

Rachel Alemu

# The Liberalisation of the Telecommunications Sector in Sub-Saharan Africa and Fostering Competition in Telecommunications Services Markets

An Analysis of the Regulatory  
Framework in Uganda

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# Preface

The basis for this study stemmed from my interest in the phenomenal growth of the telecommunications sector in Sub-Saharan Africa. Within the space of a decade, the telecommunications sector went from being characterised as having poorly developed infrastructure with less than 1% of the population having access to telecommunications services in 1994, to having 82% telephone penetration rate in 2016. The dramatic change was due to the opening up of the telecommunications sector to competition. This led me to ponder the issue—how the telecommunications sector which traditionally was a monopoly would be regulated. Was regulation still needed in a sector that was now open to competition? If so, what regulatory approach would be taken?

Admittedly, I would not have been able to successfully complete this study without a strong support group. I would like to express special appreciation and gratitude to my PhD supervisor Professor Dr. Josef Drexl, for his unwavering support throughout the exciting albeit challenging PhD journey. The advice and encouragement received enabled me to grow as a researcher. Special thanks also go to my assistant supervisors Dr. Mor Bakhoun and Dr. Marc-Oliver Mackenrodt for their steady guidance and availability throughout the course of my PhD studies. In this context, it is also worth mentioning the financial support received from Max Planck Institute for Innovation and Competition Law together with the Munich Intellectual Property Law Center. Without this support, this research, particularly the invaluable information obtained during the field study in Uganda, might not have been possible.

I would like to extend my sincere gratitude to all the telecommunications sector experts in Uganda who took time out of their busy schedules to provide me with invaluable insights into the key competition issues affecting the telecommunications sector in Uganda and other countries in Sub-Saharan Africa. Notable mentions include Ms. Ann Rita Ssemboga, Ms. Joan Kyomugisha, Ms. Rebecca Mayanja, Mr. Abdul Musoke, Ms. Helen Kyeyune and Mr. Godfrey Sengendo representing communications regulator UCC, Mr. Paul Mwebesa, Mr. Dennis Kakonge, Ms. Zulaika Kasujja and Mr. Ronald Zakumumpa providing the perspective of the

telecommunications operators and Dr. Ham Mulira, Dr. Nora Mulira, Dr. Vincent Kasangaki, Dr. Abel Katahoire and Dr. Fredrick F Tusubira representing the prominent ICT experts in Uganda.

A special thanks goes to my family. Words cannot express how grateful I am to my mother and father for all of the sacrifices that you have made on my behalf. Thank you for consistently inspiring me to reach greater heights and always believing in me. To my dear brother, thank you so much for the constant moral support. I would also like to convey my gratitude to my relatives, family friends and friends whose words of encouragement have carried me all the way through to the end of this PhD journey.

Last but not least, I would like to thank God for his never ending grace and mercy which has enabled me to get this point in my life.

Munich, Germany

Rachel Alemu

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# Abbreviations

2G	Second-generation wireless telephone technology
3G	Third-generation technologies
ACCC	Australia Competition and Consumer Commission
ADSL	Asymmetric digital subscriber line
AKDEF	Aga Khan Fund for Development
APEC	Asia-Pacific Economic Coordination
ARPU	Average revenue per user
BT	British Telecom
CAG	Comptroller and Auditor General of India
CCC	COMESA Competition Commission
CCK	Communications Commission for Kenya
CDMA	Code Division Multiple Access
CIT	Committee on Investment in Telecommunications
CJEU	European Court of Justice
CLEC	Competitive local exchange carriers
COMESA	Common Market for Eastern and Southern Africa
CSTs	Community Service Telephones
CUTS	Customer Unity & Trust Society
DSL	Digital subscriber line
EAC	East African Community
EACCA	East Africa Community Competition Authority
EACSO	East African Common Service Organisation
EAETC	East African External Telecommunications Company
EAP&TC	East African Posts and Telecommunications Corporation
EAPTA	East African Post and Telecommunications Administration
EAPTC	East African Post and Telegraph Company
ECN	European Competition Network
ECOWAS	Economic Community of West African Countries
EDGE	Enhanced Data Rates for GSM Evolution
EEO	Equally efficient operator
EU	European Union

FCC	Federal Communications Commission
FDI	Foreign Direct Investment
FTC	Federal Trade Commission
FTM	Fixed to mobile interconnection
GDP	Gross Domestic Product
GPRS	General Packet Radio Service
GSM	Global System for Mobile Communications
HSPA	High Speed Packet Access
ICASA	Independent Communications Authority of South Africa
ICT	Information and Communications Technology
ILECs	Incumbent local exchange carriers
IMF	International Monetary Fund
IP	Internet Protocol
ISP	Internet Service Provider
ITU	International Telecommunications Union
LAP	Libya Africa Investment Portfolio
MIO	Model Interconnection Offer
MNC	Multinational corporation
MTF	Mobile to fixed termination
MTG	Multinational Telecommunications Group
MTM	Mobile to mobile termination
MTR	Mobile Termination Rate
NBI	National Data Transmission Backbone Infrastructure
NCC	Nigerian Communications Commission
Ofcom	Office of Communications United Kingdom
Oftel	Office of Telecommunications United Kingdom
OTDR	Department of Public Enterprise and the Office of the Director of Telecommunications Regulations
PCS	Personal communications services
PIP	Public Infrastructure Provider Licence
PPIAF	Public-Private Infrastructure Advisory Facility
PSP	Public Service Provider Licence
PwC	PriceWaterHouseCoopers
REO	Reasonably efficient operator
RIO	Reference interconnection offer
SADC	Southern African Development Community
SIM	Subscriber Identity Module
SSA	Sub-Saharan Africa
SSNIP	Small but significant and non-transitory price
TCRA	Tanzania Communications Regulatory Authority
TDM	Time-division multiplexing
TFEU	Treaty of the Functioning of the European Union
TRO	Triennial Review Order
TVWS	TV whitespace

UBC	Uganda Broadcasting Council
UCC	Uganda Communications Commission
UHF	Ultra high frequency
UMTS	Universal Mobile Telecommunications System
UPTC	Uganda Post and Telecommunications Corporation
USAID	US Agency for International Development
UTL	Uganda Telecom
VANS	Value Added Network Services
WAEMU (UEMOA)	West African Economic and Monetary Union
Wi-Fi	Wireless Fidelity
WiMAX	Worldwide Interoperability for Microwave Access
ZCCPC	Zambia Competition and Consumer Protection Consumer

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# Chapter 1

## Introduction

### 1.1 Background of Research

A little over a decade ago, the telecommunications sector in Sub-Saharan Africa was still characterised by poorly developed infrastructure, primarily concentrated in urban areas,<sup>1</sup> and poor service provision with less than 1% of the population accessing telecommunications services. In 1994 the telephone penetration rate in Africa was 1.5 main lines per 100 people compared to the United States with 65 main lines per 100 population and OECD countries with 47 main lines.<sup>2</sup> When one took into consideration the fact that 40% of the telephone lines were concentrated in a single country, South Africa,<sup>3</sup> the penetration rate in individual countries in the region was even smaller. Fast forward to 2016, the telephone penetration rate in Sub-Saharan Africa stands at approximately 82 telephone subscribers per 100 inhabitants.<sup>4</sup> In contrast to the situation a decade ago where most telephone line subscribers on the African continent were located in South Africa as well North Africa, the current data reveals increased access to telecommunications services in Sub-Saharan Africa countries.<sup>5</sup> More importantly, the current penetration confirms

---

<sup>1</sup>Uganda is cited as an example. Statistics from 1997 indicate that even though the capital city Kampala had less than 10 percent of the population, it had 70 percent of all subscriber lines in 1997, while the Eastern and Western regions of the country, home to more than 50 percent of the population, only had 20 percent. See Mary Shirley, Fred Tusubira, Luke Haggarty, and Frew Gebreab, ‘Telecommunications Reform in Uganda’ (2002) World Bank Working Research Paper No.2864 9.

<sup>2</sup>Eli M Noam, *Telecommunications in Africa* (Oxford University Press 1999) 3.

<sup>3</sup>Ibid.

<sup>4</sup>ITU, ‘Key 2005-2016 ICT Data for the World, by Geographic Regions and by Level of Development’ <<http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>> accessed 15 June 2017.

<sup>5</sup>Ibid.

that the telecommunications reforms that began to take place in Sub-Saharan Africa in the mid-1990s have significantly transformed the sector. The telecommunications reforms that facilitated the transition from monopoly to competition have enabled a great portion of the population to access telecommunications services.

Traditionally, telecommunications services in Sub-Saharan Africa, and around the world, have been provided through a regulated state-controlled monopoly operator.<sup>6</sup> A key rationale for that state of affairs was the perception that the telecommunications sector was a natural monopoly. According to the natural monopoly theory, a natural monopoly exists where one producer can supply the market more efficiently than several producers.<sup>7</sup> The telecommunications sector was deemed as exhibiting natural monopoly characteristics, as a result, telecommunications sector policy-makers and telecommunications regulators opted to provide telecommunications services through one operator in order to avoid wasteful duplication of networks.<sup>8</sup> In order to prevent the monopoly operator from abusing its monopoly power, a series of controls were put in place including controls on the prices which could be imposed on end-users.<sup>9</sup>

In the last quarter of the twentieth century, growing awareness of the inefficiency of the monopolist operator and technological changes sparked reforms in the telecommunications sector.<sup>10</sup> In the 1980s the governments in the United States, Japan and the European Union<sup>11</sup> commenced telecommunications policy reforms which later triggered reforms worldwide. The telecommunications reforms included the privatisation of the state monopoly operator and liberalisation of the telecommunications sector by removing barriers to market entry, in particular, legislative barriers that opened up different telecommunications market segments to private sector investment. In Sub-Saharan Africa, substantive telecommunications reforms resulting in the liberalisation of telecommunications markets began to take place in the mid to late 1990s with Ghana, Uganda and Zimbabwe as pioneers. Other countries followed suit leading to the startling transformation of the telecommunications sector in Sub-Saharan Africa into a booming sector at the heart of economic development.

The liberalisation of the telecommunications sector in Sub-Saharan Africa has resulted in increased access to telecommunications services. This is specifically the case in the mobile communications market which has grown exponentially with the

<sup>6</sup>It should be noted that most of the monopoly telecommunications operators were state-owned with the exception of Canada and the United States where the telecommunications services were provided through privately owned monopolies.

<sup>7</sup>Kevin G Wilson, *Deregulating Telecommunications: US and Canadian Telecommunications, 1840-1997* (Rowman and Littlefield 2000) 89.

<sup>8</sup>Jacques Pelkmans and David Young, *Telecoms-98* (Centre for European Policy Studies 1998) 19.

<sup>9</sup>Damien Geradin and Michel Kerf, *Controlling Market Power in Telecommunications: Antitrust vs. Sector-Specific Regulation* (Oxford University Press 2003) 1.

<sup>10</sup>Jean-Jacques Laffont and Jean Tirole, *Competition in Telecommunications* (MIT Press 2000) 3.

<sup>11</sup>The European Union started its liberalisation policy based on Article 106 (3) of the TFEU.

mobile telephony penetration increasing from 1% in 2000 to almost 81% in 2016, with the region having approximately 772 million mobile telephone subscribers.<sup>12</sup> It is worth noting that by 2011, the mobile telephone market in Africa was crowned the fastest-growing in the world over taking Asia.<sup>13</sup> The majority of the countries in the region have more than one operator serving the mobile market.<sup>14</sup>

Pivotal to the transformation of the telecommunications sector has been wireless technology that has become the primary means through which the population in the region accesses telecommunications services with limited use of the fixed-line infrastructure.<sup>15</sup> In this regard, it should be noted that the exponential growth of the telecommunications sector has occurred in some markets and not others. Specifically, the fixed telephony market has grown at a very slow pace and in a number of countries growth has stagnated with penetration rates in most countries at 1% or below.<sup>16</sup> The internet market in Sub-Saharan Africa has experienced mild success. ITU statistics reveal that there were 280 million active mobile broadband subscriptions and 6 million fixed wired broadband subscriptions in 2016.<sup>17</sup> The low fixed broadband penetration rate stems from the low telephone landline density in the region.<sup>18</sup> The introduction of mobile internet using GSM technology, WiMAX, and Wi-Fi in the mid to late 2000s<sup>19</sup> is increasing internet penetration in the region as evidenced by the significantly greater number of mobile broadband internet subscriptions compared to fixed wired subscriptions. Mobile internet, specifically

<sup>12</sup>ITU, ‘Key 2005-2016 ICT Data for the World, by Geographic Regions and by Level of Development’ <<http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>> accessed 15 June 2017. However, it should be noted that several countries (Botswana, Cape Verde, Côte d’Ivoire, Djibouti, Gabon, Gambia, Ghana, Mali, Mauritius, Namibia, Seychelles, and South Africa) have a penetration rate of more than 100 percent, while other countries have less than 30 percent penetration rate. For example, Eritrea, 7 percent, Central African Republic, 26 percent.

<sup>13</sup>GSMA, ‘Africa Now the World’s Second Largest Mobile Market’ *GSMA Press Release* (London, 9 November 2011) <<http://www.gsma.com/newsroom/press-release/africa-now-the-worlds-second-largest-mobile-market-reports-gsma/>> accessed 15 June 2017.

<sup>14</sup>Mark D J Williams, Rebecca Mayer, and Michael Minges, *Africa’s ICT Infrastructure: Building on the Mobile Revolution* (World Bank 2011) 79.

<sup>15</sup>The limited use of fixed-line infrastructure stems for the fact that the fixed-line network is poorly developed in the region.

<sup>16</sup>ITU, ‘Key 2005-2016 ICT Data for the World, by Geographic Regions and by Level of Development’ <<http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>> accessed 15 June 2017.

<sup>17</sup>Ibid.

<sup>18</sup>In other regions of the world, particularly in developed jurisdictions, the majority of the population accesses internet through fixed wireline. In the European Union, the popular DSL technology-based broadband internet is provided through landline copper lines. In the United States the key medium is the cable lines built up by cable TV operators.

<sup>19</sup>ITU, ‘Study on International Internet Connectivity in Sub-Saharan Africa’ (March 2013) 3 <[www.itu.int/en/ITU-D/Regulatory-Market/.../IIC\\_Africa\\_Final-en.pdf](http://www.itu.int/en/ITU-D/Regulatory-Market/.../IIC_Africa_Final-en.pdf)> accessed 15 June 2017.

internet connection with GSM is of great significance in Sub-Saharan Africa because GSM 3G is the most widespread network in the region.<sup>20</sup> The future of broadband internet connection undoubtedly lies essentially in mobile broadband technologies. However, even with the population of the region gaining increased access to internet via wireless technology, the internet connection statistics pertain primarily to the population in urban areas. In fact, it should be pointed out that the transformation of the telecommunications sector in general has been more positive in urban rather than rural areas.<sup>21</sup> That said, the tremendous growth of the telecommunications sector has greatly enhanced connectivity within Sub-Saharan through, *inter alia*, increased competition which has translated into lower prices and better quality of services for consumers. Therefore, the liberalisation of the telecommunications sector is a development that should be maintained and fostered. A crucial tool for fulfilling this objective is effective regulation of the telecommunications sector.

Regulation has played a pivotal role in bringing about the transition from monopoly to competition. Undoubtedly, the removal of barriers to entry through, *inter alia*, modification of the licensing regime and liberalisation of FDI restrictions to allow for increased private sector participation, have been important for purposes of bringing the liberalisation policy into effect. However, it is the introduction of a sector-specific regulatory framework aimed at ensuring that telecommunications markets become competitive and the establishment of an independent regulator that has primarily facilitated the transition to competition.

It has long been argued by academics that effective competition in a market reduces the need for regulatory intervention primarily because strong competition for a market constitutes a self-regulating system that ensures the elimination of excess profits.<sup>22</sup> However, it has been pointed out that liberalisation often involves a change, not a decrease, in the nature of regulation.<sup>23</sup> One key reason put forward for the need for continued regulation in the liberalised telecommunications sector is to establish a level playing field for competitors and to ensure that

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<sup>20</sup>Ibid.

<sup>21</sup>Helen Nyambura-Mwaura and Simon Akam, ‘Telecoms Boom Leaves Rural Africa Behind’ *Reuters* (Johannesburg, 31 January 2013) <<http://www.reuters.com/article/2013/01/31/us-africa-telecoms-idUSBRE90U0MK20130131>> accessed 15 June 2017.

<sup>22</sup>Martin C Stewart-Smith, *Industry Structure and Regulation* (World Bank Publications 1995) 22.

<sup>23</sup>Philip Cerny, ‘The Deregulation and Re-Regulation of Financial Markets in a More Open World’ in Philip Cerny (ed), *Finance and World Politics; Markets, Regimes, and States in Post Hegemonic Era* (Aldershot Edward Elgar 1993). Also see Damien Geradin and Michel Kerf, *Controlling Market Power in Telecommunications: Antitrust vs. Sector-Specific Regulation* (Oxford University Press 2003) 2, providing a similar argument in the context of the telecommunications sector by stating the need for regulatory oversight in the liberalised telecommunications sector.

competitive pressures remain sufficiently intense.<sup>24</sup> Therefore, in the liberalised telecommunications sector, the existence of competition does not automatically eliminate the need for regulatory intervention.

In Sub-Saharan Africa, competition-related regulatory concerns in the liberalised telecommunications sector, particularly in the mobile telephony and internet markets, point to the need for regulatory intervention to protect the benefits arising from having open competition.

Among the major regulatory concerns are: interconnection, access to spectrum for wireless services, and anti-competitive behaviour. With regard to interconnection, a key concern is the high mobile interconnection rates that work in favour of incumbent mobile operators and against new entrants.<sup>25</sup> To ensure that interconnection does not become a bottleneck to competition, ensuring fair and efficient interconnection is a must.

Availability of spectrum for wireless services, specifically mobile services, is also another critical issue that is threatening the continued growth of the mobile market with scarcity of spectrum affecting entry into that market.<sup>26</sup> One factor most likely contributing to this problem is the legacy of uneven distribution of spectrum holding among telecommunications operators prior to full liberalisation with incumbent operators telecommunications operators having substantially larger spectrum holdings in ‘superior spectrum’<sup>27</sup> than other telecommunications

<sup>24</sup>Damien Geradin and Michel Kerf, *Controlling Market Power in Telecommunications: Antitrust vs. Sector-Specific Regulation* (Oxford University Press 2003) 2.

<sup>25</sup>Interconnection rates can have an impact on competitiveness of a mobile market due to network effects. Network effects occur when the value of a product or network to a user changes as the number of users of the product or network increases. In the context of the telecommunications sector, the more subscribers a network has the more valuable its network is as a subscriber can communicate with more people. Since new entrants usually have a smaller network than incumbent operators, if interconnection rates are set too high, a customer will prefer to join the larger network which offers connection to more people. On the other hand, if interconnection rates are set too low, there will be less incentives for the provider of interconnection to maintain and upgrade its network affecting quality of telecommunications services. Regulation of the interconnection should therefore find the right balance between the two competing interests.

<sup>26</sup>This is the case in Ivory Coast, Ghana, and Uganda, where scarcity of spectrum for mobile services in the GSM frequency bands has hindered market entry. See ‘Cote D’Ivoire: Warid Telecom Pays for Licence but Can’t Get Enough Spectrum to Operate’ *Balancing Act* (13 March 2009) <<http://www.balancingact-africa.com/news/en/issue-no-445/top-story/cote-d-ivoire-warid/en>> accessed 15 June 2017; ‘Spectrum Unavailability and Review of Guidelines Delayed Globalcom’s Operations in Ghana says Minister Iddrisu’ *Balancing Act* (2 September 2011) <<http://www.balancingact-africa.com/news/en/issue-no-570/telecoms/spectrum-unavailabil/en>> accessed 15 June 2017; and Julius Barigaba, ‘Uganda: Country cannot take more GSM operators says UCC’ *The East African* (Kampala, 25 August 2008) <<http://www.theeastfrican.co.ke/news/-/2558462354/-s2iw2ez/-index.html>> accessed 15 June 2017.

<sup>27</sup>‘Superior spectrum’ refers to the spectrum in the GSM frequency band, 900 MHz band which is more efficient than the alternative 1800 MHz band. Operators with spectrum holdings in the 900 MHz band invest less in base stations since lower frequency bands offer higher transmission ranges than higher frequency bands.

operators putting the latter at a competitive disadvantage.<sup>28</sup> Thus, there is need for more efficient spectrum management in the telecommunications sector.

The third most significant regulatory concern is anti-competitive behaviour by telecommunications operators. One area of concern is collusion with allegations of collusion by incumbent operators to restrict competition in the mobile services markets. For example, in South Africa, the Competition Commission investigated claims of collusion by the incumbent mobile operators MTN and Vodacom that raised their interconnection rate by 500% shortly before a third mobile operator Cell C entered the market.<sup>29</sup> Abuse of dominant position, through for example, predatory pricing and refusal to grant access to essential facilities has also been a source of concern. In South Africa, the Competition Commission had, for several years, sought to address allegations of refusal by the incumbent fixed-line operator, Telkom SA, to grant access to essential facilities in the value-added services market.<sup>30</sup> In Ghana, Ghana Telecom (now Vodafone Ghana) has also been accused of predatory pricing in the broadband internet market by internet service providers.<sup>31</sup>

Linked to the concern of anti-competitive behaviour in the liberalised telecommunications sector in Sub-Saharan Africa is the conduct of the large multinational telecommunications groups that have a strong presence in the telecommunications markets in Sub-Saharan Africa.<sup>32</sup> There is a substantial amount of literature, albeit not specifically focusing on the telecommunications sector, which concludes that multinational corporations have a greater tendency to engage in anti-competitive behaviour in developing countries in order to become dominant or acquire monopoly status in a market.<sup>33</sup> One example of anti-competitive behaviour is predatory

<sup>28</sup>For example, in Uganda, UCC data, see UCC, ‘Usage of Frequency Bands as at December 31<sup>st</sup> 2012’, reveal that some telecommunications operators have spectrum holdings in the 900 MHz band while other telecommunications operators have been assigned spectrum in the 1800 MHz band.

<sup>29</sup>MTN, Vodacom in Clear on Collusion Charges’ *Techcentral* (23 March 2011) <<http://www.techcentral.co.za/mtn-vodacom-in-the-clear-on-collusion-charges/22038/>> accessed 15 June 2017.

<sup>30</sup>In 2011, the South Africa Competition Tribunal adjudicated over the issue in *Competition Commission v Telkom SA Ltd 11/CR/Feb04* [2011] ZACT 2 finding Telkom SA liable under the Competition Act 1998.

<sup>31</sup>Internet Ghana Takes on Ghana Telecom over Anti-Competitive Practices’ *Balancing Act* <<http://www.balancingact-africa.com/news/en/issue-no-263/internet/internet-ghana-takes/en>> accessed 15 June 2017.

<sup>32</sup>Particularly in the mobile market where subsidiaries of multinational telecommunications groups have taken control. In most countries the former monopoly operator continues to dominate the fixed-line market.

<sup>33</sup>Sanjaya Lall, ‘Multinationals and Market Structure in an Open Developing Economy: The Case of Malaysia’ (1979) 115(2) *Weltwirtschaftliches Archiv* 325; Magnus Blomström, ‘Foreign Direct Investment and Productive Efficiency: The Case of Mexico’ (1986) 35(1) *Journal of Industrial Economics* 97; and Selim Raihan, ‘Foreign Competition and Growth: Bangladesh Manufacturing Industries’ in Paul Cook, Raul Fabella and Cassey Lee (eds), *Competitive Advantage of Competition Policy in Developing Countries* (Edward Elgar Publishing 2007) 281.

pricing. Local subsidiaries of the multinational telecommunications groups are likely to have the financial capacity to engage in predatory pricing and drive out smaller operators since they can withstand short term losses recoupable once competitors have exited the market.<sup>34</sup> The other potential area for anti-competitive conduct is in relation to cross-border mergers. Multinational telecommunications groups seeking to enter the telecommunications markets in Sub-Saharan Africa are increasingly relying on cross-border mergers. Mergers, have the potential to limit competition, as they can create or extend monopoly power and increase the scope for collusion in a market which, post-merger, will be more oligopolistic and less competitive than was the market pre-merger.<sup>35</sup> Therefore, there is need for mechanisms, for example, merger control, in place to ensure that mergers do not have anti-competitive effects.

The above concerns indicate that although a liberalisation policy has been implemented in the region and the population is benefiting from the policy through increased competition, which has translated into lower prices and better quality of services for consumers, it is important to ensure the benefits arising from the liberalisation are sustainable. This entails ensuring that the regulatory framework, which was put in place with an objective of creating competitive telecommunications markets, promotes sustainable competition.

## 1.2 Statement of the Problem

The introduction of competition in the telecommunications sector following the liberalisation of the sector has not taken away the need for regulatory intervention. In the absence of perfect competition, regulatory intervention is still needed to ensure a level playing field among competitors and maintain sustainable competition in the telecommunications markets. However, in contrast to the monopoly

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<sup>34</sup>Predatory pricing by multinational corporations has been observed in other sectors in developing countries. See, for example, Magnus Blomström, ‘Foreign Direct Investment and Productive Efficiency: The Case of Mexico’ (1986) 35(1) *Journal of Industrial Economics* 97, with regard to multinational corporations (MNCs) in the manufacturing industry in Mexico; Richard S Newfarmer ‘TNC Takeovers in Brazil: The Uneven Distribution of Benefits in the Market for Firms’ (1979) 7(1) *World Development* 25, which explores the effect of foreign direct investment (FDI) in the Brazilian electrical industry noting that MNCs used predatory pricing as a means of gaining dominant position in the industry; and Maria C Lattore, ‘Multinationals and Foreign Direct Investment: Main Theoretical Standards and Empirical Effects’ UCM Working Paper 6/2008 23 <[http://estudiosestadisticos.ucm.es/data/cont/docs/12-2013-02-06-CT06\\_2008.pdf](http://estudiosestadisticos.ucm.es/data/cont/docs/12-2013-02-06-CT06_2008.pdf)> accessed 15 June 2017. Lattore’s article highlights two reasons why MNCs presence can lead to high market concentration in a given market: (1) they are more efficient than local firms; and (2) they can engage in conduct that restricts competition for example, predatory pricing sustained by their financial staying power.

<sup>35</sup>Sandra Marco Colino, *Competition Law of the EU and UK* (7th edn, Oxford University Press 2011) 348.

period where regulatory intervention focused on price control to ensure that the monopoly operator did not exploit its privileged position, in the liberalised telecommunications sector, regulatory intervention entails a significant change in the nature of oversight to an approach that focuses on, *inter alia*, fostering and maintaining competitive telecommunications markets.

However, the increasing number of competition-related regulatory concerns prevalent in the liberalised telecommunications sector in Sub-Saharan Africa including: anti-competitive behaviour, high interconnection rates, and spectrum scarcity, suggest that the existing regulatory framework for competition in the telecommunications sector in different countries in the region does not reflect the change in regulatory requirements.

On that basis, this study focuses on the issue whether the existing regulatory framework, for the telecommunications sector in countries in Sub-Saharan Africa sector effectively deals with emerging competition-related concerns in the liberalised sector. In order to address this issue, Uganda is used as a case study. The choice of Uganda, among all other Sub-Saharan Africa countries is down to four key reasons.

Firstly, it is one of the pioneer countries in the region taking concrete steps to liberalise the telecommunications sector with the adoption of the telecommunications policy of 1996 and the enactment of a Communications Act of 1997 providing for the establishment of an independent telecommunications regulator. Therefore, Uganda has gained substantially more experience regarding regulation of a liberalised telecommunications sector in contrast to other countries in Sub-Saharan Africa.

Secondly, shortly before the full liberalisation of the telecommunications sector in 2006, the regulatory framework for telecommunications was comprehensively modified with the introduction of several statutory instruments aimed at implementing the provisions of the Communications Act of 1997. The statutory instruments notably cover three main regulatory areas of concern, anti-competitive,<sup>36</sup> interconnection,<sup>37</sup> and spectrum.<sup>38</sup> The modification of the regulatory framework in Uganda illustrates a proactive effort on the side to telecommunications policy-makers and the telecommunications regulator to provide a framework in line with the changes in regulatory requirements in the sector. The analysis of the regulatory framework in Uganda therefore provides one with the opportunity to establish whether the efforts to modify the framework to reflect changes in regulatory requirement are sufficient.

Thirdly, Uganda has one of the most active telecommunications sectors in the region, with several telecommunications operators including two major operators in

<sup>36</sup>Communications (Fair Competition) Regulations 2005, SI 2005/24.

<sup>37</sup>Telecommunications (Interconnection) Regulations 2005, SI 2005/26.

<sup>38</sup>Communications (Radio) Regulations 2005, SI 2005/23.

the fixed-lines market and several internet service providers.<sup>39</sup> The presence of numerous players in Uganda's telecommunications sector suggests a high potential for competition-related regulatory concerns.

Fourthly, despite the introduction of competition in Uganda's telecommunications sector two decades ago,<sup>40</sup> Uganda still relies exclusively on sector-specific rules to govern competition in the telecommunications sector. This approach is an exception to the norm (both at the regional and global level) whereby national competition legislation plays a role in the regulation of the telecommunications sector. Thus, by focusing on Uganda, one can establish whether exclusive reliance on sector-specific rules to govern the telecommunications sector is the appropriate regulatory approach for facilitating sustainable competition in the liberalised telecommunications sector.

### 1.3 Main Objective and Research Questions

As pointed out in the previous sub-section, the main objective of this study is to establish whether the regulatory framework for telecommunications in countries in Sub-Saharan Africa adequately deals with the regulatory issues following from the liberalisation of the telecommunications sector.

In order to analyse the efficacy of the regulatory environment for competition in the telecommunications sector, the following questions are specifically addressed as having the greatest bearing on sustainable competition in the telecommunications sector in Uganda:

- (1) Whether Uganda's regulatory framework for telecommunications provides sufficient measures to prevent or curb anti-competitive behaviour in the sector.
- (2) Closely connected to the first issue is whether the relevant sector-specific competition rules in Uganda are encompassing enough to deal with the anti-competitive conduct of large multinational telecommunications groups particularly with regard to cross-border mergers.
- (3) Whether the regulatory framework promotes fair and efficient interconnection and network access.
- (4) Whether there is efficient spectrum management, specifically with regard to spectrum for mobile services.
- (5) Whether competition law should play a significant role in the sector that is already subject to regulatory control by an independent regulator implementing sector-specific rules.

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<sup>39</sup>This is according to UCC's 'List of Licensees' <<http://www.ucc.co.ug/data/smenu/80>List-of-Licensees.html>> accessed 15 June 2017.

<sup>40</sup>Substantive introduction of competition in the telecommunications sector occurred in 1998 when a second national operator, MTN Uganda began to provide telecommunications services in the fixed-line market, competing against the former state monopoly operator, Uganda Telecom, and in the mobile market competing against mobile operator Celtel (now Airtel).

## 1.4 Justification of Research

The topic of research is motivated by the increased intensity of activities in liberalised telecommunications market segments in Sub-Saharan Africa which has given rise to a number of regulatory issues. The notable issues already highlighted in Sects. 1.1 and 1.2 of this chapter are: interconnection, scarcity of spectrum, and anti-competitive behaviour.

There is an amount of literature on the regulation of the liberalised telecommunications sector. Some of the literature has focused on the telecommunications reforms in the telecommunications sector in Sub-Saharan Africa. Gadio in his PhD dissertation looks at the key reasons behind the telecommunications reforms in Sub-Saharan Africa and focuses on the role of international economic development agencies, World Bank and IMF.<sup>41</sup> However, the thesis does not delve into the issue of regulatory intervention in the liberalised telecommunications sector. Similarly, Shirley, Tusubira, Haggarty, and Gebreab provide comprehensive research on the telecommunications reforms in the 1990s in Uganda.<sup>42</sup> While they point out potential areas of regulatory concern, for example, interconnection in the telephone market, the issue is not explored in detail.

Most of the literature specifically addressing the issue of regulation stems from South Africa. Books focusing on the regulation of telecommunications in Sub-Saharan Africa are scarce. Notable publications include one by Thornton, Carrim, Mtshualana and Reburn, along with several other contributors focusing on the legislative framework for telecommunications in South Africa.<sup>43</sup> However, the book while serving as a great reference for information on telecommunications law and regulation in South Africa, does not highlight the contemporary regulatory issues in detail. Additionally, the publication focuses on the Telecommunications Act of 1996 which was later repealed by the Electronic Communications Act of 2005. The other notable publication is the PhD thesis by Opata which stands out as an in-depth research focusing on the regulation of the telecommunications sector in Nigeria under the Communications Act of 2003.<sup>44</sup> The analysis of the regulatory framework includes specific discussion of interconnection. However, interconnection is primarily discussed within the context of access to telecommunications services through universal service. Thus, while the thesis greatly contributes to the general understanding of telecommunications regulation in Nigeria, and

<sup>41</sup>Cheikh Tidiane Gadio, ‘Institutional Reform of Telecommunications in Senegal, Mali and Ghana: The Interplay of Structural Adjustment and International Policy Diffusion’ (DPhil dissertation, Ohio State University 1995).

<sup>42</sup>Mary Shirley, Fred Tusubira, Luke Haggarty, and Frew Gebreab, ‘Telecommunications Reform in Uganda’ (2002) World Bank Working 2864/2002.

<sup>43</sup>Lisa Thornton, Yasmin Carrim, Patric Mtshualana, and Pippa Reburn (eds), *Telecommunications Law in South Africa* (STE 2006).

<sup>44</sup>Chukwudiebube Bede Abraham Opata, ‘Telecommunications Law and Regulation in Nigeria: A Study of Universal Service Provision’ (PhD Thesis, University of Warwick 2010).

provides in-depth analysis of universal access, it does not expound on the issue of regulation of competition in the liberalised telecommunications sector in Sub-Saharan Africa.

While there is a dearth of literature in the form of book publications, there have been a number of articles on the regulation of competition in the telecommunications sector in Sub-Saharan Africa. The literature has focused primarily on inefficient interconnection as an obstacle to competition in the mobile market.<sup>45</sup> However, in-depth analysis focusing on whether the regulatory framework of a country addresses the key regulatory concerns impacting on competition is still lacking.

Given the significant role that the telecommunications sector has come to play in all countries in Sub-Saharan Africa, it is beneficial to tackle this particular issue in order to ensure that liberalisation is effective and sustainable. By undertaking this research, the author makes a contribution to knowledge in two key ways. Firstly, the author further expounds on an area lacking in-depth analysis. Secondly, the findings of the study while aimed at enhancing competition through regulation in Uganda are also of relevance for telecommunications policy-makers in other countries in Sub-Saharan Africa. The reason being that the telecommunications markets throughout Sub-Saharan Africa bear a number of similar characteristics.<sup>46</sup>

## 1.5 Research Methodology

As already explained in the introduction to this chapter, the liberalisation of the telecommunications sector in Sub-Saharan Africa has transformed telecommunications into a vibrant sector at the heart of economic development. However, the liberalisation of the telecommunications sector has given rise to a number of regulatory issues that were absent during the period when the telecommunications sector was a monopoly. The key regulatory issues have already been identified in the previous sub-sections as interconnection, anti-competitive behaviour, and scarcity of spectrum for mobile services.<sup>47</sup> It is for this reason that the main objective of

<sup>45</sup> Jerome Bezzina, ‘Interconnection Challenges in a Converging Environment: Policy Implications for African Telecommunications Regulators’ (June 2005) World Bank <<http://event-africa-networking.web.cern.ch/event-africa-networking/cdrom/Worldbank/interconnectionFinal.pdf>> accessed 15 June 2017; Nicola Theron, ‘The Competitiveness of the SA Mobile Market-Will the Entry of Virgin Mobile Increase Competition?’ (2006) Econex Research Note 4; Stephen Esselaar and Keith Weeks, ‘The Case for the Regulation of Call Termination in South Africa: An Economic Evaluation’ <<http://www.ictregulationtoolkit.org/en/toolkit/docs/Document/4009y>> accessed 15 June 2017; Nicole Theron and Johann van Eeden, ‘Asymmetric Mobile Termination Rates in South Africa’ (2011) Econex Research Note 21; and Christoph Stork and Alison Gillwald, ‘Mobile Wholesale and Retail Price Interplay: the Somewhat Contrary Case of South Africa in Africa’ (19th ITS Biennial Conference, Bangkok, November 2012).

<sup>46</sup> These similarities are highlighted in Sect. 2.4.

<sup>47</sup> See Sects. 1.1 and 1.2.

this study is to establish whether the existing regulatory framework for the telecommunications sector in countries in Sub-Saharan Africa sufficiently deals with emerging competition-related concerns in the liberalised sector.

To address this issue, the author has opted to rely on the case study methodology as the means of gathering information for research, hence the focus on the telecommunications regulatory framework in Uganda.<sup>48</sup> A case study is a suitable method for gathering information as Sub-Saharan African countries have similar telecommunications market characteristics distinguishable from other regions of the world.<sup>49</sup> Therefore, the findings in one country will be of relevance in other Sub-Saharan African countries.

The research methodology is also a hybrid of approaches involving, legal-historical, legal-analytical and comparative methodological framework. This study centres on the issue whether the existing regulatory framework for the telecommunications sector in Uganda sufficiently addresses competition-related issues in the fully liberalised sector. In order to draw concrete conclusions, reference must be made to the historical development of telecommunications legislation, policy and regulatory institutions in Uganda. Therefore, the legal-historical methodological framework is incorporated in this study.

With regard to the legal-analytical approach, the study analyses how the existing telecommunications legislation deals with the key regulatory issues in the telecommunications sector. The legal analytical approach, importantly, takes into account the peculiar economic features and characteristics of the telecommunications sector which have implications for regulation.<sup>50</sup>

The research methodology also has a comparative element, that is, it draws from the national laws and policies, including the implementation thereof, of other jurisdictions with experience in dealing with competition-related regulatory issues that have arisen in the liberalised telecommunications sector. The comparative analysis attempts to rely primarily on the experience from countries in Sub-Saharan Africa with a similar telecommunications market composition and level of economic development.<sup>51</sup> However, due to the dearth of examples within Sub-Saharan Africa, particularly when it comes to competition law enforcement, reference is also made to the leading jurisdictions, specifically, the European Union and the United States.

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<sup>48</sup>The reasons for the choice of Uganda for the case study have been explained in great detail in Sect. 1.2 of this study that defines the statement of the problem.

<sup>49</sup>Detailed characteristics are highlighted in Sect. 2.4 of this study.

<sup>50</sup>These characteristics particular to the telecommunications sector are highlighted in Sect. 2.3 of this study.

<sup>51</sup>The most notable features prevalent in the telecommunications sectors in the Sub-Saharan African countries are highlighted in Sect. 2.4 of this study. The sub-section emphasises how the market composition in Sub-Saharan Africa is different from that in developed jurisdictions.

The research materials collected and referred to in this study are based on primary and secondary sources. The primary sources comprise legislation, policies, guidelines, and case law pertaining to the regulation of the telecommunications sector in Uganda and other relevant jurisdictions.

In addition to the legislation and case law, there is also research material gathered by the author from the field. Between November and December 2011 the author visited Uganda to obtain information on the regulatory framework for competition in the telecommunications sector. The field work involved visits to four of the then seven telecommunications operators, in which interviews were conducted with personnel in the legal departments.<sup>52</sup> Visits were also made to the Uganda Communications Commission with interviews conducted with designated officials working in the areas of competition, economic, and spectrum regulation. Valuable documentation was also acquired from independent telecommunications experts in Uganda. The purpose of the field work was to provide the author with first-hand information on the key issues in the telecommunications sector impacting on the growth of competition. The visits also established the extent to which the existing pieces of legislation have been implemented and helped to verify the telecommunications policies of greatest relevance in Uganda's telecommunications sector.

Regarding secondary sources, the author relied greatly on literature in existence focusing on the regulation of competition in the fully liberalised telecommunications sector. In contrast to the primary sources that are essentially Uganda-centric, secondary sources encompass books and articles from other jurisdictions such as the European Union, the United States, and South Africa. The secondary sources comprise both law and economics literature.

## 1.6 Limitations of Research

While the author received tremendous support in undertaking this research, a few challenges were faced that might have an impact on the quality of the analysis of the subject matter of the study. Specifically, the author found it difficult to obtain reliable data on the market statistics in the telecommunications sector in Uganda and other countries in Sub-Saharan Africa. The available data in a number of instances was not up-to-date making it difficult for the author to verify aspects such as market share when discussing anti-competitive behaviour in the telecommunications sector. Additionally, some information that could have provided the author with a clearer picture as regards the regulatory issues in Uganda was not available to the author on confidentiality grounds.

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<sup>52</sup> Appendix A of the study for the list of interviews.

## 1.7 Structure of the Study

The dissertation study comprises eight chapters in addition to the introduction chapter. Chapter 2 discusses the reasons for continued regulation of the liberalised telecommunications sector despite the introduction of competition. It highlights economic characteristics of the telecommunications sector that warrant continued regulation to ensure that the policy of liberalisation bears fruition. In addition, specific market characteristics in the telecommunications sector in Sub-Saharan Africa that have implications for regulation are discussed.

Chapter 3 delves into the rationale for the change in telecommunications policy from monopoly to competition. The chapter commences with a summary of the main factors which prompted governments in Sub-Saharan Africa to open the telecommunications sector to competition. The summary illustrates how the journey toward the full liberalisation of the telecommunications sector in the different countries in Sub-Saharan Africa followed a similar path. The chapter then proceeds to discuss the evolution of Uganda's telecommunications policy and law from monopoly to competition.

Chapters 4 and 5 focus on the key anti-competitive behaviour concerns in the telecommunications sector in Uganda. Chapter 4 focuses on anti-competitive agreements and abuse of dominant position. Chapter 5 analyses the relationship between foreign direct investment (FDI) and competition in the telecommunications sector from the perspective of cross-border mergers. There have been a number of cross-border mergers between multinational telecommunications groups in Sub-Saharan Africa that have impacted on Uganda's telecommunications sector. Therefore, the chapter places emphasis on the efficacy of existing sector-specific competition rules in addressing anti-competitive behaviour of a cross-border nature. Both Chaps. 4 and 5 make reference to South Africa and Zambia which have experienced competition authorities that have been involved in regulating anti-competitive conduct in the telecommunications markets. This is in order to contrast Uganda's approach of relying on sector-specific competition rules with the alternative approach of using national competition law.

Chapter 6 analyses the regulatory framework for network interconnection and network access. The chapter stresses that network interconnection is the most significant regulatory concern in the telecommunications sector, particularly in the mobile market. This is partly because the mobile market in Uganda and other African countries has infrastructure-based competition with most service providers using their own end-to-end mobile networks. The effectiveness of Uganda's regulatory framework for interconnection is analysed. With regard to network access, the chapter addresses the issue whether a policy of network access is important as a means of stimulating competition in Uganda's telecommunications sector.

Chapter 7 is concerned with another major regulatory issue, spectrum management. It focuses on the management of spectrum for mobile services and addresses the issue whether the current approach to spectrum management should be modified to deal with increased demands for spectrum in the liberalised telecommunications sector.

Chapter 8 is based on the findings in previous chapters, particularly Chaps. 4 and 5 that indicate the need to reassess the nature of regulatory oversight. The Chapter focuses on the limitations of applying sector-specific competition rules and addresses the question whether there is a need for national competition law in Uganda's regulatory framework for telecommunications.

Chapter 9 presents conclusions and recommendations based on the findings in the Chaps. 4–7.

# **Chapter 2**

## **Competition and Regulation**

### **of the Telecommunications Sector**

Before delving into the analysis of Uganda's regulatory framework governing competition in the telecommunications sector, the author would like to, as an initial step, discuss the reasoning behind continued regulation of the telecommunications sector.

During the monopoly era, regulation was seen as a means of ensuring that the monopoly operator did not abuse its monopoly power. Regulation has played a crucial role in bringing about the transition from monopoly to competition in the telecommunications sector. In the liberalised telecommunications sector, the introduction of competition raises the assumption that with increased competition there should be less regulation. Regulation and competition are seen as substitutes for making production and allocation decisions.<sup>1</sup> Yet, increasing competition in the telecommunications sector seems to have brought with it the need for more, not less, regulatory intervention. This is linked to the fact that the telecommunications market exhibits certain economic characteristics, for example, economies of scale, which might have an impact on competition and thus warrant continued regulatory intervention in order to guarantee fruition of the benefits of liberalisation. Therefore, this chapter focuses on key economic characteristics of the telecommunications sector that have an impact on regulation. Additionally, the chapter highlights the market composition characteristics particular to the telecommunications sector in Sub-Saharan Africa on the basis that the unique market composition characteristics warrant an approach to regulation tailor-made for the region.

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<sup>1</sup>Michael A Crew and Menahem Spiegel, *Obtaining the Best from Regulation and Competition* (Springer 2005) 2.

## 2.1 Rationale for Regulating the Telecommunications Sector

Historically, the telecommunications sector has been subject to regulation based on two grounds, natural monopoly and network externalities. For much of the twentieth century, the telecommunications sector was regarded as exhibiting natural monopoly characteristics such that it was deemed more cost efficient to provide telecommunications services through a single firm. Network externalities in the telecommunications sector was the other argument used to justify the monopoly market structure in the sector. A network externality is said to exist for a service if users of the service benefit when more people use it.<sup>2</sup> Using the basic voice telephony as an example of network externalities in the telecommunications sector, the value to a consumer of telephone services is proportional to the number of other consumers who can be reached through the network.<sup>3</sup> The larger the subscriber base the greater the value of the system to all its users.<sup>4</sup> Those two economic characteristics of the telecommunications sector formed the basis for providing telecommunications services on a monopoly basis. In order to prevent the monopoly operator from abusing its monopoly power, telecommunications activities were regulated. A series of controls were put in place focusing, to a large extent, on the prices which could be imposed on end-users as well as the minimum service standard which operators had to meet to fulfil their so-called universal service obligations.<sup>5</sup> In Uganda, the approach adopted was self-regulation with most decisions made by Uganda Post and Telecommunications Corporation (UPTC) and its board.<sup>6</sup>

## 2.2 Justifying Continued Regulation in the Fully Liberalised Telecommunications Sector

In the liberalised telecommunications sector there is competition between different operators in various market segments. As competition intensifies one may assume that there should be less regulation as a competitive market largely regulates itself.<sup>7</sup>

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<sup>2</sup>Mark Armstrong, ‘Competition in Telecommunications’ (1997) 13(1) Oxford Review of Economic Policy 64, 67.

<sup>3</sup>Kevin G Wilson, ‘Deregulating Telecommunications and the Problem of Natural Monopoly: A Critique of Economics in Telecommunications Policy’ (1992) 14 Media, Culture & Society 343, 350.

<sup>4</sup>Ibid.

<sup>5</sup>Damien Geradin and Michel Kerf, *Controlling Market Power in Telecommunications: Antitrust vs. Sector-Specific Regulation* (Oxford University Press 2003) 1.

<sup>6</sup>Mary Shirley, Fred Tusubira, Luke Haggarty, and Frew Gebreab, ‘Telecommunications Reform in Uganda’ (2002) World Bank Working Research Paper 2864/2002 17.

<sup>7</sup>infoDev and ITU, ICT Regulation Toolkit: Module 1. Regulating the Telecommunications Sector: Overview’ 5 <<http://www.ictregulationtoolkit.org/1>> accessed 15 June 2017.

There is a substantial amount of literature, notably from developed countries, arguing for less regulation as the telecommunications sector becomes more competitive.<sup>8</sup> However, irrespective of how competitive the telecommunications sector is, in certain areas such as universal access and service, market forces often fall short of creating the conditions necessary to satisfy public interest objectives and thus regulatory intervention is required.<sup>9</sup> Furthermore, regulatory agencies must ensure that spectrum is properly managed and allocated.<sup>10</sup> Additionally, regulating the conduct of telecommunications operators is also important for purposes of ensuring effective liberalisation of the telecommunications sector. Particularly in the early stages of liberalisation where the incumbent operator is still very dominant,<sup>11</sup> regulatory intervention may be necessary to ensure a level playing field for competition.

Regulating the conduct of telecommunications operators in the liberalised telecommunications sector is more crucial if one takes into account the existence of economic characteristics impacting on the nature of competition. These economic characteristics in question are: significant economies of scale in production, network externalities and switching costs for consumers. In the absence of regulation, these economic characteristics may hamper competition. It is worthwhile noting that the major regulatory issues with regard to competition in the telecommunications sector in Uganda and other Sub-Saharan Africa countries are strongly linked to the economic characteristics of telecommunications markets.

## 2.3 Economic Characteristics of the Telecommunications Sector and Regulation

The economic features of the telecommunications sector provide a strong basis for regulation of the sector on the ground that they provide incentives for anti-competitive behaviour.<sup>12</sup>

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<sup>8</sup>See Herbert Ungerer, ‘The Regulatory Challenges in the Emerging Competition in the EU’ (Scientific Society of Infocommunications Conference, Budapest, September 1999) <[http://ec.europa.eu/competition/speeches/text/sp1999\\_016\\_en.html](http://ec.europa.eu/competition/speeches/text/sp1999_016_en.html)> accessed 15 June 2017 in which it is argued that in the long run the competitive telecommunications sector will be adequately governed by competition law exclusively.

<sup>9</sup>Colin Blackman and Lara Srivastava (eds), *Telecommunications Regulation Handbook* 11 (10th Anniversary edn, World Bank 2011) 11.

<sup>10</sup>Ibid.

<sup>11</sup>At the beginning of the liberalisation process it is usually the case that the former monopoly operator has 100 percent of the market which will only be eroded gradually.

<sup>12</sup>James Hodge and Keith Weeks, ‘The Economics of Telecommunications and its Regulation’ in Lisa Thornton, Yasmin Carrim, Patric Mtshaulana, and Pippa Reburn (eds), *Telecommunications Law in South Africa* (STE Publishers 2006) 83.

### 2.3.1 Significant Economies of Scale

The key rationale for providing telecommunications services through a monopoly operator was the significant economies of scale in constructing telecommunications relative to the market. The telecommunications sector was deemed a natural monopoly based on the argument that economies of scale in the sector were such that costs were minimised when there was only one operator in the market.<sup>13</sup> The gradual opening of the telecommunications sector to competition worldwide indicates the changing perception of economies of scale relative to the market demand in the sector.

Although economies of scale in the telecommunications sector have changed, they still have an impact on the nature of competition and regulation. In particular, it is still argued that small numbers of competitors in network provision are essential in order for all operators to reach a sufficient economic scale that brings costs down to a minimum.<sup>14</sup> This means that even though liberalisation entails that legislation-based market entry restrictions are eliminated, it may be the case that certain market segments are not competitive. Thus, the liberalisation of the telecommunications sector while introducing competition can result in the creation of an oligopoly market structure due to economies of scale.<sup>15</sup> It is worth pointing out the mobile communications market, while competitive, has tended to taken on an oligopoly market structure.<sup>16</sup> Given the amount of literature expressing concern about oligopoly markets facilitating anti-competitive behaviour, specifically collusion, scrutiny of the conduct of telecommunications operators is needed to ensure the growth of sustainable competition.<sup>17</sup>

<sup>13</sup>Kip W Viscusi, John M Vernon, and Joseph E Harrington Jr, *Economics of Regulation and Antitrust*, (2nd edn, MIT Press 1998) 31.

<sup>14</sup>James Hodge and Keith Weeks, ‘The Economics of Telecommunications and its Regulation’ in Lisa Thornton, Yasmin Carrim, Patric Mtshaulana, and Pippa Reburn (eds), *Telecommunications Law in South Africa* (STE Publishers 2006) 84.

<sup>15</sup>“Oligopoly markets consist of a small number of competitors-small enough to require each competitor to take into account its rivals’ current actions and likely future responses to its actions.” See Kip W Viscusi, John M Vernon, and Joseph E Harrington Jr, *Economics of Regulation and Antitrust* (2nd edn, MIT Press 1998) 97.

<sup>16</sup>Howard Shelanski observes that while the telecommunications market in the US is no longer a monopoly structure, it exhibits an oligopoly market structure, see Howard A Shelanski, ‘Adjusting Regulation to Competition: Toward a New Model of U.S. Telecommunications Policy’ (2007) Yale Journal on Regulation 56, 84. Also see Eli M Noam, ‘Fundamental Instability: Why Telecom is Becoming a Cyclical and Oligopolistic Industry’ (2006) 18 Information Economics and Policy 272; and Mario Passos, ‘Regulating Competition in Oligopoly: The Case of Telecommunications in Brazil’ <[http://www.ie.ufrj.br/grc/pdfs/regulating\\_competition\\_in\\_oligopoly.pdf](http://www.ie.ufrj.br/grc/pdfs/regulating_competition_in_oligopoly.pdf)> accessed 15 June 2017.

<sup>17</sup>See Antoine Winckler and Marc Hansen, ‘Collective Dominance under the EC Merger Control Regulations’ (1993) Common Market Law Review 787; Kip W Viscusi, John M Vernon, and Joseph E Harrington Jr, *Economics of Regulation and Antitrust* (2nd edn, MIT Press 1998); Simon Bishop and Mike Walker, *The Economics of EC Competition Law: Concepts, Application and*

In other instances, the scale of economies may be such that only a single firm may exist, for example, in the local loop connecting end customers to the fixed-line network. This may then serve as a bottleneck or essential facility for other operators downstream. In order to guarantee that new entrants have access to the essential facility, regulatory measures, such as local loop unbundling,<sup>18</sup> may be necessary. For example, in the European Union and the United States access to the local loop owned by the former monopoly operator has been a regulatory priority aimed at facilitating competition in the broadband and long-distance telephone services markets, respectively.<sup>19</sup> It has been the case in most countries that the former monopoly operator retains monopoly or is significantly dominant in the fixed-line market. This indicates the need for regulation particularly of the former monopoly operator.

### 2.3.2 Network Externalities

The existence of network externalities was one of the key reasons for regulation of the telecommunications sector under a monopoly market structure. In the liberalised telecommunications sector, network externalities provide a competitive advantage to incumbent operators that have a larger network than new entrants. This is because network externalities make it more attractive for a customer to join a large network as it means connection to more people. In an environment where access to a competing operator's network is not an option, new entrants will find it very difficult to compete for subscribers. In order for new entrants to be able to compete effectively, they must be able to interconnect with incumbent operators' networks. However, in the absence of mandated interconnection, an incumbent operator has no incentive to interconnect with new entrants that are regarded as a

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*Measurement* (2nd edn, Sweet and Maxwell 2002); and Thomas A Piraino, 'Regulating Oligopoly Conduct under Antitrust Laws' 89 (2004) Minnesota Law Review 9.

<sup>18</sup>: 'Local loop unbundling is a regulatory concept that gives new entrant telecommunications operators access to the local network of the incumbent operator.' See Martin Fransman (ed), *Global Broadband Battles: Why the US and Europe Lag While Asia Leads* (Stanford Business 2006) 20.

<sup>19</sup>: The European Commission has promoted local loop unbundling in order to enhance competition in the broadband market. As explained in the preamble, para 3 of Council Regulation EC 2887/2000 on unbundled access to the local loop [2000] OJ 336/4, "New entrants do not have widespread alternative network infrastructures and are unable, with traditional technologies, to match the economies of scale and the coverage of operators designated as having significant market power in the fixed public telephone network market. This results from the fact that these operators rolled out their metallic local access infrastructures over significant periods of time protected by exclusive rights and were able to fund investment costs through monopoly rents." Similarly in the United States, the Telecommunications Act of 1996, section 251(c) grants the Federal Communications Commission (FCC) powers to compel incumbent local exchange carriers to grant new entrants access to their local networks.

threat to its market share. In such a scenario, network externalities may facilitate domination of one network. Specifically, the dominant network operator will be able to maintain a higher price than its competitors without much threat of market share loss. This is because consumers are willing to pay more for the extra value offered by the large network, which is being able to call more people.<sup>20</sup> Therefore, mandating interconnection is crucial for purposes of ensuring that network externalities do not have an adverse impact on the competitive landscape.

It is worthwhile noting that merely providing for interconnection will not suffice as operators, especially incumbent operators with greater bargaining power due to larger network, may offer interconnection on unfair terms that greatly affect the viability of new entrants. This may be through charging very high prices for interconnection or providing inadequate interconnection capacity. Of greatest significance is the need to regulate mobile call termination which has become one of the major competitive bottlenecks in the telecommunications sector in Sub-Saharan Africa. Call termination refers to the service whereby a network completes or ‘terminates’ a call made to one of its subscribers by a caller on another network.<sup>21</sup> Mobile call termination is regarded as a bottleneck to competition because each mobile operator is considered a monopolist for its own termination call.<sup>22</sup> That is, there is competition for subscribers (mobile retail services market) but no competition for reaching the subscribers of a network.<sup>23</sup> This may serve as an incentive for an operator to abuse its monopoly position in the mobile call termination market.

### **2.3.3 Switching Costs**

Switching costs are the costs that consumers incur in moving from one telecommunications provider to another.<sup>24</sup> Consumers are unlikely to switch from one service provider to another if this means they have to change their own telephone number or if they need to dial longer numbers when they place a call.<sup>25</sup> The

<sup>20</sup>James Hodge and Keith Weeks, ‘The Economics of Telecommunications and its Regulation’ in Lisa Thornton, Yasmin Carrim, Patric Mtshaulana, and Pippa Reburn (eds), *Telecommunications Law in South Africa* (STE Publishers 2006) 86.

<sup>21</sup>Mark Armstrong and Julian Wright, ‘Mobile Call Termination’ (2009) 119 (538) *Economic Journal* F270, F271.

<sup>22</sup>Ibid.

<sup>23</sup>Marcel Canoy, Paul de Bijl, and Ron Kemp, ‘Access to Telecommunications Networks’ in Pierre A. Buigues and Patrick Rey (eds), *The Economics of Antitrust and Regulation in Telecommunications* (Edward Elgar 2004) 142.

<sup>24</sup>James Hodge and Keith Weeks, ‘The Economics of Telecommunications and its Regulation’ in Lisa Thornton, Yasmin Carrim, Patric Mtshaulana and, Pippa Reburn (eds), *Telecommunications Law in South Africa* (STE Publishers 2006) 88.

<sup>25</sup>Damien Geradin and Michel Kerf, *Controlling Market Power in Telecommunications: Antitrust vs. Sector-Specific Regulation* (Oxford University Press 2003) 9.

existence of switching costs locks in consumers to one network, providing a captive market.<sup>26</sup> Switching costs provide the operator with a degree of market power over its existing customers, but not over potential consumers.<sup>27</sup> This has important implications for pricing by a dominant operator, that is, the operator with a large number of subscribers relative to its competitors.<sup>28</sup> Switching costs enable the dominant operator to sustain a price above that of its competitors without fear of subscribers moving to the competitors.<sup>29</sup> Therefore, regulators efforts to reduce the switching costs for consumers enable greater price competition in the market.<sup>30</sup>

Loss of a telephone number is one of the primary switching costs. This imposes costs on the consumer in the form of informing all family, friends and business associates of the change in number, and any costs of changing business stationery that includes the phone number on it, for example letterheads, business cards, advertising.<sup>31</sup> In order to maintain a level playing field between the incumbent and its competitors, steps may need to be taken to ensure number portability.<sup>32</sup> Number portability is a telecommunications service that enables local telephone numbers to be retained even if a subscriber's operator is changed.<sup>33</sup> While number portability has the potential to enhance competition, the adoption of the concept in Uganda has been rejected by the Uganda Communications Commission (UCC) on the ground that the costs of implementing number portability far outweigh the potential benefits stemming from number portability.<sup>34</sup>

Another major switching cost is the administrative time required to cancel a subscription to one provider and initiate a subscription to another provider.<sup>35</sup> This is

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<sup>26</sup>James Hodge and Keith Weeks, 'The Economics of Telecommunications and its Regulation' in Lisa Thornton, Yasmin Carrim, Patric Mtshaulana, and Pippa Reburn (eds), *Telecommunications Law in South Africa* (STE Publishers 2006) 89.

<sup>27</sup>Ibid.

<sup>28</sup>Ibid.

<sup>29</sup>Ibid.

<sup>30</sup>Ibid.

<sup>31</sup>Ibid.

<sup>32</sup>Damien Geradin and Michel Kerf, *Controlling Market Power in Telecommunications: Antitrust vs. Sector-Specific Regulation* (Oxford University Press 2003) 9.

<sup>33</sup>Julie K Petersen (ed), *The Telecommunications Illustrated Dictionary* (2nd edn, CRC Press 2002) 586.

<sup>34</sup>According to Ann Rita Ssemboga (then) Economist at UCC during an interview held on the 7 December, 2011, at the UCC headquarters, Kampala, Uganda. In the course of the interview it was explained that UCC has undertaken a study to determine whether the mobile number portability should be implemented in Uganda. The study established that the costs to be incurred to implement mobile number portability greatly outweighed the benefits leading the UCC to conclude that the policy is not tenable in Uganda's telecommunications sector.

<sup>35</sup>James Hodge and Keith Weeks, 'The Economics of Telecommunications and its Regulation' in Lisa Thornton, Yasmin Carrim, Patric Mtshaulana, and Pippa Reburn (eds), *Telecommunications Law in South Africa* (STE Publishers 2006) 89.

**Table 2.1** Pre-paid subscription in specific countries in Sub-Saharan Africa, 2015

Country	Pre-paid mobile subscription % (estimated)
Botswana	96
Cameroon	99.0
Ethiopia	99.0
Ghana	97.4
Kenya	97.3
Namibia	92
Nigeria	99
Rwanda	99
South Africa	84
Tanzania	99
Uganda	98

**Source:** By author based on information available on national communication authorities' websites

specifically the case where the consumer accesses telecommunications services on a post-paid basis. In developed countries it is the main fee strategy used by telecommunications operators to provide services. However, in Sub-Saharan Africa, the post-paid contracts fee strategy is less prevalent as indicated in Table 2.1.

The greater reliance on the pre-paid scheme rather than post-paid contracts is pertinent for purposes of regulation of competition in the telecommunications sector in Sub-Saharan Africa. This is because post-paid contracts are seen as tools through which mobile operators can raise switching costs in order to make the mobile telephony market less competitive.<sup>36</sup> This may occur when mobile operators offer customers, long term contracts thereby artificially creating lock in.<sup>37</sup>

In Uganda, the reliance on the pre-paid scheme, the existence of multiple SIM handsets, and the availability of SIM cards at low costs (approximately US \$ 1.4) tend to indicate that the issue of high switching costs should not be at the top of the list of regulatory priorities.<sup>38</sup>

<sup>36</sup>Harald Gruber, *The Economics of Mobile Communications* (Cambridge University Press 2005) 148.

<sup>37</sup>Ibid.

<sup>38</sup>The specific factors listed are some of the key reasons put forward against the introduction of number portability in Uganda's telecommunications market. This was confirmed in an interview with Ann Rita Ssemboga, (then) Economist, UCC (Kampala, Uganda 7 December 2011).

## 2.4 The Market Characteristics in the Telecommunications Sector in Sub-Saharan Africa and the Implications for Regulation

The previous sub-section has identified economic characteristics that might affect the growth of competition in the telecommunications market. This part of the chapter is concerned with the particular market characteristics prevalent in the telecommunications sector in Sub-Saharan Africa that are bound to affect the approach to regulation. A key reason for highlighting the characteristics is to point out that telecommunications policy-makers in Sub-Saharan Africa should be cautious when relying on experiences of jurisdictions outside the region. Given that liberalisation of the telecommunications sector occurred much later in Sub-Saharan Africa compared to other regions, telecommunications policy-makers in the region have to some extent referred to the experiences of other jurisdictions that have been regulating the liberalised telecommunications market for a much longer time. For example, the adoption of the local loop unbundling policy by the Government of South Africa was influenced to some extent by the case studies conducted in the United States, the European Union, Australia, and India.<sup>39</sup> The European Union framework for regulation of telecommunications in particular has been touted as a good model for developing countries to follow.<sup>40</sup>

### 2.4.1 Substitution of Fixed Line Networks with Mobile Networks

As in the rest of the world, the first telephone networks built in Sub-Saharan Africa were wireline networks which connected customers using fixed-copper based lines.<sup>41</sup> Thus, during the era of the monopoly operator customers were only able to access telecommunications services through the wireline network. With the liberalisation of the telecommunications sector, the lack of suitable copper wireline infrastructure has led to significant investment in the wireless mobile network and the exponential growth of mobile communications market. The result has been the substitution of the fixed network for the mobile network in the telecommunications services market most pronounced in the voice market. By 2009, 90% of Africa's

<sup>39</sup>The Local Loop Unbundling Committee, 'Local Loop Unbundling: A Way Forward for South Africa' (May 2007) 3 <[http://www.ellipsis.co.za/wp-content/uploads/2014/03/local\\_loop\\_unbundling.pdf](http://www.ellipsis.co.za/wp-content/uploads/2014/03/local_loop_unbundling.pdf)> accessed 15 June 2017.

<sup>40</sup>See, for example, Ann Buckingham, Camilla Bustani, David Satola, and Tim Schwarz 'Telecommunications Reform in Developing Countries' in Ian Walden and John Angel (eds), *Telecommunications Law and Regulation* (2nd edn, Oxford University Press 2005) 591.

<sup>41</sup>Mark D J Williams, Rebecca Mayer, and Michael Minges, *Africa's ICT Infrastructure: Building on the Mobile Revolution* (World Bank 2011) 52.

urban population was living within reach of a mobile network, with about 48% of the rural population living within physical reach of a mobile network up from 5% a decade ago.<sup>42</sup> In contrast, the fixed networks have not grown significantly with penetration at approximately 1.1%<sup>43</sup> with nearly half of the fixed-lines located in South Africa.<sup>44</sup> Also it should be observed that the reliance on wireless technology has led to increased access to internet via the wireless mobile network.

The substitution of the fixed network with the mobile network has also had an impact on infrastructure ownership in the telecommunications sector. A recurring competition-related concern, highlighted in the introduction to the study, has been the monopoly or super dominant position that incumbent fixed-line operators have in the fixed-line infrastructure market. Competition authorities and telecommunications regulators worry that the position of dominance or monopoly in the infrastructure market may stifle competition in retail markets in cases where the end-user accesses services through the fixed-line network. In the liberalised telecommunications sector, the former monopoly operators have thus been the subject of extra regulatory scrutiny.<sup>45</sup>

However, the infrastructure ownership make-up in Sub-Saharan Africa is different. In 2010, only 32% of the terrestrial backbone network was owned by fixed-line operators in Sub-Saharan Africa.<sup>46</sup> It is doubtful that the situation has changed dramatically in the last 5 years.<sup>47</sup> This is unlike other regions of the world where the fixed-line operators owned the majority of the backbone network. Mobile operators in more developed telecommunications markets choose not to build their own backbone network but rather to purchase backbone services from fixed operators.<sup>48</sup> However, in Sub-Saharan Africa, the poorly developed telecommunications network at the time of liberalisation of the telecommunications sector compelled

<sup>42</sup>Ibid, 53.

<sup>43</sup>ITU, ‘Key 2005-2016 ICT Data for the World, by Geographic Regions and by Level of Development’ <<http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>> accessed 16 June 2017.

<sup>44</sup>ITU, ‘Country Statistics 2000-2015: Fixed-Telephone Subscriptions’ <<http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>> accessed 15 June 2017.

<sup>45</sup>This is the case in the European Union where the European Commission has investigated a number of cases of anti-competitive behaviour in the telecommunications sector focusing on the Member States’ former monopoly operator leveraging its infrastructure ownership to stifle competition in downstream services markets. Notable cases are: *Deutsche Telekom AG* [2003] OJ L 263/9; Case COMP/38.233 *Wanadoo Interactive* Commission Decision 2003, published under <[http://ec.europa.eu/competition/antitrust/cases/dec\\_docs/38233/38233\\_87\\_1.pdf](http://ec.europa.eu/competition/antitrust/cases/dec_docs/38233/38233_87_1.pdf)> accessed 15 June 2017; and *Wanadoo Espana v Telefonica SA* [2008] OJ C 83/6.

<sup>46</sup>Mark D J Williams (ed), *Broadband for Africa: Developing Backbone Communications Networks in the Region* (The World Bank 2010) 16.

<sup>47</sup>Most investment in infrastructure is being undertaken by multinational telecommunications groups’ subsidiaries or governments that are seeking to develop a national backbone network for internet services.

<sup>48</sup>Mark D J Williams (ed), *Broadband for Africa...*, page 17. See footnote 46 above.

operators to build their own end-to-end network. The result is that the mobile network is the most widespread network in the region.

The substitution of the fixed network with the mobile network in Sub-Saharan Africa has significant implications for regulation of competition in the telecommunications sector. Firstly, it has been the case, most notably in Europe, for investigations into anti-competitive behaviour to focus on the fixed-line market. Specifically, the former fixed monopoly operator has been subjected to greater regulatory scrutiny as means of ensuring a level playing field for competition in the telecommunications sector.<sup>49</sup> However, in Sub-Saharan Africa where the essence of the telecommunications sector is the mobile telephony market, greater emphasis should be placed on the conduct of mobile operators.

Secondly, the market characteristic described above also significantly affects the manner in which access to telecommunications infrastructure should be regulated. It tends to point to the need for greater emphasis on access to the mobile network to enable, for example, interconnection. This is in stark contrast to the approach in more developed telecommunications markets, where focus has been on access to the fixed network (specifically the local loop) owned by former monopoly operators. However, as the fixed-line network has not developed significantly in the liberalised telecommunications sector in Sub-Saharan Africa, regulators and telecommunications policy-makers should be cautious about transplanting policy ideas from other regions of the world.<sup>50</sup>

#### ***2.4.2 The Fading Dominance of Former State Monopoly Operator and Rise of Multinational Telecommunications Operators***

Closely connected to the discussion above on the substitution of the fixed network with the mobile network, is the fading dominance of the former state monopoly operator in many countries in Sub-Saharan Africa. Worldwide, incumbents have tended to dominate in markets where they have been allowed to compete alongside new entrants, even in historically competitive markets such as the mobile and internet services markets.<sup>51</sup> Taking the European Union as an example, a key aspect of regulation of the telecommunications sector has been asymmetric

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<sup>49</sup>As already pointed out in footnote 45 of this chapter, the European Commission cases on anti-competitive behaviour in the telecommunications sector have focused primarily on the conduct of the former monopoly operator.

<sup>50</sup>This is the conclusion reached in Chap. 6, Sect. 6.5, of this study which discusses the relationship between access to telecommunications facilities and competition in the telecommunications markets in Uganda and Sub-Saharan Africa in general.

<sup>51</sup>ITU, ‘Competition Policy in Telecommunications: Background Paper’ (2002) Workshop on Competition Policy in Telecommunications, Geneva 20-22 November, 6 <<http://www.itu.int/osg/spuold/ni/competition/background/Final%20background%20paper.pdf>> accessed 15 June 2017.

regulation at the regional and national level,<sup>52</sup> in a bid to ensure that the incumbent operator's dominant position does not affect the growth of competition. In the early stages of liberalisation the European Commission made a distinction between operators with significant market power and operators without significant market power. Fixed line operators with significant market power (former monopoly operators) were required to charge cost-based access prices, an obligation that did not extend to operators without significant market power.<sup>53</sup> This is because the former monopoly operators enjoyed a high market share in the fixed-lines market in the liberalised telecommunications sector.<sup>54</sup>

In Sub-Saharan Africa, the exponential growth of the mobile market has challenged the dominant position of the incumbent fixed-line operator particularly because of the substitution of the fixed network with the mobile network. It is the case that the incumbent operators continue to dominate the fixed voice and internet (broadband) market (as a result of the control over or their ownership of the local loop). However, these markets are gradually becoming a small part of the telecommunications sector as wireless networks have become the main form of access to telecommunications services in Sub-Saharan Africa. ITU statistics reveal that while Sub-Saharan Africa's mobile-cellular subscribers in 2016 were approximately 770 million there were only 11 million fixed telephone subscribers.<sup>55</sup> In the internet market there were 280 million mobile broadband internet subscriptions and 6 million fixed wired broadband subscriptions.<sup>56</sup>

Table 2.2 below shows the top 20 mobile operators in Sub-Saharan Africa. The list reveals how strong the presence of the local subsidiaries of the multinational telecommunications groups is. Out of the top 20 mobile operators in the region,

<sup>52</sup>The European Commission has strongly supported asymmetric regulation imposing obligations on the fixed-line incumbent operators. See European Commission 'Europe's Liberalised Telecommunication's Market-A Guide to the Rules of the Game' (2000) Commission Staff Working Document <<https://portal.etsi.org/erm/kta/harmstd/userguide-en.pdf>> accessed 15 June 2017. Similarly, at the national level, telecommunications regulator Ofcom (now Ofcom) until recently, relied on asymmetric regulation to foster competition in the telecommunications sector. See also Ofcom 'Ofcom Strategy Statement: Achieving the Best Deal for Telecoms Consumers' (2000) <[http://www.ofcom.org.uk/static/archive/ofcom/publications/about\\_ofcom/strat100.htm](http://www.ofcom.org.uk/static/archive/ofcom/publications/about_ofcom/strat100.htm)> accessed 15 June 2017.

<sup>53</sup>Council Directive (EC) 33/1997 on interconnection in telecommunications with regard to ensuring universal service and interoperability through application of the principles of Open Network Provision (ONP) [1997] OJ L199/32, art.7.

<sup>54</sup>For example, the European Commission in 2004 reported that incumbent operators continued to retain a dominant position in the telecommunications markets particularly with regard to local access and calls. See Commission 'Communications from the Commission to the Council, the European Parliament, and the European Economic and Social Committee and the Committee of the Regions, European Electronic Communications Regulation and Markets 2005' (2006) SEC 816.

<sup>55</sup>ITU, 'Key 2005-2016 ICT Data for the World, by Geographic Regions and by Level of Development' <<http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>> accessed 15 June 2017.

<sup>56</sup>Ibid.

**Table 2.2** Top 20 Mobile Operators in Sub-Africa, 2016

Country	Mobile Operator	Position in Sub-Saharan Africa	Position in Africa
Nigeria	MTN Nigeria	1	1
	Glo Mobile	3	4
	Airtel	5	6
	9Mobile (formerly Etisalat)	8	11
South Africa	Vodacom	4	5
	MTN	6	8
	Cell C	10	14
Kenya	Safaricom <sup>a</sup>	7	9
Ethiopia	Ethio Telecom <sup>a</sup>	2	3
Sudan	Zain	11	19
	MTN	18	28
Ghana	Scancom (MTN)	9	12
Tanzania	Vodacom Tanzania	12	20
	Tigo	14	22
	Airtel	18	26
Cote D'Ivoire	Orange	13	21
	MTN	20	29
Angola	Unitel Angola	15	23
Mali	Orange	16	24
Uganda	MTN Uganda	17	25
Cameroon	MTN Cameroon	19	27

Source: By author based on information available on national communication authorities' and multinational telecommunications groups' websites

<sup>a</sup>Former state-owned monopoly operator

only three operators fall within the former state monopoly category: Ethiotelcom, Safaricom and Vodacom. With regard to Ethiotelcom it is worth noting that the high market share that it enjoys is most probably linked to the fact that the operator has been the sole telecommunications service provider in Ethiopia for a long time only losing its monopoly status in 2010. Safaricom is the leading mobile network in Kenya and was originally the fully-owned subsidiary of the former state monopoly, Telkom Kenya. In 2000, UK based Vodafone Group Plc acquired 40% stake and management responsibility for the company. Vodacom South Africa was owned on a 50:50 basis by the incumbent operator Telkom SA and UK-based Vodafone until 6 November 2008 when Vodafone increased its stake to 65%.

There are a few other countries where the subsidiary of the former monopoly operator is one of the largest mobile operators. In Mali, national telecom company's subsidiary, Malitel has the second largest market share in the country,<sup>57</sup> while in Burkina Faso and Sudan, the subsidiary of the former monopoly operator also has

<sup>57</sup>Ranked 29th in Africa (28th in Sub-Saharan Africa), according to African & Middle East Telecom-Week's List of Top 101 Africa Mobile Network Operators 4Q 2016 ranked by mobile subscribers.

the large market share and the second largest share, respectively.<sup>58</sup> Nevertheless, the fact still remains that multinational telecommunications groups have greater market presence in telecommunications markets compared to the former monopoly operators. This is highlighted in great detail in Table A.1 in the Appendix B.

One can argue that a big concern for telecommunications regulators and competition authorities will be how to deal with pan-African mobile operators. As the Table A.1 indicates, the multinational telecommunications groups are present in more than one country. The rise of pan-African mobile operators is regarded as positive for telecommunications infrastructure development in the region due to fact that operators with operations in several countries are building cross-border network connections in order to link neighbouring countries.<sup>59</sup> However, there is also a need to ensure that the growth of pan-African operators does not threaten sustainable competition in national mobile markets by making it difficult for exclusively national operating telecommunications operators to stay in the market. The growth of the pan-African operators suggests that it might not be sufficient to rely on national legislation and there is need for cross-border co-operation in the regulation of competition in the telecommunications sector.

#### ***2.4.3 Network Infrastructure: Vertically Integrated Telecommunications Operators***

Another significant characteristic of the telecommunications sector in Sub-Saharan Africa relates to the network architecture. Although telecommunications operators have their networks through which they provide telecommunications services, this networks are not completely separate from other networks. Operators tend to buy and sell network services to one another, in effect using other operators' networks to fill in gaps in their own infrastructure.<sup>60</sup> For example, in high-income economies, operators may own the wireless 'last mile infrastructure',<sup>61</sup> while relying on other operators for other parts of their network.<sup>62</sup> In Sub-Saharan Africa, the network infrastructure is substantially different with less advanced integration of networks. Driven by the poorly developed telecommunications network infrastructure during the era of the monopoly operator, the trend has been for operators to build their own

<sup>58</sup>Burkina Faso's Onatel was ranked 30th in Africa (29th in Sub-Saharan Africa) in African & Middle East Telecom-Week's List of Top 101 Africa Mobile Network Operators 4Q 2016, while Sudani, the mobile arm of Sudatel Group was ranked 26<sup>th</sup> in Africa and (25<sup>th</sup> in Sub-Saharan Africa).

<sup>59</sup>Mark D J Williams, Rebecca Mayer and Michael Minges, *Africa's ICT Infrastructure Building on the Mobile Revolution* (World Bank 2011) 94.

<sup>60</sup>Ibid, 52.

<sup>61</sup>That is, the link between the network and the customer, also known as access network.

<sup>62</sup>Mark D J Williams, Rebecca Mayer and Michael Minges, *Africa's ICT Infrastructure Building on the Mobile Revolution* (World Bank 2011) 52.

stand-alone, end-to-end networks.<sup>63</sup> Therefore, in countries with a liberalised telecommunications sector, there are several vertically integrated operators relying on their own infrastructure to provide telecommunications services in the downstream market. This is particularly the case in the mobile market.<sup>64</sup> This has implications for regulation in that it suggests more emphasis on interconnection rather than one-way access to networks for purposes of facilitating competition in the telecommunications sector.

#### ***2.4.4 Outsourcing Tower Sites: Rise of Third Party Tower Companies***

More recently there has been an increase in the number of transactions involving the selling and leasing back of mobile towers, particularly among multinational telecommunications groups operating in Sub-Saharan Africa. Mobile operators have been selling their mobile towers to third parties and leasing their mobile towers back in order to reduce operational costs. In December 2013 it was reported that Africa's largest mobile operator, MTN Group had sold 1200 mobile towers in Zambia and Rwanda to IHS Holdings.<sup>65</sup> A year before, the Group had sold 1758 towers in Cameroon and Ivory Coast to IHS<sup>66</sup> and in 2011 it sold 1000 towers in Uganda to American Towers.<sup>67</sup> This has given rise to a crop of tower operators in the region, notably, Helios Towers, Eaton Towers, IHS, and American Tower Corporation that have acquired towers of a number of mobile operators in the region. This development points to the potential significance of intervention in the regulation of infrastructure sharing in the telecommunications sector.

## **2.5 Conclusion**

The chapter has sought to justify the need for regulation of the telecommunications sector despite the opening up of markets to competition. It was important in the monopoly era to ensure that the monopoly operator did not abuse its privileged position to the detriment of the consumer. In the liberalised telecommunications

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<sup>63</sup>Ibid.

<sup>64</sup>Ibid.

<sup>65</sup>S.Africa's MTN Sells 1,200 Mobile Towers to HIS' *Reuters* (Johannesburg, Friday 20 2013) <<http://www.reuters.com/article/2013/12/20/mtn-ihs-idUSL6N0JZ36Q20131220>>

15 June 2017.

<sup>66</sup>Ibid.

<sup>67</sup>Martin Luther Oketch, 'MTN Sells Tower Sites to American Tower' *Daily Monitor* (Kampala, 12 December 2011) <<http://allafrica.com/stories/201112130076.html>> accessed 5 June 2017.

sector, specific economic characteristics, namely: significant economies of scale; network externalities and switching costs, may serve as bottlenecks to the sustainable growth of competition. It is therefore paramount for both telecommunications regulators and competition authorities to intervene, where necessary, to foster competition.

The regulation of the telecommunications sector in Sub-Saharan Africa should take into account certain features of the telecommunications sector in the region that may impact on the approach to regulation. For example, it has already been noted that the substitution of the fixed network with the mobile network suggests greater attention should be paid to dominant mobile operators rather than the incumbent fixed network operator. Additionally, the strong presence of multinational telecommunications groups in Sub-Saharan Africa points to the importance of regional enforcement of legislation.

# **Chapter 3**

## **Liberalisation of the Telecommunications Sector: From Public Monopoly to Competitive Telecommunications Markets**

The analysis of the regulatory framework for competition in Uganda's telecommunications sector is borne out of the need to determine whether or not the framework adopted by countries in Sub-Saharan Africa is insufficient for purposes of meeting the regulatory requirements in the liberalised telecommunications sector. In order to properly analyse the efficacy of the telecommunications regulatory framework, it is important, as a first step, to trace the origins of competition in Uganda's telecommunications sector. Therefore, this chapter looks at the reasons behind the introduction of competition in the telecommunications sector which has traditionally been a monopoly. The first section briefly discusses the reasons that triggered the liberalisation of the telecommunications sector from a global perspective. The second section focuses on the key factors that brought about the liberalisation of the telecommunications sector in Uganda. This is followed by an overview of the evolution of the telecommunications policy in Uganda from monopoly to competition.

### **3.1 Rationale for Opening Up the Telecommunications Sector to Competition**

A key reason for the liberalisation of the telecommunications sector worldwide was the ever-growing criticism of the natural monopoly theory as a guiding principle of telecommunications policy. The change in perception was brought about primarily by two factors, namely: technology change and the inefficiency of the monopoly operator.

### **3.1.1 *The Phasing-Out of the Natural Monopoly Theory Rationale***

For a greater part of the twentieth century telecommunications services were provided by a monopoly operator. A major reason for the globally adopted monopoly market structure was that the telecommunications sector was regarded as constituting a natural monopoly.<sup>1</sup> A natural monopoly occurs in an industry in which the production technology is such that one producer can supply the entire market more cheaply than two or more producers.<sup>2</sup> It was argued that the large capital investment in telecommunications networks in order to provide telecommunications products and services represented a significant economic barrier to entry; therefore, economies of scale<sup>3</sup> would result from having a single supplier. A single supplier could redistribute costs thereby facilitating universal service.<sup>4</sup> Thus, the provision of telecommunications services through a monopoly operator was viewed as the most cost effective way of ensuring access to services.

The United States experience exemplifies the adoption of the perception that the telecommunications sector was a natural monopoly. In the early 1920s, there were several companies in the telecommunications industry in the United States. However, after a period of destructive competition in which competing telephone companies refused to interconnect with one another resulting in the construction by competing telephone companies of additional and seemingly duplicative facilities, regulators were willing to accept the notion that the telephone service was a natural monopoly.<sup>5</sup> The notion that the telecommunications sector in the United States was a natural monopoly was recognised in the legislation when the Willis-Graham Act of 1921 was enacted providing for only one private company, AT&T, as the telecommunications services provider.<sup>6</sup>

Over time, particularly in the last quarter of the twentieth century, the perception that the telecommunications networks were a natural monopoly changed driven by two key economic factors: technological change and the inefficiency of the monopoly operator.

<sup>1</sup>Gerald Faulhaber, *Telecommunications in Turmoil: Technology and Public Policy* (Cambridge, MA: Ballinger 1987) 106.

<sup>2</sup>Ibid.

<sup>3</sup>Kevin G Wilson, ‘Deregulating Telecommunications and the Problem of Natural Monopoly: A Critique of Economics in Telecommunications Policy’ (1992) 14 *Media, Culture & Society* 343, 345 defines economies of scale as “the situation where an increase in inputs leads to a proportionally greater increase in outputs”.

<sup>4</sup>Eileen M Trauth and Douglas Pitt, ‘Competition in the Telecommunications Industry: a New Global Paradigm and Its Limits’ (1992) 7 *Journal of Information Technology* 3, 4.

<sup>5</sup>Christopher H Sterling, Phyllis Bernt, and Martin B H Weiss, *Shaping American Telecommunications: A History of Technology, Policy and Economics* (Routledge 2005) 93.

<sup>6</sup>Ibid.

### 3.1.1.1 Technology Change and the Natural Monopoly Theory

New technology reduced traditional barriers to entry within telecommunications markets and made it possible to introduce competition in different segments of the sector.<sup>7</sup> In particular the rapid technological development of mobile technology in the 1970s, illustrated that not all components of telecommunications are natural monopolies. The development of mobile technology meant that it was no longer necessary to lay down a vastly expensive network in order to provide services.<sup>8</sup> Hence, governments took steps to open up the sector to competition. The weakening of the natural monopoly argument does not mean that it is obsolete. The natural monopoly argument can still be made in some instances, particularly with regard to the fixed-line local loop,<sup>9</sup> although there is literature that indicates that this argument rings hollow even when applied to the fixed-line local loop.<sup>10</sup>

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<sup>7</sup>Kevin G Wilson, ‘Deregulating Telecommunications and the Problem of Natural Monopoly: A Critique of Economics in Telecommunications Policy’ (1992) 14 Media, Culture & Society 343, 352.

<sup>8</sup>Martin Cave, ‘Regulating Competition in Telecommunications: British Experience and Its Lessons’ (1991) 21(2) Economic Analysis and Policy 133.

<sup>9</sup>There is a significant amount of literature pointing to the natural monopoly characteristics of the fixed local loop. See Mark Armstrong, ‘Competition in Telecommunications’ (1997) 13(1) Oxford Review of Economic Policy 64; and Harald Gruber, *The Economics of Mobile Telecommunications* (Cambridge University Press 2005) 185. Also see Martin Hellwig, ‘Competition Policy and Sector-Specific Regulation for Network Industries’ in Xavier Vives (ed), *Competition Policy in the EU: Fifty Years on From the Treaty of Rome* (Oxford University Press 2009) 204, where it is argued that the local loop of the fixed-line network involves significant fixed costs. Due to the significant fixed costs, a duplication of the local loop would be wasteful; because these costs are sunk before any sales occur, warranting the classification of ‘last mile’ as a natural monopoly. Also notable is that telecommunications regulators in the United States and the European Union have recognised that the fixed local loop is a natural monopoly. The Federal Communications Commission in the United States has expressed the view that Local Exchange Carriers (LECs) enjoy substantial advantages due to the natural monopoly characteristics of the local loop, FCC, ‘Implementation of Local Competition Provisions in the Telecommunications Act of 1996, First Report and Order’ (1996) FCC 96-325, 10. The European Commission’s policy of open network provision and local loop unbundling appears to be based on the premise that the local loop is a natural monopoly, see Council Regulation (EC) 2887/2000 on unbundled access to the local loop [2000] OJ 336/4, para. 3.

<sup>10</sup>Richard Shin and John Ying, ‘Unnatural Monopolies in Local Telephone’ (1992) 23(2) RAND Journal of Economics 171 in which it is argued that local telephone companies are not classical natural monopolies; and Lisa Correa, ‘Natural or Unnatural Monopolies in UK Telecommunications?’ (September 2003) Working Paper 501/2003 <<http://www.econstor.eu/bitstream/10419/62808/1/377033677.pdf>> accessed 15 June 2017, which comes to the conclusion that the local loop in the UK is not a natural monopoly.

### 3.1.1.2 Inefficient Monopoly Operator

Aside from rapid technological development in the telecommunications sector, the growing awareness of the inefficiency of the incumbent monopolists was another key reason for the introduction of competition in the telecommunications sector. The monopolist operators usually faced poor incentives to reduce their costs which would affect the setting of future prices.<sup>11</sup> In the United Kingdom, the poor performance of the state-owned operator in the 1970s, stemming from political interference and the operator's inability to control public spending, led the Thatcher government to adopt a policy of deregulation of the telecommunications sector through privatisation and liberalisation.<sup>12</sup> In Sub-Saharan Africa inefficiency of the state-owned telecommunications operators was a key factor behind the telecommunications reforms that began to take place in the 1990s that eventually led to the liberalisation of the telecommunications sector in many countries.<sup>13</sup>

The first concrete steps towards liberalisation of the telecommunications sector took place in 1980s when the European Union and the United States began to implement reforms in the telecommunications sector by permitting entities other than the monopoly operator to provide telecommunications services. In the United States the telecommunications sector reforms took the form of deregulation and the divestiture of the government-regulated monopoly, AT&T.<sup>14</sup> In the European Union, the change in telecommunications policy resulted in the liberalisation of voice telephony and telecommunications infrastructure in 1998. One of the pioneer countries in the European Union that pushed for the liberalisation of the telecommunications sector was the United Kingdom.

Within the United Kingdom the liberalisation process followed the trajectory of first liberalisation and then privatisation of a state-controlled monopoly, British Telecom.<sup>15</sup> The shift in telecommunications policy in the European Union and the United States triggered a wave of reforms in the telecommunications sector worldwide resulting in the liberalisation of the sector in most countries.<sup>16</sup>

<sup>11</sup>Jean Jacques Laffont and Jean Tirole, *Competition in Telecommunications* (Munich Lectures in Economics 2000) 3.

<sup>12</sup>Adrian Hunt, “Deregulation” of Telecommunications in the United Kingdom: Myth or Reality? (1997) 18 Holdsworth Law Review 38, 42.

<sup>13</sup>Cheikh Tidiane Gadio, ‘Institutional Reform of Telecommunications in Senegal, Mali and Ghana: The Interplay of Structural Adjustment and International Policy Diffusion’ (DPhil dissertation, Ohio State University 1995) 37.

<sup>14</sup>Eileen M. Trauth and Douglas Pitt, ‘Competition in the Telecommunications Industry: a New Global Paradigm and Its Limits’ (1992) 7 Journal of Information Technology 3.

<sup>15</sup>Ibid.

<sup>16</sup>In Sub-Saharan Africa, Comoros, Djibouti, and Eritrea stand out as countries without a liberalised telecommunications sector.

## **3.2 The Specific Factors Leading to the Liberalisation of the Telecommunications Sector in Uganda**

The discussion above highlights the key factors behind the liberalisation of the telecommunications sector worldwide. However, these factors did not directly lead to the change in telecommunications policy in Uganda and other countries in Sub-Saharan Africa. The liberalisation process in Uganda is closely linked to external influences from multilateral institutions as is elaborated below.

### ***3.2.1 The Influence of Multilateral Development Institutions and Donor Agencies***

The influence of multilateral development institutions, particularly the World Bank, hinging financial and technical assistance to Sub-Saharan Africa countries on the adoption of specific economic and structural reforms has played a crucial role in the opening up of the telecommunications sector to competition. Privatisation of the public monopoly operator that formed a key component of the liberalisation process in many countries in Sub-Saharan Africa was adopted as a means of acquiring financial assistance from external sources such as the United States, the World Bank and the International Monetary Fund (IMF).<sup>17</sup> The World Bank structural adjustment programmes which Sub-Saharan Africa countries had to implement as a requirement for receipt of financial assistance promoted market liberalisation and the privatisation of state-owned entities.<sup>18</sup>

Referring to the situation in Uganda, the deplorable state of the telecommunications sector in the 1980s and early 1990s was a source of concern for the government. In 1993, shortly before telecommunications reforms, the telephone penetration rate in Uganda had fallen to 0.13 lines per 100 inhabitants, well below the regional Sub-Saharan Africa average of 0.4 per 100 inhabitants.<sup>19</sup>

Compared to its neighbouring countries, telephone penetration rates in Uganda were markedly lower, with Kenya's and Tanzania's rates at 1.2 lines and 0.3 lines

<sup>17</sup>Cheikh Tidiane Gadio, 'Institutional Reform of Telecommunications in Senegal, Mali and Ghana: The Interplay of Structural Adjustment and International Policy Diffusion' (1995 DPhil dissertation, Ohio State University) 37 observes that privatisation in the region was driven by political power exercised by the World Bank, IMF and donor agencies, especially the US Agency for International Development (USAID) rather than a change in the ideology of revaluation of the commercial benefits of public enterprises.

<sup>18</sup>Ibid, 3.

<sup>19</sup>Charles Byaruhanga, 'Managing Investment Climate Reform: Case Study of Uganda Telecommunications' (2005) 5 <[http://siteresources.worldbank.org/INTWDRS/Resources/477365-1327693758977/8397896-1327771331430/byaruhanga\\_uganda\\_telecoms.pdf](http://siteresources.worldbank.org/INTWDRS/Resources/477365-1327693758977/8397896-1327771331430/byaruhanga_uganda_telecoms.pdf)> accessed 15 June 2017.

per 100 inhabitants, respectively.<sup>20</sup> Although the monopoly operator, Uganda Posts and Telecommunications Corporation (UPTC) had 115 exchanges with the capacity to handle about 62,000 telephone lines, it had only 30,449 telephone lines in service for a population of 18 million.<sup>21</sup> As an indicator of the low quality of service, local call completion rates were only 20% against the norm of 75%, and the services were limited to only basic telephone services.<sup>22</sup> UPTC's poor performance, as evidenced by the above-mentioned statistics, meant that most of the population in the country did not have access to a phone and had little prospect of access to telecommunications services in the foreseeable future. Even where people had access to a telephone line, the quality of services was in most cases abysmal.

Despite the poor performance of UPTC, the government did not of its volition take concrete steps to open the telecommunications sector to competition. The National Resistance Movement (NRM) government which had come into power in 1986 after several years of civil strife initially did not consider the telecommunications sector as a priority.<sup>23</sup> However, when the NRM government turned to the World Bank and IMF for assistance in implementing economic reforms, it was compelled to privatise state-owned entities and liberalise markets in various sectors, including telecommunications sector, as part of the World Bank and IMF programmes on economic and structural reform.<sup>24</sup> To illustrate the significant role of the World Bank structural reform programmes, reference is made to the 1994 White Paper on telecommunications reform in which the Government of Uganda pushed for the privatisation of UPTC but insisted on the maintenance of UPTC's status as a monopoly operator. The government policy shifted 2 years later to market liberalisation driven by World Bank recommendations in Uganda. The World Bank had been actively involved in the implementation of the telecommunications sector reforms. Upon the request from the NRM government, the World Bank fielded a mission in July 1993. Among the initial World Bank proposals for consideration was permitting fair competition in the provision of all services and

<sup>20</sup>Ibid.

<sup>21</sup>Mary Shirley, Fred Tusubira, Luke Haggarty, and Frew Gebreab 'Telecommunications Reform in Uganda' (2002) World Bank Working Research Paper 2864/2002 7.

<sup>22</sup>Charles Byaruhanga, 'Managing Investment Climate Reform: Case Study of Uganda Telecommunications' (2005) 5 <[http://siteresources.worldbank.org/INTWDRS/Resources/477365-1327693758977/8397896-1327771331430/byaruhanga\\_uganda\\_telecoms.pdf](http://siteresources.worldbank.org/INTWDRS/Resources/477365-1327693758977/8397896-1327771331430/byaruhanga_uganda_telecoms.pdf)> accessed 15 June 2017.

<sup>23</sup>Mary Shirley, Fred Tusubira, Luke Haggarty, and Frew Gebreab, 'Telecommunications Reform in Uganda' (2002) World Bank Working Research Paper 2864/2002 20.

<sup>24</sup>Cheikh Tidiane Gadio, 'Institutional Reform of Telecommunications in Senegal, Mali and Ghana: The Interplay of Structural Adjustment and International Policy Diffusion' (1995 DPhil dissertation, Ohio State University) 3 observes that the adoption of structural adjustment programmes that promoted liberalisation of economic sector as a condition for receipt of financial assistance in implementing economic reforms greatly influenced governments' decisions regarding telecommunications sector reform. This was evidenced by the privatisation of state-owned enterprises and the liberalisation of FDI in the 1990s and early 2000s.

infrastructure in the sector, as “monopoly whether private or public, breeds inefficiency...”<sup>25</sup> The proposal promoting competition in the telecommunications sector would eventually lead to the adoption of a telecommunications policy that encouraged liberalisation. The joint policy statement of January 1996 issued by the ministries of Finance,<sup>26</sup> and that responsible for communications proposed the introduction of competition in the core telecommunications services markets by licensing a second national operator. The joint policy statement of January 1996 paved the way for the full liberalisation of the telecommunications sector in 2006.

### **3.2.2 *The Role of WTO***

In addition to the influence of the World Bank, Uganda’s membership to the World Trade Organisation (WTO) also played a part in the liberalisation of the telecommunications sector.<sup>27</sup> Under the umbrella of the General Agreement on Trade and Services (GATS), WTO conducted a series of negotiations in relation to the liberalisation of trade in the telecommunications sector.<sup>28</sup> In February 1997, the World Trade Agreement on Basic Telecommunications (the WTO Basic Telecoms Agreement), in the fourth protocol to GATS, was successfully concluded. The WTO Basic Telecommunications Agreement, which came into effect on 5th February 1998, contains specific commitments on the opening up of telecommunications sectors to competition. Specifically, the agreement extended sector liberalisation commitments to basic telecommunications services, that is, fixed voice telephony and other core telecommunications services.<sup>29</sup> The Agreement also encourages the provision of telecommunications services through the estab-

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<sup>25</sup>Charles Byaruhanga, ‘Managing Investment Climate Reform: Case Study of Uganda Telecommunications’ (2005) 10 <[http://siteresources.worldbank.org/INTWDRS/Resources/477365-1327693758977/8397896-1327771331430/byaruhanga\\_uganda\\_telecoms.pdf](http://siteresources.worldbank.org/INTWDRS/Resources/477365-1327693758977/8397896-1327771331430/byaruhanga_uganda_telecoms.pdf)> accessed 15 June 2017.

<sup>26</sup>The involvement of the Ministry of Finance in the development of the telecommunications policy of 1996 was significant as most of its economic reforms or recommendations of reform in different sectors of the economy were influenced by its need to abide by the structural adjustment programmes developed by the World Bank.

<sup>27</sup>Uganda has been a member of the WTO since 1 January 1995.

<sup>28</sup>Ann Buckingham, Camilla Bustani, David Satola, and Tim Schwarz, ‘Telecommunications Reform in Developing Countries’ in Ian Walden and John Angel (eds), *Telecommunications Law and Regulation* (2nd edn, Oxford University Press 2005) 591.

<sup>29</sup>Other core telecommunications services referred to data transmission, telex, telegraph, facsimile, private leased circuit services (resale), fixed and mobile satellite systems and services, cellular telephony, mobile data services, paging, and personal communications services (PCS).

lishment of foreign firms, or commercial presence in foreign countries, including “the ability to own and operate independent telecom network infrastructure”.<sup>30</sup>

Uganda made unilateral GATS commitments on basic telecommunications aimed at introducing competition over a given period.<sup>31</sup> Uganda agreed to adopt the Reference Paper<sup>32</sup>; maintained the right of duopoly major licence holders and other pre-existing licence holders over international gateway services (including international roaming for mobile services) “according to the terms of those licences”; and agreed to grant licences to three mobile carriers.<sup>33</sup> By making these commitments, the government of Uganda made another step towards liberalisation and distanced itself from views expressed in the White Paper of 1994 against liberalisation of core telecommunications services.

### ***3.2.3 The Growth of Mobile Market***

The unpredictable rapid growth of the mobile market was another factor that led to the liberalisation of the telecommunications sector in Uganda. Specifically, the significant growth in the number of mobile subscribers following the market entry of the second national operator, MTN Uganda Limited, in 1998 illustrated that there was potential for greater competition.

The prevailing view when the Telecommunications Policy of 1996 was adopted was that Uganda’s telecommunications services market was very small. This perception was supported by the slow growth of the telecommunications sector following the granting of licences for mobile and value-added services prior to the adoption of the Telecommunications Policy of 1996. In particular, Clovergem Celtel Ltd which had been granted a licence to provide nationwide mobile services in September 1993, had only 5000 customers by 1998 after 3 years in operation.<sup>34</sup> It must be noted that a key reason for the small number of customers was that Celtel had opted to provide mobile telephone services on a post-paid contract basis, at very

<sup>30</sup>This is significant since foreign direct investment has played an important role in the development of the liberalised telecommunications sector in Sub-Saharan Africa countries as elaborated in Chap. 5 of this study.

<sup>31</sup>These commitments were revised in 1999 following the entry of the second national operator (MTN) Uganda in 1998 and the privatisation of the incumbent operator (UPTC); see Uganda-Revised Schedule of Specific Commitments in Basic Telecommunications (November 1999).

<sup>32</sup>The WTO Reference Paper (1997) 36 ILM 367 sets out regulatory principles for the establishment and maintenance of competitive telecommunications markets.

<sup>33</sup>Schedule of Specific Commitments of Uganda under the General Agreement on Trade in Services (GATS/SC/89) as of 24 December 1998. The schedule was later revised in 1999; Revised Schedule of Specific Commitments in Basic Telecommunications (November 1999).

<sup>34</sup>Econ One Research, ‘Uganda Telecommunications: A Case Study in the Private Provision of Rural Infrastructure’ (July 2002) 2 <<http://www.itu.int/ITUD/treg/Events/Seminars/2005/Thailand/Reference%20Material/Reference%20Material%20-%20Uganda%20Experience>> accessed 15 June 2017.

high prices putting its services beyond the reach of the average individual. Hence, despite the introduction of competition in the voice telephony market with the entry of Celtel, UPTC still remained the key provider of telephone services. It must be pointed out that while the Government of Uganda granted licences for provision of telecommunications services, it did not do so with the intention of liberalising the market. The entry of Celtel and the value-added services providers in the telecommunications sector did not stem from express government support for liberalisation, rather the entry of the entities was based on their own initiative. Until 1997, there was neither a regulatory framework expressly facilitating the growth of competition in the sector nor a sector regulator to promote competition. Thus, the slow growth of the telecommunications sector could also have been the result of the absence of a regulatory environment supporting competitive telecommunications markets.

In 1998, the Government of Uganda proactively took steps to open the telecommunications sector to competition by licensing a second national operator, MTN Uganda Limited, to provide telecommunications services. The entry of MTN Uganda Limited in 1998 fundamentally changed the landscape of Uganda's telecommunications sector particularly in the mobile market. At the time of MTN Uganda Limited's entry, Uganda Telecom had 55,749 subscribers (fixed phone line) while Celtel had 8100 mobile phone subscribers.<sup>35</sup> On the day of launch in October 1998, MTN managed to overtake incumbent mobile operator Celtel to become the leading mobile operator.<sup>36</sup> Six months later, in 1999, MTN Uganda Limited surpassed Uganda Telecom to become the largest telecommunications operator with a subscriber base of approximately 60,000.<sup>37</sup> That same year, in July, Uganda became the first country in Sub-Saharan Africa to have more mobile phone subscribers than fixed phone line subscribers.<sup>38</sup> By 2005, there were more than one million mobile phone subscribers<sup>39</sup> and 87,513 fixed-lines subscribers.<sup>40</sup> The exponential growth of the mobile market proved that the potential growth of

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<sup>35</sup>Mary Shirley, Fred Tusubira, Luke Haggarty, and Frew Gebreab, 'Telecommunications Reform in Uganda' (2002) World Bank Working Research Paper 2864/2002 52.

<sup>36</sup>Miruiki Mureithi, 'Evolution of Telecommunications Reform Policies in East Africa: Setting New Policy Strategies to Anchor Benefits of Policy Reforms' (2002) (3) South Africa Journal of Information and Communication 58, 63.

<sup>37</sup>Mary Shirley, Fred Tusubira, Luke Haggarty, and Frew Gebreab, 'Telecommunications Reform in Uganda' (2002) World Bank Working Research Paper 2864/2002 52.

<sup>38</sup>‘Communications in Uganda: A Look at One of Africa’s Fastest Growing Markets’ <<https://www.itu.int/net/itunews/issues/2009/06/31.aspx>> accessed 15 June 2017.

<sup>39</sup>ITU, ‘Country Statistics 2000-2015: Mobile-Cellular Subscriptions’ <<http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>> accessed 15 June 2017.

<sup>40</sup>ITU, ‘Country Statistics 2000-2015: Fixed Telephone Subscriptions’ <<http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>> accessed 15 June 2017.

the telecommunications market in Uganda had been grossly underestimated and there were soon calls for full liberalisation of the telecommunications sector.<sup>41</sup>

### **3.3 Evolution of the Telecommunications Policy from Monopoly to Competition**

The liberalisation of the telecommunications sector in most countries has usually involved significant market restructuring. In most cases, the liberalisation process has been implemented in phases rather than immediately opening up of the telecommunications markets to full competition.<sup>42</sup> That is, there has been partial competition in certain market segments with the incumbent operator still retaining monopoly over so-called basic telecommunications services or international or long-distance fixed voice services, and the corresponding network infrastructure.<sup>43</sup> A new regulatory framework has been adopted in order to bring about the transition from monopoly to competition with an independent regulatory body established to take over regulation in the telecommunications sector. This common approach to implementing the liberalisation policy was adopted by the Government of Uganda. This section of the study therefore focuses on the legislation and policy changes that facilitated the shift from monopoly to liberalisation in the telecommunications sector.

#### ***3.3.1 Liberalisation and Privatisation***

Before embarking on the discussion of the transition from monopoly to competition in Uganda's telecommunications sector, the distinction between liberalisation and privatisation is highlighted. Privatisation of the state-owned monopoly operator has been a key step in the process of liberalisation in the telecommunications sector in most countries. While “liberalisation” and “privatisation” mean two different things, the two terms are often confused. It is therefore important to elaborate on the difference between the two terms as applied in the context of liberalisation of the telecommunications sector.

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<sup>41</sup>UCC, ‘Recommendations on Proposed Review of the Telecommunications Sector Policy’ (2005) Policy Review Report 28/1/05, had as its main recommendation the full liberalisation of Uganda’s telecommunications sector on the basis that the policy of limited competition was stifling the growth of the sector.

<sup>42</sup>Ann Buckingham, Camilla Bustani, David Satola, and Tim Schwarz, ‘Telecommunications Reform in Developing Countries’ in Ian Walden and John Angel (eds), *Telecommunications Law and Regulation* (2nd edn, Oxford University Press 2005) 606.

<sup>43</sup>Ibid.

Liberalisation means introducing competition in the telecommunications sector by allowing commercial enterprises to set up new telecommunications businesses as long as they comply with certain government-defined policies rules and regulations.<sup>44</sup> Privatisation is the process of converting the state-owned monopoly operator to a privately owned entity.<sup>45</sup> Privatisation of a state-owned monopoly operator results in a shift in ownership from public to private hands. Privatisation on its own does not result in the opening up of the telecommunications sector to competition as it merely replaces a public monopoly with a private monopoly. A country may liberalise its telecommunications market without privatising its incumbent operator provided the operator is effectively and transparently separated from the government agencies that regulate the telecommunications sector.<sup>46</sup>

It should be noted that in a number of countries the privatisation of the state-owned monopoly operator has been primarily based on state revenue concerns and the need to improve the efficiency of the operator rather than the objective of liberalisation. This was the case in Uganda where the government initially focused on privatisation of the state-owned operator, UPTC in order to improve its efficiency<sup>47</sup> and to reduce government subsidy to the sector.<sup>48</sup> This is reflected in the fact that the Government of Uganda proposed privatisation of UPTC as a means of reforming the telecommunications sector in 1994 but made it clear that liberalisation of the telecommunications sector was not the main objective.<sup>49</sup>

Although the privatisation of UPTC was initially not linked to liberalisation, the privatisation of UPTC became an important step in the liberalisation process in Uganda after telecommunications policy shifted to liberalisation in 1996.<sup>50</sup> Therefore, while privatisation of a state-owned operator does not equate to liberalisation of the telecommunications sector, it may facilitate the liberalisation process as it grants regulators and policy-makers greater freedom to focus on the interests of end-users, and accelerate the telecommunications reform process.<sup>51</sup> In the case of Uganda, the privatisation of the UPTC in 2000 facilitated the opening up of the

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<sup>44</sup>ICC EBITT Commission, *Telecoms Liberalisation: An International Business Guide for Policy Makers* (2nd edn, ICC 2007) 9.

<sup>45</sup>Ian Walden, ‘Telecommunications Law and Regulation: An Introduction’ in Ian Walden and John Angel (eds), *Telecommunications Law and Regulation* (2nd edn, Oxford University Press 2005) 10.

<sup>46</sup>ICC EBITT Commission, *Telecoms Liberalisation: An International Business Guide for Policy Makers* (2nd edn, ICC 2007) 11.

<sup>47</sup>Government of Uganda, ‘White Paper on the Reform of the Telecommunications Sector’ (1994).

<sup>48</sup>UCC, ‘Recommendations on Proposed Review of the Telecommunications Sector Policy’ (2005) Policy Review Report 28/1/05, 20.

<sup>49</sup>Government of Uganda, ‘White Paper on the Reform of the Telecommunications Sector’ (1994).

<sup>50</sup>The privatisation of UPTC is highlighted as one of the important strategies in the Telecommunications Policy of 1996 which was put in place to trigger the liberalisation of Uganda’s telecommunications sector.

<sup>51</sup>ITU, *Trends in Telecommunications Reform 2006: Regulating in the Broadband World* (7th edn, ITU 2006) 6.

market to competition particularly because it reduced government involvement in the provision of telecommunications services.

### ***3.3.2 Evolution of the Telecommunications Policy in Uganda from Monopoly to Competition***

In this part of the chapter, the change in telecommunications policy in Uganda which was determinedly pro-monopoly for the greater part of the twentieth century is discussed. The shift in policy can best be explained by distinguishing among three phases: monopoly, duopoly (limited competition) and full liberalisation. The three phases are described below.

#### **3.3.2.1 Monopoly Era (1900–1993)**

Telecommunications services were introduced in Uganda by the British colonial administration which established a telegraph network in Entebbe and Kampala in 1900.<sup>52</sup> The provision of telephone services soon followed. Telecommunications services were provided exclusively by a state-owned entity in step with the telecommunications services structure in Britain.<sup>53</sup> Although the telecommunications sector was created by the British colonial administration, the development of Uganda's telecommunications sector for the greater part of the twentieth century was closely tied to regional co-operation with neighbouring East African countries, Kenya and Tanzania that were both under British control.

The first foray into the provision of telecommunications services under regional co-operation occurred in 1933 when the East African Post and Telegraph Company (EAPTC) took over the provision of post and telecommunications services in the three East African countries, Kenya, Tanzania and Uganda. This was followed by the East African Post and Telecommunications Administration (EAPTA) formed under the East Africa High Commission established in 1948.<sup>54</sup> The East Africa High Commission, created by Order in Council,<sup>55</sup> was a permanent executive

<sup>52</sup> Michael Tyler, Janice Hughes, and Helena Renfrew, 'Telecommunications in Kenya: Facing the Challenges of an Open Economy' <<http://www.vii.org/papers/tyler.htm>> accessed 15 June 2017.

<sup>53</sup> According to Eileen M Trauth and Douglas Pitt, 'Competition in the Telecommunications Industry: a New Global Paradigm and Its Limits' (1992) 7 Journal of Information Technology 3, 5, the rationale for state ownership in Britain rested on two assumptions: first, the objective of a universal service could best be met through state ownership of services and products; and second, that the development of infrastructural services such as railways and telecommunications could be most effectively fostered through government management and control.

<sup>54</sup> East African Post and Telecommunications Act of 1951 provided for the establishment of the East African Post and Telecommunications Administration.

<sup>55</sup> East Africa (High Commission) Order in Council 1947.

authority created to administer certain common services, including post and telecommunications, railways and harbours, and airways on an all-East African basis.<sup>56</sup> The East Africa High Commission was later superseded by the East African Common Service Organisation (EACSO) in 1961.<sup>57</sup> In 1967, the East African Community was founded and replaced EACSO.<sup>58</sup> Post and telecommunications services were unified and run by the East African Posts and Telecommunications Corporation (EAP&TC) with international services provided by East African External Telecommunications Company (EAETC).<sup>59</sup> EAP&TC provided telecommunications services in Uganda until the demise of the East African Community in 1977 when control of telecommunications services reverted back to the Ugandan government. The Uganda Post and Telecommunications Corporation (UPTC) was established by decree to take over the role of EAP&TC in Uganda.<sup>60</sup> In 1983, Uganda Post and Telecommunications Act was enacted which provided for UPTC as a de-facto monopoly provider of both telecommunications and postal services.

The overview of the telecommunications services sector in Uganda up until 1983 reveals that, for most of the twentieth century, telecommunications services provision in Uganda was the exclusive privilege of the state and decision-making about the organisation, development and provision of telecommunications services was the responsibility of a government official or government body. However, in the 1980s the exclusive reliance on the state to provide telecommunications services became a source of concern. UPTC as the provider of telecommunications services was reputed for provision of poor quality of service and there was limited investment by the Government of Uganda in the maintenance or development of telecommunications infrastructure.<sup>61</sup> Between 1985 and 1994, there were only 1.6 lines for every 1000 inhabitants in Uganda which was a very low penetration rate even when compared with other Sub-Saharan Africa countries with similar levels of per capita income.<sup>62</sup> Despite the terrible state of the telecommunications sector, the new government ushered in by the National Resistance Movement (NRM) in 1986 after several years of civil war did not initially consider telecommunications

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<sup>56</sup>J D Fage, Michael Crowder and Roland Anthony Oliver (eds), *The Cambridge History of Africa: Volume 8 c.1940-c.1975* (Cambridge University Press 1984) 452.

<sup>57</sup>The East African Common Service Organisation (Implementation) Agreement Ordinance 1961.

<sup>58</sup>This was the era between 1967 and 1977 in which the former British colonies from the East Africa (Kenya, Tanzania, and Uganda) region formed the East African Community with the objective of establishing an East Africa common market.

<sup>59</sup>Roger Noll and Mary Shirley, ‘Telecommunications Reform in Sub-Saharan Africa: Politics, Institutions and Performance’ <[http://dev.wcfia.harvard.edu/sites/default/files/656\\_nollshirley.pdf](http://dev.wcfia.harvard.edu/sites/default/files/656_nollshirley.pdf)> accessed 15 June 2017.

<sup>60</sup>Uganda Posts and Telecommunications Corporation Decree 1977, Order No.15 of 1977.

<sup>61</sup>This could partly be explained by the political instability in Uganda between 1979 and 1986.

<sup>62</sup>See Mary Shirley, Fred Tusubira, Luke Haggarty, and Frew Gebreab, ‘Telecommunications Reform in Uganda’ (2002) World Bank Working Research Paper 2864/2002 8 where it is observed that Kenya and Tanzania had telephone rates at 1.2 lines and 0.3 lines per 100 inhabitants, respectively.

as a priority.<sup>63</sup> However, as the government began to take measures to revitalise the economy ravaged by several years of civil war, it soon came to realise that it had to make comprehensive reforms in the telecommunications sector. In 1993, the government began to consider measures that could be put in place to improve telephone penetration and telecommunications services provision. The measures included competition in non-core telecommunications market segments and privatisation of UPTC.

### **3.3.2.2 The Beginning of Competition (1993–1996)**

1993 signalled the beginning of the change in telecommunications sector policy in Uganda with government focusing on addressing UPTC's ineptitude through privatisation. In May 1993, Cabinet decided to privatise UPTC while maintaining a majority shareholding.<sup>64</sup> This was shortly followed by the constitution of the Committee on Investment in Telecommunications (CIT) in June 1993 which had as its key mandate, studying ways of introducing private investment in the telecommunications sector. CIT's report of November 1993 provided among its key recommendations: creation of an independent telecommunications regulatory body; liberalisation of, *inter alia*, value-added services including data communications and mobile communications; and the privatisation of UPTC through the selling of 49% of its equity stake.<sup>65</sup> By recommending the liberalisation of value-added services, the CIT Report encouraged a shift in telecommunications policy towards competition.

Prior to the publication of the report, the government had already taken steps to open up the market to private sector investment. In July 1993, Celtel was granted a licence by the Ministry of Works, Housing and Communications to provide mobile services until 2008. Further private sector participation was permitted with the grant of several licences to value-added services providers in 1995 and 1996. However, the granting of the licences for mobile and value-added services was not aimed at liberalisation of the sector or introducing competition. For example, Celtel's entry was primarily a mechanism for introducing the private sector and extending the selection of available services, rather than providing a direct competitive challenge

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<sup>63</sup>“Initially Museveni’s (the President of Uganda) speeches suggested that he did not view telecommunications as priority; rather, telecommunications was seen as a luxury, of limited importance to the new regime’s supporters.” See Mary Shirley, Fred Tusubira, Luke Haggarty, and Frew Gebreab, ‘Telecommunications Reform in Uganda’ (2002) World Bank Working Research Paper 2864/2002 21.

<sup>64</sup>Charles Byaruhanga, ‘Managing Investment Climate Reform: Case Study of Uganda Telecommunications’ (2005) 9 <[http://siteresources.worldbank.org/INTWDRS/Resources/477365-1327693758977/8397896-1327771331430/byaruhanga\\_uganda\\_telecoms.pdf](http://siteresources.worldbank.org/INTWDRS/Resources/477365-1327693758977/8397896-1327771331430/byaruhanga_uganda_telecoms.pdf)> accessed 15 June 2017.

<sup>65</sup>CIT, ‘Report of the Committee on Investments in Telecommunications’ (November 1993).

to the UPTC.<sup>66</sup> It is worth noting that Celtel's licence covered only mobile services and it focused on providing mobile services to elite in urban corridors in south-central Uganda by setting prices at level out of reach of Uganda's middle class. While Celtel could have intensified competition in the voice telephony market, the high prices for its mobile services and its limited geographical reach meant that most of Uganda's population continued to rely on UPTC to access telecommunications services. Therefore, the partial private sector participation in the telecommunications sector did not threaten UPTC's monopoly position in the sector as it still had exclusivity of core services and significant market share in the telecommunications services overall. Notably, in 1994, after reviewing the CIT report, the government issued a white paper which recommended the divestiture of UPTC. While the White Paper sought to reduce government control over UPTC by limiting its shareholding, it still maintained that the telecommunications sector would be operated as a monopoly, with core services in the telecommunications sector not being liberalised for at least 10 years.<sup>67</sup>

### 3.3.2.2.1 Adoption of the Telecommunications Sector Policy Statement of 1996 and the Enactment of the Communications Act of 1998

Two years after the Government of Uganda adopted the White Paper of 1994 it became apparent that the negative stance on liberalisation of the telecommunications sector had changed. In January 1996, a joint policy statement was issued by the Ministry of Finance, and the Ministry of Works, Housing and Communications. The policy statement, the Telecommunications Policy of 1996, had as its main objective to increase the penetration and level of telecommunications services in the country through private sector investment rather than government intervention.<sup>68</sup> The policy statement provided for four major policy strategies:

1. Unbundling of UPTC into Uganda Post Limited (UPL) and Uganda Telecommunications Limited (Uganda Telecom),
2. Privatisation of Uganda Telecom with the government maintaining minority shares
3. Establishment of an independent sector regulator
4. Introduction of competition in the industry, including licensing a second national operator.

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<sup>66</sup>Econ One Research, 'Uganda Telecommunications: A Case Study in the Private Provision of Rural Infrastructure' (July 2002) 2 <<http://www.itu.int/ITUD/treg/Events/Seminars/2005/Thailand/Reference%20Material/Reference%20Material%20-%20Uganda%20Experience.pdf>> accessed 15 June 2017.

<sup>67</sup>Charles Byaruhanga, 'Managing Investment Climate Reform: Case Study of Uganda Telecommunications' (2005) 3 <[http://siteresources.worldbank.org/INTWDRS/Resources/477365-1327693758977/8397896-1327771331430/byaruhanga\\_uganda\\_telecoms.pdf](http://siteresources.worldbank.org/INTWDRS/Resources/477365-1327693758977/8397896-1327771331430/byaruhanga_uganda_telecoms.pdf)> accessed 15 June 2017.

<sup>68</sup>UCC, 'Recommendations on Proposed Review of the Telecommunications Sector Policy' (2005) Policy Review Report 28/1/05.

The fourth strategy providing for the licensing of second national operator was significant as it supported competition in core telecommunications services<sup>69</sup> which was under the exclusive purview of UPTC. The establishment of an independent sector regulator was also significant as UPTC was prior to the sectoral reform largely self-regulated.<sup>70</sup> Self-regulation had been a stumbling block to efficient to provision of services.<sup>71</sup>

In order to implement the telecommunications sector reform program provided for in the Telecommunications Policy of 1996, a new regulatory framework was established in 1997 with the enactment of the Communications Act, Cap. 106. The Communications Act sought to provide for the restructuring of the communications industry in Uganda by establishing the Uganda Communications Commission, providing for unbundling of UPTC by separating postal and telecommunications commercial activities, and most notably, liberalising and introducing competition in the industry.<sup>72</sup>

The Telecommunications Sector Policy Statement of 1996 and telecommunications legislation provided the basis for the full liberalisation of the telecommunications sector in 2006. While the Communications Act was the key law put in place to liberalise the telecommunications sector, other legislative reforms that were aimed at fostering economic liberalisation across sectors also played a role. Specific reference is made to the Investment Code Act of 1991 which facilitated and continues to facilitate foreign investment in the country.<sup>73</sup>

### **3.3.2.3 Privatisation of UPTC and the Duopoly Period (1998–2006)**

The Telecommunications Policy of 1996 provided for the introduction of limited competition among its key policy strategies whereby two national operators would exclusively provide the core telecommunications services. The objectives of the duopoly policy were as follows: to increase tele-density from 0.28 lines to 2.0 per 100 people in 2002, improve telecommunications facilities and quality of service, serve the unmet customer demands, and increase the geographical distribution and

<sup>69</sup>That is, basic telecommunications services and international/long-distance fixed voice services.

<sup>70</sup>Mary Shirley, Fred Tusubira, Luke Haggarty, and Frew Gebreab, ‘Telecommunications Reform in Uganda’ (2002) World Bank Working Research Paper 2864/2002 17.

<sup>71</sup>Ibid.

<sup>72</sup>Long title of the Communications Act, Cap.106.

<sup>73</sup>The Investment Code Act, Cap 92 was enacted establishing an investment authority to facilitate the procedure for entities and individuals interested in investing in Uganda’s economy, fostering the FDI liberalisation process.

coverage of services throughout the country.<sup>74</sup> Increased private sector investment was seen as critical for the attainment of the objectives with limited competition as an important strategy for attracting private sector investment in Uganda's telecommunications sector which was deemed to have an unattractively small market size.<sup>75</sup> According to the government, limited competition would promote universal services through investment in telecommunications infrastructure as it allowed the licensed investors to recoup some of their investment in return for which they were required to fulfil the rollout obligations that were specifically included in their licenses.<sup>76</sup> Thus, when MTN Uganda Limited was granted the second national operator licence it was subject to the condition that it would install 89,000 telephone lines in 5 years.<sup>77</sup>

Initially, the government's plan was to sell the licence for the second national operator prior to the privatisation of UPTC since there were some doubts about whether the second network operator licence would attract any bidders if Uganda Telecom was sold first.<sup>78</sup> However, it was eventually stipulated in the Communications Act, Cap. 106 that the second national operator licence could only be issued after Uganda Telecom had been privatised. The privatisation of Uganda Telecom proved to be more challenging than anticipated. The time consuming process of incorporating Uganda Telecom and sorting out its finances and worker relations delayed the Uganda Telecom sales process to the point where the government requested, and Parliament allowed, the process of licensing of the second national operator to proceed.<sup>79</sup>

In June 1997, tender of the second national operator licence was opened and in April 1998 MTN Uganda Limited was granted the licence. The licensing of MTN was the first instance of direct competitive challenge for former monopoly operator Uganda Telecom. There existed other firms in the telecommunications sector, Celtel which provided mobile services and valued added service providers. However, the licences of the companies were restricted with UPTC still having exclusivity with regard to core services such as fixed-lines and satellite services. MTN Uganda Limited, in contrast, was licensed to provide all telecommunications services including fixed-lines and international gateway access services.

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<sup>74</sup>Statistics from 1997 indicate that even though the capital city Kampala had less than 10 percent of the population, it had 70 percent of all subscriber lines in 1997, while the Eastern and Western regions of the country, home to more than 50 percent of the population, only had 20 percent. Mary Shirley, Fred Tusubira, Luke Haggarty and Frew Gebreab, 'Telecommunications Reform in Uganda' (2002) World Bank Working Research Paper 2864/2002 9.

<sup>75</sup>UCC, 'Recommendations on Proposed Review of the Telecommunications Sector Policy' (2005) Policy Review Report 28/1/05 19.

<sup>76</sup>Ibid, 8.

<sup>77</sup>This obligation was stipulated in its operation licence.

<sup>78</sup>Mary Shirley, Fred Tusubira, Luke Haggarty, and Frew Gebreab, 'Telecommunications Reform in Uganda' (2002) World Bank Working Research Paper 2864/2002 30.

<sup>79</sup>Ibid, 29.

While the licensing of the second national operator progressed smoothly, the process of privatising Uganda Telecom suffered some setbacks with two unsuccessful attempts to sell Uganda Telecom following the incorporation of Uganda Telecom and the finalisation of the financial restructuring plan in February 1998. The two privatisation attempts were marred by insufficient interest, low bidding prices and corruption claims.<sup>80</sup> In late 1999, a third attempt was mounted attracting 3 bidders. In February 2000, Uganda Telecom was finally sold to the UCOM consortium of companies comprising, Telecel International of Switzerland, Orascom Telecom of Egypt and Detecon of Germany which acquired 51% of Uganda Telecom's shareholding with the government retaining 49% shareholding.<sup>81</sup>

With the conclusion of the sale of Uganda Telecom, the government embarked on operationalising the limited competition period. The Communications Act had introduced a licensing regime that enabled MTN Uganda Limited and Uganda Telecom to exclusively provide all telephone services. The licensing regime as prescribed by the Communications Act classified services under major and minor licences. A major licence was defined as including a licence for the provision of local, long distance or international telephone services, trunk capacity resale, rural telecommunications, store and forwarding messaging, cellular or mobile service.<sup>82</sup> A minor licence included all licences not being major licences.<sup>83</sup> The minister responsible for communications issued the major licences upon the advice of the regulator, while the UCC issued minor licences.<sup>84</sup> MTN Uganda Limited and Uganda Telecom were the only recipients of the major licences. Since most telecommunications services were provided under the major licence rather than the minor licence, it meant that the bulk of the telecommunications services were provided by the two national operators. The only exception was the continued provision of mobile services by Celtel stemming from its 1993 licence and full competition in the value-added services market.<sup>85</sup> In 2000 the limited competition for a 5 year period commenced. The clock could only start counting down the 5-year period of the exclusive duopoly for MTN and Uganda Telecom after the Uganda Telecom licence was signed on July 25, 2000.<sup>86</sup>

The strategies of privatisation of Uganda Telecom and licensing of a second national operator helped to enhance competition in the telecommunications sector.

<sup>80</sup>Mary Shirley, Fred Tusubira, Luke Haggarty, and Frew Gebreab, ‘Telecommunications Reform in Uganda’ (2002) World Bank Working Research Paper 2864/2002 30.

<sup>81</sup>Jonathan L Muwonge and Emanuel Gomes, ‘Analysis of the Acquisition Process of Uganda Telecom by LAP Greencom’ (2007) 1(1) MIBES Transactions Online 108.

<sup>82</sup>Uganda Communications Act, Cap.106, s 1(o).

<sup>83</sup>Ibid, s 1(q).

<sup>84</sup>Ibid, s 33.

<sup>85</sup>Exception was made for Celtel which continued to have a major licence to provide mobile services.

<sup>86</sup>Mary Shirley, Fred Tusubira, Luke Haggarty, and Frew Gebreab, ‘Telecommunications Reform in Uganda’ (2002) World Bank Working Research Paper 2864/2002 49.

The market entry of second national operator MTN Uganda Limited revolutionised the telecommunications sector, particularly the mobile market. Following MTN Uganda Limited's entry, there was significant growth in the number of people having access to telephone services. At the time MTN Uganda Limited's entry in October 1998, Uganda Telecom had 55,749 fixed telephone subscribers and Celtel had 8100 wireless subscribers.<sup>87</sup> A year later, Uganda Telecom's subscriber base was at still about 55,000, Celtel had grown to 19,074, while MTN Uganda Limited had 53,528 subscribers.<sup>88</sup> Within two and a half years after the MTN Uganda Limited's entry connected customers had grown by about 267%.<sup>89</sup>

Aside from MTN Uganda Limited's entry into the telecommunications sector in Uganda, the privatisation in 2000 of Uganda Telecom increased competitive pressures in the sector particularly when it entered the mobile market.<sup>90</sup> Uganda Telecom began to aggressively compete against Celtel and MTN Uganda Limited for subscribers by launching a major publicity and promotional campaign.<sup>91</sup> The two incumbent mobile operators responded with their own promotional campaigns.<sup>92</sup> By 2001, Uganda Telecom had 10,000 wireless subscribers while Celtel and MTN had 32,934, and 149,216 mobile subscribers respectively.<sup>93</sup>

An interesting development arising from the decision to grant MTN Uganda Limited the licence to operate prior to the privatisation of Uganda Telecom is that MTN Uganda Limited, rather than the former monopoly operator, had the greater market share at the time of operationalisation of the duopoly period. While the government was trying to privatise Uganda Telecom, MTN Uganda quickly built up a subscriber base in the mobile telephone market soon becoming the largest telephone operator in the market, a position it still maintains in the fully liberalised telephone services market. The Table 3.1 illustrates the transformation of Uganda's telecommunications sector during the duopoly period.

### 3.3.2.4 Full Liberalisation and Telecommunications Policy of 2006

The telecommunications sector during the duopoly period was described as moderately competitive.<sup>94</sup> Nevertheless, there were calls for the introduction of full competition prior to the expiry of the duopoly period. One key ground was that the

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<sup>87</sup>Ibid, 52.

<sup>88</sup>Ibid.

<sup>89</sup>Ibid.

<sup>90</sup>Ibid, 48.

<sup>91</sup>Ibid.

<sup>92</sup>Ibid.

<sup>93</sup>Ibid, 52.

<sup>94</sup>Ibid, 48.

**Table 3.1** Uganda's telecommunications market composition in 2005

Licence category	Type of licence	Number of providers	Remarks
National telecommunications operators	Major	2 (Uganda Telecom and MTN Uganda Limited)	The national telecommunications licences allowed them to provide all telecommunications granting them exclusivity in fixed telephony and international gateway
Mobile operators	Major	MTN Uganda Limited, Uganda Telecom, and Celtel	Competition in the mobile market was restricted to the three operators. Celtel, though not a national operator, was granted the right to have its own independent international gateway
Internet access service	Minor	18 (12 operational licensed including the national telecommunications operators)	Open competition in the retail market. However, minor licences incorporated restrictions with regard to infrastructure provision granting exclusivity to the national telecommunications operators. In the duopoly period licensing international data gateways to Internet Service Providers (ISPs) was suspended

**Source:** Extracted from Uganda Communications Commission, 'Recommendations on Proposed Review of the Telecommunications Sector Policy' (2005) Policy Review Report 28/1/05

decision to opt for limited competition was based on the erroneous assumption that the market size for telecommunications services was very small. The rapid growth of the mobile market in Uganda, following the entry of MTN Uganda Limited illustrated that the telecommunications services market size had been grossly underestimated. The growth in the number of mobile subscribers, which had passed the one million mark in 2004, indicated that there was potential for greater competition. Due to the exponential growth of the telecommunications sector, especially the mobile market, targets were met earlier than predicted. One of the goals set in the Telecommunications Policy of 1996 was to increase telephone density from the current 0.26 lines per 100 persons to 2.0 lines per 100 persons. A main target was increasing the number of telephone lines to at least 300,000 by the year 2002.<sup>95</sup> By 2002, the fixed phone lines had not risen drastically from the 55,000 lines in 1998 to 59,472. However the number of mobile telephone subscribers had grown from 8100 subscribers in early 1998 to 505,627 in 2002.<sup>96</sup>

<sup>95</sup>UCC, 'Recommendations on Proposed Review of the Telecommunications Sector Policy' (2005) Policy Review Report 28/1/05 6.

<sup>96</sup>Bernard Krief Consultants, 'The ICT Africa Marketplace Information & Communications Technologies East Africa and Indian Ocean- Country Profile Uganda' 5 <[http://www.bk-conseil.com/espaceinformation/documentation/ict/Uganda\\_Country\\_Profile.pdf](http://www.bk-conseil.com/espaceinformation/documentation/ict/Uganda_Country_Profile.pdf)> accessed 15 June 2017.

Thus, while the number of fixed telephone lines remained low, the composite of fixed-line and mobile telephone subscribers surpassed the target number of persons accessing telephony services.

Although the limited competition period was set to expire in July 2005, by 2004 telephone penetration had increased to 4.2 lines per 100 persons surpassing the 2.0 lines per person target. With the targets of the limited competition sufficiently met, the continued status quo was over time blamed for stifling innovation and development of the telecommunications sector, as well as hindering uptake of ICT in other sectors.<sup>97</sup> The reasoning behind limited competition was also questioned on the basis that the licensing structure also resulted in competition concerns because the national telecommunication operators' (NTOs) licences enabled the national operators to provide value-added services for which minor licences had been issued with restrictions.<sup>98</sup>

Not surprisingly, the 2005 review of the telecommunications policy of 1996 provided as one of its key recommendations the full liberalisation of the sector by 2010. Prompted by policy review recommendations in 2005, the Government of Uganda took steps to bring the duopoly period to an end. The duopoly period expired on the 24 July 2005; however the full liberalisation of Uganda's telecommunications sector effectively occurred in 2006. On 11 May 2006, the ministry responsible for telecommunications issued Ministerial Policy Guidelines as an interim response to the end of the duopoly period. In June 2006, the Ministry of Information and Communication Technology was set up following which the minister issued further Ministerial Policy Guidelines on 13 October 2006 giving policy direction for the full liberalisation of the telecommunications sector by 1 November 2006, opening competition in all aspects of telecommunications. Following the 13th October 2006 Ministerial Guidelines, UCC established a new licensing regime becoming effective on 2 January 2007 providing for new categories of licences which are: infrastructural licences<sup>99</sup> and service licences.<sup>100</sup> The policy of full liberalisation of the telecommunications sector has facilitated further growth of the sector. The number of mobile operators had risen from three to seven by 2014. MTN Uganda Ltd and Uganda Telecom remain the key fixed-line

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<sup>97</sup>Francis Fred Tusubira et al, 'Uganda Telecommunications Sector Performance Review: A Supply ICT Analysis for Policy Outcomes' (2007) Research ICT Africa 16 <[http://www.researchictafrica.net/publications/Telecommunications\\_Sector\\_Performance\\_Reviews\\_2007/Uganda%20Telecommunications%20Sector%20Performance%20Review%202007.pdf](http://www.researchictafrica.net/publications/Telecommunications_Sector_Performance_Reviews_2007/Uganda%20Telecommunications%20Sector%20Performance%20Review%202007.pdf)> accessed 15 June 2017.

<sup>98</sup>UCC, 'Recommendations on Proposed Review of the Telecommunications Sector Policy' (2005) Policy Review Report 28/1/05 24.

<sup>99</sup>The infrastructure licences permit holders to establish and operate telecommunications infrastructure, with a requirement to permit service providers access on a non-discriminatory commercial basis.

<sup>100</sup>Service licences permit holders to provide services, using infrastructure provided by infrastructure licensees. They can also establish their own infrastructure if licensed to do so.

operators in the country, however they no longer have exclusivity in core telecommunication services.<sup>101</sup>

### 3.3.2.5 Competition Concerns in the Fully Liberalised Telecommunications Sector

The full liberalisation of the telecommunications has given rise to number of competition concerns particularly in the mobile market which is the largest and most competitive market segment in the sector. Specifically, there have been concerns with regard to interconnection, access to spectrum and anti-competitive practices. Interconnection has been a major concern ever since the mobile market was opened to competition in 1993. Celtel (now Airtel) faced challenges interconnecting with UPTC.<sup>102</sup> UPTC only signed an interconnection agreement with Celtel after pressure was exerted by the ministry responsible for communications.<sup>103</sup> However, in the fully liberalised telecommunications sector it has been the case that incumbent mobile operators have tried to use interconnection as a means to distort competition by charging high interconnection rates.

With regard to access to spectrum, the full liberalisation of the telecommunications and increased competition in the mobile market has rendered spectrum a scarce resource acting as a barrier to entry in the market.<sup>104</sup> Spectrum management has become a critical regulatory issue in the fully liberalised telecommunications sector.

Anti-competitive behaviour by telecommunications operators is another major issue particularly because a number of the operators are local subsidiaries of large multinational telecommunications groups. Empirical studies conducted in developing countries indicate that the presence of local subsidiaries in markets in developing countries might have a negative impact on competition. In particular, the conduct of the local subsidiaries might result in the market exit of smaller local operators.<sup>105</sup> For example, a local subsidiary of a MNC with financial stay may

<sup>101</sup>The competition landscape in Uganda's telecommunications sector is described in greater detail in Chap. 4, Sect. 4.4.

<sup>102</sup>Mary Shirley, Fred Tusubira, Luke Haggarty, and Frew Gebreab, 'Telecommunications Reform in Uganda' (2002) World Bank Working Research Paper 2864/2002 38.

<sup>103</sup>Ibid.

<sup>104</sup>For example, operator Anupam Global had to delay plans to roll out its network due to the unavailability of spectrum for mobile voice services.

<sup>105</sup>Sanjaya Lall, 'Multinationals and Market Structure in an Open Developing Economy: The Case of Malaysia' (1979) 115(2) Weltwirtschaftliches Archiv 325; and Magnus Blomström, 'Foreign Investment and Productive Efficiency: The Case of Mexico' (1986) 35(1) Journal of Industrial Economics 97.

drive out local competitors through predatory pricing since short term losses should not be too serious a problem.<sup>106</sup>

### 3.4 Conclusion

This chapter has provided an overview of the reasons for the liberalisation of the telecommunications sector in Uganda. It reveals that factors affecting the shift from monopoly to competition in the Uganda's telecommunications sector were closely linked to structural reforms for developing countries formulated by the World Bank and IMF. The chapter also highlights the transformation of the telecommunications sector in Uganda, as the government gradually embraced the concept of competition in the telecommunications sector. More importantly, the chapter points out that while competition has facilitated the growth of the telecommunications sector it has given rise to competition-related regulatory concerns. It is therefore critical to have a regulatory framework in place that aptly addresses regulatory concerns stemming from the full liberalisation of the telecommunications sector. The subsequent chapters seek to establish the extent to which Uganda's regulatory framework addresses the specific regulatory concerns that have been highlighted in this chapter and the introduction chapter.

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<sup>106</sup>Richard S Newfarmer, 'TNC Takeovers in Brazil: The Uneven Distribution of Benefits in the Market for Firms' (1979) 7(1) *World Development* 25, which explores the effect of FDI in electrical industry in Brazil. The article notes that MNCs used predatory pricing as a means of gaining a dominant position in the market.

# Chapter 4

## Regulating Anti-Competitive Conduct in the Telecommunications Market in Uganda

Liberalisation of the telecommunications sector has brought the issue of competitive conduct of operators to the forefront. This is evidenced by the increased number of investigations by competition authorities into anti-competitive behaviour in the telecommunications sector worldwide following the opening-up of the sector to competition.<sup>1</sup> As already explained in Chap. 3 of this study, in Uganda, a phased approach to liberalisation of the telecommunications sector was adopted with the government opting to have limited competition for a prescribed period before embracing full competition. This phase, known as the duopoly period,<sup>2</sup> was characterised as having moderate competition, with fairer pricing and improved quality of services.<sup>3</sup> Nevertheless, there were still concerns of anti-competitive behaviour by vertically integrated telecommunications operators particularly in the value-added services market which had not been subject to limited competition.<sup>4</sup>

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<sup>1</sup> A notable example is the European Commission which has investigated a number of cases of anti-competitive behaviour in different telecommunications markets in the European Union. See *Deutsche Telekom AG* [2003] OJ L 263/9; Case COMP/38.233 *Wanadoo Interactive* Commission Decision 2003, published under <[http://ec.europa.eu/competition/antitrust/cases/dec\\_docs/38233/38233\\_87\\_1.pdf](http://ec.europa.eu/competition/antitrust/cases/dec_docs/38233/38233_87_1.pdf)> accessed 15 June 2017; and *Wanadoo Espana v Telefonica SA* [2008] OJ C 83/6. While the culture of competition law enforcement in Sub-Saharan Africa is not as strong as in developed jurisdictions such as the European Union, there have been a few landmark cases in the region. One particular case worth mentioning is *Competition Commission v Telkom SA Ltd* 11/CR/Feb04 [2011] ZACT 2. That case addressed the issue whether the incumbent operator, Telkom SA, had engaged in anti-competitive behaviour in contravention of the South Africa Competition Act by granting access to its fixed network subject to terms and conditions viewed as unfavourable by independent value-added services providers.

<sup>2</sup>The duopoly period is described in great detail in Chap. 3, Sect. 3.3.2.3.

<sup>3</sup>UCC, ‘Recommendations on Proposed Review of the Telecommunications Sector Policy’ (2005) Policy Review Report 28/1/05 22.

<sup>4</sup>One particular competition concern cited in UCC, ‘Recommendations on Proposed Review of the Telecommunications Sector Policy’ (2005) Policy Review Report 28/1/05 24 related to the licensing structure. Under the licensing structure, the two national telecommunications operators

However, it is in the fully liberalised telecommunications sector that the issue of anti-competitive behaviour has gained more prominence particularly in the mobile telephony market which is undoubtedly the most competitive market segment in the sector.

This is illustrated by the price war in the mobile market between 2010 and 2011 that saw a significant reduction in call prices which led to claims of predatory pricing having a negative impact on competition especially with smaller operators that had less financial capacity to engage in such ferocious competition.<sup>5</sup>

## **4.1 Anti-Competitive Conduct in the Telecommunications Sector: Why Uganda Should Focus on the Mobile Market**

That competition concerns in the telecommunications sector in Uganda have centred primarily on anti-competitive conduct in the mobile market is an interesting development. This is because in a number of jurisdictions, specifically those with more developed telecommunications markets, anti-competitive conduct concerns have for the most part centred on the former fixed-line monopoly operator. The case for such focus is based on the fact that in a number of countries, the vertically integrated former monopoly operator continues to maintain a strong position in the liberalised telecommunications sector.

The majority of main mobile operators<sup>6</sup> for example, within the European Union are subsidiaries of the fixed incumbent operators.<sup>7</sup> However, most competition concern has been in relation to the fixed-line incumbent's monopoly over most fixed local network facilities which are important inputs for the provision of telecommunications services such as internet and fixed telephony. In the European Union, at the time of full liberalisation of the telecommunications markets, the former monopoly operators provided over 98% of fixed access

Uganda Telecom and MTN Uganda Limited, the only major license holders, could provide value-added services while minor licences holders had been issued licences with restrictions particularly with regard to infrastructure ownership. As the national telecommunications operators were also infrastructure providers particularly in the last mile access market, the potential for abuse of dominant position at the upstream level distorting competition at the retail level was an issue of concern.

<sup>5</sup>The price war was sparked by Warid Telecom Uganda (now Airtel) which entered the mobile communications market in February 2008. In order to compete against the well-established incumbent telecommunications operators, Warid Telecom began a campaign that offered unlimited on-net calls for as low as 1000 Uganda shillings (US\$ 0.4 cts) per day. See Daniel K. Kalinaki, 'Uganda: Telecoms Price War No One Could Win' *Daily Monitor* (Kampala, 5 September 2011) <<http://allafrica.com/stories/201109061267.html>> accessed 15 June 2017.

<sup>6</sup>This refers to the ten mobile operators that control 90 percent of the mobile market in the European Union. See Massimo Flori, *Network Industries and Social Welfare: The Experiment that Reshuffled European Utilities* (Oxford Press 2013) 109.

<sup>7</sup>Ibid.

network connections in Europe.<sup>8</sup> Not surprisingly, the European Commission has been involved in several investigations into anti-competitive conduct by incumbent fixed-line operators in different member states.<sup>9</sup> The key goal for the European Commission has been ensuring that the broadband market, for which the fixed network is an important input, becomes competitive.<sup>10</sup>

In the United States, the leading cases on anti-competitive behaviour in the telecommunications sector have focused on the incumbent local exchange carriers' (ILECs) monopoly over the local access network.<sup>11</sup>

While there may be a strong case for competition authorities in other countries to focus primarily on anti-competitive behaviour in the fixed-line market, in Uganda, the market composition is starkly different pointing to a more different approach to competition law enforcement. Specifically, the incumbent fixed-line operator, Uganda Telecom does not maintain a strong position in the telecommunications sector where most telecommunications services are provided through the mobile network.<sup>12</sup> This is in stark contrast to countries with a more developed telecommunications sector where the majority of the population have access to fixed network services. Therefore, in Uganda, the market composition points to prioritising competition law enforcement in the mobile market. Of significance is that telecommunications services are primarily provided by mobile operators, with local subsidiaries of the large multinational telecommunications groups having the greater market share.<sup>13</sup> This suggests that it is perhaps worthwhile to shift focus from the former fixed-line incumbent operator to the subsidiaries of large multinational telecommunications groups.

In light of the above-mentioned anti-competitive behaviour concerns, this chapter is devoted to assessing the extent to which the existing regulatory framework deals with anti-competitive conduct in the telecommunications sector in Uganda.

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<sup>8</sup>Deutsche Telekom AG (Case COMP/C-1/37.451, 37.578, 37.579) Commission Decision 2003/707/EC [2003] OJ L 263/9, para 83.

<sup>9</sup>Deutsche Telekom AG EC [2003] OJ L 263/9; Case COMP/38.233 Wanadoo Interactive Commission Decision 2003, published under <[http://ec.europa.eu/competition/antitrust/cases/doc\\_docs/38233/38233\\_87\\_1.pdf](http://ec.europa.eu/competition/antitrust/cases/doc_docs/38233/38233_87_1.pdf)> accessed 2015 June 2017; and Wanadoo Espana v Telefonica SA Case [2008] OJ C 83/6.

<sup>10</sup>Case COMP/C-1/37.451, 37.578, 37.579 *Deutsche Telekom AG* Commission Decision 2003/707/EC [2003] OJ L 263/9, para 83 in which the Commission found that alternative infrastructure such as wireless local loop, fibre optic, cable networks, and satellites were not sufficiently developed to be substitutes for the fixed network owned by the incumbent.

<sup>11</sup>*Northeastern Co. v AT&T Co.*, 651 F.2d 76 (2d Cir. 1981); *MCI Communications v AT&T Co.*, 708 F.2d 1081 (7th Cir. 1982); and *Verizon Communications v Law Offices of Curtis V Trinko, LLP*, 540 U.S. 398 (2004).

<sup>12</sup>This fact is explained in detailed in the next section that describes the state of competition in the telecommunications sector in Uganda. See Sect. 4.4 of this chapter.

<sup>13</sup>Ibid.

## 4.2 Regulating Anti-Competitive Behaviour: Economy-Wide Versus Sector-Specific Competition Rules

A key piece of legislation for regulating anti-competitive conduct in the majority of countries is a national competition law which is of economy-wide application in most cases extending to the telecommunications sector. In Uganda however, the absence of a national competition law entails that competition regulation is governed by industry specific rules enforced by the industry regulator UCC.<sup>14</sup> As Uganda's regulatory approach does not follow the norm it is doubly important to establish whether the regulatory framework is sufficient for purposes of preventing or curbing anti-competitive conduct in the liberalised telecommunications sector. The assessment therefore includes, where applicable, reference to other countries in Sub-Saharan Africa with experience applying national competition legislation in the telecommunications sector. However, as most countries in the region lack enforcement experience<sup>15</sup>; reference is made primarily to South Africa and Zambia that stand out as having accumulated the most competition law enforcement experience in the region.<sup>16</sup> In addition, reference is made to the United States and the European Union which have the most developed competition law jurisprudence in the world. There is a stark difference between the telecommunications market composition in the United States and the European Union on the one hand and Uganda's telecommunications market composition.

The difference in market composition strongly suggests that the regulatory approach towards anti-competitive conduct adopted in the developed jurisdictions may not have the same effect if taken up in Uganda. However, as the leading competition law enforcement countries in Sub-Saharan Africa have not developed much jurisprudence in the telecommunications sector, reference to the United States and the European Union might provide some useful guidance. This is

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<sup>14</sup>Other notable countries are Nigeria and Ghana which in the absence of national competition law rely on industry specific competition rules.

<sup>15</sup>David J Gerber in his book *Global Competition: Law, Markets, and Globalisation* (Oxford University Press 2010) 248, observes that a number of countries in Sub-Saharan Africa have virtually no competition law enforcement experience. Also see Clifford Chance 'Our Insights into Antitrust Trends in Africa 2017' <<http://globalmandatoolkit.cliffordchance.com/downloads/Africa-Trends-2017-new.pdf>> accessed 15 June 2017 which notes that the majority of authorities are still building up enforcement capacity.

<sup>16</sup>Zambia has had a national competition law in place since 1994 following the enactment of the Competition and Fair Trading Act of 1994, Cap.417. The Act established the Zambia Competition Commission which, until 2010, conducted a number of investigations into anti-competitive conduct in different economic sectors in Zambia. In 2010, the enactment of the Zambia Competition and Consumer Protection Act 2010 replaced the Zambia Competition Commission with the Zambia Competition and Consumer Protection Commission. In South Africa, since the enactment of the Competition Act 1998, the Competition Commission and the Competition Tribunal have been very active in enforcing the Act in different economic sectors including the telecommunications sector.

particularly the case with regard to European Union competition law as Uganda's industry specific competition rules are clearly influenced by the former.<sup>17</sup>

It has been stated in the previous paragraphs that this chapter deals with the regulation of anti-competitive practices in Uganda's telecommunications sector. However, the scope of this chapter must be clearly demarcated. Firstly, this chapter only addresses abuse of dominant position and anti-competitive agreements. Anti-competitive mergers and acquisitions are discussed in Chap. 5. In light of the increased significance of cross-border mergers and acquisitions as form of foreign direct investment in Uganda's telecommunications sector Chap. 5 assesses adequacy of the merger control provisions in Uganda.

Secondly, the anti-competitive behaviour analysis in the telecommunications sector in Uganda is limited to the infrastructure provision and retail services market. The telecommunications market is generally divided into equipment, networks, and services. However, the equipment market is excluded from the analysis of anti-competitive behaviour in Uganda's telecommunications sector.<sup>18</sup>

### 4.3 Overview of Competition in the Telecommunications Sector in Uganda

Before embarking on an analysis of the adequacy of the laws governing anti-competitive behaviour in the telecommunications sector, it is important to provide an overview of the state of competition in the fully liberalised telecommunications sector in Uganda and highlight particular market characteristics that may have an effect on the competitive landscape in the sector.

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<sup>17</sup>The Communications (Fair Competition) Regulations, 2005, SI 2005/24 govern anti-competitive behaviour in the telecommunications sector. In a similar fashion to the European competition law as provided for in Articles 101 and 102 of the Treaty of the Functioning of the European Union (TFEU) and Council Regulation (EC) No 139/2004 of January 2004 on the control of concentrations between undertakings [2004] OJ L24/1 (EC Merger Regulation of 2004), the Regulations prohibit anti-competitive agreements and concerted practices, abuse of dominant position, and anti-competitive mergers. Furthermore, the Regulations definition of dominance is clearly taken from CJEU's definition of the same term in *Case 85/76 Hoffman- La Roche & Co AG v Commission* [1979] ECR 461, para 38.

<sup>18</sup>This is primarily because anti-competitive behaviour is not a significant concern in this particular market. This conclusion is based on the extensive interviews conducted with legal personnel in leading telecommunications firms, personnel at UCC, policy-makers, and independent telecommunications industry experts. See Appendix A of this study with a detailed list of persons interviewed.

**Table 4.1** Mobile and fixed telephony subscriptions July–September 2016

Indicators	Q2 2016	Q3 2016
Mobile subscriptions (prepaid)	21,938,324	21,904,627
Mobile subscriptions (post-paid)	96,567	91,817
Fixed subscriptions	340,851	365,698
Teledensity	61.2	61.1
National status	22,375,742	22,362,142

**Source:** UCC Post, Broadcasting, Telecommunication Market & Industry Report, Third Quarter (July–September 2016)

## 4.4 Main Telecommunications Markets in Uganda

Uganda's telecommunications sector is divided into two main markets: the telephony market comprising fixed and mobile telephony, and the internet market.

### 4.4.1 *The Telephony Market*

According to the latest statistics published by UCC, Uganda had a total of 21,904,627 telephony subscribers in 2016, see Table 4.1.

As is evident from Table 4.1 above, the majority of Ugandans rely on the mobile phone to communicate with the fixed network having been substituted by the mobile network. The next two sub-sections described the fixed telephony and mobile telephony markets in detail.

### 4.4.2 *Fixed Line Market (Voice)*

The fixed-line market in Uganda is primarily serviced by two vertically integrated operators, Uganda Telecom and MTN Uganda Limited. Uganda Telecom is the former fixed-line monopoly operator while MTN Uganda Limited is the former second national operator. Prior to 2006, the licensing regime only permitted Uganda Telecom and MTN Uganda Limited, as the national operators, to provide core telecommunications services including fixed-line (voice) services.<sup>19</sup> The full liberalisation of the telecommunications sector in 2006 introduced a new licensing regime which put an end to the exclusivity period by allowing any new entrant to provide fixed-line services. Although there have been entrants in the voice services market following the full liberalisation of the telecommunications sector, most new entrants have opted to provide mobile telephony rather than fixed telephony

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<sup>19</sup>UCC, 'Recommendations on Proposed Review of the Telecommunications Sector Policy' (2005) Policy Review Report 28/1/05 22.

services. As a result the fixed telephony market is not very competitive with fixed telephony services being provided primarily by Uganda Telecom and MTN Uganda Limited. A key factor for the current state of the fixed telephony market is the substantial amount of investment in infrastructure required to provide fixed telephony services comparative to mobile telephony services resulting in less investment in the fixed telephony market.<sup>20</sup>

Prior to the liberalisation of the telecommunications sector in Uganda, there was a poorly developed telecommunications network. In the monopoly era the national telecommunications operator made negligible investment in the wireline network.<sup>21</sup> Therefore, investors wishing to provide telecommunications services in the liberalised sector have had to invest heavily in the network infrastructure to reach customers in different regions of Uganda. While investment in telecommunications network infrastructure is on the whole very expensive, investment in the mobile network is significantly lower than investment in building up the fixed network.<sup>22</sup> Investment in infrastructure has not only been restricted to building up the telecommunications network. Uganda, as is the typical situation in other Sub Saharan African countries, has a poorly developed infrastructure hampering development. Lack of roads and electricity has only increased the capital investment burden of investors seeking to gain a foothold in the telecommunications sector in Uganda.<sup>23</sup> As a result, not much progress has been made in the development of the fixed-line network with the limited coverage concentrated mainly in the capital city, Kampala, central and southern Uganda.

On the whole, the growth of the fixed-line market has been very slow with the penetration rate at approximately 1% as at 2016 up from 0.25% in 2000 as indicated in Fig. 4.1. This clearly indicates that there has been a substitution of fixed-line telephony for mobile telephony services with the substantial growth of the latter market.<sup>24</sup> The fixed-line customer base is made up primarily of corporate customers.<sup>25</sup>

<sup>20</sup>Mark D J Williams, Rebecca Mayer, and Michael Minges, *Africa's ICT Infrastructure: Building on the Mobile Revolution* (World Bank 2011) 53.

<sup>21</sup>Charles Byaruhanga, ‘Managing Investment Climate Reform: Case Study of Uganda Telecommunications’ (2005) 3 <[http://siteresources.worldbank.org/INTWDRS/Resources/477365-1327693758977/8397896-1327771331430/byaruhanga\\_uganda\\_telecoms.pdf](http://siteresources.worldbank.org/INTWDRS/Resources/477365-1327693758977/8397896-1327771331430/byaruhanga_uganda_telecoms.pdf)> accessed 15 June 2017.

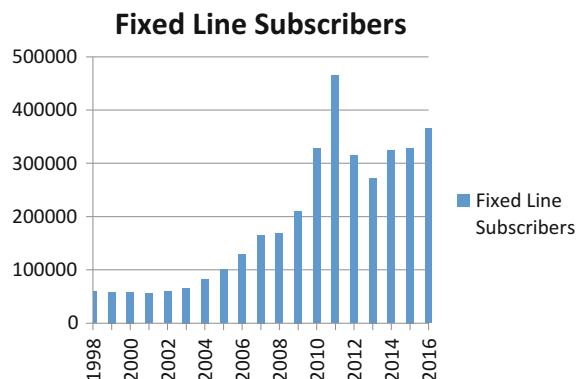
<sup>22</sup>Mark D J Williams, Rebecca Mayer, and Michael Minges, *Africa's ICT Infrastructure: Building on the Mobile Revolution* (World Bank 2011) 53.

<sup>23</sup>Based on an interview with Ronald Zakumumpa, legal counsel, MTN Uganda (Kampala, Uganda 29 November 2011). He explained the additional expenses telecommunications companies have to incur due to the poor infrastructure development in Uganda.

<sup>24</sup>See Sect. 4.4.3 of this chapter discussing the mobile services market. The section shows that the majority of telephone subscribers in Uganda are mobile phone subscribers.

<sup>25</sup>Nora Mulira, Apolo Kyeyune, and Ali Ndiwalana, ‘Uganda ICT Sector Performance Review, 2009/2010: Toward Evidence Based ICT Policy and Regulation’ (2010) 13(2) Policy Paper 10.

**Fig. 4.1** Fixed line subscriptions in Uganda (1998–2016). **Source:** By author based on statistics from UCC website



There are a number of reasons for the dismal figures in the fixed-line telephony market. The primary factor is the limited investment in the fixed-line network infrastructure. Most investment has gone towards mobile telephony services where significantly less capital for infrastructure is required compared to investment in the fixed-line network. As a result, not much progress has been made in the development of the fixed-line network with the limited coverage concentrated mainly in the capital city, Kampala, central and southern Uganda.<sup>26</sup>

#### 4.4.3 Mobile Market (Voice)

In contrast to the fixed-line telephony market, the mobile telephony services market has grown substantially since the entry in October 1998 of MTN Uganda Limited. Prior to MTN Uganda Limited's entry, Celtel was the only provider of mobile telephony services with a subscriber base of 8100.<sup>27</sup> The market entry of MTN Uganda was pivotal as it soon became clear that the mobile telephony market had potential for exponential growth. Within a year of MTN Uganda's entry it became the leading mobile operator with 53,528 subscribers.<sup>28</sup> At the same time Celtel's subscriber base had more than doubled to 19,074 subscribers.<sup>29</sup> The former monopoly operator, Uganda Telecom entered the mobile market in 2000 and began to compete aggressively with Celtel and MTN Uganda Limited and by 2001 had 10,000 mobile subscribers.<sup>30</sup> The three mobile operators were the only mobile phone service providers during the government imposed limited competition era (2000–2006). Nevertheless, the number of mobile subscribers continued to grow

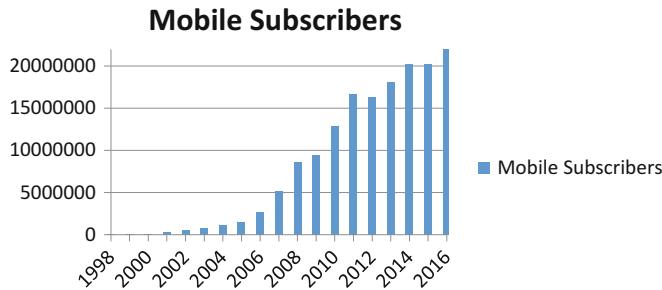
<sup>26</sup>Ibid.

<sup>27</sup>Mary Shirley, Fred Tusubira, Luke Haggarty, and Frew Gebreab, 'Telecommunications Reform in Uganda' (2002) World Bank Working Research Paper 2864/2002 52.

<sup>28</sup>Ibid.

<sup>29</sup>Ibid.

<sup>30</sup>Ibid.



**Fig. 4.2** Mobile subscriber growth in Uganda (1998–2016). **Source:** By author based on statistics from UCC website

with more than two million subscribers compared to the slightly over 100,000 fixed-line subscribers at the end of the exclusivity period in 2006.<sup>31</sup>

The full liberalisation of the telecommunications sector has resulted in a highly competitive mobile market with several operators: incumbents, MTN Uganda Limited, Airtel, and Uganda Telecom, and new entrants Warid Telecom Uganda,<sup>32</sup> Orange now Africell,<sup>33</sup> K2, Vodafone,<sup>34</sup> Smile Communications, Sure Telecom, and I-tel as at December 2016. At the end of the duopoly period in 2006 there were 2,697,616 mobile subscribers. By December 2016 the number had significantly risen to 21,904,627 subscribers at penetration rate of 61%, see Fig. 4.2. However, this figure might be skewed due to the prevalent practice of people owning more than one SIM card to take advantage of the different on-net call discounts.

MTN Uganda Limited has maintained its position as the largest mobile operator since its entry in the mobile market in 1998. It had the highest number of mobile subscribers, 7.7 million in 2013, making a market share of 47.5% down from 60% 5 years ago.<sup>35</sup> Airtel subscriber base rose from 4.6 million to 7.4 million subscribers in 2013 following its acquisition of Warid Telecom Uganda which had 2.8 million

<sup>31</sup>ITU, ‘Country Statistics 2000-2015: Mobile-Cellular Subscriptions’ <<http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>> accessed 15 June 2017.

<sup>32</sup>It should be pointed out that Airtel Uganda entered into an acquisition agreement with Warid Telecom Uganda in March 2013 in which Airtel Uganda acquired Warid Telecom’s business operations. Faridah Kulabako and Solomon Arinaitwe ‘UCC Okays Airtel, Warid Deal as Subscribers are Reassured’ *Daily Monitor* (Kampala, 9 May 2013) <<http://www.monitor.co.ug/Business/Technology/UCC-okays-Airtel--Warid-deal-as-subscribers-are-reassured/-/688612/1846494/-/u28gpy/-/index.html>> accessed 15 June 2017.

<sup>33</sup>On 23rd December 2014, the acquisition of Orange Uganda by Africell came into effect. The Orange logo was immediately changed to the Africell logo to reflect the change in ownership. See ‘Orange Uganda now Africell But with a Bleak 2015 Forecast’ <<http://www.dignited.com/11398/orange-uganda-now-africell-bleak-2015-forecast/>> accessed 15 June 2017.

<sup>34</sup>K2 was Uganda’s first mobile virtual network operator with Vodafone becoming the second mobile virtual network operator after entering into a non-equity Partner Market agreement with internet provider Afrimax in November 2014.

<sup>35</sup>Based on information on company website <[www.mtn.co.ug](http://www.mtn.co.ug)> accessed 15 June 2017.

subscribers.<sup>36</sup> The former monopoly operator, Uganda Telecom, with 15.7% market share had the third largest mobile operator, a position previously enjoyed by Warid Telecom. Although MTN Uganda has maintained a noticeably higher market share since its entry in 1998, UCC does not regard any mobile telecommunications operator as dominant in the retail voice services market.<sup>37</sup>

One key justification for this conclusion is that the existence of several vertically integrated operators in the mobile market is a competitive constraint limiting the ability of any one operator to act independently of competitors.<sup>38</sup> However, UCC has found that with regard to mobile call termination, each mobile operator has 100% share of the relevant market for termination of calls.<sup>39</sup> Therefore mobile operators are presumed to have significant market power in mobile call termination services market.<sup>40</sup>

A significant development in the mobile market has been the signing of an agreement by Bharti Airtel to acquire Warid Telecom in April 2013.<sup>41</sup> Although the merger was approved by UCC, the transaction which took effect in 2014 has implications for competition in the mobile market as it reduces the number of mobile operators in the country. Additionally, the acquisition increased Airtel's market share to 7.4 million, almost at par with MTN Uganda's market share in 2013.<sup>42</sup> The acquisition by Airtel is the first instance of consolidation of two domestic operators with previous consolidations involving entities without prior business interests in Uganda seeking to enter the telecommunications market.

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<sup>36</sup>Faridah Kulabako and Solomon Arinaitwe, 'UCC Okays Airtel, Warid Deal as Subscribers are Reassured' *Daily Monitor* (Kampala, 9 May 2013) <<http://www.monitor.co.ug/Business/Technology/UCC-okays-Airtel--Warid-deal-as-subscribers-are-reassured/-/688612/1846494/-/u28gpy/-/index.html>> accessed 15 June 2017.

<sup>37</sup>This information is based on an interview with Abdul Musoke, Market Analyst, UCC (Kampala, Uganda, 18 November 2011. Also see PwC for UCC, 'Draft Report on Competition and Dominance in the Ugandan Telecoms Sector (Part 2): Interconnection and Retail Cost Study' (2009) Unpublished 15.

<sup>38</sup>PwC for UCC, 'Draft Report on Competition and Dominance in the Ugandan Telecoms Sector (Part 2): Interconnection and Retail Cost Study' (2009) Unpublished 1.

<sup>39</sup>UCC, 'Market Power Assessment in Telecommunications' (2009) 11 <<http://www.ucc.co.ug/data/smenu/46/5/Competition%20and%20Merger%20Reviews.html>> accessed 15 June 2017.

<sup>40</sup>However, smaller operators I-Tel and Smile Uganda are not seen as dominant in the mobile market according to information gathered from interview with Abdul Musoke, Market Analyst, UCC (Kampala, Uganda, 18 November 2011. Arguably, newer entrants K2 and Vodafone, as virtual mobile network operators will not be viewed as dominant in the market in part because of their smaller subscriber base but also because they do not own the network via which they provide their services.

<sup>41</sup>Faridah Kulabako and Solomon Arinaitwe, 'UCC Okays Airtel, Warid Deal as Subscribers are Reassured' *Daily Monitor* (Kampala, 9 May 2013) <<http://www.monitor.co.ug/Business/Technology/UCC-okays-Airtel--Warid-deal-as-subscribers-are-reassured/-/688612/1846494/-/u28gpy/-/index.html>> accessed 15 June 2017.

<sup>42</sup>Ibid.

#### 4.4.4 Internet Market

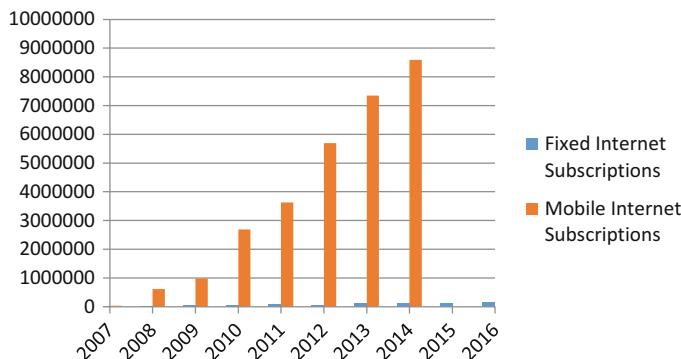
There are several players in the internet market in Uganda. Telecommunications operators, Uganda Telecom, MTN Uganda Limited, Airtel, Africell, Sure Telecom, Vodafone, Afrimax and K2 provide internet services. In addition, there are independent internet service providers including: Altech Infocom Limited, iWayAfrica, Datanet, Afrimax Uganda Limited, Tangerine and Foris Telecom.

The internet market in Uganda has been growing steadily since the liberalisation of the telecommunications market particularly following the introduction of mobile internet in 2009 as indicated in Fig. 4.3.

There were an estimated 17 million internet users in Uganda, a penetration rate of approximately 45.8% in 2016 in 2014.<sup>43</sup> The significant growth of internet subscribers has been due to the availability of affordable pre-paid mobile internet services as well as low cost high performing smartphones. As shown in Fig. 4.3, the internet market is generally divided into fixed internet and mobile internet.

Just as is the case with the telephony market, the majority of subscribers (8,594,668) access internet services through the mobile network. Between 2010 and 2014 the number of mobile broadband subscriptions grew by approximately 70% per annum.<sup>44</sup> In contrast the fixed broadband penetration rate has remained below 1%.

The market share in the mobile broadband market in 2014 is illustrated in Table 4.2. The statistics indicate a correlation between mobile telephony subscriber base and high market share in the mobile broadband market. Airtel and MTN with a



**Fig. 4.3** Internet subscriptions in Uganda (2007–2016). **Source:** By author based on statistics from UCC website

<sup>43</sup>UCC, ‘Post, Broadcasting, Telecommunication Market & Industry Report, Third Quarter (July-September 2016)’ <<http://www.ucc.co.ug/details.php?option=industrial>> accessed 15 June 2017.

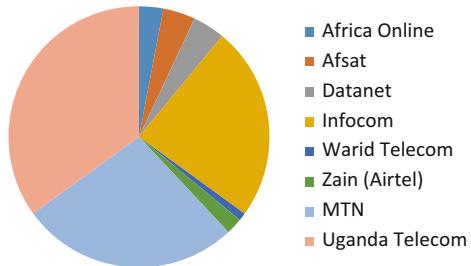
<sup>44</sup>Ibid.

**Table 4.2** Mobile broadband subscriptions and market share in Uganda 2013

Mobile operator	Number of mobile broadband subscriptions	Market share percentage
Airtel	2,200,000	51
MTN	1,800,000	44
Orange	100,000	2
Sure Telecom	100,000	2
K2	4000	<1

**Source:** Cartesian for UCC, ‘Broadband Internet Access from a Mobile Terminal: Market Assessment’ 2015

**Fig. 4.4** Internet market share 2008. **Source:** UCC Market Analysis Report 2008



market share of more than 80% in the mobile telephony market have a combined market share of 95% in the mobile broadband market.

The significance of the mobile network for access to internet services can be further illustrated by referring back to 2008 when the fixed network was still the primary means through which internet services were provided.

The competition assessment report by UCC from 2008 shows that Uganda Telecom had the greatest market with 35% based on combined fixed and mobile internet services revenue in 2008 as indicated in Fig. 4.4.

MTN which at the time had the largest market share of 68% in the mobile internet market had a combined fixed and internet market share of 27%. Among the independent internet service providers Infocom had the greatest market share of 24%, Datanet, Afsat and Africa Online had market shares of less than 5%. In 2008, the total number of fixed broadband subscribers was 22,000 fixed broadband subscribers, a penetration rate well below 1%. By 2009, there were more mobile broadband subscribers (31,058) compared to fixed broadband subscribers (27,590). This trend has held with Uganda with mobile broadband representing the primary means of broadband internet access.

The entry of mobile operators in the internet market has undoubtedly stimulated competition in the internet services market and increased internet access as the mobile network coverage is nationwide and thus more extensive than the fixed network coverage. That being said, the wireless backbone network though extensive is primarily of low-capacity suitable for voice services and low bandwidth

internet (GPRS and EDGE).<sup>45</sup> In 2014, the high capacity 3G and LTE broadband technologies only covered 30% of Uganda's population.<sup>46</sup>

The fixed network is particularly suitable for the provision of high capacity internet. Furthermore, fixed broadband through CDMA, Fibre, WiMAX, leased lines, and ISDN, remains critical for large institutional users.<sup>47</sup> A number of internet service providers (ISPs) rely on the access to the fixed networks of former national operators, Uganda Telecom and MTN Uganda Limited that happen to own most for the fixed network infrastructure in the country.<sup>48</sup> Uganda Telecom and MTN Uganda Limited's monopoly over infrastructure needed for the provision of value-added services in the duopoly era raised competition concerns primarily because of the vertical integration of both operators.<sup>49</sup>

In the fully liberalised telecommunications sector, there is less infrastructure-based competition in the fixed internet market compared to the mobile internet and voice markets. The Uganda Electricity Transmission (UETCL) also leases out part of its fibre optic on its transmission network in addition to MTN Uganda Limited and Uganda Telecom. However, the fixed network is not as widespread as the mobile network. With increased access to mobile broadband technologies, as evidenced by the significant growth of the mobile internet market in recent years, it is possible to envisage that the fixed network will be substituted by the mobile network in the internet market just as is the case in the voice services market.<sup>50</sup> The availability of affordable smartphones for less than US \$100 is also playing a critical role in increasing access to internet. That said, it should be stressed that the mobile broadband network coverage (W-CDMA and LTE) is still relatively low and focused in large urban areas<sup>51</sup> yet more than 80% of Uganda's population is rural-based.

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<sup>45</sup>Mark D J Williams (ed), *Broadband for Africa: Developing Backbone Communications Networks in the Region* (The World Bank 2010) 16-17.

<sup>46</sup>Cartesian for UCC, 'Broadband Internet Access from a Mobile Terminal: Market Assessment' (2015) 10 <[http://www.ucc.co.ug/files/downloads/SMP\\_Report\\_Mobile\\_Broadband\\_April%202015.pdf](http://www.ucc.co.ug/files/downloads/SMP_Report_Mobile_Broadband_April%202015.pdf)> accessed 15 June 2017.

<sup>47</sup>Ministry of ICT, 'The National Broadband Strategy of Uganda (2016-2020)' 4 <<https://www.ict.go.ug/sites/default/files/Resource/National%20Broadband%20Strategy%20for%20Uganda%20Draft%20V8.pdf>> accessed 16 June 2017.

<sup>48</sup>Nora Mulira, Apolo Kyeyune, and Ali Ndiwalana, 'Uganda ICT Sector Performance Review, 2009/2010: Toward Evidence Based ICT Policy and Regulation' (2010) 13(2) Policy Paper 3.

<sup>49</sup>UCC, 'Uganda Telecommunications Policy Sector Review' (2005) Policy Review Report 28/1/05.

<sup>50</sup>At least for individual users. Fixed broadband is likely to remain of relevance for the large groups of users such as corporations, institutions.

<sup>51</sup>Cartesian for UCC, 'Broadband Internet Access from a Mobile Terminal: Market Assessment' (2015) 11 <[http://www.ucc.co.ug/files/downloads/SMP\\_Report\\_Mobile\\_Broadband\\_April%202015.pdf](http://www.ucc.co.ug/files/downloads/SMP_Report_Mobile_Broadband_April%202015.pdf)> accessed 15 June 2017.

Latest data from 2014 reveal that the largest operator, MTN, covers only 16% of the country's geography with W-CDMA (GSM network coverage is 71%), and Orange covers approximately 30% of the population.<sup>52</sup> Uganda Telecom's network uses GSM data technologies (GPRS and EDGE) that are not capable of supporting mobile broadband services.<sup>53</sup> Furthermore, it does not have the necessary spectrum to deploy W-CDMA or LTE. Airtel, on the other hand, has spectrum to offer W-CDMA, but not LTE.<sup>54</sup> Thus, the wireless backbone in Uganda though extensive is of primarily of low-capacity only suitable for low bandwidth internet.

While the mobile network is fast becoming the primary means of access to high capacity internet, it is worth mentioning the Government of Uganda's goal of increasing broadband access. The Ministry of ICT's strategy for 2016–2020 seeks to have minimum broadband speeds of 3 Mbps by 2020 and broadband access penetration of 50% and 100% for rural and urban areas, respectively, by 2020.<sup>55</sup> The Government of Uganda through the National Backbone Infrastructure initiative and private sector are rolling out optic fibre throughout the country. As of 2014, Uganda had about 5000 km of optic fibre.<sup>56</sup> This project once complete will lead to increased access broadband internet.

## 4.5 Specific Market Characteristics of Uganda's Telecommunications Sector Impacting on the Regulation of Anti-Competitive Behaviour

As pointed out in Chap. 2, there are economic and market characteristics particular to the telecommunications market that might have an impact on the regulation as these characteristics may affect the growth of competition in the sector.<sup>57</sup> This sub-section makes particular note of the market characteristics most relevant to the regulation of anti-competitive behaviour.

For example, the high fixed costs in the telecommunications market might have an effect on the regulatory authority's ability to accurately define the relevant market.<sup>58</sup> The existence of vertically integrated operators with a high market

<sup>52</sup>Ibid.

<sup>53</sup>Ibid.

<sup>54</sup>Ibid.

<sup>55</sup>Ministry of ICT, 'The National Broadband Strategy of Uganda (2016-2020)' 13 <<https://www.ict.go.ug/sites/default/files/Resource/National%20Broadband%20Strategy%20for%20Uganda%20Draft%20V8.pdf>> accessed 16 June 2017.

<sup>56</sup>Ibid.

<sup>57</sup>See Chap. 2, Sects. 2.3 and 2.4 of this study.

<sup>58</sup>This particular issue is delved into in more detail in Sect. 4.6.2.1 of this chapter.

share might give rise to concerns of abuse of dominant position. In more developed telecommunications markets the vertical integration of the fixed-line operator has given rise to investigations of anti-competitive behaviour.<sup>59</sup> Additionally, the presence of a large number of subsidiaries of multinational telecommunications groups competing alongside small-sized local operators suggests scrutiny of the subsidiaries for anti-competitive behaviour, specifically, abuse of dominant position.

This sub-section highlights two characteristics of the telecommunications sector in Uganda that, in the author's opinion, could give rise to the most anti-competitive behaviour concerns: dominant presence of local subsidiaries of multinational telecommunications groups; and vertical integration of the majority of telecommunications operators.

#### ***4.5.1 Strong Presence of Local Subsidiaries of Multinational Corporations (MNCs)***

Uganda's telecommunications market is serviced mainly by local subsidiaries of the multinational telecommunications groups. Of the seven telecommunications operators in 2016, five were subsidiaries of a multinational telecommunications company as indicated in Table 4.3. The dominance of the multinational telecommunications groups is seen particularly in the mobile market which has been the main recipient of foreign direct investment in the telecommunications sector.<sup>60</sup> The top two mobile operators, that is, MTN Uganda Limited, and Airtel with almost 90 market share combined are owned by large multinational telecommunications companies as shown in Table 4.3.

The foreign owned telecommunications operators have undoubtedly contributed to the growth of competition in the Uganda's telecommunications sector.<sup>61</sup>

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<sup>59</sup>A notable example is the European Union where the European Commission's investigations into allegations of anti-competitive behaviour have tended to focus on the vertically integrated incumbent operator. See *Deutsche Telekom AG* [2003] OJ L 263/9; and Case COMP/38.233 *Wanadoo Interactive* Commission Decision 2003, published under <[http://ec.europa.eu/competition/antitrust/cases/dec\\_docs/38233/38233\\_87\\_1.pdf](http://ec.europa.eu/competition/antitrust/cases/dec_docs/38233/38233_87_1.pdf)> accessed 15 June 2017; and *Wanadoo Espana v Telefonica SA* [2008] OJ C 83/6.

<sup>60</sup>This is based on the significant number of multinational telecommunications groups and foreign controlled telecommunications firms in the mobile market compared to the fixed-line market.

<sup>61</sup>Without the local subsidiaries of MNCs entering Uganda's market, viable competition for Uganda Telecom, as the former monopoly, in the liberalised telecommunications sector would not have developed at the current pace experienced. The purely domestic investors lack the capacity to invest in the telecommunications sector particularly in the infrastructure needed to provide the telecommunications services.

**Table 4.3** Telecommunications operators in Uganda (as of December 2016)

Company	Ownership details	Home country of holding company	Presence of company in other Sub-Saharan African countries
Africell Uganda	Africell is a subsidiary of Lintel Holdings, a Lebanese telecommunications company	Lebanon	Democratic Republic of Congo, The Gambia, Sierra Leone, Uganda
Airtel Uganda	Airtel Uganda is part of Airtel Africa which is a wholly owned subsidiary of Bharti Airtel's telecommunications operations In March 2013, Airtel entered into an agreement with Warid Telecom Uganda to acquire the latter's business operations. At the time Warid Telecom was the third largest mobile operator, behind MTN Uganda Limited and Airtel	India	Burkina Faso, Chad, DRC, Congo Brazzaville, Gabon, Ghana, Kenya, Madagascar, Malawi, Niger, Nigeria, Seychelles, Sierra Leone, Tanzania, Uganda, Zambia
K2	Locally owned company	Uganda	None
MTN Uganda Limited	Subsidiary of MTN Group	South Africa	Benin, Botswana, Cameroon, Congo Brazzaville, Ghana, Guinea Bissau, Guinea Conakry, Ivory Coast, Liberia, Nigeria, Rwanda, South Africa, Sudan, Swaziland, Uganda, Zambia
Sure Telecom (Smart Telecom)	The company is owned and operated by Industrial Promotion Services, a subsidiary of the Aga Khan Fund for Development (AKFED)	Switzerland	Burundi, Tanzania, and Uganda
Uganda Telecom	Owned by Libya Africa Investment Portfolio (LAP) with 69% stake in Uganda Telecom	Libya	
Vodafone Uganda	A subsidiary of Vodafone Group	England	Botswana, DRC, Cameroon, Ghana, Kenya, Lesotho, Mozambique, Nigeria, South Africa, Tanzania, Zambia

**Source:** Author's compilation of information from the websites of the telecommunications operators and their holding companies

However, the dominant presence of the local subsidiaries of MNCs gives rise to competition concerns.

Empirical studies on the effect of entry of multinational corporations into markets in developing countries indicate that the conduct of the local subsidiaries

may result in the market exit of smaller local operators.<sup>62</sup> This is because MNCs have financial and technological advantages enabling them to quickly take dominant positions in the domestic market giving them greater scope for anti-competitive behaviour.<sup>63</sup> For example, a local subsidiary of a MNC with financial stay may drive out local competitors through predatory pricing since short term losses will not have long term effects on the MNC.<sup>64</sup> The 1 year price war from 2010 to 2011 in the mobile telephone services market in Uganda sparked by the market entry of Warid Telecom is evidence of the potential of local subsidiaries of multinational telecommunications companies to engage in anti-competitive behaviour. Although the price war was not *per se* predatory pricing, as the instigator Warid Telecom was not a dominant operator, it proves that financial capacity may give rise to market dominance. There was no exit from the market of any operator, however, the price war did raise complaints most notably from the smaller operators concerned about their viability in the market.<sup>65</sup> Therefore, while the presence of several telecommunications operators is positive for competition in the telecommunications sector in Uganda, the strong position of the local subsidiaries may provide opportunities for them to engage in anti-competitive practices.

Uganda as a developing country should pay heed to the fact that the telecommunications sector in Uganda is controlled by multinational corporations. It has been observed that developing countries are more susceptible to anti-competitive practices perpetrated by MNCs on the grounds that they lack the requisite legal framework, specifically a strong national competition policy regarded as important for dealing with anti-competitive behaviour of MNCs.<sup>66</sup> In those countries that do

<sup>62</sup>This is the finding in a number of empirical studies on the impact of foreign direct investment in developing countries. See Magnus Blomström, 'Foreign Investment and Productive Efficiency: The Case of Mexico' (1986) 35(1) Journal of Industrial Economics 97; Sanjaya Lall, 'Multinational and Market Structure in an Open Developing Economy: The Case of Malaysia' (1979) 115 (2) Weltwirtschaftliches Archiv 325; Richard Newfarmer, 'TNC Takeovers in Brazil: The Uneven Distribution of Benefits in the Market for Firms' (1979) 7(1) World Development 25; and Larry Willmore, 'Determinants of Industrial Structure: A Brazilian Case Study' (1989) 17 (10) World Development 1601.

<sup>63</sup>UNCTAD, 'Transnational Corporations, Market Structure and Competition Policy' (1997) World Investment Report 134 <[http://unctad.org/en/Docs/wir1997\\_en.pdf](http://unctad.org/en/Docs/wir1997_en.pdf)> accessed 15 June 2017.

<sup>64</sup>Magnus Blomström, 'Foreign Investment and Productive Efficiency: The Case of Mexico' (1986) 35(1) Journal of Industrial Economics 97. Also see Richard Newfarmer, 'TNC Takeovers in Brazil: The Uneven Distribution of Benefits in the Market for Firms' (1979) 7(1) World Development 25 which explores the effect of FDI on Brazil's electrical industry. The article notes that MNCs used predatory pricing as a means of gaining dominant position in the market.

<sup>65</sup>According to an interview with Zulaika Kasujja, legal counsel, Smile Communications Uganda (Kampala, Uganda December 2011). The difficulties faced by smaller telecommunications operators in competing at the same level as the local subsidiaries of large multinational telecommunications groups was also noted by UCC personnel interviewed. This was revealed in interview with Abdul Musoke, Market Analyst, UCC Headquarters (Kampala, Uganda, 18 November 2011).

<sup>66</sup>UNCTAD, 'Objectives of Competition Law and Policy: Towards a Coherent Strategy for promoting competition and development' (2003) note by UNCTAD Secretariat 5 <[http://unctad.org/en/docs/ciclciclpd9\\_en.pdf](http://unctad.org/en/docs/ciclciclpd9_en.pdf)> accessed 15 June 2017.

have national competition policies and laws, effective implementation against the MNCs is problematic.<sup>67</sup> It is therefore critical for UCC to take note of this particular characteristic of Uganda's telecommunications sector when enforcing competition legislation.

#### **4.5.2 Vertical Integration in the Telecommunications Markets**

Vertical integration exists when a firm provides for itself some input that it might otherwise purchase on the market.<sup>68</sup> In the telecommunications sector, it is usually the case that firms rely on other firms for certain inputs needed to provide telecommunications services. The telecommunications sector comprises network operators who provide the links between exchanges that enable communications to take place between one point and another, while service providers use network operations to provide various communications services to end-users.<sup>69</sup> Therefore, the provision of telecommunications network is usually viewed as a separate market from the services market. This is the case in Uganda where UCC in identifying the markets in the telecommunications sector has drawn a distinction between provision of networks or infrastructure (wholesale/access markets) and provision of services (retail/services).<sup>70</sup>

Although, the wholesale and retail telecommunications markets are generally separate, some operators are vertically integrated, present not only at the wholesale (access) level but also the retail level competing alongside non-vertically integrated service providers. Economics literature, particularly from the 1960s and early 1970s (primarily Chicago scholars), has emphasised the pro-competitive effects of vertical integration through increased economic efficiency due to the realisation of economies of scope (and scale).<sup>71</sup> Nevertheless, vertical integration, particularly

<sup>67</sup>Ibid.

<sup>68</sup>Phillip E Areeda and Herbert Hovenkamp, *Fundamentals of Antitrust law* (4th edn, Aspen Publishers 2011) 7-123.

<sup>69</sup>Rossana Achterberg, 'Competition Policy and Regulation: A Case Study of Telecommunications' (2002) <<https://www.tips.org.za/research-archive/trade-and-industry/trade-growth-dynamics/item/93-competition-policy-and-regulation-a-case-study-of-telecommunications>> accessed 15 June 2017.

<sup>70</sup>See UCC, 'Telecommunications Market Definition 2009' <<http://www.ucc.co.ug/files/downloads/Extract%20from%20Report%20on%20Competition%20and%20Dominance%202009.pdf>> accessed 15 June 2017.

<sup>71</sup>The positive effects of vertical integration were first famously highlighted by Professor Coase in his article 'The Nature of the Firm' (1937) 4 *Economica* 386, in which he argued that using the market itself is costly and that replacement of the market with vertical integration could result in vast cost savings. Several decades later this theory was built on by other economists who exalted the pro-competitive effects of vertical integration. See George Stigler, 'A Theory of Oligopoly' (1963) 72 *Journal of Political Economy* 44; George Stigler, 'The Theory of Economic Regulation' (1971) 71 *Bell Journal of Economics* 3; Richard Posner, *Antitrust Law: An Antitrust Perspective*

of the former monopoly operator in the liberalised telecommunications markets has become one of the main sources of concern for competition authorities and academics.<sup>72</sup> This is primarily because the former monopoly operator still maintains control over inputs needed by competitors to provide telecommunications services.

Vertical integration as a threat to competition has been closely linked to vertically integrated firms that control access to an essential facility.<sup>73</sup> The vertically integrated firm may use its monopoly position in the infrastructure provision market to stifle competition at the retail level by denying competitors access to the essential facility.<sup>74</sup> A specific example of an input that is deemed hard to duplicate is the fixed network local loop which is usually under the exclusive control of the former monopoly operator.<sup>75</sup> This is the case in Uganda where the former monopoly operator Uganda Telecom's network has the widest spread fixed network and is thus the main provider of infrastructure for services markets where access to the

(University of Chicago Press 1976); and Robert Bork, *The Antitrust Paradox. A Policy of War with Itself* (New York Basic Books 1978). See also Michael Riordan and Steven Salop, 'Evaluating Vertical Mergers: A Post-Chicago Approach' (1995) 65 *Antitrust Law Journal* 513; and Phillip Areeda and Herbert Hovenkamp, *Fundamentals of Antitrust Law* (4th edn, Wolters Kluwer & Business 2011) para 7.06c, that points out the economic efficiencies stemming from vertical integration.

<sup>72</sup>Commission Directive 2002/77/EC of 16 September 2002 on competition in the markets for electronic communications networks and services [2002] OJ L 249/21 in recital 10 and Article 3 requires Member States to ensure that state-controlled operators which enjoy a dominant position in the relevant market do not discriminate in favour of their own activities. The Australian Competition and Consumer Commission while acknowledging that vertical integration by an operator may create efficiencies warns of the possibility of vertical integration enhancing the market power of an operator, see ACCC, 'Anti-Competitive Conduct in Telecommunications Markets: An Information Paper' (1999) 39 <[http://www.itu.int/ITU-D/treg/Events/Seminars/2005/Thailand/Reference%20Material/Reference%20material%20%20Oz\\_anticomp\\_telecom.pdf](http://www.itu.int/ITU-D/treg/Events/Seminars/2005/Thailand/Reference%20Material/Reference%20material%20%20Oz_anticomp_telecom.pdf)> accessed 15 June 2017. See also Nicola M Theron and Willem H Boshoff, 'Vertical Integration in South Africa Telecommunications: A Competition Analysis' 79(3) (2011) *South African Journal of Economics* 330 where the authors discuss competition problems in the fixed-line market linked to the vertical integration of the incumbent fixed-line operator Telkom SA.

<sup>73</sup>European Commission Notice on the Application of the Competition Rules to Access Agreements in the Telecommunications Sector [1998] OJ C 265/2 (Access Notice) defines an essential facility as a facility or infrastructure which is essential for reaching customers and/or enabling competitors to carry on their business, and which cannot be replicated by any reasonable means.

<sup>74</sup>Simon Bishop and Mike Walker, *The Economics of EC Competition Law: Concepts, Application and Measurement* (2nd edn, Sweet and Maxwell 2002) 239.

<sup>75</sup>For example, the European Commission in *Deutsche Telekom AG* (Case COMP/C-1/37.451, 37.578, 37.579) Commission Decision 2003/707/EC [2003] OJ L 263/9, para 83 stressed the significance of the fixed local loop as input for provision of services in the retail internet market finding that alternative infrastructure such as wireless local loop, fibre optic, cable networks and satellites were not sufficiently developed to be substitutes for the fixed network owned by the German incumbent.

fixed network is important.<sup>76</sup> In South Africa<sup>77</sup> and in the European Union<sup>78</sup> most investigations into anti-competitive behaviour have been in connection with the vertically integrated former monopoly owner that has monopoly over the fixed network. Similarly in Australia, the Australia Competition and Consumer Commission (ACCC) has been preoccupied with ensuring that the vertical integration of former monopoly operator Telstra does not affect competition in the telecommunications sector.<sup>79</sup>

However, competition concerns related to vertical integration are not restricted to cases where a firm has control over an essential facility. A vertically integrated company can create favourable links between itself and other companies, for example, affiliated companies, or bundle products thus offering cheaper services and excluding new entrants. The bundling of products by Uganda Telecom was raised as a concern in the internet market during the duopoly period, as explained:

Although the incumbent licensees (specifically the National Telecommunications Operator [NTO] licences) do carry an obligation to provide leased lines to customers (including other operators) subject to available network capacity and within a maximum response time at rates approved by the regulator, leased lines have been a major bottleneck in competition due to rates offered by other operators. This has proved significant in the Internet market where the NTOs, especially Uganda Telecom (UTL), whose wired network is more widespread, offer bundled services (leased line with internet access) in the same market as the other operators (especially Internet Service Providers –ISPs) that sought leased lines to offer Internet access.<sup>80</sup>

While it is the case that in Uganda the vertically integrated former monopoly operator Uganda Telecom owns most of the fixed network and has a high market share in the fixed-line market, a closer analysis of Uganda's telecommunications

<sup>76</sup>Nora Mulira, Apolo Kyeyune, and Ali Ndiwalana, 'Uganda ICT Sector Performance Review, 2009/2010: Toward Evidence Based ICT Policy and Regulation' (2010) 13(2) Policy Paper 3.

<sup>77</sup>The landmark decision is *Competition Commission v Telkom SA Ltd* 11/CR/Feb04 [2011] ZACT 2, which involved allegations of abuse of dominant position by the vertically integrated incumbent fixed-line operator by refusing to grant its competitors in the value-added services market access to its fixed network.

<sup>78</sup>The key European Commission cases on anti-competitive behaviour in the telecommunications sector have been in regard to the vertically integrated former monopoly operator abusing its dominant position in the fixed-network-infrastructure provision market in order to restrict competition in the broadband market where the fixed network is an essential input. See *Deutsche Telekom AG* [2003] OJ L 263/9; Case COMP/38.233 *Wanadoo Interactive* Commission Decision 2003 published under <[http://ec.europa.eu/competition/antitrust/cases/dec\\_docs/38233/38233\\_87\\_1.pdf](http://ec.europa.eu/competition/antitrust/cases/dec_docs/38233/38233_87_1.pdf)> accessed 15 June 2017; and *Wanadoo Espana v Telefonica SA* [2008] OJ C 83/6.

<sup>79</sup>The effect of the vertical integration of Telstra (the former state monopoly) on competition in the Australian telecommunications market has long been a source of concern. The enactment of the Competition and Consumer Safeguards Act 2010 seeks to address competition concerns associated with Telstra's involvement in both the wholesale and retail markets.

<sup>80</sup>Nora Mulira, Apolo Kyeyune, and Ali Ndiwalana, 'Uganda ICT Sector Performance Review, 2009/2010: Toward Evidence Based ICT Policy and Regulation' (2010) 13(2) Policy Paper 3.

market composition suggests that the issue of vertical integration of the incumbent fixed-line operator is not as troubling as in other jurisdictions.

Uganda Telecom has the highest market share in the fixed telephony market and fixed internet market.<sup>81</sup> Furthermore, a number of ISPs rely on access to Uganda Telecom's fixed network to provide retail internet services since it has the widest spread network.<sup>82</sup> However, it should be pointed out that the fixed telephony and fixed internet markets make up but a small part of the telephony and internet market respectively.<sup>83</sup> In the telephony market, the mobile telephony market in Uganda has approximately 22 million subscribers contrasted with the fixed telephony market with 365,698 subscribers in 2016.<sup>84</sup> The mobile network has therefore substituted the fixed network in the voice market.<sup>85</sup> The mobile telephony market is very competitive with several vertically integrated mobile operators acting as a competitive constraint on any operator seeking to engage in anti-competitive behaviour.<sup>86</sup>

In the internet market there were almost 9 million mobile internet subscribers compared to 143,650 fixed internet subscribers in September 2016.<sup>87</sup> As in the mobile telephony market, there are several vertically integrated mobile operators providing internet services through their mobile networks. The existence of infrastructure competition minimises competition concerns related to vertical integra-

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<sup>81</sup>Reliable data on specific subscriber base numbers is not available. PwC for UCC, 'Draft Report on Competition and Dominance in the Ugandan Telecoms Sector (Part 2): Interconnection and Retail Cost Study' (2009) Unpublished 18 provides the most recent concrete data confirming Uganda Telecom's strong position in the fixed-lines market. Therefore, the conclusion is based on the draft report and the fact that fixed line subscriptions have stagnated.

<sup>82</sup>Nora Mulira, Apolo Kyeyune, and Ali Ndiwalana, 'Uganda ICT Sector Performance Review, 2009/2010: Toward Evidence Based ICT Policy and Regulation' (2010) 2 Policy Paper 13 3.

<sup>83</sup>This has already been explained in detail in Sect. 4.4 of this chapter which describes the state of competition in the key telecommunications markets in Uganda.

<sup>84</sup>UCC, 'Post, Broadcasting and Telecommunications Market and Industry Report; Third Quarter (July-September 2016)' <[http://www.ucc.co.ug/files/downloads/Market\\_&\\_Industry\\_Report\\_for\\_Q3\\_July-September\\_2016.pdf](http://www.ucc.co.ug/files/downloads/Market_&_Industry_Report_for_Q3_July-September_2016.pdf)> accessed 16 June 2017.

<sup>85</sup>This conclusion is further supported by an empirical study by Steve Esselaar and Christoph Stork, 'Mobile Cellular Telephone: Fixed-Line Substitution in Sub-Saharan Africa' (2005) South Africa Journal of Information and Communication 64, in which the authors conduct studies in nine African countries: Botswana, Cameroon, Ethiopia, Namibia, Rwanda, South Africa, Tanzania, Uganda, and Zambia. The findings of the study are that with the exception of Ethiopia, mobile telephony substitutes rather than complements fixed-line phones.

<sup>86</sup>See PwC for UCC, 'Draft Report on Competition and Dominance in the Ugandan Telecoms Sector (Part 2): Interconnection and Retail Cost Study' (2009) Unpublished 15 in which it is argued that the presence of several vertically integrated operators makes it difficult for an operator with a high market share to engage in anti-competitive behaviour.

<sup>87</sup>UCC, 'Post, Broadcasting and Telecommunications Market and Industry Report; Third Quarter (July-September 2016)' <[http://www.ucc.co.ug/files/downloads/Market\\_&\\_Industry\\_Report\\_for\\_Q3\\_July-September\\_2016.pdf](http://www.ucc.co.ug/files/downloads/Market_&_Industry_Report_for_Q3_July-September_2016.pdf)> accessed 16 June 2017.

tion. However, in contrast to the voice market where the mobile network has substituted the fixed network, in the internet market the fixed network still remains an important input for the provision of internet services. The wireless mobile network in Uganda has not developed enough to handle volumes of traffic generated by high speed (broadband) internet services, rather the mobile networks have low capacity and are best suited for low-traffic volumes such as voice services. The fixed-line network with higher capacity is the more appropriate infrastructure for the provision of broadband services. In the fixed-line market, infrastructure competition is not as intense with fewer infrastructure providers. In addition to Uganda Telecom, MTN Uganda limited as the second national operator also built up its fixed network.

Since Uganda Telecom has the widest spread network among the telecommunications operators, it has a competitive advantage over other ISPs competing in the fixed internet market. Thus the vertical integration of the former fixed-line incumbent operator may potentially give rise to competition concerns. However, it must be pointed out that other ISPs rely on vertically integrated MTN Uganda Limited which also has its own fixed network albeit smaller than Uganda Telecom's network. MTN's presence in the fixed-line market therefore provides further competitive constraint for Uganda Telecom. The Uganda Electricity Transmission (UETCL) also leases out part of its fibre optic on its transmission network.

Furthermore, as has already been highlighted in Sect. 4.4.4, the availability of the high capacity 3G and LTE broadband technologies has led to a significant growth in the number of broadband internet users. The provision of mobile broadband technologies by several vertically integrated mobile operators will undoubtedly ensure that wireless technology becomes the primary means of access to internet services in the future. It may be true that the high capacity fixed broadband internet is better suited for provision of services to large groups of users such as corporations and institutions. However, given that the fixed internet subscription is below 150,000, it is more likely that the fixed network's impact on access to internet services is negligible.

Based on the discussion above, vertical integration is not likely to give rise to competition concerns to the same degree as in other countries where the fixed network is crucial for the provision of telecommunications services to the greater part of the population. In Uganda, the mobile market, which is the biggest market segment, has several vertically integrated operators competing intensely. However, UCC should still be wary of the vertical integration of large operators MTN Uganda and Uganda Telecom in the fixed internet market.

## 4.6 Legal and Regulatory Framework for Anti-Competitive Behaviour in the Telecommunications Markets in Uganda

In order to effectively deal with anti-competitive behaviour in the liberalised telecommunications sector, an effective legal and regulatory framework must be in place. In the absence of a national competition law, anti-competitive conduct in Uganda's telecommunications sector is primarily governed by the Communications Act, 2013, Act 1 of 2013 (Communications Act 2013) and the Communications (Fair Competition) Regulations 2005, SI 2005/24 (the Fair Competition Regulations). In addition, the Communications (Interconnection) Regulations 2005, SI 2005/25 (Interconnection Regulations) and the Communications (Tariffs and Accounting) Regulations 2005, SI 2005/25 (Tariff Regulations) also have provisions that may be used to deal with anti-competitive behaviour.<sup>88</sup> The communications regulator, UCC, is responsible for all forms of regulation including competition regulation. The department of competition and corporate affairs is specifically in charge of competition regulation and therefore responsible for enforcing the competition rules.<sup>89</sup> Another important body provided for in the Communications Act is the Uganda Communications Tribunal which hears appeals from decisions of UCC.<sup>90</sup> However, the tribunal is not yet operational.<sup>91</sup>

In addition to the sector-specific rules, there is a draft Competition Bill of 5 November, 2004 (the draft Competition Bill) which governs anti-competitive conduct in all economic sectors including the telecommunications sector. According to clause 4(1) of the draft Competition Bill, the national law applies to anti-competitive agreements, abuse of dominant position, and combinations and mergers. The regulated sectors are not exempted from the application of the law. This is reflected in clause 16 of the Bill which requests statutory authorities (UCC)

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<sup>88</sup>In contrast to the provisions of the Communications Act on anti-competitive conduct, and the Fair Competition Regulations which are applied *ex-post*, the Tariff Regulations and Interconnection Regulation are applied *ex-ante*.

<sup>89</sup>However, the department is also responsible for economic regulation in the telecommunications sector. It is the author's view that the department's mandate to deal with both economic and competition regulation might hamper enforcement of competition regulation as a number of the competition concerns can be addressed through economic regulation. It has been the case that in the few instances that UCC has intervened to address competition concerns it has relied on economic regulation and is yet investigate a claim of anti-competitive behaviour. This point is made in Sects. 4.6.3.3.1 and 4.6.3.3.2 on predatory pricing and on price discrimination, respectively.

<sup>90</sup>Communications Act 2013, s 60.

<sup>91</sup>The absence of a communications tribunal has been highlighted as a gap in the telecommunications regulatory framework as the presence of the tribunal, it is argued, would lead to a more rapid response to service provider grievances. See UCC, 'Recommendations on Proposed Review of the Telecommunications Sector Policy' (2005) Policy Review Report 28/1/05 42.

to consult the Competition commission, if an issue is raised that may be in contravention of the national competition law.

Apart from the national laws, there are supranational competition laws that apply to anti-competitive behaviour in Uganda. Uganda is a member of regional economic integration communities that have not only encouraged member states to enact a national competition law but also enacted supranational competition laws to help regulate cross-border anti-competitive conduct. The most relevant laws are the East African Community Competition Act of 2006 and the COMESA Competition Regulations of 2004. These laws are important given the rise of regional mobile operators that dominate the mobile market in several Sub-Saharan Africa countries.<sup>92</sup> In the absence of a national competition law, the East Africa Competition Act may be a tool used to regulate the conduct of regional operators in Uganda. However, this chapter places greater emphasis on the efficacy of the national legal framework with the supranational competition laws discussed in more detail in Chap. 5 that addresses the issue of cross-border telecommunications mergers.

#### **4.6.1 *Market Definition in the Telecommunications Sector***

An analysis of competition law enforcement would be incomplete without discussing market definition which is the first step in any investigation into anti-competitive behaviour. Market definition in the telecommunications sector is particularly significant as certain economic characteristics of the telecommunications sector, for example, high fixed costs and low margin costs, may affect the manner in which the relevant market is defined.

The Fair Competition Regulations, in line with established competition law principles, require as a first step in any investigation into anti-competitive conduct that the UCC define the relevant market.<sup>93</sup> Defining the relevant market is an analytical tool used to restrict the attention of authorities investigating anti-competitive conduct to those products or services which have a “significant” impact on competition.<sup>94</sup> This objective is achieved by identifying those substitute products or services which provide an effective constraint on the competitive behaviour

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<sup>92</sup>The majority of mobile operators in Uganda are also providing mobile services in neighbouring countries. Within the East African Community (EAC) made up of Kenya, Tanzania, Uganda, Rwanda and Burundi, there are multinational telecommunications groups operating in more than one member state. MTN is operating in Rwanda and Uganda, and Orange (now Africell in Uganda) is operating in Kenya and Uganda. Airtel is operating in Tanzania, Rwanda, Uganda, and Kenya. Millicom (Tigo) operates in Tanzania and Rwanda. Vodafone is also present in Kenya and Tanzania. The phenomenon of the pan-African telecommunications operators and potential challenges for regulation by a national regulator are briefly touched on in Chap. 2, Sect. 2.4.2 of this study.

<sup>93</sup>The Communications (Fair Competition) Regulations 2005, SI 2005/24, sch, para 3(2).

<sup>94</sup>Simon Bishop and Mike Walker, *The Economics of EC Competition Law: Concepts, Application and Measurement* (2nd edn, Sweet and Maxwell 2002) 83.

of the products or services being offered in the market by a scrutinised firm.<sup>95</sup> In this regard, the Fair Competition Regulations provide for the definition of the relevant market along two dimensions: product; and geographical.<sup>96</sup> A similar provision is found in the draft Competition Bill.<sup>97</sup>

The product market encompasses the product that is sold in the market or the relevant good or service.<sup>98</sup> The draft Competition Bill is more detailed in its definition of the product market which it refers to as market comprising all those products or services which are regarded as interchangeable or substitutable by the consumer, by reason of characteristics of the product or its price and its intended use.<sup>99</sup> However, the Fair Competition Regulations go further than the draft Competition Bill by providing a test for determining substitutability of products. According to the test, the product market includes any demand-side or supply-side substitutes whose availability prevents an operator from sustaining a small but significant increase in the price of a product above the competitive level.<sup>100</sup> This test is similar to the hypothetical monopolist test used by competition authorities worldwide to identify substitutes in the relevant market.<sup>101</sup>

The geographical market, according to the Fair Competition Regulations is the geographic area within which the product of the scrutinised firm is sold.<sup>102</sup> As is the case with the product market definition, the draft Competition Bill provides a more detailed definition of the geographic market as comprising the area in which the enterprise concerned is involved in the supply and demand of products or services, in which the conditions of competition are distinctly homogenous and can be distinguished from neighbouring areas because the conditions of competition are appreciably different in those areas and for determining a geographic market.<sup>103</sup> The Fair Competition Regulations however, list two key factors for determining the boundaries of the geographical market:

- (a) customers are able to switch to substitutes supplied by operators in different areas; and
- (b) operators in different areas are able to supply substitute products.<sup>104</sup>

<sup>95</sup>Ibid. Also see Commission Notice on the Definition of Relevant Market for Purposes of Community Competition Law [1997] OJ C 372/3 para 2.

<sup>96</sup>The Communications (Fair Competition) Regulations 2005, SI 2005/24, sch, para 3(1).

<sup>97</sup>Draft Competition Bill 2004, cl 44(6).

<sup>98</sup>The Communications (Fair Competition) Regulations 2005, SI 2005/24, sch, para 3(1)(a).

<sup>99</sup>Draft Competition Bill 2004, cl 44(7).

<sup>100</sup>The Communications (Fair Competition) Regulations 2005, SI 2005/24, sch, para 3(1)(b).

<sup>101</sup>The test is also known as the SSNIP (small but significant non-transitory increase in price increase above the competitive price) test, since it refers to a small but non-transitory increase in price by the hypothetical monopolist. The test was originally formulated by the US Department of Justice and Federal Trade Commission in the Horizontal Merger Guidelines of 1982 (last revised in 2010) and has been adopted as the standard test.

<sup>102</sup>The Communications (Fair Competition) Regulations 2005, SI 2005/24, sch, para 3(1)(b).

<sup>103</sup>Draft Competition Bill 2004, cl 44(7).

<sup>104</sup>The Communications (Fair Competition) Regulations 2005, SI 2005/24, sch, para 3(3). It should be pointed out that the draft Competition Bill, cl 44 (7)(b) also provides a list of factors

Therefore, the Fair Competition Regulations seem to adopt the standard market definition methodology applied by national competition authorities investigating cases of anti-competitive conduct. However, it must be pointed out that due to certain market characteristics of the telecommunications sector<sup>105</sup> and the impact of liberalisation of the sector on the market structure,<sup>106</sup> some competition authorities and commentators have called for caution in applying the conventional standard.<sup>107</sup> Some commentators consider the conventional methodology for defining the relevant market as inadequate for competition analysis in the telecommunications sector and have recommended modification of the methodology.<sup>108</sup> Therefore, the assessment of the provisions on market definition in the Fair Competition Regulations in the next section takes into account the propensity of certain market characteristics of the telecommunications sector and its liberalisation to affect market definition.

#### ***4.6.2 Market Definition Under the Fair Competition Regulations: Is It Modern Enough?***

The definition of the relevant market in the telecommunications sector has two dimensions, product and geographical market according to the provisions of the

to consider when defining the geographic market some of which are particularly relevant in the telecommunications sector, for example, regulatory trade barriers and customer preferences discussed in more detail in the next section.

<sup>105</sup> Particularly the high fixed costs and low margin costs that characterise the sector.

<sup>106</sup> Liberalisation has led to wide array of telecommunications services in different market segments and the existence of multi-product telecommunications companies making it particularly challenging to define the product market.

<sup>107</sup> Notable commentators are Jordi Gual, ‘Market Definition in the Telecommunications Industry’ in Pierre A. Buigues and Patrick Rey (eds.), *The Economics of Antitrust and Regulation in Telecommunications* (Edward Elgar 2004) and Martin Cave, Ulrich Stumpf and Tommaso Valletti, ‘A Review of Certain Markets Included in the Commission’s Recommendation on Relevant Markets Subject to *Ex Ante* Regulation’ <[http://ec.europa.eu/information\\_society/policy/ecommerce/doc/library/ext\\_studies/review\\_experts/review\\_regulation.pdf](http://ec.europa.eu/information_society/policy/ecommerce/doc/library/ext_studies/review_experts/review_regulation.pdf)> accessed 15 June 2017. Similar views have been expressed by competition authorities; the Australia Competition and Consumer Commission’s Information Paper on Anti-Competitive Conduct in Telecommunications Markets (August 1999); European Commission Guidelines on the Application of the EEC Competition Rules in the Telecom [1991] OJ C 233 para 25 where the European Commission points out that rapid technology changes make market definition challenging; and Office of Fair Trading UK, Competition Act 1998: The Application in the Telecommunications Sector Guidelines, s 5.

<sup>108</sup> Jordi Gual, ‘Market Definition in the Telecommunications Industry’ in Pierre A. Buigues and Patrick Rey (eds.), *The Economics of Antitrust and Regulation in Telecommunications* (Edward Elgar 2004); and ICN ‘Report of the ICN Working Group on Telecommunications Services’ <<http://www.internationalcompetitionnetwork.org/uploads/library/doc384.pdf>> accessed 15 June 2017.

Fair Competition Regulations.<sup>109</sup> As already mentioned the Fair Competition Regulations mandate the use of the hypothetical monopolist (SSNIP test) in order to identify close substitutes and thus define the product market.<sup>110</sup> The substitutability test as provided for in the Fair Competition Regulations defines the relevant substitutes as those whose availability prevents an operator from sustaining a small but significant increase in the price of a product above the competitive level as falling within the relevant product market.<sup>111</sup> However, the provisions of the Fair Competition Regulations are lacking in detail and fail to act as a sufficient guide to enable the UCC, which lacks competition law enforcement experience, to carry out its mandate.

Firstly, the Fair Competition Regulations do not explicitly mention the non-transitory nature of the price increment which is an important element. The Fair Competition Regulations refer to a ‘small but significant increase in price’ rather than ‘small but significant non-transitory increase in price’ as provided under competition law which requires that the price must be sustained for a defined period of time.<sup>112</sup> However, the non-transitory nature of the price increase is recognised by the UCC which has issued additional guidelines on market definition.<sup>113</sup> According to the market definition guidelines, non-transitory is a period of more than 12 months.<sup>114</sup> Therefore, one can safely say that though this particular aspect is not addressed in the Fair Competition Regulations, the UCC is aware of its significance.

Secondly, the Fair Competition Regulations do not provide a benchmark to help identify whether “the price of a product is above the competitive level” as another important aspect of the substitutability test. Under the standard SSNIP test, the competitive price level for the products or services under consideration is taken as marginal cost.<sup>115</sup> It is worth noting that the UCC guidelines on market definition favour the common practice of competition and regulatory authorities relying on the prevailing prices of the products as a benchmark (‘reference price’).<sup>116</sup> In addition, the UCC guidelines define “a small but significant increase in price” as

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<sup>109</sup>The Communications (Fair Competition) Regulations 2005, SI 2005/24, sch, para 3(1)(a) and (b).

<sup>110</sup>Ibid, para 3(1)(b).

<sup>111</sup>Ibid.

<sup>112</sup>The term non-transitory is usually defined as a period of more than 12 months.

<sup>113</sup>UCC, ‘Telecommunications Market Definition’ (2009) 4 <<http://www.ucc.co.ug/files/downloads/Extract%20from%20Report%20on%20Competition%20and%20Dominance%202009.pdf>> accessed 15 June 2017.

<sup>114</sup>Ibid.

<sup>115</sup>Jordi Gual, ‘Market Definition in the Telecommunications Industry’ in Pierre A. Buigues and Patrick Rey (eds.), *The Economics of Antitrust and Regulation in Telecommunications* (Edward Elgar 2004) 50.

<sup>116</sup>UCC, ‘Telecommunications Market Definition’ (2009) 4 <<http://www.ucc.co.ug/files/downloads/Extract%20from%20Report%20on%20Competition%20and%20Dominance%202009.pdf>> accessed 15 June 2017.

price increases of 5–10% which is the standard definition traced back to the United States merger guidelines.<sup>117</sup> Therefore, the Fair Competition Regulations are buttressed by the UCC guidelines on market definition which adopt the standard elements of market definition developed in competition law. That being said, the issue still remains as to whether the method of definition of the relevant market provided for in the Fair Competition Regulations and the market definition guidelines takes into account characteristics of the telecommunications sector that may affect market definition. This issue is addressed from both the product and geographical market definition perspectives.

#### **4.6.2.1 Definition of the Relevant Product Market**

When it comes to defining the relevant product market, there are two key aspects that make it challenging to rely on the conventional method. The two issues in question are: (1) economic characteristics peculiar to the telecommunication sector; and (2) the wide array of services and varied customer preferences in the liberalised telecommunications sector.

With regard to economic characteristics of the telecommunications sector, it must be observed that generally these characteristics, for example, network effects, compatibility and standards, and economies of scale and scope have an impact on the competitive market structure of the sector, rather than presenting problems for market definition.<sup>118</sup> Nevertheless, regulators and competition authorities should be wary of certain economic characteristics that may have an impact on market definition, specifically, high fixed costs and low variable costs.

A key argument raised to justify a cautious approach in the application of the standard relevant market methodology relates to the high fixed costs and low variable costs and the SSNIP test. According to the SSNIP test provided for in the Fair Competition Regulations, the relevant substitutes for purposes of defining the relevant product market are those substitutes whose availability prevents an operator from sustaining a small but significant increase in the price of a product above the competitive level.<sup>119</sup> It is argued that the existence of high fixed cost and low variable costs makes it challenging to apply the standard benchmarks for competitive price level in the telecommunications sector.

According to the UCC guidelines, the approach would be to rely on prevailing prices of products.<sup>120</sup> However, in the telecommunications sector which is

<sup>117</sup>Ibid.

<sup>118</sup>‘Key Economic and Legal Drivers to Market Definition Process’ 31 <[http://ec.europa.eu/information\\_society/policy/ecommerce/doc/library/ext\\_studies/mkt\\_def\\_reg\\_obl\\_ssdc/chapter\\_2\\_key\\_economic\\_and\\_legal\\_drivers\\_to\\_the\\_market.pdf](http://ec.europa.eu/information_society/policy/ecommerce/doc/library/ext_studies/mkt_def_reg_obl_ssdc/chapter_2_key_economic_and_legal_drivers_to_the_market.pdf)> accessed 15 June 2017.

<sup>119</sup>The Communications (Fair Competition) Regulations 2005, SI 2005/24, sch, para 3(1)(b).

<sup>120</sup>UCC, ‘Telecommunications Market Definition’ (2009) 4 <<http://www.ucc.co.ug/files/downloads/Extract%20from%20Report%20on%20Competition%20and%20Dominance%202009.pdf>> accessed 15 June 2017.

characterised by high fixed costs and low variable costs, pricing above variable costs (usually above 10%) is necessary if a telecommunications company is to remain viable.<sup>121</sup> The possibility that telecommunications prices are well above variable costs means that the practice of competition authorities relying on the current price as the competitive price might result in the definition of an excessively broad market.<sup>122</sup>

Also significant for purposes of defining the relevant market using the SSNIP test is the fact that the telecommunications sector is a regulated industry. In some cases the price level might be lower than the competitive price due to regulation. Adopting the regulated price might result in a narrowly defined relevant market.<sup>123</sup> Determining the competitive price level is not the only critical concern related to the application of the SSNIP test in the telecommunications sector. The issue of what amounts to a non-transitory price increment is important. Under the standard SSNIP test the relevant benchmark is a 10% price increase benchmark. As already mentioned, high fixed costs and low variable costs may translate into pricing above variable costs (usually above 10%).<sup>124</sup> If one adopted the standard benchmark, it could lead to excessively narrow markets and an erroneous finding that an operator has market power.<sup>125</sup>

In addition to careful application of the SSNIP test in the telecommunications markets, the liberalisation of the telecommunications market has made it more crucial for competition authorities to be cautious when defining the relevant product market. The liberalisation of the telecommunications sector has led to an explosion of market segments offering a wide array of services making it particularly challenging to properly identify demand substitutes.<sup>126</sup>

Since demand substitutability focuses on the customer, it might be the case that services provided in different markets are considered substitutes falling within the

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<sup>121</sup>Jordi Gual, ‘Market Definition in the Telecommunications Industry’ in Pierre A. Buigues and Patrick Rey (eds.), *The Economics of Antitrust and Regulation in Telecommunications* (Edward Elgar 2004) 50.

<sup>122</sup>This is known as the cellophane fallacy. The cellophane fallacy based on *United States v El Du Pont de Nemours & Co* 351 US 377 (1956) occurs when the monopoly price is used to assess substitutability resulting in an erroneous finding that a monopolist firm lacks market power. Since the monopolist will increase price to the point where other products become substitutable, the use of the monopoly price will result in a broad product market.

<sup>123</sup>Debra J Aron and David E Burnstein, ‘Regulatory Policy and the Reverse Cellophane Fallacy’ (2010) 6(4) *Journal of Competition Law and Economics*. This observation is also made by the UCC in its market definition guidelines. See UCC, ‘Telecommunications Market Definition’ (2009) 3 <<http://www.ucc.co.ug/files/downloads/Extract%20from%20Report%20on%20Competition%20and%20Dominance%202009.pdf>> accessed 15 June 2017.

<sup>124</sup>Jordi Gual, ‘Market Definition in the Telecommunications Industry’ in Pierre A. Buigues and Patrick Rey (eds.), *The Economics of Antitrust and Regulation in Telecommunications* (Edward Elgar 2004) 50.

<sup>125</sup>Ibid.

<sup>126</sup>Pierre Larouche, *Competition Law and Regulation in European Telecommunications* (Hart Publishing 2000) 132.

same product market. For example, fixed-lines services and mobile services have been delineated by the UCC as separate markets that fall under the broader umbrella of voice services.<sup>127</sup> However, for a customer wishing to make a telephone call a fixed-line call and mobile phone call might be substitutes and hence in the same market because either can satisfy the need for making a phone call.

Another aspect that must be taken into account when defining the product market is the effect of convergence on substitutability as it may result in increased competitive pressure on incumbent operators.<sup>128</sup> It is worth noting that UCC's market definition guidelines take note of the two concerns mentioned above.<sup>129</sup>

Also significant in the telecommunications sector is the varied customer preferences. Taking the example of the telephony market, customer profiles are very heterogeneous in terms of calling patterns, mobility, needs, etc., as evidenced by the wide array of tariffs packages offered by telecommunications operators. This is an aspect that the European Commission has taken into account when defining the relevant market in the telecommunications sector.<sup>130</sup> In Uganda, though the Fair Competition Regulations are not detailed, UCC has identified customer segments that may constitute specific relevant markets, for example, residential and business customers.<sup>131</sup> Therefore, UCC has taken steps to further develop the relevant market definition in the telecommunications sector in line with the current market characteristics.

Another important consideration when defining the relevant market is the existence of multi-product telecommunications companies providing different products and services that satisfy the varied customer preferences. This may give rise to cluster markets when products are offered for sale as a bundle, even though they are not tied to each other, that is, there is no requirement that all products must be

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<sup>127</sup>UCC, ‘Telecommunications Market Definition’ (2009) 6 <<http://www.ucc.co.ug/files/downloads/Extract%20from%20Report%20on%20Competition%20and%20Dominance%202009.pdf>> accessed 15 June 2017.

<sup>128</sup>Convergence in the communications sector means that firms that previously supplied one type of product or service are able to supply multiple products or services. For example, cable TV operators are providing broadband services thereby competing with broadband in local loop and mobile phones providing both voice and high data speed services. These forms of convergence may act as a competitive restraint against the dominant fixed-line incumbent with monopoly control over the local loop.

<sup>129</sup>UCC, ‘Telecommunications Market Definition’ (2009) 5 <<http://www.ucc.co.ug/files/downloads/Extract%20from%20Report%20on%20Competition%20and%20Dominance%202009.pdf>> accessed 15 June 2017.

<sup>130</sup>The European Commission in BT/AT&T, Case No IV/JV.15, 30 March 1999, defined a relevant market for the provision of global telecoms services to multinational corporate users.

<sup>131</sup>UCC, ‘Telecommunications Market Definition’ (2009) 3 <<http://www.ucc.co.ug/files/downloads/Extract%20from%20Report%20on%20Competition%20and%20Dominance%202009.pdf>> accessed 15 June 2017.

bought from one single supplier.<sup>132</sup> If customers would find it inconvenient to have individual services supplied by different firms rather than as a bundle and the majority purchase services as a bundle, it might be regarded as constituting one relevant product market.<sup>133</sup> However, there is a danger in focusing on cluster markets, that regulators and competition authorities will be both under-inclusive<sup>134</sup> and over-inclusive<sup>135</sup> in their concept of the relevant market.<sup>136</sup> The cluster market concept is noted to be particularly significant in the mobile telephony market.<sup>137</sup> This is significant in Uganda where most concerns on anti-competitive behaviour appear to arise in the mobile telephony market. Therefore, to avoid too narrow market definitions, it is important for UCC to take such considerations into account.<sup>138</sup>

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<sup>132</sup>Martin Cave, Ulrich Stumpf, and Tommaso Valletti, ‘A Review of Certain Markets Included in the Commission’s Recommendation on Relevant Markets Subject to *Ex Ante* Regulation’ 20 <[http://ec.europa.eu/information\\_society/policy/ecommerce/doc/library/ext\\_studies/review\\_experts/review\\_regulation.pdf](http://ec.europa.eu/information_society/policy/ecommerce/doc/library/ext_studies/review_experts/review_regulation.pdf)> accessed 15 June 2017.

<sup>133</sup>‘Market Definitions for Regulatory Obligations in Communications Markets’ 22 <[http://www.itu.int/ITU-D/treg/Events/Seminars/2005/Thailand/Reference%20Material/Reference%20Material%20-%20Market\\_definitions\\_exec\\_sum.pdf](http://www.itu.int/ITU-D/treg/Events/Seminars/2005/Thailand/Reference%20Material/Reference%20Material%20-%20Market_definitions_exec_sum.pdf)> accessed 15 June 2017.

<sup>134</sup>Under-exclusive, by excluding firms that may offer particular products also offered by the multi-product firm. See Martin Cave, Ulrich Stumpf, and Tommaso Valletti, ‘A Review of Certain Markets Included in the Commission’s Recommendation on Relevant Markets Subject to *Ex Ante* Regulation’ 20 <[http://ec.europa.eu/information\\_society/policy/ecommerce/doc/library/ext\\_studies/review\\_experts/review\\_regulation.pdf](http://ec.europa.eu/information_society/policy/ecommerce/doc/library/ext_studies/review_experts/review_regulation.pdf)> accessed 15 June 2017.

<sup>135</sup>Over-inclusive, by failing to note the market power existing in particular product lines. See Martin Cave, Ulrich Stumpf, and Tommaso Valletti, ‘A Review of Certain Markets Included in the Commission’s Recommendation on Relevant Markets Subject to *Ex Ante* Regulation’ 20 <[http://ec.europa.eu/information\\_society/policy/ecommerce/doc/library/ext\\_studies/review\\_experts/review\\_regulation.pdf](http://ec.europa.eu/information_society/policy/ecommerce/doc/library/ext_studies/review_experts/review_regulation.pdf)> accessed 15 June 2017.

<sup>136</sup>Martin Cave, Ulrich Stumpf, and Tommaso Valletti, ‘A Review of Certain Markets Included in the Commission’s Recommendation on Relevant Markets Subject to *Ex Ante* Regulation’ 20 <[http://ec.europa.eu/information\\_society/policy/ecommerce/doc/library/ext\\_studies/review\\_experts/review\\_regulation.pdf](http://ec.europa.eu/information_society/policy/ecommerce/doc/library/ext_studies/review_experts/review_regulation.pdf)> accessed 15 June 2017.

<sup>137</sup>‘Market Definitions for Regulatory Obligations in Communications Markets’ 22 <[http://www.itu.int/ITU-D/treg/Events/Seminars/2005/Thailand/Reference%20Material/Reference%20Material%20-%20Market\\_definitions\\_exec\\_sum.pdf](http://www.itu.int/ITU-D/treg/Events/Seminars/2005/Thailand/Reference%20Material/Reference%20Material%20-%20Market_definitions_exec_sum.pdf)> accessed 15 June 2017. Also see and Martin Cave, Ulrich Stumpf, and Tommaso Valletti, ‘A Review of Certain Markets Included in the Commission’s Recommendation on Relevant Markets Subject to *Ex Ante* Regulation’ 22 <[http://ec.europa.eu/information\\_society/policy/ecommerce/doc/library/ext\\_studies/review\\_experts/review\\_regulation.pdf](http://ec.europa.eu/information_society/policy/ecommerce/doc/library/ext_studies/review_experts/review_regulation.pdf)> accessed 15 June 2017.

<sup>138</sup>UCC takes note that cluster markets are an additional factor to consider when defining the relevant market. UCC, ‘Telecommunications Market Definition’ (2009) 4 <<http://www.ucc.co.ug/files/downloads/Extract%20from%20Report%20on%20Competition%20and%20Dominance%202009.pdf>> accessed 15 June 2017.

#### **4.6.2.2 Defining the Relevant Geographical Market**

With regard to geographical market definition in the telecommunications sector, a very important aspect is that the sector is a network based industry. This specific characteristic can have an effect on the definition of the geographical market. In particular the network reach of the scrutinised firm and that of the supplier whose services or products are considered substitutes should be considered. This is because the network coverage of different service providers varies such that some service providers are able to reach a greater number of customers than other service provider whose services would otherwise be considered as substitutes. Reference is made to the European Union competition law framework where the European Commission's decisional practice defines the scope of the geographic market for the communications sector as:

1. the extent and coverage of the network and the customers that can economically be reached and whose demands may be met; and
2. the legal and regulatory system which governs the operations of competitors and their right to provide a service or services.<sup>139</sup>

Currently, the UCC defines markets on a national basis on the ground that there is no evidence of regional market power in the telecommunications sector in Uganda.<sup>140</sup> Therefore, for purposes of definition of the geographic market all telecommunications markets are national. Nevertheless, the extent and coverage of the network and the customers that can economically be reached and whose demands may be met should still be incorporated as part of the geographical market definition methodology.

The legal framework and the UCC guidelines on market definition in the telecommunications sector take into account the fact that the sector has certain characteristics that must be taken into consideration when determining the relevant market in an investigation in anti-competitive conduct. One can therefore argue, based on the provisions of the Fair Competition Regulations and the UCC's views on market definition, that the market definition approach in Uganda's telecommunications sector corresponds to modern standards. However, it remains to be seen

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<sup>139</sup>The European Commission has developed this decisional practice through a series of merger control cases, notably, Case No COMP/M.1025-*Olivetti/Mannesmann/Infostrada*, 15 January 1998 and Case No COMP/M.1536-*Wind/Enel STC*, 29 June 1999.

<sup>140</sup>See UCC, 'Telecommunications Market Definition' (2009) 6 <<http://www.ucc.co.ug/files/downloads/Extract%20from%20Report%20on%20Competition%20and%20Dominance%202009.pdf>> accessed 15 June 2017. UCC acknowledges the fact that some services have not been rolled out to the same extent in different parts of Uganda but argues that this is a transitional phenomenon and does not merit differential regulation based on geographical heterogeneities at this stage. According to the UCC, the limited availability of some services in some parts of the country does not, in its view, constitute evidence of regional market power but rather the absence of a market in some regions.

whether UCC will be cautious in practice as the regulatory body is yet to enforce the competition rules in the telecommunications sector.

### **4.6.3 *Anti-Competitive Practices***

The Communications Act provides three main rules governing anti-competitive behaviour in Uganda's telecommunications sector. These rules, based on competition law principles, prohibit three specific types of anti-competitive practices: price fixing and other forms of concerted practice, abuse of dominant position, and anti-competitive mergers.<sup>141</sup> The Fair Competition Regulations implementing the Communications Act provides for the specific elements of each of the prohibited forms of anti-competitive behaviour. Also relevant for competition law enforcement purposes is the draft Competition Bill which prohibits the three specific types of anti-competitive practices.

This part of the study focuses on price fixing and other forms of concerted practice and abuse of dominant position and seeks to establish whether the rules adequately address specific anti-competitive behaviour in Uganda's telecommunications sector. Anti-competitive mergers are discussed in Chap. 5. Therefore, the anti-competitive practices of greatest concern are identified and how the legislation governs these particular anti-competitive practices is discussed. The analysis also addresses the issue whether UCC effectively implements the existing legislation.

#### **4.6.3.1 *Anti-Competitive Agreements and Concerted Practices***

This sub-section focuses on the first rule prohibiting price fixing and other forms of concerted practice. Under the Communications Act and the Fair Competition Regulations, certain forms of co-operation among competitors are frowned upon as detrimental to competition in a given market. The two pieces of legislation identify three specific forms of co-operation that are prohibited if they distort or restrict competition in the telecommunications sector: agreements between operators, a decision by an association of operator or a concerted practice.<sup>142</sup>

The Fair Competition Regulations provide a non-exhaustive list of specific forms of co-operation that will be regarded as anti-competitive including price fixing, agreements to share markets, and agreements between operators and entities at different levels in the supply chain as a downstream reseller or an upstream provider of communications services, among others.<sup>143</sup>

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<sup>141</sup>Communications Act, 2013, s 57(2).

<sup>142</sup>Communications Act 2013, s.53(b) and Communications (Fair Competition) Regulations 2005, SI 2005/24, reg 6(3).

<sup>143</sup>Communications (Fair Competition) Regulations 2005, SI 2005/24, reg 6(4).

In addition to the sector-specific legislation, the draft Competition Bill prohibits anti-competitive agreements, decisions,<sup>144</sup> and concerted actions where such practices cause an adverse appreciable effect on competition.<sup>145</sup>

It is clear that the prohibition of anti-competitive agreements, decision of an association and concerted practices is meant to reduce the risk of co-operation or interaction among competitors being used as an avenue to limit or restrict competition. Through co-operation competitors may replace competition with common action and thereby effect an anti-competitive restraint that could otherwise not be achieved.<sup>146</sup> The prohibition of certain forms of co-operation among operators in the Communications Act and the Fair Competition Regulations is particularly significant in the telecommunications sector for two specific reasons.

Firstly, in the telecommunications sector, compared to other economic sectors, co-operation among operators is important because telecommunications markets are characterised by network effects. Network effects exist where purchasers find a good more valuable as more purchasers buy the same good.<sup>147</sup> In the context of telecommunications, customers benefit from being able to communicate with a larger number of other users of the service.<sup>148</sup> This implies that incumbent operators with a larger number of subscribers will have the competitive advantage over new entrants seeking to establish themselves in the market and thus have few subscribers. In order to ensure effective competition among larger and smaller networks, telecommunications regulators tend to mandate access, particularly two-way access through interconnection and one-way access to networks. Thus in contrast to competition law principles that frown on competitors interacting with one another as means of protecting competition in a given market, telecommunications policy supports co-operation among competitors in order to facilitate the growth of competition in the telecommunications sector.

The telecommunications policies of mandating interconnection and one-way access to networks which are geared towards enhancing competition compel competing operators to co-operate closely with one another. This might provide an avenue for operators to engage in anti-competitive behaviour thereby restricting or distorting competition in a given telecommunications market. In Uganda, most operators are vertically integrated providing telecommunications services primarily

<sup>144</sup>In contrast to the Fair Competition Regulations that relate to decisions of associations, the draft Competition Bill appears to be of wider application covering any decision in respect of production, supply, acquisition, or control of goods, or the provision of services.

<sup>145</sup>Draft Competition Bill (2004), cl 43(1).

<sup>146</sup>Phillip E Areeda and Herbert Hovenkamp, *Fundamentals of Antitrust Law* (4th edn, Wolters Kluwer & Business 2011) 14-9.

<sup>147</sup>Mark Lemley and David McGowan, ‘Legal Implications of Network Economic Effects’ (1998) 86(3) California Law Review 481,483.

<sup>148</sup>Mark Armstrong, ‘Competition in Telecommunications’ (1997) 13(1) Oxford Law Review of Economic Policy 64, 67.

through their own infrastructure.<sup>149</sup> Thus, co-operation through one-way access is less prevalent. Interconnection is the most significant form of co-operation in Uganda's telecommunications sector particularly in the voice market where most operators are vertically integrated. While interconnection is undoubtedly crucial for competition in Uganda's voice market, the potential for co-operation among operators leading to restricted or distorted competition should not be overlooked. It is important to ensure that the policy of co-operation also includes measures to combat anti-competitive behaviour by telecommunications operators.

The second reason why the prohibition of anti-competitive agreements, decisions, and concerted practices is relevant in the telecommunications sector is due to the fact that in many countries the pattern of competition development in telecommunications markets has veered towards oligopoly, most notably in the mobile services market. Commentators have noted that while liberalisation has increased competition in the telecommunications markets, the development of competition in telecommunications markets has taken the form of an oligopoly.<sup>150</sup> Oligopoly markets consist of a small number of competitors small enough to require each competitor to take into account its rivals' current actions and likely future responses to its actions.<sup>151</sup> The specific concern with oligopoly markets is that the market structure may facilitate anti-competitive co-operation among telecommunications operators.

Competition law scholars and economists have expressed concern about the susceptibility of oligopoly markets to anti-competitive behaviour, specifically, tacit collusion.<sup>152</sup> The link between oligopoly markets and collusion is based on the interdependence theory which provides that in an oligopoly market the few competitors are interdependent in their pricing as they base their pricing decisions in

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<sup>149</sup>However, in recent years telecommunications operators have started sharing infrastructure particularly in the rural areas where there is less incentive to invest heavily in infrastructure. It must be pointed that there is a growing trend for telecommunications to sell their towers to third-party tower companies in a sale-and leaseback deal in order to reduce operational costs.

<sup>150</sup>Howard Shelanski, observes that while the telecommunications market in the US is no longer characterised by a monopoly structure, it exhibits an oligopoly market structure. See Howard A Shelanski, 'Adjusting Regulation to Competition: Toward a New Model of U.S Telecommunications Policy' (2007) Yale Journal on Regulation 56, 84. Also see Eli M Noam, 'Fundamental Instability: Why Telecom is Becoming a Cyclical and Oligopolistic Industry' (2006) Information Economics and Policy 272; and Mario Passos, 'Regulating Competition in Oligopoly: The Case of Telecommunications in Brazil' <[http://www.ie.ufrj.br/grc/pdfs/regulating\\_competition\\_in\\_oligopoly.pdf](http://www.ie.ufrj.br/grc/pdfs/regulating_competition_in_oligopoly.pdf)> accessed 15 June 2017.

<sup>151</sup>Kip W Viscusi, John M, Vernon, and Joseph E Harrington, Jr, *Economics of Regulation and Antitrust*, (2nd edn, Cambridge Mass MIT Press 1995) 97.

<sup>152</sup>Simon Bishop and Mike Walker, *The Economics of EC Competition Law: Concepts, Application and Measurement* (2nd edn, Sweet and Maxwell 2002); Kip W Viscusi, John M, Vernon, and Joseph E, Harrington, Jr, *Economics of Regulation and Antitrust*, (2nd edn, Cambridge Mass MIT Press 1995); and Thomas Piriano 'Regulating Oligopoly Conduct Under Antitrust Laws' (2004) Minnesota Law Review 9, 16.

part on anticipated reactions to them.<sup>153</sup> Oligopolistic interdependence may facilitate collusion, specifically tacit collusion,<sup>154</sup> whereby simply by observing other firms' conduct, firms may co-operate to raise prices above the competitive level.<sup>155</sup> Tacit collusion is the form of co-operation that most worries competition authorities because in practice companies tend to avoid creating direct evidence of anti-competitive communications to protect themselves from a finding of liability under competition law.<sup>156</sup> It is possible for collusion to occur in an unconcentrated market, however, in contrast to an oligopoly market, the existence of many competing firms and easy terms of entry and exit makes it less conducive for collusion.<sup>157</sup> Rather, it is more likely that firms are compelled to price at market level or risk losing sales to competitors.<sup>158</sup>

The market structure facilitating collusion is most relevant in the mobile markets which have been recognised as oligopolies.<sup>159</sup> There are however, no studies lending support to the claim that telecommunications markets in Uganda are oligopolies. Nevertheless, the mobile market in Uganda exhibits characteristics of an oligopoly. The mobile market is characterised by the presence of several structural entry barriers which foster the development of an oligopoly market structure. Structural barriers such as economies of scale and high sunk costs in the absence of whole sale access make it difficult for prospective entrants to place a competitive constraint on existing players.<sup>160</sup> More importantly, the scarcity of critical spectrum for mobile services (900 and 1800 MHz) has served as a barrier to

<sup>153</sup>Richard Posner, *Antitrust Law* (2nd edition, University of Chicago Press 2009) 56.

<sup>154</sup>“Tacit collusion exists where in the absence of any formal attempts to implement a collusive outcome; firms understand that if each firm competes less vigorously they might all be able to enjoy high prices and higher profits.” Simon Bishop and Mike Walker, *The Economics of EC Competition Law: Concepts, Application and Measurement* (2nd edn, Sweet and Maxwell 2002) 140.

<sup>155</sup>Thomas Piriano, ‘Regulating Oligopoly Conduct under Antitrust Laws’ (2004) 9 Minnesota Law Review 16.

<sup>156</sup>See Simon Bishop and Mike Walker, *The Economics of EC Competition Law: Concepts, Application and Measurement* (2nd edn, Sweet and Maxwell 2002) 141 in which it is observed that in general firms prefer to collude tacitly rather than explicitly since explicit cartel behaviour lays firms open to more serious legal penalties. A similar observation is made in Thomas Piriano, ‘Regulating Oligopoly Conduct under Antitrust Laws (2004) Minnesota Law Review 9, 11-12.

<sup>157</sup>Thomas Piriano, ‘Regulating Oligopoly Conduct under Antitrust Laws (2004) Minnesota Law Review 9, 16.

<sup>158</sup>Ibid.

<sup>159</sup>See Robert E Hall and Marc Lieberman, *Microeconomics: Principles and Applications* (6th edn, Cengage Learning 2012) 320.

<sup>160</sup>PwC for UCC, ‘Draft Report on Competition and Dominance in the Ugandan Telecoms Sector (Part 2): Interconnection and Retail Cost Study’ (2009) Unpublished 11.

market entry.<sup>161</sup> Hence, while Uganda's mobile market has a significant number of players in the market, the above-mentioned factors foster the development of an oligopolistic albeit competitive market structure. In addition, the presence of a number of local subsidiaries of multinational corporations further supports the argument that mobile services market is an oligopoly. Economists tend to point out oligopolistic competition as an important factor for increased presence of multinational corporations in various markets.<sup>162</sup> It is therefore important to ensure that co-operation does not replace competition by enforcing the provisions of the Communications Act and Fair Competition Regulations that prohibited anti-competitive concerted practices.

The accepted practice of co-operation among operators in the telecommunications sector and the existence of markets that exhibit characteristics of an oligopoly warrant an analysis of relevant provisions of the law prohibiting anti-competitive concerted practices. In analysing the provisions of the law it is not only important to establish whether the relevant provisions incorporate measures sufficient enough to combat anti-competitive behaviour but it is also important that the provisions do not impose liability where concerted practices have a neutral or positive effect on competition.

A distinction should be made between anti-competitive concerted practices on the one hand, and concerted practices that have pro-competitive objectives. Horizontal and vertical agreements both give rise to competition concerns. Vertical agreements are agreements concluded between firms which operate at different levels of production and supply chain.<sup>163</sup> Parties to vertical agreements generally produce competitive products or services, not competing products or services.<sup>164</sup> Nevertheless, vertical agreements can be a major source of anti-competitive behaviour. For example, network operators also operating at the downstream level may impose vertical restraints on service providers at the downstream level that restrict

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<sup>161</sup>Nicola M Theron and Willem H Boshoff, 'Vertical Integration in South Africa Telecommunications: A Competition Analysis (2006) 74(3) South African Journal of Economics 575, 583 recognises that the mobile services market in South Africa, though more competitive than the fixed-line market, is oligopolistic, particularly because of the scarcity of radio spectrum which serves as a barrier to entry. The scarcity of spectrum in Uganda's mobile market is threatening the continued growth of the market. See Julius Barigaba, 'Uganda: Country cannot take more GSM operators says UCC' *The East African* (Kampala 25 August 2008) <<http://www.theeastfrican.co.ke/news/-/2558/462354/-s2iw2ez/-index.html>> accessed 15 June 2017.

<sup>162</sup>The oligopolistic competition theory espouses that foreign direct investment (FDI) by a firm is a strategic reaction to the anticipated behaviour of its oligopolistic competitors and is therefore unlikely to arise in a world of perfect competition. See Kindleberger P Charles, 'American Business Abroad' (Yale University 1969).

<sup>163</sup>Alison Jones and Brenda Sufrin, *EU Competition Law-Text, Cases and Materials*, (4th edn, Oxford University Press 2011) 629.

<sup>164</sup>Ibid.

competition.<sup>165</sup> Referring to the situation in Uganda's internet services market, ISPs in the downstream market are dependent on the two vertically integrated fixed-line operators, Uganda Telecom and MTN Uganda Limited for infrastructure provision. Although there have been no competition concerns raised with regard to the vertical access agreement between the infrastructure providers and the ISPs, the anti-competitive effects of vertical agreements warrant scrutiny of such agreements under the Fair Competition Regulations.

Horizontal agreements are agreements made between competitors. An agreement is regarded as 'horizontal' when: (1) its participants are either actual or potential rivals at the time the agreement is made; and (2) the agreement eliminates some avenue of rivalry among them.<sup>166</sup> The second part of the definition is necessary because not every agreement between horizontally related firms is necessarily anti-competitive.<sup>167</sup> Simply to conclude that an agreement is horizontal establishes nothing about whether it is competitive or anticompetitive.<sup>168</sup> Several factors have to be taken into account including, whether the agreement results in any anti-competitive output reduction, whether the agreement provides any opportunity for elimination of rivalry along other avenues as well, and so on.<sup>169</sup> Nevertheless, due to the greater propensity of horizontal agreements to eliminate an avenue of rivalry among competitors, they tend to be the most scrutinised type of agreement.<sup>170</sup>

A similar argument can be made with regard to collusive behaviour particularly in the oligopoly markets which are susceptible to tacit collusion. An oligopolistic market structure on its own is not sufficient enough to read tacit collusion into concerted practices by firms in the oligopoly market. There must be incentives and ability to engage in anti-competitive co-operation. Collusion requires that firms be able to agree on a pricing structure and ensure the agreed structure is respected by all colluding firms.<sup>171</sup> That is, firms should not have an incentive to cheat by undercutting the collusive price.<sup>172</sup> Furthermore, the mere fact that firms recognise their interdependence with other firms is not sufficient grounds for inferring that observed outcomes are not the result of effective competition.<sup>173</sup>

<sup>165</sup>Oftel, 'A Prohibition Approach to Anti-Competitive Agreements and Abuse of Dominant Position: Draft Bill, Oftel's response' <[http://www.ofcom.org.uk/static/archive/oftel/publications/1995\\_98/competition/compbill.htm#3.2Vertical%20Agreements](http://www.ofcom.org.uk/static/archive/oftel/publications/1995_98/competition/compbill.htm#3.2Vertical%20Agreements)> accessed 15 June 2017.

<sup>166</sup>Phillip E Areeda and Herbert Hovenkamp, *Fundamentals of Antitrust* (4th edn, Aspen Publishers 2011) 19-4.

<sup>167</sup>Ibid.

<sup>168</sup>Ibid.

<sup>169</sup>Ibid.

<sup>170</sup>Ibid, 19-11.

<sup>171</sup>See George J Stigler, 'A Theory of Oligopoly' (1964) 72(1) *The Journal of Political Economy* 44, 45.

<sup>172</sup>Ibid.

<sup>173</sup>Simon Bishop and Mike Walker, *The Economics of EC Competition Law: Concepts, Application and Measurement* (2nd edn, Sweet and Maxwell 2002) 141.

Therefore, existing legislation regulating anti-competitive agreements and concerted practices should not snuff out the positive effects of co-operation in the telecommunications sector on competition.

#### 4.6.3.1.1 Interconnection and Anti-Competitive Behaviour: Emphasis on Call Termination Rates

The preceding sub-section provides arguments as to why close attention should be paid to the acts of co-operation among telecommunications operators in order to ensure that competition is not stifled. This sub-section focuses on the specific case of interconnection on the basis that it is the most significant form of co-operation between operators in Uganda.

Interconnection is a key part of Uganda's telecommunications policy with detailed provisions on interconnection in the Interconnection Regulations which seek to enhance competition in the telecommunications sector.<sup>174</sup> In the voice market in particular, all service providers have entered into interconnection agreements with competing providers.<sup>175</sup> However, such co-operation aimed at facilitating competition in the voice market can potentially have anti-competitive consequences. The European Commission has particularly taken note of this possibility in its Access Notice which is akin to Uganda's Interconnection Regulations.<sup>176</sup>

According to the Access Notice, access and interconnection agreements may be used as a tool to foreclose the market either through restriction of competition between the two parties to the access agreement, or restriction of competition from third parties, for example through exclusivity for one or both of the parties to the agreement.<sup>177</sup> In particular, access agreements that provide for coordination of prices, market sharing, or restricting competition from those not party to the agreement where, for example, it provides for interconnection on an exclusive basis, or lead to the exchange of commercially sensitive information, are likely to have anti-competitive effects.<sup>178</sup> It is therefore important to ensure that sufficient measures are in place to ensure that the pro-competitive policy of interconnection is not used to facilitate anti-competitive behaviour. The potential for anti-competitive behaviour is recognised in the Interconnection Regulations, which renders an

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<sup>174</sup>This is spelt out in the long title of the Interconnection Regulations.

<sup>175</sup>This form of co-operation among competitors is not as strong in other markets such as the internet market where interconnection is not seen as mandatory.

<sup>176</sup>Akin in the sense that the Access Notice provides detailed provisions on access to telecommunications facilities. The Interconnection Regulations are the primary source on regulation of access to telecommunications facilities in Uganda.

<sup>177</sup>European Commission Notice on the Application of the Competition Rules to Access Agreements in the Telecommunications Sector [1998] OJ C 265/2, para 131.

<sup>178</sup>Ibid, para 134.

operator that fails to observe the principles provided in the Regulations on interconnection negotiation in good faith liable for anti-competitive behaviour.<sup>179</sup>

In order to assess whether the measures in Uganda's legislation are sufficient, the key competition concern with regard to interconnection is call termination rates.<sup>180</sup> The UCC has yet to apply the provisions on the telecommunications competition to cases involving anti-competitive interaction among telecommunications operators. This does not imply that anti-competitive agreements and concerted practices are not a concern in Uganda's telecommunications sector. Following the full liberalisation of the telecommunications sector in 2006, one of the first allegations of anti-competitive behaviour related to claims of collusion by incumbent operators in the charging of higher interconnection rates (call termination rates) to new entrants with the aim of restricting competition in the voice market.<sup>181</sup>

Collusion in the setting of call termination rates, specifically mobile call termination rates, has increasingly received attention, especially from economists in developed jurisdictions.<sup>182</sup> Call termination is a bottleneck to competition because each mobile operator is considered a monopolist for its own call termination.<sup>183</sup> That is, there is competition for subscribers (mobile retail services market), but no competition for reaching the subscribers of a network.<sup>184</sup> Hence, in the competitive mobile telephony market in Uganda, there is need to ensure that incumbent operators do not use their monopoly over call termination to restrict competition in the market by, for example, charging exorbitantly for call termination. Guaranteeing the imposition of reasonable charges for call termination is particularly vital for new entrants since interconnection charges usually amount to

<sup>179</sup>Telecommunications (Interconnection) Regulations 2005, SI 2005, reg 9(1).

<sup>180</sup>Call termination refers to the service whereby a telecommunications operator completes or ‘terminates’ - a call made to one of its subscribers by a caller on another telecommunications operator’s network. See Mark Armstrong and Julian Wright ‘Mobile Call Termination’ (2009) 119 (538) F270, F271. Call termination rates are the charges telecommunications operators levy each other for terminating calls on their network.

<sup>181</sup>The allegations were never formally reported to the relevant authorities and therefore the information is based on interviews listed in Appendix A of this study.

<sup>182</sup>See Jean-Jacques Laffont and Jean Tirole, *Competition in Telecommunications* (MIT Press 2000) 190-196; Marc Ivaldi, Bruno Julien, Patrick Rey, Paul Seabright, and Jean Tirole, ‘The Economics of Tacit Collusion’ (2003) <[http://ec.europa.eu/competition/mergers/studies\\_reports/the\\_economics\\_of\\_tacit\\_collusion\\_en.pdf](http://ec.europa.eu/competition/mergers/studies_reports/the_economics_of_tacit_collusion_en.pdf)> accessed 15 June 2017; Damien Geradin and Michael Kerf, *Controlling Market Power in Telecommunications: Antitrust vs. Sector-Specific Regulation* (Oxford University Press 2003); Tommy Staahl Gabrielsen and Steinar Vagstad, ‘Why is On-net Traffic Cheaper than Off-net Traffic? Access Markup as a Collusive Device?’ (2008) 52 European Economic Review 99; and Mark Armstrong and Julian Wright, ‘Mobile Call Termination’ (2009) 119(538) The Economic Journal F270.

<sup>183</sup>Mark Armstrong and Julian Wright, ‘Mobile Call Termination’ (2009) 119(538) the Economic Journal F270.

<sup>184</sup>Marcel Canoy, Paul de Bijl, and Ron Kemp, ‘Access to Telecommunications Networks’, in Pierre A. Buigues and Patrick Rey (eds) *The Economics of Antitrust and Regulation in Telecommunications* (2004 Edward Elgar) 142.

50% or more of their cost of services.<sup>185</sup> With the concept of network effects in mind,<sup>186</sup> high interconnection charges will make it very difficult for a new entrant to remain viable in the market since the larger networks will be more attractive for subscribers.

#### 4.6.3.1.2 Call Termination Rates and Anti-Competitive Behaviour: Uganda's Interconnection Regulations

To date, efforts to regulate interconnection in Uganda's telecommunications sector have been through the Interconnection Regulations of 2005 which are the primary legislation on access agreements. The law contains provisions aimed at preventing or curbing the anti-competitive effects of access and interconnection agreements.

Firstly, all interconnection agreements are subject to approval by the UCC.<sup>187</sup> Requiring the UCC's approval is one way of ensuring that interconnection agreements between telecommunications operators are not anti-competitive. This is because approval by the UCC implies that the regulatory body will only recognise interconnection agreements that are in line with the principles of fair interconnection as defined in the Interconnection Regulations. In practice, however, the obligation to seek approval is not implemented with telecommunications operators entering into interconnection agreements without requiring express approval from UCC.<sup>188</sup>

Secondly, and more importantly, the Interconnections Regulations regulate the determination of interconnection rates. According to the Interconnection Regulations, interconnection rates must be cost-based.<sup>189</sup> In 2009, following numerous complaints of high interconnection rates, the UCC intervened in the determination of interconnection rates by setting a price ceiling<sup>190</sup> thereby minimising the possibility of collusion in the setting of interconnection rates.<sup>191</sup> It is worth pointing out

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<sup>185</sup>According to the Access Notice this particular factor is the reason why there is a greater risk of price co-ordination in the telecommunications sector. (European Commission Notice on the Application of the Competition Rules to Access Agreements in the Telecommunications Sector OJ [1998] C 265/2), art 135.

<sup>186</sup>Network effects means that the more subscribers a network has, the more valuable its network is as a subscriber can communicate with more people.

<sup>187</sup>Telecommunications (Interconnection) Regulations 2005, SI 2005/25, reg 13(14).

<sup>188</sup>This was established by the author during her field visit to Kampala, Uganda in which she conducted interviewers with personnel at the UCC and the leading telecommunications operators.

<sup>189</sup>Telecommunications (Interconnection) Regulations 2005, SI 2005/25, reg 15(1).

<sup>190</sup>UCC, 'LRIC reference rate determination of 2009'.

<sup>191</sup>Although the price ceiling was regarded as non-binding as the then Communications Act, Cap.106 did not provide the UCC with specific powers to set interconnection rates, it was still adopted by all telecommunications operators. However, it must be noted that with the enactment of the Communications Act of 2013, section 58, provides UCC with specific powers to set a ceiling for interconnection rates.

that the risk of price fixing in interconnection in Uganda's telecommunications sector is generally low due to the practice of off-net and on-net price differentials. Mobile call termination rates can only be a vessel for collusion in certain cases. One case is where the prices for calls terminating on a different network (off-net) and the prices for calls terminating on the same network (on-net) are same.<sup>192</sup> If there is price discrimination between off-net and on-net calls, collusion is less likely.<sup>193</sup> The reason being that under such a pricing strategy high off-net call prices through high mobile call termination rate may not raise profits since it makes firms compete more intensely through their on-net charges.<sup>194</sup>

Economic regulation through the Interconnection Regulations provides measures that, if effectively implemented, can make it difficult for operators to enter into anti-competitive agreements or to engage in tacit collusion.

Although Uganda's experience illustrates that collusion in interconnection has been addressed through interconnection rather than competition rules, it does not negate the significance of competition rules in addressing cases of anti-competitive agreements and tacit collusion related to interconnection. This is best illustrated in South Africa where in the absence of substantive rules on interconnection and ICASA's (the telecommunications regulator) failure to regulate interconnection rates the South Africa Competition Commission has stepped in and investigated allegations of interconnection price fixing.

In 2001, MTN and Vodacom increased the wholesale call termination rate in their interconnection agreement by 500% shortly after Cell C, the third mobile operator had entered the mobile services market. The call termination rates were sanctioned by the telecommunications regulator ICASA. Prior to Cell C's entrance into the market, MTN and Vodacom had enjoyed a duopoly. Three complaints<sup>195</sup> were lodged before the South Africa Competition Commission (Commission) alleging collusion by the incumbent telecommunications operators to foreclose the mobile services market by high wholesale call termination rates.<sup>196</sup> The

<sup>192</sup>Damien Geradin and Michael Kerf, *Controlling Market Power in Telecommunications: Anti-trust vs. Sector-Specific Regulation* (Oxford University Press 2003) 189.

<sup>193</sup>Jean-Jacques Laffont and Jean Tirole, *Competition in Telecommunications* (MIT Press 2000) 198. However, see Malte Cherdron, 'Interconnection, Termination-Based Price Discrimination, and Network Competition in a Mature Telecommunications Market' (2002) <<http://www.cepr.org/meets/wkcn/6/699/papers/chedron.pdf>> accessed 15 June 2017. The article illustrates how control over access charges facilitates collusion in the retail market even when the firms compete in non-linear tariffs, as long as they can price discriminate according to where calls terminate.

<sup>194</sup>Mark Armstrong and Julian Wright, 'Mobile Call Termination' (2009) 119(538) the Economic Journal F270, F288.

<sup>195</sup>The first complaint was lodged in 2004 and two others were lodged in 2005.

<sup>196</sup>'MTN, Vodacom in Clear on Collusion Charges' Techcentral (23 March 2011) <<http://www.techcentral.co.za/mtn-vodacom-in-the-clear-on-collusion-charges/22038/>> accessed 15 June 2017.

Commission appeared to have initially cleared the operators of wrongdoing when the Commission's chairman Shan Ramburuth, appearing before the Parliamentary Portfolio Committee on Communications which was exploring the high interconnection rates of mobile operators, said there was no evidence of collusion.<sup>197</sup> However, a month later (in October 2009) the Commission was still investigating claims of collusion against the incumbent mobile operators.<sup>198</sup> In 2011, the Commission cleared both companies of price fixing and collusion despite the Commission's concerns about both companies' high rates between 2004 and 2009.<sup>199</sup> It is interesting to note that the Commission highlighted jurisdictional issues between itself and ICASA as a challenge it faced in investigating cases of anti-competitive behaviour in the telecommunications sector.<sup>200</sup>

However, it is important to distinguish the situation in Uganda from that in South Africa. At the time the decision was made there was no sector-specific law regulating interconnection rates in South Africa which left ICASA less effective in ensuring fair and efficient interconnection in the telecommunications sector.<sup>201</sup> Therefore, intervention by the South Africa Competition Commission served to fill a gap in the telecommunications regulatory framework. In contrast, in Uganda, there have been detailed provisions aimed at ensuring fair and efficient interconnection in Uganda's telecommunications since 2005.<sup>202</sup> In recent years, UCC has taken steps to ensure that interconnection is not used as a tool for restricting competition as evidenced, for example, by its regulatory intervention in 2009.<sup>203</sup> In the Ugandan context, reliance on competition rules would be as complementary to the sector-specific rules on interconnection.

<sup>197</sup>Candice Jones and Nicola Mawson, 'Commission Flip-Flops on Mobile Collusion' *ITWeb* (Johannesburg 20 Oct 2009) <[http://www.itweb.co.za/index.php?option=com\\_content&view=article&id=27306:commission-flipflops-on-mobilecollusion&Itemid=53&tmpl=component&print=1](http://www.itweb.co.za/index.php?option=com_content&view=article&id=27306:commission-flipflops-on-mobilecollusion&Itemid=53&tmpl=component&print=1)> accessed 15 June 2017.

<sup>198</sup>Ibid. In particular, the provision of a non-discrimination clause which stated that everyone would be charged the same made it difficult for the Commission to establish explicit collusion according to the Mail & Guardian newspaper, see 'MTN, Vodacom Face Price Fixing Probe' *Mail & Guardian* (19 October 2009) <<http://mg.co.za/article/2009-10-19-mtn-vodacom-face-pricefixing-probe>> accessed 15 June 2017.

<sup>199</sup>'MTN, Vodacom in Clear on Collusion Charges' *Techcentral* (23 March 2011) <<http://www.techcentral.co.za/mtn-vodacom-in-the-clear-on-collusion-charges/22038/>> accessed 15 June 2017.

<sup>200</sup>Ibid.

<sup>201</sup>In 2010, ICASA published the Call Termination Regulations on the 20 October, Gazette No 33698.

<sup>202</sup>Telecommunications (Interconnection) Regulations 2005, SI 2005/24.

<sup>203</sup>UCC, 'LRIC reference rate determination of 2009'.

#### **4.6.3.2 Abuse of Dominant Position by Telecommunications Operator: Defining Dominance in Uganda's Telecommunications Sector**

Under the Communications Act and the Fair Competition Regulations, dominant operators are prohibited from using their privileged position to engage in behaviour likely to restrict or distort competition in the telecommunications sector.<sup>204</sup>

It is important, when investigating cases of abuse of dominant position, to have clear guidelines to properly establish whether an operator in fact holds a dominant position. According to the Fair Competition Regulations, in order for an operator to be regarded as dominant in a given telecommunications market, it must have a position of economic strength which enables the operator to prevent effective competition from being maintained on the relevant market, by affording the operator the power to behave, to an appreciable extent, independently of competitors, customers and consumers.<sup>205</sup> Based on the definition of dominance in the Fair Competition Regulations, there are two crucial elements: (1) an operator must be in a position of economic strength, and (2), it must be able to act, to an appreciable extent, independently of its competitors and customers.

Determining economic strength of a firm is usually assessed by reference to market share.<sup>206</sup> Although market shares themselves do not automatically indicate dominance and other factors should be taken into account, the most important factor for assessing dominance is a firm's market share.<sup>207</sup> A firm with a large market share is regarded as having a dominant position. However, what amounts to a large market share varies from country to country. In Uganda's case, an operator will be presumed dominant if it has a market share of more than 35%.<sup>208</sup> Under European Union competition law, a firm is usually presumed to be dominant within the meaning of Article 102 of the TFEU, if it has a market share in excess of 50% of the relevant market.<sup>209</sup> In South Africa, a firm is dominant in a market if: it has at least 45% of the market; it has at least 35%, but less than 45%, of that market, unless it can show that it does not have market power; it has less than 35% of that

<sup>204</sup>Communications Act 2013, s 53(2)(a) and Communications (Fair Competition) Regulations 2005, SI 2005/24, reg 6(1).

<sup>205</sup>The Communications (Fair Competition) Regulations 2005, SI 2005/24, sch, para 3(5). This definition is influenced by European Union competition law adopting a definition similar to that provided by the ECJ in *Case 85/76 Hoffman- La Roche & Co.AG v Commission* [1979] ECR 461, para 38.

<sup>206</sup>Simon Bishop and Mike Walker, *The Economics of EC Competition Law: Concepts, Application and Measurement* (2nd edn, Sweet and Maxwell 2002) 181.

<sup>207</sup>Ibid.

<sup>208</sup>The Communications (Fair Competition) Regulations 2005, SI 2005/24, sch, para 3(9). Under the draft Competition Bill, clause 44(3)(a), an enterprise with a market share over 33 percent is presumed to be dominant.

<sup>209</sup>Case IV/30.698 *Engineering and Chemical Supplies (Epsom and Gloucester) Ltd v Akzo Chemie UK Ltd* [1981] O.J. L 374/1. Another notable case is the C-27/76 *United Brands BV v Commission* (1978) ECR 207 in which the CJEU found a firm with a 45 percent market share in the banana market as having a dominant position.

market, but has market power.<sup>210</sup> In Zambia, a firm with a market share of 30% is deemed dominant.<sup>211</sup> Reference to the legislation in Uganda and other leading competition law enforcement jurisdictions indicates that market share is undoubtedly important for purposes of determining dominance. However, market share is not the only indicator of market dominance although it is the only criterion identified in the Fair Competition Regulations. The draft Competition Bill is notable in this regard as it provides for other factors that are to be taken into consideration. These include: size and resources of the scrutinised firm, size and resources of the firm's competitors, technical advantages of the firm, market structure and size of the market, among others.<sup>212</sup>

The paragraphs above illustrate that there are guidelines to identifying which operators are dominant in the telecommunications market in Uganda. However, as will be revealed in the discussion below on dominance in the voice and internet markets, high market share does not automatically mean that an operator is dominant in a given market.

#### 4.6.3.2.1 Dominance in the Voice Market

In the voice market, there are a few operators that would be presumed dominant based on the 35% benchmark in the Fair Competition Regulations. Fixed-line incumbent, Uganda Telecom has maintained its strong market position in the liberalised fixed telephony market. There is a lack of reliable current data. However, UCC data of 2008 indicates that the incumbent operator had a market share of 75%.<sup>213</sup> Taking into account the fact that there has not been a significant increase in the number of fixed telephony operators and subscribers in the fully liberalised telecommunications sector,<sup>214</sup> one may conclude that market shares in the fixed telephony market have not changed much since 2008. Thus, Uganda Telecom still maintains a high market share well above the 35% benchmark. However, the high market share in the fixed telephony market does not imply that Uganda Telecom fulfils all the requirements needed to conclude that it is dominant. Though Uganda

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<sup>210</sup>Competition Act 1998, s 7.

<sup>211</sup>Competition and Consumer Protection Act 2010, s 15(a).

<sup>212</sup>Draft Competition Bill 2004, cl 44(3).

<sup>213</sup>Most reliable data from PwC for UCC, 'Draft Report on Competition and Dominance in the Ugandan Telecoms Sector (Part 2): Interconnection and Retail Cost Study' (2009) Unpublished 22 indicates that Uganda Telecom had a 75 percent market share with MTN Uganda having the remaining 25 percent of the market in 2009. This market share has not diminished considerably as there have been few entrants in the fixed telephony market following the liberalisation of the telecommunications sector in 2006. Furthermore, fixed telephone subscriptions have stagnated and fixed internet penetration rate remains at less than one percent. The market continues to be predominantly serviced by MTN Uganda limited and Uganda Telecom.

<sup>214</sup>The discussion on the state of competition in Uganda's fixed-line market reveals that this market has stagnated. See Sect. 4.4.2 of this chapter.

Telecom may have the economic strength in the fixed voice market, this does not enable it to act independently of competitors or customers in a manner that will prevent effective competition.

A key factor is the substitution of the fixed network by mobile network in Uganda which means Uganda Telecom's competitors comprise not only fixed telephony operators but also mobile telephony operators. Also significant is that the fixed telephony market only accounts for less than 0.02% of the voice services market. These factors make it difficult to argue that Uganda Telecom has a dominant position in the voice market.

While the dominance of Uganda Telecom in the fixed-telephone line market as a potential threat to competition in the voice market is disputed, dominance in the mobile telephony market might be a source of concern. The mobile market accounts for approximately 98% of the voice market, a mobile operator with a very high market share might be able to act in a manner that will prevent effective competition in the voice market.

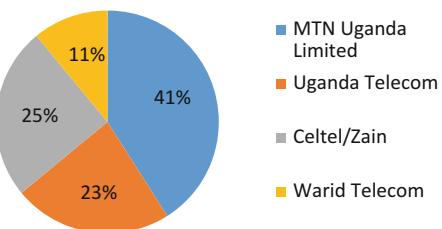
The mobile telephony market has two mobile operators with shares above the 35% mark, MTN and Airtel which had a market share of 49 and 38%, respectively in 2013, based on financial reports of the mobile operators. It is worth noting that in March 2013 Airtel entered into an agreement to acquire Warid Telecom, putting it almost at par with MTN Uganda's Limited.<sup>215</sup> However, a higher subscriber base does not automatically indicate greater market power as will be illustrated through voice traffic market share data from 2008.

Figures 4.5 and 4.6 show data on customer base in the voice market and voice traffic, respectively. Figure 4.5 shows that in 2008 MTN Uganda Limited had the largest customer base with 41% of the market, followed by Celtel/Zain (now Airtel) with a market share of 25%. However, when it came to voice traffic market share, the competitive landscape changed significantly. MTN Uganda's market share was much greater at 54%, with MTN's close rival Uganda Telecom having a market

**Fig. 4.5** Market share in the mobile market (2008).

Source: UCC

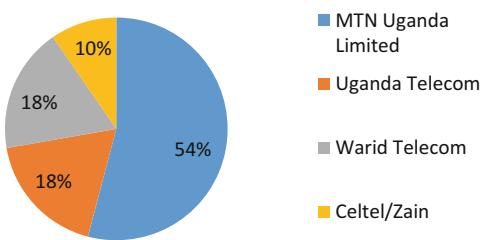
**Market share based on number of customers**



<sup>215</sup>'UCC Okays Airtel, Warid Deal as Subscribers are Reassured' *The Monitor* (Kampala, May 9 2013) <<http://www.monitor.co.ug/Business/Technology/UCC-okays-Airtel-Warid-deal-as-subscribers-are-reassured/-/688612/1846494/-/u28gpy/-/index.html>> accessed 15 June 2017.

**Fig. 4.6** Voice traffic in the mobile telephone market (2008). Source: UCC

### Voice Traffic (December 2008)



share of 18% (combination of fixed and mobile) while Celtel/Zain, with the second largest subscriber base, had a 10% market share as indicated in Fig. 4.6.

New entrant Warid Telecom had a voice traffic market share of 18% based on attractive on-net tariff plans. A comparison of the two figures confirms that MTN Uganda Limited had a strong position in the mobile market and casts doubt on Celtel/Zain as having a strong position in the mobile market.

While the telecommunications sector has changed greatly since 2008 with more players in the telephony market, MTN Uganda still maintains the highest customer base with 9.9 million subscribers (mobile and fixed) as of 30 June 2016 (45% of subscribers).<sup>216</sup> Reliable data on market share in the voice traffic market is scant but evidence from the field indicates that MTN Uganda Limited also enjoys a significantly higher market share compared to its competitors.<sup>217</sup> Thus, market statistics suggest that MTN Uganda Limited has a position of economic strength in the mobile telephony market.

The UCC while acknowledging that MTN Uganda has a high market share compared to its competitors, does not consider any mobile operator dominant in the retail voice market.<sup>218</sup> The reason for UCC's finding is the presence of several vertically integrated operators that, according to UCC, serve as a competitive

<sup>216</sup>MTN Group 'MTN Group Limited Interim Results for Six Months Ended 30 June 2016' 21 <[https://www.mtn.com/MTN%20Service%20Detail%20Interim%20Results/MTN\\_Interim\\_Results\\_booklet\\_Aug\\_\\_2016.pdf](https://www.mtn.com/MTN%20Service%20Detail%20Interim%20Results/MTN_Interim_Results_booklet_Aug__2016.pdf)> accessed 15 June 2017.

<sup>217</sup>This deduction is based on interviews with representatives of competing telecommunications operators. It was claimed that interconnection charges comprise a big portion of MTN Uganda's revenue suggesting that a lot of voice traffic still passes through MTN Uganda Limited's network. See Appendix A for list of interviewees.

<sup>218</sup>See PwC for UCC, 'Draft Report on Competition and Dominance in the Ugandan Telecoms Sector (Part 2): Interconnection and Retail Cost Study' (2009) Unpublished 15. Although, interviews conducted with legal personnel of other mobile operators consistently cited MTN Uganda Limited as very dominant with the ability to act independently. Other mobile operators viewed MTN Uganda Limited as dominant primarily because of its ability to maintain significantly higher off net call rates comparative to the other operators.

constraint on any operator seeking to engage in anti-competitive behaviour.<sup>219</sup> The majority of MTN Uganda Limited's competitors in the mobile telephony market are not locally based companies but rather subsidiaries of large multinational corporations with financial capacity to compete aggressively with MTN Uganda Limited. This is clearly illustrated by the price war in the mobile markets, sparked by new entrant Warid Telecom, that ran from 2010 to 2011. MTN Uganda Limited initially withstood the aggressive price cutting campaign notably maintaining rates for off-net calls that were significantly higher than rates offered by other operators. However, as Warid Telecom's on-net market share grew it was compelled to also offer lower calling rates not only for on-net calls but also off-net calls.<sup>220</sup> Thus, while MTN Uganda Limited's market share is high, the high market share does not afford the operator power to behave, to an appreciable extent, independently of competitors, customers and consumers.<sup>221</sup>

While dominance is not an issue in the retail voice market, the UCC considers it an issue in the call termination market. Uganda's voice market comprises primarily vertically integrated operators that provide services in the retail market through their own networks. Since 100% of the calls bound for a given network terminate on that network, monopoly over call termination led UCC to conclude in 2011 that all telecommunications operators, save for Smile Uganda, and I-Tel,<sup>222</sup> are dominant in the call termination market. Given that most competition concerns in telecommunications sector have centred on high call termination rates in the mobile market, anti-competitive behaviour in the call termination market should be a priority for the UCC.

#### 4.6.3.2.2 Dominance in the Internet Market

The internet market is loosely divided into the mobile internet and fixed internet market with mobile internet market having more subscribers.<sup>223</sup> The mobile internet market is serviced primarily by vertically integrated operators that also provide

<sup>219</sup>See PwC for UCC, 'Draft Report on Competition and Dominance in the Ugandan Telecoms Sector (Part 2): Interconnection and Retail Cost Study' (2009) Unpublished 15.

<sup>220</sup>David Mugabe, 'Zain, Uganda Telecom, MTN Cut Call Rates' *New Vision* (Kampala, 28 September 2010) <<http://www.newvision.co.ug/D/8/12/733445>> accessed 15 June 2017.

<sup>221</sup>Communications (Fair Competition) Regulations 2005, SI 2005/24, sch, para 3(5) defines a dominant operator as one that has a position of economic strength which enables the operator to prevent effective competition from being maintained on the relevant market, by affording the operator the power to behave, to an appreciable extent, independently of competitors, customers and consumers.

<sup>222</sup>The two exempt companies rely primarily on other operators for infrastructure provision.

<sup>223</sup>The UCC makes this distinction, see for example, UCC, 'Post; Broadcasting and Telecommunications Market and Industry Report: Third Quarter (July-September 2016)' <[http://www.ucc.co.ug/files/downloads/Market\\_&\\_Industry\\_Report\\_for\\_Q3\\_July-September\\_2016.pdf](http://www.ucc.co.ug/files/downloads/Market_&_Industry_Report_for_Q3_July-September_2016.pdf)> accessed 15 June 2017.

voice services in Uganda's telecommunications sector.<sup>224</sup> Therefore, the same discussion of dominance in the mobile telephone services market is also relevant in the mobile internet market. That is, the presence of several vertically integrated operators providing internet services through their own networks makes it difficult for a service provider with economic strength to act independently of competitors and customers.

The same argument cannot, however, be made in the fixed internet market. In contrast to the mobile internet market characterised by several vertically integrated operators, in the fixed internet market, there are several non-vertically integrated ISPs competing alongside vertically integrated internet service providers. The issue of dominance is particularly important in the infrastructure provision market, specifically the leased line market. Uganda's leased line market has two key players, Uganda Telecom and MTN Uganda Limited have the greatest share,<sup>225</sup> with Uganda Telecom dominant in this market.<sup>226</sup> The dominance of Uganda Telecom in the leased line market is of significance in the internet market where concerns have been raised regarding how Uganda Telecom's commanding presence in the leased line market affects the ability of internet service providers to offer formidable competition. As reported in 2010 Uganda Telecom with the bulk of the leased lines in its possession (as it has the more widespread wired network) offered bundled services (leased line with internet access) in the same market as the other operators (especially Internet Service Providers—ISPs) that sought leased lines to offer internet access.<sup>227</sup> This potentially made it more difficult for firms to enter in the provision of only one service within the bundle, such as internet.

Although UCC's conclusion is based only on market statistics, the perception that certain telecommunications operators are dominant means that the discussion of an abuse of dominance is relevant even though there have been no investigations by UCC or formal complaints related to this type of anti-competitive behaviour in Uganda's telecommunications sector.

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<sup>224</sup>See PwC for UCC, 'Draft Report on Competition and Dominance in the Ugandan Telecoms Sector (Part 2): Interconnection and Retail Cost Study' (2009) Unpublished 20. Although it must be observed that in recent years, some mobile operators have been selling their mobile towers to third parties and leasing their mobile towers back in order to reduce operational costs. See Sect. 2.4.4 in Chap. 2 of this study.

<sup>225</sup>Most reliable statistics from 2008 put the market share at 75 and 25 percent respectively. See PwC for UCC, 'Draft Report on Competition and Dominance in the Ugandan Telecoms Sector (Part 2): Interconnection and Retail Cost Study' (2009) Unpublished 22. Given the negligible investment in the fixed network by operators, it is less likely that the situation has changed dramatically in recent years.

<sup>226</sup>Ibid.

<sup>227</sup>Nora Mulira, Apolo Kyeyune, and Ali Ndiwalana, 'Uganda ICT Sector Performance Review, 2009/2010: Toward Evidence Based ICT Policy and Regulation' (2010) 2(13) Policy Paper 3.

#### 4.6.3.2.3 Collective Dominance

The previous sub-sections have focused on dominance of the market by a single firm. However, under the Fair Competition Regulations, dominance relates not only to unilateral but also collective conduct. According to the Fair Competition Regulations, two or more operators may jointly have collective dominance where they are linked in such a way that they adopt the same conduct in the market, which makes them dominant against other operators on the market.<sup>228</sup>

The concept of collective dominance is linked primarily to oligopoly markets. Traditionally, anti-competitive behaviour linked to the oligopolistic market structure has been explicit collusion through cartels or tacit collusion. Oligopoly markets consist of a small number of competitors small enough to require each competitors to take into account its rivals' current actions and likely future responses to its actions.<sup>229</sup> The link between oligopoly markets and collusion is based on the interdependence theory, which explains that in an oligopoly the few competitors are interdependent in their pricing as they base their pricing decisions in part on anticipated reactions to them.<sup>230</sup> Oligopolistic interdependence may facilitate collusion whereby simply by observing other firm's conduct, firms may cooperate to raise prices above the competitive level. However, in the past two decades there has been discussion that the coordinated behaviour of firms in oligopoly markets falls within the concept of collective dominance.

The European Union competition law is the best reference point as it is in the European Union that this concept seems to have gained traction.<sup>231</sup> Although the European Union competition law had long recognised collective dominance in ex-Article 82 (now Article 102 of TFEU) EC, it remained a mere theoretical

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<sup>228</sup>The Communications (Fair Competition) Regulations 2005, SI 2005/24, sch para 3(8).

<sup>229</sup>Kip W Viscusi, John M Vernon, and Joseph E Harrington Jr, *Economics of Regulation and Antitrust* (2nd edn, MIT Press 1995) 97.

<sup>230</sup>Richard Posner, *Antitrust Law* (2nd edn, University of Chicago Press 2001) 56.

<sup>231</sup>This concept remains most widely discussed in the context of European Union competition law. See, for example, Juan Briones-Alonso, 'Oligopolistic Dominance: Is There a Common Approach in Different Jurisdictions? A Review of the Decisions Adopted by the Commission under Merger Regulation' (1995) European Competition Law Review 334; Richard Whish, 'Collective Dominance' in David O'Keefe and Antonio Bavasso (eds), *Judicial Review in European Union Law: Liber Amicorum in Honour of Lord Slynn Hadley* (Kluwer 2000); Kai-Uwe Kühn, 'Closing the Pandora's Box? Joint Dominance after the "Airtours" Judgment' University of Michigan John M Olin Centre for Law and Economics, Paper 02-013; John Temple Lang, 'Oligopolies and Joint Dominance in Community Antitrust Law' in Barry Hawk (ed), *2001 Annual Proceedings of the Fordham Corporate Law Institute* (2002); Giorgio Monti, 'The Scope of Collective Dominance under Article 82 EC' (2001) 38(1) Common Market Law Review 131; and Lambros Papadis, 'Some Thoughts on Collective Dominance from a Lawyer's Perspective' in Pierre A Buigues and Patrick Rey (eds), *The Economics of Antitrust and Regulation in Telecommunications: Perspectives for the New European Regulatory Framework* (Edward Elgar 2004).

possibility for more than 30 years since the entry into force of the treaty.<sup>232</sup> In the 1990s this concept rose to prominence through European Commission and European Union Court of Justice jurisprudence (CJEU).<sup>233</sup> The concept of collective dominance is specifically recognised as applicable in the European Union telecommunications markets<sup>234</sup> and has been applied to a few cases in the communications market.<sup>235</sup>

As has already been pointed out, the liberalisation of the telecommunications sector in Uganda, though increasing competition in the sector, has given rise to markets with an oligopoly market structure with the mobile market as the notable example.<sup>236</sup> Therefore, investigations of abuse of dominance in the telecommunications sector should also encompass collective dominance. However, it should be pointed out that while oligopolistic interdependence may give raise to presumption of collective dominance, it should be borne in mind that a number of factors need to be considered. Firstly, each member of the dominant oligopoly must have the ability to know how other members are behaving in order to monitor whether or not they are adopting the common strategy.<sup>237</sup> Secondly, tacit coordination must be sustainable over time. Thirdly, existing and future competition that would be able to counteract a collective dominant position should be taken into account.<sup>238</sup> On this basis, the UCC has expressly rejected the existence of collective dominance in the internet services market despite the very high prices for internet services (as in

<sup>232</sup>Lambros Papadia, ‘Some Thoughts on Collective Dominance from a Lawyer’s Perspective’ in Pierre A Buigues and Patrick Rey (eds), *The Economics of Antitrust and Regulation in Telecommunications: Perspectives for the New European Regulatory Framework* (Edward Elgar 2004) 115.

<sup>233</sup>In 1988, the European Commission in *Alsatel v Novosam* [1988] ECR 5987, paras. 21-2 suggested that the European Court of Justice consider the case of collective dominance on the part of several undertakings. The notion was then discussed in a number of European Court of Justice cases including: Joined cases T-68/89, T-77/89 and T-78/89, *SIV and Others v Commission* [1992] ECR II-1403 (*Flat Glass*) and Case T-102/86 *Gencor v Commission* [1999] ECR II-753.

<sup>234</sup>See the Commission Guidelines on the Application of EEC Competition Rules in the Telecommunications Sector, para 79.

<sup>235</sup>Particularly in merger reviews rather than abuse of dominance cases. See Case No. COMP/M.1741 *MCI WorldCom/Sprint*, para 263 in which the European Commission examined whether the merged entity together with Concert Alliance could be found to enjoy a collective dominant position in the market for global telecommunications services. It was also a matter of consideration in Case No.IV/M.1430 *Vodafone/Airtouch*, para 28 and Case No.COMP/N.2016, *France Telecom/Orange*, para 26.

<sup>236</sup>The main argument is that the scarcity of spectrum for mobile services is fostering the growth of an oligopoly market. Currently, there is no spectrum available in the GSM frequency bands 900 MHz and 1800 MHz yet GSM is the default standard in the mobile telephone market in Uganda.

<sup>237</sup>UCC, ‘Market Power Assessment in Telecommunications’ (2009) 38 <<http://www.ucc.co.ug/files/downloads/Extract%20from%20Report%20on%20Competition%20and%20Dominance%202009.pdf>> accessed 15 June 2017.

<sup>238</sup>Ibid.

2008)<sup>239</sup> due to the stringent conditions required for sustained tacit collusion which are not met in the market.<sup>240</sup>

#### **4.6.3.3 Forms of Abuse of Dominant Position**

Having a dominant position in a given market does not automatically impute anti-competitive conduct; rather it is the abuse of the dominant position which lessens competition that is of concern.<sup>241</sup> The Fair Competition Regulations define ‘abusive conduct’ as:

- (a) conduct which affects the competitive process by adversely affecting a consumer, directly through price charged or indirectly through raising and enhancing entry barriers or increasing competitors costs, and
- (b) anti-competitive conduct that exploits a customer or supplier through excessively high prices or discriminatory prices, among others; or excludes new operators from entering a market.<sup>242</sup>

The Fair Competition Regulations provide a non-exhaustive list of conduct amounting to abuse of dominant position including price abuses such as predatory pricing, price squeezes, and cross-subsidisation, refusal to supply or grant access to facilities, and refusal to interconnect or act in good faith during interconnection negotiations.<sup>243</sup> While the Fair Competition Regulations prohibit abuse of dominant position, UCC is yet to conduct any investigations into abuse of dominant position in the telecommunications sector. Therefore, the abuses of dominant position that are perceived as a key concern in Uganda’s telecommunications sector are discussed. The abuses of dominant position that will be discussed in this chapter are: predatory pricing, price discrimination, price squeeze and refusal to deal.<sup>244</sup>

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<sup>239</sup>The internet prices have steadily dropped with the introduction and growth of mobile internet in 2008 leading to a significant increase in the number of internet subscribers.

<sup>240</sup>UCC ‘Market Power Assessment in Telecommunications’ (2009) 38 <<http://www.ucc.co.ug/files/downloads/Extract%20from%20Report%20on%20Competition%20and%20Dominance%202009.pdf>> accessed 15 June 2017.

<sup>241</sup>The Fair Competition Regulations (Communications (Fair Competition) Regulations 2005, SI 2005/24) only prohibited conduct by a dominant operator if it is abusive conduct according to regulation 6(1).

<sup>242</sup>Communications (Fair Competition) Regulations 2005, SI 2005/24, sch para 4.

<sup>243</sup>Ibid, reg 6.

<sup>244</sup>The concerns are based on interviews conducted with legal counsel of telecommunications operators. Interview with Ronald Zakumumpa, legal counsel, (MTN Uganda Kampala, 29 November 2011, interview with Dennis Kakonge, Director Legal, Airtel Uganda (Kampala, Uganda 5 December 2011), interview with Paul Mwebesa, Head Legal, Warid Uganda (Kampala, Uganda 23 November 2011), and interview with Zulaika Kasujja, legal counsel, Smile Communications, Uganda (Kampala, Uganda 16 December). Additionally, interview of UCC personnel in the department of competition and corporate affairs in charge of competition regulation (specifically interview with Abdul Musoke, Market Analyst, UCC Headquarters (Kampala, Uganda, 18 November 2011) and telecommunications industry experts, Dr. Ham Mukasa Mulira (Former

#### 4.6.3.3.1 Predatory Pricing

According to the Fair Competition Regulations, predatory pricing by a dominant operator is deemed to be an abuse of dominant position.<sup>245</sup> Low prices *per se* are usually seen as a benefit from, and the successful result of the process of competition since competition tends to prevent firms from profitably increasing prices above competitive levels.<sup>246</sup> However, under certain circumstances low pricing by a dominant operator can be deemed anti-competitive, a case in point is predatory pricing. Predatory pricing involves a dominant operator setting its retail prices very low, often below cost, with the aim of recouping its losses by charging monopoly prices once competitors have been driven out of the market.<sup>247</sup>

Although predatory pricing is provided for in competition legislation in many countries or has been interpreted as a form of abuse of dominant position, it has long been a source of controversy. Some commentators have gone as far as to challenge the existence of such a form of abuse of dominant position on the basis that such pricing is rare and should not be part of competition law.<sup>248</sup> However, this controversy is not strongly perceived in telecommunications sector as it has been observed that the liberalisation of the telecommunications sector makes it particularly susceptible to predatory pricing.<sup>249</sup> The major concern is that the former monopoly operator or an incumbent operator will rely on predatory pricing schemes in an effort to eliminate competition from new entrants.<sup>250</sup> It has been argued that since the former monopoly operator usually provides services in various market segments, it can finance its predation strategy through cross-subsidies from

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Minister of ICT) interviewed on 6 January 2012 at eConsult Uganda Head Office Kampala, Uganda, and Dr. Francis Fredrick Tusubira interviewed on 11 December 2011 at Communications House, Kampala. These interviews, in addition to the relevant literature, enabled the author to deduce which forms of abuse of dominant position warrant the most attention.

<sup>245</sup>Communications (Fair Competition) Regulations 2005, SI 2005/24, reg 6(1) (a).

<sup>246</sup>Simon Bishop and Mike Walker, *The Economics of EC Competition Law: Concepts, Application and Measurement* (2nd edn, Sweet and Maxwell 2002) 218.

<sup>247</sup>Forrest Miller, 'Predatory Pricing in Deregulated Telecommunications Markets' (1997) 21 (2) World Competition 65.

<sup>248</sup>Most criticism has been in connection with US antitrust law. See the US Supreme court decisions *Matsushita Electric Industrial v Zenith Radio Corp* 475 US 574 (1986) 588-91 and *Brook Group Ltd v Brown and Williamson Tobacco Corp*, 509 U.S. 209 (1993) where predatory pricing as anti-competitive behaviour was critiqued. Similarly, literature such as Robert Bork, *The Antitrust Paradox* (Simon and Schuster 1993); and Frank H Easterbrook, 'Predatory Strategies and Counterstrategies' (1981), 48 University of Chicago Law Review 263 written prior to the Matsushita and Brook Group cases criticised the basis on which predatory pricing as a form of abuse of dominant position is founded.

<sup>249</sup>Forest Miller, 'Predatory Pricing in Deregulated Telecommunications Markets' (1997) 21 (2) World Competition 65, 68.

<sup>250</sup>Forest Miller, 'Predatory Pricing in Deregulated Telecommunications Markets' (1997) 21 (2), World Competition 65, 67; and Justus Haucap and Joern Kruse, *Predatory Pricing on Liberalised Telecommunications Markets* (Institut für Wirtschaftspolitik Universität der Bundeswehr 2002) 1.

protected monopoly markets to the detriment of its competitors.<sup>251</sup> The fear that the former monopoly operator will engage in predatory pricing in the liberalised telecommunications sector is reflected in the makeup of competition law cases focusing on the telecommunications sector, particularly in the European Union and in the United States. In most cases, the former monopoly operator is usually in the role of perpetrator of the prohibited conduct.

In the European Union, the European Commission has long recognised predatory pricing as one of the main competition concerns in the liberalised telecommunications markets in the European Union.<sup>252</sup> One of its most notable decisions is the *Wanadoo Interactive* (WIN) case.<sup>253</sup> In that case the European Commission found that Wanadoo Interactive SA (WIN), a subsidiary of France Telecom, had infringed Article 102 of the TFEU by charging predatory prices for its ADSL services in France between late 1999 and October 2002. Specifically, the European Commission found that WIN had marketed its ADSL services at a predatory price that was, below cost. The European Commission ruled that WIN had sacrificed profits in the form of financial losses during the period in issue coinciding with a company plan to pre-empt the strategic market for high speed internet access. Furthermore, the European Commission found that while WIN suffered significant loss, France Telecom, as the holding company with almost 100% of the market for wholesale ADSL services for ISPs, was anticipating considerable profits in the near future on its wholesale ADSL products. The Commission's decision was confirmed by both the General Court and the CJEU.<sup>254</sup> There have also been decisions by national competition and regulatory authorities in the European Union regarding predatory pricing in the telecommunications sector. In the United Kingdom, the telecommunications regulator Ofcom conducted an investigation into allegations of predatory pricing by former monopoly operator British Telecom (BT) in the internet services market and found that BT was not dominant and thus not liable under competition law.<sup>255</sup> Ofcom further held that even if BT had been dominant, it would not have been guilty of predatory pricing as there is was insufficient evidence to back such a finding.<sup>256</sup>

In the United States, there have been two notable cases dealing with predatory pricing involving former monopoly operator AT&T. In both cases the courts found

<sup>251</sup>Justus Haucap and Joern Kruse, *Predatory Pricing on Liberalised Telecommunications Markets* (Institut für Wirtschaftspolitik Universität der Bundeswehr 2002) 5.

<sup>252</sup>See, European Commission Notice on the Application of the Competition Rules to Access Agreements in the Telecommunications Sector [1998] OJ C 265/2 paras 110-116.

<sup>253</sup>Case COMP/38.233 *Wanadoo Interactive*, Commission Decision 2003, published under <[http://ec.europa.eu/competition/antitrust/cases/dec\\_docs/38233/38233\\_87\\_1.pdf](http://ec.europa.eu/competition/antitrust/cases/dec_docs/38233/38233_87_1.pdf)> accessed 15 June 2017.

<sup>254</sup>See Case T-340/03 *France Telecom SA v Commission* (2007) ECR II-107 and Case C-202/07 P, *France Telecom SA v Commission* (2009) ECR I-2369, respectively.

<sup>255</sup>*Complaint against BT's pricing of digital cordless phones*, OFCOM decision of 1 August 2006, [2007] UKCLR 1.

<sup>256</sup>Ibid.

that AT&T's pricing strategy did not give rise to liability under the Sherman Act. In *Northeastern Co. v AT&T Co.*,<sup>257</sup> a small supplier of telephone equipment argued that AT&T had engaged in predatory pricing by setting its equipment pricing below its fully distributed cost. The Second Circuit reversing the finding of liability by the trial court held that AT&T had not engaged in predatory pricing. The court based its decision on Northeastern's failure to adduce evidence that AT&T's pricing was below average variable cost, the test it adopted for assessing predatory pricing. Similarly, in *MCI Communications Corp. v AT&T Co.*, the Seventh Circuit concluded that AT&T's prices were not predatory because they remained at or above long run incremental cost (LRIC).<sup>258</sup> It should be pointed out that in contrast to the European Union competition law jurisprudence pertaining to predatory pricing, in the United States courts have adopted a lax approach towards predatory pricing by setting high standards for finding liability.<sup>259</sup>

There is scant case law or investigations into predatory pricing in the telecommunications markets in Sub-Saharan Africa. However, there have been concerns raised about the practice in the voice and broadband markets. There have been some claims of predatory pricing levelled against the former monopoly operators in the internet market where they maintain a dominant position in the infrastructure provision market.<sup>260</sup> There have also been predatory pricing concerns linked to

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<sup>257</sup> *Northeastern Co. v AT&T Co.* 651 F.2d 76 (2d Cir.1981).

<sup>258</sup> *MCI Communications Corp. v AT&T Co.* 708 F.2d 1081 (7<sup>th</sup> Cir.1982).

<sup>259</sup> As Eleanor Fox explains "The U.S. Supreme Court has repeatedly declared that predatory pricing rarely occurs and is even more rarely successful. On that premise, combined with the aim to give consumers the benefit of low prices and the fear that courts will protect inefficient firms, the U.S. Supreme Court has formulated a rule of law that makes it nearly impossible for a plaintiff to win a predatory pricing case." See Eleanor M Fox, 'Competition, Development and Regional Integration: In Search of a Competition Law Fit for Developing Countries' in Josef Drexl, et al. (eds), *Competition Policy and Regional Integration in Developing Countries* (Edward Elgar 2012) 279.

<sup>260</sup> Regarding claims of former monopoly operators engaging in predatory pricing, allegations have been made in Ghana and South Africa. In Ghana, Ghana Telecom was accused by Ghana Internet Service Providers Association (GISPA) of predatory pricing in the broadband market. See 'Ghana Telecom Tries to Strong-Arm GISPA's Members Out of the Market with Predatory Pricing' *Balancing Act* <<http://www.balancingact-africa.com/news/en/issue-no-217/top-story/ghana-telecom-tries/en>> accessed 15 June 2017 and 'Internet Ghana Vrs GT: The Battle of the Shark and Fish Part II' *Modern Ghana* (18 May 2005) <<http://www.modernghana.com/news/116936/1/internet-ghana-vrs-gt-the-battle-of-the-shark-and-.html>> accessed 15 June 2017. Concerns were also raised about predatory pricing by Ghana Telecom's successor, Vodafone Ghana in the broadband market in Ghana. See Godfred Frempong, 'Ghana ICT Sector Performance Review 2009/2010: Towards Evidence-Based ICT Policy and Regulation' (2010) 2 (8) *Research ICT Africa* 19, 24. In South Africa, academics have long expressed the view that former monopoly operator Telkom SA has the capacity to engage in predatory pricing in the value-added services market. For example, in Rossana Achterberg, 'Competition Policy and Regulation: A Case Study of Telecommunications' (2000) TIPS Working Paper 38 <<https://www.tips.org.za/research-archive/trade-and-industry/trade-growth-dynamics/item/93-competition-policy-and-regulation-a-case-study-of-telecommunications>> accessed 15 June 2017, it is argued that Telkom SA is the provider of infrastructure needed for ISPs to provide internet services and may be able to charge

mobile operators with large market shares.<sup>261</sup> South Africa is one country in Sub-Saharan Africa that is making an effort to develop jurisprudence on predatory pricing. The South Africa Competition Commission's referral of a predatory pricing case to the South Africa Competition Tribunal in 2011 provided an opportunity for the tribunal to develop case law in this area.<sup>262</sup> Although, the referral did not address predatory pricing in the telecommunications sector specifically, this case law might be relied on by competition authorities in other countries in the region when dealing with predatory pricing in the sector.

As in the majority of countries in Sub-Saharan Africa, Uganda's telecommunications sector has been devoid of formal complaints regarding predatory pricing. However, this does not minimise the likely significance of this form of dominant abuse in the telecommunications sector in Uganda. Predatory pricing requires the existence of barriers to entry, or to re-entry by excluded firms, into the relevant market.<sup>263</sup> If there were no barriers to entry, then once the predator raised prices, firms would enter the market and undercut the price.<sup>264</sup> Uganda's telecommunications sector is characterised by high entry barriers. For example in the primary market, the voice services market, high entry barriers include high sunk costs due to the absence of wholesale access that compels telecommunications service providers to build up their own upstream network infrastructure, economies of scale which require an operator to acquire a large market share in order to effectively compete, and limited access to spectrum licences with regard to mobile communications services.<sup>265</sup> However, high barriers to market entry do not suffice, other elements are required.

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artificially lower prices since Telkom South Africa enjoys a monopoly and can cross-subsidise among the range of services it provides. Although Second National Operator Neotel has gained market share in the infrastructure market, Telkom SA still remains the main provider of infrastructure in the value-added services market.

<sup>261</sup>In Zambia, a complaint was lodged by MTN Zambia before ZICTA and the Competition Commission (now Competition and Consumer Protection Commission) in May 2010 claiming predatory pricing by Zain the biggest mobile operator in the country at the time. In Uganda, concerns of predatory pricing arose during the one year price war in the mobile telephone market that started in 2010 and ended in 2011.

<sup>262</sup>The Commission had investigated a complaint lodged in 2009 by Berkina Twintig (Pty) Ltd trading as Gold-Net News claiming that Media 24 engaged in predatory pricing which resulted in Gold-Net News exiting the newspaper market. Gold-Net news was a community newspaper in Goldfields region of the Free State. The Commission found that Media 24 had priced its advertising rates below cost and therefore engaged in predatory pricing, see Competition Commission Media Release 31<sup>st</sup> October, 2011, 'Commission Refers Predatory Pricing against Media24' <<http://www.compcom.co.za/assets/Uploads/AttachedFiles/MyDocuments/FINAL-MEDIA-RELEASE-Media-24.pdf>> accessed 15 June 2017. Prior to that, the Competition Tribunal had in 2000 ruled against a referral by Nationwide Airlines against South African Airways for alleged predatory pricing. See *Competition Commission v South African Airways (Pty) Ltd (final)*, 18/CR/Mar01, (2005) ZACT 50.

<sup>263</sup>Simon Bishop and Mike Walker, *The Economics of EC Competition Law: Concepts, Application and Measurement* (2nd edn, Sweet and Maxwell 2002) 220.

<sup>264</sup>Ibid.

<sup>265</sup>PwC for UCC, 'Draft Report on Competition and Dominance in the Uganda Telecoms Sector (Part 2): Interconnection and Retail Cost Study' (2009) Unpublished 11.

One key element is that the predator must have access to greater financial resources than its rivals.<sup>266</sup> This particular factor is a key reason why competition authorities focus on the former monopoly operator. Former monopoly operators can finance their predation strategy through cross-subsidies from protected monopoly markets.<sup>267</sup> In the *Wanadoo* case the European Commission found that predatory pricing by WIN, which led to heavy losses in the broadband market, were offset by very substantial profits made by the holding company Wanadoo Group in its diverse business portfolio.<sup>268</sup> According to the European Commission, the composition of the Wanadoo group's business portfolio gave it considerable financial power that helped it to establish its dominant position in the relevant market.<sup>269</sup> In Ghana, a key reason cited for the concerns of predatory pricing by Vodafone Ghana in the broadband market is that other competing operators lacked the financial muscle to compete aggressively with Vodafone Ghana.<sup>270</sup>

Referring to Uganda's former monopoly operator Uganda Telecom, it is very dominant in the fixed network infrastructure market, with a significant number of ISPs relying on access its network to provide fixed internet services. At the same time Uganda Telecom also involved in the provision of fixed internet services at the retail level. One can argue that it might use its strong position in the fixed network infrastructure market to engage in predatory pricing in the retail internet services market to the detriment of ISPs. A case for predatory pricing can also be made in the mobile telephony market. The market is serviced by several vertically integrated mobile operators the majority being local subsidiaries of multinational corporations. MNCs have the financial longevity to engage in price cuts sustaining losses for a period of time potentially driving out competitors.<sup>271</sup> Predatory pricing has been used by multinational corporations in developing countries to eliminate competition to force local firms to exit the markets in which they operate.<sup>272</sup>

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<sup>266</sup>Simon Bishop and Mike Walker, *The Economics of EC Competition Law: Concepts, Application and Measurement* (2nd edn, Sweet and Maxwell 2002) 221.

<sup>267</sup>Justus Haucap and Joern Kruse, *Predatory Pricing on Liberalised Telecommunications Markets* (Institut für Wirtschaftspolitik, Universität der Bundeswehr 2002) IWP 5.

<sup>268</sup>Case COMP/38.233 *Wanadoo Interactive*, Commission Decision 2003, para 248 published under <[http://ec.europa.eu/competition/antitrust/cases/dec\\_docs/38233/38233\\_87\\_1.pdf](http://ec.europa.eu/competition/antitrust/cases/dec_docs/38233/38233_87_1.pdf)> accessed 15 June 2017.

<sup>269</sup>Ibid.

<sup>270</sup>Godfred Frempong, 'Ghana ICT Sector Performance Review 2009/2010: Towards Evidence-Based ICT Policy and Regulation' (2010) 2 (8) Research ICT Africa 19.

<sup>271</sup>Magnus Blomström, 'Foreign Investment and Productive Efficiency: The Case of Mexico' (1986) 35(1) Journal of Industrial Economics 97. Also see Richard S Newfarmer, 'TNC Takeovers in Brazil: The Uneven Distribution of Benefits in the Market for Firms' (1979) 7(1) World Development 25.

<sup>272</sup>See Richard S Newfarmer, 'TNC Takeovers in Brazil: The Uneven Distribution of Benefits in the Market for Firms' (1979) 7(1) World Development 25 which explores the effect of FDI on Brazil's electrical industry. The article notes that multinational corporations used predatory pricing as a means of gaining dominant position in the market.

The financial longevity of the local subsidiaries of the multinational telecommunications groups in Uganda has already been illustrated in the price war in the mobile services market that commenced in November 2010 and lasted until September 2011. New entrant at the time, Warid Telecom, sparked a price war by offering calls at a significantly lower rate than that of other operators in the market.<sup>273</sup> The operators responded by bringing their prices down to the same rate or close to the same rate offered by Warid Telecom. The lower prices strategy adopted by Warid Telecom Uganda was not predatory pricing since Warid Telecom Uganda at that time was a new entrant in the mobile services market and therefore not able to engage in abuse of dominant position.<sup>274</sup> Given that Warid Telecom was a newcomer in the mobile market and thus only starting to grow its subscriber-base, it would have been very difficult to claim abuse of dominant position. This is because Warid Telecom's market share was well below the 35% threshold that triggers presumption of dominance under paragraph 3(9) of the Schedule to the Fair Competition Regulations.

Nevertheless, the 1 year price war illustrates that other telecommunications operators apart from the former monopoly operator Uganda Telecom also have deep pockets. Notably, smaller operators expressed greater concern about the effect of the price war on their viability in the voice market.<sup>275</sup> Therefore, investigations of predatory pricing in the telecommunications sector should not follow the trend of focusing on the former monopoly operator as is the case in jurisdictions with more developed competition law enforcement regimes. Potential areas for investigation in the telephony market include call termination and call price differentials.<sup>276</sup> Generally, cases of predatory pricing in the mobile telephony market should be prioritised because the telephony market is the most significant market in Uganda.<sup>277</sup>

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<sup>273</sup>Faridah Kulabako and Dorothy Nakweesi, ‘Price War Looms as Warid Fires First Short’ *Daily Monitor* (Kampala, 23 September 2010) <<http://www.monitor.co.ug/News/National/-/688334/1016440/-/cnm51dz/-/index.html>> accessed 15 June 2017.

<sup>274</sup>As the head of the legal department at Warid Uganda explained, the lower prices was a strategy aimed at gaining some ground in a mobile services market already dominated by three large mobile operators, Airtel, MTN Uganda and Uganda Telecom. This is based on an interview with Paul Mwebesa, Head Legal, Warid Telecom (Kampala, Uganda 23 November, 2011).

<sup>275</sup>Interview with Zulaika Kasujja, legal counsel, Smile Communications Uganda (16 December, 2011). The same views were expressed by personnel at UCC, interview with Abdul Musoke, Market Analyst, UCC Headquarters (Kampala, Uganda, 18 November 2011). Abdul Musoke observed that it is particularly difficult for smaller operators to compete on the same level as the large operators with ties to multinational corporations.

<sup>276</sup>It has been noted that on-net off net price differentials among operators especially stemming from call termination rates may be regarded as predatory pricing, see Steffen Hoernig, ‘Tariff-Mediated Network Externalities: Is Regulatory Intervention Any Good?’ (2008) Industrial Organisation Discussion Paper Series No.6866, 15-16.

<sup>277</sup>This particular fact is stressed because in other jurisdictions, for example, the European Union, South Africa, and Ghana, predatory pricing concerns have focused on the internet market.

In light of the discussion above that illustrates that predatory pricing might be a cause for concern in Uganda's telecommunications sector, it is necessary to assess the legal measures in place to combat the anti-competitive practice.

The Communications Act has a provision prohibiting abuse of dominant position by an operator covering predatory pricing.<sup>278</sup> Predatory pricing is specifically listed among the price abuses regarded as abuse of dominant position under the Fair Competition Regulations.<sup>279</sup> As already mentioned, low prices are usually seen as a benefit from and the successful result of the process of competition.<sup>280</sup> Therefore, it is critical to make a clear distinction between low prices that are the normal outcome of competition and low prices that are detrimental to the competitive process in the long run. However, there is a certain difficulty in distinguishing competitive pricing from predatory pricing creating the danger of misjudging the former as predatory.<sup>281</sup> For example, in the mobile telephony market in Uganda, competition is very intense with both new entrants and incumbent operators seeking new ways to stay relevant in the market. Warid Telecom's strategy of offering unlimited on-net calls for as low as 1000 Uganda shillings (US\$ 0.4 cts) per day in 2010 that triggered the price war occurred due to the need to gain foothold in the telecommunications sector. As Warid Telecom was not in a dominant position it could not be liable for anti-competitive behaviour under the Fair Competition Regulations. However, this does not minimise the significance of discussing predatory pricing in the telecommunications sector in Uganda. This is particularly because of the concerns of predatory pricing raised by smaller operators not tied to big multinational groups.<sup>282</sup> Therefore, it is essential to have in place clear criteria defining when low pricing is predatory.

The Fair Competition Regulations fail to identify the elements of predatory pricing to enable UCC to effectively investigate predatory pricing. The Fair Competition Regulations merely declare that predatory pricing by a dominant telecommunications operator is an abuse of dominant position.<sup>283</sup> The draft Competition Bill offers some guidance on how to assess whether a low price is predatory as it provides a definition of predatory pricing. According to the draft Competition Bill,

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<sup>278</sup>Communications Act 2013, s 57(2)(a).

<sup>279</sup>Communications (Fair Competition) Regulations 2005, SI 2005/24, reg 6(1).

<sup>280</sup>Simon Bishop and Mike Walker, *The Economics of EC Competition Law: Concepts, Application and Measurement* (2nd edn, Sweet and Maxwell 2002) 218.

<sup>281</sup>Udai Singh Mehta, 'Predatory Pricing: Lessons for Developing Countries' (2008) (3) CUTS-CCIER <<http://www.cuts-international.org/pdf/CCIER-1-2008.pdf>> accessed 15 June 2017. Also see the Second Circuit in *Northeastern Telephone Co. v AT&T Co.*, 651 F.2d 76, 88 (2d Cir.1981) that makes a similar observation particularly noting that inadvertently condemning low prices borne out of competition as an instance of predation may chill the behaviour the antitrust laws seek to promote.

<sup>282</sup>According to interviews with Zulaika Kasujja, legal counsel, Smile Communications Uganda (Kampala, Uganda 16 December, 2011) and interview with Abdul Musoje, Market Analyst, UCC Headquarters (Kampala, Uganda 18 November 2011).

<sup>283</sup>Communications (Fair Competition) Regulations 2005, SI 2005/24, reg 6(1)(a).

selling a product or provision of a service with a view to eliminate competition or the competitors, at a price that is below the marginal cost is predatory pricing.<sup>284</sup> This definition seems to follow the spirit of the renowned Areeda-Turner test that is used to differentiate between predatory pricing and competitive pricing.<sup>285</sup> However, data on marginal costs are difficult to attain and competition authorities instead rely on average variable costs as a proxy.<sup>286</sup>

The application of the Areeda-Turner test to the telecommunications sector is a source of controversy because the cost structure of telecommunications as a network industry is different from the typical cost structure in other industries. The telecommunications sector is characterised by high fixed costs and negligible marginal and low variable costs. On that basis, the average variable cost test has been deemed inappropriate with a test based on long-run incremental costs (LRIC) preferred.<sup>287</sup> Nevertheless, the Areeda-Turner test is the test most favoured by

<sup>284</sup>Uganda Competition Bill 2004, cl 44(5).

<sup>285</sup>Harvard law professors Phillip Areeda and Donald F Turner in their article ‘Predatory Pricing and Related Practices under Section 2 of the Sherman Act’ (1975) 88(4) Harvard Law Review 697, 712 put forward a test for determining predatory pricing by defining a price as predatory if it is below the short-run marginal costs of providing the product or service.

<sup>286</sup>See Phillip Areeda and Donald F Turner, ‘Predatory Pricing and Related Practices under Section 2 of the Sherman Act’ (1975) 88(4) Harvard Law Review 697, 716, in which it is noted that it is usually difficult to measure short-run marginal cost and recommend the use of average variable costs as a reasonable approximation to the short- run marginal costs. The test has been adopted by the United States Courts; see, for example, James D Hurwitz and William E Kovacic, ‘Judicial Analysis of Predation: The Emerging Trends’ (1982) 35 Vanderbilt Law Review 63. It was applied by the Second Circuit in *Northeastern Telephone Co. v AT&T Co.*, 651 F.2d 76 (2d Cir.1981). Under European Union competition law the Areeda-Turner test was used by the CJEU to develop a predatory price determination test. See Case 62/86 *AKZO Chemie BV v Commission* [1991] ECR I-3359 in which the court indicated that prices below average variable costs would be considered abusive, and that prices below average total costs but above average variable costs might be considered predatory if other factors suggested predatory intent. This test was later affirmed in Case C-333/94 P *Tetra Pak II* [1996] ECR I-5951. The European Commission has applied this test in the telecommunications sector. In Case COMP/38.233 *Wanadoo Interactive*, Commission Decision 2003, published under <[http://ec.europa.eu/competition/antitrust/cases/dec\\_docs/38233/38233\\_87\\_1.pdf](http://ec.europa.eu/competition/antitrust/cases/dec_docs/38233/38233_87_1.pdf)> accessed 15 June 2017, the European Commission found that Wanadoo had marketed its ADSL services, at prices which were below cost. The prices charged by WIN were well below variable cost until August 2001 and in the subsequent period they were approximately equivalent to variable cost, but significantly below total cost.

<sup>287</sup>See the European Commission Notice on the Application of the Competition Rules to Access Agreements in the Telecommunications Sector [1998] OJ C 265/2 paras113-115 noting that the average variable cost standard is not appropriate in a network industry such as telecommunications and that a standard based on LRIC might be preferable. Similar views have been expressed by the United Kingdom Office of Fair Trading in its guidelines on the application of the Competition Act in the telecommunications sector, ‘The Application of the Competition Act 1998 in the Telecommunications Sector’, para 7.15; Richard Whish, *Competition Law* (6th edn, Oxford University Press 2008) 736; Forest Miller, ‘Predatory Pricing in Deregulated Telecommunications Markets’ (1997) 21(2) World Competition 82; Justus Haucap and Joern Kruse, *Predatory Pricing on Liberalised Telecommunications Markets* (Institut für Wirtschaftspolitik, Universität der Bundeswehr 2002) 11; Alexander C Larson and William Kovacic, ‘Predatory Pricing Safeguards

competition authorities and recognised by courts in other jurisdictions when dealing with predatory pricing in the telecommunications sector, therefore, the UCC ought to rely on it. However, given the doubts expressed about the appropriateness of the Areeda-Turner test for predatory pricing cases in the telecommunications market, the UCC should not rely solely on average variable cost as a proxy for marginal cost and should also consider using the recommended LRIC test.

Another important criterion for purposes of investigating cases of predatory pricing is that there must be a reasonable expectation that the operator will be able to recoup its losses after its predation.<sup>288</sup> Although the fact that a firm is dominant means that it has substantial market power and can raise prices significantly above the level that would exist under conditions of effective competition that is no guarantee that the firm will recoup its short run losses if it excludes a competitor.<sup>289</sup> For example, in Uganda's mobile telephony market, with low switching costs stemming from the greater reliance on pre-paid rather than post-paid subscription, with SIM cards priced at 1 dollar and the use of multiple SIM card phones, it might be challenging for an operator to recoup its short term losses stemming from predatory pricing. This is because subscribers will simply switch to other operators still in the market if the predatory operator hikes the price of its call rates. To substantiate this argument, reference is made to reports in 2014 indicating that the practice of using multiple SIM cards has affected the profitability of telecommunications operators in Uganda with the operators having a lower Average Revenue per User (ARPU) compared to their counterparts operating in other East African countries.<sup>290</sup> Additionally, the presence of a number of vertically

in Telecommunications: Removing Impediments to Competition' (1990) 35 Saint Louis University Law Journal 1, 2; and Neil Mackenzie, 'Are South Africa's Predatory Pricing Rules Suitable' (Sixth Annual Competition Conference, Johannesburg, September 2012) <<http://www.compc.com.co.za/assets/Uploads/events/Sixth-Annual-Competition-Law-Economics-and-Policy-Conference-in-South-Africa-2012/NewFolder-5/Neil-Mackenzie-Predatory-Pricing-in-SA.pdf>> accessed 15 June 2017.

<sup>288</sup>Simon Bishop and Mike Walker, *The Economics of EC Competition Law: Concepts, Application and Measurement* (2nd edn, Sweet and Maxwell 2002) 229. Recouping of investment is a very important factor for determining predatory pricing as has been stressed in United States case law. See *Matsushita Electric Industrial v Zenith Ratio Corp* 475 US 574 (1986) and *Brook Group Ltd v Brown and Williamson Tobacco Corp*, 509 U.S. 209 (1993). In Australia see High Court decision, *Barol Masonry Ltd v ACCC* (2003) HCA 5. However, under European Union competition law, proof of the possibility of recouping is not a prerequisite for determining that a pricing strategy is predatory. See the CJEU's decision in *Tetra Pak II*, C-333/94 P (1996) ECR I-5951, para 44. In that case Tetra Pak had argued that its pricing strategy was not predatory since it has no reasonable prospect of recouping the losses incurred. This was reiterated by the CJEU in Case C-202/07 P, *France Telecom SA v Commission* (2009) para 37.

<sup>289</sup>Simon Bishop and Mike Walker, *The Economics of EC Competition Law: Concepts, Application and Measurement* (2nd edn, Sweet and Maxwell 2002) 236.

<sup>290</sup>Faridah Kulabako, 'Uganda Telecoms Have Lowest Average Revenue Per User in EA- Report' *Daily Monitor* (Kampala, 27 February 2014) <<http://www.monitor.co.ug/Business/Uganda-telecoms-have-lowest-revenue-per-user-in-EA---report-/688322/2223028/-r6we15z/-index.html>> accessed 15 June 2017.

integrated operators, specifically local subsidiaries of multinational telecommunications groups, with diverse business portfolios that are likely to have access to substantial financial resources points to the challenging prospect of recouping short term losses.

The Communications Act and the Fair Competition Regulations are not the only means of safeguarding against predatory pricing in the telecommunications sector. The UCC may rely on price caps as provided in the Tariff Regulations.<sup>291</sup> The Tariff Regulations give the UCC the authority to regulate the prices of services in the telecommunications market through a price caps. The Regulations permit the UCC to set a pricing ceiling, where a tariff shall not be fixed above this ceiling, or price floor, and where a tariff shall not be fixed below the floor.<sup>292</sup> The price caps are binding for all providers of telecommunications services. Although these powers are meant to be exercised *ex ante*, the UCC's recent application of the Tariff Regulations has been *ex post*. The UCC attempted to set a price floor for call tariffs in order to bring an end to the price war in the mobile telephone services market that commenced in September 2010 and ended a year later. The UCC, while acknowledging that the price war was beneficial to consumers, intervened in the price war by introducing tariff guidelines for voices services.<sup>293</sup> It justified its intervention on the grounds that the price war had resulted in degradation of quality of services and standards.<sup>294</sup> However, after heavy criticism particularly from the public, the UCC abstained from implementing the guidelines.<sup>295</sup>

Some authorities in other countries have relied on *ex ante* regulation to control predatory pricing. The German Monopoly Commission has used retail price regulation in German telecommunications markets as a safeguard against predatory pricing.<sup>296</sup> And in the United States, the FCC has used a number of strategies including price caps in order to regulate predatory pricing in the telecommunications markets.<sup>297</sup> Therefore, there is precedent on the use of *ex ante* regulation to control price abuses.

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<sup>291</sup>Communications (Tariff and Accounting) Regulations 2005, SI 2005/27.

<sup>292</sup>Ibid, reg 5.

<sup>293</sup>UCC 'Retail Tariff Guidelines for Voice Services' (January 2011).

<sup>294</sup>Walter Wafula, 'Price Fixing Questions Arise as UCC Makes Proposals', *Daily Monitor* (Kampala 21 June 2011) <<http://allafrica.com/stories/201106211016.html>> accessed 15 June 2017.

<sup>295</sup>Paul Tentena, 'UCC Makes a U-turn on Minimum Price' *East African Business Week* (Kampala, 20 June 2011) <[www.busiweek.com/index.php?option=com\\_content&view=article&id=1222:ucc-makes-u-turn-on-minimum-price&catid=104:uganda&Itemid=1364](http://www.busiweek.com/index.php?option=com_content&view=article&id=1222:ucc-makes-u-turn-on-minimum-price&catid=104:uganda&Itemid=1364)> accessed 15 June 2017.

<sup>296</sup>Justus Haucap and Joern Kruse, *Predatory Pricing on Liberalised Telecommunications Markets* (Institut für Wirtschaftspolitik, Universität der Bundeswehr 2002) 1.

<sup>297</sup>Alexander C Larson and William Kovacic, 'Predatory Pricing Safeguards in Telecommunications: Removing Impediments to Competition' (1990) 35 Saint Louis University Law Journal 1, 11-16.

A clear benefit of *ex ante* regulation under the Tariff Regulations is that it provides a more timely measure for dealing with predatory pricing in Uganda's telecommunications market compared to the Fair Competition Regulations where the UCC must respond after predatory pricing has occurred. However, it comes with the risk that using price caps might affect competition in a market.<sup>298</sup> As observed, while implementing a tariff-control regime might certainly be an efficiency-inducing strategy to control the prices of telecommunications services, it should not be forgotten that competition remains the best way to impose continuous pressure on the prices of such services.<sup>299</sup> Regulating prices limits the flexibility of firms in determining their prices.<sup>300</sup> In a competitive telecommunications market it is important to afford operators greater pricing flexibility. The intervention by the UCC illustrates the risk of regulation of prices through a tariff-control system. The UCC's price floor for telephone calls while meant to protect the quality of services and standards, favoured the incumbent operators with an established customer base all the while working to the disadvantage of new entrants seeking to rely on low pricing to attract subscribers to their networks.<sup>301</sup> In light of the danger of *ex ante* regulation stifling competition in telecommunications market, it is recommended that precedence be given Fair Competition Regulations when dealing with a claim of predatory pricing.

#### 4.6.3.3.2 Price Discrimination

Price discrimination by a dominant operator is prohibited under the Fair Competition Regulations as a form of anti-competitive behaviour.<sup>302</sup> Price discrimination is described as the practice of selling the same product at different prices even though the cost of sale is the same for each of product.<sup>303</sup> Charging different prices for the same product is ubiquitous with the typical example of price discrimination taking

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<sup>298</sup>Ibid, 38.

<sup>299</sup>See Damien Geradin and Michael Kerf, *Controlling Market Power in Telecommunications: Antitrust vs. Sector-Specific Regulation* (Oxford University Business 2003) 317. The authors go on to cite the example of Chile where drastic price reductions were observed when Chile switched from a regime of price regulation to a regime of unhindered competition in the national and international long-distance market.

<sup>300</sup>OECD, 'Price Caps for Telecommunications: Policies and Experiences' (1995) <[www.oecd.org/sti/ieconomy/1909801.pdf](http://www.oecd.org/sti/ieconomy/1909801.pdf)> accessed 15 June 2017.

<sup>301</sup>This particular point was made in an interview with Zulaika Kasujja, legal counsel, Smile Communications Uganda (Kampala, Uganda 16 December 2011) and Paul Mwebesa, Head Legal Warid Telecom (Kampala, Uganda 23 November 2011). Additionally, there was public outrage over UCC's efforts to control prices, with customers viewing the policy as not working in their favour because it would lead to a rise in call tariffs. See Walter Wafula, 'Price Fixing Questions Arise as UCC Makes Proposals', *Daily Monitor* (Kampala, 21 June 2011) <<http://allafrica.com/stories/201106211016.html>> accessed 15 June 2017.

<sup>302</sup>Communications (Fair Competition) Regulations 2005, SI 2005/24, reg 6(1)(a).

<sup>303</sup>Richard Posner, *Antitrust Law* (2nd edition, University of Chicago Press 2001) 56.

the form of charging customers who buy in bulk lower unit prices than those who only buy small amounts. Prices may also vary according to geographical location. Taking the case of the European Union, even though it is regarded as one internal market, prices of goods tend to vary through the region, for example, prices for pharmaceuticals.<sup>304</sup> In the context of the telecommunications sector, price discrimination can involve an operator charging customers different prices for telecommunications services based on different categories of users, low, medium and high volume users. A typical form of price discrimination relates to the different tariffs for business and residential users.

Price discrimination as defined above is a generic term covering different types of pricing behaviour that can either be good for consumer welfare or anti-competitive. Thus, examples cited above are not necessarily synonymous with anti-competitive behaviour.<sup>305</sup> It has in fact been argued that price discrimination can be of benefit to the consumer as it minimises deadweight loss by allowing a firm to supply a group of consumers that would not be supplied in the absence of price discrimination.<sup>306</sup> However, the inclusion of price discrimination in the Fair Competition Regulations as a form of abuse of dominant position indicates that price discrimination, in lieu of uniform pricing, can at times be detrimental to competition and consumer welfare. This may occur where price discrimination leads to the exclusion of competitors or potential competitors reducing the intensity of competition and increasing the levels of prices.<sup>307</sup> It is this exclusionary effect of price discrimination that is a source of concern for competition authorities, particularly when it involves discrimination by a vertically integrated operator. Vertically-integrated firms have strong incentives to price discriminate in favour of their downstream subsidiaries as such discrimination results in a competitive

<sup>304</sup>“Pharmaceuticals vary substantially throughout across the European Union countries with higher prices in Northern Europe and comparatively lower prices in Eastern, Central and Southern Europe. For example, Lipitor is sold for €44.93 in Sweden, but for less than half that, just €20.30, in Greece...”. See David Granlund and Miyase Yesim Köksal, ‘EU Enlargement, Parallel Trade and Price Competition in Pharmaceuticals: What’s to Blame? Derogation or Perception?’ (2011) Swedish Retail Institute (HUI) Working Paper 59/2011.

<sup>305</sup>For example, the General Court has ruled that price discrimination in the pharmaceutical markets in the European Union is not necessarily an infringement of Article 102(c) TFEU that cites price discrimination as a form of abuse of dominant position. In *GlaxoSmithKline Services Unlimited v Commission* Case T-168/01 [2006] ECR II-2969, para 177, the General Court stressed that Article 102(c) does not preclude a dominant firm from setting different prices in the various Member States, in particular where the price differences are justified by variations in the conditions of marketing and the intensity of competition. However, the General Court went on to state that Article 102(c) prohibits a firm from applying artificial price differences.

<sup>306</sup>See Frederic M Scherer and David Ross, *Industrial Market Structure and Economic Performance* (3rd edn, Houghton Mifflin Company 1990); Jean Tirole, *The Theory of Industrial Organisation* (MIT Press 1998) ch 3; Gregory Mankiw and Mark P Taylor, *Economics* (Thomson 2006) 309 and Robert O’Donoghue and Atilano J Padilla, *The Law of Economics of Article 82* (Hart Publishing 2006) 561-2.

<sup>307</sup>Simon Bishop and Mike Walker, *The Economics of EC Competition Law: Concepts, Application and Measurement* (2nd edn, Sweet and Maxwell 2002) 200.

disadvantage for their subsidiaries' rival.<sup>308</sup> A vertically integrated dominant operator owning a network essential for provision of telecommunications at the retail level may charge a lower price to its downstream subsidiary compared to the price it charges its competitors affecting the latter's ability to stay profitable.<sup>309</sup>

Price discrimination by a dominant operator in the telecommunications sector is particularly of significance in the context of access to networks and interconnection. This is noted by the European Commission in the Access Notice by providing as follows:

A dominant access provider may not discriminate between the parties to different access agreements where such discrimination would restrict competition. Any differentiation based on the use which is to be made of access rather than differences between the transactions for the access provider itself, if the discrimination is sufficiently likely to restrict or distort actual or potential competition, would be contrary to Article 82. This discrimination could take the form of imposing different conditions, including the charging of different prices...Such discrimination could be likely to restrict competition in the downstream market in which the company requesting access was seeking to operate, in that it might limit the possibility for that operator to enter the market or expand its operations in that market.<sup>310</sup>

In the liberalised telecommunications sector, anti-competitive price discrimination in the call termination market has become a major source of concern. Following the liberalisation of the telecommunications markets in the European Union in 1998, the European Commission conducted European Union-wide investigations into fixed and mobile interconnection rates.<sup>311</sup> The European Commission in July 1998 determined that Telecom Italia's termination charges for mobile calls in its network were higher than charges for terminating a call which originated from the fixed network.<sup>312</sup> In the leading competition law jurisdiction in Sub-Saharan Africa, investigation into price discrimination in the telecommunications sector also related to access to networks.<sup>313</sup>

Concerns of price discrimination in Uganda's telecommunications sector became an issue following the full liberalisation of the sector in 2006. There were allegations that incumbent operators sought to use interconnection rates as a tool to

<sup>308</sup>Damien Gerardin and Nicolas Petit, 'Price Discrimination under EC Competition Law: The Need for a Case-by-Case Approach' (2005) GCLC Working Paper 07/2005 35.

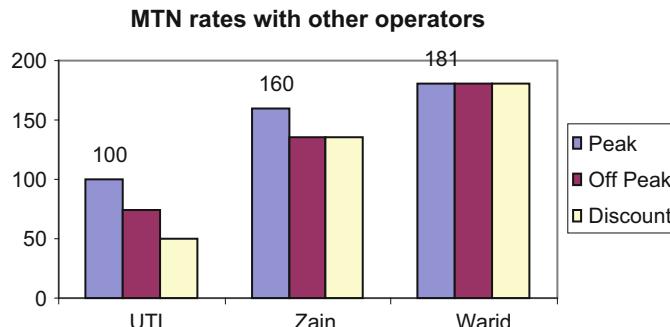
<sup>309</sup>It has been observed that market structures where vertically integrated firms control inputs are often prone to price discrimination. See the South Africa Competition Tribunal's decision in *Competition Commission v Telkom SA Ltd* 11/CR/Feb04 [2011] ZACT 2 para 152; Pierre Larouche, *Competition Law and Regulation in European Telecommunications* (Hart Publishing 2000) 220; and Damien Gerardin and Nicolas Petit, 'Price Discrimination under EC Competition Law: The Need for a Case-by-Case Approach' (2005) GCLC Working Paper 07/2005 35.

<sup>310</sup>European Commission Notice on the Application of the Competition Rules to Access Agreements in the Telecommunications Sector [1998] OJ C 265/2, para 120.

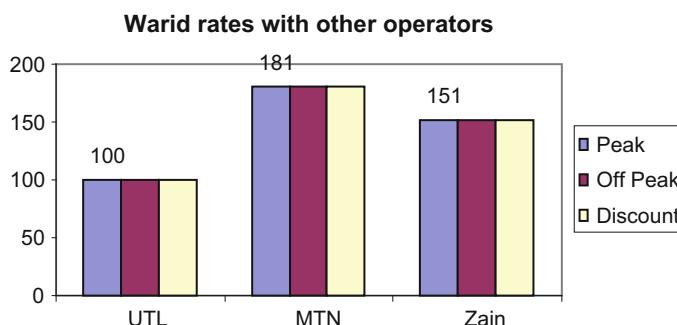
<sup>311</sup>'Commission Successfully Closes Investigation into Mobile and Fixed Telephony Prices Following Significant Reductions Throughout the EU', IP/99/298 2.

<sup>312</sup>Ibid.

<sup>313</sup>*Competition Commission v Telkom SA Ltd* 11/CR/Feb04 [2011] ZACT 2, para 156.



**Fig. 4.7** MTN interconnect rates with other operators (2008). **Source:** UCC Market Analysis Report 2008

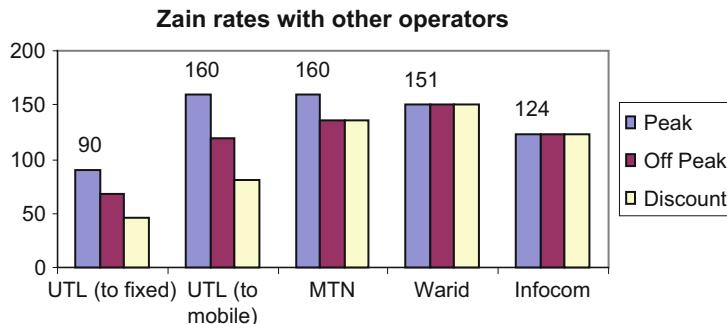


**Fig. 4.8** Warid interconnect rates with other operators (2008). **Source:** UCC Market Analysis Report 2008

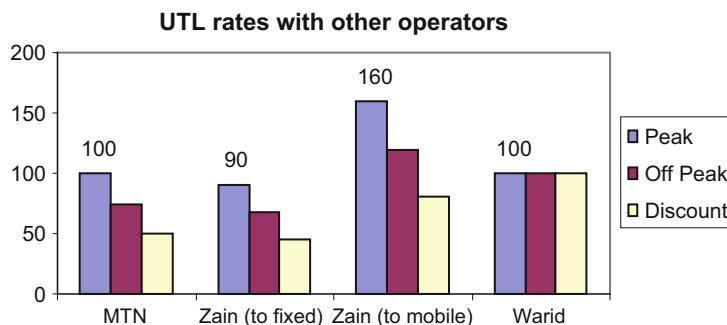
restrict market entry by charging new entrants significantly higher rates for interconnection compared to the rates offered between the incumbent operators.

Although there has never been an investigation concluded to establish the veracity of these claims, UCC data from 2008 confirms the practice of offering interconnection at different rates as indicated in Figs. 4.7, 4.8, 4.9 and 4.10. As the figures show, incumbent operators, MTN Uganda, Uganda Telecom and Celtel/Zain still offered each other interconnection rates that were more favourable compared to the interconnection rates offered to new entrant Warid Telecom. The practice of price discrimination puts new entrants at a competitive disadvantage. Of particular concern is that the largest operator MTN Uganda Limited charged new entrant Warid Telecom a rate significant higher than that it charged fellow incumbent operators, see Figs. 4.7, 4.8, 4.9 and 4.10. Given that almost 60% of the voice traffic terminated on MTN Uganda Limited's network in 2008,<sup>314</sup> it was probable

<sup>314</sup>PwC for UCC, 'Draft Report on Competition and Dominance in the Uganda Telecoms Sector (Part 2): Interconnection and Retail Cost Study' (2009) Unpublished 10.



**Fig. 4.9** Zain interconnection rates with other operators (2008). **Source:** UCC Market Analysis Report 2008



**Fig. 4.10** UTL interconnection rates with other operators (2008). **Source:** UCC Market Analysis Report 2008

that the high interconnection fees would form a big portion of Warid Telecom's costs affecting its ability to compete with the established incumbent operators.<sup>315</sup>

Although the difference in interconnection rates did not result in the exit of Warid Telecom from the market,<sup>316</sup> it still remains the case that in other circumstances the price discrimination might have reduced the intensity of competition.<sup>317</sup> By 2009 however, all operators had adopted a standard rate of Uganda shillings 181 (approximately US\$ 0.08).

<sup>315</sup>It is worth mentioning that in 2008, an off-net call from MTN to Warid was Uganda shillings 480 (0.18 US cts) per minute, whereas the charge for a call in the reverse direction was Uganda shillings 299 (0.11 US cts) per minute.

<sup>316</sup>Warid's on-net tariff plan that offered free on-net calls, which it introduced in 2010, proved to be a very successful campaign attracting a significant number of subscribers.

<sup>317</sup>For example, if the new entrant was a local enterprise rather than a local subsidiary of a multinational telecommunications group, it would have less financial capacity to withstand substantial losses in the initial years in operation.

In the same year the UCC published a price ceiling for call termination rates based on the Interconnection Regulations of 2005 to address persistent complaints of high interconnection rates in the mobile telephony market.<sup>318</sup> This has resulted in all operators adopting the price ceiling for call termination (mobile and fixed) eliminating call termination price discrimination.

While there has been no investigation into price discrimination in Uganda's telecommunications sector, the South Africa Competition Commission has intervened in the telecommunications sector to address claims of price discrimination. The South Africa Competition Commission received a complaint of anti-competitive conduct by MTN in relation to the interconnection fee it charged Cell C for its Community Service Telephones (CSTs).<sup>319</sup> Universal service obligations were imposed on Cell C, MTN and the third mobile operator Vodacom in their licences requiring them to provide CSTs in 'under-serviced areas'.<sup>320</sup> A reduced interconnection fee is charged for CST areas. Cell C alleged that MTN charged Vodacom the reduced CST interconnection rate in respect of its CST phones while it charged Cell C a commercial interconnection rate in the same areas that it charged Vodacom the CST rate.<sup>321</sup> The Commission found that the conduct of MTN amounted to price discrimination as provided for under section 9(1) of the South Africa Competition Act 1998 and that MTN's conduct was likely to have the effect of substantially lessening competition between the telecommunication network operators.<sup>322</sup>

Therefore, in contrast to Uganda where the potential for anti-competitive price discrimination has been minimised through the *ex post* regulation of interconnection rates under the Interconnection Regulations, in South Africa, economy-wide competition law has played an important role. This distinction can be explained by the fact that at the time of the investigation South Africa lacked substantive laws on interconnection to enable the telecommunications regulator, ICASA, to effectively regulate interconnection rates.<sup>323</sup> The South African experience illustrates that a national competition law has the propensity to bolster competition regulation in the telecommunications sector even where sector-specific competition rules exist.

In addition to price discrimination in interconnection, on-net/off-net call price discrimination in the mobile voice services market, where subscribers pay significantly less for calls made within the network (on-net), has also become a source of concern. With intensified competition in the mobile telephony market, the differential pricing has become an established strategy in Uganda's and other

<sup>318</sup>UCC, 'LRIC reference rate determination of 2009'.

<sup>319</sup>South Africa Competition Commission, 'Competition Commission refers Cell C complaint against MTN for price discrimination to Tribunal' (Press Statement 30 July 2007) <<http://www.compcom.co.za/2007-media-releases/>> accessed 15 June 2017.

<sup>320</sup>Ibid.

<sup>321</sup>Ibid.

<sup>322</sup>Ibid.

<sup>323</sup>ICASA published the Call Termination Regulations on the 20 October, 2010 Gazette No 33698.

Sub-Saharan countries mobile services market.<sup>324</sup> Although the differential pricing may be viewed as a competitive instrument, some commentators (economists) have come to regard such pricing as potentially anti-competitive.<sup>325</sup> The main argument is that on-net discounts and high off-net prices can be used by incumbent operators to foreclose the market.<sup>326</sup> In some countries, this form of price discrimination has given rise to concerns of anti-competitive behaviour. For example, in Slovenia, the exit of third mobile operator Vega from mobile phone market in 2006 after 5 years of operation was reportedly partly due to the aggressive on-net/off-net price differentials offered by the two incumbents.<sup>327</sup>

Claims of on-net/off net price differentials being anti-competitive have also arisen in New Zealand where a third mobile operator, 2 degrees, which entered the mobile market in 2009 lodged complaints against the two incumbent operators claiming anti-competitive on-net/off-net differentials.<sup>328</sup> However, a difference in price does not automatically translate into abusive price discrimination. On-net discounts may be an important pricing strategy for new entrants seeking to gain a foothold in the mobile market. Furthermore, the practice in Sub-Saharan African countries of subscribers owning multiple SIM cards enables subscribers to benefit from different on-net off-net tariff plans. Nevertheless, the Slovenia and New Zealand experiences show that incumbent operators with significant market share may still use call price differentials to restrict competition in the mobile market.

The discussion above illustrates that price discrimination may on the one hand be a threat to competition in the telecommunications sector and on the other hand enhance competition and consumer welfare. The ambiguity as to whether price discrimination is pro-competitive has led to the recommendation of a careful analysis of the effects of price discrimination on a case-by-case basis.<sup>329</sup> The South Competition Tribunal has noted that the ambiguity makes it challenging to

<sup>324</sup> Atsushi Iimi, 'Price Structure and Network Externalities in the Telecommunications Industry: Evidence from Sub-Saharan Africa' (2007) World Bank Policy Research Working Paper.

<sup>325</sup> See Hee-Su Kim and Namhoon Kwon, 'The Advantage of Network Size in Acquiring New Subscribers: A conditional Logit Analysis of the Korean Mobile Telephony Market' (2003) 15 Information Economics and Policy 17; Steffen Hoernig, 'On-net and off-net pricing on Asymmetric Telecommunications networks' (2007) 19 Information Economics and Policy 171; and Steffen Hoernig, 'Tariff-Mediated Network Externalities: Is Regulatory Intervention Any Good?' (2008) CEPR Working Paper 6866/2005.

<sup>326</sup> Justus Haucap and Ulrich Heimeshoff, 'Consumer Behaviour towards On-net Off-net Price Differentiation' (2011) DICE discussion paper, No. 16, ISBN 978-3-86304-015-4, 1.

<sup>327</sup> Ibid, 2.

<sup>328</sup> Ibid.

<sup>329</sup> Simon Bishop and Mike Walker, *The Economics of EC Competition Law: Concepts, Application and Measurement* (2nd edn, Sweet and Maxwell 2002) 194. See also Damien Geradin, Anne Layne-Farrar, and Nicolas Petit, *EU Competition Law and Economics* (Oxford University Press 2012) 293, in which it is observed that the concept of price discrimination covers many different practices whose objectives and effects on competition differ which makes this one of the most complex areas of European Union competition law.

assess cases of price discrimination.<sup>330</sup> It is therefore important, for enforcement purposes, to have in place criteria distinguishing price discrimination as an abuse of dominant position under the Fair Competition Regulations and price discrimination a legitimate business strategy.

A definition of price discrimination is provided neither under the Fair Competition Regulations nor the draft Competition Bill, both merely identify price discrimination by a dominant firm as anti-competitive.<sup>331</sup> This also implies that there is no general economic test for identifying price discrimination under the Fair Competition Regulations. Under European Union competition law, there is also no concise legal definition of price discrimination. Price discrimination falls under Article 102 (c) TFEU, which prohibits applying dissimilar conditions to equivalent transactions with other trading parties, if it places them at a competitive disadvantage. Although the provision has been subject to interpretation by the CJEU, a clear economic test identifying price discrimination that falls within Article 102 is yet to be developed.<sup>332</sup> It is for that reason that reference is usually made to economic tests provided by scholars to help identify price discrimination. Price discrimination has been defined as selling two or more similar goods at prices that bear different ratios to their marginal costs.<sup>333</sup> The definition provides an objective criterion, to identify the occurrence of price discrimination.<sup>334</sup> The criterion is the presence of different ratios of price to marginal costs.

Aside from the definition of price discrimination by economists, the South African experience is also relevant and might provide some guidance as to how to determine whether a given form of price discrimination by a dominant operator is anti-competitive. According to the South Africa Competition Act of 1998, price discrimination is anti-competitive if the three elements below are present:

- a) It is likely to have the effect of substantially preventing or lessening competition;
- b) It relates to the sale, in equivalent transactions, of goods or services of like grade and quality to different purchasers; and
- c) it involves discriminating between those purchasers in terms of –
  - (i) the price charged for the goods or services;
  - (ii) any discount, allowance, rebate or credit given or allowed in relation to the supply of goods and services;

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<sup>330</sup>“Price discrimination often leads to mixed outcomes, with some gains and some losses. Intermediaries may lose but consumers may gain, some consumers may lose and others may gain. In this instance it was not easy for us to determine the net impact on competition”, *Competition Commission v Telkom SA Ltd 11/CR/Feb04 [2011] ZACT 2*, para 156.

<sup>331</sup>Communications (Fair Competition) Regulations 2005, SI 2005/24, reg 6(1) (a), and Draft Competition Bill 2004.

<sup>332</sup>Damien Geradin and Nicolas Petit, ‘Price Discrimination under EC Competition Law: The Need for a Case-by-Case Approach’ (2005) GCLC Working Paper 07/2005, 4.

<sup>333</sup>Richard Posner, *Antitrust Law* (2nd edn, University of Chicago Press 2009) 79-80.

<sup>334</sup>Damien Geradin and Nicolas Petit, ‘Price Discrimination under EC Competition Law: The Need for a Case-by-Case Approach’ (2005) GCLC Working Paper 07/2005, 4.

- (iii) the provision of services in respect of the goods or services; or
- (iv) payment for services provided in respect of goods or services.<sup>335</sup>

Regarding the application of this provision in the telecommunications sector, price discrimination was one of the abuses of dominant position addressed in the landmark *Competition Commission v Telkom SA* case.<sup>336</sup> The Competition Tribunal had to address the issue whether the incumbent operator Telkom SA engaged in anti-competitive price discrimination as defined in section 9(1) of the South Africa Competition Act. It was alleged that Telkom SA's differentiated access prices between independent VANs and Telkom's own VANs customers fell within the scope of section 9(1). While the tribunal found that Telkom's access price differentials placed its competitors at a cost disadvantage, it ruled that there was no clear evidence to indicate that Telkom's conduct caused consumer harm.<sup>337</sup> Under the South Africa Competition Act a finding of price discrimination requires proof of competitive harm.<sup>338</sup> According to the Tribunal, the Commission had failed to present a clear case of competitive harm and therefore concluded that there was no contravention of section 9(1). The case is significant because the Competition Tribunal was quick to point out that assessing whether price discrimination is unlawful is very challenging since it often leads to mixed outcomes.<sup>339</sup> While the decision discusses price discrimination it only addressed one requirement of whether price discrimination "is likely to have the effect of substantially preventing or lessening competition". As this requirement was not satisfied by the facts of the case, the tribunal did not need to focus on the two other requirements. Also significant is that the decision did not discuss the economic test for identifying price discrimination. Therefore, the South Africa experience is only helpful up to a point.

In conclusion, the experiences in other jurisdictions illustrate that the UCC should adopt a cautious approach when investigating a claim of unlawful price discrimination under the Fair Competition Regulations. It is very important that clear guidelines for the enforcing price discrimination provision under the Fair Competition Regulations are developed in order to avoid erroneous findings of liability where price discrimination is welfare enhancing. Reference to the economic tests provided by scholars would be a good starting point.

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<sup>335</sup>Competition Act 1998, s 9(1).

<sup>336</sup>*Competition Commission v Telkom SA Ltd* 11/CR/Feb04 [2011] ZACT 2.

<sup>337</sup>*Competition Commission v Telkom SA Ltd* 11/CR/Feb04 [2011] ZACT 2, para 156.

<sup>338</sup>This was also stressed by the Competition Tribunal in the leading case on price discrimination Case 72/CR/Dec03 *Nationwide Poles and Sasol Oil (Pty) Ltd* [2005] ZACT 17 and Competition Appeal Court in Case 49/CAC/ Apr 05 *Sasol Oil (Pty) Ltd v Nationwide Poles* [2005] ZACAC 5 which pointed out that section 9(1) of the South Africa Competition Act required that price discrimination was likely to have the effect of substantially lessening or preventing competition.

<sup>339</sup>*Competition Commission v Telkom SA Ltd* 11/CR/Feb04 [2011] ZACT 2, para 156.

#### 4.6.3.3.3 Price Squeeze

Price squeeze by a dominant operator is another form of anti-competitive behaviour prohibited under the Fair Competition Regulations.<sup>340</sup> The Fair Competition Regulations do not define price squeeze (also referred to as margin squeeze) which is generally understood to refer to situations in which a vertically integrated dominant firm uses its control over an input supplied to downstream rivals to prevent them from making a profit in a downstream market in which the dominant firm is also active.<sup>341</sup> The dominant firm could achieve this result by raising the input price to levels at which rivals could no longer sustain a profit downstream.<sup>342</sup> Alternatively, it could engage in below-cost selling in the downstream market while maintaining a profit overall through the sale of the upstream input.<sup>343</sup> The actions described above may reduce the difference between the wholesale and retail prices for the dominant firm's competitors to such an extent that either entering the downstream market or staying in the market becomes prohibitive.

Given that price squeeze involves offering access to an input at a high price or offering retail services at prices below competitive level, one may presume that the conduct is covered under the anti-competitive practice of excessive pricing also provided for in the Fair Competition Regulations.<sup>344</sup> However, a distinction must be made between excessive pricing and price squeeze. Excessive pricing occurs where a dominant firm exercises its market power by raising prices significantly above its costs.<sup>345</sup> Excessive pricing is therefore an exploitative abuse while price squeeze is an exclusionary abuse since it seeks to exclude competitors in the downstream market.<sup>346</sup> In addition, the principal tests for identifying an excess price are different from those for identifying price squeeze abuse. When assessing whether high prices are excessive and exploitative, the usual benchmark is the firm's own costs of supplying the relevant product or service compared to similar products in the same market or other related markets. In a margin squeeze case, a price is not excessive in relation to the dominant firm's costs, but in relation to the relevant price and profit margin on a downstream market.<sup>347</sup>

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<sup>340</sup>Communications (Fair Competition) Regulations 2005, SI 2005/24, reg 6(1)(a).

<sup>341</sup>Damien Geradin and Robert O'Donoghue, 'The Concurrent Application of Competition Law and Regulation: The Case of Margin Squeeze Abuses in the Telecommunications Sector' (2005) 1 (2) Journal of Competition Law and Economics 355, 357.

<sup>342</sup>Ibid.

<sup>343</sup>Ibid.

<sup>344</sup>Communications (Fair Competition) Regulations 2005, SI 2005/24, reg 6(1)(a).

<sup>345</sup>Simon Bishop and Mike Walker, *The Economics of EC Competition Law: Concepts, Application and Measurement* (2nd edn, Sweet and Maxwell 2002) 190.

<sup>346</sup>Damien Geradin and Robert O'Donoghue, 'The Concurrent Application of Competition Law and Regulation: The Case of Margin Squeeze Abuses in the Telecommunications Sector', (2005) 1(2) of Journal Competition Law and Economics 355, 365.

<sup>347</sup>Ibid.

Margin squeeze is also distinguishable from predatory pricing. In the case of predatory pricing, a dominant operator sets its retail prices at a very low level, namely, below cost with the aim of recouping its losses through charging monopoly prices once competitors have been driven out of the market.<sup>348</sup> However, in a predatory pricing case, a competition authority looks at all the relevant costs of the dominant firm while in a margin squeeze case, it looks only at the costs in the downstream market.<sup>349</sup> In addition, in the case of margin squeeze, the dominant operator is not making any loss, as it might merely be taking its profit upstream rather downstream. Therefore, the issue of recoupment of short term losses does not arise.<sup>350</sup>

Based on the differences highlighted above, it is clear that margin squeeze cases deal with the issue of whether the margin between the upstream and downstream price restricts competition in the downstream market rather than the specific level of wholesale or retail prices as is the case in predatory pricing and excess pricing.<sup>351</sup>

The telecommunications sector is one of those industries that is susceptible to margin squeeze as the specific conditions needed for margin squeeze tend to exist in this sector.<sup>352</sup> One of those conditions is that there must be two markets: the upstream market in which inputs are provided on a wholesale basis, and the downstream market where services are provided on a retail basis. The telecommunications sector is roughly divided into two markets the infrastructure provision market at the upstream level, and the retail services market at the downstream level. In Uganda, the UCC distinguishes between two kinds of markets in the telecommunications namely, infrastructure provision and services.<sup>353</sup> Although there are several vertically integrated operators in Uganda's telecommunications sector blurring the boundaries of the two markets,<sup>354</sup> a number of providers of

<sup>348</sup>Simon Bishop and Mike Walker, *The Economics of EC Competition Law: Concepts, Application and Measurement* (2nd edn, Sweet and Maxwell 2002) 190.

<sup>349</sup>Damien Geradin and Robert O'Donoghue, 'The Concurrent Application of Competition Law and Regulation: The Case of Margin Squeeze Abuses in the Telecommunications Sector', (2005) 1(2) Journal Competition Law and Economics 355, 367.

<sup>350</sup>Ibid.

<sup>351</sup>See Case T-271/03 *Deutsche Telekom AG v European Commission* [2008] ECR II-477, para 167 and Case T-398/07 *Kingdom of Spain v European Commission (Telefonica)* [2012] ECR II-0000, para 67, where the General Court clarified that margin squeeze is about the unfairness of the spread between wholesale and retail prices and does not depend on either price being excessive or predatory.

<sup>352</sup>Forrest Miller, 'Predatory Pricing in Deregulated Telecommunications Markets' (1997) 21 (2) World Competition 65.

<sup>353</sup>See UCC, 'Telecommunications Market Definition' (2009) <<http://www.ucc.co.ug/files/downloads/Extract%20from%20Report%20on%20Competition%20and%20Dominance%202009.pdf>> accessed 15 June 2017.

<sup>354</sup>This is especially the case in the mobile telephony market for which the UCC has noted that the downstream market is not very distinct. See PwC for UCC, 'Draft Report on Competition and Dominance in the Uganda Telecoms Sector (Part 2): Interconnection and Retail Cost Study (2009) Unpublished 12.

telecommunications services rely on other operator's infrastructure in order to provide telecommunications services.<sup>355</sup>

In order for margin squeeze to occur, there must, additionally, be a vertically integrated firm dominant in the upstream market supplying inputs, to rivals operating on the downstream market where the dominant firm is also active.<sup>356</sup> The input must in some sense be "essential" for competition on the downstream market.<sup>357</sup>

In the telecommunications markets, particularly in the more developed telecommunications markets, it is usually the case that the vertically integrated former monopoly operator owns the fixed-line network needed to provide retail services, particularly telephone and internet services. The vertically integrated former monopoly operator is dominant or has monopoly in the upstream market and also participates in providing retail services market. The former monopoly operator's presence in both markets is the reason why margin squeeze has become a major concern in the post liberalised telecommunications sector. Chief among the competition-related concerns is that the former monopoly operator may use margin squeeze as a strategy to make it difficult for new entrants to stay in the market.<sup>358</sup> Specific instances of margin squeeze include: in the broadband market, the incumbent operator engaging in margin squeeze by charging its rivals in the downstream market highly for access to its fixed network<sup>359</sup>; and in the mobile telephone services market, a large dominant operator setting high interconnection charges which directly influence retail prices of the smaller competitors resulting in margin squeeze.<sup>360</sup>

<sup>355</sup>For example, a number of internet service providers operating in the downstream retail market lease lines on a wholesale basis from the primary fixed-line operators Uganda Telecom and MTN Uganda Limited. In addition, Uganda was one MVMO K2 Telecom which was no infrastructure and is solely dependent on Africell's network for the provision of mobile services.

<sup>356</sup>Damien Geradin and Robert O'Donoghue, 'The Concurrent Application of Competition Law and Regulation: The Case of Margin Squeeze Abuses in the Telecommunications Sector' (2005) 1(2) Journal of Competition Law and Economics 355, 358.

<sup>357</sup>Ibid.

<sup>358</sup>In this regard, the European Union competition case law on the abuse of margin squeeze under article 102 of the TFEU has involved a number of the former monopoly operators in different member states. The leading cases are Case T-271/03 *Deutsche Telekom AG v Commission* [2008] ECR II-477; Case C-52/09 *Konkurrensverket v TeliaSonera Sverige* [2011] ECR I-527; and Case T-398/07 *Kingdom of Spain v European Commission (Telefonica)* [2012] ECR II-0000.

<sup>359</sup>Case T-271/03 *Deutsche Telekom AG v Commission* [2008] ECR II-477 and Case T-398/07 *Kingdom of Spain v European Commission (Telefonica)* [2012] ECR II-0000 at the European Union level. At the national level, in the United Kingdom, British Telecom (BT) was investigated for margin squeeze in OFCOM decision of November 2010, *Investigation into BT's Residential Broadband Pricing*.

<sup>360</sup>The basis of claiming margin squeeze is that the retail price of an on-net call on a large network is less than the wholesale cost to a smaller network sending an off-net call to the larger network. In the United Kingdom the claims of margin squeeze in the mobile telephony market were addressed by Ofcom in its decision of 19 August 2004, *Suspected Margin Squeeze by Vodafone, O2, Orange and T-Mobile* [2005] UKCLR paras 3.24-3.100. In 2012, the Icelandic the Competition Authority

The experience from other jurisdictions indicates that curbing margin squeeze should be one of the priorities for the regulatory authorities seeking to prevent or discourage anti-competitive behaviour in the telecommunications sector. This conclusion is relevant in Uganda's telecommunications sector as the possibilities for engaging in margin squeeze highlighted in the paragraphs above can potentially occur in Uganda.

In the mobile telephone services market, most operators tend to provide services through their own end to end networks thereby limiting the possibility of an operator engaging in margin squeeze as they are not dependent on the facility of another operator in order to provide services at the retail level. UCC does not consider any operator dominant in the retail services market for voice services.<sup>361</sup> However, the retail mobile telephone services market is connected to the call termination market in which the majority of telecommunications operators are considered dominant as they have 100% market share for termination of calls on their networks.<sup>362</sup> Incumbent operators with a large market share have the incentive to use their dominant position in the call termination market to limit competition by offering call termination to competitors at rates that are significantly higher than the on-net calls to its subscribers.<sup>363</sup> However, whether such a strategy can help an incumbent operator to eliminate or restrict competition in the mobile telephone services market is debatable in light of the considerable steps taken by UCC to regulate call termination rates. UCC's intervention by setting a price ceiling for interconnection rates calculated on a cost-oriented basis curtails the ability of an operator to successfully engage in margin squeeze.

The case for margin squeeze might be more tenable in the internet market. There are two distinct market segments in Uganda, mobile internet and fixed-line internet. In the mobile internet market, the existence of several vertically integrated operators renders it difficult for any one operator to exert market power in the upstream

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imposed a fine of ISK 440 million on Siminn (Iceland Telecom) for abusing its dominant position by engaging in margin squeeze in the mobile telephone market. This was based on Siminn charging its competitors mobile call termination rates at the wholesale level that were higher than Siminn's on-net call prices. See 'The Icelandic Competition Authority Imposes a Fine of ISK 440 million on Siminn (Iceland Telecom) for Violation of the Competition Act' <<http://en.samkeppni.is/published-content/news/nr/1985>> accessed 15 June 2017. Similar investigations by the competition authority in Germany (Bundeskartellamt) were undertaken relating to margin squeeze by T-Mobile and Vodafone accused of charging low on-net tariffs for mobile telephony. See Case Summary of Examination of Possible Abuse of Dominant Position of T-Mobile and Vodafone by Charging Lower On-net Tariffs for Mobile Voice Telephony Services <<http://www.bundeskartellamt.de/wEnglisch/download/pdf/Fallberichte/B07-170-07-engl.pdf>> accessed 15 June 2017.

<sup>361</sup> See Sect. 4.6.3.2.1 of this study.

<sup>362</sup> PwC for UCC, 'Draft Report on Competition and Dominance in the Uganda Telecoms Sector (Part 2): Interconnection and Retail Cost Study' (2009) Unpublished 25.

<sup>363</sup> Operators with a large network charging high interconnection rates are bound to affect the profits of new entrants as a significant amount of the voice tariff of the latter subscriber's call will terminate on the former's network.

market. However, in the fixed-line market, Uganda Telecom and MTN Uganda Limited, alongside UETCL are the main infrastructure providers with Uganda Telecom having the widest spread network. All three entities offer leased lines at the wholesale level to a number of ISPs, with MTN Uganda Limited and Uganda Telecom also providing retail internet services in competition with the ISPs. Uganda Telecom is notably dominant in the wholesale leased line market not only servicing ISPs but also offering leased lines at the retail level directly to corporate customers.<sup>364</sup> The UCC mandates Uganda Telecom and MTN Uganda to provide leased lines to customers, including other operators, at cost-oriented prices.<sup>365</sup> Nevertheless, the market structure in the fixed internet market can facilitate margin squeeze encouraging an operator to leverage its market power in the wholesale leased line market to restrict competition in the retail fixed internet market.

The significance of margin squeeze in the liberalised telecommunications sector means that UCC should be vigilant in ensuring that telecommunications operators do not engage in such conduct. As the Fair Competition Regulations merely identify margin squeeze as an abuse of dominant position, it is important to have criteria in place to enable the UCC to effectively fulfil its role as the enforcer of competition regulation in the telecommunications sector. The next paragraphs aim to identify these criteria by relying on jurisprudence from other countries that have experience investigating margin squeeze in the telecommunications sector. Emphasis is placed on the margin squeeze jurisprudence under European Union and South African competition law.<sup>366</sup>

South Africa has the most developed margin squeeze jurisprudence in Sub-Saharan Africa though there is yet to be a decision dealing with this form of price abuse in the telecommunications sector. There was an unsuccessful attempt by the South Africa Competition Commission to develop case law specifically on

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<sup>364</sup>PwC for UCC, ‘Draft Report on Competition and Dominance in the Uganda Telecoms Sector (Part 2): Interconnection and Retail Cost Study’ (2009) Unpublished 21.

<sup>365</sup>Ibid. This was confirmed by Ann Rita Ssemboga, Economist at UCC interview held on the 7 December 2011, at UCC headquarters, Kampala, Uganda.

<sup>366</sup>This is because under South African and EU competition law, margin squeeze is a distinct form of abuse of dominant position as is the case in Uganda’s telecommunications sector. Specifically, a discussion of margin squeeze under the competition law in the United States is avoided primarily because of the stark difference in approach to regulation of price squeeze. In United States, price squeeze is not a distinct antitrust harm under antitrust law and should be assessed as a combination of refusal to deal and predatory pricing. This was the holding made by the United States Supreme Court in *Pacific Bell Telephone v linkLine Communications, Inc.*, 555 U.S. 438 (2009). In that case, incumbent fixed-line operator AT&T was accused of engaging in margin squeeze in the broadband market by setting a high price for wholesale local loop access and a low price for its retail broadband internet services. The Supreme Court unanimously rejected claims that AT &T had engaged in price squeeze.

margin squeeze in the telecommunications sector.<sup>367</sup> The key margin squeeze case in South Africa is the *Senwes* case that focused on margin squeeze in South Africa's grain market.<sup>368</sup> In that case it was alleged that Senwes Limited, one of the leading companies in South Africa's grain market, inflated its grain storage tariffs rendering its downstream trading rivals unable to compete effectively in the market for trading grain. The South Africa Competition Tribunal had to decide whether Senwes Limited, which is a vertically integrated firm and dominant in the storage-of-grain in the upstream market, and trading in grain in the downstream market, had abused its dominant position through margin squeeze. The Competition Tribunal held that Senwes Limited had engaged in margin squeeze against the independent traders by discriminating in storage charges between traders and its own trading arm.<sup>369</sup> The case is of great significance in South African competition law as the tribunal provided the criteria for price squeeze assessment. The Tribunal listed the following conditions as necessary for purposes of margin squeeze: (1) the supplier of the input (the dominant firm) is vertically integrated; (2) the input in question is in some sense essential for the downstream competition; (3) the vertically integrated dominant firm's prices would render the activities of an efficient rival uneconomic; and (4) there is no objective justification for the dominant firm's pricing arrangements.

Notwithstanding the conditions for margin squeeze provided for in the *Senwes* case, fundamental for investigations of margin squeeze is an economic test for identifying this form of abuse of dominant position. There are two main tests: the equally efficient operator, and the reasonably efficient operator. The equally-efficient-competitor/operator (EEO) test assesses whether the dominant operator's upstream price, downstream price, or the combination of both prices, causes the activities of a downstream rival to be uneconomic, that is, either loss-making or

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<sup>367</sup>In 2004 the South Africa Competition Commission received a complaint from the VANS Association. The complaint alleged that the incumbent operator Telkom SA had engaged in anti-competitive conduct (including margin squeeze) restricting competition in the downstream value-added services market. Telkom SA at the time controlled the only fixed-line network in South Africa. The Commission referred the complaint to the Competition Tribunal but did not include an allegation of margin squeeze. It later tried to amend its complaint referral to the Competition Tribunal to include the price squeeze abuse. This would have provided the Competition Tribunal with an opportunity to build jurisprudence on price squeeze in the telecommunications sector. However, the Competition Tribunal rejected the Commission's amendment on the basis that the complaint on price squeeze failed to adequately set out the requirements of price squeeze as later laid out by the Tribunal in the *Senwes* case. See *Competition Commission v Telkom SA Ltd* 11/CR/Feb04 [2011] ZACT 2.

<sup>368</sup>*Senwes Limited v Competition Commission* 110/CR/Dec 06 [2011] ZACT 90.

<sup>369</sup>The Tribunal's decision though upheld by the Competition Appeal Court Case 87/CAC/Feb09 *Senwes Limited v Competition Commission* [2012] ZACC 6 was set aside by the Supreme Court of Appeal in 2011, *Senwes Limited v Competition Commission* Supreme Court of Appeal, Case No. 118/2010). The key ground was that the Competition Commission had not properly pleaded a case of margin squeeze as an exclusionary act.

insufficient to provide a ‘reasonable profit’.<sup>370</sup> The reasonably efficient competitor/operator (REO) test demands that the vertically integrated dominant firm must price its inputs at a level that would allow a less efficient (but still reasonably efficient) downstream operator a margin.<sup>371</sup> The most commonly applied test is the equally EEO test, notably recognised by the General Court in leading margin squeeze cases under European Union competition law, *Deutsche Telekom* and *Telefonica*.<sup>372</sup> The EEO test was also recognised by the South Africa Competition Tribunal in the *Senwes* case.<sup>373</sup> The key reason for the reliance on the EEO test is that it provides legal certainty for vertically integrated dominant firms as they have knowledge of their own costs and access charges in determining whether their conduct is lawful.<sup>374</sup>

Despite the case law supporting the use of the EEO test in the telecommunications sector, there have been some suggestions, both by competition authorities and in case law, that in the context of the liberalised telecommunications sector, the REO test might sometimes be suitable. The European Commission, in the Access Notice, expressly provides for both tests.<sup>375</sup> Furthermore, it has hinted at the use of the REO test with regard to *ex ante* regulation of margin squeeze in the case of next generation access networks.<sup>376</sup> In the UK, Oftel now Ofcom applied a number of cost tests including the REO test to determine whether BT had engaged in margin squeeze in the broadband market.<sup>377</sup>

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<sup>370</sup>Damien Geradin and Robert O'Donoghue, ‘The Concurrent Application of Competition Law and Regulation: The Case of Margin Squeeze Abuses in the Telecommunications Sector’ (2005) 1 (2) Journal Competition Law and Economics 355, 359.

<sup>371</sup>Ibid.

<sup>372</sup>See Case T-271/03 *Deutsche Telekom AG v Commission* [2008] ECR II-477; and Case T-398/07 *Kingdom of Spain v European Commission (Telefonica)* [2012] ECR II-0000. In both cases, the General Court approved the application by the European Commission of the equally efficient operator test in determining whether the German and Spanish incumbent operators had engaged in margin squeeze in contravention of Article 102 TFEU. The incumbent operators had challenged the test used by the European Commission to determine whether the operators were liable for infringement of Article 102 TFEU.

<sup>373</sup>Case 110/CR/Dec 06 *Competition Commission v Senwes Limited* [2011] ZACT 90.

<sup>374</sup>In Case T-271/03 *Deutsche Telekom v Commission* [2008] ECR II-477 paras 196-204, the General Court clearly expressed preference for the EEO standard over the reasonably efficient operator (REO) standard. The reason being that EEO is a subjective standard as it depends on the vertically integrated firm rather than how inefficient its downstream rivals are and therefore creates legal uncertainty.

<sup>375</sup>European Commission Notice on the Application of the Competition Rules to Access Agreements in the Telecommunications Sector [1998] OJ C 265/2, paras 117 and 118.

<sup>376</sup>European Commission (2010), ‘Commission Recommendation of 20th September 2010 on regulated Access to Next Generation Networks’ SEC (2010) 1037 para 26 where the Commission states that in the specific context of *ex-ante* price controls aiming to maintain effective competition between operators not benefiting from the same economies of scale and scope and having different unit network costs, a “reasonably efficient operator test” will normally be more appropriate.

<sup>377</sup>Ofcom decision of November 2010, *Investigation into BT’s Residential Broadband Pricing*. Although Ofcom in expressing its opinion about margin squeeze abuses referred to the EEO test.

One of the key arguments put forward for the use of the REO test is that in a regulated market where competition is being introduced it would be difficult, if not impossible, for an entrant at the time of entry to be as efficient as the incumbent.<sup>378</sup> Therefore, regulators might be justified in promoting entry of relatively inefficient operators in the short-term, in the expectation that they will become more efficient in the long run.<sup>379</sup> However, the REO test has been favoured in the context of *ex ante* regulation of margin squeeze and the EEO remains the preferred test for *ex post* regulation through competition rules. Therefore, in the context of investigating price squeeze under the Fair Competition Regulations, the EEO test should be the standard test.

The recommendation above on the preferred use of the EEO test is, however, qualified in that the REO test should not be completely disregarded. It has been observed that under certain circumstances it might be preferable to apply both the EEO and REO tests depending on which is most suitable in the particular circumstances because reliance solely on the dominant firm's costs under the EEO test can lead to incorrect outcomes in practice.<sup>380</sup> One case arises where the downstream rivals offer products or services that are differentiated in terms of quality or characteristics to the services of dominant firms.<sup>381</sup> Where the rivals' products are differentiated, they may make adequate profits even in circumstances where the dominant firm's downstream business would notionally make a loss if it had to pay the same wholesale prices as it charged its rivals.<sup>382</sup> Another argument for the reliance on both the dominant operator's and downstream rival's costs is that margin squeeze requires a simple, linear vertical chain of production, that is, a single, clearly-identifiable upstream product and a single, clearly-defined downstream product in which the upstream product is a high, fixed proportion of total costs.<sup>383</sup> However, in the telecommunications sector with multiple products, downstream rivals may have the option of using a range of different wholesale or intermediate inputs in combination in order to give them a lower overall cost than the dominant firm.<sup>384</sup> For example, in the case of the internet services market, downstream service providers have options ranging from local loop unbundling, cable to mobile technologies, for example, Wi-Fi and WiMAX.<sup>385</sup> This suggests that the UCC should not rely solely on EEO test for purposes of investigating

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<sup>378</sup>Richard Cadman, 'Margin Squeeze: Defining a Reasonably Efficient Operator: Is This the Biggest Challenge in Telecom Margin Squeeze?' (2011) 39(1) 24 Intermedia <[http://spcnetwork.eu/uploads/Intermedia\\_Vol\\_39\\_Margin\\_Squeeze.pdf](http://spcnetwork.eu/uploads/Intermedia_Vol_39_Margin_Squeeze.pdf)> accessed 15 June 2017.

<sup>379</sup>Damien Geradin and Robert O'Donoghue, 'The Concurrent Application of Competition Law and Regulation: The Case of Margin Squeeze Abuses in the Telecommunications Sector' (2005) 1 (2) Journal Competition Law and Economics 355, 393.

<sup>380</sup>Ibid.

<sup>381</sup>Ibid.

<sup>382</sup>Ibid.

<sup>383</sup>Ibid, 394.

<sup>384</sup>Ibid.

<sup>385</sup>Ibid.

margin squeeze in the telecommunications sector when enforcing the Fair Competition Regulations.

Another important issue that must be clarified in this discussion of margin squeeze is whether the operator must be dominant in both the upstream and downstream market. In *Deutsche Telekom*<sup>386</sup> and *Telefonica*,<sup>387</sup> the operators were dominant in both the upstream and downstream market.<sup>388</sup> However in the *Senwes* case, the South Africa Competition Tribunal still found Senwes Limited liable although it was dominant in the grain storage market and not the grain trading market.<sup>389</sup> Since margin squeeze focuses on the pricing of the dominant operator in the upstream market and its effect on the downstream market, dominance in the upstream market is what is most significant.<sup>390</sup>

Reliance on competition rules applied *ex post* by the UCC is not the only regulatory means of curbing margin squeeze with *ex ante* measures also applicable. The importance of *ex ante* intervention by national regulatory authorities to prevent margin squeeze abuses by former monopoly fixed-line operators has been stressed by the European Commission.<sup>391</sup> In Uganda the Interconnection Regulations of 2005 and the Tariff Regulations of 2005 are most significant pieces of legislation. The Interconnection Regulations require that interconnection rates should be set on a cost-oriented basis.<sup>392</sup> The UCC has intervened to regulate interconnection rates on the basis of this regulation by setting a price ceiling calculated on a cost-oriented basis.<sup>393</sup> The regulatory intervention by UCC makes it difficult for operators to engage in margin squeeze as the rates are set on a cost-oriented basis.

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<sup>386</sup>Case T-271/03 *Deutsche Telekom AG v Commission* [2008] ECR II-477.

<sup>387</sup>Case T-398/07 *Kingdom of Spain v European Commission (Telefonica)* [2012] ECR II-0000.

<sup>388</sup>Deutsche Telekom was a monopoly in the upstream market owning the only fixed-line network in Germany. In addition, it had greater market power (above 90 percent) in the two downstream retail internet markets, the narrowband and broadband markets. Telefonica was dominant in two wholesale markets (the wholesale broadband access at the regional level and the national level) and on the retail market for internet access.

<sup>389</sup>Case 110/CR/Dec 06 *Competition Commission v Senwes Limited* [2011] ZACT 90.

<sup>390</sup>Damien Geradin and Robert O'Donoghue, 'The Concurrent Application of Competition Law and Regulation: The Case of Margin Squeeze Abuses in the Telecommunications Sector' (2005) 1 (2) *Journal of Competition Law and Economics* 355, 408 affirming dominance in the upstream market as most significant.

<sup>391</sup>Council Regulation 2887/2000 on unbundled access to the local loop [2000] OJ L 336, recital 10 which encourages national regulatory authorities to rely on price setting powers for the unbundled network elements to ensure that margin squeezes are curbed. In addition, the Access Directive also points to the need for *ex-ante* intervention to prevent margin squeeze abuses, recital 20.

<sup>392</sup>Communications (Interconnection) Regulations 2005, SI 2005/25, reg 15.

<sup>393</sup>See UCC, 'LRIC Reference Rate Determination Rate 2009' and UCC, 'LRIC Reference Rate Determination Rate 2012'.

Aside from the enforcement of the Interconnection Regulations, the use of the price cap system provide for the Tariff Regulations may prevent a vertically integrated operator dominant in the upstream market from engaging in margin squeeze by regulating wholesale and retail prices in the telecommunications sector. However, price control by the telecommunications regulator might hinder the growth of competitive markets in the telecommunications sector.<sup>394</sup> Competition remains the best way to impose continuous pressure on the prices of such services.<sup>395</sup>

#### 4.6.3.3.4 Refusal to Deal

Refusal to deal usually describes a situation in which one firm refuses to sell to another firm.<sup>396</sup> The concept of refusal to deal also covers situations where a firm offers to deal with a competitor on unreasonable terms, such as very high prices, degraded service, or reduced technical interoperability.<sup>397</sup>

It is widely accepted that non-dominant firms have a right to choose with whom they deal and therefore to refuse to deal with a competitor.<sup>398</sup> The act of a non-dominant firm refusing to deal is less likely to have an adverse effect on competition.<sup>399</sup> However, the same cannot be said with regard to a firm in a

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<sup>394</sup> OECD, ‘Price Caps for Telecommunications: Policies and Experiences’ (1995) <[www.oecd.org/sti/ieconomy/1909801.pdf](http://www.oecd.org/sti/ieconomy/1909801.pdf)> accessed 15 June 2017.

<sup>395</sup> See Damien Geradin and Michael Kerf, *Controlling Market Power in Telecommunications: Antitrust vs. Sector-Specific Regulation* (Oxford University Business 2003) 317. The authors go on to cite the example of Chile where drastic price reductions were observed when Chile switched from a regime of price regulation to a regime of unhindered competition in the national and international long-distance market.

<sup>396</sup> OECD, ‘Policy Roundtables: Refusal to Deal’ (2009) 9 <<http://www.oecd.org/daf/43644518.pdf>> accessed 15 June 2017.

<sup>397</sup> Constructive refusal to deal is recognised under EU Competition law. See the Communication from the Commission: Guidance on the Commission’s Enforcement Priorities Applying Article 82 EC Treaty (now Article 102 TFEU) to Abusive Exclusionary Conduct by Dominant Undertakings (2008), para 79 which provides that it is not necessary for there to be actual refusal by dominant undertaking, ‘constructive refusal’ is sufficient. The Commission cites unduly delaying or otherwise degrading the supply of the product or the imposition of unreasonable conditions in the return for the supply as examples of constructive refusal to supply. In *Competition Commission v Telkom SA Ltd* 11/CR/Feb04 [2011] ZACT 2, para 90, the South Africa Competition Tribunal recognised constructive refusal to deal. According to the Tribunal, a dominant firm’s requirement that a downstream competitor accede to unreasonable conditions in order to obtain supply could nevertheless still amount to a refusal to deal. The Tribunal notably observed that in context of telecommunications, even a slight delay or degradation in quality of provision of telecommunications infrastructure could amount to constructive or effective refusal.

<sup>398</sup> OECD, ‘Policy Roundtables: Refusal to Deal’ (2009) 9 <<http://www.oecd.org/daf/43644518.pdf>> accessed 15 June 2017.

<sup>399</sup> Ibid.

dominant position, as the act of refusing to deal with another firm can potentially have a negative impact on competition to the detriment of consumer welfare.<sup>400</sup>

Of all the forms of abuse of dominant position none has sparked more interest from telecommunications regulators and competition authorities than refusal to deal. In leading competition law enforcement jurisdictions, the United States<sup>401</sup> and the European Union,<sup>402</sup> there have been a number of investigations into anti-competitive behaviour by telecommunications operators centring on refusal to deal. In Sub-Saharan Africa, the most substantive case on anti-competitive behaviour in the telecommunications sector dealt with is refusal to deal. The case in question is the South Africa Competition Tribunal's decision in *South Africa Competition Commission v Telkom SA* in which the Tribunal found the incumbent fixed operator, Telkom SA, liable under the South African Competition Act for refusing to provide access to independent ISPs to its fixed network.<sup>403</sup>

A key reason why refusal to deal is one of the key concerns for competition authorities and telecommunications sector regulators relates to the monopoly ownership over certain telecommunications facilities by a dominant operator. The telecommunications facility of greatest interest is the fixed line network, specifically the local loop, needed by telephone operators and internet services providers to connect to their customers.<sup>404</sup>

In the liberalised sector, the local loop, built by national incumbent operators during the monopoly era, continues to remain primarily in the hands of the incumbent operators. This means the incumbent operators have the ability to control access to customers. In certain telecommunications markets, specifically long-distance telephone and fixed-internet, access to the local loop is necessary in order for a service provider to connect to its customers. As the incumbent operators are vertically integrated and thus also engaged in the retail services market, there has been concern that the incumbent operators may have an incentive to deny access or permit access on unreasonable terms in order to restrict or distort competition. This concern has translated into case law on anti-competitive behaviour frequently touching on refusal to deal by the incumbent operator.<sup>405</sup>

<sup>400</sup>Ibid.

<sup>401</sup>Notable cases include *Northeastern Co. v AT&T Co.*, 651 F.2d 76 (2d Cir. 1981); *MCI Communications v AT&T Co.*, 708 F.2d 1081 (7th Cir. 1982); and *Verizon Communications Inc. v Law Officers of Curtis V Trinko*, 540 U.S. 398, (2004) in which the US courts primarily dealt with the allegation of refusal to provide access to essential facilities in the telecommunications sector.

<sup>402</sup>See Case COMP/39.525 *Telekomunikacja Polska* [2011] OJ C324/7 in which the Polish incumbent was found to have abused its dominant position by refusing to grant access to its local loop.

<sup>403</sup>*Competition Commission v Telkom SA Ltd 11/CR/Feb04* [2011] ZACT 2.

<sup>404</sup>According to ITU, “local loop” traditionally refers to the circuit wiring (or loop) that links a telecommunication network with a customer’s home or business.

<sup>405</sup>One of the more recent examples from the European Union is the Telekomunikacja case, Case COMP/39.525 *Telekomunikacja Polska* [2011] OJ C324/7. The landmark case in Africa is *Competition Commission v Telkom SA Ltd 11/CR/Feb04* [2011] ZACT 2.

Initial refusal to deal concerns centred on facilitating competition in the telephony market. In the United States the focus has been on enhancing competition in the long distance telephone services by mandating access to the incumbent local exchange carriers (ILECs) local access network.<sup>406</sup> With the growth of the mobile market, access to incumbents' mobile networks for the provision of telephony services has also become important. In the European Union, access to mobile network has been viewed as important for encouraging the entry of mobile virtual network operators.<sup>407</sup> That being said, greater attention has been paid to refusal to deal in the internet markets. In the European Union investigations into refusal to deal have focused on enhancing competition in the broadband market.<sup>408</sup> In Sub-Saharan Africa, refusal to deal affecting an operator's ability to connect to its customers has been an issue in the fixed internet market. The former monopoly operators in Sub-Saharan Africa still retain or have significant market power as access providers in the fixed internet market.<sup>409</sup> Therefore, a number of internet services providers are dependent on the former monopoly operators for access and carrying a customer's traffic.<sup>410</sup>

In Uganda the refusal-to-deal concept is also likely to be of particular significance in the fixed internet market. Unlike the other telecommunications markets where the majority of service providers offer their services through their own networks, in the fixed internet market, infrastructure is primarily provided by the incumbent fixed-line operator and former second national operator, Uganda Telecom and MTN Uganda, respectively. The majority of internet service providers offer internet services in the retail market through lines leased from the two fixed-line operators.<sup>411</sup> The two former national operators have significant market power in the leased lines markets. Reliable data from 2008, show that Uganda Telecom had a market share of 75% compared to MTN Uganda Limited's 25% based on total revenue and a similar structure emerged based on volumes (number of leased lines

<sup>406</sup>See, for example, *MCI Communications v AT&T Co.*, 708 F.2d 1081 (7th Cir. 1982) and *Northeastern Co. v AT&T Co.*, 651 F.2d 76 (2d Cir. 1981).

<sup>407</sup>Marco D'Ostuni, 'Access to Facilities in the Telecommunications Sector: An Overview of EU and National Case Law' (April 2012) Bulletin e-Competitions Telecom & Access to facilities, Art. No. 45007.

<sup>408</sup>Case COMP/39.525 *Telekomunikacja Polska* [2011] OJ C324/7.

<sup>409</sup>ITU, 'Study on International Internet Connectivity in Sub-Saharan Africa' (2013) 12 <[www.itu.int/en/ITU-D/Regulatory-Market/.../IIC\\_Africa\\_Final-en.pdf](http://www.itu.int/en/ITU-D/Regulatory-Market/.../IIC_Africa_Final-en.pdf)> accessed 15 June 2017.

<sup>410</sup>*Competition Commission v Telkom SA Ltd* 11/CR/Feb04 [2011] ZACT 2 is evidence of this. ITU observation that internet backbone provision market is not competitive with the former monopoly operators in the region engaging in monopolistic practices with regards to infrastructure access. See ITU, 'Study on International Internet Connectivity in Sub-Saharan Africa' (2013) 18 <[www.itu.int/en/ITU-D/Regulatory-Market/.../IIC\\_Africa\\_Final-en.pdf](http://www.itu.int/en/ITU-D/Regulatory-Market/.../IIC_Africa_Final-en.pdf)> accessed 15 June 2017.

<sup>411</sup>Nora Mulira, Apolo Kyeyune, and Ali Ndiwalana, 'Uganda ICT Sector Performance Review, 2009/2010: Toward Evidence Based ICT Policy and Regulation' (2010) 2 Policy Paper 13 3.

sold), namely, 77% to 23% respectively.<sup>412</sup> The two operators are not only access providers but also compete with the ISPs in the retail internet services market. Not surprisingly, access to leased lines has been noted as a key competition concern by the UCC. Specifically, the market composition in the leased lines markets in 2008 led the UCC to draw the conclusion that the former monopoly operator, Uganda Telecom, is dominant in the market and notably expressed the importance of intervention to regulate wholesale access to leased lines in order to ensure that Uganda Telecom cannot leverage its power into the retail market.<sup>413</sup> The data from 2008 is still relevant several years on, as investment in the fixed-line infrastructure market has not increased significantly. MTN Uganda Limited and Uganda Telecom continue to dominate the infrastructure market.<sup>414</sup> Therefore, access to telecommunications facilities is of significance in Uganda's telecommunications sector.

Although the previous paragraphs stress the importance of investigating cases of refusal to deal in internet market in order to foster competition, this particular form of anti-competitive behaviour can potentially arise in the mobile telephone services market as well. The mobile telephone services market composition in Uganda is different from that in the fixed internet market in that there are several vertically integrated operators providing telephony services through their own infrastructure. Thus, in the mobile telephone services market, the majority of telephone operators do not require access to the network of another operator to connect to their customers. Unlike the European Union, the concept of mobile virtual network operators has not taken root with the first mobile virtual network operator only entering Uganda's market in 2012.<sup>415</sup> However, access to another mobile operator's network is needed in order to guarantee universality of communications. At the heart of the interconnection issue is the need to ensure that a mobile operator's subscribers are able to terminate calls on another operator's network. Each telecommunications operator has monopoly on calls terminating on its network. Therefore, the operator of a calling party needs access to call termination services from the operator on whose network a call is being terminated. An incumbent may seek to maintain its market share by denying a new entrant or an operator with less economic strength access to call termination services or granting access on unfavourable terms affecting the growth of competition in the mobile market.

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<sup>412</sup>PwC for UCC, 'Draft Report on Competition and Dominance in the Uganda Telecoms Sector (Part 2): Interconnection and Retail Cost Study' (2009) Unpublished 21.

<sup>413</sup>Ibid, 16-17.

<sup>414</sup>UCC, 'Post, Broadcasting, Telecommunication Market & Industry Report, Third Quarter (July-September 2016) <<http://www.ucc.co.ug/details.php?option=industrial>> accessed 15 June 2017.

<sup>415</sup>Despite the entry of MVNO, K2, in Uganda's telecommunications sector, it is doubtful that the number of such operators will grow due unsuitable market conditions. As observed, a mobile market needs to be saturated and have networks which are facing reducing margins for MVNOs to become relevant. See 'MVNOs Industry Summit Africa 2013 Report' quoting Robert Schumann of Analyst Mason <<http://mvnosworldcongress.com/download-post-event-report>> accessed 15 June 2017. Interestingly, even in South Africa which is deemed to have suitable conditions, MVNOs have struggled to gain a considerable market share, case in point is Virgin Mobile.

In Uganda's largest market segment, the mobile telephone services market, call termination is a bottleneck as each network operator has monopoly over call termination on its network.<sup>416</sup> The monopoly over call termination has led the UCC to conclude that operators have a dominant position in the call termination market.<sup>417</sup> Therefore, refusal to deal is also relevant in the telephone services market with regard to call termination services.

#### 4.6.3.3.5 Refusal to Deal in the Telecommunications Regulatory Framework in Uganda

The previous sub-section has highlighted the possibility of refusal to deal in the telecommunications sector having a detrimental effect on competition, especially in the retail internet and voice services markets. The Fair Competition Regulations recognise refusal to deal as a form of abuse of dominant position.<sup>418</sup> The Fair Competition Regulations consider refusal to deal as anti-competitive in two specific cases: (1) a dominant telecommunications operator refuses to interconnect or act in good faith during interconnection negotiations; and (2) a dominant telecommunications operator refuses to supply or grant access to facilities.<sup>419</sup> In addition, the draft Competition Bill provides for refusal to deal and refusal to access an essential facility as forms of exclusionary conduct by a dominant firm.<sup>420</sup>

While the provisions on refusal to deal in the Fair Competition Regulations and the draft Competition Bill are important in light of the concerns raised in the previous sub-section, it should be stressed that the refusal to deal concept is at odds with the general perception that in a market economy, firms ought to be free to deal with whomsoever they want. This principle has been emphasised by the United States Supreme Court with the concept of refusal to deal developed as a narrow exception to the general rule that allows firms to deal with whomsoever they want.<sup>421</sup> The freedom to deal is embedded in Uganda's contract law that stresses that parties must voluntarily enter into a contract in order for the contract to be considered valid.<sup>422</sup> This indicates that the right balance should be found between protecting the right of an entity to enjoy the freedom to deal and the need to ensure that refusal to deal with a competitor does not adversely affect competition by reducing consumer welfare. Thus, the discussion of refusal to deal in Uganda's

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<sup>416</sup>PwC for UCC, 'Draft Report on Competition and Dominance in the Uganda Telecoms Sector (Part 2): Interconnection and Retail Cost Study (2009) Unpublished 18.

<sup>417</sup>Ibid.

<sup>418</sup>Communications (Fair Competition) Regulations 2005, SI 2005/24, reg. 6.

<sup>419</sup>Ibid, reg 6(g) and (h) respectively.

<sup>420</sup>Draft Competition Bill 2004, cl 44.

<sup>421</sup>*United States v Colgate & Co.* 250 U.S.300 (1919) and *Verizon Communications v Law Offices of Curtis V. Trinko, LLP* 540 U.S 398 (2004).

<sup>422</sup>David J Bakibinga, *Law of Contract in Uganda* (Fountain Publishers 2001) 6.

telecommunications legal framework has to take into account the opposing interests.

#### 4.6.3.3.6 Refusal to Interconnect or Act in Good Faith During Interconnection Negotiations

As mentioned in the previous sub-section, refusal to deal in the Fair Competition Regulations encompasses refusal to interconnect or act in good faith during interconnection negotiations. Interconnection is the most significant form of access in Uganda's telecommunications sector where the majority of operators are vertically integrated and are competing with the vertically integrated former monopoly operator, Uganda Telecom. Vertical integration of operators is particularly the norm in Uganda's biggest telecommunications market, the voice market where access to call termination is vital for competition. Refusal to interconnect would thus be a practice through which a dominant telecommunications operator could distort or even eliminate competition in the voice market. Therefore, a provision declaring refusal by a dominant operator to interconnect anti-competitive is significant.

Telecommunications operators in Uganda's voice market have observed the duty to interconnect pursuant to section 58(1) of the Communications Act of 2013. Thus, despite interconnection being a key competition-related issue in Uganda's telecommunications sector, refusal to interconnect *per se* has not featured as a concern. Instead, key interconnection complaints have related to delayed interconnection and high interconnection rates.<sup>423</sup> That is, the anti-competitive conduct relates more to not acting in good faith in interconnection negotiations. Complaints have been raised by new entrants that interconnection negotiations take a significantly longer time than the specified timeframe provided for in the Interconnection Regulations. According to the Interconnection Regulations, an interconnection agreement must be entered into within 3 months.<sup>424</sup> In practice negotiations can take up to 6 months and in some instances one and a half years.<sup>425</sup> The Orange-Uganda Telecom interconnection negotiations are worth mentioning as they took more than 1 year. In addition, there have been complaints with regard to negotiation of the terms of interconnection especially by smaller

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<sup>423</sup>This was based on interviews conducted with the legal personnel at the major telecommunications companies. Interview with Dennis Kakunge Airtel, Director Legal, (Kampala, Uganda 5 December, 2011), Paul Mwebesa, Head Legal, Warid Telecom (Kampala, Uganda 23 November 2011), and interview with Ronald Zakumumpa, legal counsel, MTN Uganda (Kampala, Uganda 29 November 2011).

<sup>424</sup>Communications (Fair Competition) Regulations 2005, SI 2005/24, reg 12 (1).

<sup>425</sup>Based on interview of Zulaika Kasujja legal counsel at Smile Communications Uganda, held on the 16 December 2011 at Smile Communications Uganda headquarters, Kampala, Uganda.

operators with less negotiating power.<sup>426</sup> Therefore, despite the clear provisions in the Interconnection Regulations aimed at ensuring fair terms of interconnection, the failure to effectively implement the provisions may provide dominant operators with the opportunity to engage in conduct that restricts competition. The availability of *ex post* measures mandating operators to act in good faith during interconnection negotiations is one means of preventing the distortion or restriction of competition.

Although the refusal to interconnect provision in the Fair Competition Regulations is significant,<sup>427</sup> it is the author's opinion that precedence should be given to the Interconnection Regulations to address competition concerns related to refusal to interconnect or act in good faith during interconnection negotiations.

Firstly, the UCC as the only regulator for all three forms of regulation, technical, economic, and competition,<sup>428</sup> notably has limited experience in enforcing competition rules in the telecommunications sector. In the post liberalised telecommunications sector era, the UCC has switched from its *laissez-faire* approach in the duopoly era and got more involved in regulating the conduct of telecommunications in order to facilitate competition. The UCC intervention has been primarily via economic rather competition regulation. Specifically with regard to interconnection, the UCC's has addressed competition concerns via the Interconnection Regulations.<sup>429</sup> Reliance on Interconnection Regulations rather than the Fair Competition Regulations to deal with anti-competitive consequences of an operator not acting in good faith during interconnection regulations is more likely to lead to more effective regulation of competition. The Interconnection Regulations provide in great detail for fair interconnection specifically providing principles aimed at ensuring that the interconnect provider negotiates in good faith and uses all efforts

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<sup>426</sup>Allegations have been levelled against largest mobile operator, MTN Uganda claiming that it offers interconnection on unfavourable terms in contravention of the Interconnection Regulations. The main complaint has been MTN adding a clause reserving the right to terminate interconnection under certain circumstances.

<sup>427</sup>Communications (Fair Competition) Regulations 2005, SI 2005/24, reg 6(h).

<sup>428</sup>OECD distinguishes these three main forms of regulation: competition, economic and technical regulation. Competition regulation relates to the curbing anti-competitive behaviour. Technical regulation involves setting and enforcing product and process standards designed to deal with safety, environmental and switching cost externalities, and allocating publicly owned or controlled resources such as spectrum or rights of ways. Economic regulation includes ensuring non-discriminatory access to necessary inputs, especially network infrastructures and adopting cost-based measures to control monopoly pricing, as well as potentially directly controlling or specifying: production technologies (other than those linked with setting, and technical product standards), eligible providers (granting and policing licences), and terms of sale (i.e. output prices in terms of access). See OECD, 'Policy Roundtables 'Relationship between Regulators and Competition Authorities' (1998) 21 <<http://www.oecd.org/regreform/sectors/1920556.pdf>> accessed 15 June 2017.

<sup>429</sup>UCC, LRIC Reference Rate Determination of 2009.

to conclude and reach the acceptable terms and conditions of an interconnection agreement.<sup>430</sup>

Secondly, it is the widely held opinion that interconnection is best regulated *ex ante* through economic regulation rather than *ex post* competition rules of the Fair Competition Regulations.<sup>431</sup> The key argument against the application of competition law is that this form of regulation is incapable of effectively handling the complexity of access and interconnection.<sup>432</sup>

#### *4.6.3.3.6.1 Refusal to Grant Access to Essential Facilities*

Refusal to grant access to essential facilities is the other form of refusal to deal prohibited under the Fair Competition Regulations.<sup>433</sup> The Regulations offer no definition for the term ‘facilities’ which might leave room for a broad interpretation of the provision as applicable to any facility owned by a dominant operator. However, given the fact that the concept of refusal to deal has developed as an exception rather than the norm, a narrow interpretation of the provision as applicable to a narrow set of facilities and situations appears to be the right approach.

Firstly, the push for a narrow interpretation of the provision is supported by experience from other jurisdictions that have enforced the concept of refusal to grant access to facilities under national competition laws. Specifically, the refusal to grant-access-to-facilities discussion has only been in relation to facilities deemed essential for the provision of telecommunications services in a given market. In the United States, the refusal to supply facilities has been applied primarily in

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<sup>430</sup>Telecommunications (Interconnection) Regulations SI 2005/24, reg 9(1).

<sup>431</sup>See Malcolm Webb and Martyn Taylor, ‘Light-Handed Regulation of Telecommunications in New Zealand: Is Generic Competition Law Sufficient?’ (1998) 2 International Journal of Competition Policy <[http://www.ijclp.org/2\\_1999/ijclp\\_webdoc\\_7\\_2\\_1999.html](http://www.ijclp.org/2_1999/ijclp_webdoc_7_2_1999.html)> accessed 15 June 2017; Pierre Larouche, *Competition Law and Regulation in European Telecommunications* (Hart Publishing, 2000) Chapter 4; Damien Geradin and Michael Kerf, *Controlling Market Power in Telecommunications: Antitrust vs. Sector-Specific Regulation* (Oxford University Business 2003); Wernhard Moeschel, ‘The Future Regulatory Framework for Telecommunications: General Competition Law instead of Sector-specific Regulation-A German Perspective’ (2009) 10(1) European Business Organisation Law Review 149; Howard Shelanski, ‘From Sector-Specific Regulation to Antitrust Law for US Telecommunications: the Prospects for Transition’, (2002) *Telecommunications Policy* 335; and Martyn Taylor, ‘Looking to the Future: Towards the Exclusive application of Competition Law?’ (2004) 5(2) *Business Law International* 172.

<sup>432</sup>See in particular Malcolm Webb and Martyn Taylor, ‘Light-Handed Regulation of Telecommunications in New Zealand: Is Generic Competition Law Sufficient?’ (1998) 2 International Journal of Competition Policy <[http://www.ijclp.org/2\\_1999/ijclp\\_webdoc\\_7\\_2\\_1999.html](http://www.ijclp.org/2_1999/ijclp_webdoc_7_2_1999.html)> accessed 15 June 2017. The article strongly advocates for regulation of interconnection through economic rather than competition regulation drawing from New Zealand’s experience where in the absence industry specific legislation, the telecommunications sector was regulated solely via general competition law.

<sup>433</sup>Communications (Fair Competition) Regulations 2005, SI 2005/24, reg 6(h).

connection with access to the local access network of ILECs.<sup>434</sup> In the European Union, reference to the refusal to supply facilities is only in connection with “essential facilities”.<sup>435</sup> In Sub-Saharan Africa, the most notable case on refusal to deal, *South Africa Competition Commission v Telkom SA*, related to access to the fixed network of Telkom SA deemed an essential facility in the value-added services market.<sup>436</sup>

Secondly, related legislation on refusal to grant access to facilities in the telecommunications sector focuses solely on essential facilities. Uganda’s draft Competition Bill which also lists refusal to grant access to facilities as an abuse of dominant position limits the scope of the provision to essential facilities.<sup>437</sup> The Interconnection Regulations, which impose additional interconnection obligations on dominant operators, also incorporates the refusal to grant access to essential facilities.<sup>438</sup>

Thirdly, the Fair Competition Regulations are concerned with conduct that has an appreciable effect on competition in the telecommunications market.<sup>439</sup> On that basis enforcement of the provision on refusal to supply facilities provisions should relate only to those facilities, for which failure to grant competitors access would adversely affect competition. Essential facilities are prime candidates on the ground that they are facilities essential for reaching customers or conducting business and which cannot be replicated by any reasonable means.<sup>440</sup> Therefore, lack of access to essential facilities can adversely affect competition.

Last but not least, a broad scope of application of the refusal to supply facilities provision may jeopardise the telecommunications policy strategy of encouraging private sector investment in Uganda. Despite the increased investment in telecommunications infrastructure in the liberalised telecommunications sector, more investment is still needed, particularly in the internet market and fixed-line markets where the penetration rate still remains low. However, it must be noted that even in the voice market where the penetration rate is at 60%, investment in infrastructure

<sup>434</sup> *MCI Communications v AT&T Co.*, 708 F.2d 1081 (7th Cir.1982) and *Verizon Communications v Law Offices of Curtis V. Trinko, LLP* 540 U.S. 398 (2004) relate to refusal to grant access to essential facilities.

<sup>435</sup> Commission: Guidance on the Commission’s Enforcement Priorities Applying Article 82 EC Treaty (now Article 102 TFEU) to Abusive Exclusionary Conduct by Dominant Undertakings [2009] OJ C 45/7, para 78 which recognises that refusal to deal includes refusal to grant access to an essential facility or network. Furthermore, the European Commission Notice on the Application of the Competition Rules to Access Agreements in the Telecommunications Sector [1998] OJ C 265/2, para 84 also focuses on refusal to grant access to telecommunications facilities as an abuse of dominant position under Article 102 of the TFEU.

<sup>436</sup> *Competition Commission v Telkom SA Ltd* 11/CR/Feb04 [2011] ZACT 2.

<sup>437</sup> Draft Competition Bill of 2004, cl 44.

<sup>438</sup> Telecommunications (Interconnection) Regulations, SI 2005/25, reg 14(3).

<sup>439</sup> *Ibid*, reg 5(3).

<sup>440</sup> Regulation 4 of the Interconnection Regulations (Communications Interconnection) Regulations, SI 2005/25, reg 5(3), this definition follows the standard definition adopted in EU and US when applying the refusal to deal concept in the context of essential facilities.

in the rural areas is still lacking.<sup>441</sup> Investors would undoubtedly lack the incentive to continue investing heavily in rolling out network infrastructure in Uganda if it would entail having grant access to competitors that have not likewise invested in infrastructure.

Based on the arguments outlined above, refusal to supply facilities as provided for in the Fair Competition Regulations will be discussed only in the context of essential facilities.

#### *4.6.3.3.6.2 The Essential Facilities Doctrine*

It is in the context of access to essential facilities (essential facilities doctrine) that the refusal to deal concept has gained prominence in the liberalised telecommunications sector. The gist of the essential facility doctrine, as it is applied in competition law, is that a firm has control over an essential facility and is able to foreclose effective competition in one or more related markets by denying a competitor access to the facility.<sup>442</sup> The doctrine imposes on owners of the essential facility an obligation to provide access to that facility at a “reasonable” price.<sup>443</sup> The essential facilities doctrine therefore involves refusal to deal in access to a bottleneck facility.<sup>444</sup> However, one should be cautious about the use of the term ‘bottleneck’ as not all bottleneck facilities are essential facilities as explained below.

The telecommunications sector is characterised by bottlenecks that have the propensity to restrict competition in telecommunications markets. The most notable bottlenecks include: spectrum in the wireless markets, call termination in the mobile market, and the fixed-line local loop in the broadband internet and long distance telephone services markets. While these bottlenecks can restrict competition, not all fore-mentioned bottlenecks are essential facilities.

The essential facilities doctrine relates to those bottleneck facilities that competitors cannot duplicate by reasonable means.<sup>445</sup> An essential facility is a tangible or intangible asset, subject to monopoly control by a firm or group of firms, that cannot be duplicated or otherwise obtained other than from the owner, and is required as an input to produce a service in the downstream market.<sup>446</sup> However,

<sup>441</sup>Particularly when one considers that most of Uganda’s population, over 80 percent, is rural-based.

<sup>442</sup>William B Tye, ‘Competitive Access: A Comparative Industry Approach to the Essential Facility Doctrine’ (1987) 8(2) Energy Law Journal 337, 344.

<sup>443</sup>OECD, ‘Roundtables on Competition Policy: The Essential Facilities Concept’ (1998) OCDE/GD (96)113 7.

<sup>444</sup>Adam Candeub, ‘*Trinko* and Re-grounding the Refusal to Deal Doctrine’ (2005) 66(4) University Pittsburgh Law Review 821, 828.

<sup>445</sup>Ibid.

<sup>446</sup>Stanford Levin and Stephen Schmidt, ‘Competition, Essential Facilities, Bottlenecks and Pricing of Mobile Phone Service’ (2009) <<https://doi.org/10.2139/ssrn.1462522>> accessed 15 June 2017.

a bottleneck can exist in the presence of competing networks. The most notable example is the call termination market: a customer seeking to call a particular subscriber has no choice but to terminate the call on the network to which a subscriber is connected. Call termination, is an essential feature of interconnection between competing networks. Each network operator has monopoly over call termination on its network.<sup>447</sup> If not properly regulated, call termination can be a bottleneck to competition in the telephony services market. However, it is the author's opinion that the call termination in the voice market is best regulated through the *ex ante* interconnection rules rather than the essential facilities doctrine. This can be achieved by regulators ensuring that network operators charge reasonably for termination of calls on their networks. The regulation of call termination charges coupled with intense competition between network operators will ensure that the total prices in the voice market are kept at competitive levels.

The case for the application of the essential facilities doctrine in the telecommunications sector is strongest with regard to the fixed-line local loop that exhibits characteristics of an essential facility. The perception that the fixed-line local loop was a natural monopoly was a key reason behind the tradition of the providing telecommunications services through one operator.<sup>448</sup>

In the liberalised telecommunications sector, competition in the fixed-line infrastructure market has been very slow to develop with the former vertically integrated monopoly operators in a number of countries continuing to have ownership over most of the fixed telecommunications infrastructure, with limited infrastructure competition in the local access network.<sup>449</sup> Therefore, it is not surprising that enforcement of the essential facilities doctrine in the telecommunications sector has in a number of cases focused on monopoly over the local access network owned by the former monopoly operator. Competition authorities have been concerned that in the liberalised telecommunications sector, the former monopoly operator, with monopoly over an input essential for the provision of telecommunications services, may leverage its privileged position to restrict competition by denying access to the essential input. In the United States, the essential facilities doctrine has been applied to stop the incumbent operator from denying its competitors in the long distance services market access to its local telephone network.<sup>450</sup> South Africa's landmark case on anti-competitive behaviour in the telecommunications sector involved the application of the essential facilities doctrine to compel

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<sup>447</sup>Mark Armstrong and Julian Wright 'Mobile Call Termination' (2009) 119(538) *Economic Journal* F270.

<sup>448</sup>Natural monopolies seem to be a clear case where access to essential facilities could be applied. See Roger J Van Bergh and Peter D Camesasca, *European Competition Law and Economics: A Comparative Perspective* (Intersentia nv 2001) 277.

<sup>449</sup>This particular characteristic of the fixed telecommunications market in Uganda is touched on in Sect. 4.4.2 of this study that describes the state of competition in that market.

<sup>450</sup>*MCI Communications v AT&T Co.*, 708 F.2d 1081 (7th Cir. 1982).

former monopoly operator Telkom SA to grant its competitors in the value-added services market access to its fixed network.<sup>451</sup>

At the European Union level, the European Commission recognises the doctrine as an important tool for facilitating competition in the liberalised telecommunications sector in the European Union. Specifically, the Notice on the Application of Competition Rules to Access Arrangements in the Telecommunications Sector (Access Notice)<sup>452</sup> provides that a company controlling access to an essential facility is presumed to enjoy a dominant position within the meaning of Article 102.<sup>453</sup> The Access Notice mandates the European Commission to ensure that the control over facilities controlled by an incumbent operator is not used to hamper the development of a competitive telecommunications environment.<sup>454</sup> The Access Notice goes on to state that a company which is dominant on a market for services and which commits an abuse contrary to Article 102 on that market may be required, in order to put an end to the abuse, to supply access to its facility to one or more competitors in that market. In particular, a company may abuse its dominant position if by its actions it prevents the emergence of a new product or service.<sup>455</sup> Thus, while the Access Notice relates explicitly to the application of competition rules in the telecommunications sector, the essential facilities doctrine lies at the centre of this approach.<sup>456</sup>

In Uganda, a case for the regulation of access to essential facilities may be relevant in the fixed internet market. Despite the opening up of all telecommunications markets to full competition in 2006 there has been limited investment in the fixed-line network. As a result, Uganda Telecom and MTN Uganda Limited remain the primary infrastructure providers in the fixed internet market.

Rapid technological developments have meant that there are alternatives to the fixed-line. This is particularly the case in Uganda's voice market where wireless technology has become the primary means through which Uganda's population accesses voice services. In the internet market as well, wireless GSM and broadband technologies have become the main medium through which the population can access internet services.<sup>457</sup> However, in the fixed internet market, the fixed network remains the key input for the provision of fixed internet services. The ownership of fixed-line infrastructure by the two operators is significant in the fixed internet market where a number of ISPs rely on the two operators for infrastructure to provide internet services at the retail level. Furthermore, in the broadband

<sup>451</sup>Competition Commission v Telkom SA Ltd 11/CR/Feb04 [2011] ZACT 2.

<sup>452</sup>European Commission Notice on the Application of the Competition Rules to Access Arrangements in the Telecommunications Sector OJ [1998] OJ C 265/2.

<sup>453</sup>Ibid, para 69.

<sup>454</sup>Ibid, para 90.

<sup>455</sup>Ibid.

<sup>456</sup>Herbert Ungerer, 'The Regulatory Challenges in the Emerging Competition in the EU' (Scientific Society of Infocommunications Conference, Budapest, September 1999) 49.

<sup>457</sup>See Sect. 4.4.4 of this study for more information on the internet market.

market, the fixed network is important as the mobile network, which is the most widespread telecommunications infrastructure in Uganda, offers less speed and reliability in data transmission than the fixed network. Though it must be mentioned the 3G and LTE broadband coverage is increasing steadily. In 2014, the technologies covered 30% of Uganda's population. It is estimated that there will be 26 million mobile broadband subscriptions, a penetration rate of 50% by 2019.<sup>458</sup>

Going back to the fixed internet market, the existence of two distinct markets, the infrastructure provision (upstream) market and the retail services (downstream) market is evident. This is in contrast to the voice market where the majority of service providers at the retail level are able to offer the said services through their own networks. This market distinction in the fixed internet market is relevant to the discussion on refusal to grant access to essential facilities. An important aspect of the essential facilities doctrine is vertical integration. The competition issues potentially raised by a refusal to provide access to an essential facility arise where a firm is active in the supply of two related activities (two markets), both of which form components of the product that is purchased by the end consumer.<sup>459</sup> The competition concern that arises is that the vertically integrated firm controlling the essential facility may refuse to grant access to a competitor who wishes to provide either upstream or downstream services only.<sup>460</sup>

Given the discussion above, an analysis of the jurisprudence pertaining to anti-competitive refusal to supply essential facilities in the telecommunications sector in Uganda is warranted.

#### 4.6.3.3.6.3 Elements of the Essential Facilities Doctrine

The Fair Competition Regulations provide for refusal to supply facilities as a form of abuse of dominant position.<sup>461</sup> The draft Competition Bill also provides for refusal of access to an essential facility as an abuse of dominant position. However, neither piece of legislation provides further criteria to enable UCC to enforce the provision prohibiting refusal to grant access to an essential facility. The need for clear criteria is critical given that compelling access to essential facilities is in conflict with other interests highlighted below.

Firstly, the concept of an essential facility runs contrary to that of property rights. It is therefore important to find an approach that is able to discriminate between a refusal to grant access that merely involves the lawful exercise of property rights

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<sup>458</sup>Cartesian for UCC, 'Broadband Internet Access from a Mobile Terminal: Market Assessment' (2015) 110 <[http://www.ucc.co.ug/files/downloads/SMP\\_Report\\_Mobile\\_Broadband\\_April%202015.pdf](http://www.ucc.co.ug/files/downloads/SMP_Report_Mobile_Broadband_April%202015.pdf)> accessed 15 June 2017.

<sup>459</sup>Simon Bishop and Mike Walker, *The Economics of EC Competition Law: Concepts, Application and Measurement* (2nd edn, Sweet and Maxwell 2002) 239.

<sup>460</sup>Ibid.

<sup>461</sup>Communications (Fair Competition) Regulations 2005, SI 2005/24, reg 6(h).

and a refusal to grant access that harms competition.<sup>462</sup> Secondly, any company, even if it is dominant, has the right actively to compete by all methods that are normally permitted. Hence, even a dominant firm should in principle be entitled to keep and use to the maximum any competitive advantage that it has legitimately acquired even if its competitors do not have any similar advantages and may not realistically be able to obtain them.<sup>463</sup> The potential that a refusal to supply will lessen competition only arises if the downstream market is not already subject to effective competition.<sup>464</sup> It is necessary to examine how the refusal to supply lessens competition.<sup>465</sup> Therefore, it is not sufficient to merely state that a refusal to supply results in foreclosure or that the product being withheld constitutes an essential facility.<sup>466</sup> Rather, it is important to ensure that the essential facilities doctrine is applied where it enhances competition and improves consumer welfare and not where it merely where it improves the welfare of a monopolist's competitors.<sup>467</sup>

In light of the absence of detailed provisions on the elements of refusal to grant access to essential facilities in either the Fair Competition Regulations or the draft Competition Bill, reference is made to the Interconnection Regulations which have incorporated the competition-law based essential facilities doctrine. According to the Interconnection Regulations, an interconnection provider that is dominant in a particular interconnection services market or that is vested with significant market power is obliged to supply or grant access to essential facilities to a requesting operator.<sup>468</sup> The Regulations provide five conditions that must exist for the doctrine to be applied to telecommunications networks:

- (i) the facility must be essential;
- (ii) the controller of the facility has spare capacity;
- (iii) the refusal blocks competition or the development of a new service;
- (iv) the rival is prepared to accept reasonable supply conditions; and
- (v) there is no objective reason for refusal.<sup>469</sup>

However, the application of the doctrine under the Interconnection Regulations is different from its application under the Fair Competition Regulations in that the former is meant to be applied *ex ante* while the latter is applied *ex post*. Additionally, the doctrine is yet to be applied by the UCC. Therefore, in discussing the elements of the essential facilities doctrine outlined in the Interconnection Regulations, reference is made to the experience from other jurisdictions regarding the

<sup>462</sup>Simon Bishop and Mike Walker, *The Economics of EC Competition Law: Concepts, Application and Measurement* (2nd edn, Sweet and Maxwell 2002) 240.

<sup>463</sup>Ibid.

<sup>464</sup>Ibid.

<sup>465</sup>Ibid.

<sup>466</sup>Ibid, 239.

<sup>467</sup>Adam Candeub, 'Trinko and Re-grounding the Refusal to Deal Doctrine' (2011) 66(4) University Pittsburgh Law Review 821, 830.

<sup>468</sup>Communications (Interconnection) Regulations, SI 2005/25, reg 14(4)(g).

<sup>469</sup>Ibid.

application of the doctrine under competition law. Specifically, the development of the essential facilities doctrine under United States, European Union, and South African competition law is discussed. Although the European Union and United States telecommunications sector market composition differs greatly from that of Uganda,<sup>470</sup> the two jurisdictions have the most developed competition law jurisprudence on the application of the essential facilities doctrine. Regarding the reference to South Africa's competition law, the country has the most experience enforcing competition law in Sub-Saharan Africa. Therefore, the development of the essential facilities doctrine in South Africa might provide persuasive precedent for application of the doctrine in Uganda's telecommunications sector.

The statutory basis for the essential facilities doctrine in the United States is section 2 of the Sherman Act which prohibits monopolisation or attempts to monopolise. Under European Union competition law, Article 102(b) of the TFEU on abuse of dominant position is the relevant provision. In South Africa, section 8 (b) of the Competition Act provides for refusal to grant access to essential facilities as a form of abuse of dominant position. It should be noted that unlike South African competition law, and Uganda's Interconnection Regulations for that matter, the essential facilities doctrine is not expressly provided for under the United States or European Union competition law but it has been developed through case law.<sup>471</sup>

Turning to the elements of the essential facilities doctrine, the first condition for applying the concept is that the facility is essential to the rival's business and the refusal to supply a facility increases the rival's costs or makes it impossible or seriously uneconomic for the rival to provide the desired service. The

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<sup>470</sup> As already explained in Sect. 2.4 of Chap. 2, Uganda's telecommunications market composition is starkly different from the market composition in more developed jurisdictions. The most significant difference is that telecommunications services are accessed primarily through wireless technology with fixed telecommunications infrastructure taking the back seat.

<sup>471</sup> The essential facilities doctrine has its genesis in the US Supreme court case *United States v Terminal Railroad Association*, F 224 U.S. 283 (1912). In the European Union, the doctrine is traced back to the 1970s *Commercial Solvents* case, Case 7/73 *Commercial Solvents Corporation v Commission* [1974] ECR 223. The case focused on the Italian subsidiary of a global chemicals company, Commercial Solvents Corporation (CSC), which had monopoly production over aminobutanol in Italy. CSC had refused to supply its former customer Zoja with aminobutanol. The CJEU held that the company had abused its dominant position by refusing to deal with Zoja. The case did not specifically deal with refusal to deal in essential facilities, as the deciding factor for the court was the use by CSC of its market power to reserve a downstream market rather than whether substitutes for ethambutol existed. The court dismissed as irrelevant arguments by CSC that Zoja could either source its aminobutanol from another manufacturer or change its production methods so as to obtain ethambutol from other raw materials. This is a clear indication that the indispensability of the raw material was not of relevance in the case. Nevertheless, subsequent case law on essential facilities can be traced to the principles of the Commercial Solvents case. Notable cases include: Case 311/84 *Centre belge d'études de marché-Télémarketing(CBEM) v SA Compagnie luxembourgeoise de télédiffusion (CLT)* and *Information publicité Benelux (IPB)* [1985] ECR 3261, and Joined Cases C-241/91 P & C-242/91 P *Radio Telefis Eireann (RTE) and Independent Television Publications Ltd. (ITP) v Commission(Magill)* [1995] ECR. 1-743.

Interconnection Regulations provide a definition of an essential facility as a facility which is essential for reaching customers or conducting business and which cannot be replicated by any reasonable means.<sup>472</sup> This is similar to the definition of the essential facility in the competition law of the United States, European Union, and South Africa which emphasise indispensability or difficulty in replicating by reasonable means of an input. In the United States the relevant case is *MCI Communications v AT&T Co.*,<sup>473</sup> in which the Seventh Circuit, summarising nearly three-quarters of a century of case law, formulated the four basic elements of the doctrine already highlighted above. One of the factors was the competitor's inability to practically or reasonably duplicate the essential facility.<sup>474</sup>

A facility is considered essential under United States antitrust law only if control of the facility carries with it the power to eliminate competition.<sup>475</sup> At the European Union level, the European Commission's Access Notice defines an essential facility as a facility or infrastructure which is essential for reaching customers and/or enabling competitors to carry on their business, and which cannot be replicated by any reasonable means.<sup>476</sup> European Union competition case law emphasises this particular factor as well. In *Oscar Bronner*, the CJEU emphasised the indispensability of the dominant firm's goods or services.<sup>477</sup> In South Africa, section 1(viii) of the Competition Act defines an essential facility as an infrastructure or resource that cannot be reasonably duplicated, and without access to which competitors cannot reasonably provide goods or services to their customers. This condition has been emphasised in case law pertaining to the application of the essential facilities doctrine.<sup>478</sup>

The second element of the essential facilities doctrine is that the refusal of access to an essential facility blocks competition or the development of a new service.<sup>479</sup> Although it is not explicitly mentioned in the Interconnection Regulations, denial need not be total denial, offering to deal at prices or upon such terms and conditions,

<sup>472</sup>Telecommunications (Interconnection) Regulations, SI 25/2005, reg 4.

<sup>473</sup>*MCI Communications v AT&T Co.*, 708 F.2d 1081 (7th Cir. 1982).

<sup>474</sup>Ibid, 1132-1133.

<sup>475</sup>*City of Anaheim v S. Cal Ediso Co.*, 955 F.2d 1373, 1380 (9th Cir. 1992).

<sup>476</sup>European Commission Notice on the Application of the Competition Rules to Access Agreements in the Telecommunications Sector [1998] O.J C 265/2, para 68.

<sup>477</sup>Case C-7/97 *Oscar Bronner*, 1998 ECR, I-7831, para 41. This can be contrasted with the *Commercial Solvents Corporation v Commission of Case 7/73*. [1974] ECR, 223 where the ECJ did not place much weight on whether the product in question was indispensable or not in deciding to find a chemical company in Italy liable under Article 102 TFEU for refusing to supply its former customer.

<sup>478</sup>See Competition Tribunal decision in *National Association of Pharmaceutical Wholesalers & Others and Glaxo Wellcome & Others* [2000] ZACT 15; Competition Appeal Court decision in *National Association of Pharmaceutical Wholesalers & Others and Glaxo Wellcome & Others*, [2002] ZACAC 3; and Competition Tribunal decision, (*Competition Commission v Telkom SA Ltd* 11/CR/Feb04 [2011] ZACT 2).

<sup>479</sup>Communications (Interconnection) Regulations, SI 2005/25, reg. 14(4)(g)(iii).

that prevent the competitor from staying in the market may also constitute refusal to deal (constructive refusal to supply).<sup>480</sup> This broader interpretation of this particular element of the doctrine was applied by the South Africa competition tribunal in *Competition Commission v Telkom SA* case.<sup>481</sup> In that case, the competition tribunal in finding incumbent operator Telkom SA liable under section 8(b) of the South Africa Competition Act focused on Telkom SA's conduct of offering to provide access to its fixed network to independent value-added service providers on onerous terms and conditions which adversely impacted on their businesses.<sup>482</sup> The Competition Tribunal viewed the incumbent operator's conduct as amounting to a constructive refusal to supply.<sup>483</sup>

The third element which aims to balance the interests between improving or protecting consumer welfare on the one hand and the interests of the essential facility holder on the other hand is that compelling the grant of access to essential facilities can only arise in the absence of no objective justification. This issue has been greatly discussed under United States competition law where a business justification is valid if it relates directly or indirectly to the enhancement of consumer welfare.<sup>484</sup> However, it is not the only basis on which business justification can be founded. In the *MCI Communications* case, the Seventh Circuit referred to regulatory policy. The Seventh Circuit held that AT&T could deny interconnection if it had a reasonable basis in regulatory policy to conclude, and in good faith concluded, that denial of interconnection was required by concrete, articulable concerns of public interest.<sup>485</sup> The reasonable justification element of the essential facilities doctrine is particularly significant as it clearly demarcates the parameters beyond which the doctrine should not be enforced.

#### *4.6.3.3.6.4 Implementation of the Essential Facilities Doctrine in the Telecommunications Sector*

The discussion of the elements of the essential facilities doctrine above is very important as a means of identifying criteria according to which the UCC can investigate cases of refusal to deal. More importantly however is ensuring proper implementation of the doctrine in a manner that caters for the conflicting interests highlighted in the previous sub-section. However, as the UCC has limited experience in enforcing competition rules, discussion of this subject in the Ugandan context is premature. Therefore, this sub-section refers to the experiences of other jurisdictions that have enforced the doctrine. A number of jurisdictions, both

<sup>480</sup>OECD, 'Policy Roundtables: Refusal to Deal' (2009) 9 <<http://www.oecd.org/daf/43644518.pdf>> accessed 15 June 2017.

<sup>481</sup>*Competition Commission v Telkom SA Ltd* 11/CR/Feb04 [2011] ZACT 2

<sup>482</sup>Ibid, para 92.

<sup>483</sup>Ibid.

<sup>484</sup>*Data General Corp v Grumman Sys. Support Corp.*, 36 F.3d 1147, 1183 (1st Cir. 1994).

<sup>485</sup>*MCI Communications v AT&T Co.*, 708 F.2d 1081, 1137 (7th Cir. 1982).

common law and civil law, apply some form of essential facility doctrine to unjustifiable denials of access to infrastructure and other forms of facilities that are impossible to duplicate, but nonetheless essential for competition.<sup>486</sup> However, this sub-section, in line with the previous sub-section, focuses on the United States, the European Union, and South Africa.

The United States is regarded as the country of origin of the essential facilities doctrine. Although the doctrine is usually applied in cases of unilateral refusal to deal, it was first applied in the 1912 United States Supreme Court *Terminal Road* decision<sup>487</sup> which involved a group of firms that jointly controlled the only feasible railroad terminal for traffic in and out of St. Louis. The first application of the doctrine to unilateral conduct was in the *Otter Tail* case which notably dealt with the application of the doctrine in a regulated industry.

In that case, Otter Tail, a regulated monopoly for electric power distribution, maintained an upstream monopoly in electric transmission lines in upper Midwest United States and also sold power at the retail level.<sup>488</sup> Otter Tail refused to sell electric power at wholesale rates to several communities that had built their own generation facilities and sought to establish their own grid by obtaining power from Otter Tail.<sup>489</sup> The United States Supreme Court determined that Otter Tail's refusal to deal had the effect of eliminating competition in the downstream market.<sup>490</sup> The Supreme Court held that Otter Tail had violated section 2 of the Sherman Act by intentionally exploiting its wholesale electric power distribution monopoly to gain a competitive advantage at the retail level<sup>491</sup> and ordered Otter Tail to sell the electric power to its competitors at the retail level.<sup>492</sup>

In 1982, the doctrine was applied specifically in the telecommunications sector in *MCI Communications v AT&T*.<sup>493</sup> The facts of the *MCI Communications* case were that new entrant MCI Communications had built a long distance telephone network. MCI Communications argued that in order for it to enter the long distance telephone market, it needed to connect its network to the local telephone facilities owned by incumbent operator, AT&T.<sup>494</sup> MCI Communications alleged that AT&T refused to grant it requisite access to the local telephone network and that such conduct on the part of AT&T constituted an abuse of the incumbent's

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<sup>486</sup>Spencer W Waller and William Tasch in ‘Harmonizing Essential Facilities and Refusals to Deal’ (2010) 76(3) Antitrust Law Journal 741, who focus on the enforcement of the essential facilities doctrine in different regions.

<sup>487</sup>*United States v Terminal Railroad Association*, F 224 U.S. 283 (1912).

<sup>488</sup>*Otter Tail Power Co. v United States*, 410 U.S. 366, 368 (1978).

<sup>489</sup>Ibid.

<sup>490</sup>Ibid, 372.

<sup>491</sup>Ibid, 377-82.

<sup>492</sup>Ibid, 381.

<sup>493</sup>*MCI Communications v AT&T Co.*, 708 F.2d 1081 (7th Cir. 1982).

<sup>494</sup>Ibid,1133.

monopoly power over facilities essential to MCI's success.<sup>495</sup> The Seventh Circuit applied the four elements of the essential facilities doctrine as outlined in the previous sub-section and found AT&T liable under section 2 of the Sherman Act.

The mid-1980s signified a turning point in the evolution of the doctrine in the United States in which the court limited the scope of application of the doctrine. In the *Aspen Skiing* case, the Supreme Court stressed that the doctrine was a very limited exception to the general rule that a firm has a right to deal with whomever it wants.<sup>496</sup>

The more recent Supreme Court decision, *Verizon v Trinko* case,<sup>497</sup> appears to limit the application of this doctrine in regulated sectors. The Supreme Court in that case famously stated that it had never recognised the doctrine which has been crafted only by lower courts.<sup>498</sup> Although this criticism was only made as obiter dictum, it has nevertheless had an impact by challenging the basis for the doctrine in the United States.<sup>499</sup> The key issue in *Verizon v Trinko* case was whether the ILEC in New York, Verizon, had violated United States antitrust laws by failing to provide new entrants (competitive local exchange companies (CLECs)) access to its local networks as required under the Telecommunications Act of 1996. Section 251(c) of the Telecommunications Act imposes an obligation on an ILEC to share its telephone network with competitors. This includes the duty to provide access to individual network elements on an "unbundled" basis under section 251 (c). The CLECs needed interconnection to Verizon's telephone network in order to provide retail phone service. Trinko a customer of a CLEC, the local telephony division of AT&T, claimed that Verizon had filled rivals' orders on a discriminatory basis as part of an anti-competitive scheme to discourage customers from becoming or remaining customers of CLECs in violation of section 2 of the Sherman Act.<sup>500</sup> The United States Supreme Court concluded that Verizon's conduct did not fit within the limited exception, as stipulated in the *Aspen Skiing* case, to the general rule that parties are free to choose with whom they will deal.<sup>501</sup>

The Supreme Court distinguished the facts in *Verizon v Trinko* from those in *Aspen Skiing*. According to the Supreme Court *Aspen Skiing* was a case of termination of a voluntary agreement by the defendant with the plaintiff which suggested a willingness to forsake short-term profits to achieve an anti-competitive end.<sup>502</sup> In

<sup>495</sup>Ibid, 1132.

<sup>496</sup>*Aspen Skiing Co v Aspen Skiing Highlands Skiing Corp*, 472 U.S. 585 (1985).

<sup>497</sup>*Verizon Communications v Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398 (2004).

<sup>498</sup>Ibid.

<sup>499</sup>Josef Drexel, 'IMS Health and Trinko—Antitrust Placebo for Consumers Instead of Sound Economics in Refusal-to-Deal Cases' (2004) 35 International Review of Intellectual Property and Competition Law 788; and Adam Candeub 'Trinko and Re-grounding the Refusal to Deal Doctrine' (2011) 66(4) University of Pittsburgh Law Review 821.

<sup>500</sup>Brief for Respondent at 16, *Verizon Communications v Law Offices of Curtis V. Trinko, LLP*, (No.02-682) available at 2003 WL 21767982.

<sup>501</sup>*Verizon Communications v Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 408 (2004).

<sup>502</sup>Ibid, 399.

contrast, in *Verizon v Trinko* the Supreme Court argued that because the complaint did not allege that Verizon ever engaged in a voluntary course of dealing with its rivals, its prior conduct shedded no light upon whether its lapses from the legally compelled dealing were anti-competitive.<sup>503</sup> More fundamentally, the Supreme Court pointed out that in *Aspen Skiing* the defendant refused to provide its competitor with a product it already sold at retail, whereas in *Verizon v Trinko* the unbundled elements offered pursuant to §251(c)(3) are not available to the public, but are provided to rivals under compulsion and at considerable expense.<sup>504</sup>

Most notably, the Supreme Court ruled that if a legal mechanism exists, as with the Telecommunications Act of 1996, to compel access to firm's resource, the refusal to deal doctrine under antitrust law will not apply.<sup>505</sup> Although *Verizon v Trinko* has not been read as a repudiation of the doctrine by the lower courts it is seen by some authors as significantly limiting the circumstances in which the doctrine can be applied to enable competitors gain access to a firm's infrastructure.<sup>506</sup> More importantly, the decision is considered as limiting the scope of application of the doctrine where a sector-specific regulatory regime already exists.<sup>507</sup> The Supreme Court by giving precedence to sector-specific regulatory intervention implies that the essential facilities doctrine may not be a viable tool for fostering competition in the telecommunications sector. This is particularly so following the *Credit Suisse* decision in 2007 in which the Supreme Court reinforced its holding in *Verizon v Trinko* by granting precedence to securities law over competition law.<sup>508</sup>

Thus in the United States, this doctrine has been applied very narrowly. This evolution of the doctrine is most likely linked to the fact that the basis on which it is grounded has been a source of criticism in the United States in the last two and half decades in academic literature.<sup>509</sup> However, it is not only the perceived dubious

<sup>503</sup>Ibid.

<sup>504</sup>Ibid.

<sup>505</sup>Ibid, 411.

<sup>506</sup>Josef Drexel, 'IMS Health and Trinko—Antitrust Placebo for Consumers Instead of Sound Economics in Refusal-to-Deal Cases' (2004) 35 International Review of Intellectual Property and Competition Law 788.

<sup>507</sup>Adam Candeub, 'Trinko and Re-grounding the Refusal to Deal Doctrine' (2011) 66(4) University of Pittsburgh Law Review 821.

<sup>508</sup>*Credit Suisse Securities v Billing*, 551 U.S. 264 (2007).

<sup>509</sup>Phillip Areeda, 'Essential Facilities: An Epithet in Need of Limiting Principles' (1989) 58 Antitrust Law Journal 841, where Areeda criticises the doctrine for lacking a consistent rationale. "You will not find any case that provides a consistent rationale for the doctrine or that explores the social costs and benefits or the administrative costs of requiring the creator of an asset to share it with a rival. It is less a doctrine than an epithet, indicating some exception to the right to keep one's creations to oneself, but not telling us what those exceptions are." Also see Phillip Areeda and Herbert Hovenkamp, *Fundamental of Antitrust Law* (Wolters Kluwer Law & Business 2011), 7-13 sec. 7.07b; Michael Boudin, 'Antitrust Doctrine and the Sway Metaphor' (1986) 75 Georgetown Law Journal 395; and Lipsky B Abott and Sidak J Gregory, 'Essential Facilities' (1999).51 (5) Stanford Law Review 1187.

foundation of the doctrine that has limited the scope of application of the doctrine. In the lower courts where the doctrine was expressly recognised,<sup>510</sup> a high bar has been set for finding a facility essential such that U.S courts have rarely found liability under the essential facilities doctrine.<sup>511</sup>

The doctrine appears to be more favoured in the European Union.<sup>512</sup> However, the European courts have also sought to limit the scope of application of the doctrine. In the *Bronner* case, the CJEU sought to restrict the application of the doctrine.<sup>513</sup> The brief facts of the case were: Mediaprint, a publisher of two Austrian newspapers with a large market share with its own nationwide newspaper distribution network had refused to grant its competitor Oscar Bronner access to its network. Oscar Bronner contended that Mediaprint bore a duty to grant access to its newspaper distribution network invoking the essential facilities doctrine.

Prior to this case, an owner of an essential facility would be compelled to offer access if three conditions were met: (a) the input to which access is denied is indispensable, (b) the refusal to supply or grant access must lead to elimination of competition, and (c) objective justification is absent. These conditions were stipulated in the *Magill* decision which focused on refusal to license intellectual property rights.<sup>514</sup>

In the *Bronner* case, the CJEU made it clear that the “indispensability” element would not be satisfied merely by showing it would not be economically viable for the firm requesting access to create a duplicate facility.<sup>515</sup> Instead, it would at least have to be shown that it was uneconomically viable for a firm in a position similar to the facility owner to create the facility.<sup>516</sup> In the *Bronner* case the CJEU found that these circumstances were not clearly met. The CJEU argued that there were other methods of delivering newspapers and there were no technical, legal or economic obstacles making it impossible, or unreasonably difficult, to establish another nationwide home delivery scheme.<sup>517</sup> Therefore, by interpreting

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<sup>510</sup>In *MCI Communications v AT&T Co.*, 708 F.2d 1081 (7th Cir. 1982) the 7th circuit provided for the four key elements of the doctrine.

<sup>511</sup>Robert Pitofsky, Donna Patterson, and Jonathan Hooks, ‘The Essential Facilities Doctrine under United States Antitrust Law’ (2002) 70 Antitrust Law Journal 443.

<sup>512</sup>Spencer W Waller and William Tasch in ‘Harmonizing Essential Facilities and Refusals to Deal’ (2010) 76(3) Antitrust Law Journal 741, distinguish between the United States and the European Union noting favourable reception of the doctrine in the European Union compared to United States.

<sup>513</sup>Case C-7/97 *Bronner* [1998] ECR I-779.

<sup>514</sup>Joined Cases C-241/91 P & C-242/91 P *Radio Telefis Eireann (RTE) and Independent Television Publications Ltd. (ITP) v Commission(Magill)* [1995] ECR. I-743.

<sup>515</sup>Case C-7/97 *Bronner* [1998] ECR I-779, paras 45-6.

<sup>516</sup>Ibid.

<sup>517</sup>Ibid, paras 43-4.

‘indispensability’ narrowly, *Bronner* narrows the scope of application essential facilities doctrine.

Nevertheless, the doctrine is more favourably treated in the European Union. The approach to the application of the essential facilities doctrine in regulated sector in the European Union differs from that in the United States based on the *Deutsche Telekom* decision. According to the CJEU in that decision, the enforcement of sector-specific rules by the sector regulator does not hinder the application of competition law to address the same subject matter.<sup>518</sup>

In that case the court upheld the European Commission’s determination that Germany’s incumbent operator, Deutsche Telekom, had engaged in margin squeeze by charging its competitors higher prices for access to the local loop (wholesale local loop access services) than it charged its subscribers to access the local loop (end-user access services).<sup>519</sup> The court made such a finding despite the fact that the access prices had been approved by Germany telecommunications regulator.<sup>520</sup> Therefore, the perception that the role of competition law, and hence the essential facilities doctrine, is to be limited in regulated sectors where sector-specific regulatory intervention exists does not apply in the European Union context. In fact, the European Commission’s Access Notice clearly promotes the application of the essential facilities doctrine as a tool for fostering competition in the liberalised telecommunications markets in which former monopoly operators still have control over the infrastructure needed by competitors to provide telecommunications services.<sup>521</sup> The Access Notice does, however, ascribe a limited role to competition law when its application relates to access agreements in the telecommunications sector.<sup>522</sup>

In South Africa as well, the courts have sought to apply the doctrine narrowly. In the *Glaxo Wellcome* decision in which the Competition Tribunal first developed the essential facilities doctrine, the tribunal limited the scope of application of the doctrine.<sup>523</sup> The key issue in the case was whether pharmaceutical products were resources as defined in the term “essential facility” in the Competition Act.

<sup>518</sup>Case T-271/03 *Deutsche Telekom AG v Commission* [2008] ECR II-477.

<sup>519</sup>Ibid.

<sup>520</sup>The European Commission stated that “competition rules may apply where the sector-specific legislation does not preclude the undertakings it governs from engaging in autonomous conduct that prevents or distorts competition.” Case COMP/37.451 *Deutsche Telekom AG* [2003] OJ L263/9, upheld on appeal Case C 280/08 *Deutsche Telekom AG v Commission* [2010] OJ para 53.

<sup>521</sup>European Commission Notice on the Application of the Competition Rules to Access Agreements in the Telecommunications Sector [1998] OJ C 265/2, para 68.

<sup>522</sup>Ibid.

<sup>523</sup>National Association of Pharmaceutical Wholesalers & Others and Glaxo Wellcome & Others, 687IR/Jun00, [2000] ZACT 15, 28 April 2000, published under <<http://www.saflii.org/za/cases/ZACT/2000/15.html>> accessed 15 June 2017.

Section 1(1)(viii) of the South Africa Competition Act defines an essential facility as an infrastructure or resource that cannot be reasonably duplicated and without access to which competitors cannot reasonably provide goods or services to their customers. The court ruled that the term “resource” was not intended to include products, goods or services thereby limiting the scope of the doctrine.<sup>524</sup> Furthermore, in the *Telkom SA* case, the court supported a narrow interpretation of the doctrine on the basis that a broader interpretation of the doctrine can have harmful economic effects such as discouraging investment in infrastructure.<sup>525</sup> In the *Verizon v Trinko* case, the United States Supreme Court also expressed concerns about the essential facilities doctrine’s negative impact on investment in telecommunications infrastructure.<sup>526</sup>

The investment argument is linked to dynamic efficiency. Dynamic efficiency refers to the speed at which innovative technologies are introduced.<sup>527</sup> Areeda, who famously challenged the rationale of the essential facilities doctrine under United States competition law, proposed that the doctrine should only be applied when its application is likely to increase competition substantially, and that it should not be applied when its application is likely to reduce the incentives for investments.<sup>528</sup>

A brief overview of the application of the essential facilities doctrine in other jurisdictions supports the limited scope of application of the doctrine. The South Africa Competition Tribunal’s urging that the doctrine should not discourage investment in infrastructure is of significance in Uganda where investment in infrastructure remains important for the growth of the telecommunications sector.<sup>529</sup>

In conclusion, the essential facilities doctrine as prescribed in the Fair Competition Regulations should be applied with caution even though it is a useful measure for enhancing competition in the telecommunications sector.

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<sup>524</sup>Ibid, para 53.

<sup>525</sup>*Competition Commission v Telkom SA Ltd* 11/CR/Feb04 [2011] ZACT 2. The South Africa Competition Appeal Court had delivered a similar opinion a few years prior in Case 15CACFeb02 *National Association of Pharmaceutical Wholesalers & Others and Glaxo Wellcome & Others*, [2002] ZACAC 3, para 54, published under <<http://www.comptrib.co.za/assets/Uploads/Case-Documents/Glaxo%20Wellcome%2015CACFeb02.pdf>> accessed 15 June 2017.

<sup>526</sup>*Verizon Communications v Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 414 (2004).

<sup>527</sup>Adam Candeub, ‘*Trinko* and Re-grounding the Refusal to Deal Doctrine’ (2011) 66(4) University of Pittsburgh Law Review 821, 835.

<sup>528</sup>Philip Areeda, ‘Essential Facilities: An Epithet in Need of Limiting Principles’ (1989) 58 Antitrust Law Journal 841.

<sup>529</sup>Ministry of ICT Draft Telecommunications Policy of 2010–2016 stressed the need for investment in telecommunications infrastructure despite the exponential growth of the sector following liberalisation.

## 4.7 Conclusion

Uganda lacks a national competition law which may raise concerns regarding the adequacy of the regulatory framework for regulation of anti-competitive behaviour in the telecommunications sector. An analysis of the relevant sector-specific legislation governing anti-competitive behaviour reveals that the competition rules closely follow the competition law principles. The Fair Competition Regulations provide for the main rules of competition law: anti-competitive agreements, abuse of dominant position and anti-competitive mergers. The Fair Competition Regulations notably cover forms of abuse of dominant position such as price discrimination, refusal to supply access to facilities and price squeeze that are practices of key concern in the telecommunications sector. That being said, it must be observed that the legislation lacks detailed criteria for identifying anti-competitive conduct and effectively enforcing provisions. The lack of criteria is critical in light of the fact that the UCC as the regulator of all forms of competition in the telecommunications sector lacks experience in enforcing competition law. However, this can be addressed by putting in place concise guidelines on the enforcement of the provisions of the Fair Competition Regulations. In this regard, the UCC has over the last years come out with guidelines that would help to implement the provisions of the Fair Competition Regulations. For example, there are guidelines on definition of the relevant market<sup>530</sup> and assessment of dominance.<sup>531</sup>

More important is addressing the concerns raised in the chapter about the lacklustre enforcement of the competition regulation provisions. There is need for the UCC to switch from the *laissez-faire* approach to regulation that it adopted in the era of limited competition, to a more involved manner of regulation of competition in the telecommunications sector. However, it must be pointed out that in recent years, the UCC has taken concrete steps to address competition concerns, for example, high call termination rates in 2009 and the price war in the mobile market. However, based on interviews with different stakeholders in the telecommunications sector, the UCC needs to step up more in its competition regulation role as concerns about anti-competitive behaviour in the telecommunications sector still persist.

The fact that Uganda's sector-specific competition rules for the telecommunications sector follow the standard competition law principles does not imply that a national competition law is not needed in Uganda's telecommunications sector. Firstly, in the era of convergence of communications, which is blurring the boundaries of economic sectors (telecommunications, IT and media) that were previously

<sup>530</sup>UCC, 'Telecommunications Market Definition 2009' <<http://www.ucc.co.ug/files/downloads/Extract%20from%20Report%20on%20Competition%20and%20Dominance%202009.pdf>> accessed 15 June 2017.

<sup>531</sup>UCC, 'Market Power Assessment in Telecommunications 2009' <<http://www.ucc.co.ug/files/downloads/Extract%20from%20Report%20on%20Competition%20and%20Dominance%202009.pdf>> accessed 15 June 2017.

separate, regulatory oversight should not remain exclusively sector-specific in nature. It has been argued that since general competition law, in contrast to the sector-specific rules, is of economy-wide application it is better suited to regulate conduct in the converged communications sector.<sup>532</sup> The merger of the Uganda Communications Commission and the Uganda Broadcasting Council (UBC) into one entity, the Uganda Communications Commission, in 2010 was driven by the need to address regulatory challenges in the converged communications sector. Despite this, views from within the UCC indicate that having an authority enforcing economy-wide competition law as a complement is needed to ensure effective competition regulation in the telecommunications sector.<sup>533</sup> As further support for the application of national competition law, despite the existence of sector-specific competition rules, is the recurring argument in academic literature that general competition, being of economy-wide application, is better suited to regulate conduct in the converged communications sector.<sup>534</sup>

Secondly, the UCC has a very broad mandate not limited to the telecommunications sector but covering all forms of regulation in the broadcasting sector. While UCC has been very engaged in fulfilling its mandate of economic and technical regulation which are *ex ante* in nature, it has done very little in the area of the regulation of anti-competitive behaviour *ex post*. It is the author's view that UCC tends to address competition concerns in the telecommunications via economic regulation rather than relying on the Fair Competition Regulations. For example, to address the price war in the mobile market UCC relied on the price control system in the Tariff Regulations that is of *ex ante* application. The price cuts by a number of mobile operators had led to concerns of predatory pricing.<sup>535</sup> Furthermore, the high call termination rates in the telephony market were eventually controlled by the intervention of UCC relying on the Interconnection Regulations. The Fair Competition Regulations could also have been applied to address the problem as the conduct had already occurred favouring the *ex post* application of legislation. The Interconnection Regulations are meant to be applied *ex ante*. The result is the regulatory body has limited experience in dealing with anti-competitive practices under the Fair Competition Regulations. As Uganda's telecommunications market continues to grow, there will undoubtedly be more cases of anti-competitive practices. The presence of a specialised authority with economy-wide mandate in the area of competition regulation would enhance the regulation of competition in

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<sup>532</sup>Nikos Th. Nikolinakos, *EU Competition Law and Regulation in the Converging Telecommunications, Media and IT Sectors* (Kluwer Law International 2006) 187 observes that competition law is sufficiently flexible to deal with all future problems that may arise in a converged environment and to accommodate unanticipated developments.

<sup>533</sup>Interview with Ann Rita Ssemboga, Economist, UCC (Kampala, Uganda 7 December 2011).

<sup>534</sup>Nikos Th. Nikolinakos, *EU Competition Law and Regulation in the Converging Telecommunications, Media and IT Sectors* (Kluwer Law International 2006) 187 observes that competition law is sufficiently flexible to deal with all future problems that may arise in a converged environment and to accommodate unanticipated developments.

<sup>535</sup>As already noted these views were primarily expressed by the smaller operators.

the telecommunications sector by focusing exclusively on addressing anti-competitive behaviour concerns.

Thirdly, the rise of pan-African operators with subsidiaries in Uganda suggests the need for national competition law that can better govern the conduct of regional operators and their subsidiaries. In particular, co-operation with other competition agencies in the region could bolster competition regulation in the telecommunications sector.

However, granting a competition authority jurisdiction in the telecommunications sector may lead to conflicts with the sector regulator leading to inefficient regulation. The South African experience is an example of how conflict between sector-specific rules and general competition law can hamper effective enforcement of competition law. Failure to clearly demarcate the roles between the competition authority and the industry regulator ICASA resulted in the very slow disposition of the landmark Telkom SA case. The Competition Tribunal disposed of the case in 2011 although the Competition Commission had referred the complaint of anti-competitive behaviour by Telkom SA in 2004. Telkom SA challenged the jurisdiction of the competition bodies, with the issue finally being resolved in 2008.<sup>536</sup> The draft Competition Bill touches on this issue by providing that a statutory authority must refer to the competition authority if in the course of any proceeding before the statutory authority an issue is raised by any party that any decision that the authority has taken is contrary to the provision of the competition law.<sup>537</sup> However, there is need to have more concrete guidelines on how both authorities are to engage in competition regulation in the telecommunications sector.

Another aspect highlighted in this chapter is the fact that the telecommunications market is a special market exhibiting economic characteristics that might render it challenging to properly apply competition law principles. For example, the telecommunications sector is characterised by high fixed costs and low variable costs. These characteristics make it challenging to apply certain competition law principles, for example, as regards the definition of the relevant market. Specifically, the application of the standard test for defining the product market, the SSNIP test, might result in an incorrect definition of the relevant product market.

In summary, the existing legislative framework to a great extent addresses anti-competitive practices of concern in Uganda's telecommunications sector. However, the lacklustre enforcement is affecting effective competition regulation. Effective competition regulation in the telecommunications sector could also benefit from the enactment of a national competition law with an authority dedicated to addressing anti-competitive behaviour in the economy.

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<sup>536</sup>Case 11239/04 *Telkom SA Limited v The Competition Commission of South Africa and the Competition Tribunal of South Africa* [2008] ZAGPHC 188.

<sup>537</sup>Draft Competition Bill, 2004, cl 16(1).

# **Chapter 5**

## **Foreign Direct Investment**

### **in Telecommunications Sector and Regulation of Anti-Competitive Behaviour: The Specific Case of Cross-Border Mergers**

This chapter focuses on the regulation of anti-competitive behaviour linked to foreign direct investment (FDI) in the telecommunications sector. Sub-Saharan Africa's booming telecommunications sector is strongly tied to increased FDI flows into the sector following the change in telecommunications sector policy in most countries from monopoly to competition. FDI may take the form of foreign investment involving one enterprise in another country acquiring a degree of control over another enterprise in a domestic country as opposed to just providing financial capital.<sup>1</sup>

Access to finances is a major economic constraint in Sub-Saharan Africa.<sup>2</sup> Investment in the telecommunications sector has come from a wide range of public and private sources. However, most of the investment has been from private finances rather than public finances, with FDI comprising the greatest portion of the private finances. Data substantiating the view that most private investment in the telecommunications sector in Sub-Saharan Africa occurs in the form of FDI is scant. The World Bank, which provides the most reliable data on private sector participation in the telecommunications sector in Sub-Saharan Africa, values private investment in the sector, between 1990 and 2015 at more than US \$ 114 billion.<sup>3</sup> However, the World Bank data does not distinguish FDI from other private sources. Nevertheless, the significance of FDI as a source of funding for infrastructure development in the telecommunications sector in Sub-Saharan Africa can be gleaned at the national level. In Nigeria, FDI accounted for 70% of private

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<sup>1</sup>OECD, *Benchmark Definition of Foreign Direct Investment* (3rd edn, OECD 1996) 7.

<sup>2</sup>Mark D J Williams, 'Advancing the Development of Backbone Networks in Sub-Saharan Africa' in *Information and Communications for Development: Extending Reach and Increasing Impact* (World Bank 2009) 123.

<sup>3</sup>'World Bank Private Participation in Infrastructure Database: Regional Snapshots' <[http://ppi.worldbank.org/explore/ppi\\_exploreRegion.aspx?regionID=2](http://ppi.worldbank.org/explore/ppi_exploreRegion.aspx?regionID=2)> accessed 15 June 2017.

investment in the telecommunications markets in 2011.<sup>4</sup> Additionally, Nigeria's telecommunications sector is primarily serviced by local subsidiaries of multinational telecommunication groups (MTGs).<sup>5</sup> In Uganda, the significance of FDI is evidenced by the strong presence of local subsidiaries of MTGs. For example, in the mobile telephony market, subscribers of the local subsidiaries of MTGs, Airtel Uganda, and MTN Uganda Ltd had 17 million subscribers split between them in 2015, accounting for approximately 87% of the market.

The inability of governments and purely domestic firms to provide the finances needed to develop the capital intensive telecommunications sector magnifies the significance of FDI in the telecommunications sector in Sub-Saharan Africa. The lack of capacity of governments to invest in the telecommunications infrastructure is a key reason why telecommunications sector growth in Sub-Saharan Africa lagged behind other regions between the 1970s and 1990s.<sup>6</sup> This particular factor is the reason why the World Bank, in the 1980s, promoted market liberalisation and the privatisation of state-owned entities.<sup>7</sup> With specific regard to the domestic private sector, income levels and domestic savings in Sub-Saharan Africa are usually too low to provide the capital needed to invest in the telecommunications sector.<sup>8</sup> Thus, in the absence of financial capacity from within Sub-Saharan Africa, FDI has competently filled the gap as evidenced by the growth of the telecommunications sector over the years.

While FDI has undoubtedly played a big part in the growth of competitive telecommunications markets in Sub-Saharan Africa, concerns of FDI adversely affecting competition should not be ignored. The potential threat to sustainable competition stemming from the strong position of local subsidiaries of multinational telecommunications groups has been hinted at in previous chapters.<sup>9</sup>

<sup>4</sup>Oji-Okoro Izuchukwu, 'Relationship between FDI and Telecommunication Growth in Nigeria' (7th International Conference on Innovation and Management, Paris, March 2011) 1.

<sup>5</sup>Apart from Global Mobile (Glo) which is an Nigerian based MTG, the other mobile operators, EMTS Ltd (Etisalat), MTN Nigeria and Airtel Nigeria are local subsidiaries of MTGs. As at April 2017, the local subsidiaries of MTGs had an aggregate of 111 million mobile telephone subscribers compared to the 37.2 million subscribers for Glo, according Nigerian Communications Commission (NCC) data 'Subscriber/Operator Data' <<http://www.ncc.gov.ng/stakeholder/statistics-reports/industry-overview#view-graphs-tables-2>> accessed 15 June 2017.

<sup>6</sup>Cheikh Tidiane Gadio, 'Institutional Reform of Telecommunications in Senegal, Mali and Ghana: The Interplay of Structural Adjustment and International Policy Diffusion' (1995 DPhil dissertation, Ohio State University) 3.

<sup>7</sup>Ibid.

<sup>8</sup>Elizabeth Asiedu, 'On the Determinants of Foreign Direct Investment to Developing Countries: Is Africa Different' 30 (2002) World Development 107. However, there are exceptional cases in the telecommunications sector in Sub-Saharan Africa. For example, in Nigeria Globalcom limited, a 100 percent Nigerian owned company is a major player in the telecommunications sector. Similarly in South Africa, MTN is a key player in the telecommunications sector and the largest MTG in Sub-Saharan Africa.

<sup>9</sup>See specifically, Sects. 2.4.2 and 4.5.1 of this study which discuss the strong presence of local subsidiaries of MTGs in Sub-Saharan Africa and Uganda, respectively. The two sub-sections raise the concern that local subsidiaries of MTGs may leverage their strong financial position and

Multinational corporations have financial and technological advantages, comparative to local entities that enable them to quickly take dominant positions in the domestic market giving them greater scope for anti-competitive behaviour.<sup>10</sup> An oft-cited example of anti-competitive conduct by multinational corporations is predatory pricing.<sup>11</sup>

The concern that FDI can foster anti-competitive behaviour is particularly significant in Sub-Saharan Africa on the ground that developing countries' markets are more susceptible to cases of anti-competitive behaviour than developed countries' markets.<sup>12</sup> There is a dearth of literature on this subject focusing on Sub-Saharan Africa, and the telecommunications sector in particular. However, literature from other developing regions, South America and South Asia, primarily focusing on the manufacturing sector, reveals that the entry of MNCs in markets has led to the exit of domestic companies and the creation of oligopoly or monopoly market structures.<sup>13</sup>

Additionally, policy-makers at the international level have also expressed concern about anti-competitive behaviour by MNCs entering markets in developing

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engage in anti-competitive behaviour in order to take dominant positions in the markets in which they operate.

<sup>10</sup>UNCTAD, *World Investment Report 1997: Transnational Corporations, Market Structure and Competition Policy* (UN 1997) 134.

<sup>11</sup>Magnus Blomström, 'Foreign Direct Investment and Productive Efficiency: The Case of Mexico' (1986) 35(1) *Journal of Industrial Economics* 97 points out that a local subsidiary of a MNC with financial stay may drive out local competitors through predatory pricing since short term losses should not be too serious a problem. See also Richard S Newfarmer, 'TNC Takeovers in Brazil: The Uneven Distribution of Benefits in the Market for Firms' (1979) 7(1) *World Development* 25 who explores the effect of FDI in the Brazilian electrical industry. The article notes that MNCs used predatory pricing as a means of gaining dominant position in the market. Maria C Lattore, 'Multinationals and Foreign Direct Investment: Main Theoretical Standards and Empirical Effects' UCM Working Paper 6/2008 23 <[http://estudiosestadisticos.ucm.es/data/cont/docs/12-2013-02-06-CT06\\_2008.pdf](http://estudiosestadisticos.ucm.es/data/cont/docs/12-2013-02-06-CT06_2008.pdf)> accessed 15 June 2017 highlights two reasons why MNCs presence can lead to high market concentration in a given market: (1) they are more efficient than local firms; (2) they can engage in conduct that restricts competition for example, predatory pricing sustained by their financial staying power.

<sup>12</sup>UNCTAD, 'Cross-Border Anti-competitive Practices: The Challenges for Developing Countries and Economies in Transition', Note by the UNCTAD Secretariat (April 2012) 14 <[http://unctad.org/meetings/en/SessionalDocuments/ciclpd16\\_en.pdf](http://unctad.org/meetings/en/SessionalDocuments/ciclpd16_en.pdf)> accessed 15 June 2017.

<sup>13</sup>While some economists have concluded that FDI increases competition in the recipient market, for example, John H Dunning and Sarianna M Lundan, *Multinational Enterprises and the Global Economy* (2nd edn, Edward Elgar 2008), other economists, particularly those focusing on developing countries, have expressed the view that FDI stifles competition. See Sanjaya Lall, 'Multinationals and Market Structure in an Open Developing Economy: The Case of Malaysia' (1979) 115(2) *Weltwirtschaftliches Archiv* 325; Magnus Blomström, 'Foreign Direct Investment and Productive Efficiency: The Case of Mexico' (1986) 35(1) *Journal of Industrial Economics* 97; and Selim Raihan, 'Foreign Competition and Growth: Bangladesh Manufacturing Industries' in Paul Cook, Raul Fabella and Cassey Lee (eds), *Competitive Advantage of Competition Policy in Developing Countries* (Edward Elgar 2007).

countries.<sup>14</sup> Even though the literature does not relate specifically to FDI in telecommunications sector, it illustrates the need for close scrutiny of FDI flows in the telecommunications sector by the relevant competition authorities.

While anti-competitive behaviour by MNCs may take the form of anti-competitive agreements, collusion, abuse of dominant position, or anti-competitive mergers and acquisitions, this chapter focuses solely on mergers and acquisitions. Specifically, cross-border mergers have been identified as one of the major competition concerns for developing countries. Cross-border mergers are mergers that involve firms established in more than one jurisdiction or affect markets in more than one jurisdiction.<sup>15</sup> One reason for the concern is that developing countries have less competitive markets compared to developed countries making them more vulnerable to the anti-competitive effects stemming from cross-border mergers and acquisitions.<sup>16</sup> On that basis, developing countries have been encouraged to put in place competition policies, particularly a national competition law with merger control provisions to deal with cross-border mergers.<sup>17</sup> At the same time, it has been observed that developing countries that already have a national competition law in place face great challenges effectively enforcing national competition legislation against anti-competitive mergers.<sup>18</sup> The reasons for this are as follows:

Firstly, there is usually an asymmetry of power between national competition authorities in developing countries and MNCs in favour of MNCs. MNCs may easily convince decision-makers in the developing countries to abstain from intervention by threatening to withdraw economic activity from that country thereby undermining effective enforcement of competition law.<sup>19</sup>

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<sup>14</sup>UNCTAD, *World Investment Report 1997: Transnational Corporations, Market Structure and Competition Policy* (UN 1997); UNCTAD, *Cross-border Mergers and Acquisitions and Development, World Investment Report* (UN, 2000); and UNCTAD, ‘Objectives of Competition Law and Policy: Towards a Coherent Strategy for Promoting Competition and Development’, Note by UNCTAD Secretariat (16 February 2003).

<sup>15</sup>UNCTAD, ‘Cross-Border Anti-competitive Practices: The Challenges for Developing Countries and Economies in Transition’, Note by the UNCTAD Secretariat (April 2012) 13 <[http://unctad.org/meetings/en/SessionalDocuments/ciclpd16\\_en.pdf](http://unctad.org/meetings/en/SessionalDocuments/ciclpd16_en.pdf)> accessed 15 June 2017.

<sup>16</sup>CUTS International, ‘Issues Paper on Cross-Border Competition Issues in the Context of the DOHA Agenda’ <<http://www.cuts-international.org>> accessed 15 June 2017; and UNCTAD, ‘Objectives of Competition Law and Policy: Towards a Coherent Strategy for Promoting Competition and Development’ Note by UNCTAD Secretariat (16 February 2003) 5 both note that cross-border mergers usually have little or no effect in developed countries because their markets are so competitive. However, the merger of two MNCs could create problems for developing countries where the merged firm could result in a monopoly.

<sup>17</sup>UNCTAD, *World Investment Report 1997: Transnational Corporations, Market Structure and Competition Policy* (UN 1997) 189.

<sup>18</sup>UNCTAD, ‘Impact of Cross-Border Mergers and Acquisitions on Development and Policy Issues for Consideration’ Note by UNCTAD Secretariat (2000); and CUTS International ‘Issues Paper on Cross-Border Competition Issues in the Context of the DOHA Agenda’ <<http://www.cuts-international.org>> accessed 15 June 2017.

<sup>19</sup>Josef Drexel, ‘The Development Dimension of Regional Integration and Competition Policy’ in Josef Drexel, et al (eds), *Competition Policy and Regional Integration in Developing Countries* (Edward Elgar 2012) 242.

Secondly, effectively enforcing merger control provisions is a very resource intensive task, many competition authorities in developing countries lack the human and financial resources as well as sufficient expertise in law and economics making it difficult to carry out the necessary tasks.<sup>20</sup>

Thirdly, an effective merger control regime requires a comprehensive mechanism for merger regulation. However, many developing countries provide only basic provisions in the law, which are inadequate for efficiently controlling mergers.<sup>21</sup>

The competition concerns raised with regard to FDI in the form of cross-border mergers and acquisition are relevant in Sub-Saharan Africa which has seen a significant rise in the number of cross-border mergers in the telecommunications sector in the past decade.

FDI flows in the telecommunications sector in the region are primarily in the form of greenfield investment.<sup>22</sup> Greenfield investment is new investment made by setting up a foreign affiliate.<sup>23</sup> However, in recent years, FDI flows into the telecommunications sector have taken the form of cross-border mergers and acquisitions between MTGs. The most notable acquisitions have been; Celtel/MSC in 2005, Investcom LLC/MTN International in 2006, Etisalat/Atlantique Telecom in 2008, Vodafone Group/Vodacom Group in 2008, and finally, Zain Africa/Bharti Airtel, which ranks as the biggest consolidation transaction in the telecommunications sector in Sub-Saharan Africa to date.<sup>24</sup> The listed cross-border acquisitions have been concluded for an aggregate sum of US \$17.04 billion.<sup>25</sup> While greenfield investment remains the primary source of FDI, the World Bank valued private sector participation via greenfield investment at US \$ 45.5 billion,<sup>26</sup> the rise in the number of cross-border mergers in the past decade shows that they have become an important form of FDI in the telecommunications sector.

In light of the discussion above, this chapter focuses on analysing Uganda's regulatory framework on anti-competitive cross-border conduct in the telecommunications sector. The specific issue addressed is whether the existing legislation is comprehensive enough to protect Uganda's telecommunications sector from the

<sup>20</sup>OECD, 'Policy Roundtables Cross-Border Merger Control: Challenges for Developing and Emerging Economies' (2011) 9 <<http://www.oecd.org/daf/competition/mergers/50114086.pdf>> accessed 15 June 2017.

<sup>21</sup>Ibid.

<sup>22</sup>World Bank data on private sector participation in the telecommunications sector in Sub-Saharan Africa shows that greenfield investment has been the primary form of FDI. PPIAF, 'Regional snapshots' <[http://ppi.worldbank.org/explore/ppi\\_exploreRegion.aspx?regionID=1](http://ppi.worldbank.org/explore/ppi_exploreRegion.aspx?regionID=1)> accessed 15 June 2017.

<sup>23</sup>Grazia Letto-Gillies, *Transnational Corporations and International Production: Concepts, Theories and Effects* (2nd edn, Edward Elgar Publishing 2012) 16.

<sup>24</sup>The Zain Africa/Bharti Airtel acquisition was concluded for US\$ 10.7 billion.

<sup>25</sup>This sum is the author's own calculation based on the information available on the value of the cross border acquisitions.

<sup>26</sup>PPIAF, 'Regional snapshots' <[http://ppi.worldbank.org/explore/ppi\\_exploreRegion.aspx?regionID=1](http://ppi.worldbank.org/explore/ppi_exploreRegion.aspx?regionID=1)> accessed 15 June 2017.

anti-competitive effects of cross-border mergers and acquisitions. Uganda's regulatory framework makes for an interesting study because regulation of anti-competitive behaviour is through sector-specific competition rules. Economy-wide competition law is seen as the most effective way of dealing with anti-competitive mergers and acquisitions, even in regulated sectors such as telecommunications.<sup>27</sup> Experience from leading competition law enforcement jurisdictions indicates exclusive reliance on merger control provisions under national competition legislation to regulate telecommunications mergers. For example, the European Commission has assessed cross-border mergers in the telecommunications sector under the Merger Regulation of 2004.<sup>28</sup> In Sub-Saharan Africa, the leading competition law enforcement jurisdiction, South Africa, has also relied on its competition authority to regulate cross-border mergers in the telecommunications sector. The Vodacom Group/Vodafone Group acquisition in 2008 was reviewed and approved by the South Africa's Competition Commission and Competition Tribunal.<sup>29</sup>

For the purpose of facilitating a comprehensive analysis of Uganda's regulatory framework, reference is made, where relevant, to the merger control regulatory framework in the major competition law enforcement jurisdictions in Sub-Saharan Africa, that is, South Africa and Zambia.<sup>30</sup> Reference is also made to the EC Merger Regulation which the European Commission has effectively used to review a number of cross-border mergers in the telecommunications market in the European Union. Although, the telecommunications markets in the European Union is vastly different from Uganda's telecommunications markets, particularly with regard to market composition, the EU Merger Regulation may offer some guidance as to the form a merger control regime should take in order to be effective. The comparison is with the aim of assessing whether Uganda's exclusive reliance

<sup>27</sup>In Gilles Le Blanc and Howard Shelanski, 'Merger Control and Remedies Policy in the EU and U.S: the Case of Telecommunications Mergers' (November 2002) 3 <<http://www.cerna.ensmp.fr/Documents/GLB-TelecomMergerRemedies.pdf>> accessed 15 June 2017, it is argued that cross border mergers make it less appropriate to rely on sector-specific rules to govern competition regulation in the telecommunications sector.

<sup>28</sup>Council Regulation (EC) 139/2004 on the control of concentrations between undertakings (the EC Merger Regulation). Notable cross border mergers in the European Union include: Case No IV/JV.1 *Telia/Telenor/Schibsted*, Commission Decision 1998, published under <[http://ec.europa.eu/competition/mergers/cases/decisions/jv1\\_en.pdf](http://ec.europa.eu/competition/mergers/cases/decisions/jv1_en.pdf)> accessed 15 June 2017; Case No IV/M.1669 *Deutsche Telekom/One2One* [1999] OJ C 309/3; Case No COMP/M.2016 *France Telecom/Orange* [2000] OJ C 261/6; and Case No COMP/ M. 1795 *Vodafone Airtouch/Mannesmann* [2000] OJ C141/19 which have all been assessed by the European Commission enforcing the EC Merger Regulation.

<sup>29</sup>Case 135/LM/Dec *In the matter between Vodafone Group Plc v Vodacom Group (Pty) Ltd* [2009] ZACT 20.

<sup>30</sup>The Zambian and South African competition authorities have a lot of experience regulating anti-competitive practices compared to other authorities in the region. The Zambia Competition and Consumer Protection Commission, originally the Zambia Competition Commission has been operational since 1997, while the South Africa Competition Commission has been operational since 1998.

on sector-specific competition rules puts it at a disadvantage when it comes to regulating anti-competitive cross-border conduct.

## **5.1 Overview of Significant Mergers Affecting the Telecommunications Sector in Sub-Saharan Africa**

Before focusing on Uganda's regulatory framework on merger control, an opportunity is taken to provide an overview of the most significant cross-border mergers and acquisitions that have impacted on the telecommunications sector in Sub-Saharan Africa. This is with the aim of providing a clearer picture of how important cross-border mergers and acquisitions, as a form of FDI, have become in the telecommunications sector in Sub-Saharan Africa in recent years. The overview is confined to major mergers transactions concluded or ongoing at end of December 2014.

### **5.1.1 *Celtel International BV/Mobile Telecommunications Company KSC (MTC)***

The first cross-border merger and acquisition of significance in Sub-Saharan Africa was the 2005 acquisition of Celtel International BV (Celtel), registered in the Netherlands, by Kuwait-based Mobile Telecommunications Company KSC (MTC). Celtel at the time had 24 million subscribers across 14 countries in the region. It was therefore, the leading mobile operator in Sub-Saharan Africa. On 29 March 2005, it was announced that MTC had entered into a binding agreement with Celtel to acquire 100% of the issued share capital in Celtel.<sup>31</sup> According to the agreement, MTC was to initially acquire 85% of the Celtel's share for US\$ 2.84 billion and to purchase the remaining 15% within 24 months of closing date for US\$ 520 million.<sup>32</sup> MTC concluded acquisition of 100% of Celtel's share capital in May 2007.<sup>33</sup> In August 2008, following MTC's rebranding in 2007 to Zain, all operations in Africa adopted the Zain brand.<sup>34</sup> This transaction is of significance in

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<sup>31</sup>MTC, 'MTC Acquires Celtel International B.V' Press Release 29 March, 2005 <<http://www.zain.com/media-center/press-releases/mtc-completes-acquisition-of-celtel-in-13-african-countries/>> accessed 15 June 2017.

<sup>32</sup>Ibid.

<sup>33</sup>'MTC concludes acquisition of 100 percent of Celtel' <<http://allafrica.com/stories/200705140897.html>> accessed 15 June 2017.

<sup>34</sup>Zain, 'Global Aspirations: Zain Rebrands Celtel Africa Operations' Press Release, 1 August 2008 <<http://www.zain.com/media-centre/press-releases/global-aspirations-zain-rebrands-celtel-africa-operations/>> accessed 15 June 2017.

Uganda as Celtel had a local subsidiary operating in the mobile communications market. Celtel was the first mobile operator in Uganda entering the market in 1995.

### **5.1.2 *Investcom LLC/MTN International (Mauritius) Limited***

On 2 May 2006, MTN Group announced its intention to acquire the entire share capital of Investcom LLC which had operations in Africa, the Middle East and Europe.<sup>35</sup> Within Sub-Saharan Africa, Investcom LLC was operating in Benin, Ghana, Guinea Bissau, Liberia, and Sudan with 4 million subscribers.<sup>36</sup> The acquisition was undertaken by MTN International (Mauritius) Limited, a subsidiary of MTN Group for a consideration of US \$ 5526 million.<sup>37</sup> The transaction particularly strengthened MTN's presence in West and Central Africa.

### **5.1.3 *Atlantique Telecom/Etisalat***

In May 2007, UAE-based Etisalat increased its stake in Atlantique Telecom/Moov to 70% by acquiring 18% share capital in Atlantique Telecom for US\$ 75 million.<sup>38</sup> In 2005, Etisalat had acquired a 50% stake in Atlantique Telecom, based in Ivory Coast, which at the time had local subsidiary mobile operators in Benin, Burkina Faso, Togo, Niger, the Central African Republic, and Gabon.<sup>39</sup> Therefore, Etisalat's acquisition of Atlantique Telecom enabled it to increase its market presence in West and Central Africa.

### **5.1.4 *Vodacom Group/Vodafone Group***

In November 2008, Vodafone Group entered into an agreement to acquire a percentage of shares in Vodacom Group from Telkom SA for US\$ 2.25 billion.

<sup>35</sup>MTN Group, 'Chairman's Report: MTN Group Limited, Annual Report 2005' <[http://annualreport.mtn.com/today\\_chairman\\_report.htm](http://annualreport.mtn.com/today_chairman_report.htm)> accessed 15 June 2017.

<sup>36</sup>MTN Group, 'Circular to MTN Group Shareholders Regarding Proposed Transaction between MTN International (Mauritius Limited) and Investcom LLC' (12 June 2006) <[https://www.mtn.com/Investors/Circulars/Circulars/investcom\\_transaction.pdf](https://www.mtn.com/Investors/Circulars/Circulars/investcom_transaction.pdf)> accessed 15 June 2017.

<sup>37</sup>Ibid.

<sup>38</sup>'Etisalat Increases Stake in Atlantique Telecom to 70%' Balancing Act (6 May 2007) <<http://www.balancingact-africa.com/news/en/issue-no-353/money/etisalat-increases-s/en>> accessed 15 June 2017.

<sup>39</sup>Ibid.

The merger involved a pan-African mobile operator, Vodacom Group based in South Africa, and a MTG, Vodafone Group based in London. Pre-merger both Vodafone Group and Telkom SA owned 50% share capital in Vodacom.<sup>40</sup> Under 2008 the agreement, Vodafone acquired 15% issued share capital in Vodacom from Telkom SA. As a result Vodafone became a majority shareholder with 65% share capital in Vodacom. In accordance with the agreement Telkom SA unbundled its remaining shares in Vodacom (35%) to its own shareholders, who are members of the public. Following the merger, Vodafone exercises sole control over Vodacom. The merger had a cross-border effect since Vodacom was operating regionally in the Democratic Republic of Congo, Lesotho, Mozambique and Tanzania.

### **5.1.5 Zain International BV/Bharti Airtel**

The most significant of the cross-border mergers and acquisitions is Bharti Airtel's (India's largest telecommunications operator) acquisition of Zain's wholly owned subsidiary Zain International BV (Zain Africa). There are two reasons why this cross-border acquisition is significant: (1) it involved 15 countries covering East, West, Central, and Southern Africa,<sup>41</sup> a feat only previously accomplished by Zain when it acquired Celtel International BV; (2) as of December 31st 2014, it was the most expensive cross-border acquisition concluded in the region.

Since 2008, Bharti Airtel, keen on entering the telecommunications market in Sub-Saharan Africa, had been actively looking for a merger opportunity. Between 2008 and 2009, Bharti Airtel attempted to enter into a merger agreement with MTN Group hoping to acquire 49% stake in MTN.<sup>42</sup> Following its failed merger bid, in February, 2010, Bharti Airtel entered into discussions with Zain to acquire Zain Africa for US \$10.7 billion.<sup>43</sup> On 30 March, 2010 Bharti Airtel and Zain entered into binding agreements enabling the former to acquire Zain Africa. However, the merger excluded Zain Africa's operations in Sudan. The acquisition of most of Zain Africa's subsidiaries in Sub-Saharan Africa has enabled Bharti Airtel to become one of the leading telecommunications companies in the region.

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<sup>40</sup>Vodacom was created through a 50/50 joint venture between Vodafone Group and incumbent operator Telkom SA in 1994.

<sup>41</sup>Burkina Faso, Chad, the Republic of Congo, Democratic Republic of Congo, Gabon, Ghana, Kenya, Malawi, Madagascar, Niger, Nigeria, Sierra Leone, Tanzania, Uganda, and Zambia.

<sup>42</sup>Naazneen Karmali 'Bharti Airtel Wants Africa's Ear' *Forbes* (New Delhi 06 May 2008) <[https://www.forbes.com/2008/05/06/mtn-bharti-airtel-markets-equity-cx\\_vk\\_0506markets02.html](https://www.forbes.com/2008/05/06/mtn-bharti-airtel-markets-equity-cx_vk_0506markets02.html)>; and Naazneen Karmali 'Bharti Airtel Woos MTN Again' *Forbes* (New Delhi 25 May 2009) <<http://www.forbes.com/2009/05/25/bharti-mtn-merger-markets-equityindia.html>>.

<sup>43</sup>Arun Scaria, Ajay Singh Solanki, Sambhav Ranka, Nischal Joshipura, and Siddarth Shah, 'Bharti-Zain Deal Dissection' (May 17 2010) <[http://www.nishithdesai.com/fileadmin/user\\_upload/pdfs/Ma%20Lab/Bharti-Zain%20Deal.pdf](http://www.nishithdesai.com/fileadmin/user_upload/pdfs/Ma%20Lab/Bharti-Zain%20Deal.pdf)> accessed 15 June 2017.

Following the transaction, Zain's presence in Sub-Saharan Africa is now restricted to two countries, Sudan and South Sudan.<sup>44</sup> The Bharti Airtel/Zain transaction stands out as the largest telecommunications acquisition within Sub-Saharan Africa. In addition, it resulted in the entrance of a South Asia multinational telecommunications group into the region which had until then been dominated by Sub-Saharan African, Middle Eastern countries, and European investors. In contrast to the previous cross-border mergers this specific transaction received a lot of attention from the affected countries. While it was approved expeditiously in Zambia by the Competition Commission,<sup>45</sup> it was initially opposed by governments of Gabon, DRC, Congo Brazzaville, and Tanzania.<sup>46</sup>

## 5.2 Similarities Among the Cross-Border Mergers and Acquisitions in Sub-Saharan Africa's Telecommunications Sector

A few observations must be made with regard to the cross-border consolidations that have taken in place in the telecommunications sector in Sub-Saharan Africa. Firstly, the cross-border consolidations have primarily affected the mobile communications market as they all involved the acquisition of mobile operators present in several countries. This is in line with the FDI trend that has seen most capital flows going to the mobile communications market with negligible investment going to the fixed-line markets.<sup>47</sup>

Secondly, the cross-border concentrations have taken the form of acquisitions, rather than mergers with one legal entity acquiring control over another legal entity. However, the most important feature of consolidations is that only one of the merging parties was operating in the affected Sub-Saharan African markets at the time the transaction was included. This means that there has been a lack of horizontal overlap that could increase market concentration as would have been the case if the consolidations were mergers between entities that were both active in

<sup>44</sup>Sudan and South Sudan did not fall under the umbrella of Zain Africa.

<sup>45</sup>Chiwoyu Sinyangwe, 'Prospects Turn Gloomy as Bharti Takes over Zain' *The Post Zambia* (25 May 2010) <[http://www.postzambia.com/post-print\\_article.php?articleId=9558](http://www.postzambia.com/post-print_article.php?articleId=9558)> accessed 15 June 2017.

<sup>46</sup>'Congo Move to Jam Bharti-Zain Network' *Telegraph* (Calcutta, April 13, 2010) <[http://www.telegraphindia.com/1100414/jsp/business/story\\_12337285.jsp](http://www.telegraphindia.com/1100414/jsp/business/story_12337285.jsp)> accessed 15 June 2017, which reports that the governments in Gabon, Democratic Republic of Congo, and Congo Brazzaville opposed the sale of Zain's local subsidiary to Bharti Airtel. The Bharti Airtel acquisition of Zain Africa was also opposed by the government in Tanzania, 'Gov't-No Zain Deal' *The Citizen* (12 June 2010) <<http://allafrica.com/stories/201006141285.html>> accessed 15 June 2017.

<sup>47</sup>In Mark D J Williams, Rebecca Mayer, and Michael Minges, *Africa's ICT Infrastructure: Building on the Mobile Revolution* (World Bank 2011) 11, it has been observed that most FDI flowing into the telecommunications sector has gone to mobile communications and to mobile network infrastructure in particular.

the same telecommunications markets. This creates the presumption that the cross-border acquisitions have been neutral and thus not a threat to the growth of competition in the telecommunications markets that were affected by the cross-border acquisitions. The absence of horizontal overlap was a key reason behind the South Africa Competition Tribunal's decision to unconditionally approve Vodafone Group's acquisition of a controlling stake in Vodacom Group in 2008.<sup>48</sup>

However, the fact that the cross-border acquisitions undertaken thus far in Sub-Saharan Africa do not appear to be anti-competitive does not mean that cross-border mergers and acquisitions cannot have a negative impact on competition in developing countries. A case in point is the Telecom Italia/Telefónica merger in 2007 that was concluded in Europe but raised a number of competition issues in Latin America where both merging parties operated. While the merger did not get significant attention from the competition authorities in Europe, due to lack of horizontal overlap between the activities of the two telecommunications companies, in Latin America the two companies were competing with one another in the fixed-line and mobile services markets, for example, in Argentina and Brazil.<sup>49</sup> Therefore, regulation of cross-border mergers and acquisitions in the telecommunications sector should be a key issue for competition authorities in Sub-Saharan Africa.

A final note is made with regard to one aspect of the cross-border mergers and acquisitions in the telecommunications sector in Sub-Saharan Africa, namely, the significance of south to south FDI. Traditionally, most FDI flows to Africa have come from the developed countries with the United States, France, the United Kingdom, and Portugal being the main contributors (North to South FDI).<sup>50</sup> This has particularly been the case with regard to the initial wave of FDI that led to the privatisation of former monopoly operators with the acquiring firms coming primarily from Europe.<sup>51</sup> However, over the past two decades there have been increasing FDI flows into the telecommunications sector from developing and emerging countries (South to South FDI).<sup>52</sup> Of the major cross-border acquisitions

<sup>48</sup>Case No. 135/LM/Dec *In the matter between Vodafone Group Plc v Vodacom Group (Pty) Ltd [2008]* Competition Tribunal of South Africa, para 9.

<sup>49</sup>Marco Botta, *Merger Control Regimes in Emerging Economies: A Case Study on Brazil and Argentina* (Kluwer International 2011) 271.

<sup>50</sup>Chantal Dupasquier and Patrick N Osakwe, 'Foreign Direct Investment in Africa: Performance, Challenges and Responsibilities' (2005) African Trade Policy Centre 2005/21 1, 8.

<sup>51</sup>Mark D J Williams, Rebecca Mayer, and Michael Minges, *Africa's ICT Infrastructure Building on the Mobile Revolution* (World Bank 2011) 128.

<sup>52</sup>There is a significant amount of literature focusing on this phenomenon, including: Chantal Dupasquier and Patrick N Osakwe, 'Foreign Direct Investment in Africa: Performance, Challenges and Responsibilities' (2005) African Trade Policy Centre 2005/21 1; Sheila Page and Dirk Willem te Velde 'Foreign Direct Investment by African Countries' (2004) Overseas Development Institute <<http://www.odi.org.uk/sites/odi.org.uk/files/odi-assets/publications-opinion-files/5739.pdf>> accessed 15 June 2017; Dilek Aykut and Andrea Goldstein, 'Developing Country Multinationals: South-South Investment Comes of Age' (2006) OECD Development Centre Working Paper 257/2006; and Stephen Gelb, 'South-South Investment: The Case of Africa' in Jan Joost Teunissen and Age Akkerman (eds), *Africa in World Economy-The National, Regional and International Challenges* (The Hague: Fondad 2005) 200-203.

discussed above, only one acquiring company, Vodafone Group, is from Europe. The rest of the companies are from within Sub-Saharan Africa, the Middle East, and Asia.

### 5.3 Rationale for the Increase in Cross-Border Mergers in Sub-Saharan Africa

The previous sub-sections have illustrated that FDI in the telecommunications sector is increasingly taking the form of mergers and acquisitions, particularly cross-border acquisitions. Mergers and acquisitions in the telecommunications sector is nothing new. In fact most of the initial FDI in the telecommunications sector went into acquisition of majority shares in state-owned operators that were being privatised. However, as the liberalisation policy began to take hold, most investors went the greenfield investment route. The significance of greenfield investment in the telecommunications sector is easily explained by the under developed infrastructure requiring investors to build their own end to end networks as the most expedient means of providing telecommunications services within a reasonable time.<sup>53</sup>

While greenfield investment has been the key form of FDI in Sub-Saharan Africa, it is not the preferred mode of entry for multinational telecommunications groups. A study focusing on South Africa based telecommunications groups operating in other countries in Sub-Saharan Africa indicates a preference to enter a market via mergers and acquisitions rather than greenfield investment because the former are viewed as a more expedient means of entering the market than the latter.<sup>54</sup> Greenfield investment requires network rollout to provide telecommunications services and this involves acquiring right-of-way approvals, coordination with local government departments, acquiring municipal and local council approvals to set up tower and antenna, obtaining electrical connection for sites and installation of power, constructing roads in order to access the mobile towers, import of equipment, among others. It therefore comes as no surprise that as the telecommunications markets in Sub-Saharan Africa have grown and opportunities for consolidation have risen, MTGs have opted to rely on mergers and acquisitions to enter the markets.

Aside from the expediency factor, spectrum scarcity is another key reason for the increased interest in cross-border mergers and acquisitions. In many countries in the region, spectrum in the GSM bands 900 MHz and 1800 MHz is unavailable having already been assigned to telecommunications operators. This has made it difficult

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<sup>53</sup>Kaoru Kimura, Duncan Wambogo Omole, and Mark Williams, 'ICT in Sub-Saharan Africa: Success Stories' in Punam Chuhan-Pole and Manka Angwafo (eds), *Yes Africa Can: Success Stories from a Dynamic Continent* (World Bank 2011) 343.

<sup>54</sup>John M Luiz and Henry Stephan, 'The Multinationalisation of South African Telecommunications Firms into Africa' (2012) 38(8) *Telecommunications Policy* 621, 624.

for entities to gain entry into the mobile communications services market.<sup>55</sup> To address this problem, some companies have opted to enter the market through mergers and acquisitions. A notable example is Orange's entry in Uganda's telecommunications market after France Telecom's acquisition of majority shares in HITs Telecom Uganda thereby acquiring a spectrum licence along with its PIP and PSP licences.<sup>56</sup> Although the Hits Telecom/France Telecom merger was a domestic one, the rationale undoubtedly applies to cross-border mergers in the mobile communications market.

## 5.4 Cross-Border Mergers and Acquisitions and Competition

Mergers and acquisitions tend to give rise to more competition concerns than greenfield investment. The reason being that greenfield investment is deemed to reduce market concentration, especially in industries with high entry barriers, by increasing the number of firms in a given market.<sup>57</sup> The growth of a more competitive telecommunications sector in Sub-Saharan Africa (particularly the mobile market) is strongly linked to FDI, which is primarily greenfield investment, providing support for that assumption.<sup>58</sup> On the other hand, mergers and

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<sup>55</sup>For example, Warid Telecommunications faced difficulties getting enough spectrum to operate in Cote D'Ivoire, 'Cote D'Ivoire: Warid Telecom Pays for Licence but Can't Get Enough Spectrum to Operate' *Balancing Act* (13 March 2009) <<http://www.balancingact-africa.com/news/en/issue-no-445/top-story/cote-d-ivoire-warid/en>> accessed 15 June 2017; in Ghana, the fifth telecommunications company Globalcom's failure to commence operations after being granted a licence was due to the scarcity of spectrum, 'Spectrum Unavailability and Review of Guidelines Delayed Globalcom's Operations in Ghana says Minister Iddrisu', *Balancing Act* (2 September 2011) <<http://www.balancingact-africa.com/news/en/issue-no-570/telecoms/spectrum-unavailability/en>> accessed 15 June 2017. In Uganda, telecom operator, Anupam faced challenges building its network due to scarcity of spectrum in the 900 MHz and 1800 MHZ frequency bands despite having acquired a licence, according to Enrico Calando, 'Re-farming Frequencies in Rural Areas: A Regulatory Perspective' (5th ACORN\_REDECOM Conference, Lima, 19 May, 2011) 9.

<sup>56</sup>Enrico Calando, 'Re-farming Frequencies in Rural Areas: A Regulatory Perspective' (5th ACORN\_REDECOM Conference, Lima, 19<sup>th</sup> May, 2011) 9.

<sup>57</sup>Sanjaya Lall, 'Implications of Cross Border Mergers and Acquisitions by TNCs in Developing Countries: A Beginners Guide' (June 2002) QEH Working Paper Series 88/2002 <<http://www3.qeh.ox.ac.uk/pdf/qehwp/qehwps88.pdf>> accessed 15 June 2017.

<sup>58</sup>However, it has been noted that greenfield investment can also result in a less competitive market structure in the long run. Sanjaya Lall in his article 'Implications of Cross Border Mergers and Acquisitions by TNCs in Developing Countries: A Beginners Guide' (June 2002) QEH Working Paper Series-88/2002 notes that greenfield investment may initially increase competition in the market but it might in the long run result in increased market concentration, for example, through crowding out of less efficient local firms with the dangers of turning the market into a more oligopolistic structure.

acquisitions transfer ownership from local to foreign hands leaving the number of firms in the market unchanged.<sup>59</sup> For this reason, mergers and acquisitions are deemed to increase market concentration particularly where mergers are concluded by two competing firms within a market.

Mergers and acquisitions are usually a source of concern for competition authorities on the basis that they can create or extend monopoly power and increase the scope for collusion in a market which, post-merger, will be more oligopolistic and less competitive than was the market pre-merger.<sup>60</sup> Horizontal mergers and acquisitions raise the most concern as they may eliminate competition between merging parties thereby lessening competition between the post-merger firm and other market rivals.<sup>61</sup>

Cross-border mergers have been specifically identified as one of the major concerns for developing countries on the grounds that these countries are the most susceptible to anti-competitive behaviour arising from such mergers.<sup>62</sup> In particular, cross-border mergers are believed to have little or no effect in developed countries because their markets are competitive.<sup>63</sup> However, in developing countries, the merger of two MNCs could create severe problems whereby the merger could create a monopoly market structure or substantially lessen competition in the market with the local subsidiary post-merger gaining a dominant position and charging higher prices.<sup>64</sup>

Cross-border acquisitions are increasingly being used by MTGs to enter the telecommunications sector in Sub-Saharan Africa. While the cross-border acquisitions have not had any horizontal overlap, it is quite probable that in time there will be cross-border mergers and acquisitions that change the market structure resulting in anti-competitive effects in the given telecommunications market. Therefore, countries in Sub-Saharan Africa with liberalised telecommunications markets must have measures in place to preventing anti-competitive cross-border mergers and acquisitions. One particular recommendation is the adoption of effective competition policies especially general competition law with merger control provisions.<sup>65</sup>

<sup>59</sup>UNCTAD, *World Investment Report 1997: Transnational Corporations, Market Structure and Competition Policy* (UN 1997) 141.

<sup>60</sup>Sandra Marco Colino, *Competition Law of the EU and UK* (7th edn, Oxford University Press 2011) 348.

<sup>61</sup>Phillip Areeda and Herbert Hovenkamp, *Fundamentals of Antitrust Law* (Wolters Kluwer 2011) 9-5.

<sup>62</sup>CUTS International, ‘Issues Paper on Cross-Border Competition Issues in the Context of the DOHA Agenda’ <<http://www.cuts-international.org>> accessed 15 June 2017.

<sup>63</sup>Ibid.

<sup>64</sup>Madhav Mehra, ‘Competition Policy and Law-An Overview’ <<http://www.Internationalacademyoflaw.org>> accessed 15 June 2017.

<sup>65</sup>UNCTAD, *World Investment Report 1997: Transnational Corporations, Market Structure and Competition Policy* (UN 1997) 189. Madhav Mehra, ‘Competition Policy and Law-An Overview’ <<http://www.Internationalacademyoflaw.org>> accessed 15 June 2017 stresses the need for

## 5.5 Regulating Cross-Border Mergers in the Telecommunications Sector in Uganda

Until 2005, FDI in the form of mergers played a less significant role in Uganda's telecommunications sector with most foreign owned telecommunications operators entering the market through greenfield investment. The only significant telecommunications merger until then related to the privatisation of the former state monopoly fixed operator Uganda Telecom Limited in 2000. The Government of Uganda sold 51% of its holding in Uganda Telecom Limited to the UCOM consortium of companies comprising, Telecel International of Switzerland, Orascom Telecom of Egypt and Detecon of Germany retaining 49% shareholding.<sup>66</sup> In 2007, LAP Green acquired a 69% stake in Uganda Telecom Limited.<sup>67</sup> As a result the Government of Uganda's share shrunk from 49 to 31%.<sup>68</sup>

In 2005, Celtel Uganda's ownership changed following the cross-border merger between Celtel International BV and MTC representing the first instance of substantial FDI in the form of a cross-border merger in Uganda's telecommunications sector.<sup>69</sup> Since then, mergers and acquisitions, both domestic and cross-border, have increasingly become one of the main sources of private investment in Uganda's telecommunications sector. This is particularly the case following the shift from duopoly to full competition in 2006.

In 2008, France Telecom acquired 53% stake in Hits Telecom Uganda which resulted in the entry of local subsidiary mobile operator Orange Uganda. In 2010, Celtel Uganda which had by then been rebranded as Zain was acquired by Bharti Airtel following Bhartel Airtel's acquisition of Zain Africa from multinational telecommunications group parent company, Zain. Finally, in 2013, Airtel Uganda increased its subscriber base from 4.6 million to 7.4 million subscribers following its acquisition of Warid Telecom Uganda merger which had 2.8 million subscribers. In April 2013, Airtel Uganda received approval from UCC to conclude the merger.<sup>70</sup> The Warid Telecom Uganda/Airtel Uganda merger is significant as it represents the first instance of horizontal overlap in a merger with both entities

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competition law following the liberalisation of FDI as the impact of FDI is not always pro-competitive. As Madhav Mehra points out, very often foreign direct investment takes the form of a foreign corporation acquiring a domestic enterprise or establishing a joint venture with one. By making such an acquisition the foreign investor may substantially lessen competition and gain a dominant position in the relevant market thus charging higher prices.

<sup>66</sup>Jonathan L Muwonge and Emanuel Gomes, 'Analysis of the Acquisition Process of Uganda Telecom by LAP Greencom' (2007) 1(1) MIBES Transactions Online, 108.

<sup>67</sup>Ibid.

<sup>68</sup>Ibid.

<sup>69</sup>This merger is discussed in Sect. 5.1.1 of this study.

<sup>70</sup>Faridah Kulabako and Solomon Arinaitwe, 'UCC Okays Airtel, Warid Deal as Subscribers are Reassured' *Daily Monitor* (Kampala, 9 May 2013) <<http://www.monitor.co.ug/Business/Technology/UCC-okays-Airtel--Warid-deal-as-subscribers-are-reassured/-/688612/1846494/-u28gpy/-index.html>> accessed 15 June 2017.

competing in the mobile communications market. The overview of the key mergers and acquisitions in the telecommunications sector reveal that mergers and acquisitions are an important form of FDI.

The previous sub-sections have highlighted the threat to competition stemming from cross-border mergers and acquisitions. Established practice indicates that mergers and acquisitions are best dealt with under national competition law rather than sector-specific rules.<sup>71</sup> Cross-border mergers and acquisitions in the regulated telecommunications sector have been specifically identified as better regulated through national competition law.<sup>72</sup> Preference for national competition law as the appropriate tool to govern cross-border mergers and acquisitions raises the question whether the increased FDI flows via cross-border mergers in Uganda's telecommunications sector warrant the enactment of national competition legislation. Uganda currently only relies on sector-specific rules to deal with anti-competitive practices in the telecommunications sector.

The following sub-sections are therefore dedicated to identifying the strengths and weaknesses of Uganda's regulatory framework governing cross-border mergers and acquisitions. One of the reasons why developing countries are viewed as susceptible to anti-competitive effects of cross-border mergers and acquisitions is that they only provide basic provisions in the law, while an effective merger control regime requires a comprehensive mechanism for merger regulation.<sup>73</sup> The basic provisions make it difficult for national authorities to efficiently control mergers.<sup>74</sup> For this reason it is important to analyse the relevant provisions of the law in Uganda in order to establish whether they offer sufficient protection from anti-competitive cross-borders and mergers.

<sup>71</sup>Cross-border mergers in the European Union have been assessed under the Council Regulation (EC) 139/2004 on the control of concentrations between undertakings [2004] OJ L24/1 (the EC Merger Regulation). The European Commission has reviewed a number of cross-border mergers in the telecommunications sector under the EC Merger Regulation including: Case No IV/JV.1 *Telia/Telenor/Schibsted*, Commission Decision 1998, published under <[http://ec.europa.eu/competition/mergers/cases/decisions/jv1\\_en.pdf](http://ec.europa.eu/competition/mergers/cases/decisions/jv1_en.pdf)> accessed 15 June 2017; Case No IV/M.1669 *Deutsche Telekom/One2One* [1999] OJ C 309/3; Case No COMP/M.2016 *France Telecom/Orange* [2000] OJ C 261/6; and Case No COMP/ M. 1795 *Vodafone Airtouch/Mannesmann* [2000] OJ C141/19. In South Africa, jurisdiction of merger assessment is the exclusive purview of the Competition Commission and the Competition Tribunal which notably reviewed the Vodacom Group/Vodafone Group acquisition in 2008, Case No. 135/LM/Dec *In the matter between Vodafone Group Plc v Vodacom Group (Pty) Ltd* [2009] ZACT 20.

<sup>72</sup>Gilles Le Blanc and Howard Shelanski, 'Merger Control and Remedies Policy in the EU and U.S: the Case of Telecommunications Mergers' (November 2002) 3 <<http://www.cerna.ensmp.fr/Documents/GLB-TelecomMergerRemedies.pdf>> accessed 15 June 2017 who observe that it is preferable to rely on competition law rather than sector-specific rules when dealing with cross-border mergers.

<sup>73</sup>OECD 'Policy Roundtables Cross-Border Merger Control: Challenges for Developing and Emerging Economies' (2011) 10 <<http://www.oecd.org/daf/competition/mergers/50114086.pdf>> accessed 15 June 2017.

<sup>74</sup>Ibid.

The assessment also comprises a discussion as to whether the UCC, as the competition authority, has capacity to effectively enforce the provisions of the law against a large multinational telecommunications group. Concerns regarding the regulation of cross-border mergers in developing countries centre on the asymmetry of power between large multinational corporations and national regulators in favour of multinational corporations.<sup>75</sup> Key to ensuring effective regulation of cross-border mergers is the availability of sufficient resources, both human and financial, to effectively undertake the tasks needed to effectively implement merger control provisions and mitigate the asymmetry of power.<sup>76</sup> Within Sub-Saharan Africa, it has been observed that national competition authorities lack capacity to effectively enforce competition legislation particularly in connection with cross-border conduct.<sup>77</sup> Therefore, the analysis of Uganda's legislative framework on merger control should also establish whether effective enforcement is possible.

That said, developing countries like Uganda must apply a cautious approach in order to ensure that merger control does not hinder FDI flows in the telecommunications sector. There is an increasing amount of literature suggesting that merger control hampers FDI flows in the form of cross-border mergers.<sup>78</sup> Within Sub-Saharan Africa, the effect of a merger control regime on FDI flows has been a subject of discussion primarily in South Africa.<sup>79</sup>

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<sup>75</sup>Ibid.

<sup>76</sup>Ibid, 9.

<sup>77</sup>Michal S Gal and Inbal Faibis Wassmer, 'Regional Agreements of Developing Jurisdictions: Unleashing the Potential' in Josef Drexel, et al. (eds), *Competition Policy and Regional Integration in Developing Countries* (Edward Elgar 2012) 294.

<sup>78</sup>Notable literature includes: Marco Botta, *Merger Control Regimes in Emerging Economies: A Case Study on Brazil and Argentina* (Wolters Kluwer 2011) which focuses on merger control regimes in Argentina and Brazil and discusses the extent to which merger control in those two countries can serve as a disincentive for FDI through cross-border mergers; and Manish Agarwal, 'Does Implementation of Merger Regulation Impede Inbound Cross-Border Mergers? Analysis of Developed versus Developing Countries' in Richard Whish and Christopher Townley (eds), *New Competition Jurisdictions: Shaping Policies and Building Institutions* (Edward Elgar 2012) who analyses the effects of national merger regulation regimes on in bound cross border mergers in host countries.

<sup>79</sup>See Romeo Kariga, Jabulani Ngobeni, and Mfundzo Ngobese, 'Is South Africa a Good Investment Destination? A Relook at Conditions in Merger Case' (6th Annual Conference on Competition Law, Economics and Policy, Johannesburg, September 2012) <<http://www.comppcom.co.za/assets/Uploads/events/SIxth-Annual-Competition-Law-Economics-and-Policy-Conference-in-South-Africa-2012/NewFolder-3/Is-South-Africa-a-good-investment-destination-22.08.2012-F.PDF>> accessed 15 June 2017; Marumo Nkomo and Magdaleen van Wyk, 'Public Interest Criteria in Mergers-Protectionist Measures' (6th Annual Conference on Competition Law, Economics and Policy, Johannesburg, September 2012) <<http://www.comppcom.co.za/assets/Uploads/events/Sixth-Annual-Competition-Law-Economics-and-Policy-Conference-in-South-Africa-2012/NewFolder-3/Publicinterestcriteriainmergersprotectionistmeasuressubmissionformatted1.pdf>> accessed 15 June 2017; and John Oxenham, 'Balancing Public Interest Merger Considerations Before Sub-Saharan African Competition Jurisdictions with the Quest for Multi-Jurisdictional Merger Control Certainty' (2012) 9(211) US-China Law Review 211. These articles focus on

One of the key arguments put forward against merger control as a disincentive for FDI is that national merger regulation regimes impose administrative burdens on merging parties creating disincentives for acquisition of host country firms by foreign firms.<sup>80</sup> The administrative requirements of merger regulation impose both direct and indirect costs on merging parties, which may reduce the acquiring firm's net expected return from a merger.<sup>81</sup> A PwC report indicated that cross-border mergers attract high costs for the merging parties arising from the notification fees and the legal expenses faced by the parties in each country where a notification is required.<sup>82</sup>

Another major concern is the lengthy merger review process that can serve as an obstacle to FDI flows into markets.<sup>83</sup> The merger review process is regarded as taking a longer time to conclude in developing countries compared to developed countries.<sup>84</sup> The slow merger review process in Argentina and Brazil has been identified as a likely obstacle to flow of FDI into the countries.<sup>85</sup> Given the significance of FDI for the growth of the telecommunications sector in Uganda, merger regulation should not make it particularly cumbersome for MTGs to enter the sector.<sup>86</sup>

Taking into account the above-mentioned issues, the regulatory framework for merger control in Uganda's telecommunications sector will be analysed in the following sub-sections.

South Africa's competition authorities application of the public interest consideration provided for in the South Africa Competition Act when reviewing mergers involving a foreign interest.

<sup>80</sup>Manish Agarwal, 'Does Implementation of Merger Regulation Impede Inbound Cross-Border Mergers? Analysis of Developed versus Developing Countries' in Richard Whish and Christopher Townley (eds), *New Competition Jurisdictions: Shaping Policies and Building Institutions* (Edward Elgar 2012) 234.

<sup>81</sup>Ibid. The compliance costs in different countries faced by merging parties involved in a cross-border transaction is also recognised in Dimitris Liakopoulos and Armando Marsilia, *The Regulation of Transnational Mergers in International and European Law* (Martinus Nijhoff 2010) 3.

<sup>82</sup>PwC, 'A Tax on Mergers? Surveying the Time and Costs to Business of Multi-Jurisdictional Merger Reviews', A Study Commissioned by the International Bar Association and the American Bar Association (June 2003) <[http://www.globalcompetitionforum.org/PWC\\_Merger\\_Cost\\_Study\\_Report\\_Final\\_2003\\_Jun.pdf](http://www.globalcompetitionforum.org/PWC_Merger_Cost_Study_Report_Final_2003_Jun.pdf)> accessed 15 June 2017.

<sup>83</sup>Marco Botta, *Merger Control Regimes in Emerging Economies: A Case Study on Brazil and Argentina* (Wolters Kluwer 2011) 342.

<sup>84</sup>OECD, 'Policy Roundtables Cross-Border Merger Control: Challenges for Developing and Emerging Economies' (2011) 10 <<http://www.oecd.org/daf/competition/mergers/50114086.pdf>> accessed 15 June 2017.

<sup>85</sup>Marco Botta, *Merger Control Regimes in Emerging Economies: A Case Study on Brazil and Argentina* (Wolters Kluwer 2011) 342.

<sup>86</sup>See Sect. 4.5.1 which discusses the dominant presence of subsidiaries of MTGs in the three main markets, fixed-line, mobile and internet.

### ***5.5.1 Regulatory Framework for Cross-Border Merger Control in the Telecommunications Sector***

Telecommunications merger control in Uganda is enforced by the telecommunications regulator, UCC and governed by the Communications Act, Act 1 of 2013 (the Communications Act) and the sector-specific competition rules, the Fair Competition Regulations 2004, SI 2005/24 (Fair Competition Regulations). The draft Competition Bill of 2004 (draft Competition Bill) also contains provisions on merger control.

Furthermore, since Uganda is a member of the East African Community,<sup>87</sup> the East African Community Competition Act of 2006 (EAC Competition Act) which applies to all economic activities and sectors having cross-border effect is relevant. The supranational competition legislation with a supranational competition authority regulating activities of cross-border effect is particularly important in light of the fact that all the subsidiaries of MTGs operating in Uganda are also operating in other EAC member states.<sup>88</sup> Uganda is also party to Common Market for Eastern and Southern Africa (COMESA) which provides Competition Regulations of 2004 which are binding for all member states. Just as the case with the East African Community Competition Act, it applies to anti-competitive practices of a regional dimension. The COMESA Competition Regulations of 2004 may also contribute to the effective regulation of the cross-border conduct of MTGs.

The discussion of the regulatory framework for cross-border mergers and acquisitions is divided into two parts. The first part focuses solely on Uganda's national legislation and the second part focuses on the role of supranational competition legislation. In order to properly assess the adequacy of Uganda's merger control regime, a comparison is made, where relevant, with the legislation of countries with national competition.

#### **5.5.1.1 Scope of Application**

##### **5.5.1.1.1 Who Is Subject to Merger Control?**

The first issue addressed is whether the merger control regime covers cross-border mergers. The Communications Act prohibits operators from engaging in any activities which have or are intended or are likely to have the effect of unfairly preventing, restricting or distorting competition in the communications markets in

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<sup>87</sup>A regional group aimed at economic integration made up of Burundi, Kenya, Rwanda, South Sudan, Tanzania, and Uganda.

<sup>88</sup>Examples of MNCS telecommunications operators in more than one member state of the EAC in 2015: MTN: Rwanda and Uganda; Airtel: Kenya, Tanzania, Uganda; Orange: Kenya and Uganda, Tigo: Rwanda and Tanzania; and Vodafone: Tanzania and Kenya.

Uganda.<sup>89</sup> One activity specifically identified by the Communications Act is the conclusion of anti-competitive mergers and acquisitions. The Communications Act prohibits acts or omissions effecting anti-competitive changes in the market structure, particularly anti-competitive mergers and acquisitions in the communications sector.<sup>90</sup> The Fair Competition Regulations that implement the Communications Act reiterate the prohibition of transactions affecting the market structure having anti-competitive effects.<sup>91</sup>

The Communications Act identifies the perpetrator of the anti-competitive behaviour as an operator. The Act defines an operator as a person licensed to provide a communication service.<sup>92</sup> Based on this definition, UCC's merger control powers clearly cover the mergers and acquisitions concluded by operators licensed to provide telecommunications services in Uganda. However, cross-border mergers tend to be undertaken by MNCs without the direct participation of their subsidiaries. The issue then arises whether a merger involving parties not licensed by UCC but resulting in anti-competitive changes in a given market structure in Uganda falls within the scope of the Communications Act.

To the extent that a cross-border merger has to be implemented through a subsidiary operator in Uganda, the merger falls within Uganda's telecommunications merger control regime. The Fair Competition Regulations provide that operators seeking to undergo a restructuring or consolidation by way of a merger or acquisition must obtain UCC's approval before implementation.<sup>93</sup> Therefore, any cross-border merger and acquisition undertaken outside Uganda's borders will still need approval from UCC.

Whether this grants the UCC sufficient powers over cross-border mergers is questionable, particularly when one contrasts the sector-specific rules with general competition law principles that link scope of application to the effects doctrine. Since a cross-border merger concluded by MTGs having business operations in Uganda may have relevant effects in the telecommunications market in Uganda, the UCC should be able to apply the merger control law to the mergers concluded outside Uganda. That is, provided the cross-border merger has or is likely to affect competition in a given market in a country, the provisions of the national competition law apply. This principle is reflected in Uganda's draft Competition Bill which applies to all mergers and acquisitions that are likely to cause any adverse effect on competition within the relevant market in Uganda, provided they meet the prescribed merger thresholds.<sup>94</sup> The Fair Competition Regulations provide that its provisions shall to the extent practicable be based on the principles of competition law and practice relating to the prohibitions of, *inter alia*, anti-competitive mergers

<sup>89</sup>Communications Act 2013, s 53(1).

<sup>90</sup>Ibid, s 53(2)(c).

<sup>91</sup>Fair Competition Regulations 2005, SI 2005/24, reg 6(5).

<sup>92</sup>Communications Acts 2013, s 2.

<sup>93</sup>Fair Competition Regulations 2005, SI 2005/24, reg 6(6).

<sup>94</sup>Draft Competition Bill 2004, cl 46(1).

and acquisitions.<sup>95</sup> Since competition law focuses on the effect of a given conduct on competition in a relevant market, it may be argued that the Fair Competition Regulations merger control provisions apply to conduct of parties outside Uganda that affect the telecommunications market structure in Uganda.

### **5.5.1.2 Which Mergers Are Subject to Merger Review?**

According to Fair Competition Regulations all mergers by an operator that involve restructuring, consolidation, amalgamation, re-arrangement of its structure, control, among others, can only be concluded following approval by UCC.<sup>96</sup> Most countries tend to rely on financial or market thresholds to limit the reach of merger review. Merger thresholds are considered an important means of identifying mergers subject to review.<sup>97</sup>

#### **5.5.1.2.1 Merger Thresholds**

In Uganda, merger thresholds are provided in the draft Competition Bill which combines the criteria of financial thresholds and market share.<sup>98</sup> Providing a clearly defined scope of the mergers that qualify for review is very important as subjecting all mergers to review does not promote efficient regulation. Not all mergers and acquisitions are anti-competitive; some are neutral while others are pro-competitive. A cross-border merger may have an adverse effect on competition in one country and negligible consequences in another country. A merger control regime that does not provide some guidelines for expediently weeding out the anti-competitive mergers can hamper the UCC's ability to fulfil its mandate due to merger notification overload. Additionally, it is important to ensure that large multinational corporations are not subjected to multiple notification filings for mergers of a small scale. Merger control might discourage FDI in the form of mergers and acquisitions because of length merger review processes and high administrative costs.<sup>99</sup> Therefore, there must be a mechanism in place to enable UCC identify those mergers that can potentially have anti-competitive effect in Uganda's telecommunications sector.

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<sup>95</sup>Fair Competition Regulations 2005, SI 2005/24, reg 5.

<sup>96</sup>Ibid, reg 6(6).

<sup>97</sup>ICN Merger Working Group, ‘Setting Notification Thresholds for Merger Review’ (April 2008) <<http://www.internationalcompetitionnetwork.org/uploads/library/doc326.pdf>> accessed 15 June 2017.

<sup>98</sup>Draft Competition Bill, cl. 46(1) and (2).

<sup>99</sup>Marco Botta, *Merger Control Regimes in Emerging Economies: A Case Study on Brazil and Argentina* (Wolters Kluwer 2011) 342.

One such mechanism already highlighted is the use of merger thresholds. The European Commission has acknowledged the importance of turnover thresholds as an effective means of identifying cases of EU relevance.<sup>100</sup> As previously mentioned, in Uganda, both financial and market share thresholds are to be applied.<sup>101</sup> According to the draft Competition Bill, the market share threshold is 35% market share post-merger or acquisition.<sup>102</sup> Reliance on a market share threshold has the advantage of excluding from the scope of jurisdiction all those transactions that are unlikely to pose any serious threats to competition, as the merged entity may not have considerable market share.<sup>103</sup> However, it might lead to legal uncertainty, since it entails the definition of relevant markets affected by the merger and the assessment of market shares of the merging parties.<sup>104</sup> The assessment is a subjective, fact-intensive exercise, which can be difficult.<sup>105</sup> Legal certainty is particularly crucial for mergers subject to multi-jurisdictional review.

More common is the adoption of financial thresholds. The South Africa Competition Act provides for three categories of mergers, each falling within a distinct financial threshold.<sup>106</sup> Small mergers are not subject to review by the South Africa Competition Commission while intermediate and large mergers must be reviewed.<sup>107</sup> The Competition Commission provides for financial thresholds falling into two categories: lower and higher thresholds.<sup>108</sup> Proposed mergers and acquisitions, with a value equalling or exceeding South African Rand 560 million (US\$ 41.35 million), calculated by either combining the annual turnover of both firms or their assets), and where additionally the annual turnover or asset value of the transferred or target firm is at least South African Rand 80 million, are subject to review by the Competition Commission.<sup>109</sup> This is the lower financial threshold. The higher financial threshold relates to proposed mergers and acquisitions, whereby the combined annual turnover or assets of both the acquiring and transferred or target firms are valued at or above South African Rand 6.6 billion

<sup>100</sup>Commission, ‘Mergers: Merger Regulation Contributes to More Efficient Merger Control in EU’ Press Release 18 June 2009 IP/09/963. The turnover threshold is articulated in Article 5 of the Merger Regulation.

<sup>101</sup>Draft Competition Bill, cl 46(1) and (2).

<sup>102</sup>Ibid, cl 46 proposed new clauses para. 1.

<sup>103</sup>Dimitris Liakopoulos and Armando Marsilia, *The Regulation of Transnational Mergers in International and European Law* (Martinus Nijhoff Publishers 2010) 104.

<sup>104</sup>Ibid.

<sup>105</sup>Ibid.

<sup>106</sup>South Africa Competition Act 1998, s 11(5).

<sup>107</sup>Ibid, s 13 (1).

<sup>108</sup>South Africa Competition Commission, ‘Merger Thresholds: When Must the Competition Commission be Notified of a Merger?’ <<http://www.compcom.co.za/merger-thresholds/>> accessed 15 June 2017 (with is the latest update of merger thresholds on 1 April, 2009).

<sup>109</sup>Ibid, these mergers are categorised as intermediate mergers which are defined in the South Africa Competition Act, section 11 (5), as a merger or proposed merger with a value between the lower and higher threshold.

(approximately US\$487.4 million), and the annual turnover or asset value of the transferred or target firm is at least R190 million (US\$14.03 million).<sup>110</sup> In Zambia, following the enactment of the Competition and Consumer Protection Act, the merger thresholds in the Competition and Fair Trading Act of 1994 were rendered obsolete. Under the Competition and Consumer Protection Act, mergers that fall within the merger threshold are subject to review by the Zambia Competition and Consumer Protection Commission (ZCCPC).<sup>111</sup> In 2012, ZCCPC published merger thresholds, which mandate merger review only if the combined turnover or assets (whichever is the higher) of the merging parties exceeds Zambian Kwacha 9 billion (US\$ 1.7 million).<sup>112</sup>

The adoption of financial thresholds, especially if they are calculated globally, may pose problems for cross-border merger parties seeking to implement the transaction.<sup>113</sup> There is the risk that a country may assert its jurisdiction on a merger that, though it meets the financial thresholds of a country, causes only negligible competition problems in the market of that country.<sup>114</sup> This might arguably be the case if the financial thresholds provided for in the Uganda's draft Competition Bill are used.

Financial thresholds in the draft Competition Bill are based on the amount of turnover generated by or the value of the assets of the merging parties worldwide or domestically. The financial thresholds are comparatively low in the draft Competition Bill.<sup>115</sup> For example, the draft Competition Bill requires the Competition Commission to review acquisitions where the combined assets worldwide of the acquiring entity and targeted entity exceed Uganda shillings 10 million (approximately US\$ 3000) or their combined turnover worldwide exceeds Uganda shillings 30 million (approximately US\$ 9000).<sup>116</sup> The draft Competition Bill also provides financial thresholds linked to assets of the group which the targeted firm will belong to the group post merger. The Bill lists a number of financial thresholds including: owning assets in Uganda exceeding Uganda Shillings 40 million (US\$ 11,500) or

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<sup>110</sup>South Africa Competition Commission, ‘Merger Thresholds: When Must the Competition Commission be Notified of a Merger?’ <<http://www.compcop.co.za/merger-thresholds/>> accessed 15 June 2017. Mergers falling within this financial threshold are large mergers under the South Africa Competition Act, section 11(5) which defines a large merger as a merger with a value at or above the higher threshold.

<sup>111</sup>Zambia Competition and Consumer Protection Act 2010, s 25 (2).

<sup>112</sup>Charles Carter and Kayla de Oliveira, ‘New Merger Notification Thresholds to be Introduced’ <<http://www.howwemadeitinafrica.com/new-merger-notification-thresholds-to-be-introduced-in-zambia/13080/>> accessed 15 June 2017.

<sup>113</sup>Dimitris Liakopoulos and Armando Marsilia, *The Regulation of Transnational Mergers in International and European Law* (Martinus Nijhoff Publishers 2010) 104.

<sup>114</sup>Ibid.

<sup>115</sup>For example, if compared to the thresholds in Zambia which has an economy size similar to Uganda's. According to World Bank data, Zambia had a GDP of US\$20.59 billion in 2012 close to Uganda's GDP of US\$ 20.03 billion.

<sup>116</sup>Draft Competition Bill, cl 46(2)(a).

turnover exceeding Uganda Shillings 120 million (US\$ 35,000); or having worldwide assets exceeding US dollars one billion or a turnover exceeding half a billion US dollars. Therefore, the financial thresholds in the draft Competition Bill should be reviewed in order to ensure that they do not hamper the flow of FDI through cross-border mergers once enacted.

It is also important that the merger regime provides for flexible thresholds for merger notification in order to ensure that the most appropriate turnover threshold is prescribed over time. This is the case in South Africa, where South Africa Competition Commission has been able to modify the merger threshold to reflect the economic situation in the country.<sup>117</sup>

It is also worth mentioning that some countries apply other criteria in addition to merger thresholds. For example, in Zambia, the Competition and Consumer Protection Act grants ZCCPC the power to review mergers falling below the prescribed merger thresholds under certain circumstances.<sup>118</sup> One such circumstance, of particular relevance to cross-border mergers, is where a merger is concluded outside Zambia and has consequences in Zambia that require further consideration.<sup>119</sup>

The discussion above shows that there are different criteria for determining whether a merger is subject to review by a competition authority. The Fair Competition Regulations should include criteria to allow for efficient regulation of cross-border mergers. As has been observed with regard to cross-border merger regulation, an effective merger control regime requires a comprehensive mechanism for merger regulation.<sup>120</sup> Basic provisions in the legislation are inadequate for efficiently controlling mergers.

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<sup>117</sup>Prior to the publication of the current merger thresholds by the South Africa Competition Commission on April 1 2009, its merger thresholds determination of the February 2001 applied. The lower threshold was South Africa Rand 30 million (US\$ 2.2 million) for target firms assets or turnover up from South Africa Rand 5 million (US\$ 369,566) and for merging parties combined assets or turnover South Africa Rand 200 million US\$ (14.7 million) up from South Africa Rand 50 million (US\$ 3.6 million). The higher threshold has remained unchanged at South Africa Rand 100 million for target firms assets or turnover 100 million (US\$ 7.3 million) and South Africa Rand 3.6 million (US\$ 258.6 million) for merging parties combined assets or turnover. This is according to South Africa Competition Commission and Competition Tribunal, 'Ten Years of Enforcement by the South Africa Competition Authorities: Unleashing Rivalry 1999-2009' <<http://www.compcom.co.za/assets/Uploads/AttachedFiles/MyDocuments/10year.pdf>> accessed 15 June 2017.

<sup>118</sup>Zambia Competition and Consumer Protection Act 2010, s 27.

<sup>119</sup>Ibid, s 27 (1)(d).

<sup>120</sup>OECD, 'Policy Roundtables Cross-Border Merger Control: Challenges for Developing and Emerging Economies' (2011) 10 <<http://www.oecd.org/daf/competition/mergers/50114086.pdf>> accessed 15 June 2017.

### 5.5.1.2.2 Defining Business Transactions: The Concept of Combinations/Concentrations

The use of merger thresholds is very critical for the purpose of effectively identifying transactions with the potential to adversely affect competition. However, it is also important to clearly define the business transactions that warrant regulation.

The Fair Competition Regulations seeks to do so as it applies only to those operations that bring about a lasting change in the structure of the telecommunications operator concerned. According the Fair Competition Regulations mergers, joint ventures, acquisitions, take-overs or consolidations that result in “...a restructuring, consolidation, amalgamation, re-arrangement or re-composition of a telecommunications operator’s structure, composition, management, control, ownership or shareholding ...” are subject to review by the UCC.<sup>121</sup>

The draft Competition Bill also identifies the ‘combinations’ that qualify for review. Any acquisitions where:

- (a) the parties to the acquisition, or the group to which the entity in which the shares, assets, or voters rights, will lead to worldwide assets above a specific financial threshold,<sup>122</sup>
- (b) acquiring of control by a person over an enterprise where that person has already direct or indirect control over another enterprise engaged in production, distribution or trading of the same or substitutable goods or provision of the same or substitutable service,
- (c) the enterprise over which control has been acquired together with the enterprise over which the acquirer already has direct or indirect control, jointly, would have assets worldwide above a specific financial threshold,<sup>123</sup>
- (d) the group to which the enterprise over which control has been acquired, together with the enterprise over which the acquirer already has direct or indirect control jointly belong would have assets in Uganda or worldwide above a specific financial threshold,<sup>124</sup>

The draft Competition Bill also applies to mergers, amalgamations and joint ventures that would be above a specific financial threshold as defined in clause 46 (2)(b) and (c).

It is worth highlighting the concept of concentration as applied in the European Union. The Merger Regulation applies to any concentration deemed to have a community dimension. The concept of concentration includes:

- (a) The merger of two or more previously independent undertakings;
- (b) The acquisition of direct or indirect control of the whole or parts of one or more other undertakings; or
- (c) The establishment of a joint venture where this involves the acquisition of joint control of a full-function joint venture undertaking.

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<sup>121</sup>Fair Competition Regulations 2005, SI 2005/24, reg 6(6).

<sup>122</sup>The financial thresholds are defined in Clause 46(2)(a)(i) and (ii).

<sup>123</sup>The financial thresholds are defined in Clause 46 (2)(a)(iv).

<sup>124</sup>The financial thresholds are defined in Clause 46 (2)(a)(v).

The concept of concentration as provided for in the EU Merger Regulation undoubtedly offers a more concrete definition of business transactions subject to merger review in comparison to the legislation in Uganda. The draft Competition Bill provides a clear definition of acquisitions but is less elaborate with regard to mergers and joint ventures. In order to further enhance merger regulation, definition of mergers and joint ventures should be incorporated into Uganda's legislation on merger control. The Fair Competition Regulations in particular should be amended to provide definitions of acquisitions, mergers, and joint ventures.

### 5.5.1.3 Notification

The act of merging parties notifying the relevant competition authority of their intention to conclude a merger is an important aspect of a merger control regime. Notification may be voluntary or mandatory. However, it has been observed that there is a tendency for merging parties to an international merger to conclude the merger without notifying authorities affected by the consolidation.<sup>125</sup> The risk is greater in jurisdictions with voluntary merger notifications systems.<sup>126</sup> The high risk of non-notification in developing countries points to the need for mandatory notification as a means of ensuring efficient regulation. Mandatory notification is generally seen as necessary to ensure effective merger control.<sup>127</sup>

The Fair Competition Regulations provide for mandatory pre-merger notification since telecommunications mergers and acquisitions are subject to approval by the UCC prior to implementation.<sup>128</sup> It has been observed that pre-merger notification is preferred to post merger notification since the latter creates compliance uncertainty and divesting a merger is often extremely difficult and exceptionally costly.<sup>129</sup> The mandatory pre-merger notification under the Fair Competition Regulations is important as it relieves the UCC of the additional burden of collecting the necessary information under a voluntary merger notification regime.<sup>130</sup>

<sup>125</sup>UNCTAD, 'Cross-Border Anti-competitive Practices: The Challenges for Developing Countries and Economies in Transition', Note by the UNCTAD Secretariat (April 2012) 14 <[http://unctad.org/meetings/en/SessionalDocuments/cicld16\\_en.pdf](http://unctad.org/meetings/en/SessionalDocuments/cicld16_en.pdf)> accessed 15 June 2017.

<sup>126</sup>Ibid.

<sup>127</sup>For example, the EU Council Regulation (EC) 139/2004 of January 2004 on the control of concentrations between undertakings (the EU Merger Regulation), in recital 34, justifies mandatory notification as necessary in order to ensure effective control.

<sup>128</sup>Fair Competition Regulations 2005, SI 2005/24, reg 6(6).

<sup>129</sup>Sandra Marco Colino, *Competition Law of the EU and UK* (7th edn, Oxford University Press 2011) 353.

<sup>130</sup>Evaluating a merger requires access to a substantial amount of information which is usually not available in the public domain. Voluntary merger notification makes it more challenging for an authority to get information. As explained in Martyn D Taylor and Mallesons Stephen Jacques, *International Competition Law: A New Dimension for the WTO?* (Cambridge University Press

To promote legal certainty, it is important to provide clear circumstances that trigger the notification obligation. The Fair Competition Regulations are silent in this regard however, in the draft Competition Bill; the pre-merger notification obligation is triggered when<sup>131</sup>:

- (a) the Board of Directors of the respective companies accept a proposal of merger,
- (b) negotiations of an agreement for acquisition or acquiring control have been concluded,
- (c) the execution of a joint venture agreement, shareholder agreement or technology agreement, in relation to any joint venture.

Additionally, the draft Competition Bill provides a 7 day time limit within which to fulfil the notification obligation. A similar provision can be found in competition legislation in other jurisdictions. At the European Union level, the EU Merger Regulation also sets out the circumstances that trigger the obligation to notify. The EU Merger Regulation demands notification after the conclusion of the merger agreements but before the implementation of the transaction.<sup>132</sup>

However, it may not suffice to merely provide for the pre-merger notification obligation, the law should also motivate MTGs to observe the pre-merger notification requirement. As already noted, the risk of non-notification by merging parties to a cross-border merger is greater in developing countries.<sup>133</sup> It has been observed that it has become common practice for the merging parties to implement the cross-border merger once approval has been granted by the authorities in priority jurisdictions, for example, the European Commission and FTC in the United States.<sup>134</sup> Therefore, it is probable that cross-border mergers affecting the market structure in a given telecommunications market in Uganda may be implemented without waiting for UCC's approval.

Furthermore, even where merging parties provide pre-merger notification, they may not notify authorities in developing countries in a timely manner. The South Africa Competition Commission has pointed out how major jurisdictions

2006) 86, while voluntary pre-merger notification places the burden of compliance on merging parties rather than the competition authorities, such a regime reduces the flow of information to competition authorities.

<sup>131</sup>The Draft Competition Bill 2004, cl 45(1).

<sup>132</sup>The EU Council Regulation (EC) 139/2004 of January 2004 on the control of concentrations between undertakings, Art 4 (1).

<sup>133</sup>UNCTAD, 'Cross-Border Anti-competitive Practices: The Challenges for Developing Countries and Economies in Transition', Note by the UNCTAD Secretariat (April 2012) 14 <[http://unctad.org/meetings/en/SessionalDocuments/cicld16\\_en.pdf](http://unctad.org/meetings/en/SessionalDocuments/cicld16_en.pdf)> accessed 15 June 2017.

<sup>134</sup>Marco Botta, *Merger Control Regimes in Emerging Economies: A Case Study on Brazil and Argentina* (Wolters Kluwer 2011) 269 cites a number of examples in Brazil, the notable one being *Owens Corning-Saint, Compagnie de Saint Gobain. Relatório*, AC n.08012.001885/2007-11. In that case the concentration was notified to the Brazilian competition authorities on 13 March 2007, a few weeks after the signature of the acquisition agreement was concluded. The concentration was also notified to the European Commission and the US FTC, which released their decisions on the same day, on 26 October 2007. After having received the authorisation from the European Commission and FTC, the merging parties implemented the concentration on 1 November, 2007, even though the merger review process was still ongoing in Brazil.

such as Europe Union and the United States are prioritised by merging parties with attention given to non-priority jurisdictions at later stages.<sup>135</sup> According to the South Africa Competition Commission, merger filings are submitted late and enormous pressure placed on the jurisdiction to finalise its analysis to ‘fit in’ with the corporate time table.<sup>136</sup> This makes it difficult for competition authorities in developing countries to effectively assess mergers.

One solution adopted to incentivise merging parties to notify authorities in a timely manner is imposition of a financial penalty. Under the Fair Competition Regulations, a financial penalty does not automatically follow from a failure to provide notice of a proposed merger; rather it is one of the various remedies that the UCC may apply if it finds a given conduct contravenes the law. Furthermore, the penalty is imposed on a licensed operator in the context of the cross-border mergers; it would be the local subsidiary that has been granted a license to operate in the country. The targeted parent company (the multinational telecommunications group) and the acquiring company are not directly liable. This is contrasted with the draft Competition Bill which specifically provides a financial penalty for failure by parties to the merger to provide notice of a proposed merger or acquisition.<sup>137</sup> Under this provision of the draft Competition Bill, MTGs may be held accountable for failing to observe the national merger control provisions. Similarly, in Zambia, the Competition and Consumer Protection Act provides for a financial penalty for implementing a merger prior to review by the ZCCPC.<sup>138</sup> The Act therefore grants ZCCPC powers to make the cross-border merging parties financially liable for not acquiring the consent. The EU Merger Regulation also provides a financial penalty if parties implement a consolidation transaction of a European Union dimension without notifying the European Commission of the proposed merger.<sup>139</sup>

Incentivising cross-border merger parties to notify authorities in developing countries is particularly important because it would be very difficult to enforce competition legislation against the MTGs for failing to observe the notification obligation. Reliance on other structural remedies is greatly curtailed once a cross-border merger is implemented.<sup>140</sup> Furthermore, due to the asymmetry of power between MTGs and national authorities it is less likely that the national authority enforce merger control legislation by preventing implementation of the merger within its jurisdiction.<sup>141</sup>

<sup>135</sup>OECD, ‘Policy Roundtables Cross-Border Merger Control: Challenges for Developing and Emerging Economies’ (2011) 258 <<http://www.oecd.org/daf/competition/mergers/50114086.pdf>> accessed 15 June 2017.

<sup>136</sup>Ibid.

<sup>137</sup>Draft Competition Bill, cl 39.

<sup>138</sup>Zambia Competition and Consumer Protection Act 2010, s 37(a).

<sup>139</sup>EU Council Regulation (EC) 139/2004 of January 2004 on the control of concentrations between undertakings, Art14 (2)(a).

<sup>140</sup>Marco Botta, *Merger Control Regimes in Emerging Economies: A Case Study on Brazil and Argentina* (Wolters Kluwer 2011) 343.

<sup>141</sup>Michal Gal, ‘Antitrust in a Globalized Economy: The Unique Enforcement Challenges Faced by Small and Developing Jurisdictions’ (2010) 33(2) Fordham International Journals 1, 3.

### 5.5.1.4 Defining an Anti-Competitive Merger

The most important aspect of the merger control regime is the assessment of a merger in order to determine whether the merger is anti-competitive. The Fair Competition Regulations provide as a first step for the definition of the relevant market.<sup>142</sup> The next step is to assess the impact of a merger on competition in the relevant market.<sup>143</sup> According to the Fair Competition Regulations, the test is whether the mergers and acquisitions have an appreciable effect on competition in the communications market.<sup>144</sup> However, there is no guidance either in the legislation or case law as to what “having an appreciable effect on competition in the communications market” entails. In this regard, the provisions of the draft Competition Bill are less ambiguous. Under the draft Competition Bill, the key issue is whether the merger has the effect or is likely to have an adverse effect on competition in a market.<sup>145</sup> While the Bill does not define the phrase “has the effect or is likely to have an adverse effect on competition in a market” it provides several factors for the Competition Commission to consider when determining whether a merger is anti-competitive.<sup>146</sup> Factors include: the extent of barriers to entry to the market; the level of combination in the market; the degree of countervailing power in the market; the extent of effective competition remaining in the market and the market share of parties involved in the combination; individually and as a combination.

A similar approach is adopted in South Africa and Zambia where the substantial lessening of competition test is applied. In Zambia, ZCCPC must first carry out a market assessment of the proposed merger and then assess whether the merger is likely to prevent or substantially lessen competition in a market.<sup>147</sup>

In South Africa, the key test is whether the merger is likely to lead to a substantial prevention or lessening of competition and, if so, whether there are efficiencies that outweigh the anti-competitive effects of the merger.<sup>148</sup> For purposes of determining whether the merger substantially lessens competition, the Competition Commission may take into account several factors including: ease of entry into the market; the level and trends of concentration; and history of collusion; and degree of countervailing market.<sup>149</sup> The Competition Commission and Competition Tribunal have applied this test to telecommunications mergers. One of the

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<sup>142</sup>Fair Competition Regulations 2005, SI 2005/24, sch, para 2(a).

<sup>143</sup>This is based on the fact that Communications Act, section 53(2) prohibits acts or omissions effecting anti-competitive changes in the market structure, particularly anti-competitive mergers and acquisitions in the communications sector.

<sup>144</sup>Fair Competition Regulations 2005, SI 2005/24, reg 6(5).

<sup>145</sup>Draft Competition Bill, cl 46(1).

<sup>146</sup>Ibid, cl 46(6).

<sup>147</sup>Zambia Competition and Consumer Protection Act 2010, s 30.

<sup>148</sup>South Africa Competition Act 1998, s 12A.

<sup>149</sup>Ibid, s 12A (2).

most notable cases involved the review of the Vodacom Group/Vodafone Group merger in which Vodafone Group sought to acquire controlling shares in Vodacom.<sup>150</sup> Both the Competition Commission and the Competition Tribunal approved the merger unconditionally on the basis that it was not likely to result in any substantial prevention or lessening of competition.<sup>151</sup> The Competition Tribunal cleared the merger on the basis that it did not raise significant competition concerns particularly as Vodafone did not compete in any of the product markets in South Africa.<sup>152</sup> Therefore, there were no horizontal effects stemming from the merger.

### 5.5.1.5 Public Interest Considerations

While assessment of mergers centres on whether they have or will have a negative effect on competition in the affected market, the competition laws in South Africa and Zambia additionally provide for public interest considerations. The competition legislation in both countries permits the national competition authority to approve or deny the clearing of a merger on public interest grounds. The public interest considerations are incorporated in the competition legislation of a number of countries in Sub-Saharan Africa.<sup>153</sup>

The Zambia Competition and Consumer Protection Act, permits the ZCCPC to take into account any factor which bears upon the public interest in the proposed merger in Zambia, including the extent to which benefits to the public stemming from the proposed merger outweigh the detriment to competition; the proposed merger is likely to promote technical or economic progress; the proposed merger may enhance competitiveness; or advance or protect the interests of micro and small business enterprises; and the proposed merger affects the ability of national industries to compete in international markets.<sup>154</sup>

The public interest considerations for purposes of merger assessment has garnered the most interest in South Africa, particularly because it has been applied to assessment of mergers involving foreign interests. In the South Africa Competition Act, public interest considerations relate to the effect of the merger on: a particular industrial sector or region, employment, the ability of small businesses or firms

<sup>150</sup>See details of the merger in Sect. 5.1.4 of this chapter.

<sup>151</sup>South Africa Competition Commission, ‘Competition Commission Approves Vodacom/Vodafone Merger’ 16 February, 2009, Press Statement; and Case No. 135/LM/Dec *In the matter between Vodafone Group Plc v Vodacom Group (Pty) Ltd* [2009] ZACT 20, respectively.

<sup>152</sup>Case No. 135/LM/Dec *In the matter between Vodafone Group Plc v Vodacom Group (Pty) Ltd* [2009] ZACT 20, para 9.

<sup>153</sup>Botswana, Competition Act 2009, s 59(2)(e) and (f), Malawi, Competition and Fair Trading Act, Act 1998, s38(1)(b)(vi) and (vii), Namibia Competition Act of 2003, s 47(2)(c), (e) and (f), Swaziland, Competition Act 2007, s 17(2)(h)(i), (ii), and (iii), Tanzania Fair Competition Act 2003, s 13(1)(b)(vi).

<sup>154</sup>Zambia Competition and Consumer Protection Act 2010, s 31.

controlled or owned by historically disadvantaged persons, to become competitive, and the ability of national industries to compete in international markets.<sup>155</sup>

The public interest considerations in merger control has been justified on the ground that they weigh more heavily in developing countries than they do in developed countries.<sup>156</sup> One reason is that there is a greater role for industrial policy, for targeting support at strategically selected sectors or interest groups, in developing than in developed countries.<sup>157</sup> The other reason is developing country competition authorities are still engaged in a very basic struggle to achieve credibility and legitimacy in their countries therefore, competition authorities need to strike a balance between competition and public interest to ensure their credibility and legitimacy does not come under fire.<sup>158</sup>

As already mentioned, the public interest considerations have been applied to a number of large mergers involving a foreign interest in South Africa. Most notable is the Walmart/Massmart merger. Global retailer Walmart sought to acquire 51% of Massmart, a local wholesaler and retailer of grocery, liquor, and general merchandise. The Competition Commission recommended the unconditional approval of the merger.<sup>159</sup> Before the Competition Tribunal, the Competition Commission's recommendation was challenged on public interest grounds, particularly, effects that the merger would have on employment, distribution, and the retail sector at large.<sup>160</sup> The Competition Tribunal approved the merger on 3 May 2011 subject to several conditions including a condition that the merged entity had to establish a programme aimed exclusively at the development of local South African suppliers funded in a fixed amount of South Africa Rand 100 million (approximately US\$ 7.4 million) within 3 years.<sup>161</sup> That condition was based on public interest considerations and not competition considerations.

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<sup>155</sup>South Africa Competition Act 1998, s 12A (3).

<sup>156</sup>David Lewis, 'The Role of Public Interest in Merger Valuation' (International Competition Network, First Annual Conference, Naples, September 2002) 2. <<http://www.comptrib.co.za/assets/Uploads/Speeches/lewis5.pdf>> accessed 15 June 2017.

<sup>157</sup>Ibid.

<sup>158</sup>Ibid.

<sup>159</sup>Case No. 75/ LM/Nov.10 *In the matter between Wal-Mart Stores Inc and Massmart Holdings Limited* [2011] ZACT.

<sup>160</sup>Ibid, para 18.

<sup>161</sup>Case No. 75/ LM/Nov.10 *In the matter between Wal-Mart Stores Inc and Massmart Holdings Limited* [2011] ZACT 41 (CT). The ruling of the Competition Tribunal was appealed before the Competition Appeal Court by the Government of South Africa, Case No 111/CAC/Jun 1 *In the matter between the Minister of Economic Development, and others v the Competition Tribunal, the Competition Commission South Africa, Wal-Mart Stores Inc., Massmart Holdings Ltd, and others* [2012] ZACAC 2, published under <<http://www.saflii.org/za/cases/ZACAC/2012/2.html>> accessed 15 June 2017. The Competition Appeal Court upheld the Competition Tribunal's ruling. However, the court acknowledged that significant public interest concerns arose from the merger observing that the introduction of Wal-mart, the largest retailer in the world, to the South African economy could pose significant challenges for participation of South African producers in global value chains which is dominated by Wal-mart.

It is worth noting that while the Walmart/Massmart merger was a transaction concluded in South Africa, it had cross-border effect since Massmart has business operations throughout Sub-Saharan Africa.<sup>162</sup> It is for this reason that the Namibia Competition Commission reviewed the merger. The Commission concluded that since Walmart has no operations in Namibia at the time, there was no competition between the merging parties.<sup>163</sup> However, the Commission approved the merger between Walmart and Massmart subject to four conditions which included public interest considerations.<sup>164</sup> The Commission decreed that the merger would not result in any job losses in Namibia, would not harm small, micro and medium enterprises and would promote a “greater spread of ownership” among black Namibians.

Walmart contended that all four conditions were unauthorised by law and invalid and challenged the Commission’s decision in the High Court. The High Court held in favour of Walmart, finding, *inter alia*, that the conditions were vague and set aside the conditions imposed by the Commission.<sup>165</sup> The Commission appealed to the Supreme Court which dismissed Walmart’s suit challenging the Commission’s conditional approval of the merger on the basis that the appeal should rather have been brought before Namibia’s Minister of Trade and Industry.<sup>166</sup> Once the matter was before the Minister of Trade and Industry, he approved the merger subject to refined and specific conditions. One of the conditions was that the merger would not result in retrenchments based on the newly merged entity’s operational requirements in Namibia and resulting from the transaction, for the period of 2 years from the effective date of the transaction.<sup>167</sup>

The experiences in South Africa and Namibia indicate that public interest considerations are increasingly becoming important when assessing large mergers involving foreign interests. This has given rise to concerns about merger control hampering FDI flows in the form of cross-border mergers particularly in South Africa.<sup>168</sup> One major concern is that legal uncertainty generated by public

<sup>162</sup>Wal-mart/Massmart merger had a cross-border dimension with Massmart having business operations Botswana, Ghana, Malawi, Mozambique, Namibia, Nigeria, Tanzania, Uganda, and Zambia.

<sup>163</sup>Notice of Determination by Commission (9 February 2011).

<sup>164</sup>Ibid.

<sup>165</sup>*Wal-Mart Stores Inc v Chairperson of Namibian Competition Commission and Others* (A 61/2011) [2011] NAHC 165.

<sup>166</sup>*Namibia Competition Commission and Another v Wal-Mart Stores Inc.* [2011] NASC 11.

<sup>167</sup>Sun Reporter, ‘Wal-Mart Merger Approved with Conditions’ *Namibian Sun* (Windhoek, 6 March 2012) <<http://www.namibiansun.com/content/national-news/wal-mart-merger-approved-conditions>> accessed 15 June 2017.

<sup>168</sup>The South Africa Competition Tribunal has voiced such concerns in *Shell South Africa (Pty) Ltd v Tepco Petroleum (Pty) Ltd*, 66/LM/Oct01 (22 February 2002) para 58 and 41/LM/Jul10 *Metropolitan Holdings Limited and Momentum Group Ltd Competition Tribunal* [2010] CPLR 337 CT. There have been some articles discussing public interest and its impact on FDI flows, see Romeo Kariga, Jabulani Ngobeni, and Mfundzo Ngobese, ‘Is South Africa a Good Investment Destination? A Relook at Conditions in Merger Case’ (6th Annual Conference on Competition Law, Economics and Policy, Johannesburg, September 2012) <<http://www.compcom.co.za/>>

interest considerations might deter foreign investment.<sup>169</sup> Thus, while public interest considerations are meant to protect developing countries from the negative effects of FDI, in Uganda, priority should be given to developing guidelines for assessing whether a merger is anti-competitive. The telecommunications sector in Uganda is heavily dependent on FDI for its growth, the merger control regime should be enforced in a manner that does not hamper the telecommunications policy that promotes private sector investment and FDI in particular.

#### 5.5.1.6 Merger Review Timeframe

While it is critical for Uganda to have an effective merger control regime for sustainable competition in its telecommunications sector, it is also necessary to ensure that the merger control regime does not hamper FDI flows. The lengthy process of merger review in developing countries is regarded as a potential obstacle to FDI flows into markets and a key argument made against merger control.<sup>170</sup> It is therefore important to have merger reviews conducted expeditiously. One way of guaranteeing this is by not only imposing strict deadlines on merging parties but also on authorities assessing the merger. Specifically, there must be a clear time frame within which the UCC must review a merger. The reason being that merger parties face a high cost in suspending the conclusion of the consolidation transaction in order to await the approval of the relevant national authority.<sup>171</sup> Despite the importance of having a clear merger review timeframe, the merger control provisions in Uganda reveal that neither the Fair

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assets/Uploads/events/SIxth-Annual-Competition-Law-Economics-and-Policy-Conference-in-South-Africa-2012/NewFolder-3/Is-South-Africa-a-good-investment-destination-22.08.2012-F.PDF> accessed 15 June 2017; Marumo Nkomo and Magdaleen van Wyk, ‘Public Interest Criteria in Mergers-Protectionist Measures’ (6th Annual Conference on Competition Law, Economics and Policy, Johannesburg, September 2012) <<http://www.compcop.co.za/assets/Uploads/events/SIxth-Annual-Competition-Law-Economics-and-Policy-Conference-in-South-Africa-2012/NewFolder-3/Publicinterestcriteriainmergersprotectionistmeasuressubmissionformatted1.pdf>> accessed 15 June 2017; and John Oxenham, ‘Balancing Public Interest Merger Considerations Before Sub-Saharan African Competition Jurisdictions with the Quest for Multi-Jurisdictional Merger Control Certainty’ (2012) 9/211 US-China Law Review 211.

<sup>169</sup>Ngobeni and Mfundu Ngobese, ‘Is South Africa a Good Investment Destination? A Relook at Conditions in Merger Case’ (6th Annual Conference on Competition Law, Economics and Policy, Johannesburg, September 2012) <<http://www.compcop.co.za/assets/Uploads/events/SIxth-Annual-Competition-Law-Economics-and-Policy-Conference-in-South-Africa-2012/NewFolder-3/Is-South-Africa-a-good-investment-destination-22.08.2012-F.PDF>> accessed 15 June 2017; and John Oxenham, ‘Balancing Public Interest Merger Considerations Before Sub-Saharan African Competition Jurisdictions with the Quest for Multi-Jurisdictional Merger Control Certainty’ (2012) 9/211 US-China Law Review 211.

<sup>170</sup>Marco Botta, *Merger Control Regimes in Emerging Economies: A Case Study on Brazil and Argentina* (Wolters Kluwer 2011) 342.

<sup>171</sup>Ibid.

Competition Regulations nor the draft Competition Bill provide for said timeframe.

Other countries in Sub-Saharan Africa have merger control regimes that provide a timeframe for review. In Zambia, the ZCCPC must review a merger within period of 90 days from the date of the application for authorisation of the proposed merger.<sup>172</sup> In South Africa, the Competition Commission must review small or large intermediate mergers within 20 business days after pre-merger notification; however, the commission may extend this period by a further 40 business days.<sup>173</sup> Large mergers are to be reviewed within 40 business days.<sup>174</sup> The Commission may apply to the Competition Tribunal for an extension of the time period of not more than 15 business days.<sup>175</sup> With regard to mergers of a European Union dimension, the European Commission must adopt a decision within 25 working days of receipt of notification of a merger.<sup>176</sup> However, if the Commission needs to engage in a more in-depth analysis of the merger's effects on competition, the regulatory body has 90 working days to make a decision.<sup>177</sup>

Having a clear time frame for merger review is undoubtedly important for facilitating expedient merger review. However, having a provision on merger review timeframe is ineffective if national competition authorities do not observe the time frame.

### **5.5.2 *Overview of the Assessment of the Merger Control Provisions for Uganda's Telecommunications Sector***

The analysis of the merger control provisions for the telecommunications sector in Uganda illustrates that the current regime is not adequate for purposes of assessing cross-border mergers for anti-competitive effects. The existing regime provides basic provisions prohibiting anti-competitive mergers and acquisitions but fails to offer comprehensive guidance on how the UCC should implement the provisions.

In particular, there should be detailed guidelines to help identify potentially anti-competitive mergers either through the use of merger thresholds or other criteria. Furthermore, the test for assessing a merger of anti-competitive effects should be defined and a clear timeframe for merger review should be provided.

<sup>172</sup>Zambia Competition and Consumer Protection Act 2010, s 32.

<sup>173</sup>South Africa Competition Act 1998, ss 13(5) and 14(1).

<sup>174</sup>Ibid, s 14A (1)(b).

<sup>175</sup>Ibid, s 14A(2).

<sup>176</sup>European Commission, 'Merger Control Procedure' <[http://ec.europa.eu/competition/mergers/procedures\\_en.html](http://ec.europa.eu/competition/mergers/procedures_en.html)> accessed 15 June 2017.

<sup>177</sup>Ibid.

More importantly, efforts should be made to enact a general competition law. The analysis of the sector-specific competition rules reveals that the provisions are limited, particularly with regard to remedies. In contrast, the draft Competition Bill as an economy-wide competition law provides the competition authority with a broad scope for enforcement of the provisions. Notably, the draft Competition Bill provides for extra-territorial application of its provisions which might be useful for purposes of investigating and prosecuting cross-border practices affecting competition in Uganda's telecommunications sector.

In order to address anti-competitive cross-border mergers, substantive merger control provisions should be accompanied by the capacity of the relevant authority to enforce the provisions. Concerns have been raised about the capacity of competition authorities in developing to enforce their laws in practice, particularly with regard to multinational issues.<sup>178</sup> The experience of South Africa and Zambia shows that effective enforcement of national competition law by developing countries is possible even in the context of cross-border anti-competitive conduct. However, Uganda is starkly different from Zambia and South Africa. It does not have the benefit of having a competition authority with years of experience enforcing competition law. On the contrary, the competition authority in Uganda's telecommunications sector has limited experiencing enforcing the Fair Competition Regulations. In other words, the UCC is still building capacity in the area of competition law enforcement. To illustrate this point, the Celtel International BV/MTC and Zain/Bharti Airtel mergers were approved by the UCC without engaging in a detailed merger review as would have been required under the Fair Competition Regulations.<sup>179</sup>

In order to build enforcement capacity, regional integration incorporating a supranational competition law, and co-operation among competition authorities on a bilateral and multilateral level have been put forward as measures that may enhance the enforcement capacity of national competition authorities in developing countries.<sup>180</sup>

Evaluating a merger requires access to a substantial amount of information that is not readily available in the public domain.<sup>181</sup> Competition authorities in developing countries are likely to face difficulties in collecting information needed to help in cross-border merger reviews.<sup>182</sup> Co-operation among competition

<sup>178</sup> Michal S Gal and Inbal Faibish Wassmer, 'Regional Agreements of Developing Jurisdictions: Unleashing the Potential' in Josef Drexl, et al (eds) *Competition Policy and Regional Integration in Developing Countries* (Edward Elgar 2012) 294.

<sup>179</sup> Email from UCC personnel in the Legal Department to Author (22 March 2013).

<sup>180</sup> Michal S Gal and Inbal Faibish Wassmer, 'Regional Agreements of Developing Jurisdictions: Unleashing the Potential' in Josef Drexl, et al (eds), *Competition Policy and Regional Integration in Developing Countries* (Edward Elgar 2012) 291.

<sup>181</sup> Martyn D Taylor and Mallesons Stephen Jacques, *International Competition Law: A New Dimension for the WTO?* (Cambridge University Press 2006) 86.

<sup>182</sup> UNCTAD, 'Cross-Border Anti-competitive Practices: The Challenges for Developing Countries and Economies in Transition', Note by the UNCTAD Secretariat (April 2012) 15 <<http://>

authorities helps in this particular scenario and thereby fosters effective review of cross-border mergers.

On that basis, the next sub-sections discuss the potential role of regional integration and co-operation among competition authorities in promoting effective regulation of cross-border mergers.

## **5.6 Co-operation Agreements and Cross-Border Enforcement of Competition Law**

In the previous sub-section, it was observed that the UCC may find it challenging to enforce the sector-specific competition rules in order to deal with anti-competitive cross-border mergers. To facilitate effective enforcement of national competition legislation by authorities in developing countries in relation to anti-competitive practices of a cross-border nature, co-operation among authorities has been heavily promoted.<sup>183</sup> The importance of co-operation among competition agencies for purposes of enforcement of national competition legislation with regard to cross-border mergers has been recognised by competition authorities, particularly by competition authorities in developed countries.<sup>184</sup>

With regard to Sub-Saharan Africa, co-operation among competition authorities is seen as a means of enhancing enforcement capacity as a number of authorities are recently established and thus lack sufficient experience in dealing with anti-

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[<unctad.org/meetings/en/SessionalDocuments/ciclpd16\\_en.pdf>](http://unctad.org/meetings/en/SessionalDocuments/ciclpd16_en.pdf) accessed 15 June 2017; and Michal S Gal and Inbal Faibish Wassmer, 'Regional Agreements of Developing Jurisdictions: Unleashing the Potential' in Josef Drexel, et al. (eds), *Competition Policy and Regional Integration in Developing Countries* (Edward Elgar 2012) 295 who advocate for the use of regional competition agreements to mitigate the problems faced in gathering evidence located elsewhere.

<sup>183</sup>Marco Botta, *Merger Control Regimes in Emerging Economies: A Case Study on Brazil and Argentina* (Wolters Kluwer 2011) 345; and UNCTAD, 'Cross-Border Anti-competitive Practices: The Challenges for Developing Countries and Economies in Transition', Note by the UNCTAD Secretariat (April 2012) 18 <[http://unctad.org/meetings/en/SessionalDocuments/ciclpd16\\_en.pdf](http://unctad.org/meetings/en/SessionalDocuments/ciclpd16_en.pdf)> accessed 15 June 2017. With regard to Sub-Saharan Africa specifically, see Nelly Sakata, 'Are Southern African Competition Law Regimes Geared Up for Effective Cooperation in Competition Law Enforcement?' (Fifth Annual Competition Law Conference, Johannesburg, October 2011); and George K. Lipimile, 'The COMESA Regional Competition Regulations' in Josef Drexel, et al (eds), *Competition Policy and Regional Integration in Developing Countries* (Edward Elgar 2012) 205.

<sup>184</sup>Mario Monti, 'Cooperation Between Competition Authorities-A Vision for the Future' in Clifford A. Jones and Mitsuo Matsushita (eds.), *Competition Policy in the Global Trading System*, (Kluwer Law International, 2002) 77; The Japan Fair Trading Office, 'Cross border Merger Control in Japan' <[http://www.jftc.go.jp/en/policy\\_enforcement/speeches/110217.html](http://www.jftc.go.jp/en/policy_enforcement/speeches/110217.html)> accessed 15 June 2017; and European Commission, 'European Competition Network: Overview' <[ec.europa.eu/competition/ecn/index\\_en.html](http://ec.europa.eu/competition/ecn/index_en.html)> accessed 15 June 2017.

competitive practices.<sup>185</sup> Most of the authorities are still building institutional capacity and are therefore bound to find it more challenging to assess cross-border mergers affecting their markets.<sup>186</sup> Through co-operation, authorities may pool resources when investigating the effect of cross-border mergers on competition in the relevant telecommunications market.

While Uganda at present does not have a national competition authority, this topic is nevertheless still of relevance to Uganda's efforts to effectively regulate activities of MNCs in the telecommunications sector. Co-operation with other regional authorities is not a new concept for the UCC which has developed good relations with other national telecommunications regulators in Sub-Saharan Africa.<sup>187</sup> It is not difficult to envisage the UCC using this experience to build relationships with national competition authorities to enable it to effectively review cross-border mergers. Furthermore, there is the prospect of the enactment of a national competition law in the future as evidenced by the existence of a draft competition bill. The competition authority once established might consider co-operation with other competition authorities in order to enhance its enforcement capacity.

The benefits of co-operation in the enforcement of cross-border anti-competitive practices are well documented.<sup>188</sup> One of the major stumbling blocks faced by national competition authorities in developing countries when enforcing competition law in relation to anti-competitive practices of a cross-border nature is acquiring the relevant information.<sup>189</sup> In order to effectively investigate cross-border mergers for anti-competitive effects, authorities need to have access to a

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<sup>185</sup>While South Africa, Zambia and Zimbabwe have had operational competition authorities since the late 1990s, in the majority of countries, competition authorities only became operational in the mid to late 2000s. Examples include the Malawi's competition agency which was operational in 2005; Tanzania's agency became active in 2007 while the agencies in Botswana, Mauritius, Namibia and Seychelles became operational in 2009.

<sup>186</sup>Nelly Sakata, 'Are Southern African Competition Law Regimes Geared Up for Effective Cooperation in Competition Law Enforcement?' (Fifth Annual Competition Law Conference, Johannesburg, October 2011).

<sup>187</sup>According to interview with Ann Rita Ssemboga, (former) Economist, UCC (Kampala, Uganda 7 December 2011).

<sup>188</sup>See, for example, Mario Monti, 'Cooperation Between Competition Authorities-A Vision for the Future' in Clifford A. Jones and Mitsuo Matsushita (eds.), *Competition Policy in the Global Trading System* (Kluwer Law International 2002); Dimitris Liakopoulos and Armando Marsilia, *The Regulation of Transnational Mergers in International and European Law* (Martinus Nijhoff 2010) 120-128; UNCTAD, 'Review of the Experience Gained So Far in Enforcement of Cooperation, Including at the Regional Level', Note by the UNCTAD Secretariat (2011) <[http://unctad.org/en/docs/ciclpd10\\_en.pdf](http://unctad.org/en/docs/ciclpd10_en.pdf)> accessed 15 June 2017; and UNCTAD, 'Cross-Border Anti-competitive Practices: The Challenges for Developing Countries and Economies in Transition', Note by the UNCTAD Secretariat (April 2012) 15 <[http://unctad.org/meetings/en/SessionalDocuments/ciclpd16\\_en.pdf](http://unctad.org/meetings/en/SessionalDocuments/ciclpd16_en.pdf)> accessed 15 June 2017.

<sup>189</sup>UNCTAD, 'Cross-Border Anti-competitive Practices: The Challenges for Developing Countries and Economies in Transition', Note by the UNCTAD Secretariat (April 2012) 15 <[http://unctad.org/meetings/en/SessionalDocuments/ciclpd16\\_en.pdf](http://unctad.org/meetings/en/SessionalDocuments/ciclpd16_en.pdf)> accessed 15 June 2017.

substantial amount of information located outside their jurisdiction.<sup>190</sup> Since exchange of information is a key aspect of co-operation among competition authorities, competition authorities in Sub-Saharan Africa might be able gain important information from other authorities engaged in related investigations. Through the sharing of information competition agencies will be able to improve their analysis and achieve consistent results since co-operation permits more complete communication among the reviewing agencies and the coordination of their respective investigations.<sup>191</sup>

In addition, co-operation can help competition authorities to fashion remedies that prevent or mitigate the anti-competitive effects of cross-border mergers. Remedies for mergers are usually structural involving the sale of physical assets by merging firms or behavioural limiting merged firms' post-merger business conduct.<sup>192</sup> Effective enforcement of merger control rules will require competition authorities to monitor the remedies imposed on the parties and ensure they are properly implemented.<sup>193</sup> Developing countries are likely to find it very challenging to monitor the implementation of the remedies by MNCs.<sup>194</sup> Furthermore, it is usually the case that cross-border remedies are required in order to effectively prevent anti-competitive effects making co-operation a key tool for enforcement.<sup>195</sup>

Spurred by the 1995 OECD recommendations on co-operation in antitrust matters, there have been a number of competition agencies entering into co-operation agreements.<sup>196</sup> There are three main types of co-operation: bilateral, multilateral, and international. Bilateral co-operation is viewed as the type of co-operation that most fosters effective cross-border mergers.<sup>197</sup>

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<sup>190</sup>Michal S Gal and Inbal Faibis Wassmer, 'Regional Agreements of Developing Jurisdictions: Unleashing the Potential' in Josef Drexel, et al (eds), *Competition Policy and Regional Integration in Developing Countries* (Edward Elgar 2012) 294.

<sup>191</sup>UNCTAD, 'Cross-Border Anti-competitive Practices: The Challenges for Developing Countries and Economies in Transition', Note by the UNCTAD Secretariat (April 2012) 6 <[http://unctad.org/meetings/en/SessionalDocuments/ciclpd16\\_en.pdf](http://unctad.org/meetings/en/SessionalDocuments/ciclpd16_en.pdf)> accessed 15 June 2017.

<sup>192</sup>Ibid, 8.

<sup>193</sup>UNCTAD, 'Roundtable on Cross- Border Merger Control: Challenges for Developing Countries, Contribution from the United States' (2011) <<http://www.oecd.org/competition/mergers/50114086.pdf>> accessed 15 June 2017.

<sup>194</sup>See UNCTAD, 'Cross-Border Anti-competitive Practices: The Challenges for Developing Countries and Economies in Transition', Note by the UNCTAD Secretariat (April 2012) 15 <[http://unctad.org/meetings/en/SessionalDocuments/ciclpd16\\_en.pdf](http://unctad.org/meetings/en/SessionalDocuments/ciclpd16_en.pdf)> accessed 15 June 2017 which notes that only very few large jurisdictions have full control over large-scale international mergers, and they impose remedies to address anti-competitive effects on their markets.

<sup>195</sup>Ibid, 9.

<sup>196</sup>Dimitris Liakopoulos and Armando Marsilia, *The Regulation of Transnational Mergers in International and European Law* (Martinus Nijhoff 2010) 117.

<sup>197</sup>OECD, 'Policy Roundtables Cross-Border Merger Control: Challenges for Developing and Emerging Economies' (2011) 11 <<http://www.oecd.org/daf/competition/mergers/50114086.pdf>> accessed 15 June 2017.

A number of competition authorities have entered into bilateral co-operation agreements. The bilateral co-operation agreement between the United States and the European Union has been singled out as an important mechanism for curbing anti-competitive practices of multinational corporations of a cross-border nature.<sup>198</sup>

In Sub-Saharan Africa, there have been few cases of bilateral co-operation in the enforcement of competition law. The most notable example is the bilateral co-operation agreement between Zambia and Zimbabwe.<sup>199</sup> On the basis of their bilateral co-operation agreement, the competition authorities in Zambia and Zimbabwe have worked together when investigating cross-border mergers. Both authorities consulted each other during the course of reviewing the Coca-Cola/Cadbury Schweppes and British American Tobacco (BAT)/Rothmans of Pall Mall mergers in the late 1990s.<sup>200</sup> With regard to the Coca-Cola/Cadbury Schweppes merger, both authorities approved the merger conditionally.<sup>201</sup> The British American Tobacco (BAT)/Rothmans of Pall Mall merger was approved unconditionally by the Zambian competition authority, while the Zimbabwe competition authority approved the transaction subject to certain conditions of a structural and behavioural nature.<sup>202</sup>

Another competition authority that is actively engaged in co-operation with other competition authorities is the South Africa Competition Commission. This authority stands out for extending its co-operation activities beyond the African continent. The Competition Commission has a co-operation agreement with the European Union entered into in 1999.<sup>203</sup> Both authorities have co-operated with each other in a number of investigations into cross-border mergers. The AP Moller-Maersk (Denmark) and Royal P&O Nedlloyd N.V. (PONL) (Netherlands) merger in the shipping industry is a good example of co-operation between competition authorities of developed and developing jurisdictions. The South Africa Competition Commission and the European Commission co-operated during the course of review of this merger and shared information with the parties' consent.<sup>204</sup> The

<sup>198</sup> Dimitris Liakopoulos and Armando Marsilia, *The Regulation of Transnational Mergers in International and European Law* (Martinus Nijhoff 2010) 120-125 discuss the significance of bilateral co-operation between the EU and the United States with regard to cross-border merger review.

<sup>199</sup> Zambia and Zimbabwe have a joint trade protocol for the exchange of information in competition cases.

<sup>200</sup> UNCTAD, 'Review of the Experience Gained So Far in Enforcement of Cooperation, Including at the Regional Level', Note by the UNCTAD Secretariat (2011) 18 <[http://unctad.org/en/docs/ciclpd10\\_en.pdf](http://unctad.org/en/docs/ciclpd10_en.pdf)> accessed 15 June 2017.

<sup>201</sup> George K Lipimile, 'The COMESA Regional Competition Regulations' in Josef Drexel, et al (eds), *Competition Policy and Regional Integration in Developing Countries* (Edward Elgar, 2012) 211.

<sup>202</sup> Ibid, 212-213.

<sup>203</sup> Agreement on Trade, Development and Cooperation between the European Community and the Republic of South Africa [1999] OJ L311/3.

<sup>204</sup> UNCTAD, 'Recent Important Cases Involving More Than One Country: Report by the UNCTAD Secretariat' (2006) TD/B/COM.2/CLP/53 12.

South Africa Competition Commission eventually approved the merger with conditions.

There is no formal co-operation between the South Africa Competition Commission and the United States FTC. However, both competition authorities consult each other and co-operate informally in competition matters.<sup>205</sup> While there is no evidence to suggest that bilateral co-operation has been used to investigate cross-border mergers in the telecommunications sector in Africa, the experiences in South Africa, Zambia and Zimbabwe illustrate that bilateral co-operation might be a useful enforcement tool.

Whether bilateral co-operation agreements are the most effective means for competition authorities in Sub-Saharan Africa to regulate multinational corporations competitive conduct is questionable. Most of the successful bilateral co-operation agreements have been entered into between developed countries. In the case of Sub-Saharan Africa, the authorities that have entered into bilateral co-operation have significant experience regulating anti-competitive practices. However, in majority of cases, competition authorities in Sub-Saharan Africa are newly established with limited experience dealing with anti-competitive practices of a cross-border nature.<sup>206</sup> These authorities are still developing institutional capacity such that experienced competition authorities would be reluctant to enter into co-operation agreements with them.<sup>207</sup> This is the case in Uganda where UCC as the competition authority in the telecommunications sector has negligible experience enforcing the Fair Competition Regulations.

Additionally, competition authorities with enforcement experience tend to enter such agreements with countries whose commercial activities are likely to impact on their markets.<sup>208</sup> Given that commercial activities in countries in Sub-Saharan Africa with smaller economies are less likely to impact their markets, there is not much of an incentive for the competition authorities in other regions to enter into co-operation agreements. One may argue that bilateral agreements among authorities in Sub-Saharan Africa countries could prove to be an effective means of regulating cross-border conduct by pooling resources together. However, it is the author's opinion that bilateral agreements are more effective where authorities have

<sup>205</sup>See, for example, 'FTC Order Prevents Anti-Competitive Effects of Pfizer's Acquisition of Wyeth' FTC press release 10/14/2009 <<http://www.ftc.gov/opa/2009/10/pfizer.shtm>> accessed 15 June 2017, where the FTC acknowledges cooperating with South Africa which was also reviewing the Pfizer/Wyeth acquisition.

<sup>206</sup>Nelly Sakata, 'Are Southern African Competition Law Regimes Geared Up for Effective Cooperation in Competition Law Enforcement?' (Fifth Annual Competition Law Conference, Johannesburg October 2011).

<sup>207</sup>Marco Botta, *Merger Control Regimes in Emerging Economies: A Case Study on Brazil and Argentina* (Wolters Kluwer 2011) 344 observes that mature competition regimes are reluctant to conclude bilateral agreements with newly-established competition authorities in developing countries, due to the uncertainty concerning the treatment of information transferred to the latter.

<sup>208</sup>UNCTAD, 'Review of the Experience Gained So Far in Enforcement of Cooperation, Including at the Regional Level', Note by the UNCTAD Secretariat (2011) 7 <<http://unctad.org/en/docs/ciclpd10en.pdf>> accessed 15 June 2017.

adequate enforcement competencies. This is the case for competition authorities in South Africa, Zambia, and Zimbabwe. However, many competition authorities in Sub-Saharan Africa have yet to develop enforcement competencies to enable them to effectively deal with cross border conduct. It is for this reason that reliance on regional or community agreements as an effective tool for enforcement of competition law by competition authorities in Sub-Saharan Africa should be considered. The following sub-section focuses on the potential value of regional integration agreements as a means of dealing with anti-competitive cross-border mergers.

## 5.7 Regional Integration and Trade Agreements and Competition Law Enforcement

It has been argued that regional or community agreements allow for more efficient and effective enforcement against anti-competitive behaviour affecting several countries within a given region by fostering co-operation.<sup>209</sup> Co-operation through regional agreements may involve technical assistance or exchange of information between national competition agencies or joint enforcement by a supranational competition authority. Regional competition authorities are viewed as having the potential to enable developing countries to overcome problems faced in enforcing competition legislation against anti-competitive cross-border conduct.<sup>210</sup> Specifically, supranational competition authorities are less likely to have to deal with the problem of asymmetry of power between MNCs and competition authorities. While MNCs may easily convince decision-makers in the developing countries to abstain from intervention by threatening to withdraw economic activity from that country, such a strategy is less likely when the firm has to withdraw from a larger region composed of several states.<sup>211</sup>

In Sub-Saharan Africa, a number of regional integration and trade agreements have been adopted providing for different levels of co-operation in competition law enforcement. The majority of the agreements in the region focus on joint enforcement through a supranational competition law with a supra-national authority regulating anti-competitive practices of a regional dimension. This is the case within the East African Community, Common Market for Eastern and Southern Africa, and the West African Economic Monetary Union (WAEMU). However, a few regional integration agreements in Sub-Saharan Africa place greater emphasis

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<sup>209</sup> Michal S Gal and Inbal Faibis Wassmer, ‘Regional Agreements of Developing Jurisdictions: Unleashing the Potential’ in Josef Drexel, et al (eds), *Competition Policy and Regional Integration in Developing Countries* (Edward Elgar 2012) 291.

<sup>210</sup> Ibid, 293.

<sup>211</sup> Josef Drexel, ‘The Development Dimension of Regional Integration and Competition Policy’ in Josef Drexel, et al (eds) *Competition Policy and Regional Integration in Developing Countries* (Edward Elgar 2012) 242.

on co-operation among competition authorities of member states and national enforcement. This form of co-operation has been adopted in the Southern Africa Development Community (SADC).

The preamble of SADC Declaration on Competition and Consumer Policies of 2009 (SADC Declaration) stresses the need for increased regional co-operation as regards cross-border anti-competitive practices. However, rather than establish a supranational competition authority, the SADC Declaration calls for the establishment of a system of effective co-operation among competition authorities of the member states.<sup>212</sup> According to the SADC Declaration, there is a need to formalise a system of co-operation between national regimes that can harness the collective efforts of relevant national authorities and add value to national enforcement efforts in the face of problems affecting more than one country.<sup>213</sup> This form of co-operation is viewed as easier to implement in comparison to co-operation through joint enforcement as there are few obstacles to its adoption and enforcement.<sup>214</sup>

While regional co-operation among competition authorities might be easier to implement, in SADC this form of co-operation has not been very effective in enhancing competition law enforcement capacity. Co-operation among competition authorities in the SADC region has primarily been in relation to institutional capacity rather than enforcement.<sup>215</sup>

Due to presence of relatively new competition agencies in SADC, co-operation has primarily been in the context of the building of institutional capacity rather than enforcement capacity.<sup>216</sup> Therefore, co-operation extended to the newer agencies in Southern Africa has largely been based on the rendering of capacity-building and technical assistance in particular through staff exchanges, study tours and training workshops.<sup>217</sup> Additionally, the divergence of substantive rules and approaches, legal restrictions with regard to the exchange of information claimed as confidential and the perception of firms and individuals that confidential information might not be protected is viewed as another obstacle to the implementation of an enforcement co-operation system in SADC.<sup>218</sup>

<sup>212</sup>SADC Declaration on Competition and Consumer Policies 2009, art 1(a).

<sup>213</sup>Ibid, preamble.

<sup>214</sup>Michal S Gal and Inbal Faibis Wassmer, ‘Regional Agreements of Developing Jurisdictions: Unleashing the Potential’ in Josef Drexl, et al (eds), *Competition Policy and Regional Integration in Developing Countries* (Edward Elgar 2012) 293.

<sup>215</sup>Nelly Sakata, ‘Are Southern African Competition Law Regimes Geared Up for Effective Cooperation in Competition Law Enforcement?’ (Fifth Annual Competition Law Conference, Johannesburg, October 2011) 2 <<http://www.compc.com.co.za/wp-content/uploads/2014/09/African-Regional-cooperation-PaperFinal-27-Sept-11-.pdf>> accessed 15 June 2017.

<sup>216</sup>Nelly Sakata, ‘Are Southern African Competition Law Regimes Geared Up for Effective Cooperation in Competition Law Enforcement?’ (Fifth Annual Competition Law Conference, Johannesburg, October 2011) 11 <<http://www.compc.com.co.za/wp-content/uploads/2014/09/African-Regional-cooperation-PaperFinal-27-Sept-11-.pdf>> accessed 15 June 2017.

<sup>217</sup>Ibid.

<sup>218</sup>Ibid, 10.

In contrast in WAEMU, a high level of co-operation has been adopted by granting the supra-national competition authority exclusive competence to deal with anti-competitive practices at the regional and national dimension with national competition authorities playing a secondary role.<sup>219</sup> However, this form of competition law enforcement has been very difficult to implement. The member states of WAEMU are yet to adapt their national law to comply with community law which greatly hampers the supranational competition authority's ability to carry out its mandate.<sup>220</sup> As the national competition authorities have been deprived of all competences for the regulation of anti-competitive practices, the member states fail to see the necessity to invest in reforms of their national competition law regimes.<sup>221</sup>

Nevertheless, countries not able to benefit from co-operation among competition authorities in the absence of a national competition law may gain from being a member state of a regional integration group with a binding supranational competition law.<sup>222</sup> As Uganda does not have a national competition law in place, it could rely on its membership in a regional integration community to enhance enforcement capacity when dealing with cross-border mergers. Uganda is a member of two regional integration communities in Sub-Saharan Africa, the East African Community, and COMESA.

With regard to the East African Community, there is great potential for competition law enforcement through a regional body due to historical experience of member states relying on regional bodies to govern certain aspects of economic integration. Among the most notable regional bodies are: the East African Development Bank, which provides a range of products and services aimed at promoting development within the East African Community, and the East African Court of Justice, responsible for ensuring the adherence to law in the interpretation and application and compliance of EAC Treaty.<sup>223</sup> Furthermore, national authorities within the community co-operate with each other to facilitate more effective fulfilment of their responsibilities. For example, the revenue authorities of member states exchange information for tax purposes to enable correct application of national tax laws.<sup>224</sup>

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<sup>219</sup> Mor Bakhoun and Julia Molestina, 'Institutional Coherence and Effectiveness of a Regional Competition Policy: the Case of West African Economies and Monetary Union (WAEMU)' in Josef Drexl, et al (eds), *Competition Policy and Regional Integration in Developing Countries* (Edward Elgar, 2012) 97.

<sup>220</sup> Ibid.

<sup>221</sup> Ibid.

<sup>222</sup> George K. Lipimile, 'The COMESA Regional Competition Regulations' in Josef Drexl, et al (eds), *Competition Policy and Regional Integration in Developing Countries* (Edward Elgar 2012) 215 makes this argument with regard to Member States of COMESA without national competition laws benefiting from the regulation of cross border anti-competitive practices through the COMESA Competition Regulations.

<sup>223</sup> Article 23(1) of the Treaty for the Establishment of the East African Community of 2000.

<sup>224</sup> Hans-Georg Petersen, 'Tax Systems and Tax Harmonisation in the East African Community (EAC)' Report for EAC/GTZ Program 'Support to the EAC Integration Process' Finanzwissenschaftliche Diskussionsbeiträge, No. 60 <<http://nbn-resolving.de/urn:nbn:de:kobv:517-opus-44693>> accessed 15 June 2017.

In 2006, the East African Community Competition Act was adopted. The Act applies to anti-competitive practices having a cross-border effect within the East African Community.<sup>225</sup> It provides for a competition authority which is responsible for implementing the East African Community Competition Act.<sup>226</sup> The Act specifically provides the East African Community Competition Authority (EACCA) with powers to regulate cross-border mergers.<sup>227</sup> According to the Act, parties seeking to execute a cross-border merger of an East African Community dimension are required to notify EACCA prior to implementation.<sup>228</sup> Based on this legislation, the Celtel International BV/MTC, Vodacom Group/Vodafone Group, and Zain/Bharti Airtel mergers, which were of an East African Community dimension, should have been reviewed by the EACCA. However, the law is not operational pending the enactment of national competition legislation by some member states.<sup>229</sup> As the East African Community Competition Act is not yet operational, the role of the Act in enhancing competition law enforcement with regard to cross-border mergers in Uganda remains an option only for the future.

As already mentioned, Uganda is also a member of COMESA. In 2004, the COMESA Competition Regulations, which provide for a supranational competition authority, came into force following the publication of the Regulations in the Official Gazette of COMESA.<sup>230</sup> The COMESA Competition Regulations apply to all economic activities whether conducted by private or public persons, or having an effect, within the Common Market.<sup>231</sup> The Regulations provide for the COMESA Competition Commission (CCC) which is charged with the responsibility of enforcing its provisions.<sup>232</sup> Additionally, the Regulations provide for a Board of Commissioners to review and hear appeals from the decisions of the CCC.<sup>233</sup> On 14 January 2013, the CCC became operational bringing into effect the supranational merger control regime provided for in the COMESA Competition Regulations.

The COMESA Competition Regulations include merger control provisions that identify which mergers are subject to the notification obligation,<sup>234</sup> provide a time frame for merger review,<sup>235</sup> and outline criteria for assessing whether a merger is

<sup>225</sup>East African Community Competition Act 2006, s 4(1).

<sup>226</sup>Ibid, s 37.

<sup>227</sup>Ibid, pt IV.

<sup>228</sup>Ibid, s 11.

<sup>229</sup>Rwanda and Uganda are yet to enact national competition laws, while Burundi's competition law is not yet operational. Kenya and Tanzania are the only two countries with operational national competition laws.

<sup>230</sup>Official Gazette of COMESA, Volume 17 No.12, 20 November 2012.

<sup>231</sup>COMESA Competition Regulations 2004, art. 3(1).

<sup>232</sup>Ibid, art. 6.

<sup>233</sup>Ibid, art 12.

<sup>234</sup>Ibid, art 24.

<sup>235</sup>Ibid, art. 25(2).

anti-competitive.<sup>236</sup> COMESA Rules on Determination of Merger Notification Threshold 2012, as amended in March 2015, provide financial merger thresholds that trigger merger notification. Mergers and acquisitions, where both the acquiring firm and the target firm, or either the acquiring firm or the target firm, operate in two or more COMESA Member States, are subject to notification to the CCC if the following cumulative conditions are met<sup>237</sup>:

- a) the combined annual turnover or combined value of assets (whichever is higher) of all parties in COMESA equals or exceeds US\$50 million; and
- b) the annual turnover or value of assets (whichever is higher) of each of at least two of the parties in COMESA equals or exceeds US\$10 million.

Therefore all mergers affecting interstate trade in COMESA are subject to review by the CCC.

The merger control regime provided for in the COMESA Competition Regulations is meant to serve as an efficient one-stop shop for cross-border transactions within the community whereby transactions notified to the CCC will not need to be notified to the national competition authority of member states.<sup>238</sup> The Regulations however, provide for a transaction to be referred back to a local competition authority at its request if the transaction is likely to disproportionately reduce competition to a material extent in all or part of a member state.<sup>239</sup>

The one-stop shop merger regime created under the COMESA Competition Regulations is of great significance for Uganda which does not have a national competition authority. Cross-border mergers affecting Uganda's market that are of a COMESA dimension will be more effectively regulated by a supranational authority that focuses exclusively on anti-competitive behaviour, with presumably more resources to effectively review cross-border mergers.

The regime also promotes more efficient cross-border merger control by eliminating the need for merging parties to notify national authorities of all countries likely to be affected by a cross-border merger.

That said, concerns have been raised as to whether the supranational competition authority will be able to effectively fulfill its mandate. Specifically, concerns have been raised about the ambiguity of the authority's powers.<sup>240</sup> The Regulations stipulate that the CCC has primary jurisdiction over an industry or a sector of an industry which is subject to the jurisdiction of a separate regulatory entity (whether domestic or regional) if the latter regulates anti-competitive business practices and conduct, and mergers and acquisitions.<sup>241</sup> However, the Regulations do not clarify

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<sup>236</sup>Ibid, art 26.

<sup>237</sup>COMESA Rules on Determination of Merger Notification Threshold 2012, r 4.

<sup>238</sup>This can be interpreted in the Regulations definition of the scope of application, art 3(1) which covers all anti-competitive conduct of COMESA dimension.

<sup>239</sup>COMESA Competition Regulations 2004, art 24 (8).

<sup>240</sup>Hogan Lovell, 'COMESA-New Pan African Merger Control Regime' Antitrust Competition and Economic Regulation E-Alert, 11 February 2013 <<http://ehoganlovells.com/cv/bbbe35cf8acfceb197986f0991d0331661b16683>> accessed 15 June 2017.

<sup>241</sup>COMESA Competition Regulations 2004, art 3(3).

whether the national competition authorities will retain parallel jurisdiction. This lack of clarity is likely to cause conflict between the supra-national authority and national competition authorities and adversely affect the efficient review of merger transactions.<sup>242</sup>

The challenges of implementing regional co-operation among national competition authorities aside, this level of co-operation is currently not a viable option in Uganda in the absence of national competition law. While UCC as a competition authority in the telecommunications sector may try to engage with national competition authorities in region, the existing legislation will make it particularly difficult for UCC to effectively co-operate with the national competition authorities. The Fair Competition Regulations, from which UCC derives its powers to regulate anti-competitive behaviour in the telecommunications sector, do not foster co-operation as means of enhancing enforcement capacity. Specifically, the Regulations do not provide for exchange of information with other national authorities for enforcement purposes, yet this is an important aspect of co-operation between competition authorities.

The discussion of the role of co-operation, bilateral and regional, reveals the potential of co-operation to enhance competition law enforcement in Uganda's telecommunications sector. The presence of supranational competition authorities like CCC are particularly important for Uganda which lacks a national competition law to help it effectively enforce competition rules against anti-competitive conduct of a cross-border nature.

## 5.8 Conclusion

This chapter has set out to establish whether the provisions Uganda's legislation on anti-competitive behaviour provide sufficient measures to enable the UCC to prevent or mitigate anti-competitive consequences related to cross-border mergers. The successful implementation of the liberalisation policy in Uganda's telecommunications sector has been effective due to significant FDI flows into the telecommunications sector. This is evidenced by the strong presence of local subsidiaries in Uganda's telecommunications markets. FDI flows into Uganda's telecommunications sector have primarily taken the form of greenfield investment. However, within the last decade, a number of cross-border mergers of a

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<sup>242</sup>Muthoki Mumo, 'Authority criticises COMESA Arm Over Rollout of Competition Rules' *Daily Nation* (Nairobi 17 March 2013) <<http://www.nation.co.ke/business/news/Authority-criticises-Comesa-over-rollout-of-competition-rules/-/1006/1722692/-/127w7qb/-/index.html>> accessed 15 June 2017; and George Omondi and David Herbling, 'Conflict of Local and COMESA Laws Holds Up Firms Mergers' *Daily Nation* (Nairobi, 28 January 2013) <<http://www.businessdailyafrica.com/Agency-turf-wars-with-Comesa-freeze-mergers/-/539546/1678308/-/107ygai/-/index.html>> accessed 15 June 2017.

Sub-Saharan Africa dimension have been concluded, some of which have affected the market structure in Uganda's telecommunications sector.

The rise in the number of cross-border mergers affecting Uganda's telecommunications sector points to the need to have an effective merger control regime in place to ensure that the transactions do not adversely affect competition in the sector. It is also very important for a developing country to have a competition authority with the requisite capacity to effectively enforce national competition law against anti-competitive cross-border and mergers. Therefore, the chapter has focused on two key issues: (1) whether the merger control provisions are comprehensive enough, and (2) whether the competition law enforcement framework is effective.

The analysis of the merger control provisions for the telecommunications sector in Uganda illustrates that the current regime is not adequate for purposes of assessing cross-border mergers with anti-competitive effects. The existing regime provides basic provisions prohibiting anti-competitive mergers and acquisitions but fails to offer comprehensive guidance on how the UCC should implement the provisions. Given the UCC lacks of experience regulating anti-competitive behaviour, the absence of clear criteria enabling the UCC to distinguish what element of a cross-border makes it anti-competitive only serves to make it more challenging for the UCC to fulfil its mandate.

Of greater significance is the indication that exclusive reliance on sector-specific competition rules is inadequate for purposes of effectively regulating cross-border mergers and acquisitions affecting the market structure in Uganda's telecommunications sector. The UCC's jurisdiction only applies to firms that are licensed to provide communications services. This limits the power and range of remedies available to the UCC particularly with regard to cross-border conduct. On the other hand, the enactment of a national competition law of economy-wide application would provide the competition authority with a broad scope for enforcement of the provisions encompassing cross-sector and cross-border conduct. Notably, the draft Competition Bill provides for extra-territorial application of its provisions which might be useful for purposes of investigating and prosecuting anti-competitive cross-border practices affecting competition in Uganda's telecommunications sector.

This chapter has also touched upon the potential role of regional competition laws to facilitate effective regulation of cross-border mergers. Critical for ensuring effective regulation of cross-border mergers is having sufficient resources, both human and financial, to effectively undertake the tasks needed to effectively enforce the merger control provisions.<sup>243</sup> Within Sub-Saharan Africa, it has been observed that national competition authorities lack capacity to effectively enforce competition legislation particularly in connection with cross-border conduct. Thus,

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<sup>243</sup>OECD, 'Policy Roundtables Cross-Border Merger Control: Challenges for Developing and Emerging Economies' (2011) 9 <<http://www.oecd.org/daf/competition/mergers/50114086.pdf>> accessed 15 June 2017.

it is quite possible that the enactment of a national competition law and the establishment of a national competition authority in Uganda may not automatically lead to more efficient regulation of cross-border mergers. Building enforcement capacity through regional integration incorporating a supranational competition law, and co-operation among competition authorities at the regional level may enhance the enforcement capacity of a national competition authority in Uganda.

In conclusion the reliance on sector-specific competition rules to address cross-border mergers affecting the market structure in Uganda's telecommunications sector does not sufficiently facilitate efficient regulation.

# **Chapter 6**

## **Regulation of Network Interconnection and Network Access**

This chapter focuses on the issue of access in the telecommunications sector. Access in the telecommunications sector encompasses various arrangements involving an operator or service provider acquiring facilities or services from another operator in order to enable it to deliver communications services to its own customers.<sup>1</sup> Examples include: interconnection, network access, for example, local loop unbundling and access to co-location, and infrastructure sharing.

### **6.1 Importance of Access to Telecommunications Facilities**

As stressed in the introduction of this study, the removal of legal and regulatory obstacles are not sufficient to bring about effective liberalisation of telecommunications markets. Regulatory intervention is still needed to ensure a level playing field for competition in the telecommunications markets. One area that particularly warrants regulatory intervention is access to telecommunications facilities. The importance of regulating access to telecommunications facilities stems from the network-based nature of the telecommunications sector. New entrants initially owning limited infrastructure will need to gain access to the network of incumbent operators, which own the vast majority of the telecommunications infrastructure, in order to provide telecommunications services to the end-customer.<sup>2</sup>

Even in cases where the new entrant controls or builds up infrastructure enabling it to independently provide services to its end customers, the universality of

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<sup>1</sup>This is based on the definition of term ‘access’ in the European Union telecommunications legal framework. See the Council Directive (EC) 2002/19 on access to, and interconnection of, electronic communications networks and associated facilities (Access Directive), Art 2 (a).

<sup>2</sup>Emma McCormack, ‘Access and Interconnection’ in Ian Walden and John Angel (eds), *Telecommunications Law and Regulation* (2nd edn, Oxford University Press 2005) 216.

communication requires that different networks interconnect. The need for interconnection of networks stems from network effects. Network effects, sometimes referred to as network externalities, means that the value of a product or network to a user changes as the number of users of the product or network increases.<sup>3</sup> In the context of the telecommunications sector, the more subscribers a network has, the more valuable its network is as a subscriber can communicate with more people. Network effects may have positive a impact on competition, since consumers become better off as a product becomes more popular.<sup>4</sup> However, network effects can also be detrimental to competition in the telecommunications sector.

In a situation where operators do not interconnect networks to enable their subscribers to communicate with subscribers of another network, a customer will prefer to join the larger network to the detriment of smaller networks. In the liberalised telecommunications sector, the incumbent operators typically hold the larger subscriber base with new entrants seeking to build up a subscriber base. In order to make its network attractive to customers, a new entrant will need to be able to interconnect its network with networks of incumbent operators. However, in the absence of regulation of access to networks, an incumbent operator will have less incentive to grant new entrants, seen as potential competitors, access to its networks thereby making it difficult for new entrants to become viable competitors. To ensure a level playing field for competition in the liberalised telecommunications sector, regulatory intervention, through mandating access to networks, will be important to minimise the anti-competitive consequences of network effects.

Access in the telecommunications sector encompasses a broad range of arrangements as highlighted at the beginning of this chapter. However, this chapter only discusses the two forms of access to telecommunications facilities that have gained the most attention from telecommunications regulators and competition authorities: interconnection (two-way access); and network access (one-way access). Two-way access usually refers to network interconnection, where operators need mutual access in order to terminate calls on each other's networks.<sup>5</sup> One-way access refers to a situation where an incumbent operator monopolises an input which is needed by an entrant in order to provide its own services to the end user.<sup>6</sup>

Within Sub-Saharan Africa, most concern regarding access in the telecommunications sector has centred on two-way access. Specifically, mobile

<sup>3</sup>Stanley J Liebowitz and Stephen E Margolis, ‘Network Effects’ in Martin E Cave, Sumit K Majumdar and Ingo Vogelsang (eds), *Handbook of Telecommunications Economics: Structure, Regulation and Competition Volume 1* (Elsevier 2002) 76.

<sup>4</sup>Richard Whish and David Bailey, *Competition Law* (7th edn, Oxford University Press 2012) 12.

<sup>5</sup>Marcel Canoy, Paul de Bijl and Ron Kemp, ‘Access to Telecommunications Networks’ in Pierre A Buigues and Patrick Rey (eds), *The Economics of Antitrust and Regulation in Telecommunications* (Edward Elgar 2004) 136.

<sup>6</sup>Livi Cricelli, Francesca Di Pulo, Massimo Gastaldi and Nathan Levialdi Ghiron, ‘Mobile Networks Competition and Asymmetric Regulation of Termination Charges’ in S Raghavan, Bruce L Golden and Edward A Wasil (eds), *Telecommunications Modeling, Policy, and Technology* (Springer 2008) 124.

interconnection pricing is the most disputed issue in the region.<sup>7</sup> The importance of two-way access in the telecommunications sector in Sub-Saharan Africa is linked to the prevalent practice of telecommunications operators building their own end-to-end networks to provide telecommunications services. Therefore, telecommunications operators are more interested in interconnecting with competing operators to ensure that their end customers benefit from universal connectivity.

While two-way access is critical for competition in the telecommunications sector, one way access regulation has become an integral part of the telecommunications regulatory framework in a number of jurisdictions, primarily developed jurisdictions. For example, in the European Union and the United States, access to the local access network of the former monopoly operators has been promoted by telecommunications regulators as means of facilitating the growth of competition in the broadband and long-distance telephone services markets, respectively.<sup>8</sup>

The basis for one-way access stems from the fact that certain telecommunications facilities considered essential for the provision of telecommunications services, continue to remain under the sole control of a vertically integrated operator, usually the former monopoly operator. In order to ensure that the monopoly control does not affect the development of competition in those markets where the infrastructure is a necessary input for the provision of services, telecommunications regulators have opted to regulate one-way access to the facilities.

The discussion above illustrates the significance of two-way and one-way access for competition in the telecommunications sector. The following portion of this chapter is therefore divided in two key parts. The first part focuses on two-way access which is the most critical form of access in the telecommunications sector in Sub-Saharan Africa. On that basis, the regulatory regime for two-way access in Uganda's telecommunications sector is analysed in order to establish whether it facilitates the growth of competition in the telecommunications sector.

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<sup>7</sup>An overview of case law focusing on the telecommunications sector in Sub-Saharan Africa shows the prevalent issue of contention as interconnection charges. See for example, *Botswana Telecommunications Corporation v Mascom Wireless Pty(Ltd) and Vista Cellular (Pty) Ltd* BTA Ruling 1/1999 in Botswana; *Kencell Communications Ltd v TKL Communications Appeal Tribunal* (2003) in Kenya; *TDM (Telecomicaoes de Mocambique E.P) vs. Vodacom, Cellnet Tanzania v Mobitel, Vodacom and Tritel* (TCRA 2004) in Tanzania; and *MTN Uganda Limited v UCC Miscellaneous Cause No. 225 of High Court Civil Division 2009* in Uganda. These cases all dealt with the issue of call termination costs in the telephony market.

<sup>8</sup>For the European Union, see Council Regulation (EC) 2887/2000 of 18 December 2000 on unbundled access to the local loop [2000] OJ L366/4 recital 3 that justifies mandating access to the fixed copper local loop of former state monopoly operators on the ground that that new entrants do not have widespread alternative network infrastructures and are unable, with traditional technologies, to match the economies of scale and the coverage of operators designated as having significant market power in the fixed public telephone network market. With regards to the United States, the enactment of the Telecommunications Act of 1996 was primarily meant to introduce competition in the local loop which was under the monopoly control of incumbent local exchange carriers (ILECs), see in particular section 251 of the Telecommunications Act.

The second part (starting at Sect. 6.4) discusses the regulation of one-way access. However, one-way access to telecommunications facilities has been less of a concern in Sub-Saharan Africa. A key reason attributable to the limited concern is the less pronounced distinction between the upstream and downstream markets, as telecommunications operators have built up their own end-to end networks. Therefore, the second part focuses less on the provisions of the law on one-way access, and more on the relevance of a one-way access policy in Sub-Saharan Africa's telecommunications sector. Uganda's telecommunications sector forms of the basis for the discussion.

## 6.2 Two-Way Access: Interconnection

The introduction to this chapter has emphasised the importance of two-way access regulation for competition in the telecommunications sector in Sub-Saharan Africa. Interconnection of networks is important to ensure universality of communication, and the regulation of interconnection is needed to curb the anti-competitive effects of network effects.

### 6.2.1 *Rationale for the Regulation of Interconnection*

Requiring network interconnection is particularly crucial in a liberalised telecommunications sector because an incumbent operator will be reluctant to grant interconnection to its network if it threatens to reduce its market share. In this regard, a distinction is made between international and regional level interconnection, on the one hand, and interconnection at the national level, on the other hand.

Prior to the liberalisation of telecommunications, interconnection was only an issue at the international and regional level since telecommunications services at the national level were offered by a monopoly operator. In the liberalised telecommunications sector, it is more likely that interconnection internationally and regionally may be negotiated without regulatory intervention. This is because incumbent operators have commercial incentives to enter into cross-border interconnection agreements. Benefits arising from cross-border interconnection include increased geographical reach; and the ability of an operator to provide its customers a wider range of (sometimes high-cost and very profitable) services.<sup>9</sup> However, an operator has less incentive to agree to interconnection at the national level, particularly where an operator is seeking to provide services within the same geographical area. New entrants are competitors of incumbent operators and are therefore a threat to its

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<sup>9</sup>Emma McCormack, 'Access and Interconnection' in Ian Walden and John Angel (eds), *Telecommunications Law and Regulation* (2nd edn, Oxford University Press 2005) 216.

market share. The incumbent operator with a large number of customers may well determine that it bears little commercial risk if its users cannot contact the (very small number of) users on the new entrant's network.<sup>10</sup> This may stifle competition in the market since the new entrant will find it difficult to remain viable. Therefore, regulation of interconnection at the national level in the era of liberalised telecommunications is crucial.

An incumbent operator refusing to interconnect is not an abstract notion in Uganda. There was evidence to this effect during the early stages of liberalisation of the telecommunications sector in Uganda. Uganda's first interconnection dispute in 1993 related to the refusal by then monopoly operator UPTC (now Uganda Telecom) to interconnect with Celtel (now Airtel) which had been granted a licence to provide mobile services nation-wide.<sup>11</sup> At that time, there was neither telecommunications legislation nor an independent telecommunications regulator. In the end the dispute was settled by the then Ministry of Works, Housing and Communications which pressured UPTC to sign an interconnection agreement with Celtel.<sup>12</sup>

The refusal by the incumbent operators to interconnect has also occurred in other countries in Sub-Saharan Africa during the period of progressive liberalisation. It was reported that in Senegal the incumbent fixed-line operator Sonatel initially refused to interconnect with Sentel which entered the telecommunications market in 1998 as the second telecommunications operator in the country.<sup>13</sup> In Cote d'Ivoire, it was reported that state monopoly operator Cote d'Ivoire Telecommunications initially refused interconnection with new entrants providing pay telephone services in the late 1990s.<sup>14</sup> When the new entrants were eventually granted interconnection by Cote D'Ivoire it was inferior and at a price only 8% below its retail price.<sup>15</sup>

The incidences in the different countries in Sub-Saharan Africa illustrate that interconnection as a regulatory issue can be traced back to the early stages of liberalisation of the telecommunications sector.

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<sup>10</sup>Ibid.

<sup>11</sup>Mary Shirley, Fred Tusubira, Luke Haggarty, and Frew Gebreab, 'Telecommunications Reform in Uganda' (2002) World Bank Working Research Paper 2864/2002 38.

<sup>12</sup>Ibid.

<sup>13</sup>Sentel had to wait 14 months to eventually interconnect with Sonatel's network according to 'Senegal-Telecoms Market Overview, Statistics & Forecasts' (2006) 18 <<http://www.altongp.com/previousprojects/Tellecommunications/Senegal/Senegal%20%20Telecoms%20Market%20Overview,%20Statistics%20&%20Forecasts.pdf>> accessed 15 June 2017.

<sup>14</sup>Roger G. Noll and Mary M. Shirley 'Telecommunications Reform in Sub-Saharan Africa: Politics, Institutions and Performance' 43 <[http://dev.wcfia.harvard.edu/sites/default/files/656\\_nollshirley.pdf](http://dev.wcfia.harvard.edu/sites/default/files/656_nollshirley.pdf)> accessed 15 June 2017.

<sup>15</sup>Ibid.

### **6.2.2 Types of Interconnection**

Although interconnection of telephone networks has received a lot of attention, as technology has changed and competition has intensified in the communications sector, other forms of interconnection have evolved. In addition to telephone network interconnection, internet interconnection and cable television interconnection have become important. In developed jurisdictions, for example, Australia, Europe and North America, cable TV operators offer telephone and internet services through their cable networks. Increasingly, a number of cable TV operators now offer a combination of television, telephone and internet services making interconnection with telephone networks a critical issue.<sup>16</sup> However, in Sub-Saharan Africa, the cable TV market has had limited success therefore, cable TV interconnection is not a key regulatory issue.<sup>17</sup>

With regard to internet interconnection, competition-related concerns centre on interconnection arrangements among backbone providers. It is generally the case that internet service providers (ISPs) voluntarily provide interconnection to each other because of the externality advantages to their members having a large number of network participants.<sup>18</sup> However, backbone providers are usually the predominant internet protocol (IP) infrastructure operators in a region, or one of the limited numbers of operators providing direct international internet connectivity.<sup>19</sup> Backbone providers' refusal of interconnection if unregulated can be used to eliminate competition from service providers and resellers.<sup>20</sup> For example, in Uganda, ISP Infocom was unable to negotiate interconnection agreements to use the networks of the main internet backbone network providers, MTN Uganda Limited and Uganda Telecom.<sup>21</sup> Therefore internet interconnection should be a regulatory concern particularly in Uganda where telecommunications operators are increasingly

<sup>16</sup>Eli Noam, ‘Interconnection Practices’ in Martin E Cave, Sumit K Majumdar, and Ingo Vogelsang (eds), *Handbook of Telecommunications Economics: Structure, Regulation and Competition Volume 1* (Elsevier 2002) 397-398.

<sup>17</sup>Satellite television has been more successful in Africa than Cable TV. One reason for almost non-existent cable TV market in Sub-Saharan Africa is that the construction of private networks for the distribution of cable TV services is not permitted. See IBP USA, *Africa: Telecommunication Industry and Internet Business Opportunities Handbook* (International Business Publications 2003) 251.

<sup>18</sup>Eli Noam, ‘Interconnection Practices’ in Martin E Cave, Sumit K Majumdar, and Ingo Vogelsang (eds) *Handbook of Telecommunications Economics: Structure, Regulation and Competition Volume 1* (Elsevier, 2002) 397-398.

<sup>19</sup>Emma McCormack, ‘Access and Interconnection’ Ian Walden and John Angel (eds), *Telecommunications Law and Regulation* (2nd edn, Oxford University Press 2005) 220.

<sup>20</sup>Eli Noam, ‘Interconnection Practices’ in Martin E Cave, Sumit K Majumdar, and Ingo Vogelsang (eds), *Handbook of Telecommunications Economics: Structure, Regulation and Competition Volume 1* (Elsevier 2002) 398.

<sup>21</sup>Mark D J Williams, ‘Advancing the Development of Backbone Networks in Sub-Saharan Africa’ in *Information and Communications for Development: Extending Reach and Increasing Impact* (World Bank 2009) 55.

moving to use IP as their core technology, replacing older Time-Division Multiplexing (TDM) equipment.<sup>22</sup> Aware of these developments, the UCC has considered the issue whether operators should be obliged to accept interconnection using IP.<sup>23</sup>

While internet interconnection is a relevant issue in Uganda's telecommunications sector, this chapter focuses exclusively on mobile interconnection which is the form of interconnection of greatest concern in Uganda's telecommunications sector.<sup>24</sup>

In particular, mobile call termination rates of incumbent mobile operators have been a major concern following the full liberalisation of the telecommunications sector in 2006. Shortly after the full liberalisation policy came into effect, allegations were rife of incumbent mobile operators charging new entrants high mobile call termination rates in order to restrict competition in the mobile telephony market.<sup>25</sup> Mobile call termination is a bottleneck in the mobile telephony market as a mobile operator has 100% monopoly over call terminating on its network.<sup>26</sup> The monopoly over call termination is recognised by the UCC which views mobile operators with their own end-to end network as dominant in the call termination market.<sup>27</sup> Monopoly over call termination has the potential to restrict competition in the absence of regulation. An incumbent operator seeking to maintain its market share may leverage its monopoly position in the call termination market by refusing to grant a new entrant access to its network or offering call termination services at prohibitive prices. New entrants having a smaller subscriber base need to access to an incumbent operator's network at a reasonable price since most of its calls terminate on other operators' networks. Regulation of call termination is therefore important for purposes of ensuring that the bottleneck does not stifle market entry. This entails ensuring fair and efficient interconnection in the telecommunications sector.

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<sup>22</sup>PwC for UCC, 'Consultation Document 1: Competition Market Analysis' (2008) 9.

<sup>23</sup>This information is based on interview with Ann Rita Ssemboga, (former) Economist, UCC (Kampala, Uganda 7 December 2011).

<sup>24</sup>This is based on the interviews conducted in Uganda with legal representatives of telecommunications operators, MTN Uganda Limited, Airtel, (then) Warid Telecom, and Smile Uganda, UCC personnel, and telecommunications policy-makers and telecommunications industry experts. See, the Appendix A to this study for full list of interviewees.

<sup>25</sup>Though a formal complaint was never submitted to UCC.

<sup>26</sup>Mark Armstrong and Julian Wright, 'Mobile Call Termination' (2009) 119(538) Economic Journal F270, F271.

<sup>27</sup>PwC for UCC, 'Draft Report on Competition and Dominance in the Ugandan Telecoms Sector (Part 2): Interconnection and Retail Cost Study' (2009) Unpublished 1. However, small telecommunications operators who entered the telecommunications market after 2008, for example, Smile Uganda are not considered dominant according to UCC personnel.

### 6.2.3 Mobile Interconnection

As the discussion on interconnection regulation in this chapter focuses on mobile interconnection, this sub-section briefly highlights the main forms of mobile interconnection and identifies the form of mobile interconnection that raises the greatest concern among regulators and telecommunications operators in Uganda.

Mobile interconnection embodies three main forms: (1) fixed to mobile interconnection (FTM), a mobile network terminates a call from a fixed network the call might originate from a local fixed operator, a domestic long-distance operator, or an international operator; (2) mobile to fixed termination (MTF), a mobile operator interconnects with a fixed network to complete calls for the mobile operator's customer, again, the fixed network might be owned by a local fixed operator, a domestic long-distance operator, or an international operator; and (3) mobile to mobile termination (MTM), a mobile operator interconnects with another mobile operator.<sup>28</sup> Initial interconnection concern in the liberalised telecommunications sector, particularly in the developed countries, related to fixed to mobile interconnection (FTM). This is because charges for call termination on the mobile network were often very high thereby adversely affecting the FTM tariffs for calls to mobile networks.<sup>29</sup> FTM in developed countries, most notably European countries is still relevant as pricing asymmetry between FTM and mobile-to-fixed (MTF) is very strong.<sup>30</sup>

In Uganda, MTM is more significant as mobile networks have substituted fixed networks in the voice services market with mobile operators generating most of the traffic, both domestic and international.<sup>31</sup> This means that the significance of FTM

<sup>28</sup>Nera Economic Consulting, 'Competition, Interconnection, and Price Regulation, Module 2: ICT Regulation Toolkit' (January 2007) 20.

<sup>29</sup>Jean-Jacques Laffont and Jean Tirole, *Competition in Telecommunications* (MIT Press 2000) 180 highlights the problem of FTM in European telecommunications markets stemming from the high charges for termination on a mobile network. In the UK, telecommunications regulator, Oftel (now Ofcom) initially focused on FTM. See Monopolies and Mergers Commission (MMC), 'Cellnet and Vodafone: A Report on a Reference under Section 13 of Telecommunications Act 1984 on the Charges Made by Cellnet and Vodafone for Terminating Calls from Fixed Line Networks' (1998) <[http://www.ofcom.org.uk/static/archive/oftel/publications/1995\\_98/pricing/cmmc1298.htm](http://www.ofcom.org.uk/static/archive/oftel/publications/1995_98/pricing/cmmc1298.htm)> accessed 15 June 2017. Similar concerns were raised in Mark Armstrong, 'Network Interconnection in Telecommunications' (1998) Economic Journal 545 and Marcel Canoy, Paul de Bijl, and Ron Kemp, 'Access to Telecommunications Networks' in Pierre A. Buigues and Patrick Rey (eds), *The Economics of Antitrust and Regulation in Telecommunications* (Edward Elgar 2004) 146.

<sup>30</sup>Jerome Bezzina, 'Interconnection Challenges in a Converging Environment: Policy Implications for African Telecommunications Regulators' (June 2005) World Bank 22 <<http://event-africa-networking.web.cern.ch/event-africa-networking/cdrom/Worldbank/interconnectionFinal.pdf>> accessed 15 June 2017.

<sup>31</sup>Anders Engvall and Olaf Hesselmark, 'Options for Terrestrial Connectivity in Sub-Saharan Africa' (April 2005) 5 <[http://www.scanbi-invest.com/download/ExSum\\_OptTe.pdf](http://www.scanbi-invest.com/download/ExSum_OptTe.pdf)> accessed 15 June 2017.

or MTF in Uganda is not as great as in developed countries where fixed-line and mobile networks complement each other. Additionally, following regulatory intervention by UCC in 2009 to determine interconnection rates in the voice telephony market, there is a uniform fixed ceiling for call termination rates on either the mobile or fixed network. This limits concerns related to the pricing asymmetry between FTM and MTF interconnection charges. The symmetry of interconnection rates for FTM and MTM is applied in other countries in Sub-Saharan Africa, for example, Ghana, Ethiopia, DRC, Rwanda, Tanzania.<sup>32</sup> Therefore, regulation of interconnection in Uganda should place greater emphasis on MTM.

#### **6.2.4 Fair and Efficient Interconnection**

The previous sub-section notes that the key concern in Uganda's telecommunications sector is fair and efficient interconnection. There is no standard regulatory model for fair and efficient interconnection since approaches to interconnection regulation vary from country to country.

There are four generic types of interconnection regulation ranging from heavy-handed regulation based on sector-specific rules to *laissez-faire* regulation using general competition law. At one extreme end (heavy-handed regulation) the regulator deals with interconnection matters in great detail with input from industry, setting down precise guidelines and leaving little to be negotiated between parties. The United States interconnection regime falls in this category.<sup>33</sup> In a less extreme version, there is a regulatory framework for interconnection negotiation however, their guidelines are not as precise.

At the other end of the spectrum, interconnection is looked at as a purely commercial negotiation and in case of dispute parties fall back to commercial legal arrangements. This was the case in New Zealand where there was no industry regulator until 2000 when a Telecommunications Commissioner was established to regulate the telecommunications sector. However, general competition law rather than sector-specific rules plays a major role in interconnection regulation and the Telecommunications Commissioner is located within the Commerce Commission, the competition authority in New Zealand. A milder version of the light-handed approach recognises that commercial negotiation of interconnection takes precedence with a fall-back to regulatory intervention.

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<sup>32</sup>See for example, 'NCA Announces Interconnection Rate Regime for Period 2012-2014' <[http://www.nca.org.gh/downloads/Interconnect\\_News.pdf](http://www.nca.org.gh/downloads/Interconnect_News.pdf)> accessed 15 June 2017 pertaining to interconnection rates in Ghana; TCRA, 'Determination on Review of Telecommunications Network Interconnection Rates in the United Republic of Tanzania', Interconnection Determination No.2 of 2007; Tanzania Communications (Interconnection Rates Determination No. 3 of 2013) Notice, 2013.

<sup>33</sup>Damien Geradin and Michel Kerf, *Controlling Market Power in Telecommunications: Antitrust vs. Sector-Specific Regulation* (Oxford University Press 2003) 65.

Uganda's interconnection regime falls in the less extreme version of heavy handed regulation category with guidelines on interconnection negotiation. However, operators still have a say in negotiating details of the interconnection agreement. The interconnection regime permits commercial negotiation among operators under the Communications Act, Act 1 of 2013, subject to detailed guidelines for interconnection negotiations prescribed in the Interconnection Regulations of 2005, SI 2005/25 (hereinafter referred to as the Interconnection Regulations). A number of countries in Sub-Saharan Africa fall in this category with regulatory frameworks for interconnection negotiation. Examples include Botswana,<sup>34</sup> Kenya,<sup>35</sup> Nigeria<sup>36</sup> and Tanzania.<sup>37</sup>

While the approaches to interconnection vary, there are widely accepted principles of interconnection that aim to promote fair and efficient interconnection.<sup>38</sup> These interconnection principles are<sup>39</sup>:

- (a) General principles including the duty to interconnect with other licensed operators and the principles of non-discrimination and transparency;
- (b) Principles relating to interconnection charges, the charges must be cost oriented;
- (c) The regulator's proposed approach and deadlines with respect to interconnection negotiations;

<sup>34</sup>Telecommunications Act, 2006, Act No. 15 of 2006, and Guidelines on Interconnection for Botswana Telecommunications Sector <[http://www.bta.org.bw/sites/default/files/documents/INTERCONNECTION\\_GUIDELINES.pdf](http://www.bta.org.bw/sites/default/files/documents/INTERCONNECTION_GUIDELINES.pdf)> accessed 15 June 2017.

<sup>35</sup>Kenya Information and Communications Act, Cap. 411A; and the Kenya Information and Communications (Interconnection and Provision of Fixed Links, Access and Facilities) Regulations, 2010).

<sup>36</sup>Nigeria Communications Act 2003 and the Telecommunications Network Interconnection Regulations of 2007, SI 2007/33.

<sup>37</sup>Electronic and Postal Communications Act 2010 and the Electronic and Postal Communications (Interconnection) Regulations of 2011.

<sup>38</sup>Principles of fair and efficient interconnection are prescribed at the international level in the WTO Reference Paper on Basic Communications of 2007. Although the paper is not binding for all WTO Member States, it is binding for some members. The relevant Member States in Sub-Saharan Africa are: Cote d'Ivoire, Kenya, South Africa, Uganda, Mauritius, Ghana and Senegal that committed to the Agreement. Furthermore, the principles of interconnection are recommended or provided for at the regional level. Examples include the Asia-Pacific Economic Coordination (APEC), 'Framework and Principles for Telecommunications Interconnection' <[http://www.apec.org/Meeting-Papers/Ministerial-Statements/Telecommunications-andInformation/2000\\_tel/annex\\_c.aspx](http://www.apec.org/Meeting-Papers/Ministerial-Statements/Telecommunications-andInformation/2000_tel/annex_c.aspx)> accessed 15 June 2017; CITEL, 'Guidelines and Practices for Interconnection Regulation of 1999' for South American countries; and the Council Directive (EC) 2002/19 of March 2002 on access to, and interconnection of, electronic communications networks and associated facilities [2009] OJ L337/37 (Access Directive). For Sub-Saharan Africa, see ITU, 'West African Common Project: Harmonisation of Policies Governing the ICT Market in the UEMOA-ECOWAS Space- Interconnection' 5 <<http://www.itu.int/ITUD/treg/projects/ituec/Ghana/modules/FinalDocuments/Interconnexion.pdf>> accessed 15 June 2017.

<sup>39</sup>Scott W Minehane, 'Legal Theory and Practices: Interconnection' (ITU 2005) <<http://www.itu.int/ITUD/treg/Events/Seminars/2005/Thailand/08%20Legal%20Theory%20and%20Practices%20-%20Interconnection.pdf>> accessed 15 June 2017.

- (d) Technical issues related to interconnection including those related to the important point of interconnection;
- (e) Promotion of customer/consumer interests and provision/protection of information.

These principles will be taken into account when analysing the regulatory framework for interconnection in Uganda.

### **6.3 Analysis of the Regulatory Regime for Interconnection in Uganda with Emphasis on Mobile Interconnection**

Uganda's telecommunications sector has grown significantly since 1993. In the fully liberalised telecommunications sector there are several telecommunications operators with an independent telecommunications regulator implementing sector-specific legislation on interconnection. It is the established practice for incumbent operators to enter into interconnection agreements with new entrants. In the fully liberalised telecommunications sector in Uganda, interconnection concerns include, reports of delayed interconnection negotiations, incorporation of unfair terms and conditions in the interconnection agreement, and high interconnection rates, with incumbent operators as the culpable parties.<sup>40</sup> Therefore, issues pertaining to interconnection relate more to ensuring fair and efficient interconnection indicating that it will not suffice to merely mandate interconnection.

The following part of the chapter analyses the current legislation on interconnection and addresses the issue whether the legal framework provides sufficient measures to address specific competition-related interconnection concerns highlighted in the preceding paragraph.

Uganda's interconnection regime comprises sector-specific access legislation, traditionally applied *ex ante*, and competition rules, applied *ex post*. However, the sector-specific access legislation comprising the Communications Act and the Interconnection Regulations are the core of the interconnection regime. The Communications Act provides for interconnection in general terms while the Interconnection Regulations implement the Communications Act by providing detailed provisions aimed at ensuring fair and efficient interconnection.

In addition to the specific telecommunications laws on access, there are provisions in the sector-specific competition rules, the Fair Competition Regulations pertaining to interconnection. However, this chapter focuses only on the Communications Act and the Interconnection Regulations as the primary legislation on interconnection regulation.

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<sup>40</sup>Based on interviews conducted with legal personnel at telecommunications companies, Airtel Uganda, Warid Telecom (now part of Airtel Uganda), MTN Uganda Limited, and Smile Uganda. See Appendix A for the list of interviewees.

### ***6.3.1 Competition-Related Interconnection Concerns***

Regulation of interconnection covers a broad range of aspects both technical and competition-related. However, in assessing the extent to which Uganda's interconnection regime is fair and efficient, emphasis is placed on the primary competition-related interconnection concerns in Uganda's mobile communications market. The interconnection concerns in question are the duty to interconnect, mobile call termination rates, respect for the principle of non-discrimination, and delayed interconnection negotiations.<sup>41</sup>

#### ***6.3.1.1 Duty to Interconnect***

The duty to interconnect is a recognised principle of fair and efficient interconnection. According to the Communications Act, telecommunications operators may interconnect with other operators subject to approval by the UCC.<sup>42</sup> The discretionary language used in the provision suggests that telecommunications operators are not obliged to interconnect. However, mandating interconnection is very important in the liberalised telecommunications sector where incumbent operators will be reluctant to interconnect with new entrants that represent potential competition. While the Communications Act creates the presumption that the duty to interconnect is discretionary, the Interconnection Regulations impose an obligation on telecommunications operators to interconnect.

The Interconnection Regulations mandate interconnection for specific operators and networks. According to the Interconnection Regulations, operators with a major licence<sup>43</sup>; public operators authorised by the UCC under a licence; and operators providing public telecommunications networks or publicly available telecommunications services must interconnect with other operators entitled to interconnect.<sup>44</sup> All public telecommunications networks including, fixed, cellular and data or internet services and as well as public telecommunications networks providing essential services including fixed and cellular services are subject to interconnection.<sup>45</sup> While the Interconnection Regulations limit the duty to interconnect to the list of operators identified, in practice the duty to interconnect applies

<sup>41</sup>Ibid. The interviewees identified interconnection as a key competition-related issue but did not list refusal to interconnect among the key interconnection concerns.

<sup>42</sup>Communications Act 2013, s 58(1).

<sup>43</sup>It should be noted that with the full liberalisation of the telecommunications sector in Uganda the introduction of the Ministerial Guidelines of 2006 put in place a new licensing system which replaced the major/minor licence system. Under the new licensing system anyone can apply for a Public Infrastructure Provider (PIP) licence, a Public Service Provider (PSP)-Voice and Data licence, or a Public Service Provider (PSP)-Capacity Resale licence.

<sup>44</sup>Telecommunications (Interconnection) Regulations, SI 2005/25, reg. 5(1).

<sup>45</sup>Ibid, reg 5(2).

to all telecommunications operators operating in the telecommunications sector as they fall within one of the categories identified. On that basis, interconnection is mandatory in the voice telephony market.

With regard to the implementation of the provision mandating interconnection, there are no cases of refusal to interconnection in the fully liberalised telecommunications sector.<sup>46</sup> Therefore, an incumbent operator's refusal to grant interconnection as a means of restricting competition in the telecommunications sector is not a key issue in Uganda. More worrisome is the issue whether the conditions under which interconnection is granted facilitate competition in the telecommunications sector. Specific concerns of fair and efficient interconnection in Uganda's mobile market are addressed in the next sub-sections.

### **6.3.1.2 Asymmetric or Symmetric Approach to Interconnection Obligations**

The Ugandan approach to mandating interconnection is symmetric encompassing both dominant and non-dominant telecommunications operators. However, some countries have adopted an asymmetric approach to interconnection regulating only dominant operators. It has been argued that the most efficient and effective way to regulate interconnection is to restrict interconnection obligations to dominant incumbent operators.<sup>47</sup> The approach is based on the view that universal imposition of interconnection on all operators, large and small generally amounts to over-regulation.<sup>48</sup> It is less likely to be the case that non-dominant operators offer interconnection on unfair terms. However, dominant operators have a strong incentive to offer unfair terms for interconnection in order to maintain their market share. This view is reflected in the Reference Paper of the WTO Agreement on Basic Telecommunications which imposes interconnection obligations on major suppliers.<sup>49</sup>

Asymmetric regulation of telecommunications operators by making interconnection mandatory only for dominant operators has been applied in the European Union. In the initial directive on interconnection, the Interconnection Directive imposed special obligations on dominant operators including mandatory

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<sup>46</sup>This was affirmed by the representatives of the three mobile operators: interview with Ronald Zakumumpa, legal counsel (Kampala, Uganda 29 November 2011); interview with Dennis Kakonge, Director Legal, Airtel Uganda (5 December 2011 Kampala, Uganda); and interview with Zulaika Kasujja, legal counsel, Smile Communications Uganda (Kampala, Uganda 16 December 2011).

<sup>47</sup>Hank Intven, Jeremy Oliver, and Edgardo Sepulveda, *Telecommunications Regulation Handbook: Interconnection* (World Bank 2000) 3-6.

<sup>48</sup>Ibid, 3-7.

<sup>49</sup>According to the WTO Reference Paper on Basic Communications, art.2.2.

interconnection.<sup>50</sup> In implementing the Directive, the incumbent fixed-line operators that owned most of the telecommunications infrastructure and dominated the telecommunications services market were specifically targeted.<sup>51</sup> Asymmetric regulation of incumbent operators that had significant market power was seen as way of levelling the playing field for competition. However, the saturation of the voice telephony markets in the European Union has seen many telecommunications regulators shift to symmetric regulation of interconnection.<sup>52</sup>

In Uganda's voice services market it should be noted that the former monopoly operator Uganda Telecom does not dominate the voice services market. Uganda telecom has the largest market share in the fixed-line telephone market at close to 80%. However, this fixed telephony market accounts for less than 1% of the voice market which the majority of telephone subscribers being mobile telephone subscribers.<sup>53</sup> The largest telecommunications operator is MTN Uganda Limited which controls 45% of the mobile telephone market,<sup>54</sup> closely followed by Airtel Uganda with approximately 30% market share, with the remaining mobile operators serving the rest of the market. MTN Uganda Limited's and Airtel's strong position suggest that asymmetric regulation might be required to ensure that there is a level playing field for competition in the voice telephony market. However, the UCC does not view any operator in the market as dominant due to the presence of several vertically integrated operators serving as a competitive constraint.<sup>55</sup>

Uganda's voice telephony market composed of several vertically integrated operators, a number of which are local subsidiaries of large multinational telecommunications groups, points away from asymmetric regulation of interconnection. Thus, Uganda's voice telephony market composition does not support the asymmetric approach to interconnection regulation as no particular operator has a strong market position that threatens the growth of competition. However, fair and efficient interconnection may be enhanced by imposing additional interconnection

<sup>50</sup>Interconnection Directive, Directive 97/33/EC, art 4(1).

<sup>51</sup>Ibid.

<sup>52</sup>Jongyong Lee and Duk Hee Lee, 'Asymmetry of Mobile Termination Rates and the Waterbed Effect' 6 (23rd European Regional Conference of the International Telecommunications Society, Vienna, July 2012) <<http://hdl.handle.net/1041960353>> accessed 15 June 2017, report that national regulators in Austria, Czech Republic, Denmark, Estonia, Greece, Hungary, Malta, Portugal, Sweden and the UK now prescribe symmetric mobile call termination rates.

<sup>53</sup>The 22 million mobile telephone subscribers account for more than 98 percent of telephone subscriptions in Uganda.

<sup>54</sup>Based on data from the MTN Uganda Limited website <[www.mtn.co.ug](http://www.mtn.co.ug)> accessed 15 June 2017.

<sup>55</sup>Although MTN has a significant market share above the 25 per cent triggering a presumption of dominance under the Fair Competition Regulations, the UCC does not regard any mobile operator as dominant in the voice telephony market. This is based on findings of a competition analysis study of Uganda's telecommunications of 2008 sector commissioned by the UCC and undertaken by PricewaterhouseCoopers (PwC). See PwC for UCC, 'Draft Report on Competition and Dominance in the Ugandan Telecoms Sector (Part 2): Interconnection and Retail Cost Study' (2009) Unpublished 11.

obligations on dominant incumbent operators. The Interconnection Regulations impose additional interconnection obligations on dominant operators that promote fair and efficient interconnection.<sup>56</sup> The Interconnection Regulations require dominant operators to grant access to essential facilities, provide non-discriminatory interconnection, charge interconnection at a cost-oriented price, provide access to physical facilities, and not abuse their dominant position.<sup>57</sup>

### 6.3.1.3 Mobile Call Termination Rates

There is no issue related to regulation of interconnection in the telecommunications sector that has raised more concern than the price charged for mobile call termination. In the fully liberalised telecommunications sector in Sub-Saharan Africa high call termination rates have become the main complaint of new entrants entering the voice market.<sup>58</sup> However, while in developed countries initial interconnection rates concerns related to fixed-to-mobile interconnection (FTM),<sup>59</sup> in Sub-Saharan Africa the main concern has been about charges for mobile-to-mobile (MTM) interconnection. This primarily because the majority of the population in region rely on the mobile telephone rather than the fixed telephone for communication. In Sub-Saharan Africa, the fixed network has been substituted by the mobile network.

It is rather surprising that interconnection rates should be a very contentious issue given that interconnection involves reciprocity of access. That is, each operator needs to interconnect with other operators for universality of communication. Since both parties to an interconnection agreement have something to gain one would assume that interconnection negotiations would result in a fairer outcome than negotiations for one-way access. Interconnection rates as a contentious issue stems from call termination which is a bottleneck. Each mobile operator is considered a monopolist for its own termination call.<sup>60</sup> Larger operators with a bigger

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<sup>56</sup>Telecommunications (Interconnection) Regulations, SI 2005/25, reg 14(4).

<sup>57</sup>Ibid.

<sup>58</sup>See for example, *Botswana Telecommunications Corporation v Mascom Wireless Pty (Ltd) and Vista Cellular (Pty) Ltd* BTA Ruling 1/1999 (case from Botswana); *Kencell Communications Ltd v TKL Communications Appeal Tribunal* (2003) (case from Kenya); *TDM (Telecomicaoes de Mocambique E.P.) vs. Vodacom* (case from Mozambique), *Cellnet Tanzania v Mobitel, Vodacom and Tritel* (TCRA 2004) (case from Tanzania); and *MTN Uganda Limited v UCC Miscellaneous Cause No. 225* of High Court Civil Division 2009 (case from Uganda).

<sup>59</sup>Jean-Jacques Laffont and Jean Tirole, *Competition in Telecommunications* (MIT Press 2000) 180 highlights the problem of FTM stemming from the high charges for termination on a mobile network. See also Mark Armstrong, ‘Network Interconnection in Telecommunications’ (1998) 108 (448) Economic Journal 545, which discusses competitive bottlenecks and uses fixed-mobile termination as the main example; and Marcel Canoy, Paul de Bijl, and Ron Kemp, ‘Access to Telecommunications Networks’, in Pierre A. Buijges and Patrick Rey (eds) *The Economics of Antitrust and Regulation in Telecommunications* (Edward Elgar 2004) 146.

<sup>60</sup>Mark Armstrong and Julian Wright, ‘Mobile Call Termination’ (2007) 119 (538) Economic Journal F270.

subscriber base have more incentive to charge high interconnection rates due to the termination of a greater number of calls on its network. New entrants desire the opposite namely, cheaper call termination rates, since most of its calls terminate on other operators networks. This asymmetry of networks points to imbalanced bargaining power between larger operators and new entrants or smaller operators in interconnection negotiations. To ensure that the monopoly over call termination is not used to restrict competition, regulation of interconnection rates is very important.<sup>61</sup> Leaving operators to freely negotiate over the choice of mutual access charges may not necessarily result in a fair rate for interconnection.

In the fully liberalised telephony market in Uganda, high mobile call termination rates have been the primary source of concern for new entrants that have less bargaining power. To illustrate this point reference is made to the interconnection rates offered by mobile operators prior to UCC's regulatory intervention in 2009.

Data from 2008 reveal that MTN Uganda Limited, which at the time had a market share of 47.5%, charged the only operational new entrant in the voice market, Warid Telecom, the interconnection at Uganda shillings 480 (USD \$0.19) per minute.<sup>62</sup> MTN Uganda charged an interconnection rate that was significantly higher than the rate it charged other incumbent mobile operators. In comparison Warid Telecom charged Uganda shillings 300 (USD \$0.12) per minute for its subscribers calling MTN Uganda Limited subscribers.<sup>63</sup>

Warid Telecom as a new entrant was at a disadvantage with its subscribers having to pay a high interconnection rate for calls terminating on the largest mobile network. Furthermore, the data suggests the large incumbent operators have the advantage over new entrants and smaller operators with regards to negotiation of interconnection rates.<sup>64</sup>

The Interconnection Regulations require that interconnection services be provided on a cost-oriented basis.<sup>65</sup> The term ‘cost-oriented’ is not defined in the Interconnection Regulations. However, it should not be confused with pricing at marginal cost. Pricing at marginal cost entails setting the price of a product at or slightly above the variable cost incurred to produce it. Cost-orientation is about determining the average cost incurred by an efficient operator using the best

<sup>61</sup>Economists recommend regulation of mobile call termination rates to mitigate the competition problems arising from mobile call termination being a competitive bottleneck. See in particular, Mark Armstrong, ‘Network Interconnection in Telecommunications’ (1998) 108 (448) *Economic Journal* 545; Jean-Jacques Laffont and Jean Tirole, *Competition in Telecommunications* (MIT Press 2000); and Mark Armstrong and Julian Wright, ‘Mobile Call Termination’ (2007) 119 (538) *Economic Journal* F270.

<sup>62</sup>PwC for UCC, ‘Draft Report on Competition and Dominance in the Ugandan Telecoms Sector (Part 2): Interconnection and Retail Cost Study’ (2009) Unpublished 15.

<sup>63</sup>Ibid.

<sup>64</sup>Warid Telecom was unsurprisingly not happy with the interconnection rate charged by MTN Uganda Limited. This is gleaned from an interview with Paul Mwebesa, Head Legal, Warid Telecom (Kampala, Uganda 23 November, 2011).

<sup>65</sup>Telecommunications (Interconnection) Regulations, SI 2005/25, reg 15.

available technology.<sup>66</sup> Cost-oriented pricing is recommended on the basis that prices based on cost are most likely to promote economic efficiency.<sup>67</sup>

While the Interconnection Regulations set the standard for determining call termination rates, the approach adopted by the UCC in the initially years of full liberalisation of the telecommunications sector was to leave negotiations to the discretion of the operators. This was the approach it had adopted during the duopoly era even though some authors pointed out that the call termination rates were higher than the international standard.<sup>68</sup> The UCC's non-interventionist approach during the duopoly era is most likely explained by the absence of provisions specifically governing interconnection rates in the telecommunications sector. The Communications Act, Cap. 106 was silent on this matter. The current Interconnection Regulations were only put in place in 2005 when the duopoly period was about to end.

However, following the 2008 report by PricewaterhouseCoopers (PwC) commissioned the UCC to provide assistance in the area of interconnection, competition analysis, and retail price regulation, the UCC has become more active in regulating interconnection rates in the mobile telephony market.<sup>69</sup> Thus in 2009, the UCC set a ceiling for call termination rates which was determined in accordance with the Interconnection Regulations, that is, it was based on the average cost incurred by an efficient operator using the best available technology.<sup>70</sup> Following the UCC's intervention call termination rates were lowered from Uganda shillings 181 (US \$0.09)<sup>71</sup> to Uganda shillings 131 (US \$0.066).<sup>72</sup> By 2010, all operators had reduced their interconnection rates to Uganda shillings 131. As of June 2012, the UCC had further reduced the rate to Uganda shillings 112 (US \$0.042).<sup>73</sup>

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<sup>66</sup>Paul Noumba Um, Laurent Gille, Lucile Simon, and Christophe Rudelle, *A Model for Calculating Interconnection Costs in Telecommunications* (PPIAF and the World Bank 2004) 13.

<sup>67</sup>A study by the World Bank in Sub-Saharan Africa recommends cost-oriented pricing. See Paul Noumba Um, Laurent Gille, Lucile Simon, and Christophe Rudelle, *A Model for Calculating Interconnection Costs in Telecommunications* (PPIAF and the World Bank 2003). The European Commission justifies the cost-based pricing approach on the grounds that it promotes product efficiency because low termination rates facilitate low retail call charges and higher consumption. See 'European Commission Staff Working Document Explanatory Note Accompanying Commission Recommendation on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU' <[http://ec.europa.eu/information\\_society/policy/ecomms/doc/library/public\\_consult/termination\\_rates/explanatory.pdf](http://ec.europa.eu/information_society/policy/ecomms/doc/library/public_consult/termination_rates/explanatory.pdf)> accessed 15 June 2017.

<sup>68</sup>Mary Shirley, Fred Tusubira, Luke Haggarty, and Frew Gebreab 'Telecommunications Reform in Uganda' (2002) World Bank Working Research Paper 2864/2002 42.

<sup>69</sup>PwC for UCC, 'Consultation Document 1: Competition Analysis' (2008) Unpublished.

<sup>70</sup>Interview with Abdul Musoke, Market Analyst, UCC Headquarters (Kampala, Uganda 18 November 2011).

<sup>71</sup>At the time of the UCC's publication of the interconnection rates ceiling, mobile operators had all an interconnection rate of Uganda shillings 181 (US\$ 0.07).

<sup>72</sup>UCC, 'LRIC Reference Rate Determination of 2009'.

<sup>73</sup>UCC, 'LRIC Reference Rate Determination of 2012'.

However, the UCC's efforts to regulate interconnection rates in the voice market revealed a key weakness in the interconnection regulatory framework, ambiguity with regard to the UCC's mandate to regulate termination rates. Although the operators adopted the rates, there was uncertainty as to whether the termination rates were binding. The then Communications Act, Cap. 106 and the Interconnection Regulations do not expressly provide the UCC with the power to determine interconnection rates. However, the Interconnection Regulations require that interconnection charges must be cost-oriented. On that basis, one could argue that the UCC's power to determine interconnection rates was part of its function as implementer of the Interconnection Regulations. Some operators (the incumbent operators) however argued that the UCC powers to determine interconnection rates were only binding where operators had failed to agree on a rate.<sup>74</sup> The disagreement over the UCC's powers hampered its ability to expediently enforce cost oriented interconnection pricing. Following the UCC's publication of prescribed interconnection rates in 2009, MTN Uganda Limited filed a suit before the High Court challenging the UCC's mandate. MTN Uganda Limited's plaint requested, *inter alia*, for an injunction to restrain the UCC from publishing and implementing the interconnection rates that were to take effect on January, 1, 2010.<sup>75</sup> It was further argued in the plaint that by law fixing call termination rates between operators was a matter of negotiation and agreement.<sup>76</sup> As such, the UCC decision had the effect of re-writing the said agreement contrary to law and public policy.<sup>77</sup>

The High court granted MTN Uganda Limited a temporary injunction ruling that the UCC could not impose the new rates on MTN Uganda Telecom until the court had assessed whether it had the authority to do so.<sup>78</sup> In March 2009, MTN Uganda Limited entered into a consent agreement in which the UCC agreed to stay its implementation of the interconnection rates. For its part, MTN was to discharge the injunction it had lodged to secure the suspension of the implementation of the interconnection rates published by UCC. As a result, the UCC reference interconnection rates only came into effective several months after the 1 January 2010 deadline. Furthermore, the uncertainty as to the UCC's mandate hindered its efforts to expediently implement the reduced interconnection rate of Uganda shillings 112 (US \$0.04) effective from June 2012.<sup>79</sup> Some operators were slow to adopt

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<sup>74</sup>Interview with Ronald Zakumumpa, legal counsel, MTN Uganda, (Kampala, Uganda 29 November, 2011). A similar view was expressed in the interview with Dennis Kakonge, Director Legal, Airtel Uganda (Kampala, Uganda 5 December 2011). Mr. Kakonge called for the amendment of the Communications Act, Cap.106 to provide UCC with clear powers to regulate interconnection rates.

<sup>75</sup>MTN Uganda Limited v UCC Miscellaneous Cause No. 225 of 2009 High Court Civil Division.

<sup>76</sup>Ibid.

<sup>77</sup>Ibid.

<sup>78</sup>MTN Uganda Limited v UCC Miscellaneous Cause No. 225 of 2009 High Court Civil Division.

<sup>79</sup>UCC, 'LRIC Reference Rate Determination of 2012'.

the new rates arguing that the rates were not binding.<sup>80</sup> This uncertainty in the law was eventually resolved with the passing of the new Communications Act, Act 13 of 2013. According to the Communications Act, the UCC has the power to fix maximum interconnection rates.<sup>81</sup> The elimination of ambiguity as regards the UCC's powers to determine interconnection rates will enable the regulator to effectively fulfil its mandate of ensuring fair and efficient interconnection in the telecommunications sector.

The UCC's regulatory intervention is critical in the mobile telephony market where the lower interconnection rates has led to lower call tariffs for consumers in Uganda's mobile telephony services market.<sup>82</sup>

### 6.3.1.4 Asymmetric or Symmetric Regulation of Interconnection Rates

The previous sub-section has illustrated that the regulation of mobile call termination rates in Uganda is important for purposes of fostering competition in the mobile telephony market. In regulating mobile call termination rates there are two different approaches asymmetric, namely, or symmetric regulation of interconnection rates. Asymmetric regulation of interconnection rates entails evaluation of the position of a given mobile operator relative to other mobile operators in the market and applying individualised treatment to operators for an interim period.<sup>83</sup> In the typical case a ceiling for interconnection rates is prescribed for operators with significant market power, while other operators are free to charge interconnection rates above the prescribed ceiling. Where telecommunications regulators opt for symmetric regulation all operators dominant and non-dominant must charge the same prescribed rate. Currently, the approach in Uganda is symmetric regulation of interconnection rates, with all operators (large and small) charging the same interconnection rate.

Asymmetric regulation of mobile call termination rates has been mostly popular in the European Union where the former state monopoly operators still had a very strong market presence in both the infrastructure provision and voice services

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<sup>80</sup>Julius Businge, 'Telecoms Fear Losses over New Mobile Interconnection Rates' *The Independent* (Kampala, Friday 15 June 2012) <<http://www.independent.co.ug/business/business-news/5925-telecoms-fear-losses-over-new-mobile-inter-connection-rates>> accessed 15 June 2017 The newspaper reports that MTN Uganda was resisting implementation of the lower MTR arguing that the UCC MTR ceiling was not binding.

<sup>81</sup>Communications Act 2013, s 59(1).

<sup>82</sup>Julius Businge, 'Telecoms Fear Losses over New Mobile Interconnection Rates' *The Independent* (Kampala 15 June 2012) <<http://www.independent.co.ug/business/business-news/5925-telecoms-fear-losses-over-new-mobile-inter-connection-rates>> accessed 15 June 2017.

<sup>83</sup>Nicola Theron, 'The Competitiveness of the SA Mobile Market- Will the Entry of Virgin Mobile Increase Competition?' Econex, Research Note 4, June 2006.

market at the time of full liberalisation of the telecommunications sector.<sup>84</sup> Asymmetric regulation of interconnection rates is seen as means of ensuring a level playing field for competition. In more recent years however, telecommunications regulators in Europe have shifted to symmetric regulation due to the mobile markets entering the maturity phase with markets becoming saturated.<sup>85</sup>

While telecommunications regulators in the European Union have moved away from a policy of asymmetric regulation of interconnection rates, in Sub-Saharan Africa, a number of national telecommunications regulators in waking up to their role as enforcers of fair and efficient interconnection have chosen to regulate interconnection rates asymmetrically. This has been the case in South Africa where the incumbent mobile operators are bound by the ICASA interconnection rates while other mobile operators are not.<sup>86</sup> It would have been easy to argue against the consideration of asymmetric regulation of mobile call termination rates if the only examples were in developed countries. As has been stressed throughout this study, Uganda's telecommunications sector is significantly different from the telecommunications sector in developed countries.<sup>87</sup> On this basis policies adopted in developed jurisdictions are not necessarily appropriate in Uganda's telecommunications sector. However, given that other countries in Sub-Saharan Africa, with a telecommunications sector market composition that is similar to Uganda's,<sup>88</sup> have opted for asymmetric regulation of mobile call termination rates it is worth considering the issue more closely.

Another key reason why asymmetric regulation of interconnection rates in Uganda's telecommunications sector should be considered relates to the changes in the voice telephony market in the fully liberalised telecommunications sector. In the duopoly period, there were three mobile operators, MTN Uganda Limited, Celtel/Zain (now Airtel) and Uganda Telecom, there were disparities in network size with MTN Uganda Limited having more than 50% of the market share. Despite these disparities, the operators could all be characterised as falling in the same category. In the fully liberalised telecommunications sector, the network size disparities are very significant. At one end of the spectrum, four operators, Airtel,

<sup>84</sup>Jongyong Lee and Duk Hee Lee, 'Asymmetry of Mobile Termination Rates and the Waterbed Effect' 6 (23rd European Regional Conference of the International Telecommunications Society, Vienna, July 2012) <<http://hdl.handle.net/1041960353>> accessed 15 June 2017 report that national regulators in Austria, Czech Republic, Denmark, Estonia, Greece, Hungary, Malta, Portugal, Sweden and the UK initially regulated interconnection rates asymmetrically.

<sup>85</sup>Ibid, 6 reports that national regulators in Austria, Czech Republic, Denmark, Estonia, Greece, Hungary, Malta, Portugal, Sweden and the UK now prescribe symmetric mobile interconnection rates.

<sup>86</sup>See Call Termination Regulations of 2010, Government Gazette No.33698, 29 October, 2010 permitting operators with less than 25 per cent market share to charge rates above the prescribed ceiling. Vodacom and MTN with market shares above 25 per cent are therefore bound by the interconnection rates while the smallest operators Cell C and 8ta can charge up to 20 per cent more for interconnection.

<sup>87</sup>This is expounded on in Chap. 2 of this study, Sect. 2.4.

<sup>88</sup>Ibid.

MTN Uganda, Uganda Telecom, and Africell account for 99% of the market share, while small operators like K2 and Smile Uganda make up less than 1% of the voice telephony market. The market composition suggests that there might be a case for asymmetric regulation of interconnection rates in favour of the smaller operators.

The asymmetric regulation of interconnection rates in Uganda's voice telephony market is not a new notion. The UCC initially considered adopting asymmetric interconnection rates when it decided to determine interconnection rates in 2009. The UCC sought to set a ceiling for interconnection rates applicable to incumbent operators, Uganda Telecom, MTN Uganda, and Celtel/Zain (Airtel). Warid Telecom as the new entrant at the time would be entitled to charge an interconnection rate above the prescribed ceiling. However, UCC in the end opted for symmetric regulation of interconnection rates.

The key rationale behind asymmetric regulation of mobile call termination rates is that asymmetric regulation reduces the gap in per-unit costs between incumbents and new entrants resulting from uneven spectrum assignments and differences in the number of subscribers.<sup>89</sup>

In Uganda, there is uneven distribution of spectrum holdings in the mobile sector with the incumbent mobile operators in a more advantageous position than new entrants. Incumbent operators (MTN Uganda, Uganda Telecom and Airtel) have large spectrum holdings in the GSM frequency bands traced back to the UCC's decision in 1998 to award licences to the three mobile operators which provided for the equal sharing of the 900 MHz frequency band among the three operators. Additionally, the incumbent mobile operators were granted control over huge chunks of channels in the GSM 1880–2200 MHz band. In the fully liberalised telecommunications sector UCC has attempted to even out the spectrum holdings among the different telecommunications operators through refarming and reassigning to new entrants.<sup>90</sup> However, the three mobile operators have still managed to retain most of the spectrum assigned to them in 1998. This is because the UCC and the Ministry of ICT have faced significant challenges implementing a comprehensive refarming strategy in the mobile communications sector.<sup>91</sup> Of particular significance is the fact that most of the spectrum assigned in the 900 MHz frequency band has been licensed to the incumbent operators while new entrants have own spectrum primarily in the 1800 MHz frequency band.<sup>92</sup>

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<sup>89</sup>Jongyong Lee and Duk Hee Lee, 'Asymmetry of Mobile Termination Rates and the Waterbed Effect' 2 (23rd European Regional Conference of the International Telecommunications Society, Vienna, July 2012) <<http://hdl.handle.net/1041960353>> accessed 15 June 2017.

<sup>90</sup>Based on interview with Godfrey Sengendo, (then) Manager Spectrum Management, UCC (Kampala, Uganda 22 November 2011).

<sup>91</sup>The government bodies have faced strong opposition from the incumbent mobile operators demanding for compensation that the government bodies are unable to meet. This information was obtained during the interview with Ronald Zakumumpa, legal counsel, MTN Uganda (Kampala, Uganda 29 November 2011).

<sup>92</sup>A new entrant refers to operators that entered in the mobile market after full liberalisation of the telecommunications sector in 2006.

The latter therefore incur higher costs when rolling infrastructure compared to the incumbent operators with spectrum in the 900 MHz.<sup>93</sup> This undoubtedly gives the incumbent operators a competitive advantage over the newer entrants in the mobile market. The spectrum holdings among the telecommunications operators do not offer a level playing field for competition in the mobile telephony market suggesting that asymmetric regulation for a specific period of time may serve as means of levelling the playing field.

Differences in subscriber base also indicate that asymmetric regulation of interconnection rates might play a role in enhancing competition in Uganda's voice telephony market. As previously pointed out, the voice telephony market comprises large and small telecommunications operators. The larger operators, MTN Uganda Limited, Airtel Uganda, Uganda Telecom, and Africell control approximately 99% of market.<sup>94</sup> The remaining operators, Smile Uganda and K2 cater to 1% of the voice telephony market. The smaller operators have struggled to make headway in the voice telephony market competing alongside the larger operators, the majority of which are local subsidiaries of multinational telecommunications groups, suggesting that asymmetric regulation of termination rates might be the more appropriate approach.<sup>95</sup>

The differences in subscribers in the voice telephony market and the asymmetric spectrum holdings in the GSM frequency bands makes Uganda's voice telephony market a prime candidate for asymmetric regulation of interconnection rates.

However, Uganda's voice telephony market, specifically the mobile telephony market, has grown into highly competitive market under a regulatory environment that initially left interconnection rates determination to the operators. Before UCC intervened to address the issue of high interconnection rates in the mobile telephony market in 2009, new entrants were still able to get a foothold in the market. Warid Telecom was able to acquire 11% of the telephone market share by the end of December 2008 although it had only been in the market for 11 months.<sup>96</sup> The introduction of symmetric regulation of call termination rates has only intensified competition among operators with end consumers enjoying lower call tariffs. MTN Uganda Limited, Uganda Telecom and Airtel have progressively lost market share to new entrants.<sup>97</sup> The incumbent operators' loss of market share indicates that the voice telephony market is conducive for new entrants to grow.

<sup>93</sup>The high costs arise from the need to set up more mobile masts since higher frequency bands offer lower transmission ranges.

<sup>94</sup>MTN Uganda Limited and Airtel Uganda had an aggregate subscriber base of approximately 17 million in 2015 while Uganda Telecom and Orange (now Africell) had 2 and 1 million subscribers, respectively.

<sup>95</sup>This is according to interview with Zulaika Kasujja, legal counsel, Smile Communications Uganda, (Kampala, Uganda 16 December 2011).

<sup>96</sup>Warid Telecom's market growth is due to its on-net tariff plan that offered free on-net calls attracting many subscribers to its network.

<sup>97</sup>Largest operator MTN Uganda which had a market share of 59 per cent in December 2006 (according to UCC) has seen its market share reduce to 45 per cent in 2008, rise to 55 per cent in

Thus, given Uganda's competitive mobile market, asymmetric regulation of call termination rates is not necessary for purposes of fostering a competitive voice services market. Furthermore, asymmetric regulation of mobile network call termination rates is an artificial intervention that interferes with the market mechanism which can lead to regulatory failure, especially when there is no structural need that justifies such a policy, and could hinder the overall progress of access pricing regulation. Therefore, it is important for regulators to limit the use of asymmetric MTRs to cases in which the social benefits exceed the social costs resulting from the regulation.<sup>98</sup>

Regulation of interconnection rates asymmetrically though not justifiable in Uganda, may be justifiable in other countries in Sub-Saharan Africa where incumbent operators have a very high market share, equating to dominance, that enables them to control the market. This is the case in South Africa where incumbent mobile operators MTN and Vodacom have maintained market power akin to a duopoly despite the entry of Cell C in 2001 and 8ta in 2010.<sup>99</sup> The limited growth of new entrants Cell C and 8ta is linked to the absence of effective regulation of mobile interconnection rates over a long period of time.<sup>100</sup>

Shortly before Cell C entered the mobile market in South Africa, MTN and Vodacom increased the interconnection rate by 500%. The non-discriminatory but prohibitive interconnection rate has been viewed as the primary stumbling block to expansion of smaller operators in the South Africa's mobile market.<sup>101</sup> This is evidenced by Cell C's ability to gain only 10% of market share despite its presence in the mobile market for more than a decade.<sup>102</sup> Not surprisingly, ICASA

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2011 and was currently at around 50 per cent mark as of December 2015 based on statistics from the MTN Group Quarterly Reports.

<sup>98</sup> Jongyong Lee and Duk Hee Lee, 'Asymmetry of Mobile Termination Rates and the Waterbed Effect' 6 (23 European Regional Conference of the International Telecommunications Society, Vienna, July 2012) <<http://hdl.handle.net/1041960353>> accessed 15 June 2017.

<sup>99</sup>The two largest mobile operators control close to 80 per cent of the market in South Africa, Cell C which has been in the market since 2001 has only been able to acquire a 10 per cent market share.

<sup>100</sup> Stephen Esselaar and Keith Weeks, 'The Case for the Regulation of Call Termination in South Africa: An Economic Evaluation' <<http://www.ictregulationtoolkit.org/en/toolkit/docs/Document/4009y>> accessed 15 June 2017.

<sup>101</sup> Nicole Theron and Johann van Eeden, 'Asymmetric Mobile Termination Rates in South Africa' Econex Research Note 21, February 2011; and Nicola Theron, 'The Competitiveness of the SA Mobile Market-Will the Entry of Virgin Mobile Increase Competition?' Econex, Research Note 4, June 2006.

<sup>102</sup> Nicola Theron, 'The Competitiveness of the SA Mobile Market-Will the Entry of Virgin Mobile Increase Competition?' Econex, Research Note 4, June 2006; Stephen Esselaar and Keith Weeks, 'The Case for the Regulation of Call Termination in South Africa: An Economic Evaluation' <<http://www.ictregulationtoolkit.org/en/toolkit/docs/Document/4009y>> accessed 15 June 2017; Nicole Theron and Johann van Eeden, 'Asymmetric Mobile Termination Rates in South Africa' Econex Research Note 21, February 2011; and Christoph Stork and Alison Gillwald, 'Mobile Wholesale and Retail Price Interplay: the Somewhat Contrary Case of South Africa in Africa' (19th ITS Biennial Conference, Bangkok, November 2012).

intervened to regulate mobile interconnection asymmetrically through the Call Termination Regulations of 2010.<sup>103</sup> The Regulations provide that the prescribed rates apply to operators with a market share greater than 25%.<sup>104</sup> The Regulations specifically identify MTN and Vodacom as subject to the rates in the Call Termination Regulations and permit operators without significant market power to charge higher interconnection rates (up to 20%).<sup>105</sup>

In conclusion, the UCC does not need to regulate interconnection rates asymmetrically as the composition of the mobile market strongly suggests that it is not necessary. However, there might be a strong argument for adoption of asymmetric regulation of interconnection rates in other countries in Sub-Saharan Africa as illustrated by the South Africa experience.<sup>106</sup>

### 6.3.1.5 Non-discriminatory Interconnection

Non-discriminatory interconnection is another critical interconnection issue. Discrimination may take a number of forms: one likely form of discrimination is an incumbent operator providing interconnection to some operators on more favourable terms than others. The second form relates to an operator providing more favourable interconnection arrangements to its own operations. However, not all cases of discrimination lead to unfair and inefficient interconnection, for example, two competitors may have voluntarily agreed to different arrangements, for example to suit their different operating conditions.<sup>107</sup> The principle of non-discrimination should only apply to instances where terms and conditions of interconnection are undue, unjust or unfair. The Interconnection Regulations require interconnection on terms and conditions that are just, reasonable, and non-discriminatory.<sup>108</sup>

The issue of discriminatory interconnection in Uganda's fully liberalised telecommunications sector has centred primarily on the varied interconnection rates offered between operators. Discriminatory interconnection rates can be traced back to the duopoly period when the three mobile operators, Celtel, MTN Uganda

<sup>103</sup>See Call Termination Regulations 20 October, Gazette No 33698.

<sup>104</sup>Ibid.

<sup>105</sup>Ibid.

<sup>106</sup>Though it must be noted that the introduction of asymmetric regulation of interconnection rates has not had a significant impact on the competitive landscape in South Africa's mobile telephony market. The incumbent operators still maintain a high market share despite Cell C slashing its call prices following the implementation of the Call Termination Regulations of 2010. See Christoph Stork and Alison Gillwald, 'Mobile Wholesale and Retail Price Interplay: the Somewhat Contrary Case of South Africa in Africa' (19th ITS Biennial Conference, Bangkok, November 2012).

<sup>107</sup>Hank Intven, Jeremy Oliver, and Edgardo Sepulveda, *Telecommunications Regulation Handbook: Interconnection* (World Bank 2000) 3-8.

<sup>108</sup>Telecommunications (Interconnection) Regulations SI 2005/25, reg 5(4)(e).

Limited, and Uganda Telecom used to offer varied interconnection rates as is illustrated on the next page in Table 6.1.

In the fully liberalised telecommunications sector, the practice of offering different rates for interconnection became a key issue. There were allegations by new entrants of the incumbent mobile operators offering new entrants interconnection at a significantly higher rate than that offered between fellow incumbent mobile operators. This is illustrated in Figs. 4.7–4.10 on interconnection rates charged by operators in 2008 in Chap. 4 of this study. The figures show interconnection rates offered between operators in 2008 shortly after Warid Telecom had entered the mobile market as the first new mobile operator in the fully liberalised telecommunications sector. The discriminatory interconnection rates had raised the concern that new entrants were at a competitive disadvantage particularly when one considers the fact that interconnection rates make up a significant portion of new entrants' costs. By 2009 however, all operators had adopted a standard rate of Uganda shillings 181 (8 US cents). Furthermore, at the end of 2009, the UCC published a ceiling for mobile interconnection rates which were eventually adopted by the operators.<sup>109</sup>

While the UCC intervention in the determination of interconnection rates has mitigated the risk of discriminatory interconnection, the potential for incumbent operators to engage in other forms of discrimination in interconnection negotiations as a means of protecting their market shares remains. UCC should therefore be vigilant in enforcing the non-discrimination principle as prescribed in the Interconnection Regulations.

### 6.3.1.6 Delayed Interconnection Negotiations

Refusal to interconnect *per se* has not been a major source of concern in Uganda. However, there have been claims of delayed interconnection by incumbent operators affecting new entrants' ability to gain a foothold in the mobile services market. A notable case was Orange-Uganda Telecom interconnection negotiations which took more than a year to be concluded with the incumbent mobile operator. This affected new entrants Orange Uganda's ability to effectively participate in the mobile telephony market. Orange had entered the market in 2009. Although its subscribers could access the networks of the other operators, Warid Telecom and the two largest mobile operators Airtel, MTN Uganda Limited, the subscribers were disadvantaged compared to subscribers of other networks that were able to access Uganda Telecom's which was the third largest mobile operator at the time.

More recently, new entrant K2, which entered the mobile telephony market in January 2013, faced several months' delays in the conclusion of interconnection negotiations with three of the four large mobile operators, that is, MTN Uganda

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<sup>109</sup>UCC, 'LRIC Reference Rate Determination of 2009'.

**Table 6.1** A sample of call termination rates (MTN Interconnection) 1999–2001 in U.S. cents

Year	1999	2000	2001		
Local and national calls	Uganda Telecom	Celtel MTN Uganda Limited	Uganda Telecom	Celtel MTN Uganda Limited	Uganda Telecom
Uganda Telecom charges	17.16	6.00		13.89	5.00
Celtel charges	3.24	23.46		11.11	8.89
MTN Uganda Limited charges	4	23.46		3.33	8.89

Source: Mary Shirley, Fred Tusubira, Luke Haggarty, Frew Gebreab 'Telecommunications Reform in Uganda' (2002) World Bank Working Research Paper No. 2864

Limited, Airtel Uganda, and Uganda Telecom.<sup>110</sup> A key reason for the delay in interconnection negotiations was that the operators were not quite sure how MVNOs operate.<sup>111</sup> The delayed interconnection negotiations made it difficult for K2 to effectively provide services to its customers who could only connect with one network, Orange Uganda's network, during the delayed negotiations.

The situations above illustrate that mandating interconnection may not be ineffective without accompanying principles aimed at guaranteeing fair and efficient interconnection. It is probable that an incumbent operator faced with the obligation to interconnect adopts delay strategies aimed at paying lip service to the obligation to interconnect. The longer it takes for a new entrant to enter into an interconnection agreement with incumbent operators, the more costs it incurs. A new entrant may be compelled to agree to unfair conditions, for example insufficient points of interconnection, to speed up the negotiation process. In the worst case scenario, it might be forced to exit the market. It is therefore important to establish deadlines for expedient interconnection negotiations.

The Interconnection Regulations specifically addresses this concern by providing a specific time frame for interconnection negotiations and signing of interconnection agreements. Interconnection negotiations must be concluded and a binding agreement entered into within 45 days following receipt of a request for interconnection. An interconnection agreement shall be entered into as soon as practicable, but in any event, not later than 3 months after an interconnect provider receives a request for interconnection.<sup>112</sup> Furthermore, within the agreed timelines, after a request for interconnection is accepted or is obligatory, where agreement is not reached, temporary prices shall be applied to prevent unnecessary delay to the launch of the services and the prices shall be retrospectively adjusted when the price is finally agreed or determined.<sup>113</sup>

To ensure that disputes between parties do not hamper the progress of the interconnection negotiations, the Regulations provide UCC with powers to engage in dispute resolution. However, the UCC does not intervene on its own initiative but only upon request by either of the parties.<sup>114</sup> Providing for dispute resolution may serve as a useful tool to expedite negotiations and aid in the successful completion of interconnection agreements.

It has been observed that interconnection negotiations with incumbent operators tend to take longer than is mandated under the Interconnections Regulations.<sup>115</sup> The

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<sup>110</sup>Richard Cutcher, 'East Africa's First MVNO Loses 8 Months to Interconnect Negotiations' *Humanipo* (2nd October 2013) <<http://www.humanipo.com/news/33385/east-africas-first-mvno-lost-8-months-to-interconnect--negotiations/>> accessed 15 June 2017.

<sup>111</sup>Ibid.

<sup>112</sup>Telecommunications (Interconnection) Regulations, SI 2005/25, reg 12(1).

<sup>113</sup>Ibid.

<sup>114</sup>Ibid, reg 13(4).

<sup>115</sup>Based on interview with Zulaika Kasujja, legal counsel, Smile Communications Uganda, (Kampala, Uganda 16 December 2011).

UCC has used its dispute resolution powers to foster fair and efficient interconnection and ensuring expedient interconnection negotiations. The regulatory authority played a crucial role in speeding up the negotiation of agreements between incumbents Airtel Uganda, Uganda Telecom and MTN Uganda Limited and new entrant K2 when it issued a directive to the former to conclude interconnection agreements with the latter.<sup>116</sup> Though it must be observed that Airtel Uganda appealed against the UCC's decision delaying compliance with the directive to the detriment of K2 whose customers could not call Airtel's subscribers.<sup>117</sup>

UCC intervention in the interconnection negotiations between K2 and the other mobile operators is a very significant because prior concerns of delayed interconnection were not effectively addressed by the authority. Specifically, the delayed interconnection regulations between Orange-Uganda Telecom could have benefited from a UCC directive compelling expedient negotiation.

### **6.3.1.7 Incorporation of Unfair Terms and Conditions in the Interconnection Agreement**

An operator may rely on its greater bargaining power as an incumbent to compel a new entrant to accept unfavourable terms and conditions for interconnection. The Interconnection Regulations are significant in this regard as they provide principles aimed at ensuring that the interconnect provider negotiates in good faith and uses all efforts to conclude and reach the acceptable terms and conditions of an interconnection agreement.<sup>118</sup>

Furthermore, the Interconnection Regulations require that the interconnection agreements include clauses aimed at promoting fair and efficient interconnection.<sup>119</sup> The Interconnection Regulations require, *inter alia*, that an interconnection agreement provide for: dispute resolution; requirements to ensure maintenance of essential requirements; location and points of interconnection; definitions of interconnection charges; achievement of equal access; and duration and re-negotiation of agreements.

In addition, the Interconnection Regulations require all interconnect providers to publish a reference interconnection offer (RIO).<sup>120</sup> RIO publication promotes

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<sup>116</sup>Richard Cutcher, 'East Africa's First MVNO Loses 8 Months to Interconnect Negotiations' *Humanipo* (October 2nd 2013) <<http://www.humanipo.com/news/33385/east-africas-first-mvno-lost-8-months-to-interconnect-negotiations/>> accessed 15 June 2017.

<sup>117</sup>Ibid.

<sup>118</sup>Telecommunications (Interconnection) Regulations, SI 2005/25, reg 9(1).

<sup>119</sup>Ibid, reg 12(3).

<sup>120</sup>Ibid, reg 11(1).

transparency of interconnection as it reveals the terms and conditions under which an operator offers interconnection services. The Interconnection Regulations provides for specific aspects that must be provided for in the RIO relating to commercial, technical, and operational aspects of interconnection. New entrants may rely on the terms in the reference interconnection offer to negotiate for fair terms of interconnection. In practice, however, operators in Uganda do not publish comprehensive reference interconnection offers.<sup>121</sup>

The provisions above clearly seek to mitigate the incorporation of unfair terms and conditions in interconnection agreements. In practice however, there have been concerns raised of operators reluctantly entering into terms and conditions that are not favourable to them. One specific allegation has made against Uganda's largest operator, MTN, that it has compelled operators to agree to incorporate a provision permitting MTN to terminate interconnection under certain specific circumstances.<sup>122</sup> The clause in question permits MTN to terminate interconnection in contravention of the Interconnection Regulations which require an interconnect provider to maintain interconnection provided that the interconnection agreement is still in force.<sup>123</sup> If true, then it is a good illustration of how imbalanced negotiating power can affect the outcome of the interconnection negotiations.

The allegations also indicate that the UCC should implement the Communications Act provision that subjects interconnection agreements to approval by the UCC.<sup>124</sup> The provision provides the UCC with an opportunity to scrutinise agreements for unfair clauses or clauses that can potentially have anti-competitive effects on competition in the voice telephony market in Uganda.

## 6.4 One-Way Access

One-way access regulation is viewed as important in the liberalised telecommunications sector because there are certain telecommunication facilities, essential for the provision of telecommunications services, which tend to be under the exclusive ownership of a vertically integrated incumbent operator. The incumbent operator may refuse to grant new entrants access to its infrastructure making it difficult for the new entrants to gain a foothold in the market. Alternatively, the incumbent operator may grant access to its infrastructure but at prices that are prohibitive so-called margin squeeze, making it difficult for new entrants to remain viable competitors.

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<sup>121</sup>In absence of RIOs, UCC has proposed to publish its own view of what it considers to be an acceptable interconnection agreement in a Model Interconnection Offer (MIO).

<sup>122</sup>This particular issue was raised consistently by representatives of other telecommunications companies in field interviews conducted by the author between November and December 2011.

<sup>123</sup>Telecommunications (Interconnection) Regulations, SI 2005/25, reg 5 (4)(b).

<sup>124</sup>Communications Act 2013, s 58(1).

A typical example of one-way access occurs in the traditional telephone services market. In the long-distance telephone services market, new entrants still require access to the fixed-line network in order to be able to provide services at the retail level, even where they have their own long-distance telephone network.<sup>125</sup> While there may be competitive entry in the long-distance services market, it is usually the case that the local access network which provides access to the end user, is under the monopoly of an incumbent operator.<sup>126</sup> In this context, regulation of one-way access to the local access network is important for facilitating competition in the retail services market.

The use of one-way access regulation to foster competition in the voice telephony market has been most notable in the United States where incumbent local exchange carriers (ILECs) have been compelled to provide new entrants, competitive local exchange carriers (CLECs), access to their local networks.<sup>127</sup>

One-way access regulation in the telecommunications sector initially focused on voice telephony. Following the emergence of internet services, particularly broadband, one-way access regulation has been adopted by telecommunications regulators as a tool for fostering competition in the internet market. One-way access regulation has specifically been geared towards enhancing competition in the fixed broadband market where the fixed local loop is an important input. In a number of countries, a great portion of the population relies on digital subscriber line (DSL) technology to access fixed broadband internet services which delivers internet through copper telephone lines (fixed local loop).<sup>128</sup> In most countries, the former monopoly operator also holds monopoly over the fixed local loop or owns most of the local loop infrastructure in the country. Therefore, emphasis has been placed on ensuring that the ownership of this essential facility does not stifle competition in the downstream internet services market.

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<sup>125</sup>Marcel Canoy, Paul de Bijl, and Ron Kemp, ‘Access to Telecommunications Networks’ in Pierre A. Buigues and Patrick Rey (eds), *The Economics of Antitrust and Regulation in Telecommunications* (Edward Elgar 2004) 136.

<sup>126</sup>Harald Gruber, *The Economics of Mobile Telecommunications* (Cambridge University Press 2005) 184.

<sup>127</sup>The United States Telecommunications Act of 1996, section 251, mandates one way access to the local network. The FCC implementing this provision has compelled incumbent local exchange carriers to grant long distance service providers access to their local network. The reason is that the local network has been deemed a bottleneck to competition in the long distance service market. See Robert B Friedrich ‘Regulatory and Antitrust Implications of Emerging Competition in Local Access Telecommunications: How Congress and the FCC Can Encourage Competition and Technological Progress in Telecommunications’ (1995) 80 Cornell Law Review 646, 659.

<sup>128</sup>For example, within the European Union, standard fixed broadband lines covered 95.5 percent of all homes in 2012. Most of the population accesses fixed broadband through (DSL) technology, with a market share of 74.6 percent in July 2012. According to European Commission, ‘Broadband Lines in the EU: Situation at 1 July 2012’ (2013) Working Document 7, 20. In 2015, 94 percent of households accessed fixed broadband via DSL technology, see European Commission, ‘Broadband Coverage in Europe 2015: Mapping Progress Toward Objectives of the Digital Agenda’ <<https://ec.europa.eu/digital-single-market/en/news/broadband-coverage-europe-2015>> accessed 15 June 2017.

The European Union stands out in this regard with the telecommunications policy in Member States prioritising one-way access regulation. The European Union legislation has compelled incumbent fixed-line operators repetitive to grant access to certain components of their fixed network to facilitate the provision of broadband internet access services at the retail level.<sup>129</sup> A key reason behind this stance in the European Union has been limited infrastructure competition in the fixed-line market with the former monopoly operators continuing to own most of the fixed network infrastructure in the liberalised telecommunications sector.<sup>130</sup>

#### ***6.4.1 One-Way Access Regulation in Sub-Saharan Africa***

In Uganda and other Sub-Saharan Africa countries, telecommunications regulators and competition authorities have placed limited emphasis on one-way access regulation.<sup>131</sup> The lack of regulatory intervention is probably linked to the market composition in the telecommunication sector.

Firstly, Sub-Saharan Africa's telecommunications sector comprises several vertically integrated operators with their own end-to-end networks providing telecommunications services. This is particularly the case in the voice telephony market where the majority of service providers have built up their own end-to end infrastructure. The presence of several vertically integrated operators strongly suggests that emphasis on two-way access is the appropriate approach to ensuring sustainable competition in the telecommunications sector.

Secondly, one-way access regulation in the telecommunications sector has tended to centre on the former incumbent operator's dominant or monopoly ownership of fixed-line infrastructure viewed as an important input for provision of services in the fixed telephone and internet markets. In South Africa, as in the US and the European Union, one-way access regulation has been used to compel incumbent operator, Telkom SA, to grant independent value-added service providers access to its fixed-line network.<sup>132</sup> However, in Sub-Saharan Africa, telecommunications services are provided primarily through mobile telephone networks rather than the fixed telephone networks. In 2016, there were 772 million

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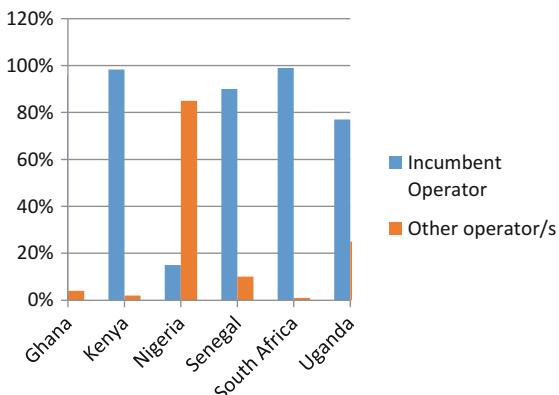
<sup>129</sup>Council Regulation EC 2887/2000 of 18 December 2000 on unbundled access to the local loop [2000] OJ 336/4 (Local Loop Unbundling Regulation of 2000).

<sup>130</sup>In particular, at the time of full liberalisation of the telecommunications sector in the European Union in 1998, the former state monopoly operators had monopoly over the local loop network.

<sup>131</sup>With the exception of South Africa, where the South Africa Competition Commission and competition tribunal investigated allegations of refusal to grant access to an essential facility in the value-added services. See *Competition Commission v Telkom SA Ltd 11/CR/Feb04* [2011] ZACT 2.

<sup>132</sup>In *Competition Commission v Telkom SA Ltd 11/CR/Feb04* [2011] ZACT 2, the South Africa Competition Tribunal found Telkom SA liable under South Africa's Competition Act for refusing to grant access to its fixed network on fair terms.

**Fig. 6.1** Sample of fixed telephone lines subscriptions in Sub-Saharan Africa: former monopoly operator vs. other operators, 2012. **Source:** By author based on statistics available on websites of the National Telecommunications Regulators



mobile telephone subscribers in Sub-Saharan Africa compared to 12 million fixed telephone subscribers.<sup>133</sup> In the broadband market, there were 280 million mobile broadband subscribers and 6 million fixed broadband subscribers.<sup>134</sup>

Thus, while the former monopoly operators in the region continue to have a dominant or monopoly control over the fixed-line network infrastructure as illustrated in Fig. 6.1 the network is not vital for provision of telecommunications services to the great portion of the population. The graph shows that, with the exception of Nigeria, former incumbent operators dominate the fixed telephone lines market.<sup>135</sup>

These two factors point away from the use of one-way access regulation to foster competition in the telecommunications sector in Sub-Saharan Africa. However, there has been support for one-way access regulation in some countries in the region. For example, Member States of the Economic Community of West African States (ECOWAS) have recognised that it is not economically advantageous to duplicate the entire existing fixed-line network, even though that would offer the advantage of providing access to the end user and end-to-end control of the network.<sup>136</sup> On that basis, regulation of access to the fixed local loop owned by

<sup>133</sup>ITU, ‘Key 2005-2016 ICT Data for the World, by Geographic Regions and by Level of Development’ <<http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>> accessed 16 June 2017.

<sup>134</sup>Ibid.

<sup>135</sup>It is worth noting that Nigeria’s incumbent operator, NITEL, remains the primary owner of the fixed copper telephone lines. However, it has lost a lot of the market to operators providing fixed telephones services through the fixed wireless infrastructure. This is according to Mark D. J Williams, Rebecca Mayer, and Michael Minges, *Africa’s ICT Infrastructure: Building on the Mobile Revolution* (World Bank 2011) 35.

<sup>136</sup>ITU, ‘West African Common Project: Harmonisation of Policies Governing the ICT Market in the UEMOA-ECOWAS Space- Interconnection’ 5 <<http://www.itu.int/ITU-D/treg/projects/itu-ec/Ghana/modules/FinalDocuments/Interconnexion.pdf>> accessed 15 June 2017.

the former monopoly operator has been encouraged.<sup>137</sup> In South Africa, both the competition authorities and policy-makers view access to the fixed-line network of Telkom SA as important for the growth of the telecommunications sector.<sup>138</sup>

In light of the views expressed in a few Sub-Saharan Africa countries of the importance of one-way access regulation in the telecommunications sector, the relevance of this form of access is discussed. The discussion on the relevance of one-way access regulation focuses on two concepts: the essential facilities doctrine and local loop unbundling.

#### **6.4.2 Essential Facilities Doctrine: Enhancing Competition in Uganda's Telecommunications Sector**

The essential facilities doctrine centres on a firm's control over an essential facility and its ability to foreclose effective competition in one or more related markets by denying a competitor access to the facility.<sup>139</sup> The essential facilities doctrine, which stems from competition law, compels owners of an essential facility to provide access to the essential facility at a reasonable price.<sup>140</sup> Thus, the essential facilities doctrine seeks to eliminate monopoly ownership of an essential input serving as a bottleneck to competition in related markets.

The experience in other jurisdictions indicates that the essential facilities doctrine has played an important role in facilitating the growth of competition in the telecommunications sector, primarily under the auspices of national competition law. In the United States, which is viewed as the source of the doctrine, it was used to breakup monopoly of the operator AT&T in 1982 on the premise that the local access network is an essential facility.<sup>141</sup> It was also used to enhance competition in the long-distance telephone services market when monopoly operator AT&T was compelled to provide competitors access to its local access network.<sup>142</sup> Within

<sup>137</sup>Ibid.

<sup>138</sup>See *Competition Commission v Telkom SA Ltd 11/CR/Feb04 [2011] ZACT 2* and The Local Loop Unbundling Committee, 'Local Loop Unbundling: A Way Forward for South Africa' (May 2007) 2 <[http://www.ellipsis.co.za/wp-content/uploads/2014/03/local\\_loop\\_unbundling.pdf](http://www.ellipsis.co.za/wp-content/uploads/2014/03/local_loop_unbundling.pdf)> accessed 15 June 2017, respectively.

<sup>139</sup>William B Tye, 'Competitive Access: A Comparative Industry Approach to the Essential Facility Doctrine' (1987) 8(2) Energy Law Journal 337, 344.

<sup>140</sup>Simon Bishop and Mike Walker, *The Economics of EC Competition Law: Concepts, Application and Measurement* (2nd edn, Sweet and Maxwell 2002) 238.

<sup>141</sup>*United States v American Telephone & Telegraph Co.*, 552 F.Supp.131, 135 (D.D.C. 1982).

<sup>142</sup>*MCI Communications v AT&T Co.*, 708 F.2d 1081 (7th Cir.1982). MCI alleged that AT&T had refused to let MCI connect its telephone lines to AT&T's nationwide system, thereby preventing MCI from competing with AT&T in the long-distance telephone service market. The Seventh Circuit found that AT&T's refusal constituted monopolisation under Section 2 of the Sherman Act.

Sub-Saharan Africa, South Africa's competition authorities have applied national competition law to oblige former monopoly operator, Telkom SA, to grant value-added services providers access to its fixed network, which is viewed as an essential facility for the provision of value-added services in the telecommunications sector.<sup>143</sup>

Turning to the situation in Uganda, the doctrine is provided for in the sector-specific competition rules, the Fair Competition Regulations. The essential facilities doctrine, though a competition law concept has also been incorporated in the telecommunications legislation governing economic regulation.

According to the Interconnection Regulations, all interconnect providers with significant market power or dominant in a particular interconnect services market are required to supply essential facilities to a requesting operator.<sup>144</sup> The Regulations provide five factors that determine the application of the doctrine: (1) the facility must be essential for reaching customers or conducting business and the facility cannot be replicated by any reasonable means, (2) the controller of the facility must have spare capacity, (3) failure to access the facility must have a negative result on competition, (4) reasonable supply conditions, (5) and there must not be any objective grounds for refusal.<sup>145</sup> An essential facility, as defined in the Interconnection Regulations, is a facility which is essential for reaching customers or conducting business and which cannot be replicated by any reasonable means.<sup>146</sup>

It is doubtful whether the essential facilities doctrine will play a significant role in Uganda's telecommunications sector. A key reason for this view is that the key bottlenecks to competition in Uganda's telecommunications sector are not essential facilities, *per se*. The most notable bottlenecks are; radio spectrum in the wireless communications markets, call termination in the mobile communications market, and the fixed-line local loop in the broadband internet. Of the three bottlenecks, radio spectrum and call termination are of greatest significance as Uganda's telecommunications services are provided primarily through mobile network, in other words, wireless technology. In 2016, there were 22 million mobile telephone subscribers and 365,698 fixed-line telephone subscribers.<sup>147</sup> In the mobile communications market, competition is infrastructure-based, with several vertically integrated operators providing services through their own end-to-end networks. Thus, in the mobile communications market, the functionality of the mobile network can be duplicated by reasonable means as there are several facilities through which customers can access telecommunications services. The mobile network therefore, does not fall within the category of essential facilities.

<sup>143</sup>Competition Commission v Telkom SA Ltd 11/CR/Feb04 [2011] ZACT 2.

<sup>144</sup>Telecommunications (Interconnection) Regulations, SI 2005/25, reg 14(3).

<sup>145</sup>Ibid, reg 14(4)(g).

<sup>146</sup>Ibid, reg 4.

<sup>147</sup>UCC, 'Post, Broadcasting and Telecommunications Market and Industry Report: Third Quarter' (July-September) <[http://www.ucc.co.ug/files/downloads/Market\\_&\\_Industry\\_Report\\_for\\_Q3\\_July-September\\_2016.pdf](http://www.ucc.co.ug/files/downloads/Market_&_Industry_Report_for_Q3_July-September_2016.pdf)> accessed 15 June 2017.

With regard to mobile call termination as a bottleneck to competition, a mobile operator has monopoly over calls terminating on its network. An incumbent operator can in principle refuse to grant a new entrant access to call termination services or offer said services at a high price. The conduct of the incumbent operator may stifle competition by making it difficult for new entrants to remain viable competitors. However, the problem of mobile call termination as a bottleneck to competition is addressed through interconnection regulation and not one-way access regulation.

Radio spectrum in the wireless communications market is another bottleneck to competition. Scarcity of radio spectrum can hinder the growth of a wireless communications market. This is the case in Uganda's mobile communications market where scarcity of spectrum in the GSM frequency bands is threatening the continued growth of the market.<sup>148</sup> However, radio spectrum in Uganda is exclusively governed by the UCC which determines how radio spectrum is allocated and to which entity radio spectrum is assigned. Therefore, the primary responsibility for ensuring that radio spectrum is not a bottleneck to competition in Uganda's telecommunications sector rests with the UCC rather than the telecommunications operators.

#### ***6.4.3 Essential Facilities Doctrine: Access to the Fixed Network and Competition in the Internet Market***

The other bottleneck to competition is the fixed local loop in the broadband internet market. It is in this regard that the essential facilities doctrine has been applied in the telecommunications sector. In South Africa, the application of the essential facilities doctrine related to internet services providers (ISPs) accessing the fixed local loop of Telkom SA in order to provide services to the end user.<sup>149</sup>

The primary reason behind the focus on the fixed-line network of the former monopoly operator is the incumbent operators continue to maintain a super dominant or monopoly position in the fixed-line infrastructure market. The dominance in the fixed-line infrastructure market is linked to the significant amount of capital and long period of time required to build up a fixed-line network to provide telecommunications services. Due to these factors there has been limited competition in the fixed-line infrastructure with new entrants opting to rely on the former monopoly operator for infrastructure. This is the case in Uganda where Uganda Telecom, as the former monopoly operator, and MTN Uganda, as the former second national operator, remain the key providers of fixed-line infrastructure for telecommunications services in the liberalised telecommunications sector. Access to the incumbent fixed-line operators' infrastructure is particularly significant in the fixed

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<sup>148</sup>See Chap. 7 of this study which discusses this issue in greater detail.

<sup>149</sup>*Competition Commission v Telkom SA Ltd*, 11/CR/Feb04 [2011] ZACT 2.

broadband market where a number of ISPs lease lines from Uganda Telecom and MTN Uganda Limited in order to provide fixed internet services.

The most reliable data (from 2008) shows that Uganda Telecom had a market share of 75% to MTN Uganda Limited's 25% based on total revenue and a similar structure emerged based on volumes (number of leased lines sold) 77% to 23% respectively.<sup>150</sup> Uganda Telecom's high market share in the leased lines market in 2008 led to suggestions that the former monopoly operator is dominant in the market and that UCC should intervene to regulate wholesale access to leased lines in order to ensure that Uganda Telecom cannot leverage its power into the retail market.<sup>151</sup> The leased lines market composition suggests that the access to the fixed-lines network might be a bottleneck to competition in the fixed internet services market. This suggests that Uganda Telecom's dominant position in the fixed-line infrastructure might warrant one-way access regulation through policies like the essential facilities doctrine.

However, Uganda's population mainly accesses telecommunications services through wireless technology with the mobile network as the key infrastructure. Prior discussion of the essential facilities doctrine under the Fair Competition Regulations indicates that wireless technologies for provision of internet services, such as, WiMAX, which was introduced by MTN Uganda Limited in 2007, and 3G (GSM EDGE, HSPA) weaken the case for the application of the essential facilities doctrine.<sup>152</sup> This is because the wireless technologies are a viable alternative means through which customers can access internet services.

Additionally, these alternatives to the fixed-line network are provided via the mobile network which is a more wide-spread network. This means the mobile network can potentially foster access to a greater percentage of the population than the fixed network. This view is substantiated by UCC data on the internet subscribers in Uganda that reveals that there were close to nine million mobile subscribers and 143,650 fixed-line subscribers in 2016.<sup>153</sup> The market composition in the internet market points to greater emphasis on access policies that foster the growth of competition in the mobile communications market. As already pointed out, in Uganda's case, the primary access policy in the mobile communications market should focus on ensuring fair and efficient interconnection. Furthermore, as broadband technology increasingly becomes available, high capacity internet via the mobile network will most likely replace fixed broadband internet.<sup>154</sup>

<sup>150</sup>PwC for UCC, 'Draft Report on Competition and Dominance in the Uganda Telecoms Sector (Part 2): Interconnection and Retail Cost Study (2009)' Unpublished 21.

<sup>151</sup>Ibid, 22.

<sup>152</sup>See Sect 4.6.3.3.6.2.

<sup>153</sup>UCC, 'Post, Broadcasting and Telecommunications Market and Industry Report: Third Quarter (July-September) <[http://www.ucc.co.ug/files/downloads/Market\\_&\\_Industry\\_Report\\_for\\_Q3\\_July-September\\_2016.pdf](http://www.ucc.co.ug/files/downloads/Market_&_Industry_Report_for_Q3_July-September_2016.pdf)>' accessed 15 June 2017.

<sup>154</sup>However, it is likely to be more the case for individual rather than multiple users that will be serviced better via fixed broadband.

#### 6.4.4 Local Loop Unbundling

The previous sub-section has cast doubt on the relevance of the essential facilities doctrine, and one-way access regulation in general, in Uganda's telecommunications services market that is wireless-based and characterised by infrastructure-based competition. However, there have been interesting developments in other Sub-Saharan Africa countries that are aimed at promoting one-way access regulation.

Specifically, the concept of fixed copper local loop unbundling has gained attention from telecommunications policy-makers that view it as important for fostering the growth of the internet market. The local loop (also known as the last mile) refers to the element of the telephone network between an end user's premises and the related exchange.<sup>155</sup> It must be pointed out that local loop in this context refers to the copper loop and not newer local loop infrastructure such as fibre optic.<sup>156</sup> Local loop unbundling is the making available by a telecommunications operator of its physical customer access connections for use by other operators or service providers.<sup>157</sup>

In some jurisdictions, local loop unbundling is closely linked to the notion of essential facilities with the indispensability of the copper local loop for the provision of broadband services consistently cited as a rationale for the adoption of the policy.<sup>158</sup> ECOWAS member states have recognised that it is not economically advantageous to duplicate the entire existing network, even though that would offer the advantage of providing access to the end user and end-to-end control of the network.<sup>159</sup> In support of local loop unbundling in South Africa, it has been noted that the local loop is owned by the former monopoly operator, Telkom SA, and that new entrants cannot economically replicate the former monopoly operator's local loop network.<sup>160</sup> That without access to the local loop infrastructure, the new entrants cannot make certain telecommunications services available such as ADSL which enables fast transmission of data services over the local loop.<sup>161</sup>

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<sup>155</sup>Ian Lloyd and David Mellor, *Telecommunications Law* (Lexis Nexis Butterworths 2003) 100.

<sup>156</sup>This distinction is clearly made in the Council Regulation EC 2887/2000 of 18 December 2000 on unbundled access to the local loop [2000] OJ 336/4. It provides for the application of the Regulation to metallic local loops and not the new loops with high capacity optical fibre, para 5.

<sup>157</sup>John Buckley, *Telecommunications Regulation* (The Institution of Electrical Engineers 2003) 157.

<sup>158</sup>The United States is an exception where the application of local loop unbundling under the Telecommunications Act has been implemented without adhering to the essential facilities doctrine.

<sup>159</sup>ITU, 'West African Common Project: Harmonisation of Policies Governing the ICT Market in the UEMOA-ECOWAS Space- Interconnection' 5 <<http://www.itu.int/ITU-D/treg/projects/itu-ec/Ghana/modules/FinalDocuments/Interconnexion.pdf>> accessed 15 June 2017.

<sup>160</sup>The Local Loop Unbundling Committee, 'Local Loop Unbundling: A Way Forward for South Africa' (May 2007) 2 <[http://www.ellipsis.co.za/wp-content/uploads/2014/03/local\\_loop\\_unbundling.pdf](http://www.ellipsis.co.za/wp-content/uploads/2014/03/local_loop_unbundling.pdf)> accessed 15 June 2017.

<sup>161</sup>Ibid.

The local loop unbundling concept has been applied primarily in connection with broadband internet market where DSL technology is the key means through which broadband services are accessed. DSL technology delivers internet through copper telephone lines (fixed local loop).

One region where DSL technology plays an important role in the broadband internet market is the European Union where 74.6% of the fixed broadband market relied on DSL technology in 2012.<sup>162</sup> In 2016, 94% of households accessed fixed broadband via DSL technology.<sup>163</sup> In the European Union, the fixed local loop is primarily owned by the former monopoly operator despite the liberalisation of the telecommunications sector. As the fixed local loop in the European Union is under the monopoly control of former incumbent operators, the European Commission has promoted access to their networks in order to foster the development of a competitive broadband market through local loop unbundling legislation. The Local Loop Unbundling Regulation of 2002 stresses the importance of access to the copper local loop as means of increasing access to broadband services in the economic region by substantially reducing costs of internet services.<sup>164</sup> The essentiality of the copper local loop for the provision of broadband services is explained as follows:

It would not be economically viable for new entrants to duplicate the incumbent's metallic local access infrastructure in its entirety within a reasonable time. Alternative infrastructures such as cable television, satellite, wireless local loops do not generally offer the same functionality or ubiquity for the time being.<sup>165</sup>

A fixed local loop unbundling policy makes sense in EU Member States and developed countries where the fixed network has not been substituted by the mobile network. In the European Union, wireless broadband services tend to complement fixed broadband services. European Commission data reveals that standard fixed broadband covered 94% of European homes in 2015.<sup>166</sup> Mobile broadband penetration in the European Union, in 2012, was 54.5%. 83.4% of mobile broadband subscriptions were used in handheld devices.<sup>167</sup> These statistics reveal that mobile broadband subscriptions support single users in contrast to fixed broadband subscriptions that tend to support multiple users indicating great use of fixed

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<sup>162</sup>According to European Commission, ‘Broadband Lines in the EU: Situation at 1 July 2012’ (2013) Working Document 7, 20.

<sup>163</sup>European Commission, ‘Broadband Coverage in Europe 2015: Mapping Progress Toward Objectives of the Digital Agenda’ <[https://ec.europa.eu/digital-single-market/en/news/broad band-coverage-europe-2015](https://ec.europa.eu/digital-single-market/en/news/broad-band-coverage-europe-2015)> accessed 15 June 2017.

<sup>164</sup>Council Regulation EC 2887/2000 of 18 December 2000 on unbundled access to the local loop [2000] OJ 336/4, art 1.

<sup>165</sup>Ibid, recital 6.

<sup>166</sup>European Commission, ‘Broadband Coverage in Europe 2015: Mapping Progress Toward Objectives of the Digital Agenda’ <<https://ec.europa.eu/digital-single-market/en/news/broad band-coverage-europe-2015>> accessed 15 June 2017.

<sup>167</sup>Ibid.

broadband. In 2015, mobile broadband technologies, HSPA networks covered 97.6% of EU households, while LTE covered 85.9% of household.<sup>168</sup>

More importantly, the European Commission's data illustrates that a great portion of the population accesses the internet through fixed broadband. Fixed broadband is also significant in other developed countries. In the United States, there were 100.8 million broadband subscriptions (31.2% penetration rate), while Japan had 38.8 million subscribers (30.6% penetration rate) at the end of 2015.<sup>169</sup> Therefore, access policies focusing on the fixed networks are relevant in developed countries where the fixed network is an important input in the internet services market.

However, in Sub-Saharan Africa, the majority of the population accesses broadband internet through wireless technology. ITU data shows that in 2016, there were 280 million mobile broadband subscribers in Africa and 6 million fixed broadband subscribers.<sup>170</sup> 3G GSM is the main technology through which mobile broadband is accessed.<sup>171</sup> This statistics show that the mobile network is not a complement to the fixed-line network; rather it has substituted the fixed-line network in the internet market. This is not surprising as the mobile network is more widespread than the fixed-line network. The future of broadband in Sub-Saharan Africa appears to lie essentially with mobile network access and 3G GSM.<sup>172</sup>

Turning to the specific case of Uganda's telecommunications sector, the access legislation categorically rejects the notion of local loop unbundling. According to the Interconnection Regulations, interconnection may be availed by an interconnect provider to network elements on an unbundled basis network with all the unbundled network element features, factors, and capabilities.<sup>173</sup> However, the Regulations further provide that only the switching and transmission facility is available for interconnection on an unbundled basis, with local loop unbundling strictly excluded.<sup>174</sup> The issue then arises as to whether the current debate on local loop unbundling in other countries in Sub-Saharan Africa is of any significance in Uganda's telecommunications sector.

Fixed broadband internet access in Uganda is primarily provided via DSL technology which delivers internet through copper telephone lines (copper local

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<sup>168</sup>Ibid.

<sup>169</sup>ITU, 'Country Statistics 2000-2015: Fixed\_Telephone Subscriptions/Mobile-Cellular Subscriptions: Fixed Broadband Subscriptions' <<http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>> accessed 25 June 2017.

<sup>170</sup>ITU, 'Key 2005-2015 ICT Data for the World, by Geographic Regions and by Level of Development' <<http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>> accessed 16 June 2017.

<sup>171</sup>ITU 'Study on International Internet Connectivity in Sub-Saharan Africa' (March 2013) 3 <[www.itu.int/en/ITU-D/Regulatory-Market/.../IIC\\_Africa\\_Final-en.pdf](http://www.itu.int/en/ITU-D/Regulatory-Market/.../IIC_Africa_Final-en.pdf)> accessed 15 June 2017.

<sup>172</sup>Ibid.

<sup>173</sup>Telecommunications (Interconnection) Regulations, SI 2005/25, reg 8(1).

<sup>174</sup>Ibid, reg 8(1).

**Table 6.2** Fixed line network coverage in Uganda

Company	Route	Length (km)May 2010
Uganda telecom	Kampala – Entebbe	42.2 km
	Kampala –Mukono	20 km
	Kampala –Masaka	258 km
	Kampala -Katuna	220 km
	Malaba –Mombasa	900 km
MTN U Ltd	Kampala – Busia	206 km
	Kampala -Mbarara	289 km
	Kampala -Masaka	258 km
	Masindi –Northern	165 km
Warid Telecom	Around Kampala	42 km
Airtel	Around Kampala	40 km
Infocom	Kampala – Eastern Uganda	240 km
	Kampala – Katuna	590 km

Source: UCC

loop). The copper local loop is owned by the former incumbent, Uganda Telecom, which as a vertically integrated operator, is active in the retail internet market and has a high market share in the fixed internet infrastructure provision market.<sup>175</sup> Uganda Telecom's strong presence in the fixed internet market is closely linked to the fact that it has the most wide-spread fixed network in the country as shown in Table 6.2.

The copper loop is ideal for the provision of broadband services as it has sufficient capacity for the provision of broadband services. The mobile network based on GSM technology, specifically, 2G technology meant for the provision of telephony services, cannot provide the requisite capacity for the provision of broadband services.<sup>176</sup> However, rapid technological development in mobile technology has led to the introduction of wireless technology for broadband services. Examples include: 3G and 4G GSM, Wi-Fi, WiMAX and HSPA.

In addition to the fixed local loop having sufficient capacity, a number of ISPs rely on the fixed-line infrastructure of Uganda Telecom to provide fixed internet services. As mentioned in the previous sub-section, a number of ISPs lease lines for the provision of fixed internet services. Aware of the significance of access to fixed-line infrastructure for provision of valued added services, the UCC mandates Uganda Telecom and MTN Uganda to provide leased lines to customers, including

<sup>175</sup>This is gleaned from Pwc for UCC, ‘Competition Analysis, Model Interconnection Offer (MIO), Reporting Obligations, and Retail Price Regulation’ (2008) 17.

<sup>176</sup>GPRS and EDGE technologies have a very limited capacity for data transmission compared to data transmission via the fixed local loop.

other operators, at cost-oriented prices.<sup>177</sup> Thus, while the UCC places greater emphasis on two-access regulation in Uganda's telecommunications sector, the regulator has sought to regulate one-way access in the fixed internet services market.

The above discussion illustrates that in the fixed internet market in Uganda, the fixed-line infrastructure of Uganda Telecom, as well as MTN Uganda Limited, are important inputs for provision of internet services. However, it is doubtful that imposing a local loop unbundling obligation on Uganda Telecom will have a substantial impact on access to broadband services in the country.

Firstly, the fixed network infrastructure in Uganda is poorly dispersed with the local loop network concentrated mainly in the capital city, Kampala, central and southern Uganda.<sup>178</sup> It is difficult to envisage access to a local loop network, which has limited coverage, greatly enhancing the growth of Uganda's internet market and increasing the population's access to internet services. This particular aspect of Uganda's local loop network is a key reason why UCC continues to reject the policy of local loop unbundling.<sup>179</sup> The general sentiment as regards the broadband market in Sub-Saharan Africa is that access to services less likely to occur via fixed network, which is poorly developed, rather it will develop through wireless technology.<sup>180</sup> However, ADSL technology will remain of relevance because it offers a better quality than wireless system. However, growth here will depend on the resumption of investment in the wired network. A LLU policy will not facilitate more investment in the wired network.

Secondly, and more importantly, Uganda's population has come to rely on wireless technology to access telecommunications services. Recent data on mobile broadband subscriptions is lacking, however, UCC statistics from 2016 reveal that there were close to 9 million mobile internet subscribers and 143,650 fixed-line subscribers.<sup>181</sup> Furthermore, data from 2014 indicates that 3G and LTE broadband

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<sup>177</sup>PwC for UCC, 'Draft Report on Competition and Dominance in the Uganda Telecoms Sector (Part 2): Interconnection and Retail Cost Study' (2009) Unpublished 4.

<sup>178</sup>Nora Mulira, Apolo Kyeyune, and Ali Ndiwalana, 'Uganda ICT Sector Performance Review, 2009/2010: Toward Evidence Based ICT Policy and Regulation' (2010) 2(13) Policy Paper 10.

<sup>179</sup>Interview with Ann Rita Ssemboga, (former) Economist, UCC (Kampala, Uganda 7 December 2011).

<sup>180</sup>Mark D J Williams, *Broadband for Africa: Policy for Promoting the Development of Backbone Networks* (Infodev/World Bank 2008) 7; Deloitte and GSMA 'Sub-Saharan Africa Mobile Observatory 2012' (November 2012) <[http://www.gsma.com/publicpolicy/wp-content/uploads/2012/03/SSA\\_FullReport\\_v6.1\\_clean.pdf](http://www.gsma.com/publicpolicy/wp-content/uploads/2012/03/SSA_FullReport_v6.1_clean.pdf)>; and ITU 'Study on International Internet Connectivity in Sub-Saharan Africa' (March 2013) 3 <[www.itu.int/en/ITU-D/Regulatory-Market/.../IIC\\_Africa\\_Final-en.pdf](http://www.itu.int/en/ITU-D/Regulatory-Market/.../IIC_Africa_Final-en.pdf)> accessed 15 June 2017.

<sup>181</sup>UCC, 'Post, Broadcasting and Telecommunications Market and Industry Report: Third Quarter (July-September 2016)' <[http://www.ucc.co.ug/files/downloads/Market\\_&\\_Industry\\_Report\\_for\\_Q3\\_July-September\\_2016.pdf](http://www.ucc.co.ug/files/downloads/Market_&_Industry_Report_for_Q3_July-September_2016.pdf)> accessed 15 June 2017.

technologies covered 30% of Uganda's population.<sup>182</sup> Additionally, it has been estimated that there will be 26 million broadband subscriptions in Uganda by 2019, representing a penetration rate of 49% of the total population.<sup>183</sup> This shows that Uganda's broadband internet future lies with access to wireless technology rather than access to the fixed copper local loop.<sup>184</sup> Thus, greater emphasis should be placed on enabling Uganda's population to gain access to wireless broadband technologies, for example, 3G and 4G technologies, WiMAX and HSPA. MTN Uganda Limited already relies on WiMAX technology, while the Warid Telecom (now merged with Airtel Uganda) provides internet services through the HSPA network.

Thirdly, there is alternative fixed-line infrastructure that can be used to provide telecommunications services. The electricity transmission lines have also become an important infrastructure for the provision internet services. The electricity transmission company in Uganda, Uganda Electricity (UETCL) leases fibre optic run over the electricity power lines. For example, following ISP Infocom's inability to gain access to the infrastructure of fixed-line operators, MTN Uganda and Uganda Telecom, it reached an agreement to buy capacity on the electricity transmission lines.<sup>185</sup>

Additionally, the Government of Uganda has invested in a national internet fibre optic backbone project that, once conclude, will facilitate greater access to broadband internet throughout the country.<sup>186</sup>

Fourthly, the regulatory burden imposed on telecommunications regulators to ensure effective implementation of compulsory local loop unbundling is another reason to consider alternative means of stimulating competition in telecommunications markets in Uganda. Local loop unbundling requires telecommunications regulators to ensure that the former monopoly operator co-operates with competitors and complies with orders that will result in the operator losing market share and revenues by leasing facilities at rates possibly quite favourable to market entrants.<sup>187</sup> Furthermore, telecommunications regulators must acquire substantial expertise and undertake vigorous scrutiny of the terms and conditions under which the former monopoly operator leases the network infrastructure needed by market

<sup>182</sup>Cartesian for UCC, 'Broadband Internet Access from a Mobile Terminal: Market Assessment' (2015) 10 <[http://www.ucc.co.ug/files/downloads/SMP\\_Report\\_Mobile\\_Broadband\\_April%202015.pdf](http://www.ucc.co.ug/files/downloads/SMP_Report_Mobile_Broadband_April%202015.pdf)> accessed 15 June 2017.

<sup>183</sup>Ibid.

<sup>184</sup>UCC, 'Recommendations on Proposed Review of the Telecommunications Sector Policy' (2005) Policy Review Report 28/1/05.

<sup>185</sup>World Bank, *2009 Information and Communications Development: Extending Reach and Increasing Impact* (World Bank 2009) 55.

<sup>186</sup>The project referred to as the National Data Transmission Backbone Infrastructure (NBI) is currently in the fourth phase with a completion date set for fiscal year 2017/18.

<sup>187</sup>Rob Friedan, 'Unbundling the Local Loop: A Cost /Benefit Analysis for Development Nations' info 17(6) 3, 4.

entrants to reach end users.<sup>188</sup> The author has previously stressed that the UCC has a very broadband mandate covering the entire communications sector and three main forms of regulation: technical, competition, and economic. While the UCC has sought to increase efficiency in fulfilling its mandate by having different departments regulating different aspects of the communications sector, its broad mandate warrants identification of the regulatory aspects of the telecommunications sector that can have the most significant impact on growth of the telecommunications sector. There is a high possibility that the resources, particularly human resources, for implementing a local loop unbundling policy will be inadequate and will lead to inefficient outcomes.

Lastly, the experience from other jurisdictions that have implemented local loop unbundling illustrates that local loop unbundling does not necessarily lead to increased broadband penetration. In an empirical study focusing on the unbundling experience in Canada, Germany, New Zealand, the United Kingdom, and the United States, the benefits accruing from local loop unbundling are disputed.<sup>189</sup>

The United States, in particular, has a long history of local loop unbundling, with the FCC implementing the policy since the Telecommunications Act of 1996 was enacted. However, FCC efforts have been greatly hampered by several court decisions overturning its policies aimed at implementing local loop unbundling. Most notably, in 2003, in response to United States Supreme Court decision related to FCC's mandate to implement local loop unbundling under Section 251 of the Telecommunications Act, it released its Triennial Review Order (TRO), addressing the unbundling requirements of incumbent local exchange carrier (ILECs).<sup>190</sup> However, in 2004, the United States Court of Appeals (D.C. Circuit) issued its opinion in *USTA v FCC* overturning key provisions of the FCC's triennial review order.<sup>191</sup> As a result of the challenges to the FCC's mandate with regard to local loop unbundling, the FCC has most notably abandoned the policy with regard to broadband infrastructure.<sup>192</sup>

More significantly, it has been observed that mandatory unbundling obligations were considered as a hurdle to investment in broadband deployment by incumbent operators.<sup>193</sup> A key argument against mandatory one way access is that it might

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<sup>188</sup>Ibid.

<sup>189</sup>Jerry Hausman and Gregory Sidak, 'Did Mandatory Unbundling Achieve its Purpose? Empirical Evidence from Five Countries' (2005) 1(1) *Journal of Competition Law and Economics* 173.

<sup>190</sup>The Supreme Court decision in question was *AT&T Corp v Iowa Utilities Board*, 525 U.S.366, 199 S.Ct. 721 [1999] where the court upheld the FCC's local loop unbundling implementation plan but directed the FCC to revise the standards under which it determines unbundling obligations.

<sup>191</sup>*USTA v FCC*, 359 F.3d 554, 561-62.

<sup>192</sup>Andrea Renda, 'Competition- Regulation Interface in Telecommunications: What's Left of the Essential Facility Doctrine' (2010) *Telecommunications Policy* 34 23, 26.

<sup>193</sup>Jerry Hausman and Gregory Sidak, 'Did Mandatory Unbundling Achieve its Purpose? Empirical Evidence from Five Countries' (2005) 1(1) *Journal of Competition Law and Economics* 173.

discourage firms from investing in infrastructure.<sup>194</sup> If operators rationally anticipate that, once somebody has invested, then the regulator will grant access at cost, everybody will then wait for investment to be done by somebody else and then seek access.<sup>195</sup> A similar conclusion is made with regard to local loop unbundling in the European Union, with empirical studies indicating that the policy has not led to increased investment in broadband infrastructure.<sup>196</sup> This rebuts the presumption that local loop unbundling enables future facilities based investment.

In conclusion, one-way access regulation is Uganda should not be prioritised by UCC. Rather, emphasis should be placed on regulating aspects that are crucial for the growth of Uganda's wireless communications markets.

## 6.5 Conclusion

The key issue addressed in this chapter is whether Uganda's regulatory framework on access to telecommunications facilities enhances competition in the telecommunications markets. The chapter has focused primarily on the regulation of interconnection which the author concludes is the most important form of access in Uganda's telecommunications sector. This stems from the market composition in Uganda's telecommunications markets characterised by the presence of vertically integrated operators that have built their own end-to-end networks for the provision of telecommunications services. The market composition indicates that the majority of telecommunications operators do not need access to another operator's facilities to access their end customers.

The analysis of Uganda's interconnection regime comprising the Communications Act 2013 and the Interconnection Regulations has centred on establishing whether the legislation facilitates fair and efficient interconnection. On that basis, this chapter has discussed the key aspects of interconnection that have raised the most concern among telecommunications operators. The interconnection aspects in question are: the duty to interconnect; determination of interconnection rates; the non-discrimination principle; delayed interconnection negotiations; and the incorporation of unfair terms and conditions in interconnection agreements.

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<sup>194</sup>Robin Mason and Tommaso Valletti, 'Competition in Communication Networks: Pricing and Regulation' (2001) 17(3) Oxford Review of Economic Policy 398, 402.

<sup>195</sup>Robin Mason and Tommaso Valletti, 'Competition in Communication Networks: Pricing and Regulation' (2001) 17(3) Oxford Review of Economic Policy 398, 403; and Martin Cave and Luigi Prosperetti, 'European Telecommunications Infrastructure' (2001) 17(3) Oxford Review of Economic Policy 416.

<sup>196</sup>Garrone Paola and Zaccagnino Michel, 'The Relationship Between Local Loop Unbundling and the Deployment of Alternative Broadband Networks: An Empirical Analysis' (European Regional Conference of the International Telecommunications Society, Budapest, September 2011).

An important finding is that Uganda's interconnection regime, specifically, the Interconnection Regulations, is very comprehensive with detailed provisions promoting fair and efficient interconnection. Firstly, the Interconnection Regulations require telecommunication operators offering core services to make their networks available for interconnection.<sup>197</sup> Secondly, the Interconnection Regulations provide detailed provisions on the negotiation of interconnection in good faith and renders an operator liable under the Fair Competition Regulations for failing to observe the provision.<sup>198</sup> Thirdly, the Interconnections Regulations require interconnection rates to be determined on a cost-oriented basis.<sup>199</sup> Additionally, the Communications Act grants the UCC powers to determine interconnection rates.<sup>200</sup> Thus, the analysis of the legislation on interconnection in the telecommunications sector has revealed that the provisions of the law put in place sufficient measures to guarantee fair and efficient interconnection.

Despite the existence of comprehensive legislation of interconnection, operators have still expressed dissatisfaction with the existing regime.<sup>201</sup> The issue is the manner in which interconnection is regulated by the UCC. For the most part, the UCC views interconnection primarily as a commercial negotiation between operators limiting the need for regulatory intervention.<sup>202</sup> However, in recent years the UCC has been more active in enforcing fair and efficient regulation. The UCC has intervened in the determination of interconnection rates by setting a reference rate which is cost-based.<sup>203</sup> The UCC's intervention in the determination of interconnection rates has improved the landscape of competition, particularly in the mobile telephone market, by eliminating the practice adopted by some incumbent operators of charging new entrants higher interconnection rates than they would charge fellow incumbent operators. However, the UCC also needs to be proactive in enforcing other provisions of the Interconnection Regulations. The UCC should implement the provisions of the Interconnection Regulations that require operators to negotiate interconnection in good faith. In particular, the delay in the conclusion of interconnection negotiations between operators should be addressed by the UCC intervening in a timely manner to ensure that new entrants are not unduly frustrated in their efforts to commence operations. Furthermore, the UCC should enforce the provision of the Communications Act that requires operators to seek approval from

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<sup>197</sup>Telecommunications (Interconnection) Regulations, SI 2005/25, reg 5(1).

<sup>198</sup>Ibid, reg 9(1).

<sup>199</sup>Telecommunications (Interconnection) Regulations, SI 2005/25, reg 15(1).

<sup>200</sup>Communications Act 2013, s 59.

<sup>201</sup>The author interviewed legal representatives of telecommunications operators, Warid Telecom, Airtel Uganda, MTN Uganda Limited, and Smile Uganda. Interconnection was the number one concern highlighted by the interviewees.

<sup>202</sup>Interview with Abdul Musoke, Market Analyst, UCC Headquarters (Kampala, Uganda 18 November 2011).

<sup>203</sup>See, UCC, 'LRIC Reference Rate Determination of 2009' and UCC, 'LRIC Reference Rate Determination of 2012'.

the UCC when entering into an interconnection agreement.<sup>204</sup> Subjecting interconnection agreements to approval by the UCC will help to weed out those terms and conditions in the agreement that contravene the Interconnection Regulations and ensure that the non-discrimination principle is observed.

The other aspect of access to telecommunications facilities discussed in this chapter has been one-way access regulation. However, in contrast to the discussion of two-way access regulation which has exclusively focused on the provisions of the legislation on two-way access, one-way access has been analysed from a policy angle. The key issue addressed has been whether Uganda's telecommunications sector, which comprises several operators with their own end-to end networks, stands to benefit from mandating one-way access. Specific reference has been made to the policy of local loop unbundling that has been used in other jurisdictions to enhance competition in the broadband internet. Within Sub-Saharan Africa, South Africa and member states of ECOWAS are promoting the local loop unbundling policy as an important tool for facilitating the growth of the broadband market.<sup>205</sup> However, one-way access regulation and the adoption of a local loop unbundling policy in Uganda is a very hard case to make. This is primarily because Uganda's telecommunications services are primarily accessed through the mobile network. The presence of several vertically integrated mobile operators with their own end- to-end network points to the need to ensure fair and efficient interconnection to enhance competition rather than mandate one-way access. On that basis, regulation of interconnection should be prioritised as a key tool for enhancing competition in Uganda's telecommunications services markets.

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<sup>204</sup>Communications Act 2013, s 59.

<sup>205</sup>ITU, 'West African Common Project: Harmonisation of Policies Governing the ICT Market in the UEMOA-ECOWAS Space-Interconnection' 5 <[https://www.itu.int/ITU-D/treg/projects/itu-ec/Ghana/modules/Compil-Guidelines\\_final.pdf](https://www.itu.int/ITU-D/treg/projects/itu-ec/Ghana/modules/Compil-Guidelines_final.pdf)> accessed 15 June 2017; and The Local Loop Unbundling Committee, 'Local Loop Unbundling: A Way Forward for South Africa' (May 2007) <[http://www.ellipsis.co.za/wp-content/uploads/2014/03/local\\_loop\\_unbundling.pdf](http://www.ellipsis.co.za/wp-content/uploads/2014/03/local_loop_unbundling.pdf)> accessed 15 June 2017

# **Chapter 7**

## **Efficient Radio Spectrum Regulation: Facilitating Competition in the Wireless Communications Markets in the Telecommunications Sector**

This chapter focuses on the link between efficient radio spectrum management and the growth of the competitive wireless communications markets in Uganda. Radio spectrum (hereinafter referred to as spectrum) refers to that part of the electromagnetic waves lying between the frequencies 3000 Hz and 300 GHz.<sup>1</sup> It is an essential input for the provision of wireless communications services in the broadcasting and telecommunications sectors. Spectrum has become a key issue of concern with a number of countries in Sub-Saharan Africa reporting scarcity of spectrum in the wireless communications markets with reports centring on the mobile telephone services market.<sup>2</sup> Given that the telecommunications services in Sub-Saharan Africa are primarily provided through wireless technology, it is important to ensure spectrum availability. On that basis this chapter addresses the issue whether the regulatory framework for spectrum management in Uganda facilitates competition by promoting efficient spectrum management. Efficient spectrum management is needed to ensure that spectrum does not become a bottleneck to competition and hinder the growth of the wireless telecommunications market.

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<sup>1</sup>KB Enterprises LLC, ‘Spectrum Auctions in Developing Countries: Options for Intervention’ (March 31 2009) 2 <<http://kbspectrum.com/wp-content/uploads/2009/10/Soros-OSI-033109-Spectrum-Auctions-in-Developing-Countries-Options-for-Intervention.pdf>> accessed 15 June 2017.

<sup>2</sup>See, for example, Julius Barigaba, ‘Uganda: Country cannot take more GSM operators says UCC’ *the East African* (Kampala, 25 August 2008) <<http://www.theeastfrican.co.ke/news/-/2558/462354/-/s2iw2ez/-/index.html>> accessed 15 June 2017; ‘Cote D’Ivoire: Warid Telecom Pays for Licence but Can’t Get Enough Spectrum to Operate’ *Balancing Act* (13 March 2009) <<http://www.balancingact-africa.com/news/en/issue-no-445/top-story/cote-d-ivoire-warid/en>> accessed 15 June 2017; and ‘Spectrum Unavailability and Review of Guidelines Delayed Globalcom’s Operations in Ghana says Minister Iddrisu’, *Balancing Act* (2 September 2011) <<http://www.balancingact-africa.com/news/en/issue-no-570/telecoms/spectrum-unavailabil/en>> accessed 15 June 2017.

## 7.1 Importance of Spectrum in the Telecommunications Sector in Sub-Saharan Africa

While spectrum is currently one of the most important inputs for the provision of services in the telecommunications sector, for the greater part of the twentieth century, spectrum as an input featured more prominently in the broadcasting sector. This was because, in contrast to the broadcasting sector, services in the telecommunications sector were transmitted through physical infrastructure, that is, copper wire. This rendered spectrum a less critical form of infrastructure for provision of telecommunications services. Thus, the policy on spectrum in the communications sector gave greater importance to spectrum management issues in the broadcasting sector, specifically, as regards avoiding signal interference.

The development of mobile telephone technology in the 1970s,<sup>3</sup> followed by the provision of commercial mobile telephone services,<sup>4</sup> set the stage for a dramatic change in the way spectrum is used in the telecommunications sector. The introduction of commercially available mobile telephone technology increased the demand for spectrum in frequency bands best suited for mobile telephone services and brought to the fore the issue of spectrum availability. Further technological developments in the telecommunications sector that have allowed the consumer to access internet services through wireless technology have spurred on the demand for spectrum.

Rapid technological development in the telecommunications sector has no doubt served as pivotal in bolstering the significance of spectrum in the telecommunications sector. However, the dissemination of this technology to the general population has been greatly facilitated by the worldwide shift in telecommunications policy from monopoly to the liberalisation. Liberalisation of the telecommunications sector has opened wireless communications markets to greater competition with consumers coming to rely more on wireless technology to access telecommunications services. ITU statistics reveal that in 2016 there were approximately one

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<sup>3</sup>Although technology for mobile telephony existed as early as 1949, the full scale development and launch of mobile telephony took place 40 years later spearheaded by developments in mobile telephony technology in the United States in the 1970s. In particular, the filing of the first patent of the modern portable handset in 1973, by Martin Cooper of Motorola, heralded the beginning of a new age in telecommunications. This information is taken from Patrick Ryan, ‘The Effect of Emerging Wireless Technologies on the Law and Regulation of Spectrum Allocations in the United States and the European Union’ (PhD Thesis, Katholieke Universiteit Leuven 2004) 100.

<sup>4</sup>In the same year that the first patent for a modern portable handset was filed in the United States, the first computer-enabled mobile telephone system was tested pursuant to limited FCC authorisation for non-wireline services, resulting in the first licenses for commercial cellular services in the United States in 1982. Mobile telephony services were launched in the United States in 1983 and later in Europe in 1991. This information is taken from Patrick Ryan, ‘The Effect of Emerging Wireless Technologies on the Law and Regulation of Spectrum Allocations in the United States and the European Union’ (PhD Thesis, Katholieke Universiteit Leuven 2004) 100.

billion fixed telephone subscribers and 7.3 billion mobile telephone subscribers.<sup>5</sup> In the internet market, there were approximately 3.6 billion mobile broadband subscriptions and 884 million fixed (wired) broadband subscriptions.<sup>6</sup>

The liberalisation of the telecommunications sector has particularly had a significant impact on spectrum use in the telecommunications sector in Sub-Saharan Africa. Prior to the liberalisation of the telecommunications sector in the region, a process that commenced in the mid-1990s,<sup>7</sup> the poorly developed fixed telephone network infrastructure in the region meant that the penetration rate for telecommunications services was very low. In 1994, the telephone penetration rate in Sub-Saharan Africa was at 1.5 main lines per 100 people with 40% of the telephone lines concentrated in a single country, South Africa.<sup>8</sup> With the liberalisation of the telecommunications sector, FDI flows into the telecommunications sector increased. Most investment went, and continues to go, primarily into mobile telephone networks rather than the fixed telephone network.<sup>9</sup> With the wider spread mobile telephone network in the region, the population in Sub-Saharan Africa has increasingly gained access to telecommunications services. Telecommunications services consumers in the region have come to rely primarily on mobile phone technology with comparatively limited utilisation of wireline infrastructure.

## 7.2 Significance in the Voice and Internet Services Markets

In the voice services market, which is the biggest market in the telecommunications sector in the region, wireless telephony is the dominant form of communication with the mobile telephone network substituting fixed telephone network. In 2016, there were 772 million mobile telephone subscribers in Sub-Saharan Africa compared to 11 million fixed telephone subscribers.<sup>10</sup> Thus, the fixed-line segment of

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<sup>5</sup>ITU, ‘Key 2005-2016 ICT Data for the World, by Geographic Regions and by Level of Development’ <<http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>> accessed 15 June 2017.

<sup>6</sup>Ibid.

<sup>7</sup>With pioneer countries Ghana, Uganda and Zimbabwe.

<sup>8</sup>Eli M Noam, *Telecommunications in Africa* (Oxford University Press 1999) 3.

<sup>9</sup>Mark D J Williams, Rebecca Mayer, and Michael Minges, *Africa’s ICT Infrastructure: Building on the Mobile Revolution* (World Bank 2011) 11. Since it is comparatively less costly to roll out mobile telephone network, this is regarded by investors as the best way of addressing the immediate service needs in Sub-Saharan Africa.

<sup>10</sup>ITU, ‘Key 2005-2016 ICT Data for the World, by Geographic Regions and by Level of Development’ <<http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>> accessed 16 June 2017.

the voice market has remained static in most countries in Africa.<sup>11</sup> A notable exception is Nigeria in which the number of fixed lines has increased. However, this has been mainly due to investment in fixed wireless links rather than the traditional copper-wireline-based networks.<sup>12</sup> Therefore, spectrum is a very important resource in the voice services market in Sub-Saharan Africa. The same can also be stated for the internet market in the region. In contrast to other regions where wireline infrastructure is important for access to internet services,<sup>13</sup> in Sub-Saharan Africa, internet is mainly accessed through the wireless mobile telephone network which is more extensively spread.<sup>14</sup> In 2016, there were 280 million mobile broadband subscribers in Africa compared to 6 million fixed broadband subscribers.<sup>15</sup>

The statistics above illustrate that availability of spectrum for wireless telecommunications services is particularly important in the telecommunications sector in Sub-Saharan Africa. Ensuring that spectrum is available to foster further growth of the wireless telecommunications services market is doubly important as the markets in Sub-Saharan Africa are far from saturated. According to ITU statistics, the penetration rate in the mobile telephone services market was approximately 80.8% in 2016.<sup>16</sup> However, country statistics reveals different penetration rates with countries having rates well above 80.8% with others having rates well below the average. Thus, while countries like Benin, Botswana, Gabon, Ghana, Namibia, Senegal and South Africa have penetrations rates of 100% a number of countries have penetration rates below 80%.<sup>17</sup> Additionally, if one takes into account the practice of multiple SIM card ownership prevalent among the primarily urban based population in Sub-Saharan Africa, the penetration rate is less than the statistics suggest. Thus, there is still room for growth in the mobile telephone market in Sub-Saharan Africa which will necessitate availability of spectrum.

There is also a strong case for ensuring spectrum availability for internet services. In Sub-Saharan Africa, the internet market remains small. The ITU

<sup>11</sup>Mark D. J Williams, Rebecca Mayer, and Michael Minges, *Africa's ICT Infrastructure: Building on the Mobile Revolution* (World Bank 2011) 53.

<sup>12</sup>Ibid.

<sup>13</sup>For example, in the European Union, a great portion of the population accesses broadband internet via DSL technology which delivers internet through copper telephone lines (fixed local loop) as highlighted in Sect. 6.4.4 of this study.

<sup>14</sup>Stork Christoph, Calandro Enrico, and Gillwald Allison, 'Internet Going Mobile: Internet Access and Usage in Eleven African Countries' (19th ITS Biennial Conference, Bangkok, November 2012) <[www.econstor.eu/bitstream/10419/72503/1/741715880.pdf](http://www.econstor.eu/bitstream/10419/72503/1/741715880.pdf)> accessed 15 June 2017.

<sup>15</sup>ITU, 'Key 2005-2016 ICT Data for the World, by Geographic Regions and by Level of Development' <<http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>> accessed 16 June 2017.

<sup>16</sup>Ibid.

<sup>17</sup>Ibid. Countries with penetration rates below 80 percent include: Burkina Faso, Cameroon, Central Africa Republic, Democratic Republic of Congo, Eritrea, Guinea, Malawi, Niger, Rwanda, Tanzania, and Uganda.

statistics put the internet penetration rate in Sub-Saharan Africa in 2016 at 29.3% for mobile broadband subscriptions and 0.7% for fixed broadband subscriptions.<sup>18</sup> The low internet penetration rate in the region is partly due to the low telephone landline density in the region that has meant that countries have been unable to take advantage of the landline as a medium for the provision of telecommunications services.<sup>19</sup> It is no coincidence that the countries with the highest internet penetration in Africa also happen to have higher landline density. While the internet market remains small, there is potential for growth centring on the use of wireless technology. Studies already reveal that the access to mobile technology is increasing the internet penetration rate in Sub-Saharan Africa.<sup>20</sup> As observed by ITU, mobile internet, specifically internet connection with GSM is of great significance in Sub-Saharan Africa because 3G GSM networks are the most widespread networks in the region.<sup>21</sup>

As spectrum availability is crucial for the telecommunications sector in Sub-Saharan Africa, efficient spectrum management mechanisms should be in place to avoid scarcity. However, evidence from several countries suggests that spectrum management is inefficient due to spectrum scarcity particularly in the GSM frequency bands allocated for mobile communications services. Scarcity of spectrum for mobile telephony services has been reported in Ivory Coast,<sup>22</sup> Uganda,<sup>23</sup>

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<sup>18</sup>Ibid.

<sup>19</sup>In other regions of the world, specifically the European Union, the majority of the population accesses internet via DSL technology which is provided through landline copper lines.

<sup>20</sup>Stork Christoph, Calandro Enrico, and Gillwald Allison, ‘Internet Going Mobile: Internet Access and Usage in Eleven African Countries’ (19th ITS Biennial Conference, Bangkok, November 2012) <[www.econstor.eu/bitstream/10419/72503/1/741715880.pdf](http://www.econstor.eu/bitstream/10419/72503/1/741715880.pdf)> accessed 15 June 2017. The importance of the mobile network for internet in Sub-Saharan Africa has also been noted in GSMA, ‘African Mobile Observatory 2011: Driving Economic and Social Development through Mobile Services’ 14 <<http://www.gsma.com/spectrum/wp-content/uploads/2011/12/Africa-Mobile-Observatory-2011.pdf>> accessed 15 June 2017. Furthermore, see ITU, ‘Key 2005-2015 ICT Data for the World, by Geographic Regions and by Level of Development’ <<http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>> accessed 15 June 2017, which reveals a significant increase in the number of mobile internet subscribers.

<sup>21</sup>ITU, ‘Study on International Internet Connectivity in Sub-Saharan Africa’ (March 2013) 3 <[www.itu.int/en/int/itu-d/Regulatory-Market/.../IIC\\_Africa\\_Final-en.pdf](http://www.itu.int/en/int/itu-d/Regulatory-Market/.../IIC_Africa_Final-en.pdf)> accessed 15 June 2017.

<sup>22</sup>See ‘Cote D’Ivoire: Warid Telecom pays for licence but can’t get enough spectrum to operate’ *Balancing Act* <<http://www.balancingact-africa.com/news/en/issue-no-445/top-story/cote-d-ivoire-warid/en>> accessed 15 June 2017.

<sup>23</sup>See Julius Barigaba, ‘Uganda: Country cannot take more GSM operators says UCC’ *the East African* (Kampala 25 August 2008) <<http://allafrica.com/stories/200808250215.html>> accessed 15 June 2017. More importantly, the spectrum scarcity problem in the telecommunications sector was confirmed by personnel interviewed in the spectrum department of the UCC in 2011. Interview with Godfrey Sengendo, (then) Manager Spectrum Management, UCC (Kampala, Uganda, 22 November 2011).

Ghana,<sup>24</sup> and South Africa<sup>25</sup> where the unavailability of spectrum for mobile telephony services is threatening the maintenance of a competitive landscape by hindering market entry.

However, it is not only the future of mobile telephone services that is under threat. Spectrum scarcity has also been cited as a threat to the growth of the mobile broadband market in Sub-Saharan Africa.<sup>26</sup> The mobile internet services market which has experienced rapid technological development may be hampered by regulation of radio spectrum in a manner that undermines the dynamic character of the mobile internet services market. The rapid technological development in the mobile internet market has led to global discussion on spectrum regulation centring on the reorganisation of existing 2G and 3G band allocations as one of the strategies to pave the way for the gradual shift by mobile operators to 4G technology.<sup>27</sup>

Closely connected to this particular matter is the increased uptake of smartphones that is intensifying wireless spectrum use. Smartphones impact on spectrum use as owners of smartphones tend to use more data intensive applications than owners of traditional mobile phones. The impact of smartphones on spectrum use has led mobile operators, specifically in developed countries, to demand for more spectrum to meet customer demand.<sup>28</sup> The link between smartphones and increased spectrum use is of relevance in Africa where smartphone use is gradually taking root on the continent with the growth of the smartphone market particularly due to the increased access to low cost high performing smartphones.<sup>29</sup>

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<sup>24</sup>See Ekow Quandzie, ‘Spectrum unavailability, review of guidelines delayed Globacom’s operations in Ghana-Minister’ *Ghana Business News* (Accra, 29 August 2011) <<http://www.ghanabusinessnews.com/spectrum-unavailability-review-of-guidelines-delayed-globacoms-operations-in-ghana-minister/>> accessed 15 June 2017.

<sup>25</sup>Enrico Calandro, ‘Re-farming Frequencies in Rural Areas: A Regulatory Perspective’ (5th ACORN\_REDECOM Conference, Lima, May, 2011) 7.

<sup>26</sup>GSMA, ‘Sub-Saharan Africa Mobile Observatory’ (2012) 5 <[http://www.gsma.com/publicpolicy/wp-content/uploads/2012/03/SSA\\_FullReport\\_v6.1\\_clean.pdf](http://www.gsma.com/publicpolicy/wp-content/uploads/2012/03/SSA_FullReport_v6.1_clean.pdf)> accessed 15 June 2017.

<sup>27</sup>‘Mobile Broadband and 4G Spectrum Regulation Trends’ Tolaga Research Report <<http://www.tolaga.com/pdfReports/MobileBroadbandand4GRegulation.pdf>> accessed 15 June 2017.

<sup>28</sup>Marguerite Reardon, ‘Is AT&T a Wireless Spectrum Hog?’ <[http://news.cnet.com/8301-30686\\_3-20058494-266.html](http://news.cnet.com/8301-30686_3-20058494-266.html)> accessed 15 June 2017; and Naela Compa, ‘Can the Wireless Spectrum Keep Up with Data Usage?’ <<http://www.extremetech.com/mobile/126873-can-the-wireless-spectrum-keep-up-with-smartphone-data-usage>> accessed 15 June 2017.

<sup>29</sup>William Wallis, ‘Smart Africa: Smartphones Pave Way for Huge Opportunities’ *Financial Times* (26 January 2016) <<https://www.ft.com/content/aba818a6-c392-11e5-808f-8231cd71622e>> accessed 15 June 2017.

### 7.3 Spectrum Scarcity and Efficient Spectrum Management

The previous sub-section illustrates that there is increasing demand for spectrum for mobile and broadband services in Sub-Saharan Africa. However, spectrum scarcity is threatening the growth of wireless telecommunications markets particularly the mobile telephony market where there is lack of spectrum capacity in the GSM frequency bands in several countries. The increasing demand for spectrum as well as the spectrum scarcity in the mobile telephone services market creates the impression that the spectrum is a scarce resource.

Undoubtedly spectrum for wireless telecommunications services is limited. Some spectrum is explicitly pre-empted by the regulator from use for other purposes, for example, broadcasting, aeronautical and maritime navigation, emergency services, and the military. Additionally, spectrum is non-homogeneous, with different parts of the spectrum being best used for different purposes.<sup>30</sup> Only a part of the spectrum is suitable for wireless telecommunications.<sup>31</sup> Mobile services can only effectively operate in frequencies below 3GHz.<sup>32</sup> In Uganda, as in other countries in Sub-Saharan Africa, GSM technology is the standard used for mobile telephone services.<sup>33</sup> GSM technology for mobile telephony services uses frequency bands between 900 and 1800 MHz making these two frequency bands prime spectrum in the telecommunications sector. Thus, spectrum for telecommunications services is finite. However, that does not necessarily imply that spectrum is a scarce resource. Spectrum scarcity exists due to the ways in which one designs and regulates technologies that use spectrum.<sup>34</sup> This points more to inefficient spectrum management that creates “administrative scarcity”.<sup>35</sup> Therefore, provided a spectrum management regime is efficient, spectrum for telecommunications services will be available. Three key aspects of spectrum management have been strongly linked

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<sup>30</sup>Joshua S Gans, Stephen P King, and Julian Wright, ‘Wireless Communications’ in Sumit K. Majumdar, Ingo Vogelsang, and Martin Cave (eds), *Handbook of Telecommunications Economics: Technology, Evolution and the Internet, Volume 2* (North-Holland Amsterdam 2006) 248.

<sup>31</sup>Ibid, 249.

<sup>32</sup>The frequencies between 3 GHz and 5 GHz are semi-mobile, and can penetrate obstacles, but with more difficulty. Those beyond 5 GHz have practically no mobile value, and must be set up for line of sight uses, that is, they must be outdoors, fixed, and aimed at each other to function. See Patrick Ryan, ‘The Effect of Emerging Wireless Technologies on the Law and Regulation of Spectrum Allocations in the United States and the European Union’ (PhD Thesis, Katholieke Universiteit Leuven 2004) 97.

<sup>33</sup>Mark D J Williams, Rebecca Mayer, and Michael Minges, *Africa’s ICT Infrastructure: Building on the Mobile Revolution* (World Bank 2011) 152-3.

<sup>34</sup>Iarla Flynn, Benjamin Lennett, and Sascha Meinrath, ‘A Technology Driven Spectrum Policy’ (2008) Google/New America Foundation.

<sup>35</sup>There term ‘administrative scarcity’ is borrowed from Evan Light, ‘Open Spectrum for Development: Policy Brief’ (2010) Association For Progressive Communications 5.

to spectrum scarcity: spectrum allocation; spectrum assignment; and spectrum utilisation.

Spectrum scarcity may arise from inefficient attribution of a range of frequencies within the spectrum to be used by a certain type of technology, inefficient spectrum allocation. For example, in many jurisdictions, there is a restriction on the reuse of GSM spectrum for 3G UMTS technologies despite the fact the 3G services can also be provided via spectrum in the 900 MHz band.<sup>36</sup> An efficient spectrum management regime ought to allow for efficient allocation that takes into account the rapid technological development that is constantly changing spectrum use in the wireless telecommunications market. To make the spectrum allocation system more flexible, a number of countries have adopted a technology neutral licensing regime. In Uganda, broadband services are licensed at 2100 MHz, however, as Uganda has a technology neutral licensing regime, 3G services can be provided via 900 MHz which is a GSM band.<sup>37</sup> If such a dynamic licensing policy does not exist, the inaccurate perception that radio spectrum for broadband services is scarce may be perpetrated.

The scarcity of spectrum can also result from the adoption of an inefficient mechanism for granting the rights to use spectrum (spectrum assignment). Spectrum scarcity may arise from the over allocation of spectrum holdings to a handful of telecommunications operators. As spectrum assignment determines the number of participants in a given telecommunications market, over-allocation of spectrum can have an adverse impact on the competitive landscape in the market.

Aside from inefficient spectrum allocation and assignment potentially leading to radio spectrum scarcity, spectrum underutilisation can also create the illusion of spectrum scarcity. Spectrum underutilisation by mobile operators has become a source of concern. A few telecommunications operators have accused spectrum licensees of inefficiently utilising their spectrum holdings.<sup>38</sup> Inefficient spectrum use is of concern particular where it facilitates anti-competitive behaviour, for example, spectrum hoarding.<sup>39</sup> In recent years, there have been spectrum occupancy measurements undertaken, primarily in Europe and United States, indicating that allocated spectrum bands are underutilised for extended periods of time.<sup>40</sup>

<sup>36</sup>Ordinarily, 3G services fall within the 2100 MHz band.

<sup>37</sup>Uganda's current licensing regime, which came into effect in 2006 following the publication of Ministerial policy guidelines of 11 May 2006 and of 20 October 2006.

<sup>38</sup>CAG, 'Report of Comptroller and Auditor General of India on Revenue Sector' (2013); and Emma Okonji, 'NCC-Operators Are Underutilising 2.3GHz Spectrum Licence' *This Day* (Abuja, 12 December 2013) <<http://www.thisdaylive.com/articles/ncc-operators-are-underutilising-2-3ghz-spectrum-licence/166431/>> accessed 15 June 2017.

<sup>39</sup>Martin Cave, 'Anti-Competitive Behaviour in Spectrum Markets' (15 August 2009) TPRC Conference 2009 <<http://ssrn.com/abstract=1999846>> accessed 15 June 2017.

<sup>40</sup>FCC Spectrum Policy Task Force' (2002) <[http://www.fcc.gov/sptf/files/SEWGFinalReport\\_1.pdf](http://www.fcc.gov/sptf/files/SEWGFinalReport_1.pdf)> accessed 15 June 2017; Ruben de Francisco and Ashish Pandharipande, 'Spectrum Occupancy in the 2.36-2.4 GHz Band: Measurement and Analysis' European Wireless Conference IEEE 2010 231; and Soraya Cointreas et.al, 'An Investigation into the Spectrum Occupancy in

There have been a few spectrum occupancy measurements undertaken within Sub-Saharan Africa, notably, in Nigeria and Uganda with similar findings.<sup>41</sup> The measurement results strongly suggest that spectrum scarcity is a result of underutilisation of spectrum rather than spectrum unavailability. Additionally, the results indicate the need for a dynamic system of spectrum management that will ensure that the spectrum holes (underutilised spectrum) are efficiently utilised.

The discussion above has established that spectrum availability in the wireless communications markets in the telecommunications sector in Sub-Saharan Africa is of great concern. It suggests a need to change the spectrum policy and regulatory framework to ensure that spectrum is efficiently managed in order to avoid spectrum scarcity and support the continued growth of the telecommunications sector in Sub-Saharan Africa. It is for this reason that this chapter assesses whether the regulatory framework in Uganda effectively governs spectrum management in the telecommunications sector by taking into account the rapid technological development of telecommunications services and the increasing demand for spectrum for wireless telecommunications services.

## 7.4 The Debate on Efficient Radio Spectrum Management

The debate on efficient radio spectrum management in the telecommunications sector has primarily focused on the model for regulation of the resource in a sector characterised by rapid technological development and liberalised markets. The two factors, liberalisation and rapid technology development, are constantly changing spectrum use in the sector and increasing demand for spectrum for wireless telecommunications services. The changing demands for spectrum in the telecommunications sector have challenged the decades-long applied approach to spectrum management.

Traditionally, spectrum has been centrally managed by government through a command-and-control model.<sup>42</sup> Under the command-and-control regulatory

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Japan in the Context of TV White Space Systems' (6th International Conference on Cognitive Radio Oriented Wireless Networks and Communications, Osaka, June 2011).

<sup>41</sup>Bara'u Gafai Najashi, Feng Wenjiang, and Choiabu Kadri, 'An Insight into Spectrum Occupancy in Nigeria' (2013) International Journal of Computer Science 394, and Mark Kagarura, Dorothy K Okello, and Roseline N Akol, 'Evaluation of Spectrum Occupancy: A Case for Cognitive Radio in Uganda' (2013) IEEE 9th Conference on Mobile Ad-hoc and Sensor Networks, 167.

<sup>42</sup>The command-and-control method was adopted in the early part of the 20<sup>th</sup> century to deal with the issue of harmful interference in the broadcasting and radio markets. See Patrick Ryan, 'The Effect of Emerging Wireless Technologies on the Law and Regulation of Spectrum Allocations in the United States and the European Union' (PhD Thesis, Katholieke Universiteit Leuven 2004) 54.

regime, a regulator rigidly allocates non-overlapping frequency bands to specific uses and assigns usage rights to licensees.<sup>43</sup> Since the late 1950s, the command-and-control approach has been subject to criticism by economists on the grounds that it leads to inefficient management of spectrum and increases the risk of scarcity of spectrum.<sup>44</sup> One of the model's most prominent critics is the Nobel Prize winner Ronald Coase. Coase argued against reliance on the command-and-control approach on the ground that reliance on the market rather than regulators would lead to more efficient allocation of spectrum.<sup>45</sup> However, since telephony services were provided via physical infrastructure, that is, copper wire, spectrum availability was not a big issue and therefore not a key concern for telecommunications policy-makers and regulators.

This changed in the 1980s following the introduction of commercial mobile telephone services in the telecommunications sector triggering increased demand for spectrum in specific frequency bands. The liberalisation of the telecommunications sector further fanned the demand for spectrum in the sector as more consumers gained access to wireless telecommunications services. These changes have made spectrum availability a key issue in the debate on efficient spectrum management in the communications sector.

One central point raised in the debate on spectrum management in the telecommunications sector is the need for a flexible regulatory regime to ensure spectrum availability in a constantly changing telecommunications sector, challenging the basis for the exclusive use of the rigid command-and-control regime.<sup>46</sup> The command-and-control regime was adopted by countries in order to control

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<sup>43</sup>ACMA, 'The Economics of Spectrum Management: A Review' (2007) <[http://www.acma.gov.au/webwr/aca\\_home/publications/reports/spectrum%20-%20final%20draft%20-%203.pdf](http://www.acma.gov.au/webwr/aca_home/publications/reports/spectrum%20-%20final%20draft%20-%203.pdf)> accessed 15 June 2017.

<sup>44</sup>Leo Herzel, 'The Public Interest and Market in Color Television' (1951) 18 University of Chicago Law Review 802; Ronald Coase, 'The Federal Communications Commission' (1959) Journal of Law and Economics 21; Arthur S De Vany, Ross D Eckert, Charles J Meyers, Donald J O'Hara, and Richard C Scott, 'A Property System for Market Allocation of the Electromagnetic Spectrum: A Legal-Economic-Engineering Study' (1969) 21 Stanford Law Review 1499; and Harvey J Levin, *The Invisible Resource: Use and Regulation of the Radio Spectrum* (Johns Hopkins Press 1971).

<sup>45</sup>Ronald Coase, 'The Federal Communications Commission' (1959) Journal of Law and Economics 21, 26-27.

<sup>46</sup>Gerald R Faulhaber and David Farber, 'Spectrum Management: Property Rights, Markets' <[http://assets.wharton.upenn.edu/~faulhabe/SPECTRUM\\_MANAGEMENTv51.pdf](http://assets.wharton.upenn.edu/~faulhabe/SPECTRUM_MANAGEMENTv51.pdf)> accessed 15 June 2017; Lawrence White, "Propertyizing" the Electromagnetic Spectrum: Why It's Important, and How to Begin' in Jeffrey A Eisenbach and Randolph J May (eds), *Communications Deregulation and FCC Reform: Finishing the Job* (Kluwer 2001); and Tommaso M Valletti, 'Spectrum Trading' (2001) 25 Telecommunications Policy 655, 657 in which it is observed that centralised management of spectrum is inappropriate due to the informational burden associated with finding the efficient allocation. That is, the central planner would need to know all consumer needs and all production possibilities of the firms which is not realistic.

interference<sup>47</sup> and has proved efficient in this regard. The command-and-control model has also facilitated international harmonisation of frequency allocation, new products standardisation and international roaming.<sup>48</sup> However, these merits do not take away the fact the command-and-control model has been heavily criticised as inefficient for purposes of spectrum management telecommunications sector where spectrum use has become very dynamic.

One weakness identified is that the command-and-control regime does not evaluate spectrum resources based on standard criteria of supply and demand economic.<sup>49</sup> It is therefore argued that the command-and-control model provides the wrong incentives to spectrum licensees and leaves much of the frequency bands idle at any point in time, contributing to scarcity, congestion, and reduced economic performance in communications markets.<sup>50</sup> This particular criticism of the command-and-control method is of significance in Sub-Saharan Africa, and Uganda in particular, where it remains the primary model for spectrum management. It has been observed that the continued application of the command-and-control regime in Sub-Saharan Africa is likely to constrain the development of the ICT sector.<sup>51</sup> In Uganda, the reliance on the command-and-control model has been criticised for leading to artificial spectrum scarcity in the mobile communications market.<sup>52</sup> Generally, the unavailability of spectrum capacity in the GSM bands in a number of countries in Sub-Saharan Africa<sup>53</sup> suggests that the exclusive use of the command-and-control spectrum management regime is not the most efficient model.

The debate over spectrum management in the telecommunications sector, in the wake of rapid technological development and market liberalisation, has led governments to discuss changes to spectrum policy. For example, Australia, the United

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<sup>47</sup>The command-and-control method was adopted in the early part of the 20<sup>th</sup> century to deal with issue of harmful interference in the broadcasting and radio markets. See Patrick Ryan, ‘The Effect of Emerging Wireless Technologies on the Law and Regulation of Spectrum Allocations in the United States and the European Union’ (PhD Thesis, Katholieke Universiteit Leuven 2004) 54.

<sup>48</sup>ACMA, ‘The Economics of Spectrum Management: A Review’ (2007) <[http://www.acma.gov.au/webwr/aca\\_home/publications/reports/spectrum%20-%20final%20draft%20-%203.pdf](http://www.acma.gov.au/webwr/aca_home/publications/reports/spectrum%20-%20final%20draft%20-%203.pdf)> accessed 15 June 2017.

<sup>49</sup>Ibid.

<sup>50</sup>Ibid.

<sup>51</sup>Vivien Foster and Cicelia Briceno-Garmendia (eds), *Africa’s Infrastructure: A Time for Transformation* (World Bank 2010) 177.

<sup>52</sup>Asaph Tweheyo, ‘Spectrum Management Policy Framework for Mobile Communications: A Case Study of Uganda’ (Postgraduate Diploma Thesis, Makerere University, May 2009).

<sup>53</sup>Cote D’Ivoire: ‘Warid Telecom pays for licence but can’t get enough spectrum to operate’ *Balancing Act* <<http://www.balancingact-africa.com/news/en/issue-no-445/top-story/cote-d-ivoire-warid/en>> accessed 15 June 2017; Uganda: Julius Barigaba, ‘Uganda: Country cannot take more GSM operators says UCC’ *the East African* (Kampala 25 August 2008) <<http://allafrica.com/stories/200808250215.html>> accessed 15 June 2017; and Ghana: Ekow Quandzie, ‘Spectrum unavailability, review of guidelines delayed Globacom’s operations in Ghana-Minister’ *Ghana Business News* (Accra, 29 August 2011) <<http://www.ghanabusinessnews.com/spectrum-unavailability-review-of-guidelines-delayed-globacoms-operations-in-ghana-minister/>> accessed 15 June 2017.

Kingdom and the United States have undertaken extensive reviews of spectrum management programmes with the aim of reforming the national spectrum policy to improve spectrum management efficiency.<sup>54</sup> A key outcome of the reviews has been the recommendation that spectrum management should be more flexible and liberalised. Aside from nation-based proposals on spectrum management reform, the European Commission recognises the need for a more flexible spectrum management regime in the European Union member states and specifically recommends the introduction of spectrum markets for purposes of spectrum assignment.<sup>55</sup>

The discussion over the change in spectrum policy in the telecommunications sector has led to the consideration of alternatives to the command-and-control regime, particularly in connection with spectrum assignment. In this regard, two alternatives have gained prominence: spectrum markets with private property rights, which address spectrum demand and valuation considerations; and a commons model, which also addresses demand problems but relies strongly on the supply side for its implementation.<sup>56</sup>

While the debate on efficient spectrum management has focused primarily on alternatives to the command-and-control model, steps have been concurrently taken to increase spectrum availability within the confines of the command-and-control model. Measures include: reallocating spectrum from one use to another; increasing technical efficiency of spectrum; increasing the amount of spectrum sharing among services and users; and extending the upper end of the spectrum.<sup>57</sup>

## 7.5 Spectrum Management in Uganda's Telecommunications Sector

The previous sub-sections have provided an overview of the key issues pertaining to efficient spectrum management in the telecommunications sector and will form the backdrop against which Uganda's regulatory framework on spectrum management will be analysed.

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<sup>54</sup>See ACMA, 'The Economics of Spectrum Management: A Review' (2007) <[http://www.acma.gov.au/webwr/aca\\_home/publications/reports/spectrum%20-%20final%20draft%20-%203.pdf](http://www.acma.gov.au/webwr/aca_home/publications/reports/spectrum%20-%20final%20draft%20-%203.pdf)> accessed 15 June 2017; Martin Cave, 'Review of Radio Spectrum Management: An Independent Review for the Department of Trade and Industry and HM Treasury' (2002) <[http://www.ofcom.org.uk/static/archive/ra/spectrum-review/2002review/1\\_whole\\_job.pdf](http://www.ofcom.org.uk/static/archive/ra/spectrum-review/2002review/1_whole_job.pdf)> accessed 15 June 2017; and 'FCC Spectrum Policy Task Force' (2002) <[http://www.fcc.gov/sptf/files/SEWGFinalReport\\_1.pdf](http://www.fcc.gov/sptf/files/SEWGFinalReport_1.pdf)> accessed 15 June 2017.

<sup>55</sup>European Commission, 'A Forward-Looking Radio Spectrum Policy for the European Union-Second Annual Report' (2005).

<sup>56</sup>See ACMA, 'The Economics of Spectrum Management: A Review' (2007) 1 <[http://www.acma.gov.au/webwr/aca\\_home/publications/reports/spectrum%20-%20final%20draft%20-%203.pdf](http://www.acma.gov.au/webwr/aca_home/publications/reports/spectrum%20-%20final%20draft%20-%203.pdf)> accessed 15 June 2017.

<sup>57</sup>Dale N Hatfield, 'Spectrum Management Reform and the Notion of the 'Spectrum Commons'' (2003) 4 African Journal of Information and Communication 1.

### ***7.5.1 The Regulatory Framework for Spectrum Management in the Telecommunications Sector***

Until 1997, spectrum in Uganda was managed by the National Frequency Registration Board of the then Uganda Posts and Telecommunications Corporation (UPTC) under the Ministry of Works, Transport and Communications.<sup>58</sup> Following the enactment of the now repealed Communications Act, Cap. 106 in 1997,<sup>59</sup> responsibility for spectrum management in the telecommunications sector fell to the UCC. The Uganda Communications Act established the UCC and defined its functions as including spectrum management.<sup>60</sup> The UCC still retains responsibility for spectrum management regulation under the new legislative framework, the Communications Act of 2013.<sup>61</sup>

While the UCC is responsible for implementing the provisions of the law on spectrum management in the telecommunications sector, the Ministry of Information and Communications Technology (Ministry of ICT) formulates policies to address issues related to spectrum management. To this effect, the Ministry of ICT has indicated that the formulation of policies on spectrum management in the telecommunications sector is one of its priority policy areas. The Ministry of ICT's Telecommunications Policy acknowledges that spectrum management and allocation is a high risk challenge in the telecommunications sector.<sup>62</sup> As part of the Ministry of ICT's goal to create a conducive environment for the establishment of a fully liberalised, technology neutral and competitive telecommunications sector, efficient spectrum management is listed as a strategy.<sup>63</sup> The policy identifies efficient issuance of spectrum as of particular importance.<sup>64</sup> A key part of its action plan is the formulation of lower level policies to address the spectrum management concerns outlined in the Policy.<sup>65</sup>

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<sup>58</sup>UCC, 'Radio Spectrum Policy Guidelines for Uganda' 7 <<http://www.ucc.co.ug/files/downloads/SpectrumPolicyGuidelines.pdf>> accessed on accessed 15 June 2017.

<sup>59</sup>The Communications Act, Cap. 106 was the primary law on spectrum management in Uganda until January 2013 when it was repealed and replaced by the Uganda Communications Act, Act 1 of 2013.

<sup>60</sup>Communications Act Cap.106, s 3 and s 4(l).

<sup>61</sup>Ibid, s 5(c).

<sup>62</sup>The draft Ministry of ICT Telecommunications Policy of 2010-2016 14.

<sup>63</sup>Ibid, 26.

<sup>64</sup>Ibid.

<sup>65</sup>Ibid.

### 7.5.1.1 Legislative Framework on Spectrum Management

The Uganda Communications Act 2013 is the primary legislation on spectrum management in the telecommunications sector. The Act charges the UCC with the responsibility of managing spectrum issuing licences for spectrum use, and determining the fees payable for use of the spectrum.<sup>66</sup> More detailed provisions on the management of spectrum in Uganda are contained in the Communications (Radio) Regulations 2005, SI 2005/23 (hereinafter referred to as the Spectrum Regulations). The Spectrum Regulations seek to promote efficient spectrum management through measures that, *inter alia*, facilitate the growth of the wireless services market, and optimise the accommodation of radio spectrum use through allocation of adequate spectrum, so as to satisfy evolving demand and ensure efficient spectrum assignment.<sup>67</sup>

The wording of the Spectrum Regulations' main objective that seeks to "satisfy evolving demand and ensure efficient spectrum assignment" clearly points to importance of having a flexible spectrum management regime that is able to meet the evolving spectrum demands in the telecommunications sector. The objective indicates that adaptability of the spectrum regime to changing demands for spectrum is one of the key elements of efficient spectrum management. In line with its objective of fostering dynamic spectrum management, the Spectrum Regulations recognise the importance of applying market methods of spectrum management.<sup>68</sup> In addition to the Communications Act and the Spectrum Regulations, the UCC has formulated guidelines on spectrum management. The Radio Spectrum Policy Guidelines (hereinafter referred to as Spectrum Guidelines) seek to guide the public on the use of spectrum in a proper manner.

The preceding sub-sections of this chapter have highlighted the importance of efficiently regulating spectrum in the telecommunications sector to maintain spectrum capacity in frequency bands and avoid spectrum scarcity in the wireless communications markets. They have brought to light the particular challenge of efficiently managing spectrum in the wake of unprecedented demand for spectrum for wireless communications services. Therefore, analysing whether a state's regulatory framework promotes efficient spectrum management is a pertinent issue. In Uganda, the discussion is particularly relevant due to the case of spectrum scarcity for mobile telephony and broadband services.<sup>69</sup> The lack of sufficient spectrum capacity in the GSM frequency bands is affecting market growth in the mobile telephony market by hindering market entry.<sup>70</sup>

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<sup>66</sup>Communications Act 2013, s 5(c).

<sup>67</sup>Communications (Radio) Regulations 2005, SI 2005/23, reg 3(1).

<sup>68</sup>Ibid, reg 3 (1)(e) and (g).

<sup>69</sup>Julius Barigaba, 'Uganda: Country cannot take more GSM operators says UCC,' (Kampala 25 August 2008) *the East African* <<http://allafrica.com/stories/200808250215.html>> 15 June 2017.

<sup>70</sup>Ibid.

It has been stressed in the introduction that spectrum is a finite resource; however, it is not a scarce resource. Spectrum scarcity exists due to the ways in which technologies that use spectrum are designed and regulated.<sup>71</sup> If the spectrum is efficiently managed spectrum capacity should be available in a given frequency band. The current scarcity of spectrum problem in Uganda, particularly in the mobile telephony market, strongly suggests that the existing approach to spectrum management in the telecommunications sector does not sufficiently meet the objectives espoused in the Communications Act 2013 and the Spectrum Regulations that promote efficient spectrum management. On that basis, a detailed analysis of the legislation and Spectrum Guidelines is undertaken in order to identify weaknesses in the regime that might explain the spectrum scarcity problem in the telecommunications sector.

Addressing concerns related to spectrum management is of importance in Uganda as the majority of consumers in the telecommunications services market, rely on wireless technology to gain access to telecommunications services. In the voice services market, there were 365,698 fixed telephone subscribers and close to 22 million mobile telephony subscribers in 2016.<sup>72</sup> In the internet market, there were 143,650 fixed internet subscriptions compared to 8.6 million mobile internet subscriptions.<sup>73</sup> The statistics show greater dependence by Uganda's population on wireless technology to access telecommunications services. The statistics additionally show that Uganda's wireless communications markets are far from saturated. The voice services market has a penetration of approximately 60% and the internet market has a penetration rate of approximately 45.8%. Therefore, ensuring spectrum availability through efficient regulation is very crucial for the growth of the telecommunications sector in Uganda.

The assessment of Uganda's regulatory framework on spectrum management focuses on three core aspects closely connected to spectrum scarcity: spectrum allocation; spectrum assignment; and spectrum utilisation. The first two aspects are particularly significant as they give rise to most competition concerns in the wireless communications markets.<sup>74</sup>

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<sup>71</sup>Iarla Flynn, Benjamin Lennett, and Sascha Meinrath, 'A Technology Driven Spectrum Policy' (2008) Google/New America Foundation.

<sup>72</sup>UCC, 'Post, Broadcasting and Telecommunications Market and Industry Report: Third Quarter (July-September 2016)' <[http://www.ucc.co.ug/files/downloads/Market\\_&\\_Industry\\_Report\\_for\\_Q3\\_July-September\\_2016.pdf](http://www.ucc.co.ug/files/downloads/Market_&_Industry_Report_for_Q3_July-September_2016.pdf)> accessed 15 June 2017.

<sup>73</sup>Ibid.

<sup>74</sup>See for example, ERG 'Spectrum Allocation and Bottlenecks/Competition Problems' (2006) <[www.erg.eu/streaming/erg\\_06\\_45\\_b\\_complementary\\_report\\_on\\_possible\\_bottlenecks\\_in\\_mobile\\_access.pdf?contentId=543425&field=ATTACHED\\_FILE](http://www.erg.eu/streaming/erg_06_45_b_complementary_report_on_possible_bottlenecks_in_mobile_access.pdf?contentId=543425&field=ATTACHED_FILE)> accessed 15 June 2017 which discusses potential competition problems related spectrum allocation in the European Union mobile communication services markets.

### 7.5.2 *Spectrum Allocation*

Spectrum allocation is the first stage in the spectrum management process and involves the spectrum management authority identifying frequency bands available for use and determining the type of use allowed within a block or band.<sup>75</sup> Spectrum allocation allows for a very orderly administration of the spectrum, facilitates international co-operation to assure interoperability of communication systems, and establishes centralised technical authorities.<sup>76</sup> However, spectrum allocation if done sub-optimally could result in artificial scarcity of spectrum for telecommunications services. This may arise where there has been allocation of limited spectrum for a specific telecommunications service. For example, it has been observed that the growth of the mobile broadband market in Sub-Saharan Africa may be hampered by the inadequate allocation of radio spectrum for mobile communications services in the region which is the lowest worldwide.<sup>77</sup> In 2011, Nigeria had allocated the highest amount of spectrum for public mobile services, with more than 250 MHz set aside.<sup>78</sup> South Africa had allocated 204 MHz while in Botswana there were 94 MHz for mobile communications services. Cote D'Ivoire stands out as having allocated 36 MHz. In comparison, in developed countries allocations typically exceed 500 MHz, with Europe aiming to allocate 1000 MHz.<sup>79</sup>

Allocation of sufficient spectrum for mobile services in the telecommunications sector is very critical particularly because of constantly increasing voice and data traffic as the subscriber base for mobile voice and mobile internet services increases. Whilst the volume of traffic is growing rapidly, the available spectrum to support this traffic has been fixed and in Sub-Saharan Africa, spectrum allocated is well below that of other regions of the world. This increases the risk of reduction in provision of quality services as networks reach capacity. In Sub-Saharan Africa, the mobile network plays a vital role in the provision of telecommunications services due to the poorly developed fixed-line network. Therefore, in order to ensure that spectrum is not a bottleneck to competition in the wireless

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<sup>75</sup>Kenneth R Carter, *Next Generation Spectrum Regulation for Europe: Price-Guided Radio Policy* (WIK Diskussionsbeitrage Nr. 326, November 2009) 3.

<sup>76</sup>Evan Light, ‘Open Spectrum for Development: Policy Brief’ (2010) Association For Progressive Communications 8.

<sup>77</sup>GSMA, ‘African Mobile Observatory 2011: Driving Economic and Social Development through Mobile Services’ 36 <<http://www.gsma.com/spectrum/wp-content/uploads/2011/12/Africa-Mobile-Observatory-2011.pdf>> accessed 15 June 2017; and GSMA, ‘Sub-Saharan Africa Mobile Observatory’ (2012) 5 <[http://www.gsma.com/publicpolicy/wp-content/uploads/2012/03/SSA\\_FullReport\\_v6.1\\_clean.pdf](http://www.gsma.com/publicpolicy/wp-content/uploads/2012/03/SSA_FullReport_v6.1_clean.pdf)> accessed 15 June 2017.

<sup>78</sup>See GSMA, ‘African Mobile Observatory 2011: Driving Economic and Social Development through Mobile Services’ 36 <<http://www.gsma.com/spectrum/wp-content/uploads/2011/12/Africa-Mobile-Observatory-2011.pdf>> accessed 15 June 2017.

<sup>79</sup>Ibid.

**Table 7.1** Allocation of frequency bands for mobile communications services as of July 2016

Allocation of frequency bands for mobile communications services (GSM Bands)		
Band	Amount of spectrum (MHz)	Amount of spectrum assigned (MHz)
E-GSM 900 MHz (Uplink: 880–890 Downlink: 925–935)	10	10
900 MHz (Uplink: 890.2–914.8 Downlink: 935.2–959.8)	25	25
1800 (Uplink: 1710.2–1785 Downlink: 1805.2–1880)	74.4	59.6

**Source:** By author based on UCC, 'Assignment Status of Access'

communications services market, it is important to have in place measures to promote efficient spectrum allocation.

Turning to the situation in Uganda, spectrum allocation is a centralised process conducted by the UCC which has a duty to allocate spectrum resources in a manner that ensures widest programming and optimal utilisation of spectrum resources.<sup>80</sup> The centralised approach to spectrum allocation is done in accordance with the Uganda Table of Frequency Allocations as stipulated by the Spectrum Regulation.<sup>81</sup> Under its mandate as the government body responsible for spectrum allocation, the UCC has allocated spectrum in frequency bands 900 and 1800 MHz for GSM based mobile telephony services. Data reveals that 98.6 MHz has been allocated for mobile communications services in the key bands, 900, 1800 MHz as illustrated in the Table 7.1.

The allocation of spectrum for public mobile services is well below the optimal allocation of 500 MHz and 1000 MHz implemented in Europe, North/Central America and parts of Asia<sup>82</sup> suggesting that an increase in the spectrum allocated for mobile services might address the spectrum scarcity problem in the mobile telephone market.

More significant is the stipulation that the UCC must allocate frequencies in accordance with the frequency allocation table implies that the spectrum allocation system is rigid. However, it should be pointed out that the Spectrum Regulations require the UCC to, *inter alia*, take into account the need to promote investment and rapid deployment of new technologies and services when allocating spectrum.<sup>83</sup> The Spectrum Regulations therefore acknowledge the need for an approach to spectrum allocation that is flexible enough to embrace changing demands for

<sup>80</sup>Uganda Communications Act 2013, s 5(1)(c).

<sup>81</sup>Communications (Radio) Regulations 2005, SI 2005/23, reg 6(1).

<sup>82</sup>See GSMA, 'African Mobile Observatory 2011: Driving Economic and Social Development through Mobile Services' 36 <<http://www.gsma.com/spectrum/wp-content/uploads/2011/12/Africa-Mobile-Observatory-2011.pdf>> accessed 15 June 2017. In this article, allocation of 500 MHz and 100 MHz for mobile services is viewed as optimal for ensuring sustainable growth of the mobile services market.

<sup>83</sup>Communications (Radio) Regulations 2005, SI 2005/23, reg 6(2)(c).

spectrum in the telecommunications sector. This specific provision is in line with the main theme of this chapter which is, promoting efficient spectrum management encompassing flexibility in the allocation and assignment of spectrum taking into account the evolving changes in spectrum use.

While legislation on spectrum management in Uganda's telecommunications sector clearly seeks to promote efficient spectrum allocation, in practice efficiently allocating spectrum is a very challenging task. This is particularly the case if centralised form of spectrum allocation is used; as in Uganda. The command-and-control regime is a rigid system that does not evaluate spectrum resources based on standard supply and demand economic criteria.<sup>84</sup> In order for the centralised approach to be effective, a national authority in charge of spectrum management must have the requisite foresight to cater for changing spectrum demands in the telecommunications sector. However, requiring a national authority to have such foresight is daunting in a sector such as the telecommunications sector where the variety of spectrum uses and associated technologies is rapidly changing and spectrum demand continuously expanding.<sup>85</sup> One this basis, the centralised regime, which is viewed as rigid, has been criticised as too slow to respond to technological innovation and change and technological and market convergence.<sup>86</sup>

The need for a flexible spectrum allocation system is highly relevant in Uganda's mobile communications services market which has grown tremendously since the government decided to open the market to competition in the late 1990s. During the duopoly phase of liberalisation that preceded full liberalisation of the sector (2000–2006), the wireless communications market only had to contend with three main players, the mobile operators Uganda Telecom, MTN Uganda Limited, and Celtel (now Airtel). However, in the fully liberalised telecommunications sector the number of mobile operators had risen to seven by 2014, and the number of mobile telephone subscribers has grown four-fold leading to increasing demand for radio spectrum. Wireless technology has also become the favoured technology for accessing internet services. Therefore, the growth of the telecommunications sector hinges on the wireless telecommunications services market. The future of the wireless telecommunications services market in turn depends on the efficient allocation of frequency bands for such services.

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<sup>84</sup>ACMA, 'The Economics of Spectrum Management: A Review' (2007) 2 <[http://www.acma.gov.au/webwr/aca\\_home/publications/reports/spectrum%20-%20final%20draft%20-%203.pdf](http://www.acma.gov.au/webwr/aca_home/publications/reports/spectrum%20-%20final%20draft%20-%203.pdf)> accessed 15 June 2017.

<sup>85</sup>In the article by Tommaso M Valletti, 'Spectrum Trading' (2001) 25 Telecommunications Policy 655, 657, it is pointed out that the central planner would need to know all consumer needs and all production possibilities of the firms.

<sup>86</sup>See Tommaso M Valletti, 'Spectrum Trading' (2001) 25 Telecommunications Policy 655; OECD, 'Secondary Markets for Spectrum: Policy Issues' (2005 OECD Digital Economy Papers, No.95) <<https://doi.org/10.1787/232354100386>> 15 June 2017; and Chris Doyle, 'Emerging Problems with the Current Spectrum Management Approach' in Martin Cave, Chris Doyle, and William Webb (eds), *Essentials for Modern Spectrum Management* (Cambridge University Press 2011).

As pointed out, Uganda's allocation system is centralised and therefore seemingly rigid suggesting that the system may result in inefficient spectrum allocation. However, UCC has proactively taken steps to make the system for spectrum allocation more flexible.

Firstly, UCC has adopted a technology neutral licensing regime thereby lifting restrictions on the technology or generation of technology to which a particular frequency can be applied.<sup>87</sup> Under the technology neutral licensing regime, UCC does not discriminate between the types of technology that licensed providers choose to provide public communication services.<sup>88</sup> This is significant because a major criticism of the command-and-control regime is that the spectrum allocated is tied to specific services and technologies and thus prohibits licensees from being able to change spectrum use to offer new services.<sup>89</sup> This discourages innovation and stifles investment.<sup>90</sup> Therefore, the adoption of a technology neutral licensing regime facilitates efficient spectrum use in Uganda's telecommunications sector. For example, mobile operators with licences for spectrum in the 900 MHz band can use this GSM frequency band for 3G services although 3G services are licensed in 2100 MHz.<sup>91</sup>

Secondly, the UCC has also allocated higher frequencies to accommodate more users and uses. For example, in the mobile communications service market, when there was lack of spectrum capacity in the 900 MHz band, UCC allocated the higher frequency band, 1800 MHz, for mobile communications services. In addition, UCC has opened up the 2.3, 3.3 and 3.5 GHz for wireless access networks.

Thirdly, the shift by the Ministry of ICT and the UCC from analogue to digital broadcasting is an important strategy for improving spectrum allocation. UCC expects that the migration to digital broadcasting will free up to 75% of spectrum resources and the additional frequencies may then be available for utilisation by service providers in the telecommunications industry.<sup>92</sup> For example, the 800 MHz spectrum is currently allocated only for terrestrial television broadcasting and yet

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<sup>87</sup>UCC, ‘Licensing’ <<http://www.ucc.co.ug/data/qmenu/11/Licensing.html>> accessed 15 June 2017.

<sup>88</sup>Ibid.

<sup>89</sup>OECD, ‘Secondary Markets for Spectrum: Policy Issues’ (2005 OECD Digital Economy Papers, No.95) 7 <<https://doi.org/10.1787/232354100386>> accessed 15 June 2017.

<sup>90</sup>Bjorn Wollenius and Isabel Neto, ‘Managing the Radio Spectrum: Framework for Reforming in Developing Countries’ (2007) 9 <<http://siteresources.worldbank.org/EXTINFORMATIONANDCOMMUNICATIONANDTECHNOLOGIES/Resources/Wollenius-Neto.pdf>> accessed 15 June 2017.

<sup>91</sup>Enrico Calandro, ‘Re-farming Frequencies in Rural Areas: A Regulatory Perspective’ (5<sup>th</sup> ACORN\_REDECOM Conference, Lima, May, 2011) 4. Mobile operators with 900 MHz may be able to refarm portions of the spectrum to provide data services in addition to telephone services.

<sup>92</sup>UCC, ‘Digital Migration’ <[http://www.ucc.co.ug/index.php?option=com\\_k2&view=item&layout=item&id=55&Itemid=58](http://www.ucc.co.ug/index.php?option=com_k2&view=item&layout=item&id=55&Itemid=58)> accessed 15 June 2017.

**Table 7.2** Assignment status of frequency bands 450 and 800 MHz as of July 2016

Band	Amount of spectrum (MHz)	Amount of spectrum assigned (MHz)
450 MHz Uplink: 450–456.36 Downlink: 460–466.35	6.325	2.525
800 MHz Uplink: 832–862 Downlink: 761–806	30	30
800 MHz Uplink: 827.94–832.89 Downlink: 872.94–877.89	4.95	4.95

**Source:** By author based on UCC, ‘Assignment Status of Access Frequency Bands as of July 2016’

much of this bandwidth is unused.<sup>93</sup> With digital migration this spectrum can be used to provide mobile communications services through CDMA technology which works well in this spectrum.<sup>94</sup> It is worth noting that the UCC has already allocated spectrum for CDMA technologies in the 800 MHz band, see Table 7.2 below.

More importantly, the underutilised UHF broadcasting spectrum is particularly relevant for the growth of the mobile broadband market.<sup>95</sup> The frequencies of 470–862 MHz when degazetted under the digital migration project can be reused for mobile broadband services.<sup>96</sup> The future of internet services growth in Uganda, as in other Sub-Saharan African countries, lies in mobile technology as the mobile network is spread throughout the country. The UHF broadcasting spectrum is especially significant for mobile broadband coverage in the rural areas where low frequency bands are required.<sup>97</sup> As most of Uganda’s population is rural-based, allocation of spectrum in the 800 MHz for mobile services can facilitate increased access to internet services in rural areas where the impact of telecommunications boom remains less pronounced. It has been argued that the cost of providing

<sup>93</sup>See G Mark Kagarura, Dorothy K Okello and Roseline N Akol, ‘Evaluation of Spectrum Occupancy: A Case for Cognitive Radio in Uganda’ (2013) IEEE 9th Conference on Mobile Ad-hoc and Sensor Networks, 167.

<sup>94</sup>Ibid, 173.

<sup>95</sup>Ibid, 172. This article provides results of spectrum occupancy measurements undertaken in Kampala in the FM, UHF and GSM frequency bands and shows underutilisation of the UHF bands IV and V of 470–862 MHz.

<sup>96</sup>Ibid, 173.

<sup>97</sup>GSMA, ‘African Mobile Observatory 2011: Driving Economic and Social Development through Mobile Services’ 36 <<http://www.gsma.com/spectrum/wp-content/uploads/2011/12/Africa-Mobile-Observatory-2011.pdf>> accessed 15 June 2017.

coverage to a given area using the 800 MHz band can be significantly less than in the 2100 MHz band that is typical designated for 3G services.<sup>98</sup> Allocating additional spectrum in the 800 MHz band to mobile services could reduce the costs of network deployments to a third of the cost of a 2100 MHz deployment.<sup>99</sup> Digital migration therefore presents exciting opportunities for the internet market in Uganda.

While the UCC has tried to implement measures that make the spectrum allocation system more flexible, the measures are not a long-term solution to ensuring that spectrum is available for wireless communications services in the telecommunications sector. This is evident in the mobile telephone market where spectrum scarcity persists despite the UCC allocating a higher GSM frequency band.<sup>100</sup>

Additionally, while the UCC's initiative has promoted a more flexible system, it is unrealistic to expect the authority to have accurate foresight to allocate spectrum to cater for changing spectrum demands in the telecommunications sector. For example, the UCC designated the 5 GHz frequency band for wireless access networks only after receiving several requests from operators.<sup>101</sup> This illustrates how challenging it can be to predict evolving demands for spectrum in the telecommunications sector under the centralised system for managing spectrum.

The fact that the mobile communications services market in Uganda is grappling with scarcity of spectrum suggests that the exclusive use of the centralised system for spectrum allocation is not particularly efficient. While there might be some truth to this assumption, the author argues for the status quo with an allocation system overhaul as unnecessary. This is because countries world-wide have not regularly re-evaluated the centralised system of allocation of spectrum over the century. Therefore, there is currently no clear cut model that can succeed the centralised system of spectrum allocation.<sup>102</sup> On this basis, it would be premature to consider making drastic changes to the method of spectrum allocation in Uganda's telecommunications sector.

Furthermore, as is illustrated in the next sub-section, it is the manner in which spectrum has been licensed to users that has been closely linked to the spectrum scarcity problem in the mobile communications market in Uganda. Therefore, the discussion as to substantial reforms to the spectrum management system should focus more on the issue of spectrum assignment. However, the UCC should

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<sup>98</sup>Ibid.

<sup>99</sup>Ibid.

<sup>100</sup>Julius Barigaba, 'Uganda: Country cannot take more GSM operators says UCC' (Kampala 25 August 2008) *the East African* <<http://allafrica.com/stories/200808250215.html>> accessed 15 June 2017.

<sup>101</sup>UCC, 'Guidelines for Utilisation of 5 GHz Band for Wireless Network Access'.

<sup>102</sup>ACMA, 'The Economics of Spectrum Management: A Review' (2007) Paper Commissioned by the Australian Communication and Media Authority ACMA 4 <[http://www.acma.gov.au/webwr/aca\\_home/publications/reports/spectrum%20-%20final%20draft%20-%203.pdf](http://www.acma.gov.au/webwr/aca_home/publications/reports/spectrum%20-%20final%20draft%20-%203.pdf)> accessed 15 June 2017.

nevertheless continue to proactively implement measures that improve the existing system of spectrum allocation. In particular, the UCC should adopt innovative ways, similar to digital migration, to ensure that more spectrum suitable for public mobile communications services is released.

### 7.5.3 *Spectrum Assignment*

Spectrum assignment is very important as it entails granting rights to use spectrum. It impacts on the number of participants in a given telecommunications market and directly affects the degree of competition in a market. Therefore, an efficient spectrum assignment system is the bedrock of a competitive and continuously growing wireless communications market in a given country.

Not surprisingly, the debate over efficient spectrum management in the liberalised telecommunications sector has tended to centre on spectrum assignment. There is a substantial amount of literature discussing approaches to spectrum assignment with the main subject of discussion being how to efficiently assign spectrum licences where demand outstrips supply.<sup>103</sup> While there are divergent views on the approach to spectrum assignment, commentators have been unanimous in their criticism of the centralised system for spectrum assignment. Under the centralised system of assignment, licence rights are usually granted in an *ad hoc* way, for example, on a first-come-first-served basis. It has been argued that such an approach to spectrum assignment does not evaluate spectrum resources based on standard supply and demand criteria leading to inefficient assignment of spectrum.<sup>104</sup> This weakness of the centralised system of spectrum assignment has resulted in proposals, and adoption thereof in some countries, of alternative models

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<sup>103</sup>See John McMillan, ‘Why Auction the Spectrum?’ (1995) 19(3) *Telecommunications Policy* 191; Tommaso M Valletti, ‘Spectrum Trading’ (2001) 25 *Telecommunications Policy* 655; OECD, ‘Secondary Markets for Spectrum: Policy Issues’ (2005 *OECD Digital Economy Papers*, No.95) <<https://doi.org/10.1787/232354100386>> accessed 15 June 2017; and Chris Doyle, ‘Emerging Problems With the Current Spectrum Management Approach’ in Martin Cave, Chris Doyle, and William Webb (eds), *Essentials for Modern Spectrum Management* (Cambridge University Press 2011).

<sup>104</sup>See John McMillan, ‘Why Auction the Spectrum?’ (1995) 19(3) *Telecommunications Policy* 191; Tommaso M Valletti, ‘Spectrum Trading’ (2001) 25 *Telecommunications Policy* 655; OECD, ‘Secondary Markets for Spectrum: Policy Issues’ (2005 *OECD Digital Economy Papers*, No.95) <<https://doi.org/10.1787/232354100386>> accessed 15 June 2017; Simon Delaere, ‘European Policy Trends Towards Flexible Spectrum Management’ (2007) (8) *South Africa Journal of Information and Communication* 8; Chris Doyle, ‘Emerging Problems With the Current Spectrum Management Approach’ in Martin Cave, Chris Doyle, and William Webb (eds), *Essentials for Modern Spectrum Management* (Cambridge University Press 2011); and Peter Cramton, Evan Kwerel, Gregory Rosston, and Andrzej Skrzypacz ‘Using Spectrum Auctions to Enhance Competition in Wireless Services’ (2011) 54 *Journal of Law and Economics*.

for assigning spectrum. The two main alternatives to the command-and-control regime are: market-based alternatives<sup>105</sup>; and spectrum commons.

The key argument put forward in favour of the market-based model for spectrum assignment is that markets are more efficient at allocating resources than regulators, as their ability to capture all the information on supply and demand is greater, and more rapid, than that of a centralised planner.<sup>106</sup>

The market-based alternative, that originates from the work of Ronald Coase,<sup>107</sup> keeps the idea of licensing the spectrum to users but differs from the traditional command-and-control model in the following ways: (1) property rights are assigned to specific frequencies and areas; (2) a market pricing mechanism is designed for acquisition of frequency bands by primary spectrum users (the licence holders), including trading, auctions, tenders, but also 'pseudo-market' mechanisms such as administrative pricing and cost-benefit analysis; (3) freedom is granted to trade licences in secondary markets (licence holders sell, lease, subdivide or give away idle spectrum rights to secondary users); (4) spectrum allocation is decided by licence holders; (5) owners have the right to exclude others who cause interferences; and (6) interference is controlled by technical rules that govern transmitters specifications and power limits.<sup>108</sup> The market-based alternative therefore promotes a liberalised approach to spectrum management.

The other alternative being considered is spectrum commons. Under the commons model, spectrum is available to all users that comply with established technical standards (e.g. power limits) to mitigate potential interference.<sup>109</sup> This alternative differs greatly from the command-and-control approach as government's role in spectrum management under this regime is muted. The government legitimises and protects the boundaries of spectrum usage by a group of users (including criteria for group membership) but takes no part in its intrinsic governance.<sup>110</sup> The spectrum commons model's advantages include: low barriers to entry (which is a source for competition), no or little uncertainty about band access, low lead times from innovation to market, for example, the development of Wi-Fi

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<sup>105</sup>For example, spectrum auctions and spectrum trading.

<sup>106</sup>'International Developments in Spectrum Policy, Management Concepts and Tools' <<http://www.dcenr.gov.ie>> accessed 15 June 2017.

<sup>107</sup>Ronald Coase, 'The Federal Communications Commission' (1959) 2 Journal of Law and Economics 21.

<sup>108</sup>ACMA, 'The Economics of Spectrum Management: A Review' (2007) 12 <[http://www.acma.gov.au/aca\\_home/publications/reports/spectrum%20-%20final%20draft%20-%203.pdf](http://www.acma.gov.au/aca_home/publications/reports/spectrum%20-%20final%20draft%20-%203.pdf)> accessed 15 June 2017.

<sup>109</sup>Bjorn Wollenius and Isabel Neto, 'The Radio Spectrum: Opportunities and Challenges for the Developing World' 8 (2) info 18, 20-22.

<sup>110</sup>ACMA, 'The Economics of Spectrum Management: A Review' (2007) Paper Commissioned by the Australian Communication and Media Authority ACMA 18 <[http://www.acma.gov.au/webwr/aca\\_home/publications/reports/spectrum%20-%20final%20draft%20-%203.pdf](http://www.acma.gov.au/webwr/aca_home/publications/reports/spectrum%20-%20final%20draft%20-%203.pdf)> accessed 15 June 2017.

technology in unlicensed bands), less pressure on licensed portions of the spectrum, creativity through information sharing and diversity.<sup>111</sup>

With the inadequacies of the command-and-control system as the regime for spectrum assignment in the liberalised telecommunications sector and the alternatives to the traditional model in mind, the next part of this chapter discusses the spectrum assignment regime in Uganda's telecommunications sector. The focal point of the discussion is ensuring efficient spectrum assignment in the wireless communications markets where demand for spectrum is greater than supply.

### **7.5.3.1 Spectrum Assignment in Uganda's Telecommunications Sector: Bottleneck to Competition in the Mobile Communications Market?**

As already stressed above, spectrum assignment is a very crucial stage of the spectrum management process as it has a direct impact on competition in the wireless communications markets. Spectrum assignment has become a critical issue in Uganda's telecommunications sector following the full liberalisation of the telecommunications sector in 2006. Specifically, concerns of inefficient spectrum assignment leading to spectrum scarcity have been raised in connection with the mobile communications market. GSM technology is the default standard in Uganda's mobile communications market and spectrum in the GSM frequency band is the most critical. However, spectrum in the GSM frequency band is currently scarce with inefficient spectrum assignment the probable source of the problem. As the mobile communications market is the most important market in the telecommunications sector, the analysis of the spectrum assignment regime centres on this market.

### **7.5.3.2 Liberalisation of the Telecommunications Sector and the Change in Spectrum Use in Uganda's Mobile Communications Market**

In order to explain the nexus between spectrum assignment and spectrum availability for mobile communications services in Uganda, the change in spectrum use in the market is traced below.

The introduction of a policy of liberalisation of the telecommunications sector in January 1996<sup>112</sup> triggered a gradual change in spectrum use in Uganda's telecommunications sector by setting the stage for increased demand for the resource.

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<sup>111</sup>Ibid, 19.

<sup>112</sup>Uganda's Telecommunications Sector Policy of 1996 issued by the Ministry of Finance and the ministry in charge of communications paved the way for the liberalisation of the telecommunications sector.

However, between 1996, when the liberalisation of telecommunications process commenced, and 2006 when the telecommunication sector was opened to full competition, spectrum management did not feature as a source of concern for competition in the sector.<sup>113</sup>

The first mobile communications services in Uganda were provided in 1995 by Celtel (now Airtel) following its receipt of a licence from the government of Uganda in September 1993. The licence permitted Celtel to provide nation-wide mobile communications services. Celtel was assigned spectrum in the 900 MHz frequency band which had been allocated for mobile communications services. Celtel adopted a business strategy of providing mobile communications services at premium in a bid to attract the elite clientele in urban areas. This greatly restricted access to mobile communications services to a few such that by 1998 Celtel only had 5000 customers.<sup>114</sup> As access to telecommunications services through mobile technology remained a privilege for a small portion of Uganda's population, use and demand for spectrum for mobile communications services remained low.

In 1998, the Government of Uganda chose to implement a policy of limited competition before opening up the telecommunications markets to full competition.<sup>115</sup> In that year, a second national operator, MTN Uganda Limited, was granted a licence to compete with the former monopoly operator (UTL). Both operators' licences contained exclusivity provisions which established them as the only providers of telephone services (both fixed and mobile) until 2005. The only exception was the continued operation of Celtel in the mobile communications services market stemming from the September 1993 licence for mobile communications services provision. The limited competition policy controlled the demand for spectrum for mobile communications services with the spectrum needs restricted to those of the three operators. In 1998, UCC awarded licences to the three mobile operators which stipulated that spectrum frequencies in the 900 MHz frequency band would be shared equally among the three operators. Furthermore, the incumbent mobile operators were granted control over huge chunks of channels in the GSM 1880–2200 MHz band. The UCC's decision to share the spectrum among the

<sup>113</sup> However, see UCC, 'Recommendations on Proposed Review of the Telecommunications Sector Policy' (2005) Policy Review Report 28/1/05 69 which recommended full competition in the telecommunications sector subject to spectrum availability. The report recognised spectrum as a scarce resource and appears to support the growth of a competitive telecommunications sector provided spectrum is available. However, the report that triggered full liberalisation of the telecommunications sector in Uganda does not specifically discuss spectrum management.

<sup>114</sup> Econ One Research, 'Uganda Telecommunications: A Case Study in the Private Provision of Rural Infrastructure' (2002) 2 <<http://www.itu.int/ITU-D/treg/Events/Seminars/2005/Thailand/Reference%20Material/Reference%20Material%20-%20Uganda%20Experience.pdf>> accessed 15 June 2017.

<sup>115</sup> The duopoly policy was based on the belief that Uganda's mobile communications market was very small such that the best way to encourage private investment was through limited competition. UCC, 'Recommendations on Proposed Review of the Telecommunications Sector Policy' (2005) Policy Review Report 28/1/05 19.

three operators did not come across as inefficient at the time as the growth of the mobile telephone market until then had been rather tame. Thus, one could not have fathomed that spectrum for mobile telephone services would become a scarce resource 10 years later. However, there was evidence of the potential for exponential growth in the mobile telephone services market. First, there was MTN Uganda Limited's entry in the mobile telephone services market that was pivotal for the surge in the number of mobile telephone subscribers in the duopoly era. MTN Uganda Limited acquired more subscribers than incumbent operator Celtel on the first day of launch of its mobile telephony services in October 1998 becoming the largest operator, a position it holds today.<sup>116</sup>

Secondly, there was the growth of the mobile telephone market well above the expectations set by the government. The government had set a target of 2.0 lines per 100 persons for the duration of the duopoly which was set to expire in July 2005. However, by 2004 the telephone penetration had increased to 4.2 lines per 100 persons surpassing the target. The growth of the mobile telephone market meant that more Ugandans were accessing telecommunications services through wireless technology particularly as the fixed telephone network was not widespread. It was thus conceivable that in the fully liberalised telecommunications sector, the demand for wireless technology based telecommunications services would be greater. However, spectrum availability and efficient issuance of spectrum licences did not feature highly as a telecommunications sector policy or regulatory issue.<sup>117</sup>

In the fully liberalised telecommunications sector, efficient spectrum management, and spectrum assignment in particular, has become a top issue for both the Ministry of ICT and the UCC. This is due to spectrum scarcity in the mobile communications market, a problem that is linked to the UCC decision in 1998 to share the 900 MHz frequency band equally among the three incumbent mobile operators. This decision had an impact on the availability of capacity in the GSM band following the full liberalisation of the telecommunications sector in 2006. The entry of mobile operator Hits Telecom (later Orange Uganda now Africell) in 2007 and Warid Telecom (now Airtel) in 2008 instantly transformed radio spectrum for mobile communications services into a scarce resource. Since spectrum for mobile communications services had already been assigned equally among the three incumbent mobile operators in 1998 it was unavailable for new entrants seeking to enter the mobile communications market. The UCC addressed this issue by opening a higher GSM band, 1800 MHz, and refarming portions of spectrum licensed to the incumbent mobile operators and reassigning it to the new entrants.

The latest data on spectrum assignment in the GSM frequency bands reveals limited spectrum capacity with most spectrum assigned, see Fig. 7.1.

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<sup>116</sup>See Mary Shirley, Fred Tusubira, Luke Haggarty, and Frew Gebreab 'Telecommunications Reform in Uganda' (2002) World Bank Working Research Paper No.2864 52.

<sup>117</sup>See UCC, 'Recommendations on Proposed Review of the Telecommunications Sector Policy' (2005) Policy Review Report 28/1/05 69.

Downlink (MHz)	Amount of Spectrum (MHz)	Usage Status
935.2-943.0	7.8	Assigned to Operator A
943.2-948.2	5	Assigned to Operator B
948.2-951.4	3.2	Assigned to Operator C
951.6-959.8	8.2	Assigned to Operator D
925-930	5	Assigned to Operator E
930-935	5	Assigned to Operator F
1805.2-1811.2	6	Assigned to Operator A
1811.2-1821.2	10	Assigned to Operator C
1821.2-1826	4.8	Free
1826-1836	10	Assigned to Operator G
1836-1846	10	Assigned to Operator E
1846-1856	10	Assigned to Operator F
1856.2-1868	11.8	Assigned to Operator B
1868.2-1880	11.8	Assigned to Operator D

**Fig. 7.1** Assignment of GSM frequency bands as of 31 December 2012. Source: UCC (According to UCC, ‘Usage Status of Frequency Bands as of 31 August 2012’)

According to the table, spectrum capacity in the 900 MHz band has been fully assigned<sup>118</sup> and there is very little spectrum capacity left in the 1800 MHz band.<sup>119</sup> However, not all new entrants have been able to get spectrum licences for the 900 and 1800 MHz bands. It was reported that there are licensed telecommunications operators seeking to provide mobile communications services but are hindered from doing so because of there is no spare capacity in the GSM 900 or 1800 MHz frequency bands.<sup>120</sup> For example, in 2011 licensed network operator Anupam Global Soft (U) Ltd faced challenges rolling out its network due to scarcity of spectrum for mobile communications.<sup>121</sup> Orange Uganda was only able to enter the market after France Telecom bought a 53% stake in Hits telecommunication’s thereby acquiring its spectrum licence.<sup>122</sup> The scarcity of spectrum is not limited to the GSM bands. Spectrum is unavailable in the 3.5GHz band for wireless internet.

<sup>118</sup>Reaffirmed by UCC data on spectrum assignment in 2013, UCC, ‘Assignment Status Frequency Bands as of June 2013’ <[http://www.ucc.co.ug/files/downloads/Assignment\\_status\\_of\\_Access\\_bands\\_as\\_of\\_June2013.pdf](http://www.ucc.co.ug/files/downloads/Assignment_status_of_Access_bands_as_of_June2013.pdf)> accessed 15 June 2017.

<sup>119</sup>Ibid.

<sup>120</sup>Julius Barigaba, ‘Uganda Cannot Take More GSM Operators, say UCC’ *The East African* (Kampala, 25 August 2008) <<http://www.theeastfrican.co.ke/news/-/2558/462354/-/view/printVersion/-/dbjxvr/-/index.html>> accessed 15 June 2017.

<sup>121</sup>BMI TechKnowledge, ‘Communication Technologies Handbook: Uganda Country Chapter’ (2011) 292 <[www.bmi-t.co.za/content/bmi-t-communication-technologies-handbook-2011-broadband-africa](http://www.bmi-t.co.za/content/bmi-t-communication-technologies-handbook-2011-broadband-africa)> accessed 15 June 2017.

<sup>122</sup>Ibid.

The lack of spectrum capacity in the GSM frequency bands is therefore serving as a bottleneck to competition in the mobile communications market.

In light of the spectrum scarcity problem in the mobile communications market, the existing regulatory framework for spectrum assignment in Uganda is analysed in order to establish whether there are measures in place to address the spectrum assignment concerns raised.

### ***7.5.4 Analysis of the Regulatory Framework for Spectrum Assignment in Uganda's Telecommunications Sector***

This part of the chapter looks at how spectrum assignment in Uganda's telecommunications is regulated focusing on the relevant legislation and the implementation of the legislation by UCC. The key issue addressed in this part of the study is whether the regulatory framework promotes efficient spectrum assignment as the previous sub-section has raised doubts about the efficiency of the current spectrum assignment system.

#### **7.5.4.1 Spectrum Assignment Methods in Uganda**

There are a number of methods used to assign spectrum, however, the most well-known methods are: first-come-first-served, lotteries, auctions and comparative hearings. Auctions in particular have gained a lot of attention in the era of the liberalised telecommunications sector with literature on reform of spectrum management pointing to the use of auctions as the most efficient method for spectrum assignment.<sup>123</sup>

In Uganda, the Spectrum Regulations provide for two methods: first-come-first-served and competitive bidding (auctions).<sup>124</sup> First-come-first-served basis of assignment implies that spectrum is assigned in order of the receipt of applications,

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<sup>123</sup>John McMillan, 'Why Auction the Spectrum?' (1995) 19(3) Telecommunications Policy 191; Gerald Faulhaber and David Farber, 'Spectrum Management: Property Rights, Markets and Commons' (2003) <[http://assets.wharton.upenn.edu/~faulhaber/SPECTRUM\\_MANAGEMENTv51.pdf](http://assets.wharton.upenn.edu/~faulhaber/SPECTRUM_MANAGEMENTv51.pdf)> accessed 15 June 2017; Chris Doyle and Paul McShane, 'On the Design and Implementation of the GSM Auction in Nigeria- the World's First Ascending Clock Spectrum Auction' (2003) 27(5-6) Telecommunications Policy 383; Bjorn Wellenius and Isabel Neto, 'The Radio Spectrum: Opportunities and Challenges for the Developing World', (2006) 8 (2) info 18; and Peter Cramton, Evan Kwerel, Gregory Rosston, and Andrzej Skrzypacz, 'Using Spectrum Auctions to Enhance Competition in Wireless Services' (2011) 54(4) Journal of Law and Economics 167.

<sup>124</sup>Communications (Radio) Regulations 2005, SI 2005/23, reg 8.

provided the application criteria are met.<sup>125</sup> Competitive bidding (auctions) is a market-based assignment mechanism that uses financial bids as a means of deciding between competing applications for the right to use a specific portion of the electromagnetic spectrum in a specific area.<sup>126</sup>

According to the Spectrum Regulations, the first-come-first-served basis for spectrum assignment is to be applied in relation to applications for a minor licence.<sup>127</sup> Minor licence refers to the licensing system used prior to the full liberalisation of the telecommunications services. The licensing system comprised minor and major licences. A major licence was defined as including a licence for the provision of local, long distance or international telephone services, trunk capacity resale, rural telecommunications, store and forwarding messaging, cellular or mobile service.<sup>128</sup> A minor licence included all licences not being major licences, for example, value-added services.<sup>129</sup> Therefore, the major licence was granted for core telecommunications services while the minor licence was used for non-core services. Although the licensing system has changed,<sup>130</sup> one can still view the legislation as making the use of the first-come-first-served method mandatory for non-core services such as value-added services.

With regard to competitive bidding, the Spectrum Regulations make it mandatory for UCC to use this method where there are mutually exclusive applications for the use of spectrum.<sup>131</sup> Additionally, the Spectrum Guidelines provide for the first-come-first-served method as the primary method for spectrum assignment but recommend the use of market-based approaches such as auctions where demand is greater than supply.<sup>132</sup> Based on the wording of the provisions in the Spectrum Regulations, spectrum for mobile communications services should be through competitive bidding. This is in line with the literature on reform of spectrum management which points to the use of auctions as the most efficient method for spectrum assignment when there are mutually exclusive applications for a spectrum

<sup>125</sup>KB Enterprises LLC, ‘Spectrum Auctions in Developing Countries: Options for Intervention’ (March 31 2009) 3 <<http://kbspectrum.com/wp-content/uploads/2009/10/Soros-OSI-033109-Spectrum-Auctions-in-Developing-Countries-Options-for-Intervention.pdf>> accessed 15 June 2017.

<sup>126</sup>Martin Cave, ‘Anti-Competitive Behaviour in Spectrum Markets’ (2009) TPRC 3 <<http://ssrn.com/abstract=1999846>> accessed 15 June 2017.

<sup>127</sup>Communications (Radio) Regulations 2005, SI 2005/23, reg 8(4).

<sup>128</sup>Communications Act, Cap.106, s 1(n).

<sup>129</sup>Ibid, s 1(o).

<sup>130</sup>The Telecommunications Policy of 2006 that brought about full liberalisation of the telecommunications sector introduced a new licensing regime that came into effect on 2 January 2007. Under this licensing regime there are two primary categories: infrastructure licences, and services licences.

<sup>131</sup>Communications (Radio) Regulations 2005, SI 2005/23, reg 8(6)(a).

<sup>132</sup>Radio Spectrum Policy Guidelines, Guideline 4.

licence.<sup>133</sup> However, in practice the UCC grants spectrum licences on the first-come-first-served basis. This begs the question whether the use of the first-come-first-served method, rather than mandated competitive bidding, is hindering efficient spectrum assignment in Uganda's telecommunications sector.

The first-come-first-served method has its advantages. One particular advantage is that it is very simple to administer which results in the quick processing of spectrum licences. In Uganda, the process of assigning spectrum is a formal one necessitating the submission of a formal application for frequency.<sup>134</sup> The application must be accompanied by a copy of the certificate of registration or incorporation of a company in Uganda; fully completed application forms for radiocommunication services, and copies of the technical specifications for all radio equipment models/types to be operated.<sup>135</sup> Provided an applicant operator submits all the relevant documents and concludes all payments, spectrum licences are usually processed within 1 month.<sup>136</sup> To the extent that the process of granting a spectrum licence is expedient, the first-come-first-served method is efficient. The quick process for assigning spectrum licences under the first-come-first-served method has undoubtedly fostered the growth of Uganda's mobile communications market by enabling operators to quickly rollout infrastructure and provide services to the population. However, the first-come-first-served has a greater number of disadvantages than advantages when viewed from the perspective of spectrum for mobile communications.

Firstly, the first-come-first-served method only considers whether the applicant fulfils certain technical criteria.<sup>137</sup> Factors such as spectrum scarcity are not considered in the assignment process.<sup>138</sup> This is the case in Uganda where UCC focuses on the fulfilment of technical criteria as the basis for granting a spectrum licence.

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<sup>133</sup>John McMillan, 'Why Auction the Spectrum?' (1995) 19(3) Telecommunications Policy 191; Gerald Faulhaber and David Farber, 'Spectrum Management: Property Rights, Markets and Commons' (2003) <[http://assets.wharton.upenn.edu/~faulhaber/SPECTRUM\\_MANAGEMENTv51.pdf](http://assets.wharton.upenn.edu/~faulhaber/SPECTRUM_MANAGEMENTv51.pdf)> accessed 15 June 2017; Chris Doyle and Paul McShane, 'On the Design and Implementation of the GSM Auction in Nigeria- the World's First Ascending Clock Spectrum Auction' (2003) 27(5-6) Telecommunications Policy 383; Bjorn Wellenius and Isabel Neto, 'The Radio Spectrum: Opportunities and Challenges for the Developing World' (2006) 8 (2) info 18; and Peter Cramton, Evan Kwerel, Gregory Rosston, and Andrzej Skrzypacz, 'Using Spectrum Auctions to Enhance Competition in Wireless Services' (2011) 54 Journal of Law and Economics 167.

<sup>134</sup>The formal procedure for applying for a spectrum licence is stipulated in the Spectrum Regulations, reg 9 and the UCC website, see 'Requirements for Frequency Applications Licensed by UCC' <<http://www.ucc.co.ug/files/downloads/SM%20FAQs.pdf>> accessed 15 June 2017.

<sup>135</sup>Ibid.

<sup>136</sup>Interview with Godfrey Sengendo, (then) Manager Spectrum Management, UCC Headquarters (Kampala, Uganda 22 November 2011).

<sup>137</sup>Mohamed Ali El-Moghazi, Fadel Digham, and Elsayed Azzouz, 'Radio Spectrum Reform in Developing Countries' (2008) IEEE 2, <<http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=0465828>> accessed 15 June 2017.

<sup>138</sup>Ibid.

Secondly, and more importantly, the first-come-first-served method is considered as an efficient method of assignment where supply of bandwidth is plentiful, that is, where there is more supply of spectrum than demand.<sup>139</sup> This is not the case with regard to frequency bands for mobile communications services where demand for spectrum exceeds supply.

Thirdly, the method rewards the first undertaking to apply rather than choosing the applicant who would be most likely to provide a service of value to the public.<sup>140</sup> While this a potential risk, it must be noted that in the specific case of Uganda, the first-come-first-served method has in most instances resulted in a spectrum licence being awarded to an entity that went on to provide a service of value to the public of Uganda. This is evidenced by the exponential growth of the mobile communications markets in the past two decades facilitated by the expedient processing of spectrum licences. However, the disadvantages highlighted make it difficult to justify exclusive reliance on the first-come-first served method. The UCC should therefore consider the use of alternatives methods for spectrum assignment.

### ***7.5.5 Alternative Methods of Spectrum Assignment***

The discussion on spectrum assignment in Uganda's telecommunications sector in the previous sub-sections has revealed that the current system of spectrum assignment does not result in efficient outcomes. The mobile communications market has been particularly affected with scarcity of spectrum affecting the growth of the market. The specific concern has been how to efficiently assign spectrum in the mobile communications market where there are more applicants interested in acquiring spectrum licences than can be more accommodated. The UCC continues to rely on the first-come-first-served method which is not ideal for the spectrum assignment in the liberalised telecommunications sector where demand outstrips supply. The primary weakness of the first-come-first-served method is that it does not take into account the scarcity of spectrum factor when assigning spectrum. Yet spectrum availability is of key importance when managing spectrum in the wireless communications markets in the telecommunications sector. There is therefore a need for the UCC to adopt methods of assignment that enable it to determine to whom a spectrum licence should be granted when there are mutually exclusive applications. Several methods have been used for the assignment of spectrum where

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<sup>139</sup>John McMillan, 'Why Auction the Spectrum?' (1995) 19 Telecommunications Policy 191.

<sup>140</sup>KB Enterprises LLC, 'Spectrum Auctions in Developing Countries: Options for Intervention' (March 31 2009) 3 <<http://kbspectrum.com/wp-content/uploads/2009/10/Soros-OSI-033109-Spectrum-Auctions-in-Developing-Countries-Options-for-Intervention.pdf>> accessed 15 June 2017.

there are mutually exclusive applications. The most popular methods are auctions, lotteries, and comparative hearings which are discussed below.

### 7.5.5.1 Spectrum Auctions

The Spectrum Regulations and the Spectrum Guidelines provide for the use of competitive bidding (spectrum auctions) where demand for spectrum is greater than supply.<sup>141</sup> Numerous economists since Ronald Coase have favoured the use of auctions in lieu of comparative hearings and lotteries arguing that auctions are economically more efficient.<sup>142</sup> Auctions are regarded as efficient because they seek to assign the spectrum licence to the firm that values the licence the most and therefore the one who will have an economic incentive to put the licence to high valued use.<sup>143</sup>

Another reason why auctions are the favoured method is because they promote transparency. Auctions are transparent since the rules of an auction are known in advance.<sup>144</sup> This is in stark contrast to comparative hearings where determining whom to assign spectrum to is based on subjective criteria.<sup>145</sup> The reliance on subjective criteria makes it hard for applicants to determine the basis of a government's decision.<sup>146</sup> With spectrum auctions the government is forced to be explicit about its criteria, since in an auction rules must be stated fully in advance.<sup>147</sup>

Lack of transparency has also been cited as a weakness of the first-come-first-served method on the ground that the method does not usually have a formal licensing process. The absence of a formal process is often accompanied by a lack of accountability and transparency on the part of the licensee and the regulator.<sup>148</sup> However, as has already been noted, the first-come-first-served system of

<sup>141</sup>Communications (Radio) Regulations 2005, SI 2005/23, reg 8(3) and Radio Spectrum Policy Guidelines, Guideline 4, respectively.

<sup>142</sup>Ronald Coase, 'The Federal Communications Commission' (1959) 2 *Journal of Law and Economics* 1, 26-27; John McMillan, 'Why Auction the Spectrum?' (1995) 19 *Telecommunications Policy* 191; Evan Kwerel and Alex D Felker, 'Using Auctions to Select FCC Licensees' (May 1985) FCC OPP Working Paper Series 16/1985; Peter Cramton, 'Spectrum Auctions' in Martin Cave, K Sumit, and Inge Vogelsang (eds), *Handbook of Telecommunications Economics: Structure, Regulation and Competition, Volume 1* (North-Holland, 2002); Janice Obuchowski, 'The Unfinished Task of Spectrum Policy Reform' (1995) 47 *Federal Communications Law Journal* 325; and Eli Noam, 'Beyond Spectrum Auctions' (1997) 21 *Telecommunications Policy* 46.

<sup>143</sup>John McMillan, 'Why Auction the Spectrum?' (1995) 19 *Telecommunications Policy* 191, 195.

<sup>144</sup>Christian Koenig and Andreas Neumann, 'The European Regulatory Framework for Administration of Scarce and Finite Resources' in Christian Koenig, Andreas Bartosch, and Jen-Daniel Braun (eds), *EC Competition and Telecommunications Law* (Kluwer Law International 2002) 533.

<sup>145</sup>John McMillan, 'Why Auction the Spectrum?' (1995) 19 *Telecommunications Policy* 191, 192.

<sup>146</sup>Ibid, 193.

<sup>147</sup>Ibid, 196.

<sup>148</sup>Evan Light, 'Open Spectrum for Development: Policy Brief' (2010) Association for Progressive Communications 10.

assignment in Uganda is a formal process, with detailed application requirements based on objective criteria.<sup>149</sup> The formalised process promotes transparency with the applicant knowing the reason behind the successful or failed application. Additionally, while the manner in which the UCC manages spectrum has been criticised by operators and industry experts, transparency of the process of granting spectrum licences has not been questioned.<sup>150</sup> However, auctions remain the more transparent method as competitors know how applications are being made and assigned.

Having a transparent process for spectrum assignment is very crucial in Uganda and other Sub-Saharan Africa where transparency in government processes is far from guaranteed. The transparency in spectrum auctions has been cited as a reason for recommending the use of the method to assign spectrum in Sub-Saharan Africa countries.<sup>151</sup> It is the key reason behind the decision by the Communications Commission of Nigeria to opt for a spectrum auction to assign GSM licences in Nigeria in 2001.<sup>152</sup> Therefore, the argument that auctions are transparent provides a strong case for considering the use of this method in Uganda.

Auctions have the added advantage of generating substantial amounts revenue for the government.<sup>153</sup> For example, in Nigeria, the GSM licences auction in 2001 generated US \$1.14 billion.<sup>154</sup> The 3G licence auctions in the UK in 2000 netted £22.5 billion (US \$34 billion).<sup>155</sup> However, the revenue generation factor is a somewhat weak argument in the Uganda. UCC is able to generate a substantial amount of revenue for the public from the licence and annual spectrum usage fees. Currently, UCC charges a fee of 50 million Uganda shillings (approximately US \$20,100) per MHz for GSM 900 MHz band and 30 million Uganda shillings (approximately US \$12,100) for GSM 1800 MHz band.<sup>156</sup> The data of spectrum usage from 2012 reveals that the operator with the biggest spectrum holding in the prime 900 MHz band has 7.8 MHz which amounts to Uganda shillings 390 million

<sup>149</sup>The formal procedure for applying for a spectrum licence is stipulated in the Communications (Radio) Regulations, SI 2005/27, reg 9.

<sup>150</sup>This is deduced by the author from interviews undertaken with representatives of operators and telecommunications industry experts as outlined in the Appendix 3 of this study.

<sup>151</sup>ITU, 'West African Common Market Project: Harmonisation of Policies Governing the ICT Market in the UEMOA-ECOWAS Space: Final Guidelines' 34 <[http://www.itu.int/ITU-D/treg/projects/itu-ec/Ghana/modulesmodules/Compil-Guidelines\\_final.pdf](http://www.itu.int/ITU-D/treg/projects/itu-ec/Ghana/modulesmodules/Compil-Guidelines_final.pdf)> accessed 15 June 2017.

<sup>152</sup>Chris Doyle and Paul McShane, 'On the Design and Implementation of the GSM Auction in Nigeria-the World's First Ascending Clock Spectrum Auction' (2003) 27(5-6) Telecommunications Policy 383.

<sup>153</sup>FCC, 'The FCC Report to Congress on Spectrum Auctions' (October 1997) 2 <[wireless.fcc.gov/auctions/data/papersAndStudies/fc970353.pdf](http://wireless.fcc.gov/auctions/data/papersAndStudies/fc970353.pdf)> accessed 15 June 2017.

<sup>154</sup>Ijeoma Nwogwugwu, Samuel Famakinwa, Francis Ugwoke, and Tayo Ajakaye, 'Nigeria: Federal Government Nets \$ 1.14 bn From GSM Licence Auction' *This Day* (Abuja, 20 January 2001) <<http://allafrica.com/stories/200101210117.html>> accessed 15 June 2017.

<sup>155</sup>Ken Binmore and Paul Klemperer, 'The Biggest Auction Ever: the Sale of the British 3G Telecom Licences' (2001) <<http://www.paulklemperer.org>> accessed 15 June 2017.

<sup>156</sup>UCC, 'Uganda Communications Fee Structure' <[http://www.ucc.co.ug/index.php?option=com\\_k2&view=item&layout=item&id=54&Itemid=57](http://www.ucc.co.ug/index.php?option=com_k2&view=item&layout=item&id=54&Itemid=57)> accessed 15 June 2017.

(US \$156,000) in annual spectrum usage fees.<sup>157</sup> On aggregate from the 24.2 MHz assigned in the 900 MHz band, UCC generates Uganda shillings 1.2 billion (approximately US \$500 million annually).<sup>158</sup> The aggregate fees generated from the spectrum licences granted for 1800 MHz is even greater at Uganda shillings 2.32 billion (approximately US \$900 million).<sup>159</sup> While these amounts are tame compared to the billions of dollars generated in auctions that took place more than a decade ago, the annual fees generated from spectrum licences in the two bands is equal to 7% of Uganda's GDP in 2012.<sup>160</sup>

Therefore, the key reasons that would make the auctions a promising alternative to the use of the traditional first-come-first-served method in Uganda are the transparency of the process, and its touted efficient assignment of spectrum.

Since 1990 when New Zealand first used auctions to assign spectrum, auctions have become a popular spectrum assignment method. Spectrum auctions have been used in the United States, United Kingdom, Germany, Greece, Austria, Belgium, the Czech Republic, Greece, Guatemala, El Salvador, Israel, Italy, Mexico, Netherlands, Nigeria, Brazil, Slovenia, Switzerland, and Taiwan. The FCC has been particularly vocal about the merits of spectrum auctions as a method for assignment of spectrum in the wireless communications markets in the United States.<sup>161</sup> According to the FCC, auctions have dramatically changed the way spectrum licenses are valued, distributed, and aggregated.<sup>162</sup> These changes have fostered the entry of new companies into the market and encouraged the development of innovative wireless technologies.<sup>163</sup>

Despite the popularity of spectrum auctions as the method for assigning spectrum where there are mutually exclusively applications for spectrum licences, in Sub-Saharan Africa, they remain the exception rather than the norm. Most countries continue to rely exclusively on the first-come-first-served method to assign spectrum. The few examples where spectrum auctions have been used include the Communications Commission of Nigeria awarding three GSM spectrum licences through an auction in 2001. Attempts have been made by South Africa's telecommunications regulator, ICASA, to use this method to assign spectrum in South Africa's telecommunications sector. In 2010, ICASA sought to auction spectrum in the 2.6 and 3.5 GHz frequency bands.<sup>164</sup> ICASA later cancelled the

<sup>157</sup> Author's own calculation.

<sup>158</sup> Ibid.

<sup>159</sup> Ibid.

<sup>160</sup> Uganda had a GDP of US\$ 19.88 billion according to 2012 World Bank data <<http://data.worldbank.org/country>> accessed 15 June 2017.

<sup>161</sup> FCC, 'The FCC Report to Congress on Spectrum Auctions' (October 1997) 1 <[wireless.fcc.gov/auctions/data/papersAndStudies/fc970353.pdf](http://wireless.fcc.gov/auctions/data/papersAndStudies/fc970353.pdf)> accessed 15 June 2017.

<sup>162</sup> Ibid.

<sup>163</sup> Ibid.

<sup>164</sup> 'ICASA's Broadband Spectrum Auction: All the Details' <<http://www.techcentral.co.za/icasa-spectrum-auction-allthedetails/14669>> accessed 15 June 2017.

auctions citing the need to ensure technology neutrality and to consult auction rules from around the world.<sup>165</sup> Thus, while spectrum auctions have been trumpeted as the method that guarantees efficient assignment of spectrum, one cannot ignore the fact that most evidence of the effectiveness of auctions as a mechanism for assigning spectrum is drawn from developed jurisdictions.

A recurring theme throughout this study is the need to ensure that any policies adopted for enhancing competition in the telecommunications sector take into account the specific market composition in Uganda's telecommunications sector. Not only is the telecommunications sector in developed countries starkly different from Uganda's telecommunications sector,<sup>166</sup> Uganda's economy is also significantly smaller than that of developed countries.<sup>167</sup> Therefore, spectrum auctions that have been a success in developed countries might not necessarily result in an efficient outcome in Uganda. Furthermore, evidence of successful use of the method in other Sub-Saharan Africa countries does not make it an appropriate alternative for Uganda despite similarities in market composition.

The doubts raised over the use of spectrum auctions in Uganda stem from the argument that the spectrum auctions may be challenging to implement in developing countries.<sup>168</sup> The reasons put forward against the use of this method include: (1) the complexity of auctions (2) the high costs of auctions and (3) the lack of competition in the telecommunications market.<sup>169</sup>

Auctions are seen as a good source of government revenue. Successful spectrum auctions have usually entailed telecommunications operators paying record high prices for the spectrum licences. In the UK, 3G spectrum licences were auctioned at US \$34 billion, in Germany the revenue generated was US \$51 billion and in Nigeria, the Communications Commission auctioned 3 GSM licences for a total of US \$1.14 billion. The revenue generated from the Nigeria 3G spectrum licences auction equalled 2.5% of Nigeria's GDP.<sup>170</sup> While auctions might be good for the government coffers, the high prices for auctioned spectrum licences can also leave a successful bidder heavily in debt and affect its ability to provide telecommunications services. To illustrate this point, reference is made to the 2010 3G auctions in

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<sup>165</sup> Steve Song, 'Open Spectrum for Development South Africa Case Study' (October 2010) <[https://www.apc.org/en/system/files/ZA\\_ToBeUploaded.pdf](https://www.apc.org/en/system/files/ZA_ToBeUploaded.pdf)> accessed 15 June 2017.

<sup>166</sup> For a more elaborate discussion see Chap. 2, Sect. 2.4.

<sup>167</sup> Citing the example of the UK, which has to date had one of the most successful spectrum licences auction, it had a GDP of US \$2,472 trillion in 2012 compared to Uganda's GDP of US \$19.88 billion according to World Bank data <<http://data.worldbank.org/country>> accessed 15 June 2017. It is also worth pointing out that Nigeria, which has had the most successful spectrum auction in Sub-Saharan Africa to date, had a GDP of US\$ 262.6 billion in 2012.

<sup>168</sup> KB Enterprises LLC, 'Spectrum Auctions in Developing Countries: Options for Intervention' (March 31 2009) 5 <<http://kbspectrum.com/wp-content/uploads/2009/10/Soros-OSI-033109-Spectrum-Auctions-in-Developing-Countries-Options-for-Intervention.pdf>> accessed 15 June 2017.

<sup>169</sup> Ibid.

<sup>170</sup> See World Bank country data <<http://data.worldbank.org/country>> accessed 15 June 2017 for GDP information.

India. In that auction operators paid a total of US \$11.3 billion for the entire auction nation-wide.<sup>171</sup> This sum is equivalent to 2 or more years of the investments made by all mobile operators in India.<sup>172</sup> Not surprisingly, the auctions placed a heavy financial burden on the winning bidders, including the SNO Neotel's owner Tata.<sup>173</sup> The high prices charged for granting spectrum through auctions raised concerns that spectrum auctions could translate into higher prices for consumers in India whereby, an operator seeking to recoup initial investments in the network deployments, including acquiring a spectrum licence, charges highly for telecommunications services it offers.<sup>174</sup>

The high prices for spectrum licences may also deter market entry, particularly by smaller operators, serving as an obstacle to the growth of competition in mobile communications market. In India, for example, spectrum auctions for wireless telecommunications subsequent to the 2010 3G auction, that is, the auctions in November 2012 and March 2013, have received lukewarm responses despite the evidence of operators clamouring for more spectrum. The main reason cited for the dismal response is the high prices set for spectrum auctions.<sup>175</sup>

While auctioned spectrum licences usually come at a high cost, there is empirical evidence, from developed countries, that spectrum auctions do not necessarily raise prices for consumers.<sup>176</sup> Empirical evidence pertaining to Sub-Saharan Africa is scant as regards the nexus between high cost of auctioned spectrum licences and high consumer prices for telecommunications services. However, literature discussing the Nigerian spectrum auction does not indicate that the auction translated into high prices for consumers.<sup>177</sup> In fact, the Nigerian mobile telephone

<sup>171</sup>'The Forgotten Objective' *Business Standard* (New Delhi, 7 November 2013) <[http://www.business-standard.com/article/opinion/the-forgotten-objective-113110701052\\_1.html](http://www.business-standard.com/article/opinion/the-forgotten-objective-113110701052_1.html)> accessed 15 June 2017.

<sup>172</sup>Ibid.

<sup>173</sup>Ibid.

<sup>174</sup>Rehka Jain, 'Spectrum Auctions in India Lessons from Experience' (2001) 25(10-11) *Telecommunications Policy* 671.

<sup>175</sup>'The Forgotten Objective' *Business Standard* (New Delhi, 7 November 2013) <[http://www.business-standard.com/article/opinion/the-forgotten-objective-113110701052\\_1.html](http://www.business-standard.com/article/opinion/the-forgotten-objective-113110701052_1.html)> accessed 15 June 2017.

<sup>176</sup>Evan Kwerel, 'Spectrum Auctions Do Not Raise the Price of Wireless Services: Theory and Evidence' (October 2000) <<http://wireless.fcc.gov/auctions/data/papersAndStudies/SpectrumAuctionsDoNotRaisePrices.pdf>> accessed 15 June 2017. On the other hand see Theo Offerman and Jan Potters in 'Does Auctioning of Entry Licenses Affect Consumer Prices? An Experimental Study' (May 2000) 53 <<http://arno.uvt.nl/show.cgi?fid=4083;h=repec:dgr:kubcen:2000>> accessed 15 June 2017, who argue to the contrary. It should be pointed out that these studies which have been conducted in developed countries might not be of much relevance to countries in Sub-Saharan Africa given the differences in market composition.

<sup>177</sup>Chris Doyle and Paul McShane, 'On the Design and Implementation of the GSM Auction in Nigeria-the World's First Ascending Clock Spectrum Auction' (2003) 27(5-6) *Telecommunications Policy* 383; and Darin Lee, 'Lessons from the Nigerian GSM Auction' (2003) 27 *Telecommunications Policy* 407.

market has grown into the biggest market in Africa with approximately 150.8 million subscribers in 2015, a penetration rate of 82.1%.<sup>178</sup>

Another argument against the use of auctions in developing countries is the lack of competition in the telecommunications market.<sup>179</sup> An auction requires that there be more bidders than items being auctioned. A key issue for countries in Sub-Saharan Africa is whether they can generate enough interest in the wireless communications markets triggering significant demand for spectrum. Nigeria's successful spectrum auction for GSM licences is evidence that countries in Sub-Saharan Africa can attract sufficient interest to run a successful auction. This is likely to be the case if the spectrum auctions are for mobile communications services. Most countries in Sub-Saharan Africa have competitive mobile communications markets.<sup>180</sup> In Uganda, the great demand for spectrum in the fully liberalised mobile communications market has led to scarcity of spectrum threatening further growth of the mobile communications services market. The mobile communications market is made of several operators, two-thirds of which are subsidiaries of multinational telecommunications groups. There is evidently greater demand for spectrum in Uganda than spectrum licences available. Therefore, concerns over insufficient competition hampering the successful use of spectrum auctions are rebuffed by looking at the very competitive landscape in Uganda's mobile communications market.

The other argument made against the use of spectrum auctions in developing countries is that auctions are a complex procedure. Spectrum auctions tend to be complex particularly where they involve numerous bidders and licences; however, they can also be relatively simple. A case in point is the GSM licences auction that took place in Nigeria in 2001. An auction design that was simple and easily understood by prospective bidders was successfully used to assign three GSM licences. The Nigerian example not only proves that spectrum auctions can successfully be utilised in Sub-Saharan Africa, it also illustrates that spectrum auctions do not have to be very complex to be successful. Therefore, the complexity problem is easily addressed by having a properly designed auction.

Ensuring that a spectrum auction is properly designed is very crucial if one is to use this method to efficiently assign spectrum. Klemperer in discussing the reasons behind the success of certain 3G auctions in Europe in 2000 and the failure of others, points to the design of the spectrum auction in the different European

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<sup>178</sup>ITU, 'Country Statistics 2000-2015: Fixed-Telephone Subscriptions' <<http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>> accessed 15 June 2017.

<sup>179</sup>KB Enterprises LLC, 'Spectrum Auctions in Developing Countries: Options for Intervention' (March 31 2009) 5 <<http://kbspectrum.com/wp-content/uploads/2009/10/Soros-OSI-033109-Spectrum-Auctions-in-Developing-Countries-Options-for-Intervention.pdf>> accessed 15 June 2017.

<sup>180</sup>See Mark D J Williams, Rebecca Mayer, and Michael Minges, *Africa's ICT Infrastructure: Building on the Mobile Revolution* (World Bank 2011) 11.

countries.<sup>181</sup> According to him, the variations in the 2000 3G spectrum auctions outcomes were primarily due to flawed auction designs.<sup>182</sup> For example, the less successful spectrum auctions in the Netherlands has been linked to the application of the same spectrum design used to successfully auction 3G licences under a different set of circumstances.<sup>183</sup>

It is therefore, important to design the auction to suit the needs of the specific country. In Nigeria, one key concern was the absence of reliable communications and power infrastructure needed to enable the use of sophisticated auction support systems.<sup>184</sup> A decision was taken not to use electronic bidding systems popularly used in spectrum auctions in Europe, Australia and North America.<sup>185</sup> Therefore, in lieu of holding the auction remotely using secure fax or internet links, it was decided that the auction would take place at a single location with all the bidders present.<sup>186</sup> Since bidders would all be in one location, stringent measures were put in place to prevent bidders from communicating.

In conclusion, there is no strong argument against the UCC considering the use of auctions to assign spectrum in Uganda's mobile communications market. However, neither is there a strong basis for the UCC to immediately switch to the auctions to assign spectrum in the mobile communications market. There is a dearth of examples of the successful use of auctions in Sub-Saharan Africa to assign spectrum. Therefore, the UCC should be cautious in adopting this method despite the stipulation in the Spectrum Regulations that auctions are to be used where there are mutually exclusive applications for spectrum licences.<sup>187</sup> The regulatory body should carefully evaluate whether auctions can help to address the current scarcity problem in the mobile communications market.

### 7.5.5.2 Lotteries

Lotteries are mentioned as one of the methods of assignment that the UCC may use if demand exceeds supply or the portion of spectrum is considered to be of high economic value.<sup>188</sup> Under the lottery system, spectrum is assigned to applicants at

<sup>181</sup>Paul Klemperer, 'How (Not) To Run Auctions: the European 3G Telecom Auctions' <<http://www.paulklemperer.org>> accessed 15 June 2017.

<sup>182</sup>Ibid.

<sup>183</sup>Ibid.

<sup>184</sup>Chris Doyle and Paul McShane, 'On the Design and Implementation of the GSM Auction in Nigeria-the World's First Ascending Clock Spectrum Auction' (2003) 27(5-6) Telecommunications Policy 383, 395.

<sup>185</sup>Ibid.

<sup>186</sup>Ibid.

<sup>187</sup>Communications (Radio) Regulations 2005, SI 2005/23, reg 8(3) and Radio Spectrum Policy Guidelines, Guideline 4, respectively.

<sup>188</sup>Uganda Radio Spectrum Policy Guidelines for Uganda, guideline 4. However, the Spectrum Regulations do not provide for lotteries as a method of assignment of spectrum.

random.<sup>189</sup> Lotteries provide a fast, inexpensive, and transparent approach for selecting from substantially similar or equally qualified applicants.<sup>190</sup> However, lotteries do not guarantee efficient assignment of spectrum because every application meeting minimal requirements (that is, relating to the applicant's reliability and including the payment of a basic application fee) could take part in a lottery.<sup>191</sup> As stated by the Canadian government when rejecting the use of lotteries, "there is no way to ensure the successful applicant's technical competence to develop, maintain and operate a public radio communications service."<sup>192</sup>

That lotteries do not assign spectrum to the entity that will efficiently use it is the reason why the United States quickly abandoned this method. In 1982, the FCC awarded mobile phone licences by lottery.<sup>193</sup> As explained by the FCC, in theory, lottery-based licensing would expedite service to the public and lower the cost of entry by applicants.<sup>194</sup> The FCC received 400,000 applications for the lotteries, many of which were from individuals who had no intention of providing services to the public.<sup>195</sup> These individuals sold the licences for windfall profits eventually placing the spectrum licence in the secondary market. While the secondary sale eventually got the spectrum licences into the right hands, it took years for secondary markets to reassign licenses to the parties that valued them the most and to aggregate these licenses efficiently.<sup>196</sup> Therefore, while the FCC was able to conduct the lotteries quickly, it did not result in an efficient assignment of the spectrum licences. The United States experience illustrates that lotteries are not an ideal method for assigning spectrum where there are mutually exclusive applications for spectrum licences.

Lotteries are not a good alternative to the first-come-first-served method primarily because the method can only assign spectrum efficiently in limited circumstances. One circumstance already mentioned in the reference to the United States is where secondary sale is possible. This particular factor makes lotteries a very unattractive alternative in Uganda. Spectrum transfers are exclusively done through the UCC with the concept of secondary sale of spectrum not provided for in the

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<sup>189</sup>Marcus J Scott et.al, *Towards More Flexible Spectrum Regulation* (Wik-Consult 2005).

<sup>190</sup>Hank Intven and McCarthy Tetraut (eds), *Telecommunications Regulation Handbook* (World Bank 2000) 2-13.

<sup>191</sup>Christian Koenig and Andreas Neumann, 'The European Regulatory Framework for Administration of Scarce and Finite Resources' in Christian Koenig, Andreas Bartosch, and Jen-Daniel Braun (eds), *EC Competition and Telecommunications Law* (Kluwer Law International 2002) 541.

<sup>192</sup>John McMillan, 'Why Auction the Spectrum?' (1995) 19 *Telecommunications Policy* 191, 193.

<sup>193</sup>Evan Kwerel and Alex D Felker, 'Using Auctions to Select FCC Licensees' (May 1985) FCC OPP Working Paper Series16/1985 4.

<sup>194</sup>FCC, 'The FCC Report to Congress on Spectrum Auctions' (October 1997) 7 <[wireless.fcc.gov/auctions/data/papersAndStudies/fc970353.pdf](http://wireless.fcc.gov/auctions/data/papersAndStudies/fc970353.pdf)> accessed 15 June 2017.

<sup>195</sup>Ibid.

<sup>196</sup>Ibid.

Spectrum Regulations.<sup>197</sup> Spectrum trading is provided for in the Spectrum Guidelines. The Spectrum Guidelines require the UCC to put in place spectrum transfer procedures to facilitate spectrum trading.<sup>198</sup> However, spectrum transfer procedures enabling spectrum trading are yet to be established.<sup>199</sup> The random nature of a lottery makes it more susceptible to disastrous results, that is, the spectrum being assigned to incompetent applicants. Having a secondary market for spectrum licences goes some way to ensuring that the spectrum licences are eventually assigned to those entities that will use them productively. Thus, as Uganda's spectrum regime does not allow for spectrum trading, it is not conducive to rely on lotteries to assign spectrum. Furthermore, literature on spectrum management is notable for its criticism of lotteries as inefficient and not a favoured alternative method of spectrum assignment.<sup>200</sup>

The other circumstance where lotteries may efficiently assign spectrum is when means of evaluation have already been used without enabling a definite decision.<sup>201</sup> For example, in comparative hearings in which at least two undertakings are equally qualified, lotteries might be the most efficient means to decide between those applicants who have already proven that they will be efficient in their use of radio frequencies.<sup>202</sup>

While the lotteries might lead to an efficient assignment in a few situations, the general perception and evidence from countries such as the United States strongly points away from the UCC considering this method to assign spectrum in the mobile communications market.

#### **7.5.5.3 Comparative Hearing (Beauty Contests)**

Although not provided for in Uganda's spectrum management regime, this section discusses the possibility of using comparative hearings since they are the most commonly used method to assign a spectrum licence where there are mutually

<sup>197</sup>The Radio Regulations allow for the transfer of spectrum with the approval of UCC but the Regulations do not categorically allow for secondary sale of spectrum.

<sup>198</sup>Radio Spectrum Policy Guidelines, guideline 15.

<sup>199</sup>Based on email response from Rebecca Mayanja of the department of Technology and Licensing, UCC to author dated 18 March 2013.

<sup>200</sup>Christian Koenig and Andreas Neumann, 'The European Regulatory Framework for Administration of Scarce and Finite Resources' in Christian Koenig, Andreas Bartosch, and Jen-Daniel Braun (eds), *EC Competition and Telecommunications Law* (Kluwer Law International 2002) 542; and Martin Cave, Adrian Foster, and Robert W Jones, 'Radio Spectrum Management: Overview and Trends' (September 2006 ITU Workshop) 12 <[http://www.itu.int/osg/spu/stn/spectrum/workshop\\_proceedings/BackgroundPapers\\_Final/Adrian%20Foster%20-%20CONCEPT\\_PAPER\\_20\\_9\\_06\\_Final.pdf](http://www.itu.int/osg/spu/stn/spectrum/workshop_proceedings/BackgroundPapers_Final/Adrian%20Foster%20-%20CONCEPT_PAPER_20_9_06_Final.pdf)> accessed 15 June 2017.

<sup>201</sup>Christian Koenig and Andreas Neumann, 'The European Regulatory Framework for Administration of Scarce and Finite Resources' in Christian Koenig, Andreas Bartosch, and Jen-Daniel Braun (eds), *EC Competition and Telecommunications Law* (Kluwer Law International 2002) 543.

<sup>202</sup>Ibid.

exclusive applications.<sup>203</sup> The standard practice has been to rely on the first-come-first-served method, unless more than one party applies for the spectrum licence, in which case, comparative hearings are used.

Comparative hearings are an administrative process where frequencies are awarded based on what is considered to be the “best” offer, usually defined by a number of quantitative and/or qualitative criteria such as the applicants’ reliability, the envisaged use of the frequencies including the degree of service coverage.<sup>204</sup>

Reliance on the different qualifications of the applicants to determine assignment is the reason why the process is referred to as a ‘beauty contest’.<sup>205</sup> Despite the popularity of this method, it is rarely used in Sub-Saharan Africa. One of the few examples that can be cited is Ghana’s National Communications Authority use of a comparative hearing to grant a sixth mobile licence.<sup>206</sup> In Nigeria, the Communications Commission attempted to use this method to assign GSM spectrum licences in 1999<sup>207</sup> and in South Africa ICASA has considered the use of a hybrid beauty contest and auction approach to spectrum to assignment spectrum in the 800 MHz and 2.6 GHz bands.<sup>208</sup>

One particular advantage of comparative hearings is that they are more flexible than the first-come-first-served basis for spectrum assignment because government can impose whatever criteria it chooses, and can thereby address its policy goals.<sup>209</sup> However, the method has several weaknesses that make it a less attractive alternative, particularly when compared with auctions.

Firstly, beauty contests are susceptible to lack of transparency in conducting the process. Determining whom to assign to spectrum using comparative hearings is

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<sup>203</sup>This method has been used in Canada, Japan, Singapore and several European countries including Spain, Sweden, the UK, and France.

<sup>204</sup>Simon Delaere, ‘European Policy Trends Towards Flexible Spectrum Management’ (2007) 8 *South Africa Journal of Information and Communication* 8, 11.

<sup>205</sup>Christian Koenig and Andreas Neumann, ‘The European Regulatory Framework for Administration of Scarce and Finite Resources’ in Christian Koenig, Andreas Bartosch, and Jen-Daniel Braun (eds), *EC Competition and Telecommunications Law* (Kluwer Law International, 2002) 534.

<sup>206</sup>See ‘NCA forges on with ‘beauty contest’ for sixth mobile licence in Ghana’ *Balancing Act* <<http://www.balancingact-africa.com/news/en/issue-no-402/telecoms/nca-forges-on-with-b/en>> accessed 15 June 2017.

<sup>207</sup>Chris Doyle and Paul McShane, ‘On the Design and Implementation of the GSM Auction in Nigeria-the World’s First Ascending Clock Spectrum Auction’ (2003) 27 *Telecommunications Policy* (5-6) 383.

<sup>208</sup>The Draft Spectrum Assignment Plan for the Combined Licensing of 800 MHz and 2.6 GHz bands in South Africa, Government Gazette No. 34872 Notice 911 which was published by ICASA on the 15 December 2011.

<sup>209</sup>John McMillan, ‘Why Auction the Spectrum?’ (1995) 19 *Telecommunications Policy* 191, 192.

based on subjective criteria.<sup>210</sup> This makes it hard for applicants to determine the basis of a government's decision, particularly as the government does not explain to losing applicants why they did not receive licences.<sup>211</sup> The lack of transparency has hampered the effective assignment of spectrum in a few countries in Sub-Saharan Africa, Nigeria being the notable example. The Communications Commission failed to assign GSM spectrum licences using beauty contests and later abandoned it in favour of a spectrum auction.<sup>212</sup> This was because the use of comparative hearing was greatly opposed due to concerns that the beauty contest would not be conducted in a transparent manner.<sup>213</sup> The assignment via beauty contest was cancelled in February, 2000 due to allegations of corruption.<sup>214</sup> The lack of transparency is the main factor that has been cited as a reason for countries in Sub-Saharan Africa to use auctions rather than beauty contests.<sup>215</sup> It should be observed that beauty contests can be transparent if the evaluation of the applicants is based only on objective data and economically justified assumptions that have been revealed beforehand.<sup>216</sup> However, given the fact that transparency of government process in Sub-Saharan Africa is still a source of concern, this method of assignment might not be the ideal alternative to the first-come-first-served method.

Secondly, beauty contests are regarded as a slow means of assigning spectrum. Assignment of spectrum licences through beauty contests is a long administrative process both in terms of crafting comparative criteria and evaluating them thereby delaying service to the public.<sup>217</sup> The FCC in rejecting the use of comparative hearings argued that the procedure fails to ensure that licences quickly go to the most efficient firms.<sup>218</sup> According to the FCC, it used to take about 2 years to award cellular licenses in comparative hearings.<sup>219</sup> This makes the first-come-first-served

<sup>210</sup>Ibid.

<sup>211</sup>Ibid, 193.

<sup>212</sup>Chris Doyle and Paul McShane, 'On the Design and Implementation of the GSM Auction in Nigeria-the World's First Ascending Clock Spectrum Auction' (2003) 27(5-6) Telecommunications Policy 383.

<sup>213</sup>Ibid.

<sup>214</sup>Ibid.

<sup>215</sup>ITU, 'West African Common Market Project: Harmonisation of Policies Governing the ICT Market in the UEMOA-ECOWAS Space: Final Guidelines' 34 <[http://www.itu.int/ITU-D/treg/projects/itu-ec/Ghana/modules/Compil-Guidelines\\_final.pdf](http://www.itu.int/ITU-D/treg/projects/itu-ec/Ghana/modules/Compil-Guidelines_final.pdf)> accessed 15 June 2017.

<sup>216</sup>Christian Koenig and Andreas Neumann, 'The European Regulatory Framework for Administration of Scarce and Finite Resources' in Christian Koenig, Andreas Bartosch, and Jen-Daniel Braun (eds), *EC Competition and Telecommunications Law* (Kluwer Law International 2002) 541.

<sup>217</sup>KB Enterprises LLC, 'Spectrum Auctions in Developing Countries: Options for Intervention' (March 31 2009) 5 <<http://kbspectrum.com/wp-content/uploads/2009/10/Soros-OSI-033109-Spectrum-Auctions-in-Developing-Countries-Options-for-Intervention.pdf>> accessed 15 June 2017; and Simon Delaere, 'European Policy Trends towards Flexible Spectrum Management' (2007) 8 South Africa Journal of Information and Communication 8, 11.

<sup>218</sup>FCC, 'The FCC Report to Congress on Spectrum Auctions' (October 1997) 7 <[wireless.fcc.gov/auctions/data/papersAndStudies/fc970353.pdf](http://wireless.fcc.gov/auctions/data/papersAndStudies/fc970353.pdf)> accessed 15 June 2017.

<sup>219</sup>Ibid.

method of assignment more attractive as the process of assignment adopted by the UCC is very simple and applicants do not have to wait long to find out if they have been granted a spectrum licence.

Additionally, as beauty contests involve evaluation across a range of criteria which essentially have a subjective element, the results of the beauty contest are often prone to successful legal challenge which can delay the start of services of benefit to consumers.<sup>220</sup> After numerous successful legal challenges, the FCC in the United States abandoned this method in favour of lotteries and later auctions.<sup>221</sup> In Ireland several 'beauty contest' licence awards have been subjected to legal challenge.<sup>222</sup> Orange unsuccessfully challenged the award by the Department of Public Enterprise and the Office of the Director of Telecommunications Regulations (OTDR) of a third mobile licence to Meteor Telecommunications Limited. The case that commenced in 1998 led to a 2 year delay in the award of the third mobile licence since the case went all the way to the Irish Supreme Court which upheld the original decision of the OTDR in May 2000.<sup>223</sup> The litigation delayed the entry of Meteor Telecommunications into the Irish mobile market.<sup>224</sup> However, there is evidence that beauty contests are not necessarily a slow method for assigning spectrum. In Finland, a comparative hearing, rather than an auction, was used to assign 3G spectrum licences in 2000. It was the first European country to assign the frequencies for third-generation technologies ahead of other European countries that used auctions.<sup>225</sup> Finland's success is striking as the popular method used to assign 3G licences in Europe between 1999 and 2000 was the auction method. The 3G spectrum auctions were characterised by a few noticeable successes, for example, the United Kingdom, and Germany, and a number of not so successful or failed auctions, for example, Belgium, the Netherlands, and Spain.<sup>226</sup> Therefore, the

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<sup>220</sup>‘International Developments in Spectrum Policy, Management Concepts and Tools’ 10 <<http://www.dcenr.gov.ie>> accessed 15 June 2017.

<sup>221</sup>John McMillan, ‘Why Auction the Spectrum?’ (1995) 19 Telecommunications Policy 191.

<sup>222</sup>‘International Developments in Spectrum Policy, Management Concepts and Tools’ 10 <<http://www.dcenr.gov.ie>> accessed 15 June 2017; and Ewan Sutherland, ‘European Spectrum Management: Successes, Failures and Lessons’ (2007) ITU Workshop on Market Mechanisms for Spectrum Management 12 <[http://www.itu.int/osg/spu/stn/spectrum/workshop\\_proceedings/Background\\_Papers\\_Final/Ewan%20Sutherland%20-%20\\_itu\\_spectrum\\_revised.pdf](http://www.itu.int/osg/spu/stn/spectrum/workshop_proceedings/Background_Papers_Final/Ewan%20Sutherland%20-%20_itu_spectrum_revised.pdf)> accessed 15 June 2017.

<sup>223</sup>*Orange v OTDR* (1998 no. 1216 OP), High Court decision and *Orange v ODTR* (224 & 278/1999 & 14/200) Supreme Court decision.

<sup>224</sup>Commission for Communications Regulation, ‘Issues Related to the Award of Spectrum in Multiple Bands in Ireland’ Economic Consultant’s Report Document No.11/58 (2011) 19 <[http://www.comreg.ie/\\_fileupload/publications/ComReg1158.pdf](http://www.comreg.ie/_fileupload/publications/ComReg1158.pdf)> accessed 15 June 2017.

<sup>225</sup>Christian Koenig and Andreas Neumann, ‘The European Regulatory Framework for Administration of Scarce and Finite Resources’ in Christian Koenig, Andreas Bartosch, and Jen-Daniel Braun (eds), *EC Competition and Telecommunications Law* (Kluwer Law International, 2002) 340.

<sup>226</sup>Daniel Sokol, ‘The European Mobile 3G UMTS Process: Lessons from the Spectrum Auctions and Beauty Contests’ (2001) 17 University of Virginia Journal of Law & Technology.

successful use of beauty contests in the wake of a number of unsuccessful spectrum auctions illustrates that beauty contests can be used to efficiently assign spectrum in the dynamic wireless telecommunications market. However, the Finland experience is an exceptional case.

Referring to the assignment of 3G spectrum licences in Europe, France's and Portugal's beauty contest results were tainted with accusations of bias on the part of the national telecommunications regulator.<sup>227</sup> The use of the beauty contest method in Spain was deemed a failure by the government that later switched to auctions.<sup>228</sup> The experiences in France, Portugal, and Spain greatly water down the case made for beauty contest. Although it may be possible to use beauty contest method to efficiently assign spectrum, the lack of transparency in beauty contests is a crucial factor that points away from the use of this method in Uganda.

Thirdly, spectrum may be inefficiently awarded under the beauty contest system to those who promise the most with no assurance of delivery. This can be contrasted with auctions where efficient assignment is more or less guaranteed as the spectrum goes to the entity that values it most and therefore seeks to use it efficiently.

While the author has expressed the view that the disadvantages of auctions can be overcome, the same argument cannot be made with regard to beauty contests. This is primarily because of the experiences not only from Europe and the United States, but also from within Sub-Saharan Africa, specifically Nigeria. The experiences highlighted in previous paragraphs illustrate that beauty contests are not an ideal method for spectrum assignment under the current spectrum use landscape in the wireless telecommunications market in Uganda. Therefore, this method should not be considered by UCC as an alternative to the first-come-first-served method.

### ***7.5.6 Liberalisation of the Spectrum Assignment Process***

The previous sub-sections have considered methods of spectrum assignment that can serve as an alternative to the first-come-first-served method. The three alternative methods discussed, auctions, lotteries, and beauty contests, are starkly different from the first-come-first-served method. However, the methods have one aspect in common; the government still plays an active role in the assignment process. With the demand for spectrum growing at a tremendous rate, the debate on efficient spectrum management in the wireless telecommunications services market has brought to the fore the possibility of a liberalised spectrum management regime with less government involvement. In particular, spectrum trading, which involves secondary sale of spectrum, and spectrum commons have gained prominence.

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<sup>227</sup>Ibid, paras 66 and 62, respectively.

<sup>228</sup>Ibid, para 63.

### 7.5.6.1 Spectrum Trading

The calls for the use of more flexible mechanisms for spectrum management to deal with the increased spectrum demand brought about by rapid technological development and liberalisation of telecommunications markets have brought spectrum trading into the limelight. Spectrum trading involves trading of the spectrum rights that were initially assigned through administrative or market mechanisms.<sup>229</sup> There is a growing list of literature supporting spectrum trading as an efficient means of managing spectrum.<sup>230</sup> Spectrum trading is considered as an appropriate mechanism for assigning spectrum where initial allocations and assignments were inefficient, or when technology and demand have subsequently changed substantially.<sup>231</sup> Spectrum trading is also favoured on the ground that it allows new sources of spectrum to emerge to benefit new technologies and services thereby being more responsive to rapid technological changes.<sup>232</sup> This particular merit of spectrum trading is of significance in the telecommunications sector where spectrum use is dynamic. As it is very responsive to rapid technological changes, it can facilitate market entry with spectrum users trading in underused spectrum to meet demand where and when it is needed by new entrants to the market.<sup>233</sup> Thus, based on existing literature, spectrum trading can ensure that there is spectrum capacity in prime frequency bands for telecommunications services and address spectrum scarcity concerns.

Although not provided for in the main legislation on spectrum management in Uganda, it is expressly provided for in the Spectrum Guidelines which provide for the possibility of spectrum trading subject to approval by UCC. The Spectrum Guidelines require UCC to put in place spectrum transfer procedures to facilitate spectrum trading.<sup>234</sup> However, spectrum transfer procedures enabling spectrum trading are yet to be established.<sup>235</sup> The specific reference to spectrum trading in Uganda is interesting in light of the fact that it does not form part of the spectrum management regime in the majority of countries in Sub-Saharan Africa. However,

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<sup>229</sup>Bjorn Wellenius and Isabel Neto, 'Managing the Radio Spectrum: Framework for Reform in Developing Countries' (2007) World Bank Policy Research Working Paper 4549/2007 2.

<sup>230</sup>Tommaso Valletti, 'Spectrum Trading' (2001) 25 Telecommunications Policy 655-670; OECD, 'Secondary Markets for Spectrum: Policy Issues' (2005) OECD Digital Economy Papers 95 (OECD Publishing) <<https://doi.org/10.1787/232354100386>> accessed 15 June 2017; Marcus J Scott and others, *Towards More Flexible Spectrum Regulation* (Wik-Consult 2005) and, Patrick Xavier and Dimitri Ypsilanti, 'Policy issues in Spectrum Trading' (2006) 8 (2) info 34.

<sup>231</sup>Bjorn Wellenius and Isabel Neto, 'Managing the Radio Spectrum: Framework for Reform in Developing Countries' (2007) World Bank Policy Research Working Paper 4549/2007 18.

<sup>232</sup>OECD, 'Secondary Markets for Spectrum: Policy Issues' (2005) OECD Digital Economy Papers No.95) 18 <<https://doi.org/10.1787/232354100386>> accessed 15 June 2017.

<sup>233</sup>Ibid.

<sup>234</sup>Radio Spectrum Policy Guidelines, guideline 15.

<sup>235</sup>Based on email response from Rebecca Mayanja, Department of Technology and Licensing, UCC, to the author dated 18 March 2013.

policy-makers in the region view it in a positive light. For example, spectrum trading has been encouraged in West Africa through the ECOWAS Spectrum Management Guidelines; however, Member States are yet to adopt the concept at the national level.<sup>236</sup> In South Africa, the National Development Plan 2013 proposes the use of spectrum trading to facilitate efficient spectrum management. However, from the legislative perspective, spectrum trading in South Africa is not yet a possibility as spectrum management is exclusively done by ICASA with spectrum licensees prohibited from selling access to spectrum to third parties. Therefore, within Sub-Saharan Africa, spectrum trading is a concept that has not yet been incorporated in the spectrum management regime.

The limited application of spectrum trading is not restricted to Sub-Saharan Africa. At the global level, a limited number of countries permit secondary sale of spectrum. Spectrum trading is permitted in Australia, Bulgaria, Canada, El Salvador, France, Guatemala, New Zealand, Spain, United Kingdom and the United States. This is an interesting state of affairs given the opportunities for efficient spectrum assignment through spectrum trading. The limited application of spectrum trading to assign spectrum in the telecommunications sector may be explained by its weaknesses which are highlighted below.

Firstly, spectrum trading is regarded as increasing the risk of interference.<sup>237</sup> Deregulating the spectrum market and making spectrum usage flexible is likely to increase the number of licences granted, which opens the potential for various types of signal interferences, such as band power in neighbouring frequencies.<sup>238</sup> In this context, the centralised system of spectrum assignment is more attractive as interference is effectively managed under this system. However, it must be noted that countries that allow spectrum trading have implemented measures that limit the risk of interference. For example, regulators in the United States, New Zealand and Australia set the initial limit for interference parameters.<sup>239</sup>

Secondly, spectrum trading increases the incentive to engage in anti-competitive behaviour, particularly spectrum hoarding.<sup>240</sup> Spectrum hoarding can also occur under the centralised system of spectrum assignment. However, it has featured highly as an issue of concern in the literature discussing the merits of spectrum

<sup>236</sup>ITU, ‘West African Common Market Project: Harmonisation of Policies Governing the ICT Market in the UEMOA-ECOWAS Space: Final Guidelines’ 34 <[http://www.itu.int/ITU-D/treg/projects/itu-ec/Ghana/modules/Compil-Guidelines\\_final.pdf](http://www.itu.int/ITU-D/treg/projects/itu-ec/Ghana/modules/Compil-Guidelines_final.pdf)> accessed 15 June 2017.

<sup>237</sup>OECD, ‘Secondary Markets for Spectrum: Policy Issues’ (2005) OECD Digital Economy Papers No. 95 23 <<https://doi.org/10.1787/232354100386>> accessed 15 June 2017.

<sup>238</sup>ACMA, ‘The Economics of Spectrum Management: A Review’ (2007) 14 <<http://www.acma.gov.au/~media/mediacoms/Research%20library%20reports%20old/pdf/Economics%20of%20spectrum%20management%20pdf.pdf>> accessed 15 June 2017.

<sup>239</sup>OECD, ‘Secondary Markets for Spectrum: Policy Issues’ (2005) OECD Digital Economy Papers No. 95 28 <<https://doi.org/10.1787/232354100386>> accessed 15 June 2017.

<sup>240</sup>Ibid, 23.

trading as a method of assignment.<sup>241</sup> Although spectrum trading is considered as the method most likely to provide incentive to engage in anti-competitive behaviour, this issue can be addressed through measures such as the enforcement of the competition legislation. In Australia and New Zealand, general competition law is considered as adequate.<sup>242</sup> Other countries, for example, the United States have used *ex ante* measures such as a requirement for regulatory approval of spectrum trades.<sup>243</sup> Therefore, perceived disadvantages of spectrum trading in the form of interference and anti-competitive behaviour can be overcome.

However, from the perspective of a developing country it would appear that use of spectrum trading to efficiently assign spectrum places a significant regulatory burden on the government entity responsible for spectrum management. Spectrum trading is a market-based model and thus depends on the market to determine how spectrum is assigned. However, the disadvantages of spectrum trading, for example, the risk of interference, and the susceptibility to spectrum hoarding, indicate that the market can fail to produce efficient results that maximise social welfare. Therefore, to guarantee that spectrum trading results in efficient assignment, the government regulators must intervene to implement measures, for example, setting spectrum caps and enforcing competition legislation that prevent inefficient outcomes. In Uganda, the responsibility falls to the UCC that is the regulator of the communications sector encompassing broadcasting and telecommunications. The UCC's mandate is broad, not only covering spectrum management but also licensing, economic regulation, competition regulation, among others. Given the UCC's broad mandate it is difficult to envisage that the UCC will have sufficient capacity (particularly human) to implement measures that prevent interference and anti-competitive behaviour and therefore facilitate the efficient assignment of spectrum. This casts the effective implementation of the spectrum trading method in doubt.

In addition to the regulatory burden, it is doubtful that Uganda's wireless telecommunications market is conducive enough to facilitate the effective use of spectrum trading. Spectrum trading can only be an effectively tool where there is a substantial number of buyers or sellers of spectrum. However, a market for spectrum may not always be guaranteed. For example, in Australia and New Zealand, concerns of low spectrum trading activity have been raised.<sup>244</sup> This particular problem has been identified as one of the main weakness of the spectrum trading method. As has been observed, asymmetric information is a potential valuation problem for spectrum trading if the owner of a band has important economic

<sup>241</sup> See specifically, Martin Cave, 'Anti-Competitive Behaviour in Spectrum Markets' (August 15 2009) TPRC 2009 4 <<http://ssrn.com/abstract=1999846>> accessed 15 June 2017.

<sup>242</sup> OECD, 'Secondary Markets for Spectrum: Policy Issues' (2005) OECD Digital Economy Papers No.95 30 <<https://doi.org/10.1787/232354100386>> accessed 15 June 2017.

<sup>243</sup> A similar measure is provided for in Uganda's Spectrum Policy Guidelines which stipulates that the radio spectrum transferee must first seek permission from UCC prior to the transfer of spectrum.

<sup>244</sup> OECD, 'Secondary Markets for Spectrum: Policy Issues' (2005) OECD Digital Economy Papers No.95 23 <<https://doi.org/10.1787/232354100386>> accessed 15 June 2017.

information that cannot be verified by potential buyers, for example, persistent interference patterns.<sup>245</sup> Uncertainty and risk aversion may deter the creation of such markets.<sup>246</sup> While there is significant interest in spectrum for mobile communications services in Uganda, there is nothing to suggest that this will translate into an active secondary market for spectrum. This factor alone should be reason enough for the UCC to be hesitant in embracing this method.

More importantly, there is limited practical experience from other countries that have used spectrum trading to assign spectrum. The majority of the countries are developed countries. It is therefore difficult to make an informed decision as to the merits of spectrum trading as a method for assigning spectrum in Uganda's telecommunications sector. Thus, while the centralised approach has its weaknesses, it is a tried and tested method. On that basis, although spectrum trading has its advantages, there is no strong justification for liberalising the spectrum management regime in Uganda to allow for spectrum trading. However, this does not in any way reject the possible use of this method in the future. Spectrum use in the telecommunications sector in Uganda is always evolving and spectrum trading may become a more efficient method for spectrum assignment.

#### 7.5.6.2 Spectrum Commons

Spectrum commons is the other spectrum assignment model that has been gaining popularity under the umbrella of liberalised spectrum management. Under this model, spectrum is available to all users that comply with established technical standards (for example, power limits) to mitigate potential interference.<sup>247</sup> Spectrum is managed by end-users that have sole authority for spectrum uses, setting standards, and dealing with interference.<sup>248</sup> This approach is a great departure from the traditional approach of spectrum management that involves greater government participation.

One of the key arguments put forward in support of spectrum commons as a method of spectrum assignment is that it fosters innovation due to low entry barriers and no authorisation conditions.<sup>249</sup> This allows users to experiment with new technologies, potentially respond rapidly to changing demand patterns, and adapt

<sup>245</sup>ACMA, 'The Economics of Spectrum Management: A Review' (2007) 14 <<http://www.acma.gov.au/~media/mediacoms/Research%20library%20reports%20old/pdf/Economics%20of%20spectrum%20management%20pdf.pdf>> accessed 15 June 2017.

<sup>246</sup>Ibid.

<sup>247</sup>Bjorn Wellenius and Isabel Neto, 'The Radio Spectrum: Opportunities and Challenges for the Developing World' 8 (2) info, 18, 20-22.

<sup>248</sup>ACMA, 'The Economics of Spectrum Management: A Review' (2007) 18 <<http://www.acma.gov.au/~media/mediacoms/Research%20library%20reports%20old/pdf/Economics%20of%20spectrum%20management%20pdf.pdf>> accessed 15 June 2017.

<sup>249</sup>Bjorn Wellenius and Isabel Neto, 'The Radio Spectrum: Opportunities and Challenges for the Developing World' 8 (2) info, 18, 20-22.

technologies to local needs.<sup>250</sup> Spectrum commons promotes efficient spectrum management because no spectrum is exclusively held, and the permitted signal range is relatively short making it possible to accommodate a very high density of users.<sup>251</sup> Additionally, users have practical incentives to adopt spectrum-efficient technologies that use whatever spectrum is available.<sup>252</sup> Spectrum commons is particularly relevant for wireless telecommunications services that work within short signal ranges, such as Wi-Fi, and may foster increased internet access via Wi-Fi technology. Given that the internet market in Uganda, and Sub-Saharan Africa, remains small and wireless technology is the primary means through which the population in the region accesses communications services, the discussion of spectrum commons is pertinent since it appears to support the growth of the wireless internet market.

In Sub-Saharan Africa, where most of the population is dependent on wireless technology to access telecommunications services, wireless internet is considered as the key to increased internet access in the region.<sup>253</sup> On that basis, spectrum commons, or rather licence exempt wireless technologies designed to use spectrum in a shared fashion, without need for exclusive licensing may be important in the Sub-Saharan Africa context.<sup>254</sup> Additionally, it has been observed that the spectrum commons model is well suited for large rural populations widely dispersed across areas with little spectrum use or risk of interference.<sup>255</sup> Almost 84% of Uganda's population is rural-based with less access telecommunications services, this model might help to promote efficient spectrum management that facilitates the growth of the wireless internet market.<sup>256</sup> This is recognised by the UCC which made 2.4 and 5.8 GHz bands licence exempt.<sup>257</sup> Originally, use of 2.4 GHz was subject to

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<sup>250</sup>Ibid.

<sup>251</sup>Ibid.

<sup>252</sup>Bjorn Wellenius and Isabel Neto, 'Managing the Radio Spectrum: Framework for Reform in Developing Countries' (2007) World Bank Policy Research Working Paper 4549, 36.

<sup>253</sup>Isabel Neto, Michael L Best, and Sharon E Gillett, 'License-Exempt Wireless Policy: Results of African Survey' (2005) 2(3) MIT Information Technologies and International Development Journal 73 <[itidjournal.org/itid/article/download/206/76](http://itidjournal.org/itid/article/download/206/76)> accessed 15 June 2017, who argue that wireless technology can play a major role in addressing the internet access challenge in Sub-Saharan Africa.

<sup>254</sup>Ibid.

<sup>255</sup>Bjorn Wellenius and Isabel Neto, 'The Radio Spectrum: Opportunities and Challenges for the Developing World' 8(2) info 18, 24.

<sup>256</sup>This argument applies to the majority of Sub-Saharan African countries which have significantly larger rural populations compared to urban based populations.

<sup>257</sup>Licence-exemption is one of the spectrum common models. Under this model, designated bands can be used without individual authorisations according to Bjorn Wellenius and Isabel Neto, 'Managing the Radio Spectrum: Framework for Reform in Developing Countries' World Bank Policy Research Working Paper 4549 (2007) 34. However, license exempt use is regulated. With regard to the license exempt 2.4 GHz and 5.8 GHz bands, users of the band have to adhere to UCC regulations. The other forms of spectrum commons are private commons, where only qualified users have access to the band, which they share, and the more general open wireless

approval from the UCC. It was used mainly by ISPs to provide wireless access to their customers.<sup>258</sup> In order to encourage the use of Wi-Fi technology and to promote the use of internet services in rural and other under-served areas the UCC deregulated the use of this spectrum for the commercial provision of services.<sup>259</sup>

While spectrum commons can facilitate the growth of the internet market in Africa,<sup>260</sup> there is the risk that the commons will be overused and degraded by interference.<sup>261</sup> Despite technology evolution, there is a limit to the number of devices that can co-exist.<sup>262</sup>

Furthermore, spectrum commons can only provide efficient outcomes for certain users. Specifically, spectrum commons is best suited for short range communication, in relatively closed spaces (such as hotels, offices, or airports) or where communications density and spectrum use are low.<sup>263</sup> Not surprisingly, spectrum commons is mainly used for low-power communications, such as Wi-Fi and Bluetooth, for smaller-scale, non-commercial applications.<sup>264</sup> It is not ideal for mobile telephone services. This is because the mobile phone technology in Uganda works in the GSM frequency bands with long range signals. Therefore, spectrum commons will not address the primary concern of spectrum management in Uganda's telecommunications sector, spectrum scarcity for mobile telephone services. Nevertheless, its potential benefits as an efficient mechanism of assigning spectrum for other wireless communications services indicates that the spectrum commons model can play a role in fostering spectrum efficiency in Uganda's telecommunications sector.

network, which involves managing the use of spectrum as a public property by opening up the bands to users of equipment that can find, aggregate, and use vacant spectrum. See Bjorn Wellenius and Isabel Neto, 'Managing the Radio Spectrum: Framework for Reform in Developing Countries' World Bank Policy Research Working Paper 4549 (2007).

<sup>258</sup>Simon Moshiro, 'Licensing in the Era of Liberalisation and Convergence: The Case Study of the Republic of Uganda' Report (2004) 14 <[http://www.itu.int/ITUD/treg/Case\\_Studies/Licensing/UGANDA\\_CS.pdf](http://www.itu.int/ITUD/treg/Case_Studies/Licensing/UGANDA_CS.pdf)> accessed 15 June 2017.

<sup>259</sup>Ibid.

<sup>260</sup>Isabel Neto, Michael L Best, and Sharon E Gillett, 'License-Exempt Wireless Policy: Results of African Survey' (2005) 2(3) Spring MIT Information Technologies and International Development Journal 73<[itidjournal.org/itid/article/download/206/76](http://itidjournal.org/itid/article/download/206/76)> accessed 15 June 2017.

<sup>261</sup>Bjorn Wellenius and Isabel Neto, 'Managing the Radio Spectrum: Framework for Reform in Developing Countries' World Bank Policy Research Working Paper 4549 (2007) 37.

<sup>262</sup>Ibid.

<sup>263</sup>Ibid.

<sup>264</sup>Simon Delaere, 'European Policy Trends Towards Flexible Spectrum Management' (2007) 8 African Journal of Information and Communication 8, 13.

### ***7.5.7 Asymmetric Spectrum Holdings in the Mobile Communications Market and Spectrum Management: A Case for Refarming?***

The use of the right method for spectrum assignment is critical for ensuring spectrum availability for mobile communications. However, spectrum assignment can only go so far to facilitate efficient spectrum management. Sometimes, the key reason for the spectrum scarcity might not relate to the method of spectrum assignment *per se*, but rather a regulator's perception of what size of spectrum holding is efficient in a given wireless communications market. An incorrect perception of the future demands for spectrum may lead to over allocation of spectrum to one operator leading to administrative scarcity. A mechanism that may address the over allocation of spectrum is refarming. Refarming is a combination of administrative, financial, and technical measures aimed at removing users or equipment of the existing frequency assignments either completely or partially from a particular frequency band.<sup>265</sup> The frequency band may then be allocated to the same or different services.<sup>266</sup> Refarming promotes efficient spectrum regulation by reclaiming a portion spectrum from existing operators and competitively allocating it to new entrants.

Reframing as a mechanism for ensuring efficient spectrum management in Uganda is discussed primarily because of the concern that the legacy spectrum assignment in the prime GSM frequency is having an adverse impact on spectrum management and contributing to the artificially created scarcity problem in the mobile communications market.

In 1998, the UCC decided to award licences to the three incumbent mobile operators. The licences provided for the sharing, equally, of the 900 MHz frequency band among the three operators. Additionally, the incumbent mobile operators were granted control over huge chunks of channels in the GSM 1880–2200 MHz band. Following the full liberalisation of the telecommunications sector in 2006, entry in the mobile communications market increased leading to more demand for spectrum in the GSM frequency bands. Due to the UCC's spectrum assignment, there was inadequate spectrum capacity in the GSM frequency bands to meet growing demand. To address this problem, the UCC, in 2007, refarmed some of the radio spectrum in 900 MHz frequency band originally allocated to the incumbent mobile operators in a bid to increase spectrum for mobile communications services.<sup>267</sup> The refarmed radio spectrum was assigned to Hits Telecom (Orange Uganda now Africell) and Warid Telecom (later acquired by Airtel Uganda). However, these

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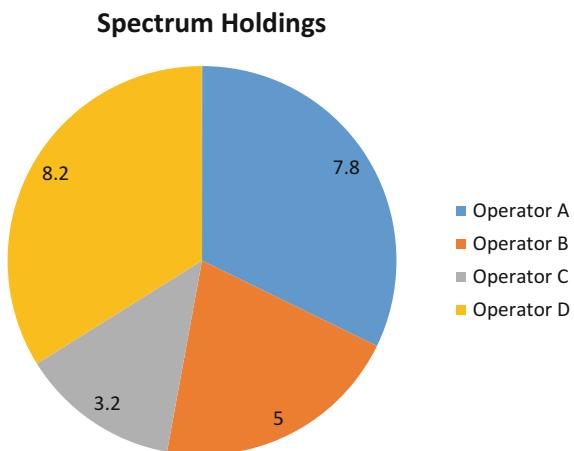
<sup>265</sup>ITU, 'Spectrum Redeployment as a Method of National Spectrum Management' Recommendation ITU-R SM.103.

<sup>266</sup>Ibid.

<sup>267</sup>Interview with Godfrey Sengendo, (then) Manager Spectrum Management, UCC (Kampala, Uganda, 22 November 2011).

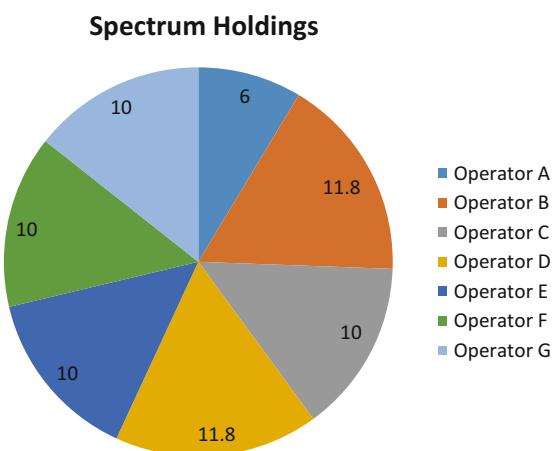
**Fig. 7.2** Spectrum holdings in 900 MHz.

**Source:** By author based on UCC data in ‘Usage Status of Frequency Bands as of 31 August 2012’



**Fig. 7.3** Spectrum holdings in 1800 MHz.

**Source:** By author based on UCC data in ‘Usage Status of Frequency Bands as of 31 August 2012’



efforts have only been short term solutions since demand for spectrum for mobile communications services persists and capacity is unavailable as illustrated in Fig. 7.1. Figure 7.1 shows the allocation of frequency bands for mobile communications services on 30 June 2013 and reveals that only 4.8 MHz was available out of the 108.6 MHz allocated for GSM services. The table also illustrates asymmetric spectrum holding among operators. Figures 7.2 and 7.3 highlight the different holdings of the operators. The figures show a clear case of disproportionate

assignment of spectrum in the GSM bands with some operators having larger spectrum holdings than others.

The four operators: A, B, C, D with spectrum holdings in the prime 900 MHz band and additional spectrum holdings in the 1800 MHz band are in a more favourable position as will be explained. Operators A and D are particularly at an advantage with the largest spectrum holdings, 7.8 MHz and 8.2 MHz, respectively, in the preferred 900 MHz frequency band.

The asymmetric assignment of spectrum holdings has implications for effective implementation of the full liberalisation policy and may serve as a bottleneck to sustainable competition. The current spectrum assignment landscape does not create a level playing field for competition.<sup>268</sup>

Firstly, there is a cost advantage gained from using spectrum in the 900 MHz band rather than the 1800 MHz band. Since lower frequency bands offer longer transmission ranges than higher frequency bands, 1800 MHz licensed operators have to construct more base stations than 900 MHz licensed operators thereby incurring higher costs for provision of the same service.

Secondly, mobile operators with spectrum in the 900 MHz frequency band are able to use the spectrum for 3G services although 3G is commonly licensed at 2100 MHz.<sup>269</sup> Since the licensing in Uganda's telecommunications sector is technology neutral, it enables mobile operators to use their spectrum for emerging technology. Therefore, in addition to the competitive advantage in the provision of mobile telephony services there is also competitive advantage in the provision of mobile data services.<sup>270</sup>

The case of inequitable assignment of spectrum holdings in Uganda's mobile communications market shows that addressing the problem of spectrum is not only about reassessing the spectrum assignment method, but also about addressing asymmetric spectrum holdings in the GSM frequency bands. The asymmetric assignment of spectrum is recognised by the UCC as an obstacle to efficient spectrum management evidenced by the UCC commissioning a study in 2008 to determine how to efficiently use critical spectrum in the 900 and 1800 MHz frequency bands.<sup>271</sup> A key recommendation in the report is refarming in the GSM frequency bands.

UCC has previously used refarming to increase spectrum for mobile communications services. In 2007, UCC refarmed portions of spectrum in the 900 MHz band originally assigned to the incumbent operators and reallocated it to new entrants that required spectrum to provide mobile communications services. Spectrum

<sup>268</sup>Data from the UCC reveals that as of December 31 2012, seven operators had been assigned spectrum in the 1800 MHz band while only four of the seven operators had been assigned spectrum in the 900 MHz band. UCC, 'Usage of Frequency Bands as of 31 December 2012'.

<sup>269</sup>Enrico Calandro, 'Re-farming Frequencies in Rural Areas: A Regulatory Perspective' (5th ACORN\_REDECOM Conference, Lima, May, 2011) 9.

<sup>270</sup>For example, MTN Uganda has refarmed its portion of 900 MHz and 1800 MHz frequency bands in order to provide data services in addition to voice services.

<sup>271</sup>The study was commissioned with regard to efficient spectrum management in GSM frequency bands according to an interview with Godfrey Sengendo, (then) Manager Spectrum Management, UCC headquarters, (Kampala, Uganda, 22 November 2011).

availability in the GSM bands remains an issue of great concern with claims that portions of assigned spectrum are lying idle,<sup>272</sup> meaning that refarming might be a solution. Refarming of spectrum may not only be beneficial for the mobile telephony market but also the broadband market since broadband services can also be provided for in the 900 MHz band.<sup>273</sup> The refarming projects implemented in Europe, Asia, and Latin America centre on reallocating the 2G spectrum (900 and 1800 MHz) for the provision of 3G services. In France and Sri Lanka refarming of spectrum originally for mobile telephony has been done with the aim of supporting new wireless services.<sup>274</sup> It is also being considered in India in order to support the growth of the wireless broadband market.<sup>275</sup>

Referring back to the situation in Uganda, under the new regime ushered in by the enactment of the Communications Act of 2013, refarming has become an integral part of the spectrum management process. This was not the case under the repealed Communications Act, cap. 106 which was silent on the issue of refarming. The Communications Act of 2013 specifically provides for refarming by granting UCC the power, to withdraw spectrum if it is not being utilised optimally or efficiently.<sup>276</sup> The Act is further complemented by the Spectrum Guidelines which offer guidance as to how spectrum refarming is to be conducted.<sup>277</sup> According to its Spectrum Guidelines, the UCC must give adequate notice to allow for reallocation or surrendering of spectrum.<sup>278</sup> The Spectrum Guidelines also address the issue of compensation. The Guidelines stipulate that compensation is to be provided by the new licensees who have to pay the cost of the displacement with the UCC bearing no responsibility for compensation of the existing spectrum users.<sup>279</sup>

Recognition of the importance of refarming is one thing; successfully implementing it is a different matter. The UCC refarmed spectrum in 2007 to increase spectrum for mobile communications services. This increased the amount of available spectrum enabling Hits Telecom (Orange) and Warid to roll out their networks. However, more recent efforts to implement refarming of 900 MHz have

<sup>272</sup>This claim has however been challenged by the incumbent operators who argue that all spectrum assigned to them is needed as part of their long term growth strategy.

<sup>273</sup>Since Uganda has a technology neutral licensing regime, this facilitates optimal usage of spectrum.

<sup>274</sup>NERA Economic Consulting, ‘GSMA, 900 MHz and 1800 MHz Band Refarming Case Study: France’ (30 November 2011); and Rehka Jain, ‘Spectrum Refarming in Sri Lanka: Lessons for Policy Makers and Regulators’ (2007) Working Paper No.10-01/2007, respectively.

<sup>275</sup>‘Spectrum Re-farming: An Unwelcome Option?’ <<http://www.indiatelecombrief.com/index.php/from-the-editors-desk/54702-spectrum-re-farming-an-unwelcome-option>> accessed 15 June 2017; and ‘Should India go for 900 MHz Spectrum Refarming’ <<http://www.telecomindiaonline.com/spectrum-refarming-india.html>> accessed 15 June 2017.

<sup>276</sup>Communications Act 2013, s 25(2).

<sup>277</sup>Radio Spectrum Policy Guidelines, guideline 3.

<sup>278</sup>Ibid.

<sup>279</sup>Ibid.

not been successfully. A plan by the Ministry of ICT and the UCC to comprehensively refarm spectrum in the 900 MHz frequency based on recommendations from a study commissioned in 2008<sup>280</sup> was abandoned in 2010 following difficulties faced in implementing the plan.

The biggest challenge was providing the incumbent operators with compensation commensurate with financial loss arising from refarming of their spectrum holdings. The incumbent mobile operators opposed the refarming plans arguing that they had invested heavily in deploying a network based on the spectrum assigned in their licences.<sup>281</sup> The operators were concerned that refarming would require that affected operators to redesign their existing networks which would also involve huge costs.<sup>282</sup> A study carried out by incumbent mobile operator MTN aimed at determining the losses it would have incurred from the proposed refarming exercise, estimated losses of approximately US \$200 million invested in infrastructure roll out which was based on the radio spectrum assigned.<sup>283</sup> The compensation demands made by the incumbent mobile operators were a key reason for the failed effort by the government to refarm spectrum in the GSM frequency bands. The failed refarming exercise illustrates that one of the core issues that must be properly addressed when seeking to refarm frequencies is compensation of incumbents.

As already mentioned, the Spectrum Guidelines stipulate that licensees benefiting from the refarming exercise are to pay the cost of the displacement.<sup>284</sup> Therefore, responsibility for compensation lies with the user of the refarmed spectrum. While the Spectrum Guidelines clarify who is responsible for compensation, an issue arises with regard to implementation of the provision. It is important to ensure that the financial burden taken on by a new entrant in order to access refarmed spectrum does not affect its viability in the market. In some countries, most notably France,<sup>285</sup> a national refarming fund administered by the national spectrum management authority has been set up.<sup>286</sup> This fund is used to reimburse costs incurred from network redeployment and also provide financial incentives to accelerate refarming process.<sup>287</sup> Such a fund could be financed by new entrants, through revenues from radio license fees in various ways, or combinations of the

<sup>280</sup>The study was commissioned with regard to GSM spectrum.

<sup>281</sup>Interview with Ronald Zakumumpa, Legal Counsel, MTN Uganda (Kampala, Uganda 29 November 2011).

<sup>282</sup>Ibid.

<sup>283</sup>Ibid.

<sup>284</sup>Ibid.

<sup>285</sup>NERA Economic Consulting, '900 MHz and 1800 MHz Band Re-farming Case Study: France' (30 November 2011) <<http://www.gsma.com/spectrum/wpcontent/uploads/2012/04/refarmingcasestudyfrance20111130.pdf>> accessed 15 June 2017.

<sup>286</sup>CEPT, 'Re-farming and Secondary Trading in a Changing Radiocommunications World' (Messolongi, September 2002) 14.

<sup>287</sup>Ibid.

aforementioned.<sup>288</sup> The advantage with using a refarming fund to compensate costs incurred in network redeployment is that it may spread the costs over a large group of contributors reducing the financial responsibility of a new entrant.<sup>289</sup>

Connected to the determination of who is responsible for paying out the compensation for refarming of spectrum is the need to determine fair compensation. Taking the case of spectrum for mobile communications which is the most critical and expensive portion of spectrum, it is bound to be the case that compensation demands may be very high. As already pointed out, MTN estimated that it would suffer losses valued at US \$200 million. This will require that compensation is fairly determined. The Spectrum Guidelines require compensation for costs stemming from displacement. However, it provides no guidance as to how costs of displacement are to be determined. To ensure that compensation is fairly determined requires sufficient time, expertise, and resources.<sup>290</sup>

Another key concern is the potential challenges before the courts brought by incumbent mobile operators likely to be strongly opposed to the refarming process as it poses threats to the entrenched position of ‘legacy users that have protected spectrum access under current regulatory regimes.<sup>291</sup> Observations have been made that spectrum refarming may be perceived as both a threat against incumbent operators’ competitive advantage and to the quality of their wireless services.<sup>292</sup> Therefore, even if the issue of compensation were to be addressed, opposition from incumbent operators is quite likely such that the implementation of the refarming exercise will be stalled by litigation from operators challenging the process.<sup>293</sup>

In light of the challenges faced in attempting to refarm spectrum for mobile communications services, it comes as no surprise that doubt has been expressed about the viability of refarming spectrum in the 900 MHz in Uganda.<sup>294</sup> Therefore, refarming, though an ideal strategy and necessary for addressing spectrum scarcity for mobile communications services, is no silver bullet for enhancing spectrum efficiency.

<sup>288</sup>Ibid.

<sup>289</sup>Ibid.

<sup>290</sup>Ibid, 21.

<sup>291</sup>Enrico Calandro, ‘Re-farming Frequencies in Rural Areas: A Regulatory Perspective’ (5<sup>th</sup> ACORN\_REDECOM Conference, Lima, May 2011) 11.

<sup>292</sup>Ibid.

<sup>293</sup>Incumbent operators have been able to use litigation to successfully challenge efforts made by the UCC to address competition problems in the telecommunications sector through the implementation of relevant provisions of the law. For example, the UCC faced challenges implementing its new policy on interconnection rates when it placed a cap on the interconnection rate that an operator could charge. The largest mobile operator, MTN Uganda Limited, challenged UCC’s mandate requesting an injunction to restrain UCC from publishing and implementing the interconnection rates. See *MTN Uganda Limited v UCC* Miscellaneous Cause No. 225 of 2009 High Court Civil Division. The UCC had to suspend the implementation of the interconnection rates for several months.

<sup>294</sup>Vincent Bagiire, ‘Uganda: Policy and regulatory strategy for deployment of NGN backbone Networks’ (2010) Unpublished case study.

### 7.5.8 *Spectrum Under-Utilisation*

Inefficient spectrum utilisation has been identified as a potential cause of spectrum scarcity in the introduction of this chapter. The manner in which assigned spectrum is used has an impact on the availability of spectrum for wireless telecommunications services. Specifically, if telecommunications operators inefficiently use spectrum holdings assigned, for example, leaving spectrum lying idle, this could restrict competition in a given market by creating a perception of spectrum scarcity. One particular source of concern is telecommunications operators engaging in spectrum hoarding whereby they acquire spectrum holdings greater than their foreseeable technical needs, with the aim of distorting competition.<sup>295</sup> Having sufficient regulatory measures in place to incentivise operators to efficiently use their spectrum holdings is therefore of paramount importance for purposes of guaranteeing efficient spectrum management. However, even in instances where operators engage in efficient spectrum use, a band of frequencies assigned through a spectrum licence is not being utilised by the licensee at a particular time and specific geographical location. A number of studies, primarily in Europe and the United States, measuring spectrum utilisation for, *inter alia*, mobile systems have revealed that spectrum utilisation in frequency bands is very low for extended periods of time.<sup>296</sup>

Though studies are scant in Sub-Saharan Africa, two studies, one in Nigeria, and the other in Uganda have also concluded that spectrum usage in mobile and broadcasting bands is underutilised.<sup>297</sup> The studies support the view that one of the primary causes of spectrum scarcity is inefficient utilisation rather than its unavailability. The subject of underutilisation of spectrum for extended periods of time has given rise to the cognitive radio concept. This concept, which was first introduced in 1999 by Mitola,<sup>298</sup> involves sharing spectrum between a primary user (spectrum licence holder) and a secondary user using dynamic spectrum access techniques enabling the secondary user to utilise that portion of spectrum left

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<sup>295</sup>ERG-RSPG, 'Report on Radio Spectrum Competition Issues' (June 2009) 14 <[http://rspg.europa.eu/\\_documents/documents/meeting/rspg19/rspg09\\_278\\_erg\\_rspg\\_report\\_on\\_radio\\_spectrum\\_competition\\_issues\\_090604.pdf](http://rspg.europa.eu/_documents/documents/meeting/rspg19/rspg09_278_erg_rspg_report_on_radio_spectrum_competition_issues_090604.pdf)> accessed 15 June 2017.

<sup>296</sup>'FCC Spectrum Policy Task Force' (2002) <[http://www.fcc.gov/sptf/files/SEWGFinalReport\\_1.pdf](http://www.fcc.gov/sptf/files/SEWGFinalReport_1.pdf)> accessed 15 June 2017; Ruben de Francisco and Ashish Pandharipande, 'Spectrum Occupancy in the 2.36-2.4 GHz Band: Measurement and Analysis' European Wireless Conference of IEEE, 2010) 231; Soraya Contreas et.al 'An Investigation into the Spectrum Occupancy in Japan in the Context of TV White Space Systems' (6th International Conference on Cognitive Radio Oriented Wireless Networks and Communications, Osaka, June 2011); and Shared Spectrum Inc., 'Spectrum Occupancy Measurements' <<http://www.sharedspectructm.com/measurements/>> accessed 15 June 2017.

<sup>297</sup>Mark Kagarura, Dorothy K Okello, and Roseline N Akol, 'Evaluation of Spectrum Occupancy: A Case for Cognitive Radio in Uganda' (2013) IEEE 9th Conference on Mobile Ad-hoc and Sensor Networks, 167; and Bara'u Gafai Najashi, Feng Wenjiang, and Choiabu Kadri, 'An Insight into Spectrum Occupancy in Nigeria' (2013) 10(1) International Journal of Computer Science 394.

<sup>298</sup>See Joe Mitola and Gerald Maguire, 'Cognitive Radio: Making Software Radios More Personal' (1999) 6(4) IEEE Personal Communications 13.

unused by the primary user. The spectrum occupancy study undertaken in Uganda suggests that this dynamic use of spectrum may have a place in Uganda's spectrum management regime due to underutilisation of spectrum in the mobile communications and broadcasting frequency bands.<sup>299</sup> The next two sub-sections proceed to discuss these aspects of spectrum utilisation and their role in hindering spectrum scarcity and promoting efficient spectrum management.

### **7.5.8.1 Inefficient Spectrum Utilisation by Telecommunications Operators**

Efficient spectrum management is not the sole responsibility of government. Operators' use of spectrum allotted to them may also impact adversely on the availability of spectrum for mobile communications. In recent years, inefficient use by mobile operators of spectrum assigned to them has become a concern for national spectrum management authorities. One notable example is India where the Comptroller and Auditor General (CAG) 2013 report accuses telecommunications operators of inefficient use of spectrum with huge quantity of spectrum lying idle.<sup>300</sup> Though the report focuses on the impact of inefficient spectrum use by the telecommunications operators on government revenue, the report criticises India's line department for wasting spectrum resources by failing to incentivise efficient and effective use of spectrum.<sup>301</sup> Within Sub-Saharan Africa, concerns of under-utilisation of spectrum by telecommunications operators have been raised by the Nigeria's communications commission. The communication commission's decision at the end of 2013 to go ahead with a fresh licensing plan for 2.3 GHz spectrum stems primarily from its realisation that the current operators licensed to operate the 2.3 GHz spectrum had grossly under-utilised spectrum assigned.<sup>302</sup>

In Uganda, spectrum under-utilisation in the mobile communications market has not been an issue that has been specifically expressed in the contemporary discussions on the regulation of competition in the market. However, spectrum under-utilisation had been alluded to during the field study undertaken by the author in 2011. Specifically, allegations had been made against telecommunications operators assigned larger chunks of spectrum in the GSM frequency bands having sections of their spectrum holdings lying idle. While the allegations of spectrum underutilisation were unsubstantiated, the concerns of under-utilisation of spectrum should not be disregarded. A study commissioned by the UCC on spectrum use in

<sup>299</sup>Mark Kagarura, Dorothy K Okello, and Roseline N Akol, 'Evaluation of Spectrum Occupancy: A Case for Cognitive Radio in Uganda' IEEE 9th Conference on Mobile Ad-hoc and Sensor Networks (2013) 167, 174.

<sup>300</sup>CAG, 'Report of Comptroller and Auditor General of India on Revenue Sector' (2013).

<sup>301</sup>Ibid.

<sup>302</sup>Emma Okonji, 'NCC-Operators Are Underutilising 2.3 GHz Spectrum Licence' *This Day* Abuja, 12 December 2013 <<http://www.thisdaylive.com/articles/ncc-operators-are-underutilising-2-3ghz-spectrum-licence/166431/>> accessed 15 June 2017.

the GSM band in 2007 concluded that incumbent mobile operators can use less spectrum to provide mobile communications services.<sup>303</sup> While the study does not expressly indicate that the operators are inefficiently using spectrum, the conclusion suggests that that is the case. Therefore, the discussion on inefficient spectrum use by telecommunications operators in Uganda is justified.

Furthermore, evidence from other jurisdictions indicates high probability of spectrum underutilisation by the telecommunications operators in Uganda. Currently, the mobile operators holding spectrum licences in the 900 and 1800 MHz bands have, in aggregate, approximately 22 million mobile telephone subscribers in Uganda. However, other countries are able to service more mobile subscribers in the GSM band. In the United Kingdom, four operators have spectrum licences for bandwidth within 900 and 1800 MHz frequency bands, they are: Vodafone UK, O2 UK, Hutchinson 3G UK and EE. These four mobile operators had an aggregate of 53 million mobile subscribers in 2013, three times the number of subscribers in Uganda.<sup>304</sup> Within Sub-Saharan Africa, in Nigeria spectrum in the 900 and 1800 MHz bands has been assigned to five mobile operators, EMTS Ltd (Etisalat), MTN Nigeria, Globacom Limited (Glo), Airtel Nigeria and MTel.<sup>305</sup> The five operators had 118.4 million mobile subscribers in total in 2015, seven times the number of mobile subscribers in Uganda.

It must be pointed that both in the UK and Nigeria more spectrum has been allocated for mobile communications services compared to Uganda. In the UK, 61.2 MHz had been assigned in the 900 MHz band while in the 1800 MHz band 149.8 MHz as of March 2013.<sup>306</sup> This is significantly greater than the spectrum assigned in Uganda with 24.2 MHz in the 900 MHz band and 74.4 MHz in the 1800 MHz band. However, in Nigeria, the spectrum assigned in the GSM bands is not significantly greater with 40 MHz assigned in equal portions among the four telecommunications operators the 900 MHz band and 60 MHz in the 1800 MHz band.<sup>307</sup> The Nigeria experience illustrates that the spectrum in the GSM frequency bands in Uganda can cover a greater number of subscribers and that the telecommunications operators could still provide quality services with less spectrum.

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<sup>303</sup> According to interview with Godfrey Sengendo, (then) Manager Spectrum Management, UCC (Kampala, Uganda, 22 November 2011).

<sup>304</sup> Mason Analysys, 'UK Mobile Spectrum Assignments' (March 2013) 4-5 <[http://www.analysysmason.com/PageFiles/40373/Analysys\\_Mason\\_UK\\_spectrum\\_assignments\\_Mar2013.pdf](http://www.analysysmason.com/PageFiles/40373/Analysys_Mason_UK_spectrum_assignments_Mar2013.pdf)> accessed 15 June 2017.

<sup>305</sup> NCC, 'Frequency Allocation Tables' <[http://www.ncc.gov.ng/index.php?option=com\\_content&view=article&id=84&Itemid=98](http://www.ncc.gov.ng/index.php?option=com_content&view=article&id=84&Itemid=98)> accessed 15 June 2017.

<sup>306</sup> Mason Analysys, 'UK Mobile Spectrum Assignments' (March 2013) 4-5 <[http://www.analysysmason.com/PageFiles/40373/Analysys\\_Mason\\_UK\\_spectrum\\_assignments\\_Mar2013.pdf](http://www.analysysmason.com/PageFiles/40373/Analysys_Mason_UK_spectrum_assignments_Mar2013.pdf)> accessed 15 June 2017.

<sup>307</sup> NCC, 'Frequency Allocation Tables' <[http://www.ncc.gov.ng/index.php?option=com\\_content&view=article&id=84&Itemid=98](http://www.ncc.gov.ng/index.php?option=com_content&view=article&id=84&Itemid=98)> accessed 15 June 2017.

The above arguments provide a good basis on which to consider the issue whether the efficient spectrum use by licensees is addressed in Uganda's spectrum management policy.

An analysis of the current regulatory framework reveals that the issue of efficient spectrum use is to be considered. The Communications Act 2013 charges the UCC with the responsibility of monitoring the use of spectrum and grants the UCC powers to withdraw and reform spectrum if it is satisfied that the spectrum is not utilised optimally or efficiently.<sup>308</sup> The Communications Act therefore places great importance on ensuring that operators that have been granted spectrum licences utilise the spectrum efficiently. To ensure that spectrum is efficiently used, the Spectrum Guidelines state as follows:

To ensure that the assigned frequencies are valued, used appropriately and brought into use in a timely manner, the Commission shall use to the extent possible appropriate Spectrum Management and Monitoring systems/tools. In case of violation, the Commission shall follow enforcement guidelines, which shall include revocation of license and application of the penalty schedule under Statutory Instruments in place.<sup>309</sup>

One particular form of inefficient spectrum use hinted at in the field study conducted by the author is spectrum hoarding. This specific conduct is discussed below.

#### 7.5.8.1.1 Anti-Competitive Behaviour and Spectrum Under-Utilisation: Spectrum Hoarding

One specific concern raised with regard inefficient spectrum utilisation in Uganda's telecommunications sector is spectrum hoarding.<sup>310</sup> Hoarding is loosely defined as acquiring or retaining frequencies with a zero or low expectation of efficient use.<sup>311</sup> Hoarding may lead to inefficient spectrum use since the spectrum remains unused or there will be little efficient use. However, a distinction must be made between hoarding that is anti-competitive, in object and effect, and hoarding that has neither the object nor effect of restricting competition on the market.<sup>312</sup> One example of the latter is an operator acquiring spectrum with the intention of providing services in a few years' time with new technology.<sup>313</sup> Anti-competitive spectrum hoarding could

<sup>308</sup>Communications Act 2013, s 25 (1)(a) and (2), respectively.

<sup>309</sup>Radio Spectrum Policy Guidelines, guideline 9.

<sup>310</sup>Interviews with Zulaika Kasujja, legal counsel, Smile Communications Uganda (Kampala, Uganda 16 December, 2011); and Dennis Kakonge, Director Legal, Airtel Uganda (Kampala, Uganda 5 December 2011) highlighted this issue.

<sup>311</sup>Martin Cave, 'Anti-Competitive Behaviour in Spectrum Markets' (2009) TPRC 4 <<http://ssrn.com/abstract=1999846>> accessed 15 June 2017.

<sup>312</sup>ERG-RSPG, 'Report on Radio Spectrum Competition Issues' (June 2009) 11 <[http://rspg.ec.europa.eu/\\_documents/documents/meeting/rspg19/rspg09\\_278\\_erg\\_rspg\\_report\\_on\\_radio\\_spectrum\\_competition\\_issues\\_090604.pdf](http://rspg.ec.europa.eu/_documents/documents/meeting/rspg19/rspg09_278_erg_rspg_report_on_radio_spectrum_competition_issues_090604.pdf)> accessed 15 June 2017.

<sup>313</sup>Ibid.

be described as market players individually or jointly acquiring or retaining spectrum quantities greater than their foreseeable technical needs, with the effect of distorting competition.<sup>314</sup> To discourage spectrum hoarding measures must be in place to incentivise efficient use.

Although most literature focuses on spectrum hoarding in the context of spectrum trading,<sup>315</sup> spectrum hoarding is still an issue of concern under the traditional approach to spectrum management. However, certain factors have to be in place to facilitate anti-competitive behaviour. One factor that is consistently cited is possession of superior spectrum at little cost whereby administrative charges tend to be low (at least compared to the opportunity cost of spectrum).<sup>316</sup> This is because the opportunity cost (the value of the next best alternative foregone as a result of an allocation decision) for holding unused spectrum does not fall on the licensee.<sup>317</sup>

However, in Uganda the spectrum fees incentivise the operators to efficiently use spectrum assigned under their licences. In particular, the most critical spectrum in the GSM frequency bands is assigned at a premium. Operators have to pay a substantial amount in annual usage fees for each MHz. Currently, the UCC charges a fee of 50 million Uganda shillings (approximately US \$20,100) per MHz for GSM 900 MHz band and 30 million Uganda shillings (approximately US \$12,100) for GSM 1800 MHz band.<sup>318</sup> The spectrum fees for mobile communications services do not fall within the definition of low administrative charges. This conclusion is buttressed by the fact mobile operators consider the annual spectrum usage fees as high with the fees representing a substantial portion of the operational costs.<sup>319</sup> Therefore, the spectrum fees serve as a great incentive to utilise licensed spectrum rather than to hoard it.

Aside from the spectrum licence fees incurred by telecommunications operators, there are other measures in place to incentivise operators to efficiently use spectrum provided in the Spectrum Guidelines. Notably, entities that have been assigned spectrum are required to bring all frequencies assigned into operation within a stipulated timeframe. Particularly important is the imposition of obligations on Public Infrastructure Provision License (PIP) holders of achieving technical

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<sup>314</sup>Ibid, 14.

<sup>315</sup>Ibid.

<sup>316</sup>Martin Cave, 'Anti-Competitive Behaviour in Spectrum Markets: Analysis and Response' (2010) *Telecommunications Policy* 34 251 <<http://www.sciencedirect.com/science/article/pii/S0308596110000029>> accessed 15 June 2017.

<sup>317</sup>Ibid.

<sup>318</sup>UCC, 'Uganda Communications Fee Structure' <[http://www.ucc.co.ug/index.php?option=com\\_k2&view=item&layout=item&id=54&Itemid=57](http://www.ucc.co.ug/index.php?option=com_k2&view=item&layout=item&id=54&Itemid=57)> accessed 15 June 2017.

<sup>319</sup>Interviews conducted with mobile operators have pointed to the very high annual spectrum licence fees. Interview with Dennis Kakonge Director Legal, Airtel Uganda (Kampala, Uganda 5 December, 2011); Ronald Zakumumpa, Legal Counsel, MTN Uganda (Kampala, Uganda 29 November 2011). Paul Mwebesa, Head Legal, Warid Uganda (Kampala, Uganda 23 November 2011).

operation within 12 months from the grant of the licence.<sup>320</sup> If an operator has not started technical operation within 12 months, it must show cause why the UCC should not withdraw the right to spectrum.<sup>321</sup> Given that the majority of telecommunications operators provide telecommunications services through their own infrastructure and therefore have PIP licences, this requirement, if properly enforced, is a strong measure against spectrum hoarding. Additionally, the Spectrum Guidelines expressly discourage spectrum hoarding and grant the UCC the right to withdraw spectrum if hoarding is established or the UCC is not satisfied with the level of utilisation of the assigned spectrum or the operator.<sup>322</sup>

While the spectrum regime has measures in place to discourage spectrum hoarding and inefficient spectrum utilisation by telecommunications operators, the UCC has not been active in monitoring spectrum use. The UCC is yet to put in place monitoring systems or tools aimed at fostering efficient spectrum use.<sup>323</sup> It is critical for the UCC to be more engaged in ensuring that telecommunications operators use spectrum optimally in order to address the problem of spectrum scarcity in Uganda's wireless communications markets.

#### **7.5.8.2 Enhancing Spectrum Utilisation: The Case for Frequency Sharing**

Spectrum under-utilisation not only relates to the inefficient spectrum use by a licensee. A number of studies, primarily in Europe and the United States, measuring spectrum utilisation for mobile systems have revealed that spectrum utilisation in frequency bands is very low for extended periods of time.<sup>324</sup> A similar finding has been made in Uganda where spectrum occupancy measurements have been carried out in the capital city Kampala focusing on broadcasting and mobile communications frequency bands.<sup>325</sup> The spectrum occupancy measurements in Uganda's communications sector show levels of low utilisation of bandwidth, particularly in the TV bands.<sup>326</sup>

The spectrum occupancy measurements conducted in Uganda and other countries strongly suggests that there is a need for a flexible approach to regulating spectrum use in the telecommunication sector. One particular concept that is

<sup>320</sup>Radio Spectrum Policy Guidelines.

<sup>321</sup>Ibid.

<sup>322</sup>Ibid, guideline 11(g).

<sup>323</sup>Based on email response from Rebecca Mayanja, of the department of Technology and Licensing in the UCC to author dated 18 March 2013.

<sup>324</sup>Most notably, FCC Spectrum Policy Task Force, 'Report of the Spectrum Efficiency Working Group' (Nov. 2002) <[https://transition.fcc.gov/sptf/files/SEWGFinalReport\\_1.pdf](https://transition.fcc.gov/sptf/files/SEWGFinalReport_1.pdf)> accessed 15 June 2017.

<sup>325</sup>Mark Kagarura, Dorothy K Okello, and Roseline N Akol, 'Evaluation of Spectrum Occupancy: A Case for Cognitive Radio in Uganda' IEEE 9th Conference on Mobile Ad-hoc and Sensor Networks (2013) 167.

<sup>326</sup>Ibid.

gaining ground in the discussion on spectrum management is dynamic frequency sharing through the use of cognitive radio systems.

Cognitive radio is a new type of radio that allows devices and base stations to detect vacant parts of the spectrum and temporarily use these frequencies, allowing various radio technologies to co-exist in the same frequency bands and thus leading to much higher spectrum efficiency.<sup>327</sup> ITU provides a definition for the cognitive radio system: “a radio system employing technology that allows the system to obtain knowledge of its operational and geographical environment, established policies and its internal state; to dynamically and autonomously adjust its operational parameters and protocols according to its obtained knowledge in order to achieve predefined objectives; and to learn from the results obtained.”

The use of cognitive radio applications to efficiently manage spectrum was a concept proposed by Mitola.<sup>328</sup> According to Mitola, a radio frequency transceiver can be designed to intelligently detect whether a particular segment of the radio spectrum is in use, and to jump into (and out of) the temporarily unused spectrum very rapidly, without interfering with the transmission of other authorised users.<sup>329</sup> The cognitive radio applications are increasingly being regarded as having the potential to promote flexible, more efficient spectrum and increased competition in wireless communications markets.<sup>330</sup> Recent regulatory decisions in the United States<sup>331</sup> and in the Europe Union have advanced the potential commercial deployment of cognitive radio systems to facilitate opportunistic secondary use of TV band spectrum, or so-called TV whitespace (TVWS).<sup>332</sup>

The discussion on utilisation of vacant parts of spectrum is very relevant in Uganda according to a study on spectrum occupancy measurements in and around Kampala.<sup>333</sup> One of the conclusions stemming from the study is that TV bands are

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<sup>327</sup>‘Telecommunications Policy-Special Issue on Cognitive Radio: Regulation and Markets’ <[http://www.elsevier.com/\\_data/promis\\_misc/TelecommunicationsPolicySIproposalCR1-1.pdf](http://www.elsevier.com/_data/promis_misc/TelecommunicationsPolicySIproposalCR1-1.pdf)> accessed 15 June 2017.

<sup>328</sup>Joe Mitola and Gerald Maguire, ‘Cognitive Radio: Making Software Radios More Personal’ (1999) 6(4) IEEE Personal Communications 13.

<sup>329</sup>Ibid. See also ITU, ‘Definitions of Software Defined Radio (SDR) and Cognitive Radio System (CRS)’ (2009) ITU-R Report SM2152.

<sup>330</sup>‘Telecommunications Policy-Special Issue on Cognitive Radio: Regulation and Markets’ <[http://www.elsevier.com/\\_data/promis\\_misc/TelecommunicationsPolicySIproposalCR1-1.pdf](http://www.elsevier.com/_data/promis_misc/TelecommunicationsPolicySIproposalCR1-1.pdf)> accessed 15 June 2017.

<sup>331</sup>FCC, ‘Rules for frequency sharing in TV Bands opening TVWS to unlicensed use’ FCC 03-322, FCC’s Spectrum Policy Task Force recommended that FCC migrate toward a ‘policy-based’ solution where spectrum could be used on an opportunistic basis.

<sup>332</sup>‘Telecommunications Policy-Special Issue on Cognitive Radio: Regulation and Markets’ <[http://www.elsevier.com/\\_data/promis\\_misc/TelecommunicationsPolicySIproposalCR1-1.pdf](http://www.elsevier.com/_data/promis_misc/TelecommunicationsPolicySIproposalCR1-1.pdf)> accessed 15 June 2017.

<sup>333</sup>Mark Kagarura, Dorothy K Okello, and Roseline N Akol, ‘Evaluation of Spectrum Occupancy: A Case for Cognitive Radio in Uganda’ IEEE 9th Conference on Mobile Ad-hoc and Sensor Networks (2013) 167, 172.

strong candidates to have spectrum holes detected.<sup>334</sup> The study makes particular reference to the UHF IV and V bands (470–862 MHz) which may present opportunities for high data rate applications, majorly, mobile broadband.<sup>335</sup> Spectrum sharing in the TV bands using cognitive radio technologies is seen as potentially important for broadband access in rural Africa by facilitating the efficient use of underutilised spectrum.<sup>336</sup>

Currently, cognitive radio technologies as a tool for enhancing spectrum utilisation in the telecommunications sector in Uganda remain but a concept. However, the concept of frequency sharing is covered in Uganda's spectrum management regime. According to the Spectrum Guidelines, the UCC aims to promote frequency spectrum sharing either on a primary or secondary basis while taking into account spectrum efficiency and operational requirements of services. The Spectrum Guidelines can therefore form the basis on which the concept of dynamic spectrum sharing is developed.

Though cognitive radios present an exciting opportunity for enhancing spectrum utilisation by opportunistically accessing the spectrum, there are critical challenges to cognitive radio. In practice, they demand big changes to the whole ICT ecosystem and must be orchestrated by the local regulator and by international standard organisations.<sup>337</sup>

One particular challenge is how to efficiently allocate transmission powers and frequency resource among secondary users while minimising interference so as to satisfy quality-of-service constraints of primary users.<sup>338</sup> In addition, it is totally unclear how cognitive radio technologies are currently being planned, standardised and implemented by industry players, how they are impacting market structures and incentives for innovation, and how policy and regulatory frameworks are being adapted or need to be adapted in order for cognitive radio to yield optimal results.<sup>339</sup>

A separate concern arises with regard to the implementation of the concept of spectrum sharing in the telecommunications sector in Uganda and other developing

<sup>334</sup>Ibid.

<sup>335</sup>Ibid, 173.

<sup>336</sup>Charles Thomas Mary, ‘Cognitive Radio for Broadband Access in Rural Africa and Other Developing Countries’ (MSc Thesis, University of York 2011).

<sup>337</sup>Arturo Bassuare, ‘Different Regulation Paths towards Cognitive Radio Technologies: Cases of Finland and Chile’ (23rd European Regional Conference of the International Telecommunication Society, Vienna, July 2012).

<sup>338</sup>Mark Kagarura, Dorothy K Okello, and Roseline N Akol, ‘Evaluation of Spectrum Occupancy: A Case for Cognitive Radio in Uganda’ IEEE 9th Conference on Mobile Ad-hoc and Sensor Networks (2013) 167, 173.

<sup>339</sup>‘Telecommunications Policy-Special Issue on Cognitive Radio: Regulation and Markets’ <[http://www.elsevier.com/\\_data/promis\\_misc/TelecommunicationsPolicySIproposalCR1-1.pdf](http://www.elsevier.com/_data/promis_misc/TelecommunicationsPolicySIproposalCR1-1.pdf)> accessed 15 June 2017.

countries. To date, research and development of cognitive radio standardisation is focused on developed countries deployment scenarios, for example, IEEE 802.22, ACME-92, IEEE 80.11af standards in TVWS.<sup>340</sup> Such countries have a highly developed infrastructure capable of supporting the use of real time database access, and a requirement for broadband data rates.<sup>341</sup> Due to financial constraints and lack of supporting infrastructure in developing countries a different approach may be required to maximise the use of cognitive radio.<sup>342</sup>

## 7.6 Conclusion

The analysis of Uganda's regulatory framework on spectrum management is based on the premise that the spectrum scarcity problems in the mobile communications market are the result of an inefficient management regime. In Uganda's telecommunications sector, wireless technology is the primary means through which the vast majority of customers access telecommunications services. This means that radio spectrum is an important input in the telecommunications sector in Uganda. Therefore, guaranteeing the availability of spectrum for wireless communications services is crucial for the maintenance of competitive telecommunications markets. This chapter has assessed the adequacy of the Uganda's regulatory framework from three angles: spectrum allocation, spectrum assignment, and spectrum utilisation. The three aspects of spectrum management are closely tied to the issue of spectrum availability in that inefficient management of any of the aspects can potentially result in spectrum scarcity.

An overview of Uganda's regulatory framework for spectrum management shows that the primary legislation, the Communications Act and the Spectrum Regulations, have as the primary objective ensuring that spectrum is efficiently managed. This is particularly reflected in the objectives of the Spectrum Regulations that seek to promote efficient spectrum management through measures that, *inter alia*, facilitate the growth of the wireless services market, and optimise the accommodation of radio spectrum use through allocation of adequate spectrum, so as to satisfy evolving demand and ensure efficient spectrum assignment.<sup>343</sup> The wording of the Spectrum Regulations' main objective that seeks to "satisfy evolving demand and ensure efficient spectrum assignment" clearly points to the importance of having a flexible spectrum management regime that is able to meet the evolving spectrum demands in the telecommunications sector.

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<sup>340</sup>Charles Thomas Mary, 'Cognitive Radio for Broadband Access in Rural Africa and Other Developing Countries' (MSc Thesis, University of York 2011).

<sup>341</sup>Ibid.

<sup>342</sup>Ibid.

<sup>343</sup>Communications (Radio) Regulations 2005, SI 2005/23, reg 3(1).

However, the analysis of spectrum management in practice reveals inefficiencies that are threatening the continued growth of the wireless communications market in Uganda. The primary concern relates to the exclusive reliance on the command-and-control method of spectrum management. The UCC faces challenges to efficiently allocate spectrum to meet the demands for spectrum in the liberalised telecommunications sector under the command-and-control method which leaves little room for flexibility. Admittedly, the regulatory body has been proactive in trying to make the command-and-control method more flexible by adopting a technology neutral licensing regime, and allocating higher frequencies to accommodate more users and uses.

Additionally, the digital migration in Uganda will free up a considerable amount of spectrum, specifically in the 800 MHz band that can be reallocated to mobile communications services through CDMA technology which works well in that band.<sup>344</sup> Despite these efforts, the centralised system for allocation of spectrum remains rigid, potentially slowing down the provision of new technology. However, the liberalisation of the allocation process to allow for greater flexibility in the management of spectrum is not an option in Uganda. This is because Uganda's telecommunications sector is still developing and the strong hand of the government is still necessary to ensure that policies are implemented.

While inefficient allocation poses a problem for the development of new markets, the greatest concern in the area of spectrum management in Uganda is spectrum assignment. The two problems identified with regards to spectrum assignment in the telecommunications sector are: (1) the UCC's exclusive reliance on the first-come-first-served method; and (2) a legacy of over allocation of spectrum to the incumbent mobile operators. As regards the first problem, the UCC continues to use a first-come-first-served which is not an ideal method for assigning method where demand for spectrum licences is greater than supply. There are alternative methods specifically designed to assign spectrum where there are mutually exclusive applications for a spectrum licence popular among which are: lotteries, auctions, and beauty contests. Auctions in particular are regarded as the most efficient way of assigning spectrum licences where demand is greater than supply. This is because auctions seek to assign the spectrum licence to the firm that values the licence the most and therefore the one who will have an economic incentive to put the licence to high valued use.<sup>345</sup> However, an analysis of the alternative methods in the context of Uganda's telecommunications sector is inconclusive as to whether the use of any of the alternative methods will enhance the spectrum management and facilitate spectrum availability. It is, however, acknowledged that the strong support for the use of auctions, and the evidence in other Sub-Saharan African countries, albeit a few, proving that an auction can efficiently assign spectrum suggests that the UCC should contemplate the use of the method. The Nigerian

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<sup>344</sup>Mark Kagarura, Dorothy K Okello, and Roseline N Akol, 'Evaluation of Spectrum Occupancy: A Case for Cognitive Radio in Uganda' (2013) IEEE 9th Conference on Mobile Ad-hoc and Sensor Networks 167, 173.

<sup>345</sup>John McMillan, 'Why Auction the Spectrum?' (1995) 19 Telecommunications Policy 191, 195.

experience in particular shows that assignment of spectrum through spectrum auctions is a viable option. Therefore, the incorporation, by the UCC, of auctions into its spectrum assignment model in the mobile communications market should be considered by the government authority.

Choosing the most efficient method to assign spectrum in the liberalised telecommunications sector is of paramount importance. However, an efficient system will not be as effective if the legacy of assignment of spectrum to mobile incumbent operators in Uganda that has led to asymmetry of spectrum holdings is not addressed. The allocation of prime spectrum in the 900 MHz band to the incumbent operators and the resultant asymmetry in spectrum holdings does not create a level playing field for competition. Therefore, measures must be put in place to facilitate a fairer distribution of spectrum among operators. This might entail refarming portions of spectrum in the GSM band to make spectrum in that frequency band available to more firms. However, as has been pointed out in the discussion on refarming, undertaking comprehensive refarming in the GSM band to allow for more symmetrical holdings does not appear to be the most viable option due to the challenges to be faced in trying to implement a refarming project. Nevertheless, refarming is a critical tool for purposes of increasing spectrum availability in the GSM band and efforts should be made to implement it.

The other aspect that has been focused on is ensuring efficient spectrum use by the telecommunications operators as well as promoting secondary use of unused spectrum. Of greater significance is the need to ensure efficient spectrum use by telecommunications operators. The regime allows for measures that promote efficient use of spectrum by telecommunications operators. For example, the high annual spectrum usage fees serve as great incentive to utilise licensed spectrum rather than engage in conduct that under-utilises the spectrum, for example, spectrum hoarding. Furthermore, the measures in place specifically focusing on deterring spectrum hoarding also promote efficient spectrum utilisation.<sup>346</sup> In particular, the Spectrum Hoarding Guidelines provide that, where the UCC is not satisfied with the level of utilisation of the assigned spectrum or the operator or user does not bring the service within the timeframe allowed the UCC has the right to withdraw spectrum. However, there is no evidence to indicate that the UCC has proactively sought to implement the measures in place to prevent spectrum hoarding.

In conclusion, Uganda's spectrum management regime supports a pragmatic system of management to accommodate the dynamic spectrum use in the liberalised telecommunications sector. While the UCC has taken steps to manage spectrum in line with the demands of the liberalised telecommunications sector, the authority must become more engaged in implementing provisions on spectrum management that may enhance efficient spectrum management. Specifically, UCC should consider the use of other methods of spectrum assignment, other than the first-come-first-served method. Furthermore, UCC should implement measures in place to incentivise operators to use assigned spectrum optimally.

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<sup>346</sup>UCC, Radio Spectrum Policy Guidelines.

# **Chapter 8**

## **Competition Regulation**

### **in the Telecommunications Sector in Uganda: The Potential Role of a National Competition Law**

This thesis has analysed the key regulatory aspects crucial for developing and maintaining competitive telecommunications markets in Uganda. The specific aspects are: anti-competitive behaviour in the telecommunications markets including anti-competitive cross-border mergers,<sup>1</sup> interconnection and network access and spectrum management.<sup>2</sup> One key issue that has been addressed in the analysis of the three aspects is whether sector-specific rules are sufficient. The issue has been answered in the affirmative with regard to regulation of interconnection and network access and spectrum management. Both the Interconnection Regulations and Spectrum Regulations are very comprehensive with the key problem being the slow process of implementation of the provisions of the law. However, the same cannot be said for the regulation of anti-competitive behaviour. The analysis of the Fair Competition Regulations suggests that the sector-specific competition rules are inadequate for purposes of regulating anti-competitive behaviour in the telecommunications sector. Uganda's telecommunications sector is governed exclusively by sector-specific rules. One key weakness of the sector-specific rules is the limited powers and remedies available to UCC when regulating cross sector or cross-border conduct. The second weakness relates to enforcement of the rules by UCC. While there are clear examples of UCC taking steps to address competition concerns in the area of interconnection and spectrum management, UCC's involvement in the implementation of the Fair Competition Regulations has been negligible. This gives rise to the question whether economy-wide competition law can play a role in fostering effective regulation of anti-competitive behaviour in the telecommunications sector.

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<sup>1</sup> See Chap. 4 which discusses collusion and abuse of dominance and Chap. 5 which focuses on the concern of anti-competitive cross border mergers.

<sup>2</sup> Chapter 6 on interconnection and network access and Chap. 7 on spectrum management.

## 8.1 Main Rules for the Regulation of Competition in the Telecommunications Sector

There are two main regulatory tools applied in the telecommunications sector in order to facilitate and maintain competition: sector-specific (telecommunications) and competition law. Competition law seeks to safeguard the operation of market forces, by preventing or providing remedies for specific behaviour that can impede such forces and that intervention is focused on the maintenance of competition as a process, rather than the survival of individual competitors.<sup>3</sup> Regulation (sector-specific rules), even where it does not actively suppress competition, often serves as a substitute for market forces, in that it involves stipulating a fairly complete set of prices and accompanying commitments regarding supply and ‘quality of service’.<sup>4</sup>

Within the ambit of the three main forms of regulation, technical, economic and competition, sector-specific rules are usually applied to economic and technical regulation while competition regulation is addressed through competition law. Economic regulation<sup>5</sup> and technical regulation<sup>6</sup> are viewed as more efficiently undertaken through sector-specific rules.<sup>7</sup> Although, technical regulation may involve some anti-competitive behaviour concerns related to setting and enforcing standards allowing for the intervention by a competition authority, it should not be the primary regulator.<sup>8</sup> Similarly, economic regulation is dealt with through

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<sup>3</sup>Robert Anderson, Abraham Hollander, Joseph Monteiro, and WT Stanbury, ‘Competition Policy and Regulatory Reform in Canada 1986-1996’ (1998) 13(1) Review of Industrial Organisation 177, 185.

<sup>4</sup>Ibid.

<sup>5</sup>Economic regulation includes ensuring non-discriminatory access to necessary inputs, especially network infrastructures and adopting cost-based measures to control monopoly pricing, as well as potentially directly controlling providers (granting and policing licences), and terms of sale, that is, output prices in terms of access. See OECD, ‘Relationship between Regulators and Competition Authorities’ 8 (1998) <<http://www.oecd.org/dataoecd/35/37/1920556.pdf>> accessed 15 June 2017.

<sup>6</sup>Technical regulation involves setting and enforcing product and process standards designed to deal with safety, environmental and switching cost externalities, and allocating publicly owned or controlled resources such as spectrum or rights of ways. See OECD, ‘Relationship between Regulators and Competition Authorities’ 8 (1998) <<http://www.oecd.org/dataoecd/35/37/1920556.pdf>> accessed 15 June 2017.

<sup>7</sup>OECD, ‘Relationship between Regulators and Competition Authorities’ (1998) 21 <<http://www.oecd.org/dataoecd/35/37/1920556.pdf>> accessed 15 June 2017.

<sup>8</sup>Ibid.

sector-specific rules.<sup>9</sup> However, when it comes to competition regulation, that is, regulation of anti-competitive conduct and mergers, the tendency has been to rely on competition legislation of economy-wide application.

The above alignment of a form of regulation to either sector-specific rules or competition law has been adopted in a number countries as the approach for regulating the telecommunications sector. This is particularly the case in developed countries where national competition legislation preceded the liberalisation of the telecommunications markets and the introduction of competition. Therefore, competition authorities have played a significant role in creating a level playing field between competitors in the telecommunications sector.

In Sub-Saharan Africa, the trend has been to establish a regulatory framework providing for an independent regulator with its role extending to regulating anti-competitive conduct in the sector.<sup>10</sup> However, the last decade has seen a substantial number of countries enact a national competition law applicable to the telecommunications sector.<sup>11</sup> Uganda is the minority as she is yet to pass a national competition law and relies exclusively on sector-specific rules to govern all three forms of regulation in the telecommunications sector.

While Uganda's regulatory approach in the telecommunications sector is an exception to the general trend, the primary reason for a discussion of the potential role of national competition law stems from the perceived weaknesses in the existing legislative framework on anti-competitive behaviour hinted at in the introduction to this chapter.

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<sup>9</sup>Although the competitiveness of the telecommunications markets following the liberalisation of the telecommunications sector has led to calls by some commentators for a narrowing of the scope of economic regulation and greater reliance on competition rules. See for example, Herbert Ungerer, 'The Regulatory Challenges in the Emerging Competition in the EU' (Scientific Society of Infocommunications Conference, Budapest, September 1999) where he argues that in the long run the competitive telecommunications sector will be adequately governed by competition law exclusively. Also see Howard Shelanski, 'From Sector-Specific Regulation to Antitrust Law for U.S. Telecommunications: the Prospects for Transition' (2002) UC Berkeley Public Law Research Paper 80/2002; Wernhard Moeschel, 'The Future Regulatory Framework for Telecommunications: General Competition Law instead of Sector-specific Regulation-A German Perspective' (2009) 10(1) European Business Organization Law Review 149; Günter Knieps and Patrick Zenhäusern 'Phasing Out Sector-specific Regulation in European Telecommunications' (2010) 6 (4) Journal of Competition Law and Economics 995; and Natascha Freude and Ernst-Olav Ruhle, 'The Evolution from Sector-specific Regulation Towards Competition Law in EU Telecommunications Markets from 1997 to 2011: Different Effects in Practical Implementation' (European Regional Conference of the International Telecommunications Society, Budapest September 2011).

<sup>10</sup>Cornelius Dube, 'Interface between Competition Law and Sector Regulation' <[http://www.cuts-ccier.org/7up4/ppt/NTW-Interface\\_Comp\\_Sector\\_Regulation-Nigeria.ppt](http://www.cuts-ccier.org/7up4/ppt/NTW-Interface_Comp_Sector_Regulation-Nigeria.ppt)> accessed 15 June 2017.

<sup>11</sup>Triggered by regional integration, member states in SADC, COMESA, EAC, ECOWAS, and UEMOA have enacted or are in the process of enacting a national competition law.

## **8.2 Exclusive Reliance on Sector-Specific Rules in Uganda's Telecommunications Sector: Perceived Weaknesses in Competition Regulation**

Uganda stands out as one of the few countries that relies exclusively on sector-specific rules to regulate the telecommunications sector. Thus, while competition regulation in the telecommunications sector usually entails intervention by the national competition authority, in Uganda, sector-specific competition rules are applied. The main provisions on the regulation of anti-competitive behaviour in the telecommunications sector are in the Communications Act and the Fair Competition Regulations. The two pieces of legislation provide for the three main rules of competition law prohibiting: anti-competitive agreements and collusion; abuse of dominant position; and anti-competitive mergers and acquisitions.<sup>12</sup> The key distinction from national competition law is that rather than the rules being of economy-wide application, they are only applied to telecommunications operators licensed by UCC.<sup>13</sup> The enforcement of the provisions of the Communications Act and Fair Competition Regulations on anti-competitive behaviour is the responsibility of UCC with a mandate that covers the three main forms of regulation, that is, technical, economic and competition. This is in stark contrast to a national competition authority that is solely dedicated to regulating anti-competitive practices in a country.

There are benefits accruing from the use of sector-specific competition rules to govern competition regulation in the telecommunications sector. Firstly, in the absence of national competition legislation, having sector-specific competition rules ensures the protection of competition in the telecommunications sector. In Uganda, the process of adopting a national competition law in Uganda has been very slow with no prospect of enacting a law soon.<sup>14</sup> Therefore, the existence of Fair Competition Regulations that are entirely based on competition law principles is an important means of curbing anti-competitive behaviour in the telecommunications sector.

Secondly, the telecommunications sector is characterised by complex technology and has natural monopoly elements that may make it very challenging to apply the conventional competition law principles. Through sector-specific competition rules, the sector can benefit from specific industry expertise of the telecommunications regulator.<sup>15</sup>

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<sup>12</sup>Communications Act 2013, s 53 and Telecommunications (Fair Competition) Regulations 2005, SI 2005/ 24, reg 5.

<sup>13</sup>Communications Act 2013, ss 52 and 53 and Telecommunications (Fair Competition) Regulations 2005, SI 2005/ 24, reg 2.

<sup>14</sup>The draft Competition Bill prepared by the Uganda Law Reform Commission in 2004 is yet to be tabled before Parliament. The Bill is still under review in the line ministry, Ministry of Tourism Trade and Industry.

<sup>15</sup>George K Lipimile, 'Competition and Sector Regulation in Telecommunications' <<http://www.internationalcompetitionnetwork.org/uploads/library/doc440.pdf>> accessed 15 June 2017.

Thirdly, applying national competition law to the telecommunications sector usually creates a situation where two authorities can intervene in the sector's regulation. There are instances where a given conduct by a firm may fall within the provisions of both sector-specific rules and national competition law. This may lead to inconsistent decisions with the industry regulator concluding that the conduct is permitted while the competition authority may decide that the conduct is prohibited. The inconsistent decisions may foster inefficient regulation to the detriment of the regulated telecommunications operators and service providers as well as end consumers. Alternatively, an operator might exploit the ambiguity in regulatory boundaries between the industry regulator and the competition authority by engaging in forum shopping hindering effective enforcement of the national competition law. A clear example of such a scenario is illustrated by the *Competition Commission v Telkom SA Ltd* case.<sup>16</sup> In 2004, the South Africa Competition Commission referred a case alleging anti-competitive behaviour by the incumbent fixed-line operator, Telkom SA, to the Competition Tribunal. However, the Competition Tribunal was only able to finally pronounce itself on the matter in 2011 because Telkom SA had challenged the jurisdiction of the Competition Commission on the subject matter.<sup>17</sup> While regulatory overlap is a concern, it must be noted that this problem can be addressed by clearly defining the scope of power of the two regulators.

Despite the above-mentioned benefits of having sector-specific rules, it has become clear that simply relying on sector-specific to regulate anti-competitive behaviour in the telecommunications sector is not enough. This is because competition law enforcement through sector-specific competition rules has a number of limitations. The weaknesses can be summarised as the limited scope of application of the Fair Competition Regulations. By only governing the telecommunications sector in Uganda exclusively, the Regulations limit the power and range of remedies available to UCC. Specifically, the legislation is unable to effectively regulate conduct of a cross-border or cross-sector nature. There is need for competition rules with a reasonably broad scope to address potential anti-competitive consequences of FDI.

FDI in Uganda's telecommunications sector is very significant with a number of multinational telecommunications groups operating through local subsidiaries in the country and the rise in the number of cross-border mergers affecting Uganda's telecommunications sector. The legal framework should be able to equip the designated competition authority in the telecommunications sector with adequate powers to govern cross-border conduct.

With regard to cross sector conduct, the convergence of communications may make it difficult for UCC to effectively regulate anti-competitive behaviour through the Fair Competition Regulations. It is important to have a law flexible enough to deal with conduct in a converged communications sector. National competition law

<sup>16</sup>*Competition Commission v Telkom SA Ltd* 11/CR/Feb04 [2011] ZACT 2.

<sup>17</sup>Case 11239/04 *Telkom SA Limited v The Competition Commission of South Africa and the Competition Tribunal of South Africa* [2008] ZAGPHC 188.

with its economy-wide scope is viewed as a better tool for regulating anti-competitive conduct in the telecommunications sector.<sup>18</sup>

It must be noted that Uganda currently has a single regulator (UCC) for the entire communications industry created from the merger of the telecommunications regulator (UCC) and the broadcasting regulator, Uganda Broadcasting Council (UBC) in 2012. In 2013, a new Communications Act, which is a unified communications sector law,<sup>19</sup> brought the merger between the two communications sector regulators into effect. Despite the creation of a single regulator for the communications sector, regulation of anti-competitive behaviour is still regulated under the Fair Competition Regulations with its apparent weaknesses.<sup>20</sup> A national competition law with a competition authority with economy-wide powers provides a more effective regime of addressing anti-competitive behaviour of a cross sector nature.

Cross sector conduct is not limited to the convergence of communications, a telecommunications operator might engage in anti-competitive behaviour in another economic sector. There is evidence of such conduct from other jurisdictions that have regulated anti-competitive behaviour in the telecommunications sector solely through sector-specific competition rules. In Hong Kong, the Telecommunications Ordinance Cap. 104, which incorporated various competition law concepts, was criticised for its inability to effectively regulating cross-border conduct. One particular situation that illustrated the ineffectiveness of the regime was the cross sector bundling of telecommunications and property management services.<sup>21</sup> The telecommunications authority was unable to rule on the conduct of developer and management companies although they bundled a telecommunications service with other property management services.<sup>22</sup> The inability of the Fair Competition Regulations to deal with cross sector conduct is a key reason why the UCC supports the enactment of a national competition law.<sup>23</sup>

In addition, to limitations in the scope of application of the Fair Competition Regulations, there is also the issue of effective enforcement of the sector-specific competition rules. UCC has a broad mandate covering not only competition regulation but also technical and economic regulation. Therefore, UCC's policy objectives are not restricted to protecting and fostering competition but also include

<sup>18</sup>Nikos Th Nikolinakos, *EU Competition Law and Regulation in the Converging Telecommunications, Media and IT Sectors* (Kluwer Law International 2006) 187.

<sup>19</sup>The Communications Act of 2013 consolidated and harmonised the now repealed Uganda Communications Act, Cap 106 and the Electronic Media Act Cap.104.

<sup>20</sup>The Communications Act 2013, s 96 repealed the Communications Act, Cap.106 but saved all statutory instruments that were made under it.

<sup>21</sup>Richard W S Wu and Grace L K Leung, 'Competition Regulation in the Hong Kong Telecommunications Sector-Challenges and Reforms' (2008) 32 Telecommunications Policy 652, 655.

<sup>22</sup>Ibid.

<sup>23</sup>Views expressed in an interview with Ann Rita Ssemboga, Economist, UCC (Kampala, Uganda 7 December, 2011).

encouraging private sector investment in the communications sector and enhancing national coverage of communications services.<sup>24</sup>

The broad mandate imposes on UCC a wide range of responsibilities casting doubt on its ability to develop the necessary competences needed to analyse whether a given conduct is anti-competitive or not.<sup>25</sup> In contrast, a competition authority is primarily dedicated to protecting competition by regulating anti-competitive practices. It can therefore, develop the requisite competition analysis expertise and thereby detect and prosecute anti-competitive conduct.

Another concern arising from UCC's broad mandate is the regulators focus on other forms of regulation with limited attention to competition regulation. It speaks volumes that in the instances where UCC has intervened to address competition concerns in the telecommunications sector, it has relied on its economic regulation powers rather than its competition regulation powers. UCC's intervention in the price war in the mobile telephone services market between 2010 and 2011 involved the application of the price cap system provided in the Tariff Regulations.<sup>26</sup> To deal with the high interconnection rates in the mobile telephone services market, it relied on the Interconnection Regulations to determine the interconnection rates.<sup>27</sup> While the choice of legislation might have been appropriate for the given situation, it is rather telling that there is a dearth of enforcement examples under the Fair Competition Regulations.

Another reason why national competition law should be incorporated in the legislative framework for the telecommunications sector in Uganda relates to the concern that an industry regulator may have a lax attitude towards actual or potential violations of the Fair Competition Regulations. The lax attitude may be due to concerns that enforcement of competition law leads to unwanted market performances such that the regulator resorts to other instruments of regulation.<sup>28</sup> It may also result from regulatory capture. Sector-specific regulators are regarded as more susceptible to regulatory capture than a national competition authority. Regulatory capture occurs when the regulator identifies itself too closely with, and so serves the interests of, certain industry players over those interests of others.<sup>29</sup> The fear of regulatory capture was one of the reasons for the disbanding

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<sup>24</sup>See Communications Act 2013, s 3.

<sup>25</sup>UCC is divided into different departments, with competition regulation falling within the Competition and Corporate Affairs department. However, this department's mandate not only covers competition but also, interconnection regulation, tariff regulation, economic monitoring and technical standards development.

<sup>26</sup>Telecommunications (Tariffs and Accounting) Regulations, SI 2005/27, reg.6.

<sup>27</sup>Specifically, Telecommunications (Interconnection) Regulations, SI 2005/25, reg.15(1) that provides for a cost-oriented basis for determining interconnection rates.

<sup>28</sup>Bernhard Duijm, 'On the Institutional Setting of Ex Post Regulation in Regulated Industries' 6 <<http://www.garsonline.de/Downloads/Regulation%20of%20Airports/021108-Duijm.pdf>> accessed 15 June 2017.

<sup>29</sup>John Buckley, *Telecommunications Regulation* (The Institution of Electrical Engineers 2003) 65.

in 1997 of the telecommunications regulator for Australia, Austel.<sup>30</sup> Regulatory responsibility was handed over to the Australian Competition and Consumer Commission.<sup>31</sup> The lax attitude may also relate to the regulator's desire to achieve other objectives. For example, exempting conduct with potential anti-competitive effective, for example, an acquisition, from the application of the competition rules in order to encourage private sector investment.

The analysis of the regulation of anti-competitive conduct in the telecommunications sector in Uganda reveals a lax attitude in enforcing the Fair Competition Regulations.<sup>32</sup> For example, there have been a number of telecommunications mergers affecting Uganda's telecommunications market both domestic and cross-border mergers.<sup>33</sup> Despite the existence of provisions in the Fair Competition Regulations requiring merger review, UCC is yet to assess whether a merger affecting the telecommunications sector in Uganda is anti-competitive.<sup>34</sup> This is not to suggest that UCC's lax attitude in enforcing the Fair Competition Regulations is based on the need to fulfil other objectives or regulatory capture. It might be linked to its broad mandate. However, it does indicate a national competition authority can step into regulate anti-competitive behaviour where enforcement is found wanting.

The experience in South Africa can be cited to illustrate the importance of having general competition law applicable to the telecommunications sector. Both the telecommunications regulator ICASA and the Competition Commission have jurisdiction over competition matters in the telecommunications sector. However, it is the South Africa Competition Commission that has been more vigilant in addressing competition concerns in the telecommunications sector. For example, the Competition Commission in 2010 completed its investigation into claims of interconnection price fixing made against the two largest mobile operators MTN and Vodacom. The Competition Commission found neither operator liable under the Competition Act.<sup>35</sup> Prior to that, the Competition Commission had

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<sup>30</sup>Ibid.

<sup>31</sup>Ibid.

<sup>32</sup>Chapter 4 analyses the regulation of anti-competitive behaviour in the telecommunications sector in Uganda and comes to the conclusion that there is poor enforcement of the provisions of the law on anti-competitive behaviour. See specifically, Sect. 4.4.

<sup>33</sup>Examples include: Celtel International BV/MTC, Hits Telecom/France Telecom, Zain International BV/Bharti Airtel, and Warid Telecom/Airtel Uganda.

<sup>34</sup>UCC does not evaluate mergers only requiring notification of the transaction.

<sup>35</sup>MTN, Vodacom in Clear on Collusion Charges' Techcentral 23 March 2011 <<http://www.techcentral.co.za/mtn-vodacom-in-the-clear-on-collusion-charges/22038/>> accessed 15 June 2017.

intervened to address claims by Cell C of discriminatory interconnection rates charged by MTN.<sup>36</sup> The Competition Commission's intervention is significant because high interconnection rates had been a major concern in South Africa's telecommunications sector since 2001 when MTN and Vodacom increased their interconnection rates by 500%. Until 2010, ICASA, as the independent regulator, had not been able to effectively regulate interconnection rates in part due to the absence of legislation on interconnection.<sup>37</sup>

The Competition Commission has also regulated access to telecommunications facilities although ICASA also has powers to regulate access to telecommunications facilities under the Electronic Communications Act.<sup>38</sup> In 2004, the Competition Commission investigated a complaint made against the incumbent operator, Telkom SA, of refusal to deal in essential facilities in contravention of the Competition Act. The Competition Commission concluded that Telkom SA had engaged in anti-competitive conduct and was liable under the Competition Act.<sup>39</sup> In 2011, the competition tribunal came to the same finding which resulted in Telkom SA being compelled to grant access to its fixed network.<sup>40</sup> The intervention by the Competition Commission served to address a key competition concern in the value-added services market where independent value-added service providers dependent on Telkom SA's fixed network infrastructure were granted access only after agreeing to unfavourable terms and conditions. Therefore, South Africa's Competition Commission's intervention in the telecommunications sector has complemented ICASA's role by filling gaps in the regulatory framework.

The weaknesses with regard to the application of sector-specific competition rules and the potential advantages of applying general competition law show that Uganda's legal framework on telecommunications stands to benefit from the enactment of a national competition law.

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<sup>36</sup>South Africa Competition Commission, 'Competition Commission refers Cell C complaint against MTN for price discrimination to Tribunal' (Press Statement 30th July 2007) <<http://www.compcom.co.za/2007-media-releases/>> accessed 15 June 2017.

<sup>37</sup>In 2010, the Call Termination Regulations, 2010 Gazette No 33698, were introduced in order to bring down the high interconnection rates in voice market.

<sup>38</sup>Electronic Communications Act 2005, ch 8.

<sup>39</sup>Outcome of Competition Tribunal Hearing: Competition Tribunal imposes R449 million penalty on Telkom for 'bullying' its competitors' <<http://www.compcom.co.za/assets/Uploads/AttachedFiles/MyDocuments/Tribunal-iposes-R449M-on-Telkom.pdf>> accessed 15 June 2017.

<sup>40</sup>*Competition Commission v Telkom SA Ltd* 11/CR/Feb04 [2011] ZACT 2.

### 8.3 National Competition Law to Facilitate Competition in the Telecommunications Sector

Reassessment of the nature of regulatory oversight in the liberalised telecommunications sector is nothing new. Most literature<sup>41</sup> as well as case law,<sup>42</sup> has focused on the relationship between economic regulation via sector-specific rules and competition law. There has been less literature discussing the issue whether sector-specific competition rules provide adequate protection against anti-competitive practices where national competition law is absent.<sup>43</sup> This may be explained by the fact that few countries rely exclusively on telecommunications specific competition rules.<sup>44</sup> The existing literature supports the application of a national competition law with exclusive reliance on telecommunications competition rules regarded as

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<sup>41</sup>Pierre Larouche, *Competition Law and Regulation in European Telecommunications* (Hart Publishing 2000); Damien Geradin and Michel Kerf, *Controlling Market Power in Telecommunications: Antitrust vs. Sector-Specific Regulation* (Oxford University Press 2003); Milena Stoyanova, *Competition Problems in Liberalized Telecommunications: Regulatory Solutions to Promote Effective Competition* (Kluwer Law International 2008); and Sahin Ardiyok and Fuat Oguz, ‘Competition Law and Regulation in the Turkish Telecommunications Industry: Friends or Foes’ (2010) 34 Telecommunications Policy 3 233. There has also been literature related to Sub-Saharan Africa: Zambia Competition Commission, ‘The Relationship between Competition Authorities and Sectoral Regulators, Particularly with Respect to Abuse of Dominant Position: The Case of Zambia’ (2006) <[http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwjbydGG643XAhUF0xoKHXwABNQQFggoMAA&url=http%3A%2F%2Fwww.competition-commission-india.nic.in%2Fspeeches\\_articles\\_presentations%2F9-PPT\\_Lahore\\_06.pdf&usg=AOvVaw3PSFqIBxrnwFWa5IbC-jf3](http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwjbydGG643XAhUF0xoKHXwABNQQFggoMAA&url=http%3A%2F%2Fwww.competition-commission-india.nic.in%2Fspeeches_articles_presentations%2F9-PPT_Lahore_06.pdf&usg=AOvVaw3PSFqIBxrnwFWa5IbC-jf3)> accessed 15 June 2017; Heather Irvine and Lara Granville, ‘Who to Call? Concurrent Competition Jurisdiction in the South African Electronic Communications Sector’ (Third Annual Competition Commission, Competition Tribunal Conference on Competition Law, Economics and Policy in South Africa, Johannesburg, September 2009); and Kasturi Moodaliyar and Keith Weeks ‘A Framework for Promoting Competition in Electronic Communications: Clarifying the Role of the Competition Authority and the Sector Regulator’ (Third Annual Competition Commission, Competition Tribunal Conference on Competition Law, Economics and Policy in South Africa, Johannesburg, September 2009).

<sup>42</sup>The two most notable cases are: Case T-271/03 *Deutsche Telekom AG v European Commission* Case T-271/03 [2008] ECR II; and *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko LLP* [2004] 540 U.S. 398 in which European Union Court of Justice (CJEU) and the US Supreme Court, respectively, addressed the issue whether general competition law could be applied to conduct in the telecommunications sector despite remedies available under sector-specific regulation. While the CJEU answered in the affirmative, the U.S. Supreme Court held that “if a legal mechanism exists, as with the 1996 Act, to compel access to the putative monopolist’s resource, the refusal to deal doctrine has nothing to remedy and, therefore, plaintiffs did not state an antitrust claim” (*Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 411).

<sup>43</sup>The few examples include: Thomas Cheng, ‘A Tale of Two Competition Law Regimes-The Telecom-Sector Competition Regulation in Hong Kong and Singapore’ (2007) 30(3) World Competition 501; and Richard W S Wu and Grace L K Leung ‘Competition Regulation in the Hong Kong Telecommunications Sector-Challenges and Reforms’ (2008) 32 Telecommunications Policy 652.

<sup>44</sup>In Sub-Saharan Africa, the notable examples aside from Uganda, are Ghana and Nigeria.

ineffective.<sup>45</sup> This supports the premise made at the beginning of this chapter that national competition law can play an important role in enhancing competition in Uganda's telecommunications sector.

While national competition law can play an important role in the regulation of the telecommunications sector, embracing the application of national competition law in the telecommunications sector gives rise to problem of regulatory overlap. The enactment of a national competition law and the accompanying establishment of a competition authority will change the regulatory landscape in Uganda's telecommunications sector by introducing a second regulator. Ambiguity in the definition of the powers of the second regulator may lead to regulatory overlap resulting in inefficient regulation of the sector. It is therefore critical when promoting the application of national competition law in the regulated telecommunications sector to also have in place measures that harmonise the relationship between the competition authority and UCC.

## 8.4 Clarifying the Role of a National Competition Authority Regarding Competition Regulation in the Telecommunications Sector

The previous sub-section argues for the need for a national competition law to facilitate effective regulation of anti-competitive practices in Uganda's telecommunications sector. The draft Competition Bill of 2004, which serves as the best example of the form Uganda's national competition law is likely to take if enacted, provides for the establishment of a Competition Commission to enforce the law.<sup>46</sup> Since the law will be of economy-wide application,<sup>47</sup> the Competition Commission will have powers to intervene in the regulation of anti-competitive conduct in the telecommunications sector. This brings into play the question how to apply national competition legislation in the regulated telecommunications sector.

The involvement of a national competition authority in telecommunications regulation increases the risk of conflict between institutions due to overlapping jurisdictions. Failure to clearly allocate regulatory responsibilities increases the risk of concurrent and inconsistent decisions resulting in ineffective competition regulation.<sup>48</sup> Therefore, clarifying the competencies of the Competition Commission

<sup>45</sup>See Thomas Cheng, 'A Tale of Two Competition Law Regimes-The Telecom-Sector Competition Regulation in Hong Kong and Singapore' (2007) 30(3) World Competition 501 and Richard W S Wu and Grace L K Leung, 'Competition Regulation in the Hong Kong Telecommunications Sector-Challenges and Reforms' 32 (2008) Telecommunications Policy 652.

<sup>46</sup>Draft Competition Bill 2004, cl 5.

<sup>47</sup>Ibid, cl 4.

<sup>48</sup>Damien Geradin and Michel Kerf, *Controlling Market Power in Telecommunications: Antitrust vs. Sector-Specific Regulation* (Oxford University Press, 2003) 350.

intervening in the regulation of telecommunications sector is of utmost importance in order to promote and maintain competition.

There are two options for addressing overlapping jurisdictions concerns. The first option is exclusive enforcement of competition law by the competition authority, while the second option involves conferring concurrent powers of competition enforcement on the competition and telecommunications regulators. The first option which involves separating competition law enforcement from regulation has the advantage of ensuring that competition law enforcement is administered by an authority thoroughly understanding the law and with cultures suited to implementation of the law.<sup>49</sup> On the other, the second option that allows for concurrent jurisdictions may benefit from specific industry expertise of the telecommunications regulator.

Of the two options, effective implementation of concurrent jurisdiction raises the most concern. Concurrent jurisdiction substantially increases the risk of inefficient competition regulation in the telecommunications sector since different institutions will be dealing with same issues. This is because both sector-specific and competition rules can be applied to the same matter in certain circumstances.<sup>50</sup> For example, mandating access to essential facilities could be done via the national competition law,<sup>51</sup> or through the Interconnection Regulations.<sup>52</sup> Furthermore, predatory pricing or margin squeeze provided for in the Fair Competition Regulations<sup>53</sup> and the draft Competition Bill<sup>54</sup> may also be addressed by the Tariff Regulations which give UCC the authority to regulate the prices of services in the telecommunications market through a price caps.<sup>55</sup>

One particular concern regarding concurrent jurisdiction is that it can lead to forum shopping where a telecommunications operator can ignore the ruling of one regulator, and approach the other regulator.<sup>56</sup> Exclusive enforcement of competition law by the competition authority, in contrast, eliminates the risks of conflict between institutions due to lack of overlapping jurisdictions in competition law enforcement since the sector-specific regulator and competition authority are functionally separate.

While exclusive enforcement of competition law by the competition authority promotes efficient competition regulation by eliminating conflicts over

<sup>49</sup>OECD, ‘Relationship between Regulators and Competition Authorities’ (1998) 33 <<http://www.oecd.org/dataoecd/35/37/1920556.pdf>> accessed 15 June 2017.

<sup>50</sup>ICN, ‘Report of the ICN Working Group on Telecommunications Services’ 27 <<http://www.internationalcompetitionnetwork.org/uploads/library/doc384.pdf>> accessed 15 June 2017.

<sup>51</sup>Draft Competition Bill 2004, cl 44.

<sup>52</sup>Telecommunications (Interconnection) Regulations 2005, SI 2005/25, reg 14 (4)(g).

<sup>53</sup>Communications (Fair Competition) Regulations 2005, SI 2005/24, reg 6 (1)(a).

<sup>54</sup>Draft Competition Bill 2004, cl 44.

<sup>55</sup>Telecommunications (Tariffs and Accounting) Regulations, SI 2005/27, reg 6.

<sup>56</sup>Norman Manoim, ‘South Africa: Competition Regulation Failing’ (2006) <<http://www.regulateonline.org/content/view/859/79/>> accessed 15 June 2017.

enforcement, concurrent jurisdiction appears to be the more ideal approach for Uganda's telecommunications sector. UCC has been the exclusive regulator of the telecommunications sector and therefore has developed invaluable expertise on the regulation of the sector. At the same time, in the initial years of operation, the national competition authority will focus on building institutional capacity and slowly gaining enforcement experience. The Competition Commission will need personnel with expertise to understand telecommunications specific technical issues in order to effectively investigate cases of anti-competitive practices in the telecommunications sector. The Competition Commission would benefit from the engagement of with UCC in competition matters in the telecommunications sector.

However, concurrent jurisdiction in competition regulation substantially increases the risk of inefficient competition enforcement. Therefore, if the concurrent approach is to be adopted in Uganda's telecommunications sector, it is important to have mechanisms in place to minimise the risk of conflict between the Competition Commission and UCC.

#### ***8.4.1 Mechanisms to Facilitate Efficient Regulation Where There's Concurrent Jurisdiction***

A variety of mechanisms have been used to address concerns of overlapping jurisdiction including: informal co-operation, delimitation of jurisdiction mechanisms, and organised co-operation mechanisms.<sup>57</sup> In Uganda, the draft Competition Bill provides that a statutory authority must make a reference to the competition authority if, in the course of any proceeding before the statutory authority, an issue is raised by any party that any decision that the authority has taken is contrary to the provision of the competition law.<sup>58</sup> Thus, UCC is obliged to involve the Competition Commission if in the course of enforcing its mandate, concerns are raised that the regulator has taken its decision in contravention of the Competition Act. However, this provision, and the Bill altogether, do not clearly stipulate regulatory boundaries of the Competition Commission when enforcing the Competition Act in the telecommunications sector.

In a number of countries, the relationship between the national competition authority and sector-specific regulators is specifically defined in legislation. In the United Kingdom,<sup>59</sup> Namibia,<sup>60</sup> Singapore,<sup>61</sup> South Africa,<sup>62</sup>

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<sup>57</sup>ICN, 'Report of the ICN Working Group on Telecommunications Services' 28 <<http://www.internationalcompetitionnetwork.org/uploads/library/doc384.pdf>> accessed 15 June 2017.

<sup>58</sup>Draft Competition Bill 2004, cl 16.

<sup>59</sup>Competition Act 1998, section 54 and Schedule 10 of the Act as well as Competition Act (Concurrency) Regulation 2004 which gives guidelines on how concurrency can be determined. In particular, regs 4 and 5.

<sup>60</sup>Competition Act 2003, s 67.

<sup>61</sup>Competition Act, Cap 50B, s 33.

<sup>62</sup>Competition Act 1998, ss 3, 21 and 82.

and Zambia,<sup>63</sup> the national competition law has provisions accommodating concurrent powers of sector regulators.

Additionally, to enable effective implementation of the provision on concurrent jurisdiction, some competitions authorities have a memorandum of understanding with sector-specific regulators that seeks to define the relationship between the two regulatory bodies. However, it must be noted that effectively implementing concurrent jurisdiction has been challenging in a number of jurisdictions despite regulators entering into memoranda of understanding. This is particularly the case where the sector regulator has been in existence prior to the enactment of a national competition law as has been the trend in Sub-Saharan Africa countries. The experience in South Africa serves as a good example of the challenges faced in effectively implementing concurrent jurisdiction in the telecommunications sector.

#### **8.4.1.1 South Africa's Experience**

Prior to 2000, the Competition Commission lacked jurisdiction to enforce the Competition Act in regulated sectors. The Competition Act defined its scope of application as covering all economic activity within, or having effect within South Africa save for acts subject to or authorised by public regulation.<sup>64</sup> An amendment to the Act in 2000 extended the enforcement powers of the Competition Commission to regulated sectors with the amendment providing as follows:

Despite anything to the contrary in any other legislation, public regulation or agreement, this Act applies to all economic activity within, or having an effect within, the Republic, subject to subsections (2) and (3).<sup>65</sup>

The amendment specifically provides for concurrent jurisdiction in regulated sectors and proceeds to define the manner in which the concurrent jurisdiction is to be exercised.<sup>66</sup> With regard to the manner in which concurrent jurisdiction is to be exercised the Act provides that it is the Competition Commission's responsibility to negotiate agreements with any regulatory authority for purposes of co-ordinating and harmonising the exercise of jurisdiction over competition matters within the relevant industry or sector.<sup>67</sup> In addition, section 82 (3) of the Act provides for certain matters that must be included in the co-operation agreement between the Competition Commission and the sector-specific regulator. Thus, the legislation in South Africa provides guidance on the implementation of concurrent jurisdiction in regulated sectors.

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<sup>63</sup>Competition and Consumer Protection Act 2010, pt VI.

<sup>64</sup>Competition Act 1998, s 3(1)(d).

<sup>65</sup>Ibid, s 3(1)(a).

<sup>66</sup>Ibid, s 3(1)(a).

<sup>67</sup>Ibid, s 21(1)(h).

To further facilitate effective implementation of concurrent jurisdiction, in 2002, the Competition Commission entered into a number of agreements with sector regulators, including a Memorandum of Agreement with ICASA.<sup>68</sup> Despite the existence of a Memorandum of Understanding between the Competition Commission and ICASA and the Competition Act's pronouncements on concurrent jurisdiction, the implementation of the concurrent jurisdiction in the telecommunications sector in South Africa has been problematic.

One reason behind the challenges faced in effectively implementing concurrent jurisdiction in the telecommunications sector has been the ambiguity as regards competition regulation powers. The Telecommunications Act of 1996, which was repealed and replaced by the Electronic Communications Act of 2005, included aspects of competition analysis to be conducted by the regulator. The Act provided as follows:

Where it appears to the authority that Telkom, in the provision of its telecommunications services, is taking or proposing to take any step which confers or may confer on it an undue advantage over any person who may in the future be granted a licence in competition with Telkom, the authority may direct Telkom to cease or refrain from taking such step, as the case may be.<sup>69</sup>

This provision resulted in firms filing the same complaints with ICASA and the Competition Commission, and forum shopping.<sup>70</sup> The problem created by the provision was magnified in the Telkom case explained below.<sup>71</sup>

In 2002, the South African Value Added Networks Association (SAVA), the Internet Service Providers Association (ISPA) and 18 Value Added Network Services (VANS) providers lodged a complaint before ICASA and the Competition Commission alleging anti-competitive behaviour by incumbent operator Telkom SA. In 2004, following investigation of the complaint by the Competition Commission, the Commission concluded that Telkom SA had engaged in anti-competitive conduct.<sup>72</sup> The Competition Commission referred various aspects of the complaints raised to the Competition Tribunal for adjudication.<sup>73</sup> Before the

<sup>68</sup>GG 23857: GN 1747 of 2002. Memorandum of Agreement entered into between the Competition Commission and ICASA, <[www.icasa.org.za](http://www.icasa.org.za)> or <[www.compc.com.co.za](http://www.compc.com.co.za)> accessed 15 June 2017.

<sup>69</sup>Telecommunications Act 1996, s 36(1)(d).

<sup>70</sup>Kasturi Moodaliyar, 'Competition and Regulatory Overlaps: Experience of South Africa' 5 <[http://www.cuts-ccier.org/IICA/pdf/Country\\_Paper\\_South\\_Africa.pdf](http://www.cuts-ccier.org/IICA/pdf/Country_Paper_South_Africa.pdf)> accessed 15 June 2017.

<sup>71</sup>Case 11239 *Telkom SA Limited v The Competition Commission of South Africa and the Competition Tribunal of South Africa* [2004].

<sup>72</sup>'Outcome of Competition Tribunal Hearing: Competition Tribunal imposes R449 million penalty on Telkom for 'bullying' its competitors' <<http://www.compc.com.co.za/assets/Uploads/AttachedFiles/MyDocuments/Tribunal-iposes-R449M-on-Telkom.pdf>> accessed 15 June 2017.

<sup>73</sup>The Competition Commission's referral alleged that Telkom refused to grant independent value-added network service providers (VANS) access to essential access facilities, induced their customers not to deal with them, charged their customers excessive prices for access services

Tribunal could hear the matter, Telkom SA applied to the South Africa High Court to review and set aside the Competition Commission's decision to refer the complaints and the referral itself. Telkom SA challenged the Competition Commission's jurisdiction by stating that the authority did not have the power to refer the matters forming the subject matter of the referral to the Competition Tribunal.<sup>74</sup> It argued that matters forming the subject matter of the referral fell within the exclusive jurisdiction of ICASA and outside the jurisdiction of the Competition Commission because it was either authorised under the Telecommunications Act of 1996, and or by ICASA in terms of Telkom SA's licences.<sup>75</sup> This case went on appeal to the Supreme Court of Appeal which dismissed Telkom SA's claims and ruled that the competition authorities had jurisdiction and that the Competition Commission had followed proper procedure.<sup>76</sup>

The case was then referred back to the Tribunal to be heard on its merits. In 2011 the Competition Tribunal found Telkom SA's conduct to be abuse of dominant position in breach section 8(b) of the Competition Act which prohibits refusal to supply an essential facility.<sup>77</sup> The case illustrates how ambiguity in defining the powers of a competition authority and a sector regulator under a regulatory framework that allows for concurrent jurisdiction can adversely affect the effective regulation of competition in a regulated sector.

In 2005, the Electronic Communications Act, Act 36 of 2005 was enacted replacing the Telecommunications Act of 1996. This Act further exacerbated the problem of concurrent jurisdiction by expanding the powers of ICASA in relation to competition matters in the electronic communications sector. Specifically, section 67(9) of the Act states that subject to the provisions of this Act, the Competition Act applies to competition matters in the electronic communications industry. This provision in effect excludes the application of the South Africa Competition Act where conduct is specifically authorised or addressed in the Electronic Communications Act.<sup>78</sup> Amendments have been made to the Competition Act to address the inconsistencies in the Electronic Communications Act and the Competition Act in

and discriminated in favour of its own customers by giving them a discount on distance related charges which it did not advance to customers of the independent VANS providers. As reported in 'Outcome of Competition Tribunal Hearing: Competition Tribunal imposes R449 million penalty on Telkom for 'bullying' its competitors' <<http://www.compcom.co.za/assets/UploadsAttachedFiles/MyDocuments/Tribunal-iposes-R449M-on-Telkom.pdf>> accessed 15 June 2017.

<sup>74</sup>Case 11239 *Telkom SA Limited v The Competition Commission of South Africa and the Competition Tribunal of South Africa* [2004].

<sup>75</sup>Ibid.

<sup>76</sup>SCA number 623 *The Competition Commission of South Africa v Telkom SA and the Competition Tribunal of South Africa* [2008].

<sup>77</sup>See *Competition Commission v Telkom SA Ltd* 11/CR/Feb04 [2011] ZACT 2.

<sup>78</sup>Heather Irvine and Lara Granville, 'Who to Call? Concurrent Competition Jurisdiction in the South African Electronic Communications Sector.' (Third Annual Competition Commission, Competition Tribunal Conference on Competition Law, Economics and Policy in South Africa, Johannesburg, September 2009).

the exercise of authority in competition matters in the telecommunications sector. The Competition Amendment Act 1 of 2009 repealed section 67(9) of the Electronic Communications Act.

The South Africa experience, particularly, the Telkom SA debacle, illustrates the dangers of not clearly demarcating regulatory responsibility between regulatory institutions where concurrent jurisdiction is the regulatory approach adopted. Therefore, a national competition law adopted by Uganda should contain provisions on the implementation of concurrent jurisdiction. However, as the South African experience shows, the legislation should be drafted in a manner that does not allow for ambiguity. The draft Competition Bill as is it is currently worded is lacking in this regard. Save for clause 16(1) that mandates UCC to consult the Competition Commission if an issue is raised as to whether its decision contravenes the competition law. The Bill does not address the issue how the Competition Commission will enforce its powers alongside UCC which is mandated to regulate anti-competitive behaviour in the telecommunications sector. Aside from legislative guidance, a memorandum of understanding may also be an important tool for ensuring that overlapping jurisdictions does not facilitate inefficient regulation in the telecommunications sector.

In addition to clarifying the role of competition authority, clarity with regard to the applicable competition rules is also important. Should UCC continue to apply the Fair Competition Regulations or should it base its competition enforcement powers on the national competition law? Applying two different sets of laws is bound to make concurrent jurisdiction difficult to implement, it would therefore be more appropriate to rely one piece of legislation, the general competition law. Therefore, the draft Competition Bill should be revised to grant UCC and other sector regulators powers to enforce provisions of the law in their respective sectors, but in collaboration with the competition authority. This is the approach in the United Kingdom, where Ofcom, which also has competition enforcement powers,<sup>79</sup> applies the Competition Act of 1998.<sup>79</sup>

## 8.5 Conclusion

The chapter has validated the enactment of a national competition law in Uganda to facilitate effective regulation of competition in the telecommunications sector. The enactment of a national competition law and the establishment of national competition authority with economy-wide powers will enable more efficient regulation of cross-border and cross-sector conduct. However, the establishment of national competition authority raises the concern of regulatory overlap that may hamper efficient regulation of anti-competitive behaviour. Evidence from other countries shows that ambiguity in the law as regard allocation of responsibility between

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<sup>79</sup> Competition Act 1998, s 54.

regulatory bodies with concurrent jurisdiction can have an adverse impact on efficient competition regulation. It is therefore imperative to incorporate a provision in the national competition law that clearly outlines the scope of the national competition authority's powers in a regulated sector. That said, it is the author's opinion, that the competition authority should take the lead in the regulation of anti-competitive behaviour in the telecommunications sector.

# Chapter 9

## Final Conclusions

This study is based on the premise that regulatory intervention is needed in the liberalised telecommunications sector in Sub-Saharan Africa in order to facilitate the sustainable growth of competitive telecommunications markets. The opening up of the telecommunications sector to competition has made telecommunications services more accessible to a great portion of the population in Sub-Saharan Africa. Specifically, the introduction of wireless technology and the resultant phenomenal growth of the mobile communications market have substantially increased connectivity within the region. As of 2016, there were approximately 772 million mobile telephone subscribers located in Sub-Saharan Africa.<sup>1</sup> In the broadband internet market, wireless technology has increased internet access in the region from 14 million broadband subscribers in 2010 to 280 million subscribers in 2016.<sup>2</sup> The statistics indicate that liberalisation has been beneficial for society. However, the figures also show that there is room for greater competition as the markets are far from saturated. This means that fostering sustainable competition is important in the liberalised telecommunications sector.

It has long been argued by academics that effective competition in a market reduces the need for regulatory intervention primarily because strong competition for a market constitutes a self-regulating system that ensures the elimination of excess profits.<sup>3</sup> However, certain developments in the telecommunications sector in Sub-Saharan Africa following the implementation of the liberalisation policy point to the need for regulatory intervention to protect the benefits arising from having open competition. The key developments are: difficulties faced by new entrants in interconnecting their networks with incumbent operators or accessing essential

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<sup>1</sup>ITU, ‘Key 2005-2015 ICT Data for the World, by Geographic Regions and by Level of Development’ <<http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>> accessed 16 June 2017.

<sup>2</sup>Ibid.

<sup>3</sup>Martin C Stewart-Smith, *Industry Structure and Regulation* (World Bank Publications 1995) 22.

facilities, scarcity of spectrum for mobile communications services, and anti-competitive behaviour.

Access to telecommunications facilities is crucial for competition in the network-based telecommunications sector. This is reflected in the fact that in almost every country in Sub-Saharan Africa there has been at least one interconnection dispute involving an incumbent telecommunications operator.<sup>4</sup> Additionally, governments and competition authorities have increasingly focused their attention on access to the fixed network infrastructure of the incumbent operator viewed as an important input for the provisions of services in the internet and value-added services market. While one-way access regulation has been a priority primarily in developed jurisdictions, in recent years policy-makers in Sub-Saharan Africa have come to view one-way access as important.

ECOWAS member states consider unfettered access by ISPs to the fixed-line network of incumbent operator as a key strategy for increasing access to broadband services.<sup>5</sup> The main reason put forward in support of one-way access to the fixed-line network is the conclusion drawn that the building of a new network is not economically advantageous, even though that would offer the advantage of providing access to the end user and end-to-end control of the network.<sup>6</sup> In South Africa, both the competition authorities and policy-makers view access to the fixed-line network of Telkom SA as important for the growth of the value-added services market.<sup>7</sup> These developments in different parts of Sub-Saharan Africa illustrate that continued regulatory intervention is an important tool for facilitating access to telecommunications facilities in order to foster competition growth.

Similarly, the increasing number of cases of spectrum scarcity for mobile communications services reported in Sub-Saharan Africa points to the necessity for an efficient spectrum management regime to ensure that spectrum is available for the growing wireless communications market in the region.<sup>8</sup>

<sup>4</sup>Examples from East and Southern Africa include: *Botswana Telecommunications Corporation v Mascom Wireless Pty(Ltd) and Vista Cellular (Pty) Ltd* BTA Ruling 1/1999 in Botswana, *Kencell Communications Ltd v TKL Communications Appeal Tribunal* (2003) in Kenya, *Cellnet Tanzania v Mobitel, Vodacom and Tritel* (TCRA 2004) in Tanzania, *MTN Uganda Limited v UCC Miscellaneous Cause No. 225 of High Court Civil Division 2009* in Uganda; and South Africa Competition Commission, ‘Competition Commission refers Cell C complaint against MTN for price discrimination to Tribunal’ (Press Statement 30th July 2007) <<http://www.compcom.co.za/2007-media-releases/>> accessed 15 June 2017.

<sup>5</sup>ITU, ‘West African Common Project: Harmonisation of Policies Governing the ICT Market in the UEMOA-ECOWAS Space-Interconnection’ 5 <<http://www.itu.int/ITU-D/treg/projects/itu-ec/Ghana/modules/FinalDocuments/Interconnexion.pdf>> accessed 15 June 2017.

<sup>6</sup>Ibid.

<sup>7</sup>See *Competition Commission v Telkom SA Ltd 11/CR/Feb04 [2011] ZACT 2* and The Local Loop Unbundling Committee, ‘Local Loop Unbundling: A Way Forward for South Africa’ (May 2007) <[http://www.ellipsis.co.za/wp-content/uploads/2014/03/local\\_loop\\_unbundling.pdf](http://www.ellipsis.co.za/wp-content/uploads/2014/03/local_loop_unbundling.pdf)> accessed 15 June 2017.

<sup>8</sup>Spectrum scarcity has become one of the biggest threats to the continued growth of the telecommunications sector in Sub-Saharan Africa as evidenced by the reports from different countries in the region that suggest that spectrum scarcity is becoming a bottleneck to market entry in the

Also significant is the rise in the number of instances where allegations of anti-competitive conduct have been levelled against incumbent operators. Allegations of anti-competitive behaviour have related to collusion in the setting of interconnection prices,<sup>9</sup> refusal to grant access to essential facilities,<sup>10</sup> and predatory pricing.<sup>11</sup> The anti-competitive behaviour concerns extend to the conduct of multinational telecommunications groups that have a very strong presence in the Sub-Saharan Africa telecommunications sector. Studies reveal that multinational corporations have financial and technological advantages, comparative to local entities, enabling them to quickly take dominant positions in the domestic market giving them greater scope for anti-competitive behaviour.<sup>12</sup> Additionally, the rise in the number of cross-border mergers and acquisitions impacting on the telecommunications markets in different countries in Sub-Saharan Africa points to the need for an effective competition law regime that is effectively enforced. Mergers and acquisitions are not *per se* anti-competitive, however, there is a danger that companies enter into a merger in order to achieve or strengthen their market power which may have an adverse effect on the competitive landscape of a market.

The rise in the number of competition-related regulatory concerns highlighted above has justified the discussion of regulation in the telecommunications sector in this study. This is because introduction of competition has not led to an elimination of the need for regulatory intervention in the telecommunications sector. On the

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mobile communications market. See, ‘Cote D’Ivoire: Warid Telecom pays for licence but can’t get enough spectrum to operate’ *Balancing Act* <<http://www.balancingact-africa.com/news/en/issue-no-445/top-story/cote-d-ivoire-warid/en>> accessed 15 June 2017; Julius Barigaba, ‘Uganda: Country cannot take more GSM operators says UCC’ *the East African* (Kampala 25 August 2008) <<http://allafrica.com/stories/200808250215.html>> accessed 15 June 2017; and Ekow Quandzie, ‘Spectrum unavailability, review of guidelines delayed Globacom’s operations in Ghana-Minister’ *Ghana Business News* (Accra August 29 2011) <<http://www.ghanabusinessnews.com/spectrum-unavailability-review-of-guidelines-delayed-globacoms-operations-in-ghana-minister/>> accessed 15 June 2017.

<sup>9</sup>‘MTN, Vodacom in Clear on Collusion Charges’ *Techcentral* 23 March 2011 <<http://www.techcentral.co.za/mtn-vodacom-in-the-clear-on-collusion-charges/22038/>> accessed 15 June 2017. In Uganda, shortly after the telecommunications sector was fully liberalised, there were allegations that the three incumbent mobile operators, Uganda Telecom, MTN Uganda, and Celtel (now Airtel) had colluded to charge new entrants high interconnection rates in order to protect their market shares. However, no formal complaint was lodged before UCC.

<sup>10</sup>In 2011, the South Africa Competition Tribunal adjudicated over the issue in *Competition Commission v Telkom SA Ltd* 11/CR/Feb04 [2011] ZACT 2 finding Telkom SA liable under the South Africa Competition Act 1998.

<sup>11</sup>See ‘Internet Ghana Takes on Ghana Telecom over Anti-Competitive Practices’ *Balancing Act* <<http://www.balancingact-africa.com/news/en/issue-no-263/internet/internet-ghana-takes/en>> accessed 15 June 2017 which reports how former incumbent operator Ghana Telecom (now Vodafone Ghana) was accused by ISPs of predatory pricing in the broadband internet market. In Uganda, smaller operators alleged that the 2010-2011 price war among the larger operators in the mobile telephone market was akin to predatory pricing. Zulaika Kasujja, legal counsel, Smile Communications Uganda (Kampala, Uganda 16 December 2011).

<sup>12</sup>UNCTAD, *World Investment Report 1997: Transnational Corporations, Market Structure and Competition Policy* (UN 1997) 134.

contrary, the concerns indicate that regulatory intervention is still necessary. However, the nature of regulatory oversight has changed. In the monopoly era, regulation was necessary to ensure that operators did not abuse their monopoly power. In the liberalised telecommunications sector ensuring that there is a competitive landscape for competition is of great importance. It is for this reason that it is important to ensure that a country's regulatory framework reflects the change in regulatory requirements. On that basis, Uganda's regulatory framework for competition has been used as a case study to establish whether the regulatory framework for competition in the telecommunications sector in countries in the region adequately addresses the challenges to sustainable competition.

Four specific issues have been addressed in this study in order to analyse the adequacy of the regulatory framework. The issues focus on whether the framework:

- (1) provides sufficient measures to prevent or curb anti-competitive behaviour in the sector;
- (2) which is limited to the telecommunication sector, is comprehensive enough to deal with the anti-competitive behaviour including conduct of large multinational telecommunications groups, specifically cross-border mergers;
- (3) promotes fair and efficient interconnection and network access;
- (4) facilitates efficient spectrum management, particularly with regard to spectrum for mobile communications services; and
- (5) should incorporate a national competition law despite the presence of a sector regulator with competition regulation powers.

The analysis of the five issues in the preceding chapters has given rise to three main conclusions. Firstly, there is need for more effective enforcement of the legislative framework in place. Secondly, there is need to bolster the regulation of anti-competitive behaviour through the inclusion of economy-wide legislation. Thirdly, economic characteristics of the telecommunications sector and the market composition particular to Uganda's telecommunications sector play an important role in the regulation of competition in the sector. The three conclusions are discussed in greater detail below.

## **9.1 Need for More Vigilant Enforcement of Legislative Framework**

An overview of the regulatory framework for competition in the telecommunications sector reveals that the legislation is not *per se* insufficient, rather it is the manner of implementation of the law that is impacting adversely on efficient regulation.

UCC has been slow to shift from its *laissez-faire* stance adopted in the duopoly era characterised by limited competition to a more engaging approach to regulating

competition in the fully liberalised telecommunications sector. The lacklustre implementation, by UCC, of the regulatory framework is illustrated below.

### ***9.1.1 Regulation of Interconnection***

Uganda's legislative framework on interconnection stands out as one of the most comprehensive frameworks in Sub-Saharan Africa incorporating the relevant regulatory requirements for the fully liberalised telecommunications sector. The analysis of the legislation on interconnection in Uganda has centred on the primary interconnection concerns: duty to interconnect, determination of interconnection rates, the non-discrimination principle, delayed interconnection negotiations, and the incorporation of unfair terms and conditions in interconnection agreements. The analysis of the provisions of primary legislation, the Communications Act 2013 and the Interconnection Regulations, has resulted in the conclusion that the framework is in line with principles established at regional and international level on fair and efficient interconnection. The interconnection issues persist due lacklustre enforcement of the legislation by the telecommunications regulator, UCC.

While it must be acknowledged that UCC has become more active in its role as the regulator of interconnection in the telecommunications sector, for the most part, UCC views interconnection primarily as a commercial negotiation between operators, therefore it does not intervene. For example, the Interconnection Regulations require operators to negotiate interconnection in good faith. This includes concluding interconnection negotiations within a reasonable time as defined in the Interconnection Regulations. The Interconnection Regulations specifically addresses this concern by providing a specific time frame for interconnection negotiations and signing of interconnection agreements. Interconnection negotiations must be concluded and a binding agreement entered into within 45 days following receipt of a request for interconnection.<sup>13</sup> An interconnection agreement must be entered into within 3 months after an interconnect provider receives a request for interconnection.<sup>14</sup> However, there have been reports of delays in the conclusion of interconnection negotiations with some new entrants waiting for several months to 1 year. This problem could be addressed by UCC intervening in a timely manner to ensure that new entrants are not unduly frustrated in their efforts to commence operations. Furthermore, concerns that operators with less bargaining power are being compelled to accept unfair terms and conditions in the interconnections agreements point to less effective regulation by UCC. The Communications Act requires operators to seek approval from UCC when entering into an interconnection agreement.<sup>15</sup> Subjecting interconnection agreements to approval by UCC will

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<sup>13</sup>Telecommunications (Interconnection) Regulations 2005, SI 2005/25, reg 13(1).

<sup>14</sup>Ibid, reg 12 (1).

<sup>15</sup>Communications Act 2013, s 58(1).

help to weed out those terms and conditions in the agreement that contravene the Interconnection Regulations.

However, it must be acknowledged that in recent years UCC has become more engaged in its role as a facilitator of fair and efficient interconnection. Thus, interconnection rates, which had been a primary concern for operators following the full liberalisation of the telecommunications sector, are now determined by UCC on a cost oriented basis in line with the Interconnection Regulations. This is provided for in UCC's LRIC Reference Rate Determination of 2009 and 'LRIC Reference Rate Determination of 2012'.

UCC's intervention in the determination of interconnection rates has improved the landscape of competition, particularly in the mobile telephone services market, by eliminating the practice adopted by some incumbent operators of charging new entrants higher interconnection rates than they would charge fellow incumbent operators. Nevertheless, UCC still needs to be more active in enforcing other aspects of interconnection provided for in the Interconnection Regulations.

### ***9.1.2 Spectrum Management***

Spectrum is an important input in Uganda's telecommunications sector as services are provided primarily through wireless technology. In the liberalised telecommunications sector demand for spectrum has risen greatly leading to concerns of spectrum scarcity. Therefore, ensuring that spectrum is available for telecommunications services is crucial for the growth of Uganda's telecommunications sector. The discussion of spectrum management in this study has focused on the issue whether spectrum management in Uganda is a bottleneck to competition in the wireless communications markets.

An overview of Uganda's primary legislation has established that the regime is geared towards promoting efficient spectrum management in the liberalised telecommunications sector. The Communications Act of 2013 and the Spectrum Regulations have as their main objective ensuring that spectrum is efficiently managed. This is particularly reflected in the objectives of the Spectrum Regulations that seek to promote efficient spectrum management through measures that, *inter alia*, facilitate the growth of the wireless services market, and optimise the accommodation of radio spectrum use through allocation of adequate spectrum, so as to satisfy evolving demand and ensure efficient spectrum assignment.<sup>16</sup> The wording of the Spectrum Regulations' main objective that seeks to "satisfy evolving demand and ensure efficient spectrum assignment" clearly points to importance of having a flexible spectrum management regime that is able to meet the evolving spectrum demands in the liberalised telecommunications sector.

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<sup>16</sup>Communications (Radio) Regulations 2005, SI 2005/23, reg 3(1).

However, the analysis of spectrum management reveals inefficiencies that are threatening the continued growth of the wireless communications market in Uganda. Focusing on the aspects of spectrum management most likely to have an impact of spectrum availability, that is, spectrum allocation, spectrum assignment, and spectrum utilisation, it is clear that UCC's approach to regulation does not adequately address the spectrum demands in the fully liberalised telecommunications sector.

The exclusive reliance on the command-and-control method of spectrum management does not enable efficient spectrum management. UCC faces challenges efficiently allocating spectrum to meet the demands for spectrum in the liberalised telecommunications sector under the command-and-control method that is leave little room for flexibility. The regulatory body has been proactive in trying to make the command-and-control method more flexible by adopting a technology neutral licensing regime, and allocating higher and higher frequencies to accommodate more users and uses. Additionally, digital migration will free up a considerable amount of spectrum, specifically in the 800 MHz band that can be reallocated provide mobile communications services using technology which works well in this spectrum.<sup>17</sup> Despite these efforts, the centralised system for allocation of spectrum remains rigid potentially slowing down the provision of new technology. However, it would be premature to consider shifting away from the centralised approach for spectrum allocation. Firstly, Uganda's telecommunications sector is still developing and the hand of the government is still necessary to ensure policies are implemented. Secondly, there is no clear cut alternative to the centralised approach with efficient outcomes that has been developed.

While inefficient allocation poses a problem for the development of new markets, the greatest concern in the area of spectrum management in Uganda is spectrum assignment. The two problems identified are: (1) UCC's exclusive reliance on the first-come-first-served method; and (2) a legacy of assignment of a significant portion of the critical spectrum to the incumbent mobile operators. As regards the first problem, UCC continues to use a first-come-first-served method which is not ideal for assigning spectrum where demand for spectrum licences is greater than supply. There are alternative methods specifically designed to assign spectrum where there are mutually exclusive applications for a spectrum licence popular among which are: lotteries, auctions, and beauty contests. Auctions in particular are regarded as the most efficient way of assigning spectrum licences where demand is greater than supply. Auctions are regarded as efficient because they seek to assign the spectrum licence to the firm that values the licence the most and therefore the one who will have an economic incentive to put the licence to high valued use.<sup>18</sup>

However, an analysis of the alternative methods in the context of Uganda's telecommunications sector is inconclusive as to whether the use of auctions will enhance spectrum management and facilitate spectrum availability.

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<sup>17</sup>For example, CDMA technology.

<sup>18</sup>John McMillan, 'Why Auction the Spectrum?' (1995) 19 Telecommunications Policy 191, 195.

It is, however, acknowledged that there is strong support for the use of auctions, and the evidence in other Sub-Saharan African countries proves that an auction can be used to efficiently assign spectrum indicating that UCC should contemplate the use of the method. The Nigerian experience where 3 GSM spectrum licences were successfully auctioned particularly shows that assignment of spectrum through spectrum auctions is a viable option for Sub-Saharan Africa countries.

While choosing the most efficient method to assign spectrum in the liberalised telecommunications sector is of paramount importance, addressing the legacy of assignment of significant portions of critical spectrum to the incumbent operators is an issue that needs to be urgently addressed. The assignment of prime spectrum in 900 MHz and 1800 MHz (GSM band) to the incumbent operators and the resultant asymmetry in spectrum holdings does not create a level playing field for competition. Therefore, measures must be put in place to facilitate a fairer distribution of spectrum among operators. This might entail refarming portions of spectrum in the GSM band to make spectrum available to new entrants. However, as has been pointed in the discussion on refarming, undertaking comprehensive refarming in the GSM band to allow for more symmetrical holdings does not appear to be a viable option due to the challenges to be faced in trying to implement a refarming project. Key problems include determining what amounts to sufficient compensation for refarmed spectrum and the potential opposition by incumbent operators that view refarming as a threat to their entrenched position as ‘legacy users’. These two problems have made it very difficult for UCC and the Ministry of ICT to effectively refarm spectrum.

The other aspect that has been focused on is ensuring efficient spectrum use by the telecommunications operators. Ideally, the spectrum management regime should incentivise operators to efficiently utilise spectrum. This is the case in Uganda where high annual spectrum usage fees and provisions on spectrum hoarding serves as great incentive to utilise licensed spectrum. The Communications Act grants UCC the power to withdraw spectrum if it is not satisfied with the level of utilisation of the assigned spectrum.<sup>19</sup> However, there is no evidence to indicate that UCC has implemented the provision through, for example, monitoring spectrum use by operators.

### ***9.1.3 Regulation of Anti-Competitive Behaviour***

In contrast to interconnection and spectrum regulation where UCC has clearly built up experience,<sup>20</sup> the regulator has limited experience in dealing with anti-

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<sup>19</sup>Communications Act 2013, s 25 (2).

<sup>20</sup>This is the perception developed by the author in the course of conducting interviews with personnel at the UCC that revealed a collection of experts knowledgeable in aspects pertaining to telecommunications regulation in Uganda.

competitive behaviour. To date, UCC is yet to engage in an investigation into anti-competitive behaviour in the telecommunications sector. The limited experience in competition regulation may explain the non-enforcement of the sector-specific competition rules, the Fair Competition Regulations, despite allegations of anti-competitive behaviour in the sector highlighted in Chaps. 5 and 6 of this study.

## **9.2 Need to Bolster the Competition Regulation Framework with Economy-Wide Competition Rules**

While the preceding sub-section concludes that UCC has not actively enforced the provisions of the law prohibiting anti-competitive behaviour, it must be noted that the legislative framework on anti-competitive behaviour is in itself lacking. Uganda relies exclusive on sector-specific rules to govern competition in the sector, that is, the Fair Competition Regulations. Sector-specific rules appear to be appropriate for purposes of regulating spectrum management and interconnection in Uganda's liberalised telecommunications sector. However, with regard to anti-competitive behaviour, analysis of the legislative framework suggests that exclusive reliance on sector-specific rules is insufficient.

Firstly, the provisions of the Fair Competition Regulations are not comprehensive enough to enable UCC to efficiently enforce the provisions on anti-competitive behaviour. This is particularly the case with regard to the regulation of abuse of dominant position and anti-competitive mergers where there is lack of detailed criteria on the elements of anti-competitive conduct.

The Fair Competition Regulations expressly prohibit abuse of dominant position.<sup>21</sup> The Regulations cover the forms of abuse of dominant position that are of the greatest concern in Uganda's telecommunications sector. These are: predatory pricing, refusal to grant access to essential facilities, refusal to interconnect, price discrimination, and price squeeze.<sup>22</sup> However, the provisions in the Fair Competition Regulations are very basic simply identifying the conduct. The Fair Competition Regulations fail to provide detailed criteria to enable UCC to establish whether a given conduct is anti-competitive. The need for clear criteria to help identify what elements of a conduct make it anti-competitive is very significant because not all forms of conduct by a dominant operator are anti-competitive. Take the case of predatory pricing, low prices are usually seen as a benefit from and the successful result of the process of competition since competition tends to prevent firms from profitably increasing prices above competitive levels.<sup>23</sup> However, there are instances where a dominant operator's strategy of setting prices very low, below

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<sup>21</sup>Telecommunication (Fair Competition) Regulations 2005, SI 2005/24, reg 6(1).

<sup>22</sup>Ibid.

<sup>23</sup>Simon Bishop and Mike Walker, *The Economics of EC Competition Law: Concepts, Application and Measurement* (2nd edn, Sweet and Maxwell 2002) 218.

margin cost, can force its competitors with less financial capacity out of business. Similarly, not all types of price discrimination are anti-competitive. Some forms of price discrimination can enhance consumer welfare by minimising deadweight loss by allowing a firm to supply a group of consumers that would not be supplied in the absence of price discrimination.<sup>24</sup> Thus, the legal framework on anti-competitive behaviour should provide clear mechanisms that enable the regulatory body to effectively distinguish anti-competitive conduct from conduct of a neutral or positive effect on competition.

It should be noted that other jurisdictions most notably, the United States and the European Union, also have competition law providing in basic terms for the prohibition of abuse of dominant position. However, in contrast to Uganda, the jurisdictions have been able to build up jurisprudence defining the elements of specific forms of abuse of dominant position based on court's interpretation of the competition law provisions. This is the case in the European Union and the United States, where the competition authorities from the two jurisdictions (European Commission and FCC) have relied heavily on principles set out in case law to enforce competition law in the telecommunications sector.

In the United States the recognised elements of the essential facilities doctrine were formulated by the seventh circuit in *MCI Communications Corp. v AT&T Co.*<sup>25</sup> In the European Union, the definition of dominance under EU competition law can be traced back to *Hoffman-La Roche v Commission*.<sup>26</sup> The EU competition law definition of dominance has notably been adopted by Uganda in the Fair Competition Regulations.<sup>27</sup> The examples highlighted above show the important role that the judiciary plays in enhancing effective enforcement of competition law in other jurisdictions. However, this avenue is currently not available in Uganda due to less emphasis on the implementation of the Fair Competition Regulations. To date, the case brought before the High Court of Uganda that related to the regulation in the telecommunications sectors related to the provision of the law on economic regulation.<sup>28</sup> Therefore, the dearth of case law on anti-competitive behaviour in Uganda's telecommunications sector and UCC's limited experience in regulating anti-competitive points to the need for concise guidance on how the Fair Competition Regulation provisions are to be implemented. It must be observed that UCC

<sup>24</sup>Robert O'Donoghue and Atilano J Padilla, *The Law of Economics of Article 82* (Hart Publishing 2006) 561-2. Other economists that have exalted the virtues of price discrimination include: Frederic M Scherer and David Ross, *Industrial Market Structure and Economic Performance* (3rd edn, Houghton Mifflin Company 1990); Jean Tirole, *The Theory of Industrial Organisation* (MIT Press 1998), ch 3 and 1998; and Gregory Mankiw and Mark P Taylor, *Economics* (Thomson 2006) 309.

<sup>25</sup>*MCI Communications Corp. v AT&T Co* 708 F.2d 1081 (7 Cir.1982).

<sup>26</sup>*Hoffman-La Roche v Commission* [1979] ECR 461 para 38.

<sup>27</sup>Communications (Fair Competition) Regulations, SI 24/2005, sch para 3(5).

<sup>28</sup>See *MTN Uganda Limited v UCC* Miscellaneous Cause No. 225 of High Court Civil Division 2009. The main issue in this case was whether UCC had powers, under the Interconnection Regulations, to determine interconnection rates.

has formulated guidelines relevant to regulation of anti-competitive behaviour. The guidelines focus on relevant market definition and defining dominance.<sup>29</sup> However, the regulation of specific forms of anti-competitive behaviour is not covered under the guidelines.

Detailed criteria would include economic tests to help UCC to identify behaviour that is anti-competitive. With regards to mergers, measures should be put in place to enable UCC to focus on the mergers and acquisitions that are most likely to affect competition in the telecommunications sector. The Fair Competition Regulations simply provide a basic provision prohibiting anti-competitive mergers and acquisitions. According to the Communications Act and Fair Competition Regulations all mergers by an operator that involve restructuring, consolidation, amalgamation, re-arrangement of its structure, control, among others, can only be concluded following approval by UCC.<sup>30</sup> However, subjecting all mergers to review does not promote efficient regulation. Not all mergers and acquisitions are anti-competitive; some are neutral while others are pro-competition. As the merger control regime does not provide guidelines for expediently weeding out the potentially anti-competitive mergers, UCC's ability to fulfil its mandate due to merger notification overload may be hampered. Measures aimed at narrowing down the mergers to those that are potentially anti-competitive may include financial and market thresholds. A leaf can be taken from the draft Competition Bill that defines the scope of application of the Bill to mergers using financial and market thresholds.<sup>31</sup>

Secondly, the sector-specific scope of the Fair Competition Regulations provides UCC with limited powers and range of remedies to enable it to effectively regulate cross-border conduct. UCC's jurisdiction only applies to firms that it have been licensed to provide communications services. On the other hand, a national competition law of economy-wide application provides the competition authority with a broad scope for enforcement of the provisions encompassing cross sector and cross-border conduct. The inability of UCC to effectively address competition concerns of a cross sector nature is a key reason why the authority supports the enactment of a national competition law.<sup>32</sup>

The need for competition rules that deal with cross-border conduct is relevant due to the rise in the number of cross-border mergers affecting Uganda's telecommunications market structure. To ensure that the cross-border mergers concluded by multinational telecommunications groups do not have an adverse effect on competition in Uganda, the legislative framework should have a broader reaching scope. Furthermore, the convergence of IT and media sectors necessitates the use of

<sup>29</sup>UCC, 'Telecommunications Market Definition 2009' and UCC, 'Market Power Assessment in Telecommunications' (2009).

<sup>30</sup>Uganda Telecommunications (Fair Competition) Regulations 2005, SI 2005/24, reg 6(6).

<sup>31</sup>Draft Competition 2004, cl 46.

<sup>32</sup>Interview with Ann Rita Ssemboga, (then) Economist, UCC (Kampala, Uganda 7 December, 2011).

competition rules of economy-wide application. As observed, competition law is sufficiently flexible to deal with all future problems that may arise in a converged environment and to accommodate unanticipated developments.<sup>33</sup> The merger of UCC and the broadcasting sector regulator UBC into one entity in 2011 has somewhat addressed the issue of convergence. However, the telecommunications sector regulations are still sector-specific dealing exclusively with telecommunications and not all forms of communications. Therefore, the merger of UBC and UCC does not negate the need for a national competition law to help regulate competition in the telecommunications sector.

Based on the two arguments above, there is need to bolster the competition regulation by having in place a national competition law of economy-wide application. A national competition law will not only provide a broader range of remedies to address anti-competitive conduct in the telecommunications, but also promote efficient competition regulation. The reason being that the enactment of a national competition law will establish a national competition authority dedicated exclusively to regulating anti-competitive behaviour. UCC has a broad mandate covering competition regulation, technical and economic regulation. Therefore, UCC's policy objectives are not restricted to protecting and fostering competition but also include encouraging private sector investment in the communications sector and enhancing national coverage of communications services.<sup>34</sup> The broad mandate imposes on UCC a wide range of responsibilities casting doubt on its ability to develop the necessary competences needed to effectively regulate anti-competitive behaviour.<sup>35</sup>

In order to avoid conflict, the Fair Competition Regulations should be repealed once the Competition Bill is enacted. If necessary, sector-specific guidelines can be developed based on the national competition law. Furthermore, the competition authority should take the lead in the investigations into anti-competitive behaviour in the telecommunications sector.

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<sup>33</sup>Nikos Th Nikolinakos, *EU Competition Law and Regulation in the Converging Telecommunications, Media and IT Sectors* (Kluwer Law International 2006) 187.

<sup>34</sup>See Communications Act 2013, s 3.

<sup>35</sup>UCC is divided into different departments, with competition regulation falling within the Competition and Corporate Affairs department. However, this department's mandate not only covers competition but also, interconnection regulation, tariff regulation, economic monitoring and technical standards development.

### ***9.2.1 Role for a National Competition Authority: Relationship Between Sector-Specific Rules and National Competition Law***

In light of the arguments put forward for the introduction of a national competition law in Uganda, it is important to take into consideration the role of a national competition authority is likely to play in the regulated telecommunications sector. As observed in Chap. 8, the incorporation of a national competition authority into Uganda's regulatory framework for telecommunications necessitates accompanying provisions of the law and measures that concisely clarify the role of the authority. The clarification of the competition authority's role in the regulated telecommunications sector is crucial due to the regulatory overlaps which may arise with either the sector regulator or the national competition authority having jurisdiction to intervene to address the same issue. As highlighted in Chap. 4 discussing the regulation of anti-competitive behaviour, the few instances where regulatory intervention has helped address competition concerns in the telecommunications sector have involved UCC exercising its powers under economic regulation rules. For example, the 2010–2011 price war in the mobile telephone services market raised concerns, particularly by smaller operators, of potentially anti-competitive consequences. UCC intervened by issuing a directive to control the call tariffs offered by the mobile operators.<sup>36</sup> It relied on its powers under the Tariff Regulations and set a price floor for call tariffs.<sup>37</sup> Prior to that, UCC had intervened to regulate the interconnection rates charged by operators.<sup>38</sup> The regulatory intervention by UCC shows a tendency to rely more on economic regulation to address competition concerns in the telecommunications sector. Therefore, the introduction of national competition authority will not prevent UCC from regulating anti-competitive behaviour. In this regard it is recommended that the draft Competition Bill be modified to include a clause clearly defining the relationship between UCC and the national competition authority in connection with the regulation of anti-competitive behaviour.

The only reference to the relationship between a national competition authority and UCC is in the draft Competition Bill. The Bill provides that a statutory authority must make a reference to the competition authority, if in the course of any proceeding before the statutory authority, an issue is raised by any party that any decision that the authority has taken is contrary to the provision of the competition law.<sup>39</sup> Thus, UCC is obliged to involve the Competition Commission if in the course of enforcing its mandate, concerns are raised that the regulator has taken its decision in contravention of the Competition Act. However, this provision,

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<sup>36</sup>UCC Retail Tariff Guidelines for Voice Services, January 2011.

<sup>37</sup>Telecommunications (Tariffs and Accounting) 2005, SI 2005/27, reg 6.

<sup>38</sup>UCC, 'LRIC reference rate determination 2009'.

<sup>39</sup>Draft Competition Bill 2004, cl.16.

and the Bill altogether, do not clearly stipulate regulatory boundaries of the Competition Commission when enforcing the Competition Act in the telecommunications sector.

### ***9.2.2 Co-operation and Regional Competition Authorities as Means of Enhancing Competition Law Enforcement Capacity***

While having in place a national competition law will facilitate more efficient competition regulation, the study has also taken note of the observations made that most countries in Sub-Saharan Africa with a national competition authority face a challenge of enforcement capacity. This is particularly the case when enforcement relates to cross-border conduct.<sup>40</sup> Thus, it is quite possible that the enactment of a national competition law and the establishment of a national competition authority in Uganda may not lead to more efficient regulation of cross-border mergers.

One proposed solution is co-operation between national competition authorities at a bilateral or multilateral level. The second solution would be enforcement through supranational competition authorities established via a supranational competition law that is binding on all member states of a regional economic integration community. The supranational competition authority investigates cases of anti-competitive behaviour of a regional dimension. Of the two options, it is the author's opinion that the use of a supranational competition authority has more potential in enhancing enforcement capacity with regard to cross-border conduct. Referring to SADC where member states have not adopted a supranational competition law and instead promoted the adoption of a co-operation system, ensuring co-operation between national competition authorities appears to be more challenging to implement. One main obstacle is the competition authorities of most member states in SADC are recently established and thus lack sufficient experience in dealing with anti-competitive practices.<sup>41</sup> Therefore, co-operation in SADC has focused more on building institutional capacity rather than building enforcement capacity.<sup>42</sup> This

<sup>40</sup>Michal S Gal and Inbal Faibis Wassmer, 'Regional Agreements of Developing Jurisdictions: Unleashing the Potential' in Josef Drexl et al (eds), *Competition Policy and Regional Integration in Developing Countries* (Edward Elgar 2012) 294-5.

<sup>41</sup>While South Africa, Zambia, and Zimbabwe have had operational competition authorities since the late 1990s, in the majority of countries, competition authorities only became operational in the mid to late 2000s. Examples include the Malawi's competition agency which was operational in 2005. Tanzania's agency became active in 2007 while the agencies in Botswana, Mauritius, Namibia and Seychelles were operationalised in 2009.

<sup>42</sup>Nelly Sakata, 'Are Southern African Competition Law Regimes Geared Up for Effective Cooperation in Competition Law Enforcement?' (Fifth Annual Competition Law Conference, Johannesburg October 2011).

casts doubt on the ability of co-operation among authorities to enhance enforcement. Furthermore, in the context of Uganda which lacks a national competition authority, it is difficult to envisage the implementation of this particular solution.

Additionally, the presence of a supranational competition authority mitigates the concerns raised of an asymmetry of power between national competition authorities in developing countries and multinational corporations. Multinational corporations may easily convince decision makers in developing countries to abstain from intervention by threatening to withdraw economic activity from the country hampering effective enforcement of competition law.<sup>43</sup> However, it is more difficult for a multinational corporation to carry out such a threat where it affects its business operations in several countries.<sup>44</sup> For Uganda, the enforcement of a supranational competition law may to some extent fill the gap in competition law enforcement arising from the lack of a national competition law. Therefore, the establishment of the COMESA Competition Commission, which became operational in 2013 may enhance competition law enforcement in Uganda. However, the supranational competition authority solution is not without its own problems. One specific concern is the potential conflicts that might arise between a supranational competition authority and a national competition authority. The COMESA competition authority is facing challenges in carrying out its mandate due to conflicts with national competition authorities of member states as regards jurisdiction.<sup>45</sup> Thus, the relationship between member states' national competition authorities and a supranational competition authority should be clearly defined.

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<sup>43</sup>Josef Drexel, 'The Development Dimension of Regional Integration and Competition Policy' in Josef Drexel et al (eds), *Competition Policy and Regional Integration in Developing Countries* (Edward Elgar 2012) 242.

<sup>44</sup>Ibid.

<sup>45</sup>Muthoki Mumo, 'Authority criticises COMESA Arm Over Rollout of Competition Rules' *Kenya Daily Nation* (Nairobi March 17 2013) <<http://www.nation.co.ke/business/news/Authority-criticises-Comesa-over-rollout-of-competition-rules/-/1006/1722692/-/127w7qb/-/index.html>> accessed 15 June 2017; and George Omondi and David Herbling, 'Conflict of Local and COMESA Laws Holds Up Firms' Mergers' *Daily Nation* 28 January 2013 <<http://www.businessdailyafrica.com/Agency-turf-wars-with-Comesa-freeze-mergers/-/539546/1678308/-/107yga/-/index.html>> accessed 15 June 2017.

### **9.3 Economic Characteristics of the Telecommunications Sector and Uganda’s Market Composition Play an Important Role in the Regulation of Competition in the Sector**

Another important conclusion arising from the analysis of Uganda’s regulatory framework for the telecommunications sector is that the approach to regulation adopted by UCC must take into account the economic characteristics of the telecommunications sector and market composition.

#### ***9.3.1 Economic Characteristics of the Telecommunications Sector***

Economic characteristics of telecommunications markets include high fixed costs, vertical integration, and oligopoly markets. The importance of taking cognizance of the economic characteristics of the telecommunications markets stems from their effect on the application of the conventional competition law principles. A case in point is definition of the relevant market under competition law. Defining the relevant market is the first step towards determining whether a given conduct is anti-competitive. The Fair Competition Regulations provide for the definition of the relevant market in line with the competition law principles. The Regulations provide for the two dimensions of the relevant market, product and geographical.<sup>46</sup> Of significance is the economic test provided in the Fair Competition Regulations to identify close substitutes. According to the Fair Competition Regulations those substitutes whose availability prevents an operator from sustaining a small but significant increase in the price of a product above the competitive level fall within the relevant product market.<sup>47</sup> The competitive price level is typically defined as the price at marginal cost. However, as the telecommunications market is usually characterised by high fixed cost, pricing above marginal costs (usually above 10%) is necessary if a telecommunications company is to remain viable.<sup>48</sup> The possibility that telecommunications prices are well above marginal costs means that definition of competitive price should be aligned with the characteristics of the market to avoid an excessively broad market definition.

The economic characteristics not only have an impact on the application of the conventional competition principles, they also may affect the approach of

<sup>46</sup>The Communications (Fair Competition) Regulations 2005, SI 2005/24, sch para 3(1)(a) and (b).

<sup>47</sup>Ibid, sch para 3(1)(b).

<sup>48</sup>Jordi Gual, ‘Market Definition in the Telecommunications Industry’ in Pierre A Buigues and Patrick Rey (eds.), *The Economics of Antitrust and Regulation in Telecommunications* (Edward Elgar 2004) 50.

authorities to regulation. Despite the liberalisation of the telecommunications sector, the pattern of competition development in telecommunications markets has veered towards oligopoly, most notably in the mobile services market.<sup>49</sup> The development of oligopoly mobile communications markets has been affirmed in the context of Sub-Saharan Africa as the dominant market structure in most countries in the region.<sup>50</sup>

Among the factors that facilitate the creation of the oligopoly market structure are high fixed costs and spectrum scarcity. The concern as regards oligopoly markets is that the market structure provides an incentive for firms to co-operate and engage in anti-competitive behaviour, specifically tacit collusion. In oligopoly markets the few competitors are interdependent in their pricing as they base their pricing decisions in part on anticipated reactions to them.<sup>51</sup> Oligopolistic interdependence may facilitate collusion whereby simply by observing other firm's conduct, firms may co-operate to raise prices above the competitive level.<sup>52</sup> The oligopoly market structure indicates that UCC should pay close attention to co-ordinated conduct of operators, particularly the operators with larger market shares.

Vertical integration is the other economic characteristic relevant in the discussion of competition regulation in the telecommunications sector. Telecommunications markets are usually divided into two distinct connected categories: upstream infrastructure market, and downstream services market. However, there are some operators that have vertically integrated structures operating at both market levels. The competition concern arises where an operator is dominant at one market level and leverages its position to restrict competition in the adjacent market. A typical example is where an operator owning an essential input for provisions of retail services refuses to grant access to the input hampering the growth of competition at the retail level. The vertical integration characteristic has played a central role in the regulation of anti-competitive behaviour in the telecommunications sector. In the European Union, most cases of anti-competitive behaviour in the

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<sup>49</sup>Howard Shelanski observes that while the telecommunications market in the US has transformed from its former monopoly structure, it exhibits an oligopoly market structure. See Howard A Shelanski, 'Adjusting Regulation to Competition: Toward a New Model of U.S Telecommunications Policy' (2007) Yale Journal on Regulation 56. Also see Eli M Noam, 'Fundamental Instability: Why Telecom is Becoming a Cyclical and Oligopolistic Industry', Information Economics and Policy 18 (2006) 272-2; and Mario Passos, 'Regulating Competition in Oligopoly: The Case of Telecommunications in Brazil' <[http://www.ie.ufrj.br/grc/pdfs/regulating\\_competition\\_in\\_oligopoly.pdf](http://www.ie.ufrj.br/grc/pdfs/regulating_competition_in_oligopoly.pdf)> accessed 15 June 2017.

<sup>50</sup>Alemu Tekie and Belayneh Metasebya, 'Competition and Mobile Penetration in Sub-Saharan Africa' (Communication Policy Research Africa Conference, Nairobi, April 2011) <[http://www.researchictafrica.net/presentations/CPRAfrica\\_2011\\_Presentations/Belayneh\\_Alemu\\_Competition\\_and\\_Mobile\\_Penetration\\_in\\_Sub-Saharan\\_Africa.pdf](http://www.researchictafrica.net/presentations/CPRAfrica_2011_Presentations/Belayneh_Alemu_Competition_and_Mobile_Penetration_in_Sub-Saharan_Africa.pdf)> accessed 15 June 2017.

<sup>51</sup>Richard Posner, *Antitrust Law* (2nd edition, University of Chicago Press 2009) 56.

<sup>52</sup>Thomas Piriano, 'Regulating Oligopoly Conduct under Antitrust Laws' (2004) Minnesota Law Review 9, 16.

telecommunications have focused on the vertically integrated fixed-line incumbent operator.<sup>53</sup> However, the issue of vertical integration may not play as central a role given the network architecture in Uganda's telecommunications sector. In other regions, particular high income regions, operators tend to buy and sell network services to one another, in effect using other operators' networks to fill in gaps in their own infrastructure. However, in Uganda there is less advanced integration of networks with operators building their-own stand-alone, end-to-end networks. The less dependence of operators on other entities for infrastructure provision limits the ability of an operator to rely on vertical integration to restrict competition due to prevalence of several vertically integrated operators.

### ***9.3.2 Market Composition and the Approach to Regulation***

With regard to market composition, it is bound to affect the approach to regulation in the telecommunications sector. One particular feature of Uganda's market composition that greatly affects the approach to regulation is substitution of the fixed-line network with the mobile network. The majority of the population in Uganda accesses telecommunications services exclusively through wireless technology. UCC data from 2016 reveal that there were close to 22 million mobile telephone subscribers with only approximately 365,698 fixed-line telephone subscribers.<sup>54</sup> This means that in contrast to other jurisdictions where regulatory scrutiny by competition authorities has focused the incumbent fixed-line operator, in Uganda, emphasis should be placed on dominant mobile operators. This is justified by the fact that the analysis of the different regulatory concerns has revealed that most issues have arisen in the mobile communications market. Thus, UCC should prioritise interconnection and spectrum management which are important for the growth of competition in the mobile communications market.

Furthermore, one way access regulation which has proved popular in developed countries might not play a crucial role in enhancing competition. A key reason is that most mobile operators in Uganda provide their services through their own end-to-end networks. The operators do not need to access the facilities of another operator to reach their customers through one-way access regulation. In this regard, the policy of local loop unbundling that mandates fixed-line incumbent operators to grant access to their copper local loop is of limited relevance in Uganda's telecommunications sector. The copper local loop unbundling is viewed as a means of

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<sup>53</sup>Notable cases are *Deutsche Telekom AG* [2003] OJ L 263/9; Case COMP/38.233 *Wanadoo Interactive* Commission Decision 2003, published under <[http://ec.europa.eu/competition/anti\\_trust/cases/dec\\_docs/38233/38233\\_87\\_1.pdf](http://ec.europa.eu/competition/anti_trust/cases/dec_docs/38233/38233_87_1.pdf)> accessed 15 June 2017; and *Wanadoo Espana v Telefonica SA* [2008] OJ C 83/6.

<sup>54</sup>UCC, 'Post, Broadcasting and Telecommunications Market and Industry Report: Third Quarter (July-September 2016)' <[http://www.ucc.co.ug/files/downloads/Market\\_&\\_Industry\\_Report\\_for\\_Q3\\_July-September\\_2016.pdf](http://www.ucc.co.ug/files/downloads/Market_&_Industry_Report_for_Q3_July-September_2016.pdf)> accessed 15 June 2017.

promoting competitive broadband markets using the local loop as a key input. However, in Uganda where the population relies on wireless technology rather than wireline to access telecommunications services, the policy is not justifiable. Particularly when one takes into account the poorly developed local loop network concentrated in a few regions and the widespread mobile telephone network that is of national coverage.

Prioritising the regulation of competition in the mobile communications market is also supported in the analysis of the framework governing anti-competitive behaviour. Most concerns have arisen in the mobile communications markets. For example, allegations of collusion, price discrimination, and predatory pricing have all been discussed in the context of the mobile communications market. However, focusing on refusal to supply essential facilities does not resonate strongly in Uganda's telecommunications sector due to the market composition.

The refusal to supply essential facilities is based on the essential facilities doctrine. The essential facilities doctrine has strongly featured in the regulatory framework in other jurisdictions and has primarily centred on access to the fixed-line network of the incumbent operator.<sup>55</sup> The essential facilities doctrines targets firms that have control over an essential facility and are able to foreclose effective competition in one or more related markets by denying a competitor access to the facility.<sup>56</sup> The doctrine imposes on owners of the essential facility an obligation to provide access to that facility at a "reasonable" price.<sup>57</sup> The fixed-line network is viewed as exhibiting natural monopoly characteristics making it not economically viable to duplicate the entire fixed-line network. In order to facilitate the growth of fixed-line telecommunications service, granting new entrants access to the fixed network of the incumbent operator has been viewed as critical. However, the substitution of the fixed network by the mobile network in Uganda limits the scope of application of this doctrine. As already pointed out, Uganda's mobile communications comprises several vertically integrated operators that have built their own end-to end network through which they provide telecommunications services to the end consumer. This limits the need for one-way access to a facility.

Furthermore, the key bottleneck to competition in the mobile communications market is mobile call termination. While a mobile operator has monopoly over calls terminating on its network, call termination does not fall within the definition of the term 'essential facility'. An essential facility, as defined in the Interconnection Regulations, is a facility which is essential for reaching customers or conducting business and which cannot be replicated by any reasonable means.<sup>58</sup> Therefore, the

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<sup>55</sup>The significance of the doctrine in other jurisdictions is discussed in Chap. 4, Sect. 4.6.3.3.6.1.

<sup>56</sup>William B Tye, *Competitive Access: A Comparative Industry Approach to the Essential Facility Doctrine* (1987) 8(2) Energy Law Journal 337, 344.

<sup>57</sup>See 'OECD Roundtables on Competition Policy: The Essential Facilities Concept' (1998) OCDE/GD (96) 113 7.

<sup>58</sup>Telecommunications (Interconnection) Regulations, SI 2005/25, reg 4.

functionality of the particular facility cannot be duplicated.<sup>59</sup> However, the existence of several mobile operators with their own mobile networks indicates that mobile networks can be replicated by reasonable means. Therefore, call termination is a bottleneck that exists in the presence of competing networks.

In conclusion, the market composition of Uganda's telecommunications sector that relies primarily on wireless technology points to the efficient regulation of interconnection and spectrum management, and anti-competitive behaviour in the mobile communications market.

## 9.4 Policy Suggestions and Recommendations

Based on the conclusions reached in the preceding sub-sections, a few policy suggestions and recommendations are highlighted.

Firstly, wireless technology rather than wireline is the essence of Uganda's telecommunications sector. On that basis, UCC's policy on the regulation of the telecommunications sector should facilitate the growth of the wireless telecommunications markets in order to increase the dissemination of wireless technology. While Uganda's telecommunications sector has grown tremendously, the wireless telecommunications markets are far from saturated. Uganda's mobile voice market had a penetration rate of approximately 60% in 2016.<sup>60</sup> In recent years, there has also been significant growth in the internet services market with a penetration rate of 48.9% in 2016.<sup>61</sup> Mobile internet subscriptions account for 98% of the internet subscriptions. The growth in the number of internet subscribers is due to increased access to internet through mobile broadband technologies. To facilitate growth in the wireless communications markets UCC should ensure fair and efficient interconnection and spectrum availability and curb anti-competitive behaviour.

Facilitating the growth of the wireless communications market is particularly important for Uganda's rural based population that makes up 84% of the population.<sup>62</sup> Wireless technology is a more efficient way of bringing telecommunications services to populations in rural areas compared to wireline. While the fixed-line network is concentrated primarily in urban areas in certain regions, the mobile network is of nation-wide coverage. It is therefore easier to foster provision of telecommunications services through the wider spread mobile network. Thus, UCC should not only focus on the universal service policy as a means for increasing

<sup>59</sup>Stanford Levin and Stephen Schmidt, 'Competition, Essential Facilities, Bottlenecks and Pricing of Mobile Phone Service' (2009) <<https://doi.org/10.2139/ssrn.1462522>> accessed 15 June 2017.

<sup>60</sup>UCC, 'Post, Broadcasting and Telecommunications Market and Industry Report: Third Quarter (July-September 2016)' <[http://www.ucc.co.ug/files/downloads/Market\\_&\\_Industry\\_Report\\_for\\_Q3\\_July-September\\_2016.pdf](http://www.ucc.co.ug/files/downloads/Market_&_Industry_Report_for_Q3_July-September_2016.pdf)> accessed 15 June 2017.

<sup>61</sup>Ibid.

<sup>62</sup>According to World Bank estimates from 2015.

access to telecommunications services in rural areas. That said, it should be noted that the Government of Uganda's National Backbone Infrastructure Project that seeks to connect all major towns within the country onto an Optical Fibre Cable based Network will make the fixed network also an important input for communications services, particularly in the broadband internet.

Secondly, a national competition law must be enacted to enhancing competition regulation in the telecommunications sector. The enactment of a national competition law will address concerns regarding the regulation of cross-border or cross-sector conduct. Furthermore, having a national competition law in place has the potential to increase the level of competition law enforcement in the sector which has remained very low. In contrast, UCC has built significant experience in technical and economic regulation with personnel having in-depth understanding of the telecommunications sector.<sup>63</sup> Having a national competition authority enforcing the national competition law will enable UCC to play to its strengths in technical and economic regulation.

It is recommended that the draft Competition Bill of 2004 form the basis of the national competition law in Uganda as it incorporates the key principles of competition law. However, comprehensive revision of the Bill is needed to reflect changes in Uganda's economy in the last 10 years.

Also important for enhancing competition regulation in the Uganda's telecommunications sector is the formulation of the specific guidelines for the application of the national competition law. Specifically, the guidelines should identify the economic characteristics that may affect the application of a national competition law in the telecommunications sector.<sup>64</sup> The guidelines should be formulated by the national competition authority in co-operation with UCC.

To ensure efficient regulation of anti-competitive behaviour the enactment of a national competition law should be accompanied by a repeal of the Fair Competition Regulations. Otherwise, there will be two sets of rules applicable in the telecommunications sector fostering confusion. It is there more appropriate to rely on one piece of legislation, the national competition law. However, UCC should still retain powers to engage in the regulation of anti-competitive behaviour in the telecommunications sector. On that basis, there should be a section in the national competition law that grants sector regulators powers to enforce the competition law in their respective sectors in collaboration with the competition authority. This is the approach in the United Kingdom, where Ofcom, which also has competition enforcement powers, applies the Competition Act of 1998.<sup>65</sup>

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<sup>63</sup>This is the author's perception based on field interviews with UCC personnel conducted between November and December 2011.

<sup>64</sup>This has been the approach adopted in the United Kingdom, Office of Fair Trading UK, Competition Act 1998: The Application in the Telecommunications Sector Guidelines, and Australia, ACCC, 'Anti-Competitive Conduct in Telecommunications Markets: An Information Paper' (1999) 39 <[http://www.itu.int/ITU-D/treg/Events/Seminars/2005/Thailand/Reference%20Material/Reference%20material%20%20Oz\\_anticomp\\_telecom.pdf](http://www.itu.int/ITU-D/treg/Events/Seminars/2005/Thailand/Reference%20Material/Reference%20material%20%20Oz_anticomp_telecom.pdf)> accessed 15 June 2017.

<sup>65</sup>Competition Act 1998, s 54.

Thirdly, the Communications Act of 2013 provides for establishment a communications tribunal.<sup>66</sup> The communications tribunal's primary function is to hear and determine all matters relating to communications services arising from decisions made by UCC or the Minister of ICT.<sup>67</sup> The operationalisation of a communications tribunal will bring more clarity in the regulation of the telecommunications through the tribunal's interpretation of provisions of the law linked to the subject matter under dispute. Furthermore, it will potentially enable operators seeking redress to obtain relief more expediently as the tribunal's scope is limited to the communications sector. Currently, operators seeking legal redress have to go to the High Court of Uganda as the court of first instance.

Fourthly, to facilitate efficient regulation, subsidiary legislation on telecommunications regulation should be revised to reflect the shift from duopoly to full liberalisation of the telecommunications sector. The Communications Act of 2013 which replaced the Communications Act of 1997 that introduced the duopoly policy focuses on the regulation of fully liberalised telecommunications sector. However, the subsidiary legislation which was saved under the new regime still refers to the key components of the duopoly policy. Specifically, the subsidiary legislation still refers to the old major/minor licence system that has been replaced by the public infrastructure provision and public services provision licence system in the fully liberalised telecommunications sector. The Spectrum Regulations provide for methods of spectrum assignment with the type of licence determining the method to be used. The first-come-first-served method applies to spectrum for minor licences, while competitive bidding applies to major licences.<sup>68</sup> In the Interconnection Regulations, interconnection is mandatory for major licensees.<sup>69</sup> Revising the subsidiary legislation will better align it with the primary legislation.

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<sup>66</sup>Communications Act 2013, s 60. The repealed The Communications Act of 1997, s 75 also provided for the establishment of a communications tribunal.

<sup>67</sup>Communications Act, s 64(1).

<sup>68</sup>Communications (Radio) Regulations, SI 23/2005, reg 8(4) and (6).

<sup>69</sup>Telecommunications (Interconnection) Regulations SI 25/2005, reg 5(1)(a).

# **Appendix A: List of Interviewees**

Between November and December 2011, the author conducted a series of interviews with key stakeholders in the telecommunications sector in Uganda. Key among the interviewees were legal representatives of the major telecommunications operators, personnel at UCC, and industry experts and policy-makers. The interviews enabled the author to verify which regulatory aspects are most crucial for competition in Uganda's telecommunications sector. Below is the list of interviewees that provided the most vital information to the author.

## **Interviewees**

Interview with Dennis Kakonge, Director Legal, Airtel, Uganda (Kampala, Uganda 5 December 2011).

Interview with Zulaika Kasujja, lawyer, Smile Communications Uganda (Kampala, Uganda 16 December 2011).

Interview with Dr. Ham Mukasa Mulira, Former Minister of ICT and Information Technology and Services and CEO eConsult (Kampala, Uganda 6 January 2012).

Interview with Dr. Nora Mulira, former Director of the Directorate for ICT support at Makerere University (DICTS) (Kampala, Uganda 8 December 2011).

Interview with Abdul Musoke, Market Analyst, UCC (Kampala, Uganda 18 November 2011).

Interview with Paul Mwebesa, Head Legal, Warid Telecom (Kampala, Uganda 23 November, 2011).

Interview with Ann Rita Ssemboga, former Economist, UCC (Kampala, Uganda 7 December 2011).

Interview with Godfrey Sengendo, (then) Manager Spectrum Management, UCC (Kampala, Uganda 22 November 2011).

Interview with Dr. Francis Fredrick Tusubira, CEO, UbuntuNet Alliance and Chairperson NITA-Uganda (Kampala, Uganda 11 December 2011).

Interview with Ronald Zakumumpa, legal counsel, MTN Uganda (Kampala, Uganda 29 November 2011).

## Appendix B

**Table B.1** Major telecommunications operators in Sub-Saharan Africa (as of 31st March 2014)

Company	Home country of holding company	Home country of holding company	Subscribers (millions)	Host countries	Ownership details
Africell	Lebanon	3.65	The Gambia, Sierra Leone, and Democratic Republic of Congo (DRC)	Africell is a subsidiary of Lintel Holdings, a Lebanese telecommunications company	
Airtel Africa	India	60	Burkina Faso, Chad, DRC, Congo Brazzaville, Gabon, Ghana, Kenya, Madagascar, Malawi, Niger, Nigeria, Rwanda, Seychelles, Sierra Leone, Tanzania, Uganda, Zambia	Airtel Africa is a subsidiary of Bharti Airtel. Bharti Airtel is incorporated in India. It acquired Zain Africa (comprising 14 Sub-Saharan countries) in 2010	
Econet Wireless	Zimbabwe	NA	Botswana, Burundi, Lesotho, Nigeria, South Africa, Zimbabwe	Part of Econet Wireless group which is a Zimbabwean company with its headquarters in Johannesburg, South Africa	
Emirates Telecommunications Corporation (Etisalat)	UAE	NA	Benin, Burkina Faso, Central African Republic, Egypt, Gabon, Ivory Coast, Niger, Nigeria, Sudan, Tanzania, Togo	Etisalat acquired 50% of Atlantic Telecom in 2005, together with a management contract, which had six GSM networks in West and Central Africa: Benin, Burkina Faso, Central African Republic, Gabon, Niger and Togo. Etisalat acquired controlling shares Sudan's Canar by increasing its stake from 37 to 82% in 2008. It owns 51% of Zanzibar Telecom Limited in Tanzania. It operates as MOOV in Ivory Coast	
Globacom (Glo mobile)	Nigeria	NA	Ghana, Ivory Coast, Nigeria and the Republic of Benin	Glo mobile is a Nigeria company owned by Mike Adenuga Group	
Maroc Telecom	France	12.5	Mali, Gabon, Burkina Faso and Mauritania	Vivendi controls 53% of share capital in the company. Vivendi is a French multinational mass media and telecommunications company based in Paris, France	

MTN	South Africa	170	Benin, Botswana, Cameroon, Congo Brazzaville, Ghana, Guinea Bissau, Guinea Conakry, Ivory Coast, Liberia, Nigeria, Rwanda, South Africa, Sudan, Swaziland, Uganda, Zambia	Part of MTN Group of South Africa, a multinational telecommunications group based in South Africa
Orange	France	NA	Botswana, Cameroon, Central African Republic, Egypt, Equatorial Guinea, Guinea Bissau, Guinea Conakry, Ivory Coast, Kenya, Madagascar, Mali, Morocco, Mauritius, Niger, Senegal, Tunisia, Uganda	Orange represents the flagship brand of the France Telecom Group for mobile, landline and internet businesses
Portugal Telecom	Portugal	NA	Angola, Namibia, Cape Verde Islands, São Tomé & Príncipe	Portugal Telecom owns 18.75% of Angola's Unitel, 30% of Cabo Verde Telecom of Cape Verde, 38.25% of Companhia Santomense de Telecomunicações of São Tomé & Príncipe and 25.5% of MTC of Namibia
Millicom International Cellular S.A (Tigo)	Luxembourg	NA	Chad, DRC, Ghana, Mauritius, Rwanda, Sierra Leone, Senegal, Tanzania	Millicom has 100% equity holding in Millicom Tchad, Oasis in DRC, Mobitel in Ghana, SENTEL GSM in Senegal and Mobitel in Tanzania. In addition, it owns 50% equity holding in Entel in Mauritius and 87.50% in Tigo Rwanda SA
Vodafone/Vodacom	United Kingdom		DRC, Ghana, Kenya, Lesotho, Mozambique, South Africa, Tanzania	Vodafone UK took full control of Vodacom in 2008 acquiring its operations in DRC, Lesotho, Mozambique, South Africa, and Tanzania. It owns 40% of Safaricom based in Kenya. It operates in Ghana as Vodafone Ghana created through Vodafone UK's acquisition of Ghana Telecom
Ward Telecom	UAE	NA	Congo, Uganda (soon to commence operations in Mali)	Part of Ward Telecom International based in UAE

**Source:** By author based on information available on websites and annual reports of the multinational telecommunications companies

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