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The Causes and Impacts of Digital Exclusion in Kenya



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The Center for Advanced Internet Studies granted me a fellowship opportunity from October 2021 through March 2022 to research and report on the causes and impacts of digital exclusion in Kenya; a contrast between urban and rural/ underserved parts of the country. The study adopted a definition of digital exclusion from Clayton, Macdonald, Smith & Wilcock, (2015), who argue that digital exclusion is the lack of access to, and use of, information and communication technology (ICT) resources. The study further limited this definition to simply mean the 'lack of access to and use of the internet'.

In carrying out the study, I sought to answer these four questions: How many Kenyans lack access to and therefore use of internet? Why do they not have this access? How does the lack of internet access impact on their lives? What can be done to enhance internet access among the excluded population of the country?

Kemp (2022) reports an internet penetration rate of 42% of the entire Kenyan population as of January 2022, an upsurge of 7.4% from 2021, representing 23.35 million internet users in the country out of the 55.60 million Kenyans. But when this should be great news, it is problematic instead. The Worldbank.org (2021), estimates that out of the 55.6 million Kenyans in 2021, only 29.0% live in urban areas while 71.0% live in rural places and that only 17% of the 47% internet users live in rural places. This makes the problem of the lack of access to and use of the internet more severe in rural Kenya than in urban Kenya. The internet situation therefore exuberates a digital divide that increases the risk for those who are deprived and live in rural settings to be left behind, thereby widening the social inequality gaps.

To understand this disparity in internet access, I sought to demystify digital exclusion from existing studies.

Dijk (2020) distinguishes the disparity between those who have access to internet technologies and those who don't in four kinds; the lack of access caused by lack of interest or fear of the technology, he terms this psychological access, lack of the material access like computers that he calls material access, lack of digital skills – skills access, and lack of the opportunities for technology usage or usage access. He contends that the primary investigations of the concept of digital exclusion narrowed down on physical access only – accessing the technology hardware and software, correlating this with demographics such as income, age, gender, and level of education. But while this study does not limit the phenomenon to physical access only Odongo & Rono (2016) note that unavailability or limited availability of digital equipment is the major cause of digital divide in Kenya. They approximate that

students access computers in the ratio of 1:150 for students to computers against the average 1:15 as in the developed world.

This paper is grounded in the Social Exclusion/ Marginalization Perspective, a multidimensional process of progressive social rupture, in which groups and individuals de-touch from social relations and institutions, preventing them from fully participating in the normal, normatively prescribed activities of the society in which they live. The outcome of social exclusion is that affected individuals are locked out of meaningful/ full participation in the economic, social, and political life of the society in which they live.

Causes of digital exclusion

Illiteracy stands as the major reason why most Kenyans living in the rural areas do not use the internet. Kebathi (2006) indicates a national literacy rate of 61.5% in Kenya, signifying a 38.5% illiteracy rate. The survey also reveals that only 29.6 % of the adult population has acquired the desired mastery level of literacy, meaning that the majority of those people measured as literate (61.5 %) are at risk of losing their literateness or cannot efficiently perform within a specific framework of knowledge. Technological ignorance is intertwined with regular illiterateness since educational and literacy levels play an important role in the likelihood that a person will own a computer or be linked to the internet. Wagner (2000) reports a 61.6% of Americans with college degrees as using the internet as contrasted to only 6.6% of those without college certification with access to internet use. Those with a college degree or higher in the US, are over eight times more likely to own a computer than the least educated and nearly sixteen times more likely to have home internet access.

Poverty/affordability/economic status: The Kenya National Bureau of Statistics (2020) indicates that 15.9 million out of 44.2 million Kenyans (about 36%) are monetary poor – describing this scenario as an adult earning less than KSh3,252 in rural areas and KSh5,995 monthly in urban areas. 53% of the population are further reported to be in multidimensional poverty – 67% in rural Kenya – more than twice the incidence in urban areas (27%). Poverty deprives people of at least three basic needs, services or rights out of the seven - physical development, nutrition, health, education, child protection, information, water, sanitation and housing. Investing in the internet is therefore considered a luxury, seeing as they struggle to access other 'very' basic amenities.

Infrastructure and digital infrastructure: Infrastructure remains one of the greatest challenges in rural Kenya. From innovation hubs, learning institutions, internet services, mobile networks, and access to grid power, people in rural areas have less access than residents in urban areas. Deficiencies in services therefore cascade from these key absences. The absence of electricity for example makes it harder for telecommunication companies to set up mobile network. The absence of mobile networks means that fewer people acquire mobile devices.

Internet use cases for rural Kenya

Rural Kenya's reluctance to the adoption and therefore use of the internet is also partly informed by their ignorance of the benefits of this commodity. They have never used the internet so they do not know how they stand to benefit from it. Below are some use cases for the underserved areas of the country.

Education: Monitoring teacher and student attendance through WhatsApp, and teacher/student literacy using e-learning applications like EasyElimu, Dawati, Ubongo kids etc.

Health: Disease outbreak surveillance, providing antenatal care to expectant mothers, and social protection through cash transfer using mobile money. This will also enhance financial inclusion.

Agriculture: Providing crop micro insurance and weather information to farmers, digitizing payments to and from farmers and for formalizing agricultural value chains.

Jobs: Providing digital employment skills suitable for the booming gig economy.

Impacts of digital exclusion

Social exclusion

Digital exclusion promotes unequal access to ICTs that are essential for an individual's full participation in societal activities thus diminishing the inclusive and participatory aspects of contemporary ICTs (the use of social media and online discussion forums) which are essential in terms of citizen participation in society. Schejter, Orit, Harush & Tirosh (2015) argue that the unequal distribution of digital resources among the digitally excluded communities permeates unequal participation in such societies, leading to social exclusion. The use of ICTs has continued to steadily but unevenly spread in Kenya, predominantly driving inequity in the transition to a modern digital era, which has been fast tracked by the Covid-19 pandemic. If ICTs are not readily accessible, it can greatly inhibit one's ability to effectively participate in the new digital economy which is becoming more and more integral for increasing social inclusion and reducing poverty (Dutton, 2001).

Digital Vicious Cycle

A vicious cycle is a loop in which an event has a consequence that not only keeps it going, but strengthens the original action, ultimately starting the entire cycle all over again. Digital exclusion, therefore, as a cause of social exclusion and in return perpetuating and exacerbating digital exclusion, creates a vicious cycle. The Knowledge gap theory states that innovations in ICTs tend to result in widening information gaps. That in pursuit of ICTs, an imbalance of wealth is created as a direct result of digital imbalance since those incapable of accessing and capitalizing the use of these technologies will be unable to exploit such technologies to improve their economic status. Digital exclusion, therefore, is portrayed mainly as a concern for the poorest, most discriminated segments of Kenya whence their marginality is advanced.

Enhancing digital inclusion

Mugendi & Valbuena (2020), who report from the Northern Kenya region – data I extrapolated to represent the rest of the rural and semi-urban areas of the country – argue that there is limited network coverage and where available, it is limited to 2G. This hinders the spread of internet in rural Kenya. Enhancing equitable distribution of such digital infrastructure will mitigate social exclusion by introducing disadvantaged groups to the benefits of internet use.

Ban the importation and use of feature phones. These phones are simplistic phones built on the 2G broadband technology that does not support internet applications thus limiting in their usability. For lacking internet applications, feature phone users will contend to the lack of internet access, for not having a choice. However, if they would be converted to the use of internet accessing smart phones, their attitude would gradually be inclined towards internet usability.

Building public internet access points (PAP) in rural Kenya and exposing rural people to the use of internet on-demand, pay-G will address the skill gap and promote internet access.

Extending internet access for people in deprived communities is worthy of further consideration in the context of government objectives for tackling social isolation and increasing wellbeing and to reinforce cohesion and social equalities.

Key Findings

- There exists a problem of skewed and uneven internet access in Kenya, causing a digital divide – information haves and have-nots. (About 40% of the entire population as of January 2022 can access and utilize this commodity.)
- Digital divide causes social divide and a reduction in human activity from affected members. This exuberates societal inequalities.
- Digital exclusion is primarily caused by the inability to afford the cost of ICTs especially among the poor of the Kenyans but accelerated by other factors like technological illiteracy and psychological access.
- Digital exclusion causes communication asymmetry and disenfranchisement of information that render people ignorant and easy to manipulate. It undermines people's full participation in the societal activities, and unfortunately repeats in a vicious cycle.
- Digital exclusion as experienced in Kenya is a multidimensional problem that cannot be solved by a single approach. However, Poverty alleviation programs that will ensure the availability of fundamental needs will make a case for the internet use in rural areas. Similarly, creating a basic minimum wage in the country will help lift people out of economic poverty so they can afford the cost of the internet and its gadgets. Its ripple effect will pull them out of social exclusion that is rampant in rural Kenya.

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