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Should Telecom Service Providers be allowed to have differential pricing for data usage for accessing different websites, applications or platforms?

TSPs should be allowed to offer differential pricing for data usage as a way to improve Internet access. Right now, less than one-third of Indians have access to the Internet. This means that there are around 400 million users, but 850 million who are outside the digital revolution. Those individuals are not able to access online financial, employment, weather, or communications services. Nor are they in a position to engage in e-commerce or e-transactions. Overall, this slows economic growth and represents a serious problem for the Indian economy.

What measures should be adopted to ensure that the principles of non-discrimination, transparency, affordable internet access, competition and market entry and innovation are addressed?

To deal with the access problem, many firms have launched what they call "zero-rating" practices as a way to improve Internet access among the disenfranchised. This policy allows people who lack the financial resources for expensive data plans to use certain applications without having that usage charged towards the individual's data cap. It frees them to use the Internet and access various services without additional fees, and in conjunction with free wi-fi networks or library-based devices, represents a way to bring digital access to those who otherwise could not pay for desired services.

It is estimated that 45 percent of mobile operators around the globe provide some type of zero rating applications.[1] Zero rating programs for popular services free up data that users can employ to explore other sites, including local ones. In many places, platforms such as Facebook, Google, and Wikipedia are very popular. Even in a diverse digital marketplace such as the U.S., surveys show that people spend about 40 minutes each day on Facebook, and they rely upon that site for about 24 percent of the total time they spend on mobile devices.[2] In the developing world, usage is more concentrated on global Internet sites like Facebook, especially when tight data caps exist.

By exempting high-usage sites from data caps, operators give people the ability to see more of the web without spending additional money. Or to put it differently, zero rating can reduce the cost of Internet access to local sites for poor consumers because their consumption of data on global applications does not take their entire data caps. In the end, poor people get more data for their money.

In a number of countries, zero rating services have enabled people to get access to the Internet who otherwise had no access. As shown in Table 1, an analysis of the Filipino Network Globe found that "what we're seeing in Globe users is the number of people who are using the internet – the data – was doubled, and Globe subscribers have grown by 25%".[3]

In Paraguay, a project has generated an increase in "the number of people using the internet by 50% over the course of the partnership and [an] increase [in the] daily data usage by more than 50%." A partnership between technology companies and the TIGO mobile operator has brought 3 million new people to the Internet who previously lacked service.[4]

Meanwhile, several African nations have reported substantial upticks in Internet usage following introduction of Facebook Zero. The number of Facebook users, for example, rose 154 percent in Nigeria, 85 percent in Ghana, and 50 percent in Kenya. For the continent as a whole, there was a reported 114 percent increase in Facebook users after the launch of Zero.[5]

Table 1 The Impact of Zero Rating Services on Internet Usage	
Paraguay	+50%
Kenya	+50%
Ghana	+85%
Nigeria	+154%
Source: The Paraguay figure comes from Internet.org, "Connecting the World from the Sky," undated report, and the Nigeria, Ghana, and Kenya numbers come from April Deibert, "Google Free Zone and Facebook Zero: Products Targeting Developing Populations, Innovation Series, February 19, 2013.	

At a recent Internet Governance Forum, zero-rating programs were cited as a popular way to provide Internet service in developing nations.[6] For example, Wikipedia offers a "zero" version of its informational website for mobile platforms to 350 million people in 30 developing nations and it attracts around 65 million page views each month.[7] Facebook meanwhile offers a "zero" service through 50 operators globally that has enabled Internet usage by low income people.[8]

Some firms have partnered with mobile operators to put together a diverse set of applications for people in a number of developing nations to access for free. The content is customized for local interest and language, providing access to basic services such as Accuweather, Facts for Life (how to raise healthy children), Kokoliko (a job board service), the Mobile Alliance for Maternal Action (information for new and expectant mothers), Facebook, Google Search, Wikipedia, and Women's Right Application (information on the rights of women), among many others.

This service has been popular in the countries where it has been launched. In Tanzania, for example, few individuals have Internet access, according to the Tanzania Communications Regulatory Authority. David Zacharia, the head of data and devices for mobile phone operator Tigo, predicted that the partnership would "accelerate internet penetration in the country but will also open new socio-economic opportunities to the users in the fields of education, technology and commerce".[9]

One zero rating service in Tanzania that has proved very popular is text messaging for mothers and pregnant women. The program regularly sends them information designed to reduce infant mortality and improve maternal health. Over a two-year period, 500,000 parents received 40 million text messages about "safe motherhood". This helped reduce infant mortality by 64 percent and maternal mortality by 55 percent. Airtel Tanzania supports this service on a zero rating basis in order to improve health care in that nation.[10]

In many parts of the developing world, telecommunications data plans are expensive and it is hard for people to afford plans themselves and the usage fees that accompany them. In these places, zero rating programs help people access valuable services in e-commerce, health care, education, and communications. For example, OLX is an online site for people to buy and sell things, and it attracts 360 million page views each day. Being included in the Internet.org app – which results in being able to access it without incurring data cap charges – is a major benefit for entrepreneurs.[11] This website dramatically expands access to digital services for natives who do not speak English.[12]

In Zambia, the Women's Rights Application (WRAPP) compiles information on women's health and legal rights. Before connecting with Internet.org, only 1,000 women had used its website. But through the broader partnership, 15 percent of the country's population that had access to the Internet was able to connect to the site.[13] This increased the reach and impact of the platform. According to Facebook chief operating officer Sheryl Sandberg, WRAPP allows a woman "to say to her husband, 'I have the right to a vote' or "I have the right to access healthcare. Sometimes women don't know those things. The goal is that giving out this information can be transformative and this is a very scalable way to do it."[14]

Having access to applications developed by the Mobile Alliance for Maternal Action has a positive impact on child care. In Bangladesh, for example, 69 percent of mothers who accessed the site received medical care, compared to 32 percent of non-users (see Table 2). On average, site users had at least four clinical appointments where they received medical care for their young child.[15]

Table 2 How Technology Boosts Medical Care	
Technology Users	69% Get Medical Care
Technology Non-Users	32% Get Medical Care
Source: Caroline Fairchild, "For Facebook, Access to Women's Rights Information Is a Basic one." Fortune, August 14, 2014.	

Are there alternative methods available to achieve the objective of providing free internet access to consumers?

Some critics assert that zero rating programs limit competition and are discriminatory. Their fear is that services that don't count against the data cap disadvantage all the other services which do count. This has led nations such as Chile to ban zero rating programs on grounds that they are anti-competitive and discriminatory.[16] In addition, the Norwegian Communications Authority has argued that zero rating practices violate net neutrality by advantaging certain types of services or applications.[17] The European Union is considering legislation that could limit zero rating practices.

Yet there are several reasons to dispute those criticisms. First, zero rating programs may encourage competition and limit discrimination by increasing access and fueling demand for Internet usage and Internet content. As an example, providing free wi-fi or access through public terminals in schools or libraries allows people to access zero rating services as well as those that

count against data caps. Those who worry about discrimination assume people who get free services will limit themselves to those offerings and not utilize other services. In reality, people who go online access other products and find ways to limit their data cap charges.

Mobile providers in a number of countries offer their own zero rating programs. They are combining services from other firms with video streaming or popular applications that people like to use. As long as they draw on services from large as well as small companies and feature a diverse range of applications, they do not seriously limit consumer options or harm competition.[18]

In fact, zero rating programs can promote competition, because they lead to more local eyeballs online, increasing demand for local content, and stimulating the local content creation sector. By offering costless access to global content and popular local content, zero rating gives consumers an incentive to get a phone and a data plan, which in turn, creates more of an audience for local content providers. Thus, zero rating can increase demand for local developers and local content, and promote greater competiveness and diversity in the process. It is also a way for mobile wireless firms to differentiate themselves from competitors by bundling "unique" content with their mobile wireless services, increasing competition among mobile operators and potentially further lowering data costs.

Officials in many places believe that zero rating programs benefit consumers, especially those from disadvantaged backgrounds. Alejandro Pisanty, director general for academic computing services at the National University of Mexico, says that "users of zero rated programs combine them with wifi network access to access the rest of the internet."[19] This brings the virtues of the Internet to people who otherwise would have no connectivity.

Participants in a recent Internet Governance Forum rejected the anti-competition argument on grounds that "the programs are offered on a non-discriminatory basis, so other services can also be a part of the package."[20] Helani Galpaya, the chief executive officer of LIRNEasia, claims that a way to promote competition is to combine partnerships with locally-developed apps and government services. That would guarantee there is diverse content and create a market for local programmers.[21]

A way to stimulate local applications is through prize competitions. In India, for example, an Innovation Challenge project awards $250,000 to the top app, website, or service that helps women, students, farmers, or migrant workers. There also are Impact Award prizes of $25,000 in each of these four categories. These kinds of cash prizes encourage developers to make digital services that will improve the daily lives of regular folks.[22]

In short, zero rating services offer the advantage of improving digital access for those who otherwise cannot afford Internet services, as well as increasing the amount of connectivity available to those who currently have minimal internet access. Concerns that these programs could threaten competition are mitigated because such efforts are designed to free up data under caps and allow users to browse content they would not otherwise choose to view. This stimulates demand for local content and innovation, and helps government and business pursue initiatives that provide inexpensive internet access through wi-fi or publicly-available terminals. Overall,

zero-rating programs build tremendous public value in developing markets by creating demand for local content and significantly expanding Internet access, including to sites that are not zero-rated. The benefits of free services encourage people to seek products that bring them into the electronic world.

Is there any other issue that should be considered in the present consultation on differential pricing for data services?

Improved Internet access would promote economic growth and move large numbers of people out of poverty. According to a Deloitte study, "extending internet access to levels seen in developed countries today means that long run productivity could be enhanced by as much as 25% in developing countries. Deloitte estimates that the resulting economic activity could generate $2.2 trillion in additional GDP, a 72% increase in the GDP growth rate, and more than 140 million new jobs" (see Table 3).[23]

Table 3 Economic and Social Impact of Improved Internet Access in the Developing World	
Productivity Gains	+25%
Total GDP Improvement	$2.2 Trillion
GDP Growth Gain	+72%
New Jobs	140 Million Jobs
Personal Income Gains	$600 Per Person Each Year
Number Lifted Out of Extreme Poverty	160 Million People
Lives Saved Through Improved Healthcare	2.5 Million Lives
Source: Deloitte, Value of connectivity: Economic and social benefits of expanding internet access, February, 2014.	

This would have a dramatic impact on poverty alleviation and strengthening the middle class. The research found that "extending internet access in developing economies to the level seen in developed countries can raise living standards and incomes by up to $600 per person a year, thus lifting 160 million people out of extreme poverty in the regions covered by this study."[24]

The value of the Internet is that it leads to increased investment and creates jobs for high-skilled workers in the developing world. This has been the case in Rwanda, which has formed partnerships with leading technology companies. These kinds of collaborations have brought valuable new funding into the country and broadened Internet access across the country. It has helped advance the knowledge society and provided benefits for millions of people.

Two of the sectors that are likely to grow as a result of improved Internet access are healthcare and education. In the developing world, both are vital to future economic growth and improved life quality. Both patients and healthcare providers benefit from timely access to medical information. They can use mobile devices to find out which drugs are most effective for certain illnesses, check for drug interaction effects, and access a database that will tell them whether particular medications are counterfeit.[25]

Increasingly, healthcare providers are using remote monitoring devices to check vital signs. Patients who live a great distance from treatment centers can electronically transmit health

information to physicians, who can let them know if they have abnormal readings. This helps developing countries deal with healthcare disparities between rural and urban areas, and brings expert diagnosis even to physically remote locations.

According to a Deloitte study, "evidence on the link between health literacy and mortality rates suggests that access to the internet has the potential to save nearly 2.5 million lives across the regions covered by this study, if they were to achieve the level of internet penetration seen in developed economies."[26]

Technology also improves education. It connects students and teachers with electronic resources and digital textbooks. It gives them access to new forms of information such as instructional videos and computer games. Students appreciate digital education because it engages them in the learning process and provides instant feedback on their academic performance.[27]

Endnotes

For more information, see my 2015 Brookings Institution paper, "Digital Divide: Improving Internet Access in the Developing World Through Affordable Services and Diverse Content" at http://www.brookings.edu/~/media/research/files/papers/2015/02/13-digital-divide-developing-world-west/west_internet-access.pdf

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