MOBILE DATA PLANS IN KENYA

Quantifying women's access to the digital world

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INTRODUCTION

"Our findings indicate a significant difference between the data bundle purchasing preferences of women and men in Kenya"

In Kenya, as across most low- and middle-income countries, the majority of citizens connect to the internet via their mobile phones. In this paper, we explore the types of mobile data plans Kenyans purchase, in order to understand and quantify their levels of internet access, as well as to determine whether differences exist in the plans purchased between women and men.

Our findings indicate a significant difference between the data bundle purchasing preferences of women and men in Kenya. Women are more likely than men to buy full-cost data plans (i.e., plans with no restrictions on which sites/apps can be accessed). However, women often purchase smaller full-cost data plans (1GB or less) — likely as a result of lower relative incomes. When they do purchase full-cost plans, men are more likely to purchase larger bundles (i.e, larger than 1GB) compared to women.

In addition, men tend to purchase significantly more service-specific plans (i.e., plans in which access to only certain websites or apps are subsidised) compared to women. This is possibly because some service specific plans are targeted at men, and maybe less appealing to women. Based on these findings, we put forward recommendations to encourage the provision of mobile data bundles that are also more appealing and affordable to women. This can also ultimately lower the gender digital divide in the country.

BACKGROUND

Background

In 2017, 50% of the world is expected to be online. While this milestone should be celebrated, it also means that 3 billion people — mostly women in low- and middle-income countries — are still offline.[1] The digital divide is multidimensional: gender, education, location, age, income, and a number of other factors determine who has access to the digital world.[2]

The nature of the gender gap in access is particularly staggering: women in poor, urban communities are up to 50% less likely to be online than men; women who are older and illiterate are most likely to be offline.[3] As in other low- and middle-income countries, the level of access men and women enjoy is largely determined by the cost of data plans and what they can afford to purchase. In response to these cost concerns, a number of mobile network operators (MNOs) now offer a range of mobile data services which vary in the kinds of access the user has to the internet. Given these types of services, we cannot simply view the gender gap as a binary in terms of whether or not a person has access, we also need to understand the type of access they have.

The Digital Gender Gap in Kenya

Kenya's economic growth coupled with several active MNOs, a favourable entrepreneurship environment, and tech friendly policies have enabled it to spearhead technological innovation in Africa, and have led many to dub the country the 'Silicon Savannah'.[4] Despite this moniker, Kenya still faces a number of issues related to affordable and equitable internet access. Kenya's internet penetration rate today stands at an impressive 90%,[5] however, high prices for broadband (3G + 4G) services mean that mobile broadband penetration sits at just 19%.[6] The country's digital gender gap is also staggering — in poor areas of Nairobi, men are over twice as likely as women to be online.[7] There is also a large gender gap in smartphone ownership, due, in large part, to the high cost of prepaid data and internet-enabled mobile phones,[8] and Kenyan women are more likely than their male counterparts to borrow phones to use.[9]

Even when women own mobile phones, research indicates that they are less likely to use these devices to browse the internet — a survey conducted in Kenya shows that 57% of women who own a personal mobile phone report never having used their phone to browse the web; 39% of men reported the same.[10] Ensuring that all citizens have equal opportunities to leverage the internet to improve their lives means that we must also take into account the quality and level of access enjoyed by both women and men. When women do go online, there are various factors that shape their experience. Research indicates that women's quality of access is imperiled by harassment online — a Web Foundation survey found that one in five Kenyan women report having been harassed online,[11] while other research shows that unwanted messages and photos on social media sites deter many women from being online.[12] The level of access women enjoy is also, as noted above, dictated by the cost of mobile data plans[13] — a theme which is further explored in this paper.

With this in mind, using a quota sampling approach, we administered a set of mobile phone-based surveys in 2016 to 1,000 mobile internet users (500 female, 500 male)[14]. For the survey, we listed and classified all the mobile data bundles offered by Kenya's three main mobile network operators (MNOs). Using the survey results, we probe how Kenyan men and women access the internet on their mobile phones, and how much they spend on mobile internet data plans.

1   Alliance for Affordable Internet. (2017). 2017 Affordability Report.
2   GSMA (2015), Bridging the Gender Gap: Mobile Access and Usage in Low and Middle-Income Countries & World Wide Web Foundation (2015), Women's Rights Online: Translating Access into Empowerment.
3   World Wide Web Foundation (2015), Women's Rights Online: Translating Access into Empowerment.
4   Osiakwan, Eric M. K. (2017). The KINGS of Africa's Digital Economy. In Digital Kenya. Bitange Ndemo and Tim Weiss, eds. pp. 55–92. Palgrave Studies of Entrepreneurship in Africa. Palgrave Macmillan UK.
5   Communications Authority of Kenya (2017), Second Quarter Sector Statistics for the Financial Year 2016/2017 (October - December 2016)
6   GSMA Intelligence (2017)
7   57% of men surveyed in low-income areas of Nairobi are online, versus just 20% of women. World Wide Web Foundation (2015), Women's Rights Online: Translating Access into Empowerment.
8   GSMA (2015), Bridging the Gender Gap: Mobile Access and Usage in Low and Middle-Income Countries & World Wide Web Foundation (2015), Women's Rights Online: Translating Access into Empowerment & Buskens, I., Webb, A., & EBSCO Publishing (2009), African women and ICTs investigating technology, gender and empowerment. London ; New York : Pretoria, South Africa : New York: Zed Books ; Unisa Press ; Distributed in the USA by Palgrave Macmillan.
9   GSMA (2015), Bridging the Gender Gap: Mobile Access and Usage in Low and Middle-Income Countries
10 Ibid.
11 World Wide Web Foundation (2016), Women's Rights Online - Report Card Kenya.
12 Chair, C. (2017), Internet Use Barriers and User Strategies: Perspectives from Kenya, Nigeria, South Africa, and Rwanda (Beyond Access Policy Paper No. 1).
13 GSMA (2015), Bridging the Gender Gap: Mobile Access and Usage in Low and Middle-Income Countries. Page 93 & Chair, C. (2017). Internet Use Barriers and User Strategies: Perspectives from Kenya, Nigeria, South Africa, and Rwanda (Beyond Access Policy Paper No. 1).
14 We also used post-stratification weights to get a representative sample of mobile phone Internet users in Kenya. See A4AI (2016) Research Brief No. 2 | Mobile Data Services: Exploring User Experiences and Perceived Benefits.

BACKGROUND

The Mobile Data Service Landscape in Kenya

Five mobile network operators (MNOs) currently operate in Kenya: Airtel Networks Kenya, Telkom Kenya (Orange), Safaricom, Finserve, and Sema. Our research focused on the three MNOs with the highest market share: Safaricom, Airtel, and Telkom Kenya. According to the Communications Authority of Kenya, the country's largest operator is Safaricom, with 67.5% of the mobile data/internet market. Airtel and Telkom Kenya hold 19.7% and 7.1% of the mobile data/internet market share, respectively.[15]

These operators provide different mobile data plan services. At the time of the survey (February 2016), Airtel Kenya had seven types of mobile data plans on offer, while Telkom Kenya had five, and Safaricom, four. The data plans on offer can be grouped into three categories, depending on data limits, the validity period of the data, and any restrictions as to the sites or applications that can be accessed on the plan.[16]

Full-Cost Data Bundle

Subscribers pay the full advertised amount to access the specified data bundle, and customers can access the web without restriction until they finish the purchased amount or the data expires. All mobile operators surveyed provide two types of full-cost mobile data plans.

Service-Specific Data Bundle

Service-specific subscribers purchase data bundles that can give them access only to certain apps and websites. Customers buy data that enable them to access primarily social media or entertainment sites at a lower price than full-cost data bundles. Airtel offers service-specific plans to access apps like WhatsApp, Twitter, and Facebook. Telkom Kenya's plan offers access to Facebook, and Safaricom sells bundles at a lower price to stream DStv content.

Zero-Rated Data Bundle

Zero-rated services provide access to websites and apps for free. All operators offer access to Wikipedia Zero, while Telkom Kenya offers access to Facebook Zero,[17] and Airtel provides access to internet.org [18] and promotional access to Twitter.

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15 Communications Authority of Kenya (2017), <u>Second Quarter Sector Statistics for the Financial Year 2016/2017</u> (October - December 2016)
16 Alliance for Affordable Internet (2015), <u>Models of Mobile Data Services in Developing Countries</u>
17 Facebook Zero provides free access to Facebook via web browsers.
18 Free Basics by Facebook which gives people access to participating apps and websites.

FINDINGS

2.1   What type of mobile services do Kenyans use?

Over 70% of Kenyans reported using a full-cost data bundle to access the internet, as shown in Table 1. Almost 10% of users reported using a service-specific plan as their primary internet data plan, while nearly 2% reported primarily using a zero-rated data bundle.

Table 1 — Most popular data bundles

MOST COMMON DATA BUNDLES	USERS
FULL COST	70.5%
SERVICE-SPECIFIC	9.7%
ZERO-RATED	1.9%
PUBLIC WIFI	15.7%
OTHER	2.1%

2.2   Is there a difference between the data bundles women and men use?

While our research has shown that over 70% of Kenyans use full-cost data bundles to access the internet, we wanted to determine whether there was a difference in the data packages purchased by women and men. Disaggregating the data based on gender, we see that among all Kenyan women surveyed, 74% reported using full-cost data plans as their main method for accessing the internet; only 67% of men reported using a full-cost plan. This result indicates that women, in general, are more likely to pay the full advertised amount for their data than men.

The reverse is true for service-specific and zero-rated data plans. As shown in Table 2, when compared to women, men prefer to use service-specific and zero-rated plans as their main means of getting online. The service-specific plans surveyed provide subsidised access to certain apps and websites like Facebook, WhatsApp, Instagram, and DStv mobile streaming services; the zero-rated plans give free access to Facebook Zero, Wikipedia Zero, and Twitter (promotion). This result indicates that men are more likely to use cheaper and subsidised data packages that offer access to a few websites and apps — mostly social media sites.

A number of demographic factors can influence these findings. When controlling for factors like education, age, weekly spending on data, and employment status, Kenyan women are still more likely to buy full-cost data plans, compared to men.

Table 2 — Most popular data bundles based on gender

MOST POPULAR DATA BUNDLES	FEMALE	MALE
FULL COST	74%	67%
SERVICE- SPECIFIC	4.4%	15%
ZERO-RATED	1%	2.8%
PUBLIC WIFI	18.8%	12.6%
OTHER	1.8%	2.4%
TOTAL	100%	100%

2.3   Do women really pay more for their data than men?

As a lower-middle income country, Kenya has a notable gender income gap. Wage equality for the same job between men and women is 0.651, on a scale of 0-to-1 where 0 shows complete inequality and 1 shows parity.[19] So, if the income disparity between men and women is high, and if women earn less than men, why is it that women are more likely than men to pay the advertised amount for their mobile data plans?

To further explain this phenomenon, we looked at the mobile data purchasing trends of men and women in Kenya.[20] The full-cost data bundles offered by operators range from 150MB to 6144MB, with the smallest data packages costing less than 199Ksh (approximately 2 USD), and the largest more than 1,000Ksh (approximately 10 USD).

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19   World Economic Forum, (2016). Gender Gap Index: Country Profiles - Kenya.
20   The purchasing trend is estimated based on the reported weekly expenditure on data and cross-referenced with the full-cost plans the three operators offer.

Our results (Table 3) show that even though women prefer to pay for the advertised amount of a data plan, they buy smaller data bundles than men. For instance, 35% of women buy 150MB of data, spending less than 199Ksh weekly, while only 25% of men purchase the cheapest data bundles. Women also tend to buy 350MB and 1024MB more frequently.[21]

However, men are more likely to buy data bundles that are 1229MB or larger. For instance, as shown in the below table, just over 1% of men buy the largest data package (6144MB) spending more than 1,000Ksh (approx 10 USD) weekly, while women in our survey do not buy the highest amount at all.[22]

As noted earlier, Kenya has a notable gender wage gap. The socio-economic factors that affect women in their everyday lives are the same factors that determine whether they buy 150MB of data or a 3GB bundle. The spending power of Kenyan women, their disposable income, and their ability to purchase mobile data packages are a few of the factors that are relevant here.

Table 3 — Mobile data purchasing difference between men and women

ESTIMATED DATA PURCHASE	FEMALE	MALE
150 MB	35.10%	24.7%
250 MB	1.11%	9.34%
350 MB	35.10%	20.18%
400 MB	0.28%	2.71%
450 MB	0.95%	9.34%
1024 MB	20.61%	16.87%
1228.8 MB	0.56%	4.82%
2048 MB	0.84%	6.33%
3072 MB	4.46%	4.52%
6144 MB	0	1.2%

2.4 Why are more men using service-specific and zero-rated data bundles than women?

Of those that reported using service-specific mobile data plans at least once in the last year, 74% were men and 26% were women (see Figure 1). Similarly, over 65% of men and 34% of women reported using zero-rated data bundles within the past year (see Figure 2). Since zero-rated data packages are free and service-specific data bundles are cheaper than full-cost data plans, one would have assumed that women would be using these data bundles at higher rates.

However, when controlling for factors like education, age, weekly spending on data, and employment status, Kenyan men are more likely to use service-specific and zero-rated data plans.
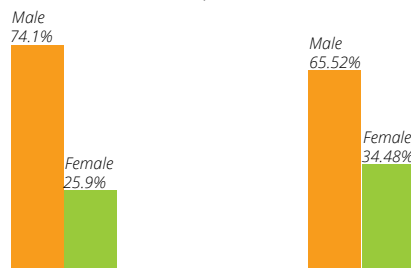

Figure 1: Service-Specific Users   *Figure 2: Zero-Rated Users*

Interestingly, when asked about online activities, women reported using messaging apps and social networking sites more than men. Nearly 6% of women report using messaging apps (compared with just over 3% of men), and over 20% report using social networking apps (compared with over 15% of men). If women are significant users of the social media sites and messaging apps that are included in service-specific and zero-rated plans, why aren't they buying these packages more frequently?

This could be a function of the marketing strategies used for these services. For example, one of the service-specific offers from Safaricom was a DStv mobile streaming service that, when available, offered access to 17 channels — a number of which were sports-focused.[23] These purchasing trends might also reflect what appears to be a greater willingness among men to accept site restrictions when accessing free data plans. The same survey found that consumers willing to accept site restrictions when accessing a free data plan were primarily men (55%).[24] Women's less frequent use of service-specific and zero-rated data plans could also suggest a possible lack of awareness of these plans or how they work.

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21 Data bundles that women buy more than men are typically offered by Safaricom.
22 Data bundles that are frequented by men are all bundles provided by Airtel and Telkom Kenya, except the data bundle 3072MB which is provided by Safaricom.
23 How To Activate DStv Channels Using Safaricom Line: DStv Channels You Can Watch From Phone. - ZaKenya. (n.d.)
24 When asked under what hypothetical conditions would they accept a free data plan of those who said they would accept some site restrictions, 55% were men and 45% women.

POLICY RECOMMENDATIONS

1 Mandate the collection of sex-disaggregated data

Kenyan mobile broadband penetration stood at 19% at the end of 2016;[25] it is therefore important to address the factors that preclude the rest of the population from using broadband internet. To address the digital gender gap, the Communication Authority of Kenya (CA) needs to mandate mobile network operators to provide sex-disaggregated data on the adoption and use of their services; in turn the CA should also disaggregate data on access and use of (mobile) internet in their quarterly sector statistics reports. Sex-disaggregated data and reporting will enable us to better understand who is online and offline. The barriers that preclude women from connecting to the internet are evident, and if sex-disaggregated data is made available, policy and marketing strategies can be tailored to better address these barriers.

2 Use Universal Service and Access Funds (USAFs) to target programmes that enable affordable access

As noted above, the gender gap in internet access in Kenya is large. While nearly 60% of men living in Nairobi's urban, low-income areas are likely to be online, just 20% of women in these same communities are connected.[26] Where Kenyan women use the mobile internet, they prefer full-cost data plans but resort to the smallest and the cheapest data bundles. It is therefore crucial to invest in strategies that can help lower costs.[27] These could include, for example, the effective and efficient use of USAFs to support access among targeted groups, as well as investments in public access programmes. For instance, Colombia used funds from its USAF to subsidise the cost of mobile devices and mobile data plans to low-income groups, including women.[28] Similar programmes are also feasible in Kenya, as it is one of the few countries in Africa that explicitly considers gender as part of its universal access policy.[29] Given that Kenyan women prefer full-cost data plans that give them access to the open web, targeted efforts (access to the full internet) could potentially enable millions of men and women to access the internet affordably.

3 Adequately market service-specific and zero-rated data packages to women

Service-specific and zero-rated data plans are more likely to be used by men than women, even though they provide access to websites and apps used more frequently by women. It is possible that this is because the service-specific and zero-rated services available are not sufficiently marketed to women, and/or do not cater to the interests of women. We recommend that MNOs invest more to understand what kind of content women consider useful, and to incorporate these insights into their services. After incorporating content and services that are of value to women, MNOs should make a concerted effort to market these services to women, and to educate women on how such data services work. To the extent where service-specific and zero-rated programmes are allowed under Kenyan law and related net neutrality principles, MNOs should expand the content they provide to women and adequately market these services so that women are equally served by these services.

4 Conduct further research to understand the gendered aspect of mobile data services

This policy brief raises several questions, and sets the groundwork for those interested to further investigate the gendered dimension of mobile data services in Kenya and elsewhere. It also leads to several opportunities for mobile network operators, civil society organisations, and policymakers to pursue a gender analysis of service-specific and zero-rating marketing practices, in order to uncover why women are less likely to use these services. Further studies can also examine ways to improve women's ability to purchase larger full-cost plans (at least of similar levels to men). This can include, for example, assessing the potential for purchasing such data plans on credit. Ultimately, Kenya cannot achieve universal access for all its citizens, unless it makes significant strides toward closing the gender digital gap. Understanding and acting upon inequalities in how people access mobile data services is one step in eliminating that gap.

25 GSMA Intelligence (2017)
26 World Wide Web Foundation. (2015). Women's Rights Online: Translating Access into Empowerment.
27 Alliance for Affordable Internet (2016) Policy and Regulatory Good Practices.
28 Alliance for Affordable Internet. (2017). 2017 Affordability Report.
29 Alliance for Affordable Internet. (2017). Are Universal Service Funds Being Used to Close the Gender Gap?