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# Evaluating consumer perception and willingness to pay for broadband in Nigeria

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## ABSTRACT

The study analysed the consumers' perception, and willingness to pay for improvements in broadband qualities and attributes in Nigeria, using survey data collected in 2014 from 3300 respondent purposively sampled from eleven states in the country. The results show that 79%, of the respondents, still perceive broadband in Nigerian as expensive relative to its quality, which 58% and 84% of them conceive as slow and unreliable respectively. The respondents are, however, even willing to increase their payment for broadband if the qualities and attributes increase with an upper price limit of ₦10,000 per month. On average, consumers are currently willing to pay an extra 166% per month for an improvement from slow to fast broadband, 96% for an improvement from fast to high-speed broadband, 90% for the inclusion of Videophone and 36.2% for the addition of priority. These, in other words, indicate that their current perception of the price of broadband as expensive is not absolute, but relative to the existing broadband qualities, which inform the utility they derive from its usage. There is, therefore, need for improvements in the qualities and attributes of broadband in the country to boost its subscription.

## 1. Introduction

### 1.1. Background of the study

Broadband network is increasingly being recognized globally as a very important proponent of economic growth and development. [Parcu et al. \(2011\)](#) report that broadband network is increasingly an integral part of the world economy, having a very strong impact on economic growth and development. [Ernst and Young \(2012\)](#), and [Omigie, Zo, and Rho \(2015\)](#) report that mobile broadband is one of the means through which developing countries can leapfrog into the post-industrial era. [Okonji \(2017\)](#) reports World Bank's finding that, "a 10 percent increase in broadband penetration yields an additional 1.38 percent increase in GDP growth for low to middle-income countries." The direct effect of broadband on economic growth and development relates to the positive influence it has on business activities and transfer of knowledge. It also exerts a number of indirect effects through a variety of channels including empowering the workforce, speeding up adverts and easing the search for jobs ([Jon, 2012](#)). In line with these, [OECD \(2008\)](#) argues that broadband network will be as critical in the 21st century as the basic telephone line was in the 20th century.

Due to this observed importance of broadband in economic growth, the Nigerian government has been making efforts over the years to promote its development and use in the country. Evidence of these efforts is the introduction of online services and e-

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payment in almost all the sectors of the economy, approval of the 2013–2018 Nigerian National Broadband Plan (NNBP) that targets a five-fold increase in broadband penetration from 6% in 2013 to 30% by 2018 and auction of the 2.6 GHz spectrum frequency. In addition, the Nigerian Telecommunications Commissions (NCC) has put up some initiatives towards ensuring wider broadband coverage in the country. These include:

- the Wire Nigeria Project (WIN), with the aim of seeing that no place in Nigeria is more than 30 miles away from the backbone infrastructure;
- the State Accelerated Broadband Initiative (SABI) project, which aims at encouraging the private sector to build and manage wireless broadband services, first, in the 36 state capitals, and then, other cities and towns in the country;
- the Universal Service Provision Fund (USPF) that financed Community Communications Centre (CCC); and
- the Rural Broadband Initiatives (RUBI); and the Rural Internet Service Providers (RISE)

Complementing the above efforts by the government, all the mobile network operators in the country have been offering mobile broadband and data services as bundled products since the advent of smartphones, Blackberry phones, tablets, and wireless modems for laptops and iPad devices. Independently they took the initiative of deploying some terrestrial and undersea fibre links to the country. These include Globacom's US\$700 million terrestrial fibre optic project to link Nigerian cities; MTN's US\$300 million installations of a 3,500 km national fibre optic transmission network; and Airtel's construction of a 4,000 km fibre optic transmission backbone linking cities in the country. Included also is the partnership between Alheri Engineering, Phase 3 Telecom and Power Holding Company of Nigeria (PHCN) to roll-out 14,000 km of aerially deployed fibre optic cables over PHCN's Power lines (Jagun & Somolu, 2010).

As a result of these efforts, a report from the Nigerian National Broadband Plan (2013–2018) shows that as of 2012 there are an appreciable number of submarine cable landings on the shores of the country providing over 9 Terabits/s of combined capacity. Uzor (2013) shows that, as at January 2013, there are four active undersea cable firms in Nigeria. These are the 7000 km MainOne submarine cable, valued at US\$240 million; the 10000-km Glo-1 cable, with building cost of US\$800,000; the NITEL's South Atlantic 3 (SAT 3) that is worth US\$600 million; and the MTN's West African Cable System (WACS), worth US\$600 million. In terms of a National Backbone fibre optic infrastructure, the report shows that most Long Distance Carriers (LDC) has among themselves, fibre presence in all the 36 states and the Federal Capital Territory (FCT) Abuja. It was also in their findings that while many routes in the country still do not have fibre coverage, there exists a proliferation of fibre along with some routes such as that between Lagos, Abuja, and Port-Harcourt.

### 1.2. Statement of problem

Despite all the efforts described in the previous section, and the landing of appreciable number of submarine cables in the shores of Nigeria, there is still low subscription to broadband with high-speed capability for data and image downloads, video calls, video conferencing, video on demand, telemedicine, entertainment, home shopping or electronic commerce, Internet telephony and the likes in the country. Data from International Telecommunications Union (ITU) show that as at 2016, fixed broadband subscribers per 100 inhabitants in Nigeria is 0.01, while Ojobo (2017) shows that Nigeria's overall broadband subscriptions per 100 inhabitants in 2017 is 21. Compared with the 2016 World averages of 12.4 and 52.2, developing countries' averages of 8.7 and 43.6, and Africa's averages of 0.4 and 22.9 per 100 individuals for fixed and mobile broadband respectively (ITU statistics), it is clear that the subscription to both fixed and mobile broadband in Nigeria are still low. ITU statistics also show that as at 2016, fixed broadband subscribers per 100 individuals is 5.25 in South Africa, 5.20 in Egypt, 1.10 in Zimbabwe, 0.61 in Togo, 0.31 in Ghana, and 0.26 in Uganda. These figures show that even among African countries, Nigeria's fixed broadband subscription is still significantly low. Specifically, data on broadband demand shows that, though at same level as at 2001, Nigeria now lag behind, Kenya, Ghana, Zimbabwe, Namibia, Libya, South Africa, Morocco, Egypt, Algeria, Tunisia, Mauritius, and Seychelles in fixed-broadband penetration, making it the 204<sup>th</sup> out of 210 countries on ITU 2016 database.

Some industry stakeholders and members of Board of Trustee of the Association of Licensed Telecoms Operators of Nigeria (ALTON) blamed Nigeria's low broadband penetration on weak demand for broadband capacities by Nigerians. Also, Uzor (2013) reports that, "despite the enormous bandwidth capacity emanating from the 7000 km MainOne submarine cable, the 10000 km Glo-1 cable, the NITEL's South Atlantic 3 (SAT 3), and the MTN's West African Cable System (WACS) cable systems, Nigerians are yet to benefit from the investments in terms of affordable and efficient broadband services. This report suggests that cost of broadband in the country relative to its quality may be contributory to its low demand and poor penetration in the country. Alongside the question of what determines the demand for broadband in the country, it is also necessary to address the question of consumers' willingness to pay for the broadband given the broadband qualities and attributes.

### 1.3. Objectives of the study

Given the above facts, it becomes necessary to assess consumers' perception of the current broadband cost and qualities, as well as how their willingness to pay is affected by the qualities and attributes of the broadband supplied in the country and their socio-economic and demographic characteristics.

In specific terms, therefore, the objectives of the study are to analyze:

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