ICT SURVEY REPORT - HOUSEHOLDS AND INDIVIDUALS

SURVEY ON ACCESS AND USAGE OF INFORMATION AND COMMUNICATION TECHNOLOGY BY HOUSEHOLDS AND INDIVIDUALS IN ZAMBIA

2015

ZICTA
ZAMBIA INFORMATION AND COMMUNICATIONS TECHNOLOGY AUTHORITY

Republic of Zambia
CENTRAL STATISTICAL OFFICE

Republic of Zambia
MINISTRY OF TRANSPORT AND COMMUNICATIONS

Foreword

It is my pleasure to present to you the findings of the 2015 survey on access and usage of Information and Communication Technology (ICT) by households and individuals. The survey was undertaken primarily to measure progress in access and usage of selected ICT products and services which include radio, television, fixed lines, mobile phones, internet services and digital financial services among households and individuals in Zambia. In addition, the report highlights some important attributes about consumers' experiences while using these ICT products and services.

This is a useful document for the country as it highlights progress towards transforming Zambia into an 'information and knowledge based society', an aspiration set out in the country's broader national strategy-Vison 2030. The measurement of ICT access and usage is equally vital for formulating and revising national ICT policies and strategies. ICT indicators are also necessary to monitor progress in achieving the global Sustainable Development Goals (SDGs) and the targets set out by the World Summit on the Information Society (WSIS).

The 2015 survey on access and usage of ICTs by household and individuals received financial support from the government of the Republic of Zambia through the Zambia Information and Communications Technology Authority (ZICTA). I am hopeful that you will find the insights highlighted in this report useful for shaping programmes and strategies aimed at complementing the growth and development of the ICT sector in Zambia

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The team wishes to thank all the respondents, various households and individuals that made important contributions during the survey. The report also benefitted from consultations and feedback of staff from the three institutions and other external stakeholders.

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List of Abbreviations

BoZ	Bank of Zambia
CAPI	Computer Assisted Personal Interviewing
CSO	Central Statistical Office
CSPro	Census and Survey Processing
FNB	First National Bank
ICTs	Information and communication technologies
IMEI	International Mobile Equipment Identity Number
ISP	Internet Service Provider
MNO	Mobile Network Operator
PDA	Personal Digital Assistant
SDGs	Sustainable Development Goals
SEAs	Standard Enumeration Areas
SIM	Subscriber Identity Module
ITU	International Telecommunications Union
OTT	Over The Top Applications
TV	Television
WSIS	World Summit on the Information Society
ZANACO	Zambia National Commercial Bank
ZICTA	Zambia Information and Communications Technology Authority
ZNBC	Zambia National Broadcasting Corporation

Executive Summary

The 2015 survey on access and usage of Information and Communication Technologies (ICTs) was conducted in August, 2015. The survey investigates the extent of access to ICT devices such as mobile phones, computers, radios and television among others. It also explores the range of ICT services accessed by individuals and households which include mobile phone services, fixed line services, digital financial services, internet services, over the top applications and social media among others. Further, the survey attempts to examine the experience of consumers with the ICT products and services available on the market.

Access to Electricity

Zambia is relatively less electrified by global standards, with only 33.1 percent of the households in the country accessing power from the national grid. The majority of the households, 29 percent access energy for powering electrical equipment through the utility companies like ZESCO while a smaller proportion of households employ alternative energy sources such as solar and generators accounting for 17 percent and 1 percent of all households respectively.

Access to Radio and Television

The proportion of households with a working television set reduced marginally from 35.5 percent recorded in 2013 to 33 percent in 2015. However, ownership of television sets by households remained relatively higher in urban areas than rural areas. Similarly, the proportion of households owning a working radio reduced from 52.7 percent reported in 2013 to 44.9 percent in 2015. The quality of radio reception was reported to be relatively better on community radio stations than the national broadcaster, ZNBC.

Access to Fixed Line Services

Only about 0.3 percent of all the households in the country have a functional fixed telephone line. The highest consumer satisfaction attribute among households accessing fixed line services is the provision of service information by the provider, accounting for 44.2 percent of households that access the service.

Access to Mobile Phones

Around 64.5 percent of the households in the country have access to a mobile phone determined by at least one member of the household owning a mobile phone. Further, about 51 percent of people aged above 10 years in Zambia are active users of mobile phones. Only 13.5 percent of the individuals that own mobile phones have smart phones. About 71 percent of individuals that own smartphones use the devices to access Over The Top (OTT) applications like WhatsApp, Viber, Facebook, Skype and Twitter for communication using instant messaging or voice calling.

Access to Computers by Households

There was a marked improvement in the proportion of households that have access to a computer, determined by at least one member of the household owning a computer, from 4.9 percent recorded in 2013 to 7.1 percent in 2015. Correspondingly, there was a marginal improvement in the proportion of households that use their computers to access the internet at home from 46.7 percent of those that own computers recorded in 2013 to 49.7 percent recorded in 2015

Access to Internet services

There was a marked improvement in the proportion of individuals that know how to use the internet from 4.8 percent reported in 2013 to 8.8 percent reported in 2015. The majority of the households, accounting for 71 percent of the total number of households with access to internet services, access mobile broadband services using a mobile phone. The majority of internet users constituting 63 percent of the internet users spend their time online on social networking sites.

Online Risks

Awareness about risks associated with using the internet is relatively low in Zambia with only about 51 percent of the internet users in the country aware of the existence of any risks online. The most prevalent victims of internet risks are exposed to obscene material online accounting for 45 percent of the total number of people aware of the existence of internet risks. Victims of fake online promotions, inappropriate contact and sexting are also relatively

high. Online risk mitigation strategies among households are diverse and mainly motivated by the source of the households' perceived greatest risks online. Most households that applied mitigation measures on online risks had rules about viewing pornography as well as about sharing passwords.

Digital Financial Services

86 percent of individuals in Zambia aged above 10 years do not have any Bank accounts. There was a marked improvement in the proportion of people in the country aware of the existence of digital financial services from 26.4 percent of the population aged above 10 years recorded in 2013 to 45.9 percent in 2015. However, only 30 percent of the individuals aware of the existence of digital financial services have used the service to pay for goods and services or transfer funds.

The main limitation to the usage of digital financial services among individuals aware of the existence of the services in the country is a lack of knowledge on the operation of digital financial services as highlighted by 57.9 percent of the people that are aware of the existence the services but do not use the services. Only 13 percent of the users of digital financial services reported to have experienced some problems while using digital financial services. The most prominent challenge encountered by digital financial services users is system failure. Other prominent challenges experienced by digital financial services users include delayed transmission of funds and insufficient funds to make payouts at receiving agents.

1. Background to the 2015 Survey on Access and Usage of Information and Communication Technology in Zambia

The 2015 survey on access and usage of Information and Communication Technologies (ICTs) in Zambia by households and individuals was conducted by the Zambia Information and Communications Technology Authority (ZICTA) in collaboration with the Central Statistical Office and the Ministry of Transport and Communications in the month August 2015. This is the second assessment undertaken by the organisations primarily aimed at measuring progress in access and usage of ICTs by households and individuals in Zambia. The first assessment, which was conducted in 2013, provided a useful baseline of the breadth and depth of access and usage of ICTs among households and individuals in the country.

Specifically, the 2015 survey investigates the extent of access to ICT devices such as mobile phones, computers, radio and television among others. It also explores the range of ICT services accessed by individuals and households which include mobile phone services, fixed line services, digital financial services, internet services, over the top applications and social media among others. Further, the survey attempts to examine the experience of consumers with the ICT products and services available on the market. Particularly, this report highlights the extent of exposure to online risks and incidence of cases among individuals. It also highlights the levels of awareness and application of mitigation measures for online risks among households. The report also highlights some policy and regulatory insights around ICT access and usage by households and individuals obtained from the survey.

In conducting the survey, ZICTA together with its collaborating partners followed international guidelines and methodologies, developed by International bodies mainly core ICT Indicators 2010 developed by the United Nations /International Telecommunication Union as well as the 2014 Manual for Measuring ICT Access and Use by Households and Individuals. The survey was conducted in all the ten provinces of the country covering both rural and urban areas[1]. A total of 6,150 households were selected in the nationally

[1] See annexure 1 for a detailed description of the methodology employed in the 2015 survey on access and usage of ICTs by households and individuals.

representative sample with a response rate of 96 percent achieved. The households were drawn from 246 Standard Enumeration Areas (SEAs) selected from the universe of SEAs in the country identified during the latest Census of Population and Housing conducted in 2010.

Face to face interviews were conducted among all the household members above the age of 10 years that were present at the time of interview in the selected households using the Computer Assisted Personal Interviewing (CAPI) method. The Census and Survey Processing (CSPro) system application for Android, a software package for capturing/digitizing, editing, tabulating and disseminating data from censuses and surveys was used on the CAPI devices. A mixture of closed, open-ended, single and multiple response questions were elicited to respondents during the survey. The diversity of responses assisted in bringing out distinct attributes associated with access and usage of ICTs among households and individuals.

The total population estimates from the survey indicate that the country has a total of 10.1 million people aged above 10 years living in 2.5 million households as at 2015. Of this population, 49 percent are male while 51 percent are female. In addition, about 35 percent are below the age of 19 while 9 percent are above the age of 55 years. In addition, 36 percent of the population has at least completed secondary education. The survey also revealed that 59 percent of the households are in rural areas while 41 percent are in urban areas. The majority of the households are situated in Lusaka province, Copperbelt province and Eastern province constituting 18percent, 15 percent and 12 percent respectively. On the other hand, North Western province and Muchinga province account for the least proportion of households with 5 percent and 6 percent respectively[2].

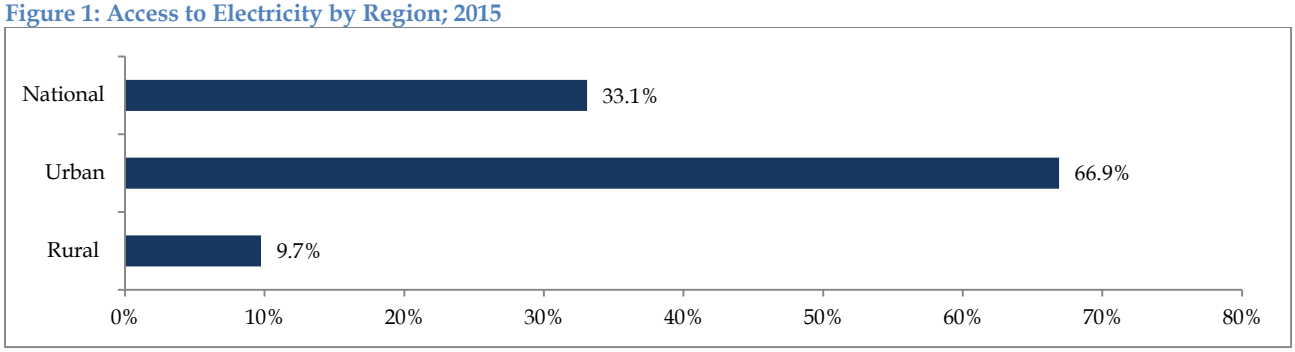
[2] See annexure 2 for detailed summaries of the demographic and socio-economic characteristics of the survey population.

2. Access and Usage of ICTs

2.1. Access and Usage of Electricity by Households

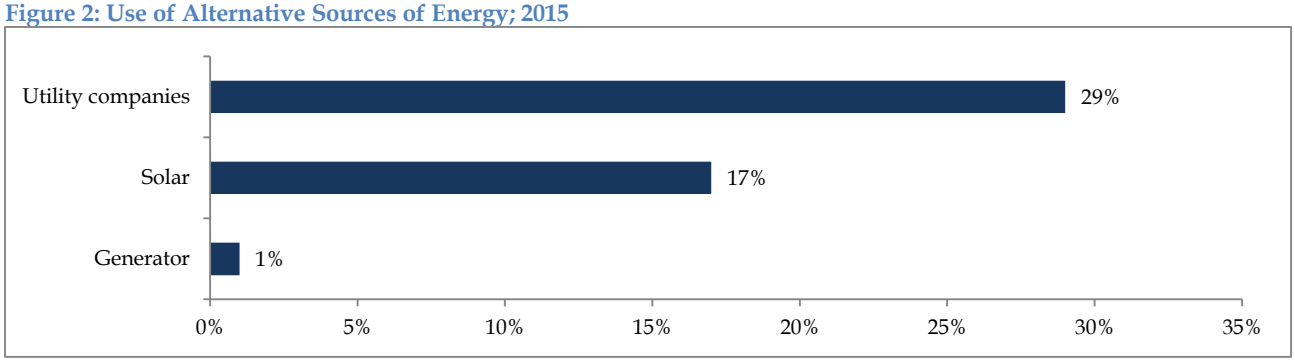
Zambia is relatively less electrified by global standards, with only 33.1 percent of the households in the country accessing power from the national grid. This proportion constitutes 27.3 percent of households in urban areas and only 5.7 percent from rural households. Further, 66.9 percent of all urban households are connected to the national grid while only 9.7 percent of all the rural households are connected to the national grid (see Figure 1).

Figure 1: Access to Electricity by Region; 2015



The majority of the households access energy for powering electrical equipment through the utility companies like ZESCO, accounting for 29 percent of all households. On the other hand, a smaller proportion of households also employ alternative energy sources such as solar and generators account for 17 percent and 1 percent of all households respectively (see Figure 2).

Figure 2: Use of Alternative Sources of Energy; 2015

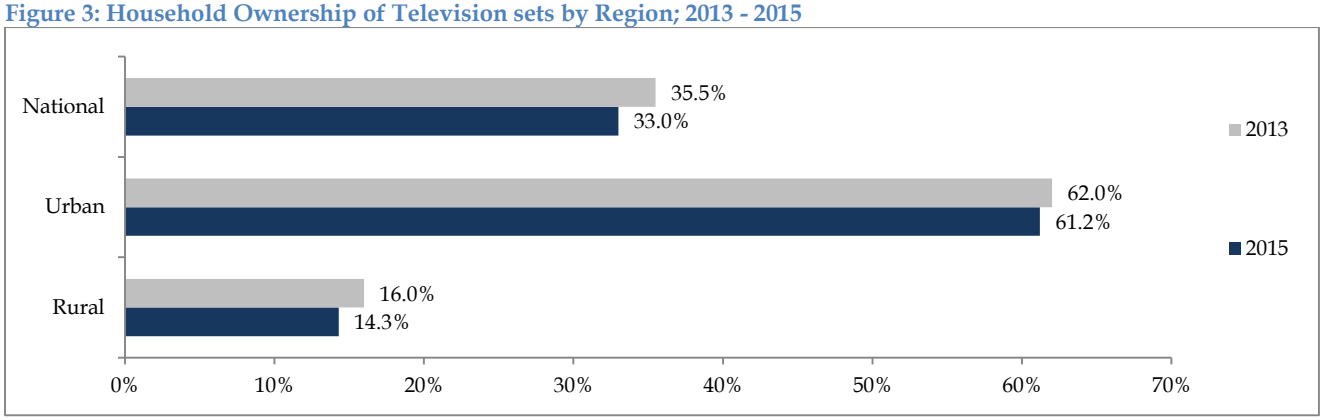


2.2. Television and Radio Ownership and Use

2.2.1. Ownership of Television Sets

The proportion of households with a working television set reduced marginally by 2.5 percent from 35.5 percent recorded in 2013 to 33 percent in 2015. However, ownership of television sets by households remained relatively higher in urban areas than rural areas. Specifically, 61.2 percent of the households in urban areas indicated that they have a working television set compared to only 14.3 percent of the households in rural areas (see Figure 3).

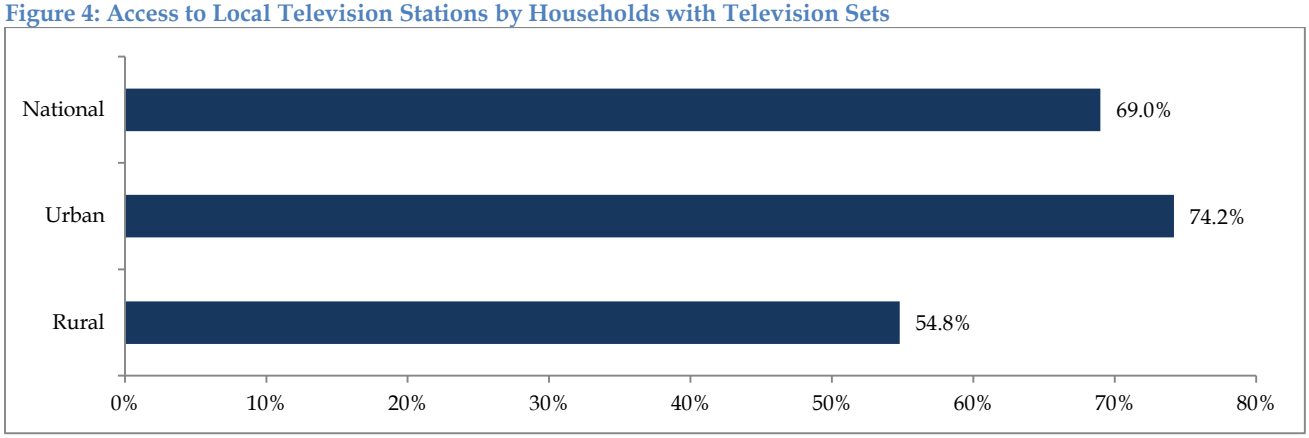
Figure 3: Household Ownership of Television sets by Region; 2013 - 2015



2.2.2. Access to Local Television Stations

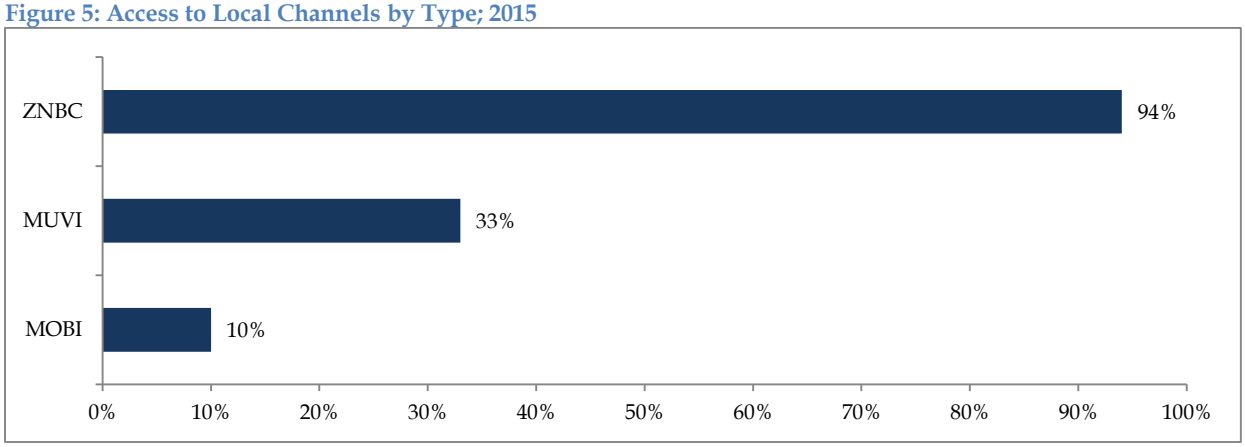
Considering only those households owning television sets across the whole country, only 69 percent access local stations. There are relatively more households in urban areas with television sets that access local stations constituting 74.2 percent compared to only 54.8 percent of the rural households that have television sets (see Figure 4).

Figure 4: Access to Local Television Stations by Households with Television Sets



The Zambia National Broadcasting Corporation (ZNBC) television station is the most widely accessed television station in the country accessed by 94 percent of all the households that said they have access to local stations. Muvi television station and Mobi television station are accessed by 33 percent and 10 percent of all the households that have access to local television stations respectively (see Figure 5).

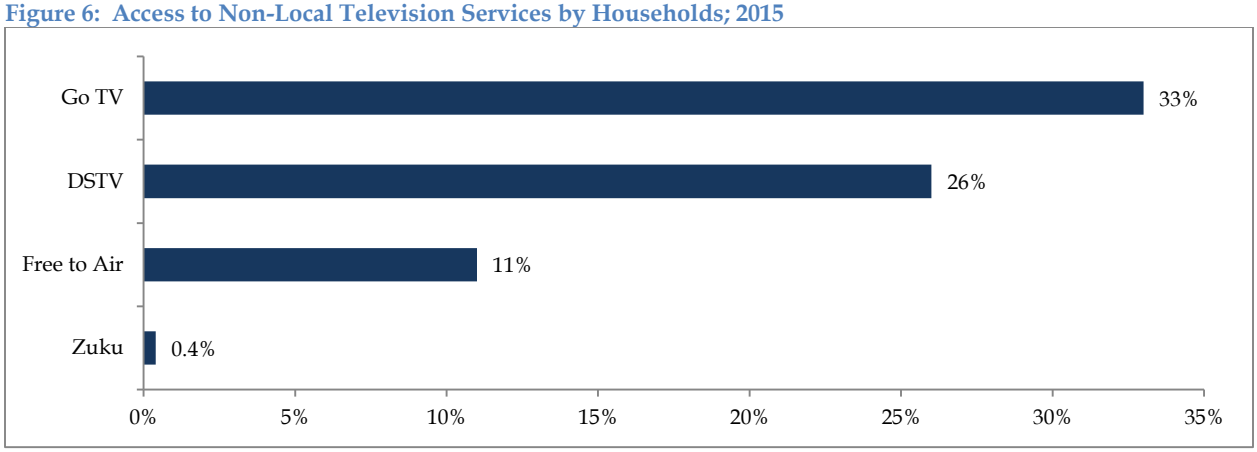
Figure 5: Access to Local Channels by Type; 2015



2.2.3. Access to Non Local Television Services

About 64 percent of the households that own television sets access at least one non local television service. The most widely accessed non-local television service in Zambia is GO TV accounting for 33 percent of all households with television sets. DSTV and Free to Air services account for 26 percent and 11 percent of all households with television sets respectively. Zuku TV is the least accessed non local television service accounting for less than 1 percent of the total number of households with television sets (see Figure 6).

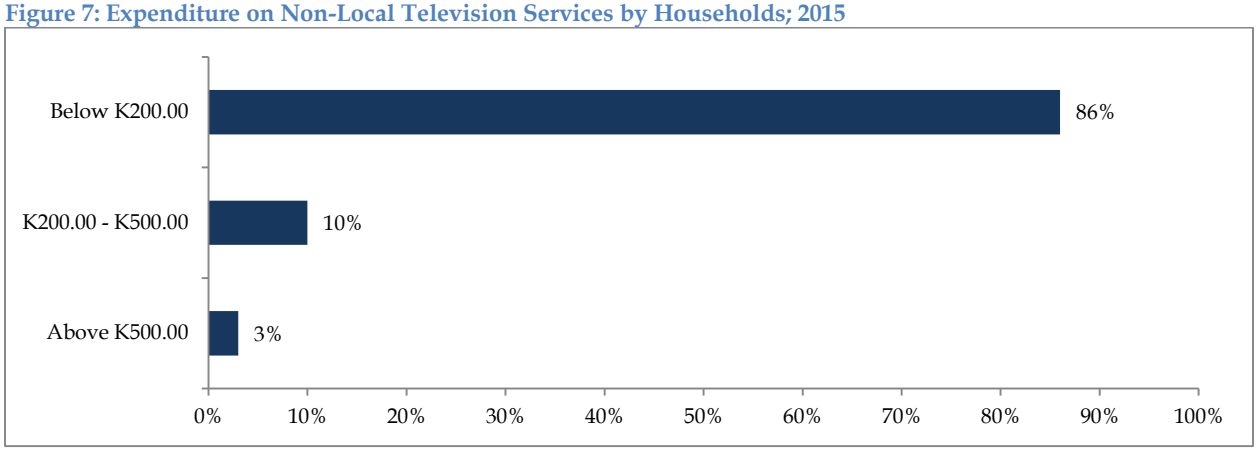
Figure 6: Access to Non-Local Television Services by Households; 2015



2.2.4. Expenditure on Non Local Television Services

About 86 percent of all households that have access to non- local channels spend less than K200 per month to access the service. On the other hand, only 3 percent of the households with access to non- local television channels pay subscriptions above K500 to access the service (see Figure 7).

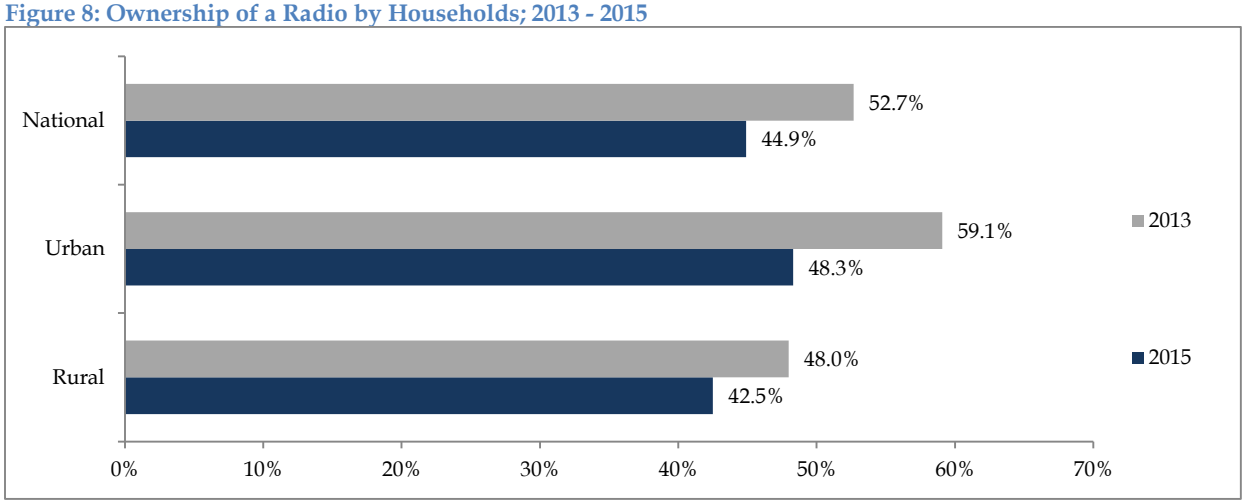
Figure 7: Expenditure on Non-Local Television Services by Households; 2015



2.2.5. Ownership of Radios by Households

The proportion of households owning a working radio reduced from 52.7 percent reported in 2013 to 44.9 percent in 2015. Radio ownership among households remained relatively higher in urban areas than in rural areas constituting 48.3 percent in urban areas and 42.5 percent in rural areas (see Figure 8).

Figure 8: Ownership of a Radio by Households; 2013 - 2015



2.2.6. Access to Radio Stations by Type

Despite access to the public broadcaster's radio stations being most prevalent among households in 2015, accounting for 89 percent of households with working radios, access to community radio stations was equally high constituting 85 percent of households with working radios. Only 2 percent of households with working radios did not have access to either ZNBC radio stations or any community radio station.

2.2.7. Household Perceptions on Quality of Reception from Radio Stations

The quality of radio reception was reported to be relatively better on community radio stations than the national broadcaster, ZNBC. Specifically, 72.6 percent of people who accessed community radio stations rated the quality of the reception as good compared to only 43 percent of people that indicated that they access ZNBC radio reception. Similarly, 29.9 percent of people who reported to have access to ZNBC radio stations rated the quality of the reception as poor compared to only 6.8 percent that access community radio stations (see Table 1).

Table 1: Perception on Quality of Reception by Type of Radio Station

Quality of Reception	ZNBC Radio Stations	Community Radios
Good	43.0%	72.6%
Fair	27.2%	20.6%
Poor/Bad	29.8%	6.8%

2.3. Access and Usage of Fixed Telephone Line Services

2.3.1. Access to Fixed Telephone Line Services by Households

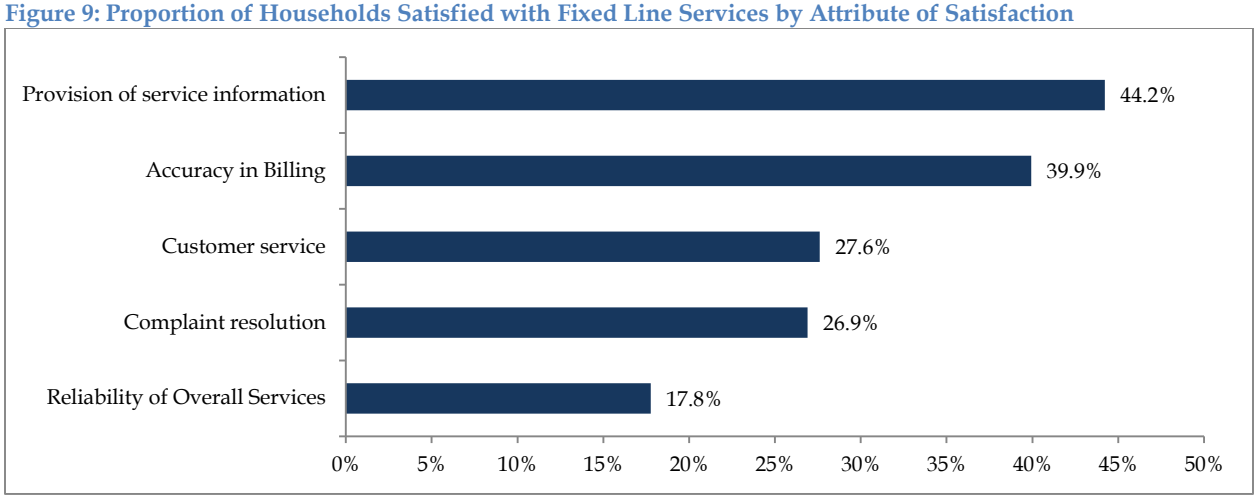
Only about 0.3 percent of all the households in the country have a functional fixed telephone line. Of this proportion, about 89.6 percent of the households are in urban areas while rural households account for 10.4 percent of households with fixed telephone lines.

2.3.2. Household Satisfaction of Fixed Line Services

The highest consumer satisfaction attribute among households accessing fixed line services is the provision of service information by the provider, accounting for 44.2 percent of households that access the service. On the other hand, most households expressed the

highest level of dissatisfaction with the reliability of the overall fixed line service in Zambia (see Figure 9).

Figure 9: Proportion of Households Satisfied with Fixed Line Services by Attribute of Satisfaction



2.3.3. Affordability of Fixed Line Services

The majority of the households with access to fixed line services, accounting for 73 percent of the total number of households that have fixed line services, indicated that they find fixed line services affordable. This perception was also reflected in the little variation between actual household expenditure on fixed line services and willingness to pay expenditure for fixed line services (see Table 2).

Table 2: Expenditure and Willingness to pay Distributions for Fixed Line Services among Households

Expenditure Bands for Fixed Line Services	Actual Expenditure	Willingness to Pay
Below K200.00	53%	58%
K200.00 - K500.00	28%	30%
Above K500.00	19%	12%

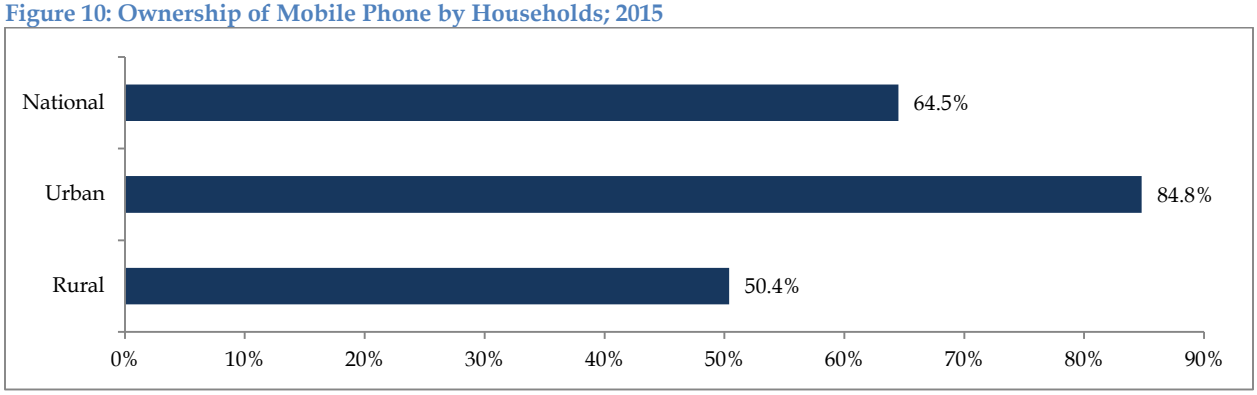
2.4. Access and Usage of Mobile Phones

2.4.1. Ownership of Mobile Phones by Households

Around 64.5 percent of the households in the country have access to mobile phones determined by at least one member of the household owning a mobile phone. The majority of the households that have access to mobile phones are located in the urban areas

accounting for 53.7 percent of the households with mobile phones. Further, 84.8 percent of the households in urban areas have access to mobile phones while only 50.4 percent of households in rural areas own mobile phones (see Figure 10).

Figure 10: Ownership of Mobile Phone by Households; 2015



2.4.2. Ownership of Mobile Phones by Individuals

About 51 percent of people aged above 10 years in Zambia are active users of mobile phones, defined as having used a mobile phone in the previous three months from the time of the survey. The proportion of active users of mobile phones is relatively higher in urban areas than rural areas corresponding to 68.3 percent of people aged above 10 years and living in urban areas compared to 38.8 percent of people aged above 10 years and living in rural areas. 83.8 percent of the total population of active mobile phone users own at least one mobile phone that is subscribed to a local network operator. Similarly, mobile phone ownership among the active users of mobile phones was relatively higher in urban areas than rural areas corresponding to 89.2 percent of the total number of active mobile phone users found in urban areas and 77 percent of the total number of active mobile phone users situated in rural areas (see Table 3).

Table 3: Access and Ownership of Mobile Phone by Individuals

Indicator	2015
Proportion of active users of mobile phones in Zambia	51%
Proportion of active users of mobile phones in urban areas	68.3%
Proportion of active users of mobile phones in Rural areas	38.8%
Proportion of ownership of mobile phones among active users	83.8%

Proportion of ownership of mobile phones among active users in urban areas	89.2%
Proportion of ownership of mobile phones among active users in rural areas	77%

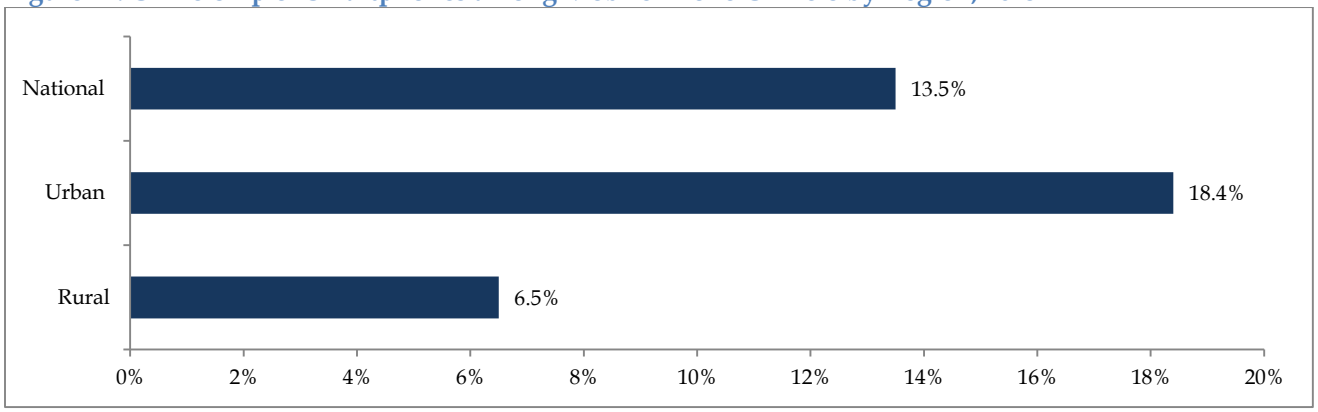
2.4.3. Ownership of Mobile Phones by Gender

There were relatively more male active mobile phone users than females corresponding to 55 percent of the males and 47.9 percent of females. Mobile phone ownership was equally higher among the male active mobile phone users accounting for 87.4 percent while the proportion of female mobile phone owners was 80.4 percent of the active female mobile phone users.

2.4.4. Ownership of Smartphones by Individuals

Only 13.5 percent of the individuals that own mobile phones have smart phones. Ownership of smartphones is relatively higher in urban areas constituting 18.4 percent of all the individuals that own mobile phones in rural areas compared to 6.5 percent of individuals that own mobile phones in rural areas (see Figure 11).

Figure 11: Ownership of Smartphones among Mobile Phone Owners by Region; 2015



About 71 percent of individuals that own smartphones use the devices to access Over The Top (OTT) applications like WhatsApp, Viber, Facebook, Skype and Twitter for communication using instant messaging or voice calling.

2.4.5. Mobile Network Coverage

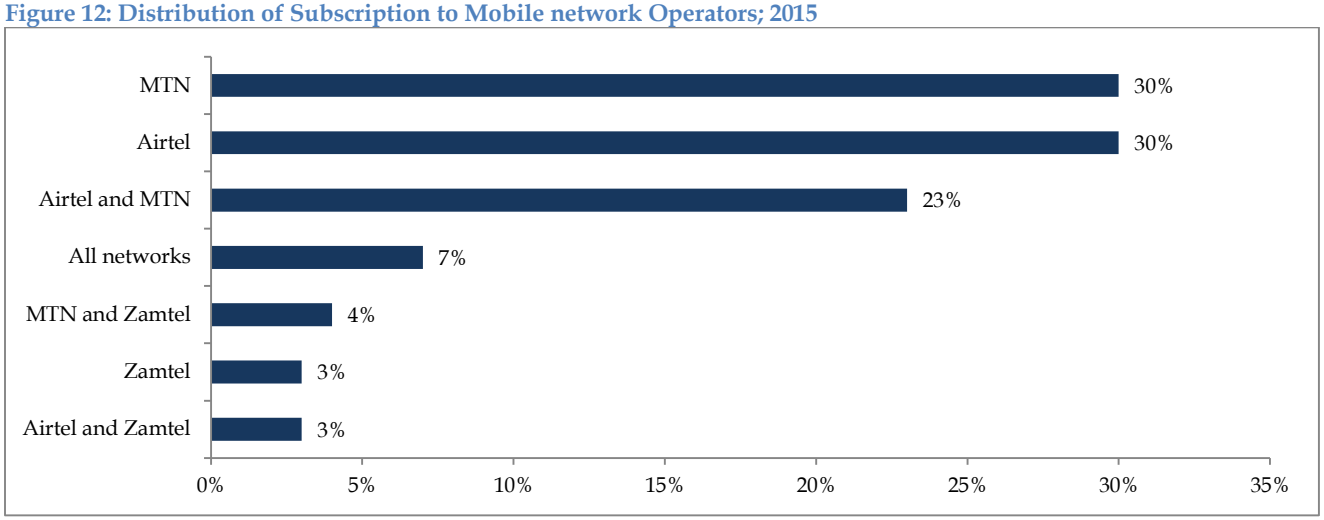
Mobile network coverage among individuals in the country was reported to be as high as 92.8 percent. However, coverage was reported to be relatively higher in urban areas than

rural areas. Specifically, 98.9 percent of individuals in urban areas reported to have network coverage in their areas of residence while only 83.9 percent of individuals in rural areas reported to have network coverage in their areas of residence. This to some extent confirms the existence of a digital divide between rural and urban areas.

2.4.6. Mobile Network Subscription by Operator

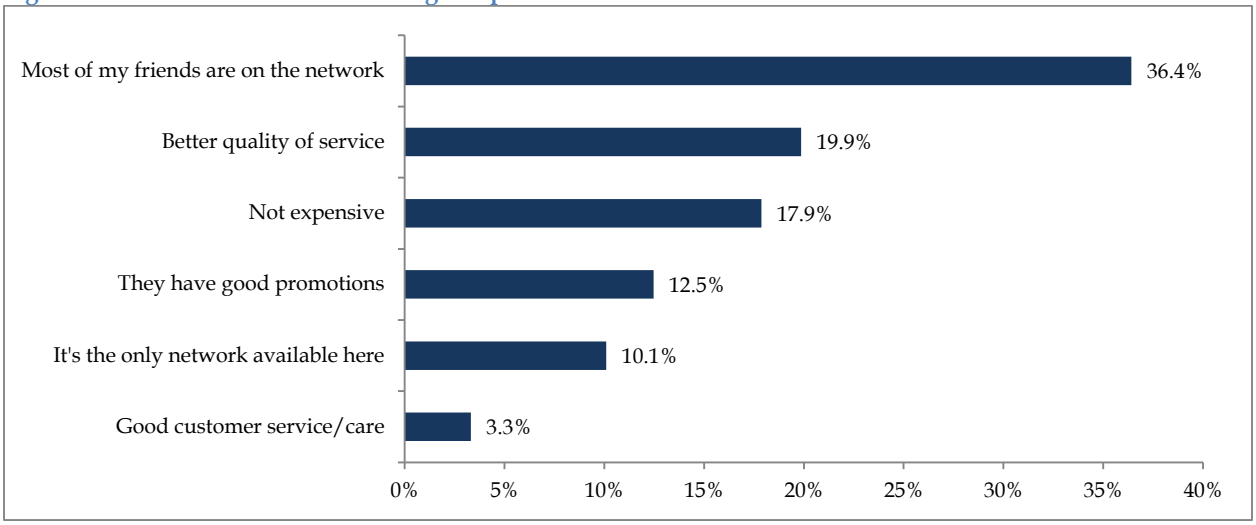
There were about 2.2 million unique subscribers to mobile networks in 2015 described as the number of individuals subscribed to at least one mobile network. Most of the mobile phone subscribers were subscribed to only one network operator accounting for 63 percent of the mobile phone subscribers. Multiple subscriptions are quite prominent especially between MTN and Airtel accounting for 23 percent of the subscribers (see Figure 12).

Figure 12: Distribution of Subscription to Mobile network Operators; 2015



MTN and Airtel are the most preferred networks among those individuals that have subscribed to more than one network accounting for 47 percent and 44 percent respectively. The choice of preference is mainly driven by a lock in effect associated with friends and family being on the same network, quality of services and cost (see Figure 13).

Figure 13: Main Reason for Subscribing to a particular Network Provider



2.4.7. Affordability of Mobile Phone Services

Most mobile phone users in the country perceive mobile phone services to be affordable as reported by 57 percent of the total number of mobile phone users. The majority of mobile phone users are low value customers who spend less than K15 per week on airtime constituting 84 percent of all mobile phone users. Only 1 percent of the mobile phone subscribers spend more than K100 per week on airtime. There is very little variation in the proportion of mobile phone users' actual expenditure on airtime per week and their willingness to pay for the mobile phone services (see Table 4).

Table 4: Distribution of Actual Expenditure on Mobile phone services Versus Willingness to pay by Individuals

Amount	Weekly Expenditure	Willingness to Pay per Week
K15.00 and below	84%	87%
K16.00-K30.00	8%	7%
K31.00-K50.00	4%	3%
K51.00-K100.00	2%	1%
Above K100.00	1%	1%

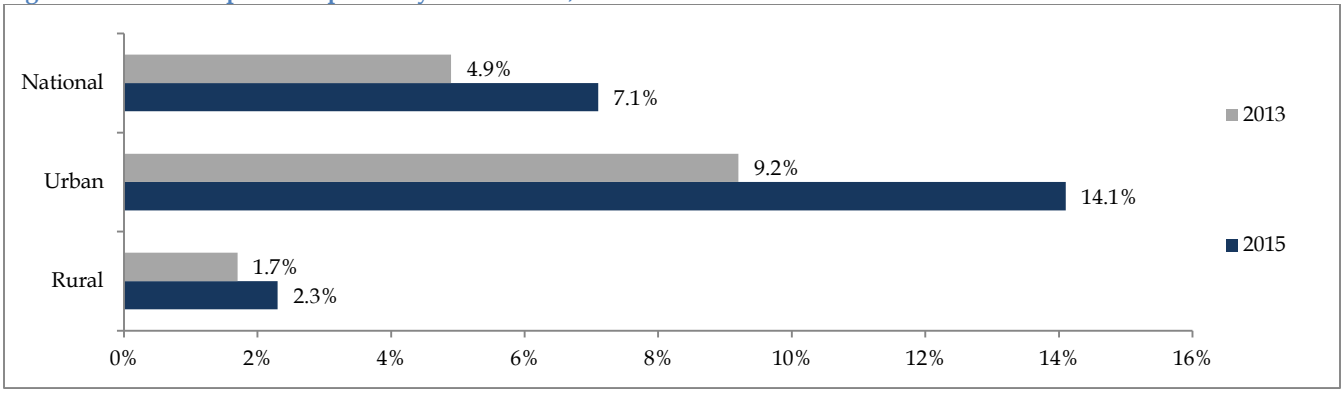
2.5. Ownership of Computers

2.5.1. Ownership of Computers by Households

There was a marked improvement in the proportion of households that have access to a computer, determined by at least one member of the household owning a computer, from

4.9 percent recorded in 2013 to 7.1 percent in 2015. The majority of the households that own at least one computer are in urban areas accounting for 80.7 percent of the households with computers. There are barely 2.3 percent of households in rural areas with access to a computer compared to 14.1 percent of urban households (see Figure 14).

Figure 14: Ownership of Computers by Households; 2013- 2015



2.6. Access and Usage of Internet Services

2.6.1. Access to Internet Services by Households

There was a marginal improvement in the proportion of households that use their computers to access the internet at home from 46.7 percent of those that own computers recorded in 2013 to 49.7 percent recorded in 2015. Broadly, the proportion of households that access internet services regardless of mode of device increased from 5.8 percent recorded in 2013 to 12.7 percent in 2015. At the same time, the proportion of households with access to the internet on alternative devices increased from 3.6 percent reported in 2013 to 9.2 percent in 2015 (see Table 5).

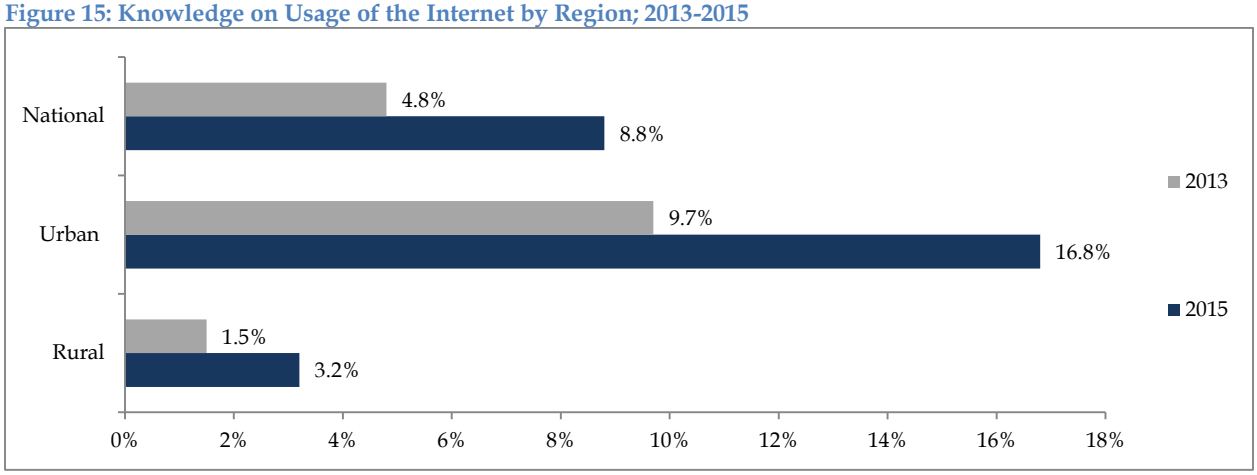
Table 5: Access to Internet Services by Households; 2013 - 2015

Indicator	2013	2015
Proportion of Households accessing the internet regardless of type of device	5.8%	12.7%
Proportion of Households that access the internet using the computer	2.3%	3.5%
Proportion of Households that access the internet using alternative devices (other than a computer)	3.6%	9.2%

2.6.2. Access to Internet Services by Individuals

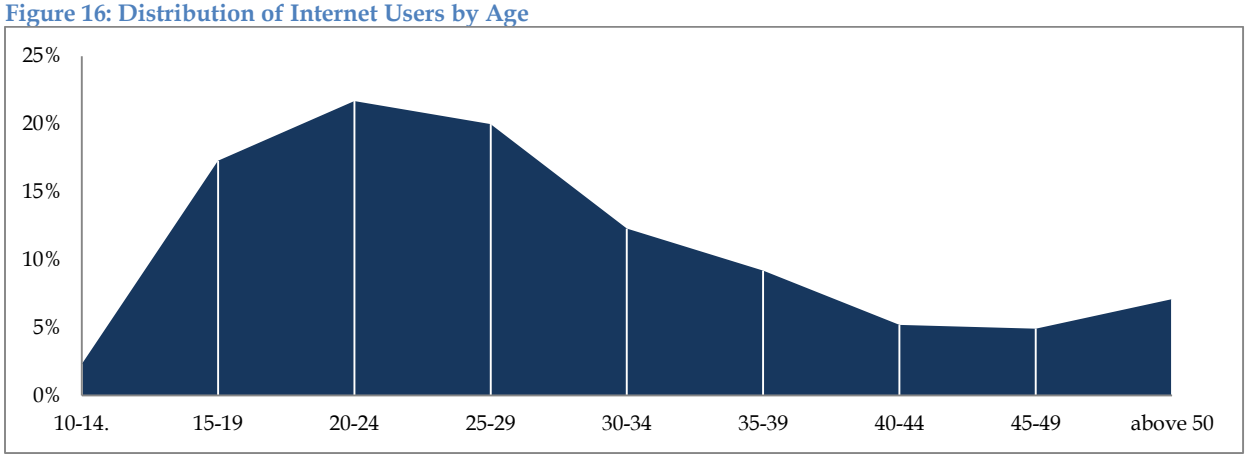
There was a marked improvement in the number of individuals that know how to use the internet from 4.8 percent reported in 2013 to 8.8 percent reported in 2015. 78.9 percent of all the internet users are found in urban areas while only 21.1 percent reside in rural areas. Further knowledge about usage of the internet remains relatively low across regions as 16.8 percent of the urban population uses the internet while only 3.2 percent of the rural population uses the internet (see Figure 15).

Figure 15: Knowledge on Usage of the Internet by Region; 2013-2015



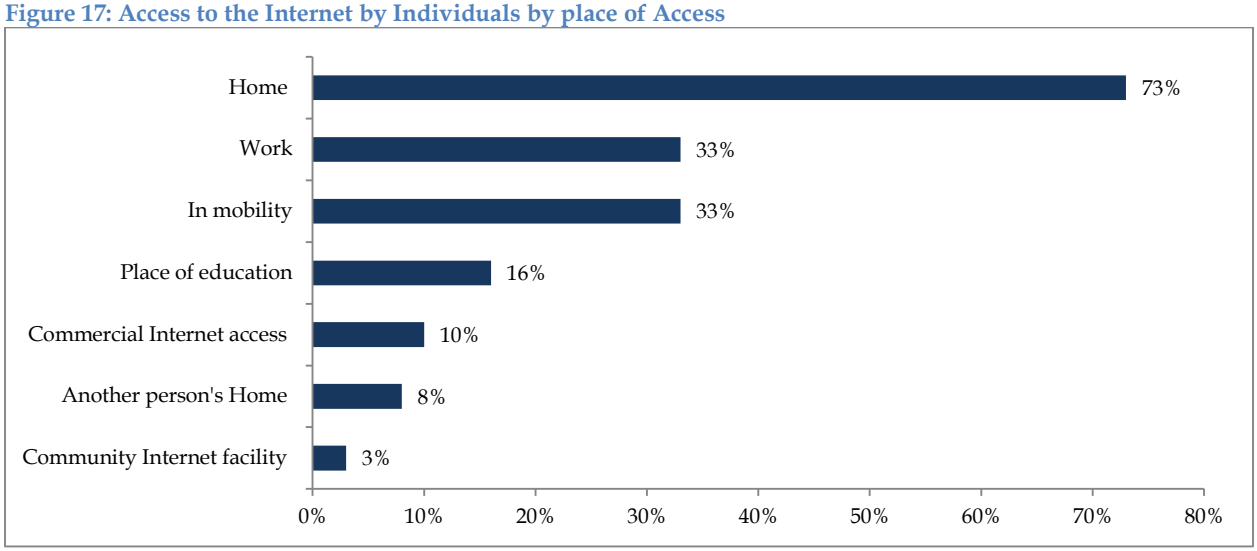
Internet usage is mainly concentrated among the young population with over 70 percent of the internet users being below 35 years of age. Further, 41.3 percent of the internet users in the country are below the age of 24 years while only 7.1 percent are above the age of 50 years (see Figure 16).

Figure 16: Distribution of Internet Users by Age



Most individuals access the internet at home, at work and in mobility accounting for 73 percent, 33 percent and 33 percent of all the internet users respectively. Community internet centers and commercial internet centers play a very minimal role in providing access to internet services for individuals facilitating access for 3 percent and 10 percent of all internet users respectively (see Figure 17).

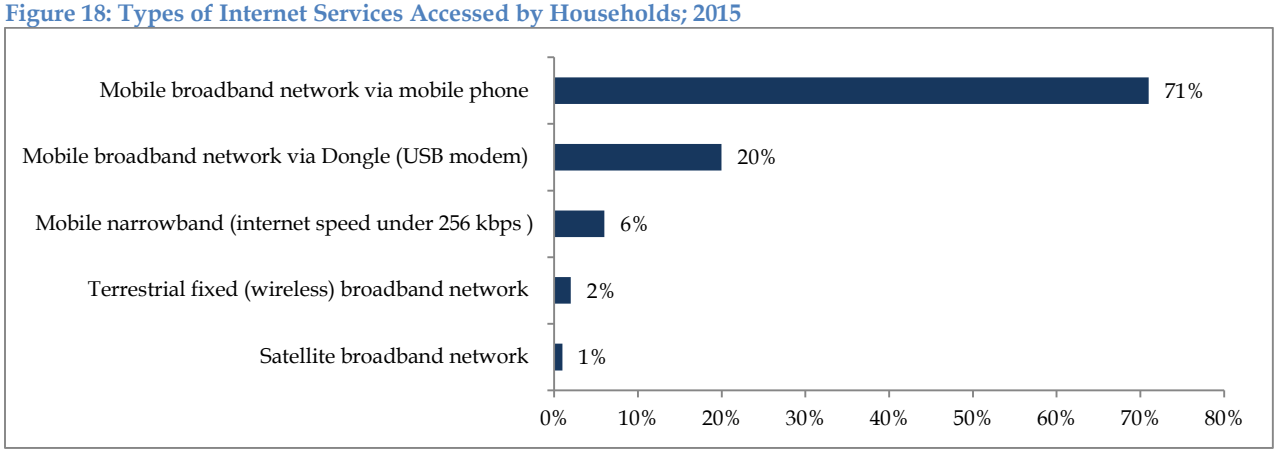
Figure 17: Access to the Internet by Individuals by place of Access



2.6.3. Household Access to Internet Services by Type

The majority of the households, accounting for 71 percent of the total number of households with access to internet services, access mobile broadband services using a mobile phone. A sizeable number of households also access mobile broadband services using a USB modem often referred to as 'dongle' and mobile narrowband services accounting for 20 percent and 6 percent respectively. Only 2 percent of the households with access to the internet access fixed wireless broadband services (see Figure 18).

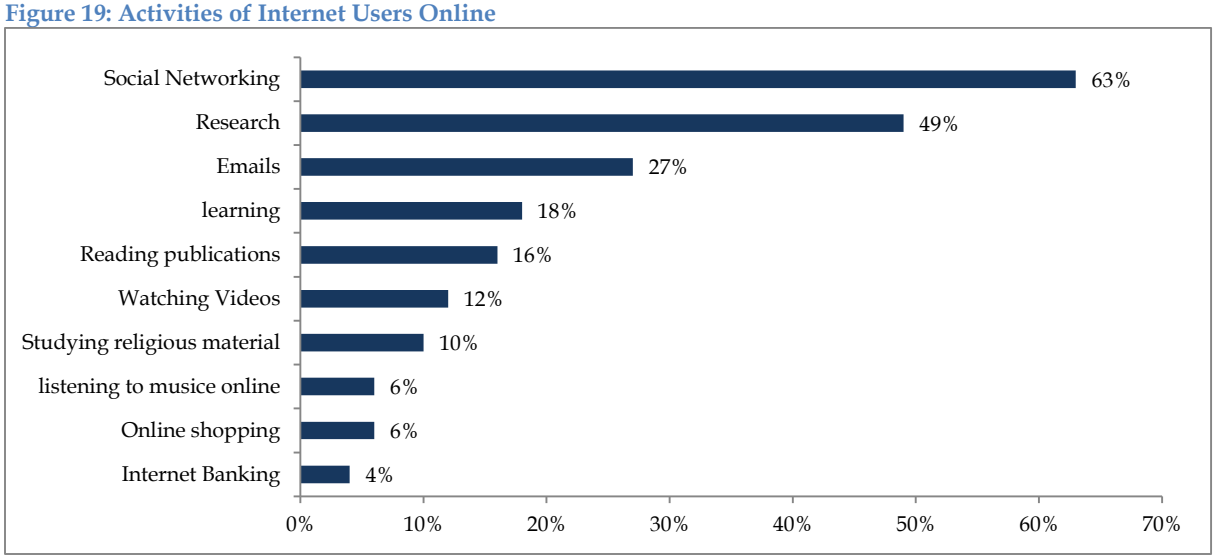
Figure 18: Types of Internet Services Accessed by Households; 2015



2.6.4. Activities of Individuals Online

About 47 percent of the internet users in the country reported to own an email address while only 7 percent indicated to have used cloud server services. Close to 100 percent of the users of cloud server services rely on 'drop box' for their cloud server services despite the availability of other options such as one drive, google drive and iCloud among others. The majority of internet users constituting 63 percent of the internet users spend their time online on social networking sites. A relatively large proportion of individuals also spend their time online conducting research and sending emails accounting for 49 percent and 27 percent of all internet users respectively. Internet Banking and Online shopping activities are relatively low, utilised by only 4 percent and 6 percent of all internet users respectively (see Figure 19).

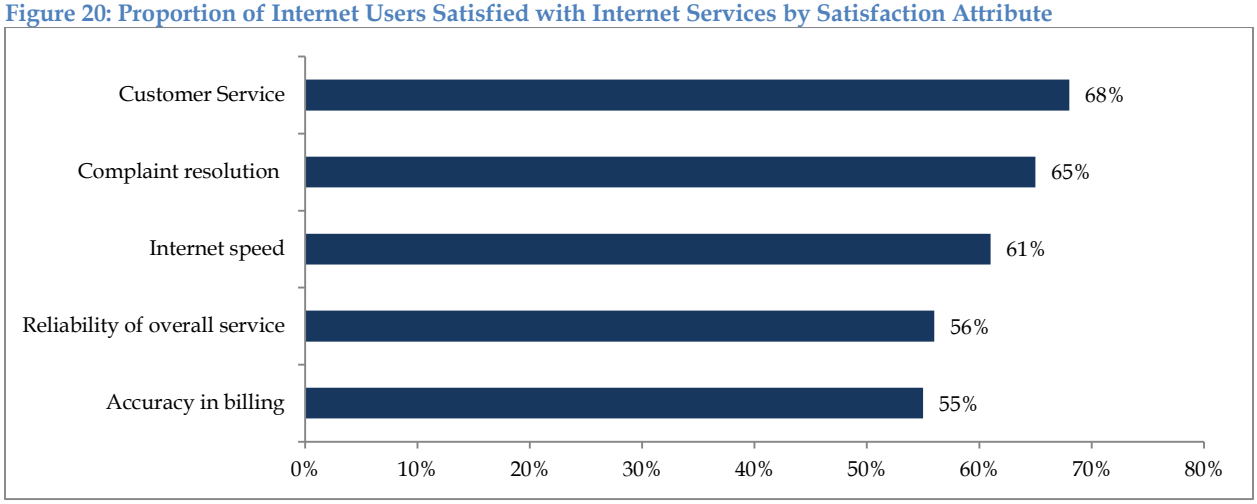
Figure 19: Activities of Internet Users Online



2.6.5. Individual Satisfaction of Internet Services

Individual internet users are mainly satisfied with customer service and complaint resolution by internet service providers as indicated by 68 percent and 65 percent of all internet users. Consumer satisfaction on the usage of internet services is relatively low with more than 40 percent of the internet users expressing dissatisfaction on internet speed, reliability of overall service and accuracy in billing (see Figure 20).

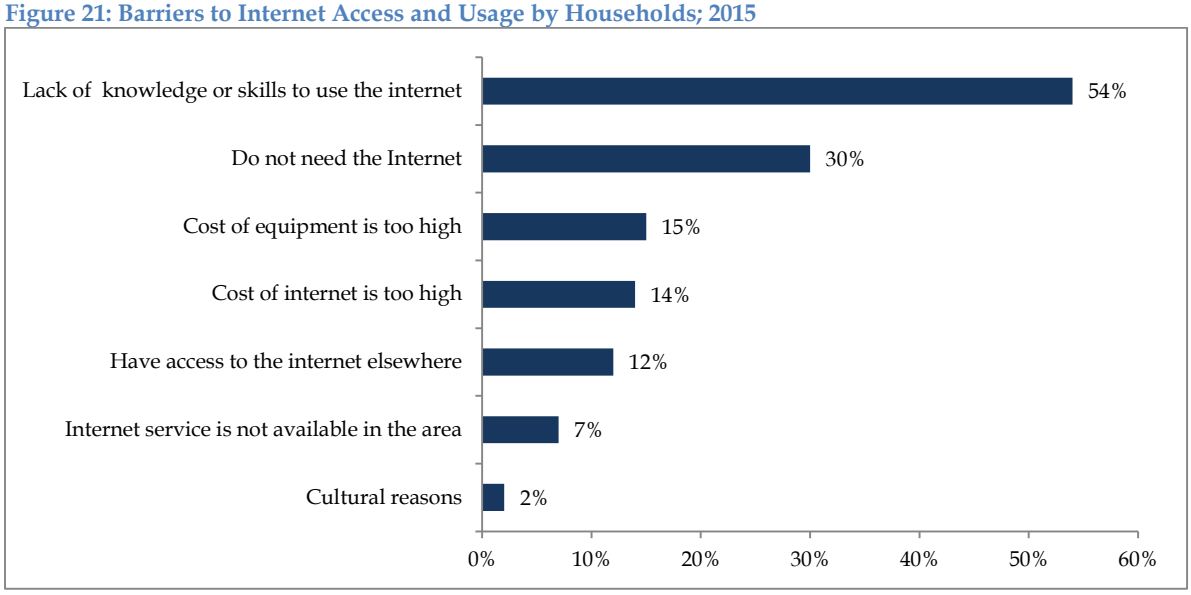
Figure 20: Proportion of Internet Users Satisfied with Internet Services by Satisfaction Attribute



2.6.6. Barriers to Internet Access and Usage

Access to internet services by households in Zambia is mainly limited by lack of knowledge and skills on internet usage. There is also a relatively wide perception that most households do not need internet services leading to lower uptake of the services in the country. Cultural barriers to internet usage as well as a lack of connectivity have very little impact on access to internet services by households in the country (see Figure 21).

Figure 21: Barriers to Internet Access and Usage by Households; 2015

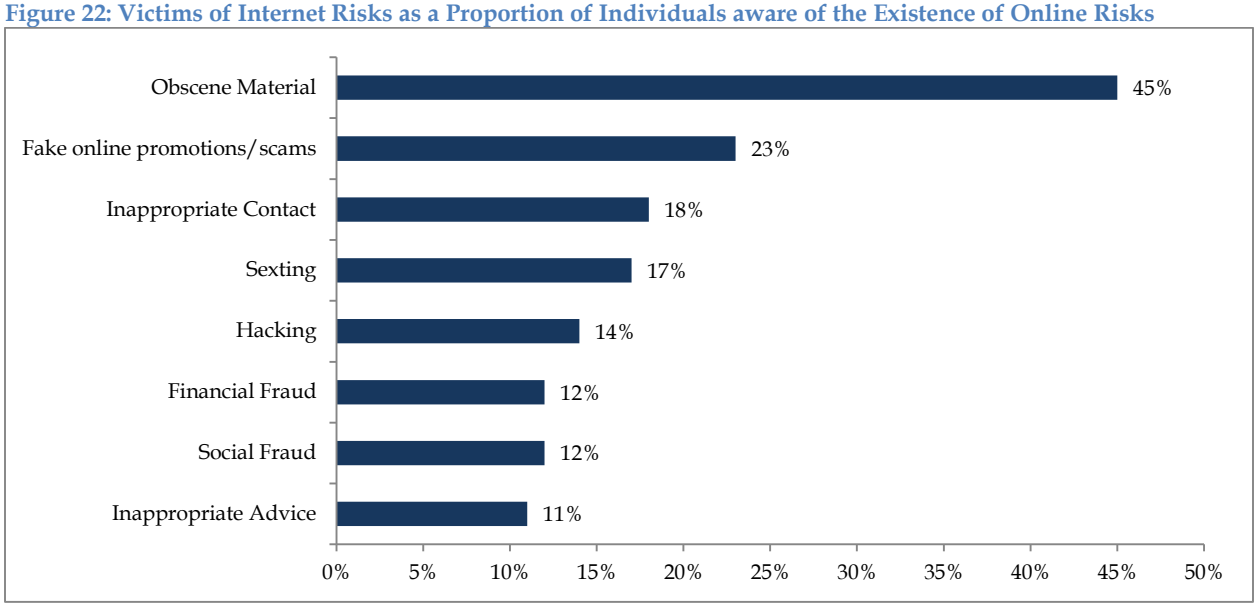


3. Online Risks and Mitigation Strategies

3.1. Awareness about Online Risks and Incidence of Victims

Awareness about risks associated with using the internet is relatively low in Zambia with only about 51 percent of the internet users in the country aware of the existence of any risks online. The most prevalent victims of internet risks are exposed to obscene material online accounting for 45 percent of the total number of people aware of the existence of internet risks. Victims of fake online promotions, inappropriate contact and sexting are also relatively high constituting 23 percent, 18 percent and 17 percent of the total number of people aware of the existence of internet risks respectively (see Figure 22).

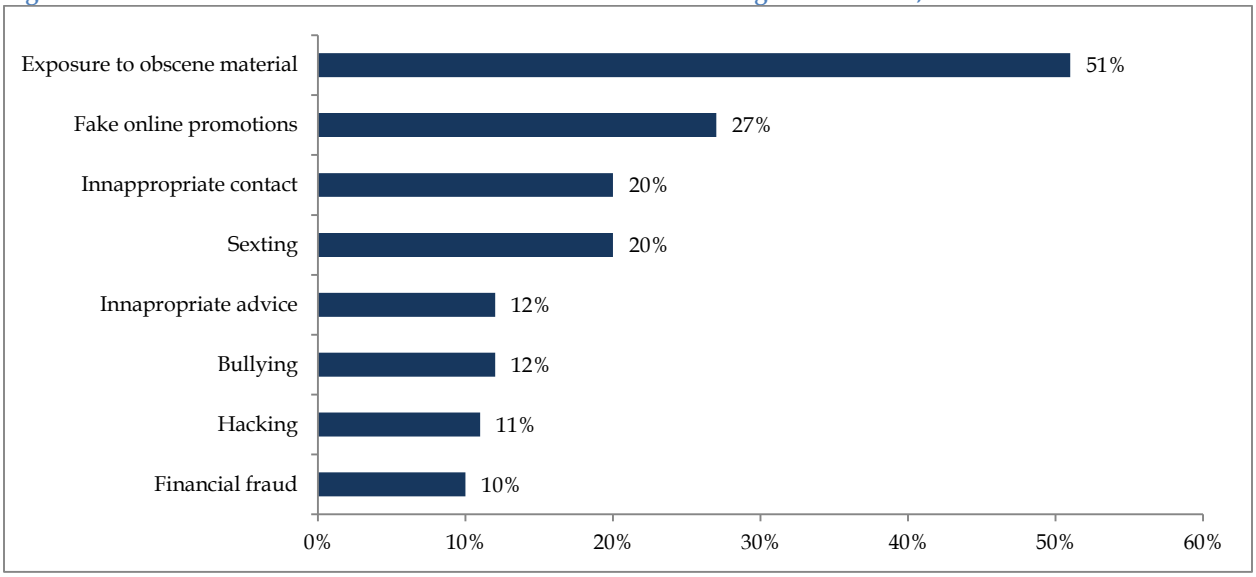
Figure 22: Victims of Internet Risks as a Proportion of Individuals aware of the Existence of Online Risks



3.2. Incidence of Online Victims Associated with Membership to Social Media

A large proportion of internet users accounting for 63 percent of all internet users indicated to be members of at least one social media network similar to the proportion reported in 2013 of 64.3 percent. The majority of people subscribed to social media network are on facebook, WhatsApp and Blackberry messenger accounting for 91 percent, 60 percent and 15 percent of all the individuals that reported to be members of social media respectively. Most online risk victims associated with social media had experiences associated with exposure to obscene material, fake online promotions, sexting and inappropriate contact.

Figure 23: Victims of Online Risks Encountered in the course of using Social Media; 2015



3.3. Incidence of Online Risk Victims Associated with Online Shopping

The practice of purchasing goods and services online is still in its nascent stages in Zambia with only 17 percent of the internet users in the country having purchased goods and services online at least once. This proportion is relatively higher than what was reported in 2013 when only 11.6 percent of the internet users indicated that they had purchased goods or services online at least once. The incidence of loss or harm associated with online shopping is very minimal with 99 percent of the internet users that have engaged in online shopping before indicating that they received the products and services they had ordered. Further, only 4 percent of the internet users that have engaged in online shopping before indicated that there was a mismatch between the description of the products purchased online and what was received.

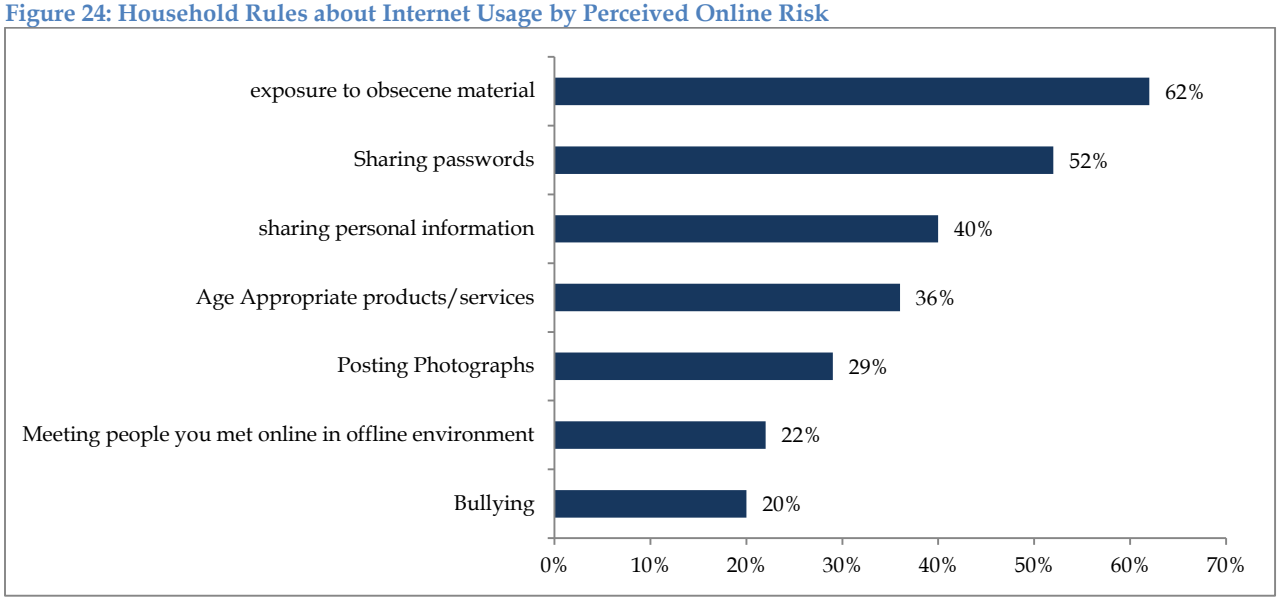
3.4. Awareness about Household Members' Activities Online

44 percent of the households that have access to the internet reported to know the activities of all household members online. A similar proportion of households reported to share their experiences online among household members. Only 23 percent of the households that apply online risk mitigation strategies visit activity logs or history pages of internet sites visited by household members.

3.5. Online Risk Mitigation Strategies by Households

Online risk mitigation strategies among households were diverse and mainly motivated by the source of the households' perceived greatest risks online. Most households that applied mitigation measures on online risks had rules about viewing pornography as well as about sharing passwords accounting for 62 percent and 52 percent of the households that applied online risk mitigation strategies respectively. The least adopted strategies involved rules about meeting people that household members met online in an offline environment and rules about cyber bullying accounting for 22 percent and 20 percent of the households that applied online risk mitigation strategies respectively (see Figure 24).

Figure 24: Household Rules about Internet Usage by Perceived Online Risk

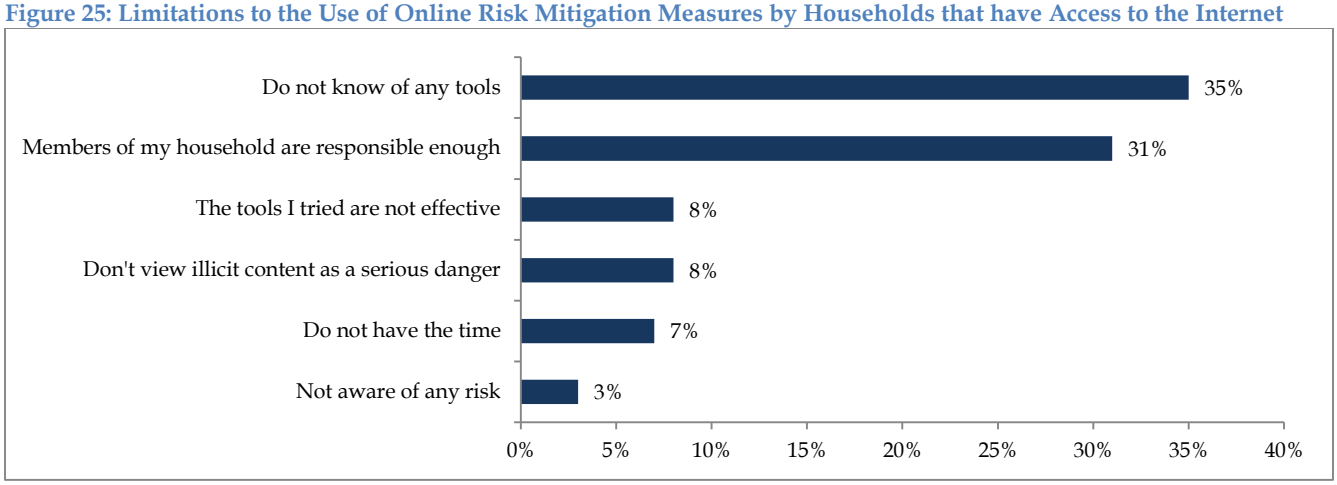


3.6. Limitations to Mitigation of Online Risks by Households

Oversight on usage of internet services by households was relatively lower in 2015 compared to 2013. Only 23 percent of the households that have access to the internet had deliberate initiatives to monitor the usage of the internet by household members in 2015 compared to 31 percent of the households reported in 2013. However, the use of mitigation measures to protect household members from online risks increased from 14.1 percent reported in 2013 to 35.7 percent in 2015. The adoption of mitigation measures against internet risks remains low in Zambia mainly on account of little awareness of mitigation measures by households

as well as a perception held by households that household members are responsible enough to safeguard themselves from any risks (see Figure 25).

Figure 25: Limitations to the Use of Online Risk Mitigation Measures by Households that have Access to the Internet

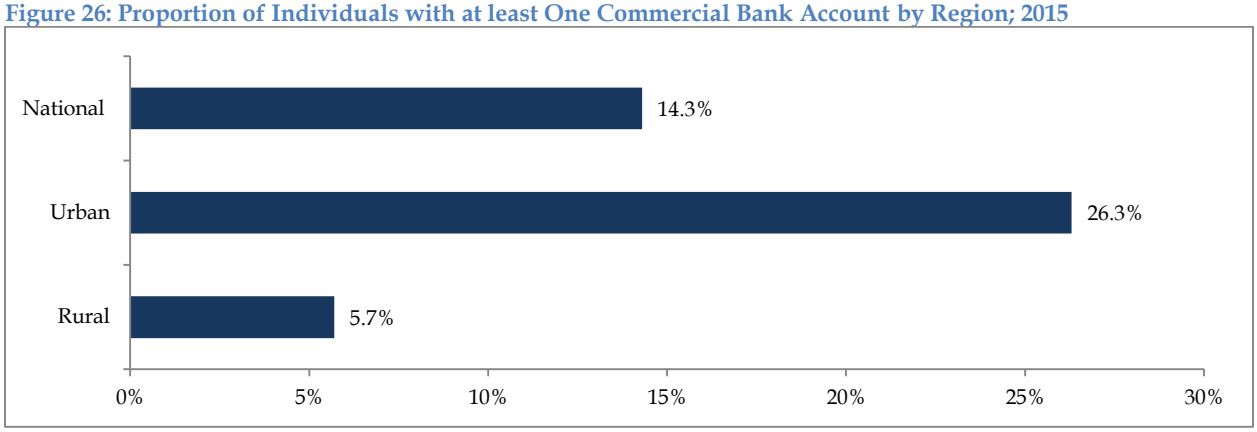


4. Digital Financial Services

4.1. Access to Commercial Banking Services

This survey revealed that 86 percent of individuals in Zambia aged above 10 years do not have any Bank account. This phenomenon excludes this proportion of individuals from traditional banking services provided by commercial banks. The situation is worse in rural areas where 94.3 percent of the rural population aged above 10 years do not have bank accounts compared to 73.7 percent of individuals in urban areas without bank accounts (see Figure 26).

Figure 26: Proportion of Individuals with at least One Commercial Bank Account by Region; 2015



4.2. Access to Digital Financial Services

There was a marked improvement in the proportion of people in the country aware of the existence of digital financial services from 26.4 percent of the population aged above 10 years recorded in 2013 to 45.9 percent in 2015. The majority of individuals aware of the existence of digital financial services are in urban areas constituting 58.1 percent of all the people aware of the existence of digital financial services while only 41.9 percent of the individuals aware of the existence of the services are found in rural areas. However, only 30 percent of the individuals aware of the existence of digital financial services have used the service to pay for goods and services or transfer funds. That notwithstanding, this is an improvement in the proportion of digital financial services users from 8.9 percent recorded in 2013. The majority of digital financial services users are found in urban areas accounting for 69.7 percent of all digital financial services users (seeTable 6: Access to Digital Financial Services; 2013-2015Table 6).

Table 6: Access to Digital Financial Services; 2013-2015

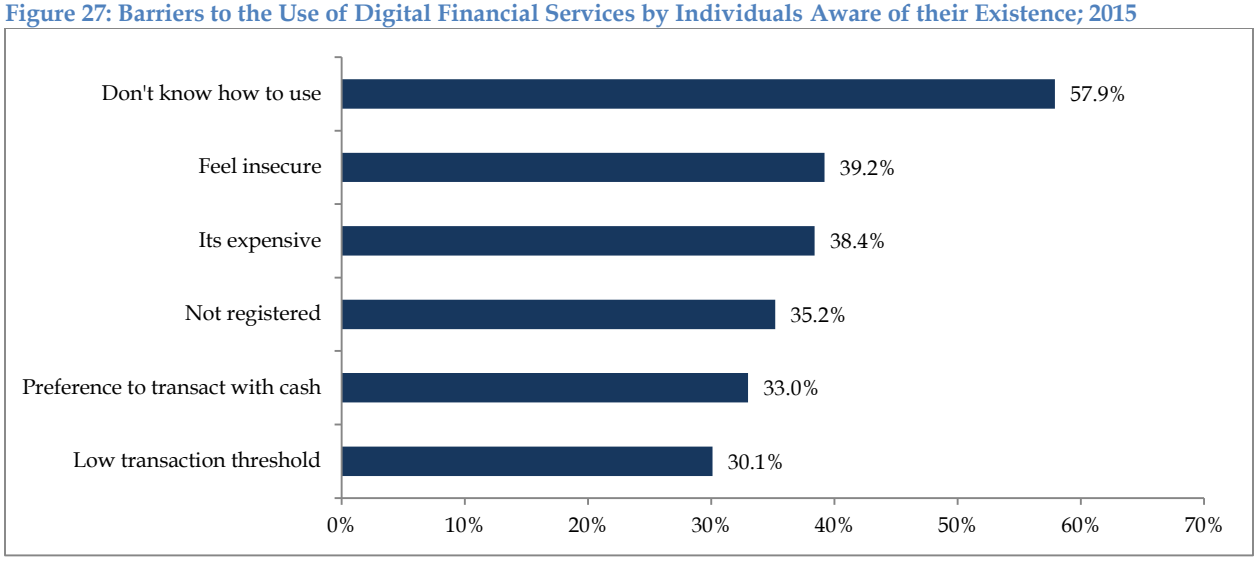
Indicator	2013	2015
Proportion of individuals aware of the existence of Digital Financial Services	26.4%	45.9%
Proportion of individuals aware of the existence of Digital Financial Services based in urban Areas	69.3%	58.1%
Individuals that use Digital Financial services as a proportion of those who are aware of the existence of the service	8.9%	30%
Individuals that use Digital Financial services as a proportion of those who are aware of the existence of the service based in Urban areas	80.9%	69.7%

4.3. Barriers to the Usage of Digital Financial Services by Individuals

The main limitation to the usage of digital financial services among individuals aware of the existence of the services in the country is a lack of knowledge on the operation of digital financial services as highlighted by 57.9 percent of the people that are aware of the existence the services but do not use the services. A sizeable proportion of individuals that do not use the service but are aware of its existence hold a perception that it is insecure and expensive

indicated by 39.2 percent and 38.4 percent of the people that are aware of the existence the services but do not use the services respectively (see Figure 27).

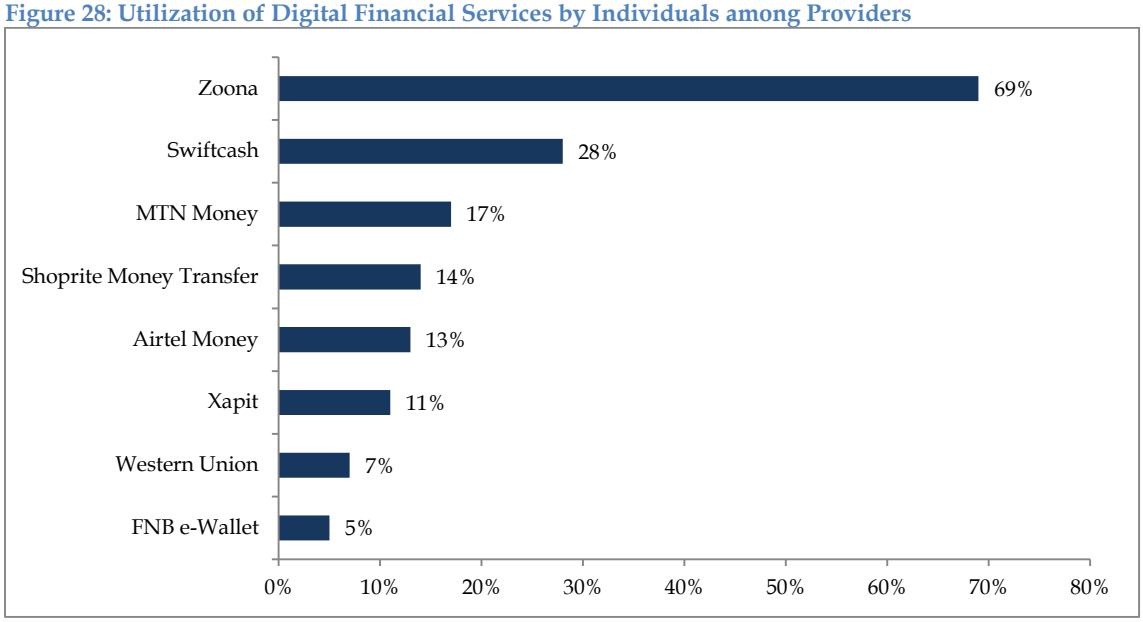
Figure 27: Barriers to the Use of Digital Financial Services by Individuals Aware of their Existence; 2015



4.4. Utilization of Digital Financial Services among Providers

Zoona is the most accessed digital financial service provider having been accessed by 69 percent of the individuals that have used digital financial services before. MTN money is the most accessed mobile money financial service accounting for 17 percent of the total number of digital financial services users while Airtel money accounts for 13 percent of the total number of digital financial services users. Swift cash, provided by the public postal operator, continues to play an important role in the provision of digital financial services having been utilised by 28 percent of the digital financial services users (see Figure 28).

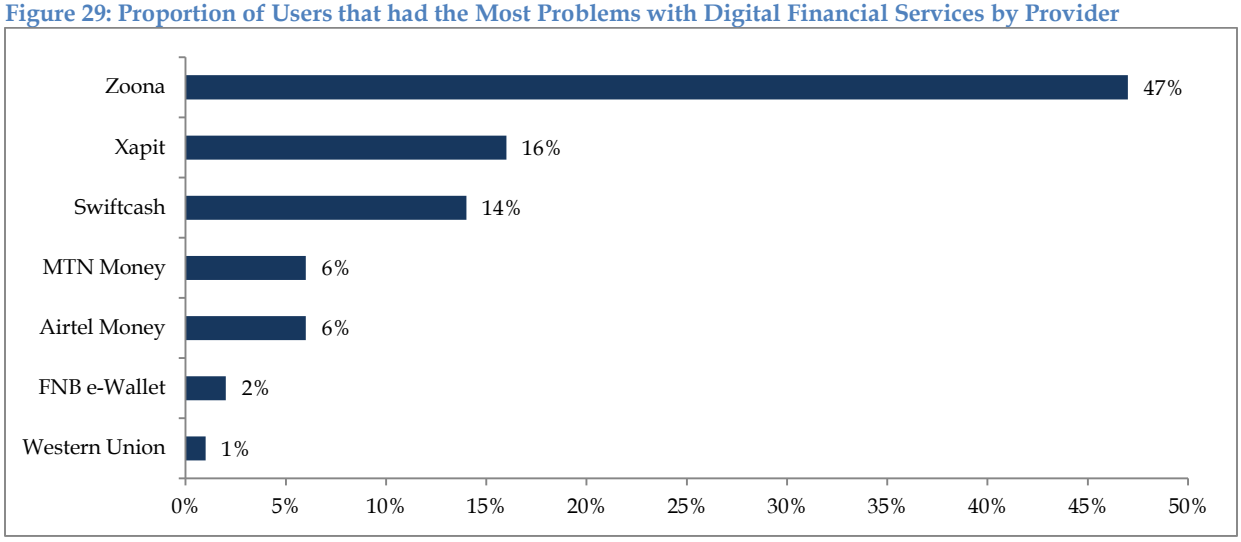
Figure 28: Utilization of Digital Financial Services by Individuals among Providers



4.5. Consumer Experience with Digital Financial Services

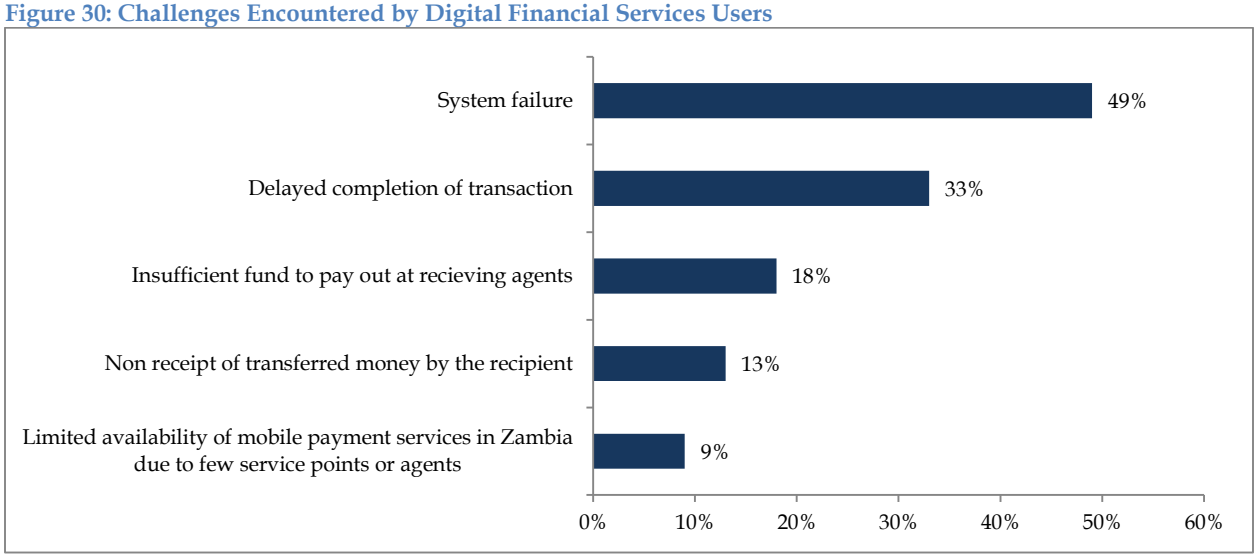
Only 13 percent of the users of digital financial services reported to have experienced some problems while using digital financial services. The majority of the digital financial services users, accounting for 47 percent of the total number of digital financial services users, indicated that they experienced the most problems with Zoona partly explained by its relatively huge client base. There were also relatively high proportions of digital financial services users who experienced challenged with Xapit and Swiftcash accounting for 16 percent and 14 percent of the total number of digital financial services users respectively. The mobile financial service providers had an equal share of digital financial services users indicating that they had the most problems with their services accounting for 6 percent each (see Figure 29).

Figure 29: Proportion of Users that had the Most Problems with Digital Financial Services by Provider



The most prominent challenge encountered by digital financial services users is system failure, experienced by 49 percent of all the digital financial services users. Other challenges experienced by digital financial services users include delayed transmission of funds and insufficient funds to make payouts at receiving agents reported by 33 percent and 18 percent of all digital financial services users respectively. Other equally notable challenges experienced by digital financial services users include non-receipt of transferred funds as well as insufficient spread of pay points leading to users having to travel long distances to access the services (see Figure 30).

Figure 30: Challenges Encountered by Digital Financial Services Users



5. Policy and Regulatory Issues

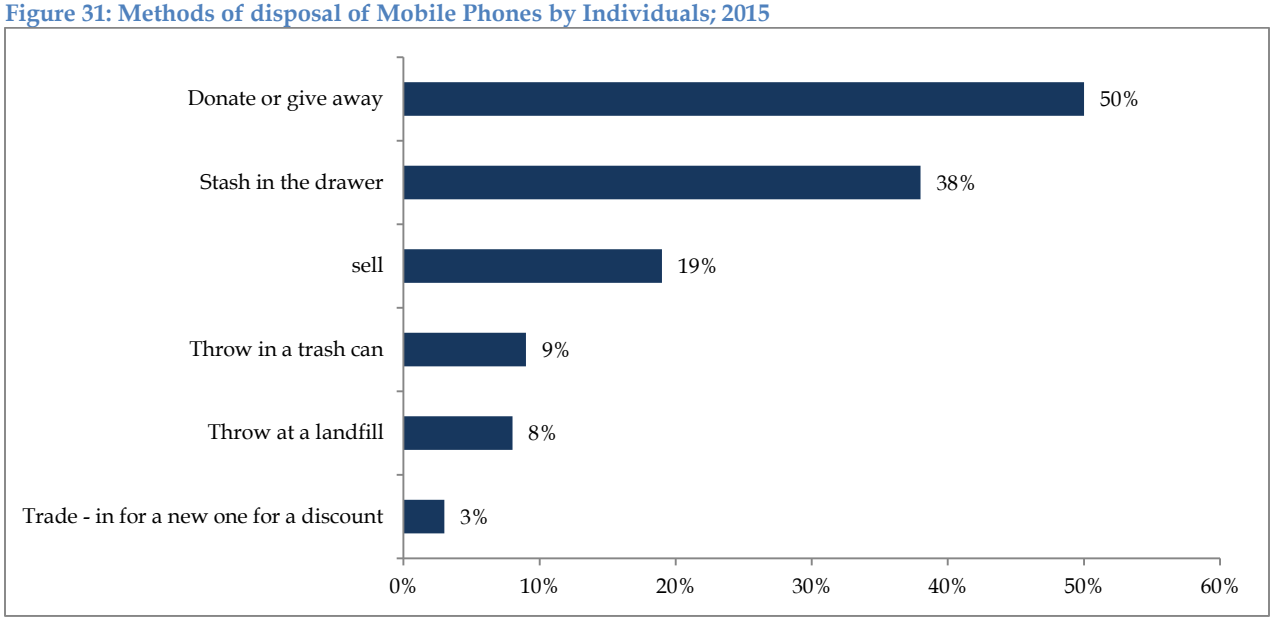
5.1. Certification of Mobile Phones Purchased Locally

One of the primary objectives of the regulator is to ensure that ICT products and services used by individuals and households in the country meet some set quality standards. A large proportion of individuals aged above 10 years who own mobile phones purchased their devices locally. However, only 24 percent of these individuals are aware of any certification process for the mobile cellular telephones they purchased. Further, 5 percent of the individuals that own only one mobile phone indicated that their phones do not have IMEI numbers. At the same time, 64 percent of individuals that own more than one mobile phone indicated that they have at least one mobile phone without an IMEI number.

5.2. Disposal of Mobile Phones by Individuals

A sizeable proportion of individuals, constituting 41 percent of individuals who own mobile phones, have disposed of an old or broken down mobile phone at least once. However, there is no clear e-waste mechanism in place for disposing old and obsolete devices. The most prominent methods of disposal being practiced are donation and keeping devices in some storage facility accounting for 50 percent and 38 percent of people who have disposed of a phone before. Some individuals opt to sell or throw away the devices in either a trash can or at a landfill accounting for 19 percent, 9 percent and 8 percent of people who have disposed of a phone before respectively (see Figure 31).

Figure 31: Methods of disposal of Mobile Phones by Individuals; 2015



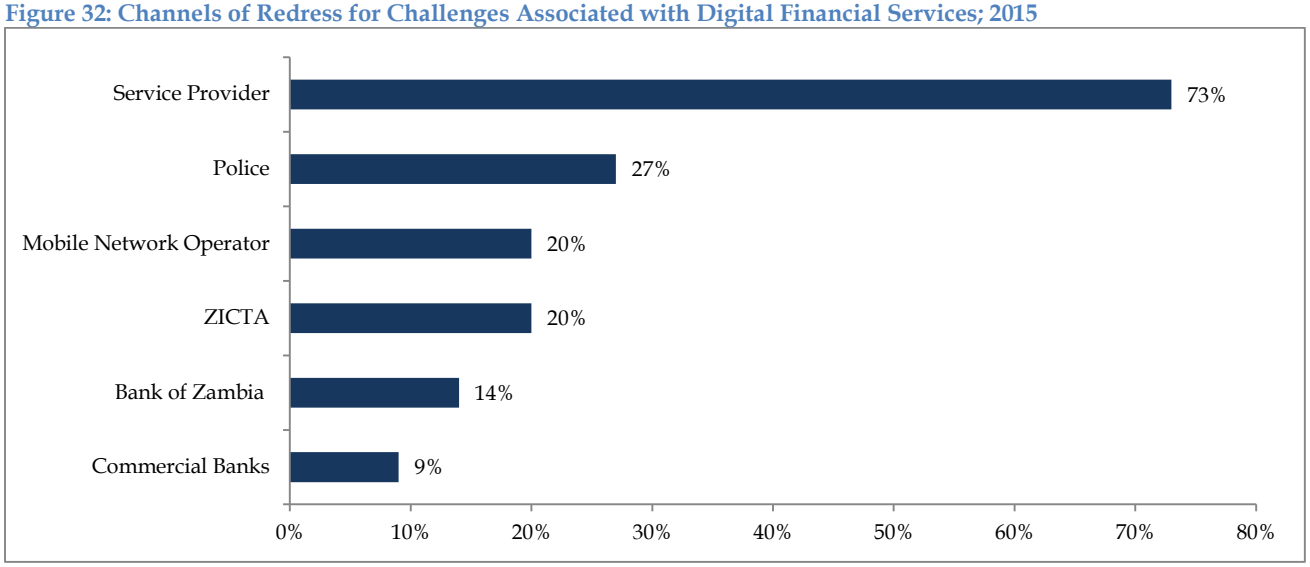
5.3. Awareness about the Existence of ZICTA

A large proportion of individuals constituting 67 percent of all the individuals aged above 10 years have heard about the existence of ZICTA. However, only 46 percent of this proportion of individuals is aware of the role of ZICTA in the ICT sector. The main insights held by the public on the role of ZICTA include: general regulation of the ICT sector; oversight of sim registration exercise; and upholding the interests of consumers of ICT products and services.

5.4. Channels of Redress for Digital Financial Services

Only 19 percent of the digital financial services users in Zambia are aware of the existence of channels of redress for dealing with complaints related to digital financial services. The majority of these individuals, constituting 73 percent of the individuals that said they are aware of some channels of redress, indicated that they would seek redress with the service provider for any challenges associated with digital financial services. Further, a sizeable section of this population would seek redress from the police, mobile network operators and ZICTA. The least considered channels of redress for challenges associated with digital financial services experienced by individuals are commercial banks and the Bank of Zambia (see Figure 32).

Figure 32: Channels of Redress for Challenges Associated with Digital Financial Services; 2015



Only 17 percent of the digital financial services users are aware that the Bank of Zambia and ZICTA have a mandate to protect the interests of consumers of digital financial services. Further, only 11 percent of the digital financial services users are aware of the existence of Laws in Zambia that protect users of digital financial services.

6. Conclusion, Policy and Regulatory Options

Zambia is relatively less electrified by global standards with only 33.1 percent of the households in the country connected to the national grid. This has important adverse ramifications on ICT access and usage by individuals and households who must rely on electricity to operate any ICT device. The use of alternative energy sources to power electrical appliances by households is equally minute with only 17 percent of the total number of households in the country using solar energy to power electrical equipment while only 1 percent utilizes generators. Interventions to increase access to electricity could be effective in increasing ICT access and usage.

The survey also reveals an interesting pattern on ownership of ICT devices in the country. Households are seen to be switching technology from the traditional ICT devices that included Fixed Lines, Radio and Television to Mobile phones and Computers. This is a

positive shift reflecting the increasing important role of mobile phones and computers in households.

However, the urban-rural digital divide is still prevalent in access to ICT devices. Particularly, rural areas are still behind in catching up to the levels of access and utilization of mobile phones and computers. For instance, 84.8 percent of households in urban areas have access to a mobile phone while only 50.4 percent of rural households have access to mobile phones. The digital divide also prevails across gender with 55 percent of all males above the age of 10years being active mobile phone user while only 47.9 percent of females are active mobile phone users. Interventions targeted at increasing access to ICT products and services in rural areas or among women could assist in closing this divide.

The ownership of smartphones is relatively low in the country with only 13.5 percent of all mobile phone owners having smart phones. However, a large proportion of individuals accounting for 71 percent of smart phone owners use OTT applications such as WhatsApp and facebook for voice calling and instant messaging. Interventions aimed at increasing access to smartphones could assist in increasing the diversity of ICT services accessed by households and individuals in the country.

Coverage of mobile phone networks is relatively high in the country with 92.8 percent of individuals having access to mobile network coverage. Efforts to ensure that there is universal access will entail more investment in the coverage of the mobile networks. Particularly, only 83.9 percent of individuals in rural areas have access to mobile network coverage while 98.9 percent of individuals in urban areas indicated that they have access. Therefore, a targeted approach to increasing coverage, particularly focused on the rural areas would be more effective in achieving universal access.

Despite the noted increase in ownership of computers, the proportion of households and individuals with access to computers is relatively low. Only 7.1 percent of households have access to a computer in the country. Efforts aimed at increasing access to computers through

lower pricing incentives or local manufacture of the devices could assist in increasing access to computers.

Access to the internet by households has been improving, though at a slow pace with only 12.7 percent of households accessing the internet in 2015, a slight improvement from 5.8 percent reported in 2013. The majority of internet users accounting for 70 percent of the internet users are below the age of 35. At the same time mobile internet services accessed through the mobile phone is the most accessed type of internet service by households utilised by over 71 percent of the households that access the internet. About 73 percent of the individuals that access the internet also mentioned that they access the service from home. The most prominent activity online by individuals is accessing social media.

The biggest constraint to access to the internet is little knowledge on how to use the internet. Therefore, efforts to encourage increased usage of internet services should be complemented by improving the skills of internet users.

The most prominent online risks encountered by individuals are exposure to obscene materials and fake online promotions. Most household heads indicated that they do not use any mitigation measures for managing online risks because they do not know of any tools available. Therefore, awareness about the available tools for mitigating online risks is still low in the country.

Access to commercial banking services is relatively low with 86 percent of individuals above the age of 10 years having no bank accounts with any commercial bank. However, only 45.9 percent of the population is aware of the existence of digital financial services. Further, only 30 percent of the people that are aware of the existence of digital financial services have used he service before. Therefore, efforts to increase awareness about the service could assist in increasing utilization of digital financials services.

The biggest limitations to usage of digital financial services among those that are aware of the service are knowledge about how to use the services, insecurity about the services and

the cost of the service. Therefore, bringing redress to these widely held perceptions could deepen usage of digital financial services in the country.

The most prominent challenges faced by digital financials services users include system failure, delayed completion of transactions and liquidity challenges by the receiving agents. Therefore, regulation of digital financial services should aim at bringing redress to these identified challenges.

Annexures

Annexure 1: Description of the Methodology

Target Population

The target population for the survey was all individuals who are aged above 10 years and were present at home at the time of the survey

Target Area

The survey was conducted in all the ten (10) provinces, namely: Central, Copperbelt, Eastern, Luapula, Lusaka, Muchinga, Northern, North-Western, Southern and Western.

Sampling Design

The method of sampling that was adopted for this survey was a stratified two-stage sampling method. The survey objectives and the available sampling frame were the main determinants for the method.

Sampling Frame

Administratively, Zambia is divided into ten provinces. Each province is in turn subdivided into districts, constituencies and wards. For statistical purposes each ward is subdivided into Census Supervisory Areas (CSAs) and these are in turn subdivided into Standard Enumeration Areas (SEAs). The list of SEAs has information on the number of households and population. There are about 25,000 SEAs countrywide. The sample frame for this study was the list of SEAs for the whole country. The SEAs are as developed from the 2010 Population Census frame.

Sample Size

The formulas to calculate sample size are based on simple random sampling. More complex sampling designs such as multi-stage sampling, lead to higher variances in survey estimates.

Therefore it is necessary to inflate the sample size determined using simple random sampling formulas to take the type of design into account. The multiplication factor is called the design effect. The design effect (*deff*) is the ratio of the actual variance of a sample to the variance of a simple random sample of the same number of elements. This factor inflates the simple random sample size to take care of complexities of clustering and stratification in the sample design. This inflation factor is usually determined from other surveys of the same or similar design.

Therefore the sample size for this survey was computed step by step as:

Step.1

The first step involved calculation of initial simple random sample size was calculated as

$$n_{srs} = \frac{s^2}{[cv(p)p]^2} = \frac{p(1-p)}{[cv(p)p]^2}$$

$n_{srs} = \frac{0.5(1-0.5)}{(0.05 \times 0.5)^2} = 400$, where n_{srs} = initial simple random sample size,es^2 = variance under the assumption of simple random sampling , cv(p) is the coefficient of variation for the proportion and p = is an estimate of the proportion of the population that has the characteristic of interest or the probability of success.

Step. 2

The second step involved adjustment of the initial simple random sample with the design effect and the expected response rate. The design effect, however, is usually estimated subjectively by making use of whatever knowledge is available about the variability of Characteristics of interest in the population. For this survey a design effect of 1.5 was used(being the recommended default value. A response rate of 99 percent was chosen.

$$n = \frac{n_{srs} \times deff}{r} = n = \frac{400 \times 1.5}{0.99} = 606$$

where n = the overall sample size under our design which is approximately 606 households. n_{srs}= the initial simple random sample size

r = the expected response rate

$deff$=the design effect

A sample of about **606** households was derived to give reliable estimates at national level. However, since there are 10 analysis domains (provinces) for which separate estimates were required, initial sample size of households (606) was thus multiplied by 10 to get the overall sample size. Therefore, the overall sample size was **6,060** households, covering about 30,000 respondents.

Since the survey was based on stratified two-stage sampling, the initial selection of the sample involved selection of clusters or enumeration areas. The total number of clusters to be selected was based on a cluster take of 25 households per cluster i.e. the number of households to be selected in each selected enumeration area. An adjustment to the initial allocation was made to ensure an even number of clusters in each stratum as recommended. Therefore the number of clusters increased from 243 to 246, resulting into 6,150 households.

Sample allocation

Sample allocation to the provinces was done using proportional allocation, with population being the measure of size. This method ensures that each province gets a sample size which is representative of its population.

Sample allocation by province

PROVINCE	POPULATION	HOUSEHOLDS ALLOCATED	SEAs
CENTRAL	1,307,111	600	24
COPPERBELT	1,972,317	950	38
EASTERN	1,592,661	750	30
LUAPULA	991,927	450	18

LUSAKA	2,191,225	1,000	40
MUCHINGA	711,657	350	14
NORTHERN	1,105,824	500	20
NORTH WESTERN	727,044	350	14
SOUTHERN	1,589,926	750	30
WESTERN	902,974	450	18
ALL ZAMBIA	**13,092,666**	6,150	246

Sample selection

The sample was selected using a stratified two-stage sampling method. The first stage involved selection of clusters corresponding to SEAs from the frame developed for this survey. The second stage involved selection of households in the selected clusters. Equal probability selection method was used to get the required sample of end-users of ICT services in the chosen target areas

Sampling Procedure

In order to make the sample selection more efficient, SEAs were selected with probability proportional to size (PPS) within each stratum. The SEAs were geographically ordered in a serpentine manner within each stratum. This ensured a systematic selection which resulted in implicit stratification. The systematic sampling procedure is efficient in terms of simplicity of selection and lowering sampling error.

In the second stage households will be selected from the selected clusters upon completion of the households listing exercise.

Selection of Clusters - PSUs

A cluster was the ultimate area unit retained in the survey. The procedure for selecting SEAs in province involved:

For each stratum (province, rural/urban), a list of SEAs, ordered by SEA identification numbers was developed. The list included, for each SEA, the number of households and population and the cumulated measure of size (by adding the populations down the list).

For each stratum, a sampling interval, ($\boldsymbol{I_h}$) was determined by dividing the total population (final cumulated measure of size), by the number of sample SEAs allocated to the stratum, a_h.

$$I_h = \frac{\sum_{i=1}^{N_h} M_{hi}}{a_h}$$

where M_{hi} is the population in i^{th}SEA in stratum h,

$\sum_{i=1}^{N_h} M_{hi}$ is the size of the stratum (total population in the stratum according to the 2010 census) and a_h is the number of SEAs to be selected in the stratum.

A random number between 1 and I was then selected. This was the random start (R) for the systematic PPS selection of EAs.

When determining the selected SEAs from the selection numbers, the calculations will be as follows: $S_{hi} = R_h + [I_h * (i-1)]$, where $i = 1,2,---,n_h$, rounded up to the next integer. The sample SEA in the stratum was the one with the cumulated measure of size closest to the selection number, without exceeding it.

Selection of households

A frame of households was developed by listing all the households in all the selected SEAs. During the household listing, all the households were assigned sampling serial numbers. The sampling numbers were assigned sequentially within each cluster starting from 1. The total number of households in the cluster was equal to the last serial number assigned.

The following steps were followed to select the households:

Let M = the total number of households listed in the SEA

n = the number of households to be selected from each cluster

A sampling interval for the cluster will be calculated as: M/n=I

A random number (R) between 1 and the last sampling serial number was generated; the first selection was hence R

The interval was added to the random number to get the next selection: R+I

Then, the interval was added repeatedly until the desired sample size.

Estimation Procedure

Weights

Weighted analysis of sample survey results is needed to achieve unbiased or nearly unbiased estimates of population parameters. Weights compensate for unequal selection probabilities. In order for the survey estimates ***to*** be representative at national or any domain level, it will be necessary to weight the sample data with appropriate expansion factors. The weight for each sample unit is equal to the reciprocal/ inverse of its probability of selection.

The probability of selecting cluster i was calculated as;

$$P_{hi} = \frac{a_h M_{hi}}{\sum_{i=1}^{N_h} M_{hi}}.$$

The weight or boosting factor is, thus, given as

$$w_{hi} = \frac{1}{P_{hi}}$$

where: P_{hi} is the first stage sampling probability of (SEA), a_h is the number of SEAs selected in stratum h, M_{hi} is the size (population) of the ith SEA in stratum h, and ΣM_{hi} is the total size of stratum h.

The selection probability of the household was be calculated as:

$$p_h = \frac{1}{I_h}$$

where I_h =the sampling interval for the ithSEA in stratum h.

Let y_{hij} be an observation on variable Y for the j^{th} household in the i^{th} SEA of the h^{th} stratum. Then the estimated total for the h^{th} stratum is:

$$y_h = \sum_{i=1}^{a_h} \sum_{j=1}^{n_h} w_{hi} y_{hij}$$

where, y_h is the estimated total for the h^{th} stratum., w_{hi} is the weight for the j^{th} household in the i^{th} SEA of the h^{th} stratum, $j = 1 - ah$ is the number of selected clusters in the stratum, $j = 1 - nh$ is the number of sample households in the stratum.

The rural and urban estimate is given by:

$$y = \sum_{h=1}^{H} y_h$$

where, y is the overall estimate, $h = 1, \dots, H$ is the total number of strata. For the purposes of this survey $H = 10$ (Provinces).

Data Collection Instruments

Three instruments were used in the data collection exercise, a listing form, one questionnaire for Households and Another for Individual members of the household. All were structured questionnaires consisting of a combination of closed and open-ended questions. Questionnaires were administered through face to face interviews with respondents using a CAPI.

Recruitment and Training of field staff

Enumerators were recruited from among CSO enumerators in Provincial and District Offices, and among students in institutions of higher learning in the country. Enumerators and some supervisors underwent training to induct them into the background and purpose of the study and also to familiarize them with the questionnaires.

Data Processing

Data Cleaning Process

Data cleaning is the process of identifying incomplete, incorrect, inaccurate, irrelevant data and then replacing, modifying or deleting dirty data. The inconsistencies detected or removed may have been originally caused at the time of data capture, corruption in transmission or storage or by different data dictionary definitions of similar entities. The actual process of data cleaning may involve removing typographical errors or validating and correcting values against a known list of entities. Data cleaning edit programs were prepared based on the variables that were highly prone to errors during data collection.

Tabulation and Analysis

Following the tabulation plan, output tables were generated using SAS software.

Annexure 2: Demographic and Socio-Economic Characteristics of the Target Population

Region				
Region2	Frequency	Relative Frequency	Cumulative Frequency	Cumulative Relative Frequency
Rural	5749523	57	5749523	57
Urban	4328468	43	10077991	100

Province Name				
PROV2	Frequency	Relative Frequency	Cumulative Frequency	Cumulative Relative Frequency
Lusaka	1936036	19	1936036	19
Copperbelt	1652455	16	3588491	36
Southern	1444947	14	5033438	50
Central	1136866	11	6170304	61
Luapula	1058828	11	7229132	72
Western	869931.9	9	8099064	80
North Western	713650.1	7	8812714	87
Muchinga	625468	6	9438182	94
Northern	517842.1	5	9956024	99
Eastern	121966.5	1	10,077,991	100

Respondent Age Group				
Age_gp	Frequency	Relative Frequency	Cumulative Frequency	Cumulative Relative Frequency
10-14	1249654	18	1249654	18
15-19	1134324	17	2383978	35
20-24	948531.9	14	3332510	49
25-29	765875.8	11	4098386	60
30-34	634975.5	9	4733362	69
35-39	557215.3	8	5290577	77
40-44	384810.2	6	5675387	83
45-49	323965.2	5	5999352	88
50-54	232973.3	3	6232326	91
55-59	180621.8	3	6412947	94
70+	176335.8	3	6589283	96
60-64	134433.2	2	6723716	98
65-69	110123	2	6833839	100

Frequency Missing = 3244151.1796

Respondent Age Group				
Age_gp	Frequency	Relative Frequency	Cumulative Frequency	Cumulative Relative Frequency

What is the relationship of ..... to the Head of household?				
	Frequency	Relative Frequency	Cumulative Frequency	Cumulative Relative Frequency
Own Child	4956432	62	4956432	62
Spouse	1434835	18	6391268	80
Grand Child	677301.5	8	7068569	89
Niece/Nephew/	296827.1	4	7365396	92
Brother/ Sister	216037.5	3	7581434	95
Other Relative	129438	2	7710872	97
Step Child	99476.02	1	7810348	98
Son In-Law/ Daughter In-Law	46811.34	1	7857159	98
Parent	39643.1	0	7896802	99
Cousin	30993.16	0	7927795	99
Not Related	24594.03	0	7952389	100
Uncle/Aunt	21015.07	0	7973404	100
Parent In-Law	7082.515	0	7980487	100

Frequency Missing = 2097503.5516

What is your marital status?				
	Frequency	Relative Frequency	Cumulative Frequency	Cumulative Relative Frequency
Never Married	5936972	62	5936972	62
Married	2989310	31	8926282	93
Widowed	329320.8	3	9255603	97
Divorced	210070	2	9465673	99
Separated	89998.6	1	9555671	100

Cohabiting	11330.99	0	9567002	100

Frequency Missing = 510988.19631

Is ..... male or female?				
	Frequency	Relative Frequency	Cumulative Frequency	Cumulative Relative Frequency
Female	5173422	51	5173422	51
Male	4872726	49	10046148	100

Frequency Missing = 31842.314232

Education Level				
Edulevel	Frequency	Relative Frequency	Cumulative Frequency	Cumulative Relative Frequency
Primary	3068567	60	3068567	60
Secondary	1839385	36	4907953	95
Tertiary	245999.3	5	5153952	100

Frequency Missing = 4924038.6191

Are you able to read and write in any language?				
	Frequency	Relative Frequency	Cumulative Frequency	Cumulative Relative Frequency
Yes	3671824	57	3671824	57
No	2814404	43	6486228	100

Frequency Missing = 3591762.6234

What is your main employment status?				
	Frequency	Relative Frequency	Cumulative Frequency	Cumulative Relative Frequency
Unemployed	3066279	60	3066279	60
Self Employed	1497623	29	4563901	89
Employed	543573.4	11	5107475	100
Employer	11517.47	0	5118992	100

Frequency Missing = 4958998.1941

PROV2(Province Name)	. Is ..... male or female?)		
Frequency Row Pct	Female	Male	Total
Lusaka	1020687 53.21	897471 46.79	1918158
Copperbelt	833122 50.50	816559 49.50	1649682
Southern	740925 51.33	702487 48.67	1443412
Central	589122 51.84	547365 48.16	1136487
Luapula	528436 49.91	530391 50.09	1058828
Western	452071 52.01	417061 47.99	869132
North Western	366173 51.31	347477 48.69	713650
Muchinga	319497 51.08	305971 48.92	625468
Northern	264893 51.28	251696 48.72	516589
Eastern	58495 50.98	56248 49.02	114743
Total	5173422	4872726	1.005E7

Frequency Missing = 31842.314232

Annexure 3: Individual Characteristics against ICT Access and Usage

Location of Internet Use by Individuals (in the last three Months)

Individual Characteristics	Work	Place of education	Another person's home	Commercial Internet Access	Home	Community internet facility	In mobility
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Region							
Rural	14.29	22.73	14.49	20.73	19.12	4	20.07
Urban	85.71	77.27	85.51	79.27	80.88	96	79.93
Age Group							
10-14	.	1.52	2.9	1.22	1.86	.	1.86
15-19	3.38	21.21	15.94	9.76	18.27	20	15.99
20-24	6.77	34.85	31.88	23.17	22	12	21.93
25-29	23.68	16.67	21.74	19.51	21.49	32	20.82
30-34	18.42	10.61	5.8	14.63	12.35	28	16.73
35-39	16.92	6.06	7.25	10.98	8.97	.	8.92
40-44	10.9	2.27	7.25	2.44	5.08	8	3.35
45-49	10.53	2.27	1.45	9.76	4.4	.	3.35
50-54	5.26	1.52	2.9	7.32	2.54	.	2.6
55-59	2.26	0.76	1.45	.	1.35	.	2.23
60-64	1.13	0.76	1.45	.	1.18	.	1.86
65-69	0.38	1.52	.	1.22	0.51	.	0.37
70+	0.38	.	.	.	.	.	.
Sex							
Male	68.8	48.48	62.32	73.17	57.36	68	59.85
Female	31.2	51.52	37.68	26.83	42.64	32	40.15
Education Level							
Primary	0.75	.	1.45	.	2.37	.	1.86
Secondary	24.81	51.52	55.07	39.02	50.93	32	52.04
Tertiary	74.44	48.48	43.48	60.98	46.7	68	46.1
Main employment status							
Employed	81.58	25.76	34.78	46.34	37.56	32	40.52
Unemployed	4.89	65.15	50.72	36.59	46.87	40	41.64
Self Employed	12.03	8.33	14.49	14.63	13.87	24	15.24
Employer	1.5	0.76	.	2.44	1.69	4	2.6

Individual Characteristics	Have you used a mobile cellular telephone in the last three months?	Do you know how to use the internet?
	Yes	Yes
	Percent	Percent
Age Group		
10-14	1.88	2.1
15-19	16.96	17.68
20-24	21.98	22
25-29	20.6	20.27
30-34	12.06	11.87
35-39	9.55	9.39
40-44	5.28	5.19
45-49	5.15	5.07
50-54	3.02	2.97
55-59	1.63	1.61
60-64	1.01	0.99
65-69	0.75	0.74
70+	0.13	0.12
Sex		
Male	59.3	58.96
Female	40.7	41.04
Education Level		
Primary	2.39	2.6
Secondary	53.14	53.65
Tertiary	44.47	43.76
Main employment status		
Employed	39.45	38.94
Unemployed	44.85	45.61
Self Employed	14.45	14.22
Employer	1.26	1.24

Individual Characteristics	Studying Religious Material	Research	Business	Email	Social Networking	Shopping Store	Internet Banking	Learning	Gaming	Reading Publications	Watching Videos and Movies	Watching Online TV	Listeining to online music/Radio	Cloud servers
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Age Group														
10-14	.	0.93	.	.	1.44	.	.	1.22	10.61	.	0.93	.	.	.
15-19	10.75	15.05	1.64	8.64	17.48	7.41	.	17.07	36.36	11.56	23.15	15.38	38.46	11.11
20-24	20.43	20.83	10.66	16.05	25.05	24.07	5.26	25.61	18.18	18.37	26.85	15.38	19.23	11.11
25-29	13.98	20.37	23.77	23.05	22.88	25.93	23.68	15.85	15.15	17.01	16.67	30.77	17.31	22.22
30-34	19.35	13.43	15.57	15.64	11.89	14.81	13.16	14.02	4.55	14.97	13.89	15.38	9.62	22.22
35-39	9.68	10.42	11.48	11.93	8.47	.	10.53	9.15	9.09	14.29	11.11	15.38	5.77	11.11
40-44	5.38	6.94	9.84	8.23	3.96	11.11	13.16	4.27	1.52	6.8	1.85	7.69	1.92	.
45-49	8.6	4.86	9.02	7	3.96	3.7	13.16	6.71	1.52	5.44	0.93	.	1.92	.
50-54	5.38	3.01	8.2	3.29	1.98	5.56	7.89	3.05	3.03	6.8	2.78	.	1.92	11.11
55-59	3.23	2.08	4.92	3.29	1.44	.	5.26	3.05	.	2.04	0.93	.	.	.
60-64	2.15	1.39	3.28	2.06	1.08	3.7	7.89	.	.	2.04	0.93	.	1.92	11.11
65-69	1.08	0.69	0.82	0.82	0.36	3.7	.	.	.	0.68	.	.	1.92	.
Sex														
Male	58.06	55.79	72.13	61.32	54.59	59.26	81.58	57.32	66.67	64.63	59.26	69.23	65.38	66.67
Female	41.94	44.21	27.87	38.68	45.41	40.74	18.42	42.68	33.33	35.37	40.74	30.77	34.62	33.33
Education Level														
Primary	1.08	1.16	.	0.41	1.44	.	.	0.61	12.12	2.04	2.78	.	3.85	.
Secondary	46.24	38.66	22.95	25.51	54.41	27.78	7.89	40.24	65.15	36.05	48.15	30.77	75	11.11
Tertiary	52.69	60.19	77.05	74.07	44.14	72.22	92.11	59.15	22.73	61.9	49.07	69.23	21.15	88.89
Main employment status														
Employed	48.39	47.22	59.02	57.61	37.66	38.89	76.32	48.78	22.73	54.42	33.33	46.15	25	66.67
Unemployed	31.18	40.51	9.02	25.93	47.75	25.93	7.89	44.51	65.15	31.97	50.93	38.46	63.46	22.22
Self Employed	17.2	10.65	24.59	12.76	12.97	25.93	5.26	6.1	10.61	12.24	13.89	15.38	9.62	11.11
Employer	3.23	1.62	7.38	3.7	1.62	9.26	10.53	0.61	1.52	1.36	1.85	.	1.92	.