Factors Influencing the Adoption of International Financial Reporting Standards by African Countries

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The purpose of this paper is to identify the factors which may influence the adoption of the International Financial Reporting Standards (IFRS) by African countries. Using previous literature, the following factors were identified: economic growth, education level, economic openness, culture and the relative capital market size.

All countries in Africa were selected. However, in view of the difficulties in obtaining data for all countries, only 32 African countries comprised the data set. A logistic regression analysis was thereafter conducted.

The results indicate that as African countries begin to grow at a quicker rate, they are more likely to adopt IFRS. Countries with relatively higher levels of market capitalization are also more likely to adopt IFRS. The culture variable was the most significant of the explanatory variables, suggesting that African countries with cultural ties to the United Kingdom are significantly more likely to adopt IFRS than those with no such cultural ties.

INTRODUCTION

A World Bank report has identified a number of advantages to the adoption of high quality financial reporting. High quality corporate reporting promotes private sector growth and reduces volatility through: "(a) strengthening countries' financial architecture and reducing the risk of financial market crises, together with their associated negative economic impacts; (b) contributing to foreign direct and portfolio investment; (c) helping to mobilize domestic savings; (d) facilitating the access of smaller-scale corporate borrowers to credit from the formal financial sector by lowering the barrier of high information and borrowing costs; (e) allowing investors to evaluate corporate prospects and make informed investment and voting decisions, resulting in a lower cost of capital and a better allocation of resources; and (f) facilitating integration into global financial and capital markets" (Hegarty, Gielen and Barros, 2004: 1). This is particularly important for developing countries in order to attract foreign direct investment to the country and generally uplift the country and its people. Wong (2004) states that a financial system which is supported by strong governance, high quality standards and a strong regulatory framework is crucial to economic development. Tarca (2012: 1-17) provides a summary of studies investigating the case for the global use of International Financial Reporting Standards (IFRS) and concludes that the "studies provide evidence that IFRS has improved efficiency of capital market operations and promoted cross border investment" and that "IFRS benefits are more likely to be realised when IFRS application is supported by a framework that encompasses legal protections, competent professionals and adequate monitoring and enforcement."

The United Nations Conference on Trade and Development (UNCTAD) believe that "[h]igh-quality corporate reporting is key to improving transparency, facilitating the mobilization of domestic and international investment, creating a sound investment environment, fostering investor confidence and promoting financial stability". Furthermore a "strong and internationally comparable reporting system facilitates the international flows of financial resources, while at the same time helping to reduce corruption and mismanagement of resources. It also strengthens the international competitiveness of enterprises by attracting external financing and benefiting from international market opportunities" (UNCTAD, 2012a).

While the adoption of IFRS has proceeded fairly rapidly in Western countries, the pace of adoption has been slower in Africa. This can be seen by examining the list of 48 African countries on Deloitte's IASplus website. In 2005 six countries required IFRS for all domestic listed companies, nine countries did not permit IFRS for domestic listed companies, six countries permitted IFRS for domestic listed companies, and one country permitted listed companies other than banks and financial institutions to use either IFRS or the national Generally Accepted Accounting Practice (GAAP). For 26 countries there was no information available (Deloitte, 2005). By 2010 11 countries required IFRS for all domestic listed companies, nine countries did not permit IFRS for domestic listed companies, four countries permitted IFRS, four countries did not have stock exchanges and while one did not permit IFRS, three did require or allowed IFRS, one country would require IFRS from 2012 and one country allowed listed companies to choose between IFRS and domestic GAAP. For 17 African countries there was no information available (Deloitte 2010). While the resolution in 2012 by the Pan African Federation of Accountants' (PAFA) General Assembly to adopt IFRS and the International Financial Reporting Standard for Small and Medium-sized Entities (*IFRS for SMEs*) will accelerate adoption of IFRS and the development of the accountancy

profession in Africa (IASB, 2012), this study aims to identify other factors that may explain the adoption of IFRS by an African country.

Studies (Ding, Jeanjean and Stolowy, 2005; Zeghal and Mhedhbi, 2006; Hope, Jin and Kang, 2006: Ramanna and Sletten, 2009; Judge, Li and Pinsker, 2010) have identified various factors that need to be in place before a country is likely to adopt the IFRS. Identifying these factors is useful for reasons such as enhancing the need for capacity building and for providing information about a country's accounting development to a range of stakeholders such as standard setters, donor agencies, governments, regulatory bodies within countries, professional accountancy organizations, bodies such as the International Federation of Accountants (IFAC) and the International Accounting Standards Board (IASB), as well as development companies and other users and preparers of financial statements.

PROBLEM STATEMENT

There has been no empirical research which has focused only on African countries. The Zeghal and Mhedhbi (2006) study included 21 African countries in their sample of 64 countries. Ramanna and Sletten (2009) included 24 African countries in their final sample of 102 non-European Union countries. Judge *et al.* (2010) included 22 African countries in their end sample of 109 countries. These studies did not attempt to isolate factors that may be more significant in one particular region as compared to another, such as Africa only, although the Zeghal and Mhedhbi (2006) study focused only on developing countries. Other empirical research usually includes only the larger more developed African countries, such as South Africa and Kenya, in their data sets. The purpose of this research is to focus only on African countries and identify factors influencing the adoption of IFRS in African countries.

The remainder of this paper is organized as follows. Firstly, prior studies on accounting development are reviewed together with studies that attempt to explain why a country might adopt IFRS. This is then followed by the development of the hypotheses. Thereafter, the research methodology and results are discussed followed by the conclusion, limitations and further research.

PRIOR LITERATURE

Literature studies in the area of accounting development in Africa have been mainly of a descriptive nature. Zeghal and Mhedhbi (2006:375) outline two schools of thought as to the principles behind the adoption of IFRS by different countries. The first argument supports the adoption of IFRS on the basis of the advantages of harmonization, comparability, globalization and the strengthening of integration and competitiveness in financial markets (2006:375). The second argument is that the country-specific factors have to be taken into account and that IFRS is not applicable to a developing country as the information produced is not relevant to the decision-models of less-developed countries (2006:375); rather a country's accounting principles must be adapted to its own unique environmental conditions.

The World Bank (2013) classifies countries according to their Gross National Product (GNP) per capita. Countries with low or middle levels of GNP are classified as developing, although there are exceptions. According to this classification, all the countries in Africa can be classified as developing countries (World Bank, 2011).

Some specific developing country descriptive studies are those of Chamisa (2000) who provided a critique of the relevance of IFRS for developing countries, and in particular for Zimbabwe; Tyrrall, Woodward and Rakhimbekova (2007) who examined the relevance and implementation of IFRS to Kazakhstan, an emerging economy; Mashayekhi and Mashayekh (2008) who examined the development of accounting in Iran; and Joshi, Bremser and Al-Ajmi (2008) who examined the perceptions of accounting professionals in the adoption and implementation of a single set of global accounting standards in Bahrain. A study identifying the main problems facing Bosnia and Hersegovina, an in-transition country, was undertaken in by Malinovic, Bašić and Alagic (2007). These studies provide developing countries with some guidance on the adoption of IFRS. However, these studies did not attempt to identify the factors which may cause a country to adopt IFRS.

Gray (1988) and Nobes (2004) have linked or described the development of financial reporting by reference to external factors or cultural differences. Nobes (1998a: 163,183 - 184) listed 17 reasons suggested by literature for international accounting differences but proposed only two explanatory factors: for culturally self-sufficient countries, the dominant accounting system depends on the strength of the equity-outsider market, and for culturally dominated countries, the class of the accounting system is determined by the cultural influence (1998a: 183,184). Nobes (1998b:33) observed that "there is strong evidence that accounting in developing countries tend to follow colonial or cultural influence rather than fitness for purpose or context." Gray (1988) explored the influence of cultural factors (using the cultural values identified by Hofstede in his world-wide study) on international differences in accounting.

Studies that explain why a country would adopt IFRS are Jaggi and Low's (2000) study on the impact of legal systems on financial disclosures which found that firms in common law countries are more likely to have greater financial disclosures when compared to firms from code law countries, and that cultural values have an insignificant effect on financial disclosures by firms from common law countries, with the results from code law countries providing mixed signals; Ding, Jeanjean and Stolowy's (2005) study of 52 countries which found that culture matters more than legal origin (common law v. civil law) in explaining divergences from IFRS; and the Zeghal and Mhedhbi's (2006:4) study which used a sample of 64 developing countries, identified that developing countries with the highest literacy rates, an Anglo-American culture and a capital market are most likely to adopt IFRS. Ramanna and Sletten (2009: 24 - 25) found, in a sample of 102 non-European Union countries, that more powerful countries are less likely to adopt IFRS, that IFRS adoption is less likely among countries with poor governance institutions where IFRS adoption is of little interest and among countries with good governance institutions where IFRS adoption may be associated with high opportunity and switching costs. Ramanna and Sletten (2009: 27 – 28) also found that IFRS adoption is more likely for higher levels of investment and trade but found no evidence that levels of and expected changes in foreign trade and investments flows in a country affect its adoption.

The Judge et al. (2010) study, using a sample of 132 countries, found that foreign aid, import penetration and educational attainment, as three forms of isomorphic pressures (coercive, mimetic and normative), are predictive of IFRS adoption. Judge et al. (2010: 169) also concluded that institutional theory, with its emphasis on legitimizing behaviour was supported by their data suggesting that the IFRS adoption process is driven by legitimization pressures rather than by economic logic.

This current study uses a synthesis of the factors identified in previous studies in order to provide an in-depth analysis of African countries but has as its foundation mostly the model used by Zeghal and Mhedhbi (2006) in view of their focus on developing countries.

THEORY AND HYPOTHESES DEVELOPMENT

The identification of what factors are likely to affect the adoption of the IFRS identified by literature are summarized as follows:

Economic growth

Economic growth in a country could provide an impetus to that country to adopt the IFRS. Zeghal and Mhedhbi (2006:377) used economic growth in their study arguing that where a country's level of economic growth is high, the social function of accounting for measurement purposes becomes more important. The size and complexity of business transactions and economic activities will require high-quality accounting. Although the Zeghal and Mhedhbi (2006) study found the variable economic growth statistically insignificant in their study, it was positively associated with the adoption of IFRS. Judge *et al.* (2010) used "economic growth rate" (GDP Growth) in their study as a control variable to exclude the economic effects that may explain IFRS adoption. Africa, while generously endowed with many natural resources, has been beset by poor governance and corruption, making it less attractive to investors. However, the renewed interest in Africa by countries such as China has provided an impetus to growth in Africa. Over the ten years to 2010, six of the world's ten fastest-growing economies were in sub-Saharan Africa (Angola, Chad, Ethiopia, Mozambique, Nigeria and Rwanda) (The Economist, 2011). This may suggest that for Africa, economic growth may have a positive association with the adoption of IFRS. Thus, the following hypothesis is stated:

Hypothesis no. 1: The probability that an African country will adopt IFRS increases with the economic growth of that country.

Education level (measured by adult literacy)

Hegarty *et al.* (2004:11) point out that the application of IFRS requires certain minimum levels of capacity (i.e., appropriately qualified individuals), which depends on the availability of opportunities for relevant and adequate education, training and experience. Furthermore, the "development and enhancement of capacity applies to educators, regulators and users as much as to preparers and auditors, and places demands on both institutions and individuals. Systems, methodologies, application guidance, curricula, teaching and training materials, examination and certification procedures, and much else must be adapted to support the new obligations" (Hegarty *et al.*, 2004:11). Zeghal and Mhedhbi (2006:377) used the level of education as an explanatory variable. A low level of education will be an obstacle to IFRS adoption. Judge *et al.* (2010:165) used a number of educational variables as proxies for normative isomorphism. Their study showed that education level was the strongest and most consistent variable across their four models. Thus, the following hypothesis is stated:

Hypothesis no. 2: The probability that an African country will adopt IFRS is positively linked to its education level.

External economic openness

Zeghal and Mhedhbi (2006) used foreign direct investment (FDI) divided by gross domestic product (GDP) to measure external economic openness in their model. They argued that external pressures, such as the degree of economic openness, will expose the country to diverse international pressures such as that by "foreign investors, multinational corporations, international accounting firms and world financial institutions" (2006:377). Their study found external economic openness to be statistically insignificant. Judge *et al.* (2010) found import penetration (value of imported goods and services sold as a proportion of GDP) as the third strongest variable across their four models. It is submitted that import penetration has some commonality with economic openness. Thus, the following hypothesis is stated:

Hypothesis no. 3: The probability that an African country will adopt IFRS increases if there is a high degree of external economic openness in that country.

Culture

Gray (1988) and Nobes (2004) have both linked or described the development of financial reporting by reference to external factors or cultural differences. Nobes (1998a; 1998b) has shown that countries belonging to a certain culture will adopt the accounting system used by countries with the same culture. Zeghal and Mhedhbi (2006:377) argued for the inclusion of a cultural membership in a group of countries as the work of the IASB is heavily influenced by the United Kingdom (UK) and the United States of America (USA), and therefore it would be easier for developing countries with a similar culture to the UK or USA to adopt the IFRS. The issue of language is also of relevance. IFRS are written in English although the translation efforts of the IASB are acknowledged. IFAC (2012:29) comments that the adoption and implementation of international standards in general have been delayed to some degree by translation barriers.

Hove (1986) and Poullaos and Sian (2010) have argued that accounting practices in most developing countries were imposed by developed countries through colonialism and the operations of multinational corporations, professional accounting bodies, and economic aid agreements. In Africa, two distinct patterns of accounting development have emerged: British Commonwealth countries taking one route and countries with French links taking another (Ollier, 1998; Lamdin, 1999; Trotman, 1999). PAOs in the francophone African countries belong to the Fédération Internationale des Experts-Comptables Francophones (FIDEF) which is recognized by IFAC as an Accountancy Grouping (AG). According to PWC (2012), the following francophone countries require their financial statements to be prepared in accordance with the Organization for the Harmonization of Business Law in Africa ("OHADA") accounting framework and not IFRS: Cameroon, Chad, Republic of Congo, Ivory Coast, Guinea (Conakry) and Equatorial Guinea. These narratives provide support for concluding that colonialism has influenced accounting practices in Africa (Moussa, 2010). Thus, the following hypothesis is stated:

Hypothesis no. 4: The probability that an African country will adopt IFRS increases if the country has an English (UK) background.

Capital market size

It is well established that the existence of a capital market is key to a country's economic development (Zeghal and Mhedhbi, 2006). Investor protection would be enhanced if financial statements were prepared using IFRS. In Africa, many countries do not have stock exchanges, and, for those that do, few companies are listed (Ntim, 2012). The existence of a stock exchange signifies the need for high-quality corporate reporting to promote investor confidence. Judge *et al.* (2010:165) included capital market size as one of their control variables in order to isolate variables explaining IFRS adoption while excluding the economic effects associated with the size of a country's capital market.

Unlike Zeghal and Mhedhbi (2006), this study did not use the existence of a capital market as a dummy variable. Instead this study used relative capital market size similarly to the Judge *et al.* (2010) study. Thus, the following hypothesis is stated:

Hypothesis no. 5: African countries with relatively higher levels of market capitalization are more likely to adopt IFRS.

RESEARCH METHODOLOGY AND RESULTS

This section is divided into three parts. The first part describes the proxies used to measure the dependent and independent variables, the second part lists the sample countries and the third part shows the descriptive statistics and discussion of the results.

The study's variables

The adoption variable

This variable was coded as equal to 1 if a country has adopted IFRS and 0 if a country has not adopted IFRS. An examination of the IASplus website (Deloitte, 2011) and the Adoptifrs website (Adoptifrs, 2011) and the various descriptions of a country's adoption show that there are many levels of adoption. The classification of whether or not the countries had adopted IFRS was mainly undertaken using *Use of IFRSs by Jurisdiction* webpage (Deloitte, 2011) on the IASplus website, together with data from the website www.adoptifrs.org (this website is the outcome of a research project conducted at Simon Fraser University in Canada) and prior literature. No further attempts were made to independently verify whether this information was correct. In a number of instances it was unclear as to the level of adoption and implementation. The adoption dates, together with a brief explanation are shown in Table 1. This study used the adoption date as being the date from when the country permitted IFRS or legislated the use of IFRS, whichever was the earlier. This is because the use of IFRS in a country may be evidence that the factors influencing the adoption of IFRS are present. There were also data issues with trying to include all African countries in the sample. For many African countries there is limited information on their accounting practices and for some countries it was difficult to determine when they had adopted the standards. To overcome this difficulty, it was decided to code as 1 all countries where IFRS is required by all businesses or when it is required by certain sectors.

Independent variables and sources of data

All the data extracted for the variables below were available on the World Bank website (http://data.worldbank.org/data-catalog/africa-development-indicators), with the exception of cultural ties to the UK where colonial history and subsequent membership of the Commonwealth of Nations was used.

Economic growth (Eco5yr)

Economic growth was measured as the average annual increase in the per capita GDP of each country in the last five years leading to adoption of the IFRS. If a country had not adopted IFRS, the last five years of GDP growth (2007 – 2011) were used.

Adult literacy rate (Adlit)

The level of adult literacy was used as the measure for the level of education in the countries in the sample as was done in Zeghal and Mhedhbi (2006). Although it is not a perfect substitute, with the lack of information on the accounting profession and education in developing countries, the literacy rate can be used as an indicator for business and accounting education. The literacy rates for the African countries were all obtained from the World Bank data bank.

Inflows of foreign direct investment (Fdi)

The inflows of foreign direct investment (FDI) are an indicator of external economic openness and may have an effect on the decision on accounting practices due to the pressure from investors and capital providers (Zeghal and Mhedhbi, 2006). For the study foreign direct investment as a percentage of GDP was used to measure the degree of openness.

Cultural ties to the UK (Cult)

This is a dummy variable that takes the value of 1 if the country has ties to British culture or zero otherwise. For African countries colonial history and subsequent membership of the Commonwealth of Nations were used as indicators of cultural ties to the UK. A list of Commonwealth members was obtained from the official website of the British Monarch (The Official Website of the British Monarch, 2013). If the countries were not part of the Commonwealth but still a previous colony of the UK they were still assigned a value of 1.

Relative capital market size (Cap)

The relative capital market size was measured by the average market capitalization as a percentage of GDP as done by Judge *et al.* (2010). This method was preferred over using a dummy variable indicating the existence of a capital market as many of the African countries have capital markets with few companies listed and see very little trading while others have larger, more active markets. This variation in the size of the capital markets and its effects are lost by only assigning a value of zero or one.

Sample countries

While all 48 African countries in the Deloitte (2011) dataset were chosen, difficulties in obtaining the necessary data for all of them meant that only 32 countries comprised the final data set. These are shown in Table 1.

Table 1: Countries in Africa and whether or not IFRS adopted

Country[1]	IFRS Adopted[2]	Year of adoption
Algeria	0	IFRS not permitted (Deloitte, 2013).
Angola	1	2009: Accounting standard regulators in Angola started to adopt IFRS.
Benin*	0	IFRS not permitted (Deloitte, 2013).
Botswana	1	2009: IFRS required for some, permitted for others.
Burkina Faso*	0	IFRS not permitted (Deloitte, 2013).
Burundi*	0	IFRS not permitted (Deloitte, 2013).
Cameroon	0	Follows OHADA (PWC, 2012).
Chad	0	Follows OHADA (PWC, 2012).
Democratic Republic of Congo	0	IFRS is prohibited, the country is considering OHADA (PWC, 2012).
Egypt	1	1998[3]: In the early 1990s, the Egyptian Institute of Accountants and Auditors issued the Egyptian Accounting Standards that were an Arabic version of the IASs. In 1997, the Egyptian Capital Market laws legally enforced joint stock companies and partnerships limited by shares to prepare their financial statements in accordance with the IASs.
Gabon	0	Considering adoption of IFRS for consolidated financial statements from 2014 (PWC, 2012).
Gambia	1	2007: Central Bank of Gambia started adopting IFRS in 2007. Mandatory from 2009.
Ghana	1	2007: Required for some entities from 2007, and for all others from 2009.
Ivory Coast (Côte D'Ivoire)	0	Follows OHADA (PWC, 2012).
Kenya	1	1998[4]: IFRS was set to be the accounting standard in Kenya in 1998 by the council of the Institute of Certified Public Accountants of Kenya.
Malawi	1	2001: Following a Society of Accountants in Malawi decision in 2001, corporate entities of all types and size that are listed in the market, are producing financial statements in accordance with the IFRS.
Mali*	0	IFRS not permitted (Deloitte, 2013).
Morocco	1	2004: In 2004, the Moroccan Stock Exchange Law was established and this required that all companies (except banks and financial institutions) listed on the Casablanca Stock Exchange prepare their financial statements using either IFRS or Moroccan GAAP.
Mozambique	1	2007: IFRS permitted, required for banks 2007.
Namibia	1	2005: In January 1, 2005, IFRS became required for listed companies under the Namibia Stock Exchange.
Niger*	0	IFRS not permitted (Deloitte, 2013).
Nigeria	1	2010: Required from 2010 and implemented from 2012 onwards.
Rwanda*	0	Rwanda is yet to adopt IFRS (Business Day, 2013).
Senegal	0	Considering adoption of IFRS for consolidated financial statements from 2014 (PWC, 2012).

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[1] All the countries are classified as developing (World Bank, 2011).
[2] The IFRS adoption status for countries excluded from the dataset is shown in Appendix 1
[3] Zeghal and Mhedhbi (2006)
[4] Zeghal and Mhedhbi (2006)

Country[5]	IFRS Adopted[6]	Year of adoption
Sierra Leone	1	2006: In July 2006, Sierra Leone adopted IFRS as its national standard.
South Africa	1	1993[7]: Followed IAS, but renumbered and adapted.
Swaziland	1	2008: IFRS permitted.
Tanzania	1	2002: Local standards based on IFRS. IFRS and IAS formally adopted as national standards in 2004.
Togo*	0	IFRS not permitted (Deloitte, 2013).
Tunisia*	0	IFRS not permitted (Deloitte, 2013).
Uganda	1	1999: IFRS permitted. Formally legislated in 2004 for financial institutions.
Zambia	1	2005: The Zambia Institute of Chartered Accountants permits all corporate entities, including commercial banks and non-bank financial institutions registered and operating in Zambia, to adopt IFRS for reporting periods beginning on or after 1 January 2005.

*These countries are not included in the PWC (2012) publication.

Descriptive statistics and results

Table 2 shows the difference in the variables of those countries that have adopted IFRS to those that have not. The 17 countries which have chosen to adopt IFRS have, on average, higher economic growth rates, higher levels of adult literacy, larger capital markets and are more likely to have some cultural ties to the UK. Those countries which have not adopted IFRS have a higher average level of FDI which is opposite to expectations. However the difference in the means of the two groups is relatively small and therefore this is unlikely to be significant.

The t-test was used to compare the means of the two groups. All the variables were statistically different except for the degree of openness measured through the ratio of incoming foreign direct investment to GDP.

From the univariate analysis it would seem that African countries which have a higher level of growth, education, larger capital markets and cultural ties to the UK are more likely to adopt IFRS. The level of economic openness is less likely to have an impact on the probability of adoption.

Table 2: Comparison of variables between the two groups of countries

Variables	Adoption			Non -Adoption			t test
	Average	Standard deviation	Median	Average	Standard deviation	Median	
Eco5yr	3.42	3.6422	2.7	1.43	1.8050	1.1	1.9113*
Adlit	65.41	14.4959	66	57.47	18.4037	57	1.3646*
Fdi	2.88	2.8432	1.8	2.92	3.1262	2	-0.036
Cult	0.76	0.4372	1	0.07	0.2582	0	5.407***
Cap	16.49	26.8478	8.3	3.81	8.6369	0	1.7824*

*Significant at 10%
***Significant at 1%

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[5] All the countries are classified as developing (World Bank, 2011).
[6] The IFRS adoption status for countries excluded from the dataset is shown in Appendix 1
[7] Zeghal and Mhedhbi (2006)

Multivariate analysis

In order to determine the effect of the explanatory variables on the dichotomous dependant variable a logistic regression model was used in the form:

$$\text{Log}[P_i/(1 - P_i)] = \alpha_0 + \alpha_1 \text{Eco5yr}_i + \alpha_2 \text{Adlit}_i + \alpha_3 \text{Fdi}_i + \alpha_4 \text{Cult}_i + \alpha_5 \text{Cap}_i + \varepsilon$$

Where:

P_i is the probability that a country will adopt IFRS;
Eco5yr_i is the average economic growth per capita for 5 years;
Adlit_i is the adult literacy rate in the country;
Fdi_i is the ratio of incoming foreign direct investment as a ratio to GDP;
Cult_i is either 1 or 0, dependant on whether a country shares cultural links with the UK or not; and
Cap_i is the market capitalization as a percent of GDP.

Table 3 suggests some correlation between some of the variables; the cultural and adoption variables have a strong positive correlation as well as the cultural variable and the level of adult literacy. Further investigations for the presence of multicollinearity were made based on the variance inflation factor (VIF). The VIF results in Table 4 indicate there are no problems with no VIF in excess of 20 and no tolerance below 0.05 and there should not be any problems in regressing the model.

Table 3: Correlation matrix among variables

Variables	Adoption	Eco5yr	Adlit	Fdi	Cult	Cap
Adoption	1.0000					
Eco5yr	0.3294	1.0000				
Adlit	0.2418	0.0481	1.0000			
Fdi	-0.0066	-0.0802	-0.1825	1.0000		
Cult	0.7022***	-0.0613	0.4240**	0.0042	1.0000	
Cap	0.3094*	-0.2523	0.3017*	-0.2022	0.3239*	1.0000

*Significant at 10%
** Significnt at 5%
***Significant at 1%

Table 4: Variance inflation factor

Variable	VIF	1/VIF
Adlit	1.32	0.7573
Cap	1.31	0.7654
Cult	1.31	0.7642
Fdi	1.10	0.9129
Eco5yr	1.10	0.9053
Mean VIF	1.23	

The regression results are shown in Table 5. The variable for economic growth has the expected sign (positive) and is significant up to the 10% level, indicating that as African countries begin to grow at a quicker rate they are more likely to adopt IFRS. Countries with relatively higher levels of market capitalization are also more likely to adopt IFRS, indicated by the positive coefficient which is significant up to the 10% level. The cultural variable is the most significant of the explanatory variables, suggesting it may have the largest impact on the decision for African countries to adopt IFRS should all

else remain constant. Countries which have cultural ties to the UK will therefore be significantly more likely to adopt IFRS than those countries with no ties to the UK.

The variables for adult literacy and economic openness (represented by FDI) are both statistically insignificant, indicating these are not factors which play a large role in influencing countries with regard to IFRS adoption.

Table 5: Logistic regression

IFRS adopted	Coefficient.	Std. Error	z	P>|z|	95% Conf.	Interval
Eco5yr	.9658*	.5737	1.68	0.092	-.1586	2.0902
Adlit	-.0851	.0673	-1.26	0.206	-.2170	.04679
Fdi	.3201	.3220	0.99	0.320	-.3110	.9512
Cult	6.9748**	2.969	2.35	0.019	1.1550	12.7947
Cap	.2073*	.1248	1.66	0.097	-.0372	.4519
Constant	-2.9691	3.9569	-0.75	0.453	-10.7244	4.7863

*Significant at 10%
**Significant at 5%

Chi-square	31.10
Correctly classified	93.75%

CONCLUSIONS, LIMITATIONS AND FURTHER RESEARCH

The objective of this study was to identify which factors influence the adoption of IFRS in African countries. The variables investigated were economic growth, the education level, economic openness, culture and relative capital market size. A logistic regression was applied to a sample of 32 African countries. The results indicate that as African countries begin to grow at a quicker rate, they are more likely to adopt IFRS. Countries with relatively higher levels of market capitalization are also more likely to adopt IFRS. The cultural variable was the most significant of the explanatory variables, suggesting that African countries with cultural ties to the UK are significantly more likely to adopt IFRS than those with no such cultural ties.

The influence of the accelerating increase in growth coupled with relatively higher levels of market capitalization may indicate that the importance of producing high quality corporate reports is crucial to a developing country. This study, unlike the study of Zeghal and Mhedhbi (2006) did not find education level (measured by adult literacy) of importance. While Zeghal and Mhedhbi (2006: 377) indicate that the adoption of IFRS requires a high level of education, and in particular highly qualified accountants, it may be that the increasing adult literacy has not translated into an increasing number of highly qualified accountants in Africa. The PAO Global Development Report (IFAC, 2012: 23 - 25) notes that only "approximately half of all countries in the Africa region hold associate or member status with IFAC" and that at "the national level, the lack of a legal and regulatory framework that supports accountancy is a significant challenge to PAO development." Similarly to Zeghal and Mhedhbi (2006), economic openness (represented by FDI as a percentage of GDP) was not an explanatory factor. A possible reason for this may be that FDI inflows to Africa declined during the period 2008 to 2011 and North Africa, which traditionally received one-third of inward FDI to the continent found their FDI halved due to political unrest in 2011 (UNCTAD, 2012b: 39,40). These results indicate that African countries which do not have cultural ties to the UK have not adopted IFRS as quickly as those that do. This may indicate that other factors, such as language, may also be of importance.

A limitation of the study is that the decision as to whether a country had or had not adopted IFRS was based on the information on websites such as IASplus (www.iasplus.com) and AdoptIFRS (www.adoptifrs.org). Ramanna and Sletten (2009) found that in some instances the information on the IASplus website was not correct when it was independently verified. This study did not attempt to verify the adoption status of the countries independently other than by using different databases and websites to cross check the information. One difficulty is that often websites reference to each other which entrenches any discrepancies into the system. The IFRS Foundation published in June 2013 details on 66 jurisdictions and plan to follow this up with more countries (IFRS Foundation, 2013). PricewaterhouseCoopers (2012) have published *IFRS adoption by country* which covers 143 jurisdictions. Having more data sources will allow the data to be verified from multiple sources. A second limitation is that the study only used two options: adopted IFRS or not adopted IFRS. (No distinction was made between IAS adoption and IFRS adoption.) In reality, there are many steps to IFRS adoption, and a number of permutations, such as IFRS adopted but not implemented, or implemented but not enforced, or IFRS adopted only for some sectors of the economy and so on. The year of adoption used in this study was that when a clear signal to adopt IFRS had been made by the country concerned.

Further research could focus on using different educational variables to isolate which aspect of education is more likely to affect IFRS adoption. It was also noted that IFRS adoption does not necessarily imply IFRS implementation. The PAO Global Development Report (IFAC, 2012:26) notes that although "adoption is relatively prevalent, there is still a large gap between adoption and actual implementation of IFRSs in some countries". Further research could use both an adoption and implementation variable to analyse why some countries may have adopted IFRS yet not implemented IFRS or determine the implementation challenges that countries in Africa face.

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APPENDIX A

List of countries excluded from data set and IFRS status

Country	IFRS status
Congo (Republic of) Brazzaville	Status unknown (Deloitte, 2011 and 2013). IFRS prohibited (PWC, 2012).
Equatorial Guinea	Status unknown (Deloitte, 2011 and 2013). OHADA followed (PWC, 2012).
Eritrea	IFRSs required for government owned enterprises, newly privatized companies, banks and insurance companies (Deloitte, 2011). Not included in PWC (2012) study.
Ethiopia	Status unknown (Deloitte, 2011 and 2013). Not included in PWC (2012) study.
Guinea Bissau	Status unknown (Deloitte, 2011 and 2013). Not included in PWC (2012) study.
Guinea (Conakry)	Status unknown (Deloitte, 2011 and 2013). OHADA followed (PWC, 2012).
Lesotho	IFRS permitted (Deloitte, 2011).
Liberia	IFRS required for all banks from 2012 (Deloitte, 2011).
Libya	IFRS required for commercial banks (Deloitte, 2011).
Madagascar	IFRS required for some enterprises (Deloitte, 2011).
Mauritania	IFRS not permitted (Deloitte, 2011 and 2013). Not included in PWC (2012) study.
Mauritius	IFRS required for some, permitted for others (Deloitte, 2011).
Somalia (North and South)	Status unknown (Deloitte, 2011 and 2013). Not included in PWC (2012) study.
Sudan	Status unknown (Deloitte, 2011 and 2013). Not included in PWC (2012) study.
Western Sahara	Status unknown (Deloitte, 2011 and 2013). Not included in PWC (2012) study.
Zimbabwe	IFRS permitted (Deloitte, 2011). Not included in PWC (2012) study.