FINAL REPORT

Botswana Communications Regulatory Authority (BOCRA)
Plot 50671, Independence Avenue
Gaborone

CONSUMER AND SERVICE PROVIDER SATISFACTION SURVEY

PREPARED BY BOTSWANA INSTITUTE FOR DEVELOPMENT POLICY ANALYSIS (BIDPA)

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BGCSE: Botswana General Certificate of Secondary Education

BIDPA: Botswana Institute for Development Policy Analysis

BMC: Botswana Meat Commission

BOBS: Botswana Bureau of Standards

BOCRA: Botswana Communications Regulatory Authority

BTCL: Botswana Telecommunications Corporation Limited

BTV: Botswana Television

COSC: Cambridge Ordinary School Certificate

CRA: Communications Regulatory Authority

DSP: Department of Social Protection

DRTS: Department of Road Transport and Safety

ICT: Information and Communication Technology

IDI: ICT Development Index

ISP: Internet Service Provider

ITU: International Telecommunications Union

JC: Junior Certificate

MLG & RD: Ministry of Local Government and Rural Development

OAP: Old Age Pension

PSLE: Primary School Leaving Examinations

PTOs: Public Telecommunication Operators

RB1: Radio Botswana 1

RB2: Radio Botswana 2

SADC: Southern African Development Community

SABC: South African Broadcasting Corporation

SMS: Short Message Service

SP: Service Provider

SPSS: Statistical Package for Social Sciences

UASF: Universal Access and Service Fund

VANS: Value Added Network Services

WWV: World War Veterans

FOREWORD

Botswana Communications Regulatory Authority (BOCRA) exists for the sole purpose of ensuring that Botswana has safe, reliable, efficient and affordable communications services. Therefore, at the heart of the broad mandate of BOCRA is the need to ensure consumer protection.

The Communications Regulatory Authority Act, 2012 (CRA Act) enjoins BOCRA to ensure that consumers are not charged unjustifiably high prices for the communications services that they receive and that there is variety of products and services to choose from. Equally, the services should be readily available, at good quality as well as sufficient quantity. Further, the CRA Act mandates BOCRA to monitor the performance of the regulated sectors in relation to, among others, the levels of investment, pricing, cost of services, availability, quality, quantity and standards of services.

Pursuant to the foregoing, BOCRA conducts Consumer and Operator Perception Surveys on a biennial basis to:

- Obtain consumer feedback on how bad or well they perceive the services they receive from licensees; and
- Obtain feedback from licensees on how they perceive their relationship with BOCRA in relation to the services they receive from the regulator.

The results of the surveys help BOCRA to have targeted consumer education initiatives as well targeted engagements with the service providers. This 2018 survey results, on the one hand, show an improvement in consumer perceptions of the communications services they receive and on the other hand, show the need for improved engagement with licensees.

BOCRA values the feedback obtained through these surveys and pledges to address all issues of concern highlighted in the results for the benefit of the sector. BOCRA wishes to thank all those who took part in the survey and assures them of its commitment to ensuring affordability of quality communications services and improved regulator-licensee relationship.

Finally, it should be noted that the survey was commissioned for the sole purpose of obtaining feedback for BOCRA to gauge how well or bad it is doing in delivering on its mandate. It should be read and understood in that context.

Martin Mokgware
Chief Executive

ACKNOWLEDGEMENTS

This report was prepared by Botswana Institute for Development Policy Analysis (BIDPA) for Botswana Communications Regulatory Authority (BOCRA). The main aim of the report is to determine customer's perceptions and satisfaction level on the services regulated by BOCRA as well as service providers' perceptions of their relationship with the regulator and their involvement on policy and regulation development.

The consultants wish to thank various organisations/institutions, and individuals who made important contributions to the development of this report. In the process of developing the report, the team consulted several stakeholders namely: the service providers and customers of BOCRA regulated services across the country. We say a big thank you to all these organisations and individuals as they all cooperated and actively participated in the discussions.

Many thanks go to the Chairperson, Mr Aaron Nyelesi and members of the BOCRA Reference Group for their invaluable support and guidance during the course of developing this report, right from inception to finality. Lastly, but not least, we would like to pass our heartfelt thanks to BOCRA for appointing us to undertake this important study. Special thanks go to the BOCRA Reference Group research team, in particular to Ms Suzan Jacob for guiding us throughout the process of coming up with this report.

Having said this, all errors and omissions remain the sole responsibility of the consulting team, comprising: Prof. Patrick Malope – Team Leader, Mr Mpho Raboloko, Ms Tshepiso Gaetsewe, Ms Masedi Tshukudu, and Ms Koketso Molefhi.

EXECUTIVE SUMMARY

Introduction and Objectives

Botswana Communications Regulatory Authority (BOCRA) was established through an Act of Parliament, the Communications Regulatory Authority (CRA) Act of 2012. The mandate of BOCRA is to regulate the communications sector in Botswana, which comprises of; telecommunications, internet, broadcasting, postal services and related matters. On a regular basis, BOCRA may carry out studies to determine and to update itself on the state of public opinion and consumer experiences with respect to services provided by the regulated suppliers. In line with this mandate, BOCRA has engaged the Botswana Institute for Development Policy Analysis, (BIDPA) to undertake a study to determine consumer perception and satisfaction as well as the views of service providers regarding their views on its mandate execution.

The main objective of the study is to determine the level of customer satisfaction and their perception on the services regulated by BOCRA as well as the service providers' perceptions and satisfaction on how BOCRA operates and regulates the communication sector. The specific objectives of the study are to: probe consumer perceptions on the services provided by the service providers i.e. quality of service, range of services, and efficiency of service; probe operator's perception of the regulator in areas of fairness, promptness, neutrality and effectiveness; compare the consumer awareness of the sectors and the level of service provision as identified in the 2015 survey with the present comprehension and to determine the trend; assess the service providers participation in regulation and policy development; identify negative experiences during the survey, and identify pointers for future developments to address negative perceptions.

Methodological Approach

The methodological approach followed involves mixed methods, which primarily include desktop reviews, in-depth interviews and focus group discussions with service providers as well as a survey of customers who are the users of the services regulated by BOCRA. The survey used a sample of 1,000 consumers for all the BOCRA regulated services in selected localities across the country. The selection of localities ensured that all locality types: cities, towns, urban villages, rural villages and remote settlements were included. Data for the survey was collected through an administered questionnaire using trained enumerators.

One of the challenges faced in the study was that the list of operators provided by BOCRA, especially internet service providers (ISPs) contained outdated contacts. A plausible reason for this might be that since registering with BOCRA, the service providers never operated or the changed their addresses without informing the regulator. This resulted in a reduction in the number of service providers interviewed. However, this is not expected to influence the results as most of these are unlikely to be operational, and a reasonable number of service providers participated in study both in and outside Gaborone.

Service Providers' Relationship and Satisfaction with BOCRA's Mandate Execution

Most service providers viewed their relationship with BOCRA is cordial, except the internet service sector who indicated that they perceive their relationship with the regulator as being one sided. In terms of fairness and neutrality all the service providers interviewed indicated that BOCRA was fair and neutral in dealing with them. Most service providers indicated that they were aware of the complaints handling procedures, although some Internet Service Providers (ISPs) stated that they did not know who the contact person or office was to lodge their complaints. However, in terms promptness to their queries and complaints, most service providers felt that BOCRA took long to attend to them and in some instances these were never addressed. Thus, service providers felt that BOCRA was not as effective as it should in dealing with their complaints.

Service Providers' Satisfaction and Involvement in Regulation and Policy Development

Regarding their involvement in regulation and policy development, the service providers indicated that BOCRA consults them, but in some instances decisions that affect their regulatory environment are often made without their input. In some sectors such as the postal services, the operators felt that the regulatory environment was weak, especially in the courier services. As a result, there were a number unlicensed operators in the market.

The services providers felt that the regulatory environment within which they operate limits their operations, citing the rules of conduct for elections and the local content regulations. They decried that they are losing revenue from election advertising because of the strict regulations they have to follow. As for local content, some service providers argued that the regulations prevent them from fully satisfying their audiences who might not be interested in local content such as the youth.

In terms of their satisfaction with the regulatory environment in the sector, the operators indicated that there were dissatisfied with the fact that public broadcasters were not regulated by BOCRA, yet the same broadcasters compete with them. They viewed this as being unfair and called for the regulation of all the players in the communication industry so that there is level playing field. Additionally, the non-regulation of public broadcasters who command a larger viewership and listenership means that BOCRA is prevented from establishing uniform performance standards across the communication industry.

Customers Usage and Satisfaction with the BOCRA Regulated Services

Mobile services: In terms of usage, the majority (98.1%) of respondents use mobile, with the most (90%) used service being voice calls, followed by short message service (SMS) (76.6%) and internet browsing (52.5%). The general feeling of mobile phone customers were that the prices of international calls and SMS were high, while the prices of local calls and SMS were perceived to be fair. More than half of the customers were generally satisfied with the services offered by their mobile operators. In terms of the effectiveness of mobile networks regarding connectivity, a majority (65.2%) of customers indicated that they had experienced some network problems. These problems mostly (56.2%) occur when there are power cuts and/or when it rains (39.6%). However, a sizeable proportion (31.6% and 29.9%) of respondents indicated that the problems occur during weekends and holidays respectively. These suggest that the problems are caused by congestion as many users are likely to use the network during these times.

Fixed line services: The use of fixed telephone line is limited, with only 3.6% of the respondents indicating that they use the service. The reason for this might be that consumers have switched to mobile telephone services because of their convenience. In terms of their satisfaction with the services offered by the fixed line operator, customers were generally satisfied with most of the services.

Postal Services: In terms of usage, the postal services were used by 32% of the sampled respondents. The most (80.6%) sought out service was collection of parcels/mail, followed by agency services (63.7%), philately/stamps (53.8%) and money orders (31.5%). The majority (84%) of the mail originated locally (84%), with limited international mail (1%). Most (46.3%) mail users indicated that it took less than 5 days for them to receive their mail after posting. Overall, postal service customers were satisfied with the services they receive from the service providers, except the prices paid for stamps.

Broadcasting services: The most listened to and watched radio and TV stations were the public ones as they have a larger geographic coverage compared to private radio and TV stations. The majority (over 70%) of the respondents indicated that they were satisfied with the signal quality of both the private radio and TV stations. The respondents were also satisfied with the programs, news and current affairs, code of practice of the private radio stations as well as TV stations.

Internet services: A sizeable proportion (60%) of respondents indicated that they used internet services, with their main providers being Mascom and Orange. The most (96.8%) commonly used type of internet is mobile data, suggesting limited use of other types of internet such as dial-up, Asymmetric Digital Subscriber Line (ADSL) and satellite probably because of they are relatively expensive to connect and require land line connection. In terms of satisfaction, the customers indicated that they were satisfied with most of the services provided. However, a significant proportion (35.9%) of customers were dissatisfied with the speed of internet, although they indicated that they did not know the speed of the internet they were using.

Regarding awareness of customer complaints handling procedures, most operators indicated that whenever they had a complaint they take it directly to their service providers. Most of the customers using BOCRA regulated services were also aware of the fact that it was an offence to send offensive, indecent, obscene, and pornographic materials through their communication devices. In addition, the customers were aware that it was an offence to damage, destroy, temper with the erection, altercation maintenance or inspection of any telecommunication equipment.

Comparison of the 2015 and 2018 Consumer Survey Results

Mobile phone sector: In the mobile telephone sector, the level of awareness of the prices charged by customers' own service providers and other providers increased from 59% in 2015 to 70% in 2018 and 27% to 55.2% respectively. This suggests that BOCRA has been successful in ensuring that the service providers disclose the prices charged to their customers. There has been an increase in the proportion of customers who felt that prices charged for local and international calls as well as roaming services and internet were high. In terms of satisfaction in the mobile service sector, there was overall improvement between 2015 and 2018.

Fixed line sector: There was a significant improvement in the proportion of customers who are aware of complaints handling procedures between 2015 and 2018. This suggests that the service provider is doing a good job in terms of making its customers aware of complaints handling procedures. In terms of level of satisfaction on a variety of attributes, there was improvement in 2018 compared to 2015. However, in 2018 a smaller proportion of consumers were satisfied with: installation time, call service center, service charges, pricing information, ease of fault reporting; network quality, fault repair, and handling of customer complaints compared to 2015. This suggests that the quality of service provided by the service provide has deteriorated. A plausible explanation for may be lack of competition as there is only one service provider in the fixed line telephone.

Postal services sector: A larger proportion (72.6%) of customers indicated that there were aware of complaints handling procedures in 2018, compared to 2015 (57.5%). This shows an improvement in awareness of the complaint handling procedures probably as a result of increased by public education campaign by the service provider. In terms of satisfaction in the courier services, there was increased proportion of consumers who were satisfied with the following: price, speed, customer service, confidentiality and security. This suggest that competition in the courier services sector has increased the efficiency of the operators as more licenses were issued.

Broadcasting sector: There was slight improvement in customers who indicated that they were aware of customer complaints handling procedures in 2018 (53.6%), compared to 2015(49.7%). However, the level of awareness is still low and this suggests that the service providers do not have effective public education campaigns. Customers' level of satisfaction improved between 2018 and 2015 on the following attributes; service availability, accessibility region wise and a variety of services. While, there was an improvement in the level of satisfaction in terms of fair subscription prices between 2015 (23.1%) and 2018 (41.2%), this level is still low, which suggests that there is less competition in the subscription TV stations because of limited number of such stations.

Internet services: Customer awareness of complaints handling procedures in the internet sector has generally improved between 2015 and 2018. This implies that the service providers are doing a good job in promoting consumer awareness of complaints procedures. In terms of satisfaction level in 2015 and 2018, more consumers satisfied with the quality of service offered in 2018 compared to 2015. In addition, more consumers were satisfied with the internet prices in 2018 than in 2015. However, there is still a sizeable proportion (16.6%) who are dissatisfied with prices charged for internet services.

Consumer satisfaction index: Comparisons of the 2015 and 2018 consumer satisfaction results reveal that overall consumer satisfaction has improved, with consumer satisfaction index increasing from 72% to 76% in 2015 and 2018 respectively. However, there was a slight decrease in the satisfaction level in the broadcasting sector, which fell from 76% in 2015 to 74% in 2018.

International comparisons: Botswana's performance in the global ICT development index has been mixed, with improvement in the global rankings from 111 in 2015 to 102 in 2016 and a fall to 105 in 2017 despite a slight improvement in the index. Regionally, the country's ranking improved from 6 to 5 in Africa.

Recommendations

While the majority of the service providers perceive their relationship with BOCRA as being cordial, others view it as being minimal and characterised by one sided communication. It is therefore recommended that BOCRA should improve its communication with the service providers and engage them more in the process of policy development as well as decision making affecting the operation of each communication sector.

In order to improve competition in the communication sector, especially the broadcasting sector, BOCRA should engage government with the view to regulate the public broadcasters. These will go a long way in providing a level playing field as both the public and private broadcasters will operate in the same regulatory environment and hence enhance competition. Additionally, this will ensure that there are uniform standards across the communication industry.

Enforcement of regulation in some sectors such as the postal services is weak, leading to a number of illegal service providers in the market. These illegal service providers do not pay license fees as they are not licenced with BOCRA leading to loss of revenue by the regulator and unfair competition with the licensed service providers.

While infrastructure sharing guidelines have been in existence for a long time, it appears that instances where infrastructure belonging to service providers is underused still persists. It is therefore recommended that BOCRA in consultation with service providers find ways in which all operators in the communication industry benefit from infrastructure sharing.

Some licensed operators, especially those offering wholesale services for internet have indicated that monitoring of the contention ratio is weak, at times leading to overload of equipment and eventually poor service delivery by the internet service providers. BOCRA should therefore improve its monitoring of the contention ratio by improving its infrastructure, especially in the internet service sector.

Regarding licensing of equipment, service providers decry that the process of licensing equipment takes long and at times BOCRA follows the same tedious process of licensing equipment even though it has licensed similar equipment, with the only difference being the brand names. However, type approval is only required if similar equipment differ in technical aspects. It is recommended that BOCRA undertakes an operator engagement on the approval process as they appear not to be fully informed about it.

While there has been improvement in the overall level of satisfaction with BOCRA regulated services, there has been a decline in some subsectors and attributes, it is therefore recommended that BOCRA engage with the same providers with the view of improving their services and hence overall consumer satisfaction.

CHAPTER 1

INTRODUCTION AND OBJECTIVES

1.1 INTRODUCTION

Botswana Communications and Regulatory Authority (BOCRA) was established through an Act of Parliament, the Communications Regulatory Authority (CRA) Act of 2012. The mandate of BOCRA is to regulate the communications sector in Botswana, which comprises of: telecommunications, internet, broadcasting, postal services and related matters. From time to time, BOCRA may carry out research to determine and update itself on the state of public opinion and consumer experiences with respect to services provided by the regulated service providers. In line with this mandate, BOCRA has engaged Botswana Institute for Development Policy Analysis (BIDPA) to undertake a study to determine consumer perception and satisfaction as well as the perceptions of service providers regarding their relationship with the regulator - BOCRA. BOCRA conducted a similar survey in 2015. Unlike the current study, the 2015 study did not include the service provider's perceptions of the regulator.

1.2 OBJECTIVES OF THE STUDY

The main objective of the study was to determine the level of customer satisfaction and perception on the services regulated by BOCRA as well as the service providers' perceptions and satisfaction on how BOCRA operates and regulates the communication sector. The specific objectives of the study as listed in the invitation to tender document are as follows:

i) *Probe consumer perceptions on the services provided by the service providers i.e. quality of service, range of services, and efficiency of service*

This objective seeks to determine consumer perception on the services provided by the service providers in the communication sector in terms of quality, range and the efficiency of the services. The objective addresses the level of usage of the regulated services, their quality as well as satisfaction in terms of the prices charged for the services. This objective is covered in Chapter 5.

ii) *Probe operator's perception of the regulator in areas of fairness, promptness, neutrality and effectiveness*

BOCRA's mission is to regulate the communication sector for promotion of competition, innovation, consumer protection and universal access. In order to achieve this mission, BOCRA has to practice fairness, promptness, neutrality and effectiveness in its regulatory framework and decision making. This objective seeks to determine the operator's perception on the operations of BOCRA in terms of fairness, the speed of responding to queries, neutrality and the overall effectiveness of BOCRA in executing its mandate especially regulations of the service providers. Chapter 4 addresses this objective.

iii) *Compare the consumer awareness of the sectors and the level of service provision as identified in the 2015 survey with the present comprehension and to determine the trend*

This objective requires that a comparison should be made between the 2015 BOCRA Customer Satisfaction Survey and results of the current survey. However, this comparison will only be in reference to the consumers' perceptions and satisfaction, as the previous survey did not include the service providers. This is dealt with in Chapter 6.

iv) *Assess operators' participation in regulation and policy development*

In performing its regulatory functions, BOCRA occasionally comes up with policies and regulations to guide the operations of the communication industry. This objective intends to determine the level of participation in the development of such policies and regulations by both the consumers and service providers. This is covered in Chapter 4.

v) *Identify negative experiences during the survey*

The results of the study might indicate some negative experiences on the part of the consumers and service providers in dealing with service providers and BOCRA respectively. This objective therefore intends to identify the negative experiences and these are addressed in Chapter 7.

vi) *Identify pointers for future developments to address negative perceptions*

Based on the findings of the study, this objective seeks to identify relevant issues which require BOCRA's attention for future development, especially negative perceptions that might have been identified in (iv) above. The objective entails coming up with detailed recommendations on strategy and regulatory frameworks that will support the development of the communication industry. This objective is addressed in chapters 7 and 8.

1.3 ORGANISATION OF THE REPORT

The rest of the report is structured as follows: Chapter 2 presents the research methodology, while Chapter 3 covers the profiles of both the consumers and service providers used in the study. Chapter 4 provides the results of the study on service providers' satisfaction with BOCRA's mandate execution as well as their participation in regulation and policy development. Chapter 5, presents the results on consumer's satisfaction and perception on the BOCRA regulated services. A comparison of the consumer perception and satisfaction between the 2015 study and the current study is undertaken in Chapter 6. Chapter 7 addresses the negative perception identified during the survey, while Chapter 8 concludes the study with major recommendations to enhance the development of the communications industry in Botswana.

CHAPTER 2

METHODOLOGICAL APPROACH

This chapter describes the methodology followed in meeting the objectives of the study. The approach followed involves mixed methods, which primarily include desktop reviews, in-depth interviews and focus group discussions with service providers as well as a survey of consumers who are the users of the BOCRA regulated services. Both qualitative and quantitative data was collected to meet the objectives of the study.

2.1 SERVICE PROVIDER'S SATISFACTION AND PERCEPTIONS

In-depth interviews and focus group discussions were conducted in order to get operators perceptions of BOCRA. In-depth interviews are data collection tools where qualitative data is collected from key stakeholders. The interviews were conducted in order to obtain insights from the service providers (telecommunication and broadcasting service providers) as well as the regulator (BOCRA). In-depth interviews are appropriate in situations where the number of respondents are not large. Owing to the small number of licenced broadcasters (10), telecommunication service providers (4) and the regulator - BOCRA, all were selected for in-depth interviews. The list of the interviewed service providers for in-depth interviews and focus group discussions is provided in Annex 1.

Focus group discussions are also a data collection tool where qualitative data is collected, but in this case, data is obtained from more than one stakeholder at a time. Owing to the large number (87) of internet providers and limitations in terms of both time and financial resources, focus group discussions were conducted for postal and internet services providers. Licenced postal service providers were divided into 2 focus groups, whereas the internet services providers were split into 5 focus groups in Gaborone.

In addition, interviews were conducted with internet service providers (5) and postal service providers (1) outside Gaborone in the localities that were visited during the consumer survey using the same data collection tool as the one used for focus group discussions (Annex 1). The reason for doing this was that the number of service providers outside Gaborone was not sufficient for focus group discussions. Two (2) of these service providers were in Maun both providing internet services, two in Francistown, one providing internet services and the other providing courier services, one in Kasane and another one in Ghanzi both providing internet services.

2.2 CUSTOMERS SATISFACTION AND PERCEPTIONS

2.2.1 Customer Survey

In order to determine customers' perception and their level of satisfaction on the services regulated by BOCRA, the information from the customers plays an important role. This information was collected through a survey conducted on a sample of respondents. The survey was implemented through a face-to-face interview method using a structured questionnaire designed for this purpose. The questionnaire included questions on: the demographics, customer's usage of different services regulated by BOCRA, their perceptions on the role of BOCRA, their level of satisfaction on the services provided as well as the awareness of laws governing the use of information and their knowledge of the complaints and dispute resolution procedures.

A number of trained interviewers were engaged to meet with respondents and pose to them questions as worded in the questionnaire. The advantage of a face-to-face interview method is that it allows the interviewers to clarify issues as they arise during the interview process, and guarantees a high response rate. While this method has been criticised for sampling errors (that it may introduce through research assistants especially if not thoroughly trained) this challenge was adequately addressed during training of interviewers.

2.2.2 Determining the Sample Size

Owing to the large number of customers using the BOCRA regulated services it was not possible to interview all of them. In situations like this, the appropriate procedure is to sample the population using acceptable statistical techniques. The sample is then used to draw conclusions about the population. This done through the use inferential statistics which enables us to determine a population's characteristics by directly observing the sample as it is deemed to be representative of the whole population.

There are different methods used to calculate the sample size depending on the nature of the study, time frame and budgetary constraints. One such method of determining the sample size is to specify the margins of error for the items that are regarded as vital to the study. The researcher needs to choose the *alpha* level of significance, which is the level of acceptable risk the he/she is willing to accept that the true margin of error exceeds the acceptable margin of error, known as Type I error. The *alpha* level used in most surveys is either .05 or .01 (Ary, Jacobs and Razavieh, 1996). Since our population was large and the data set was continuous, we used the margin of error of 0.03 (3%) and *alpha* level of 0.05 (5%) which yields Z-value of 1.96 (Krejcie and Morgan, 1970). We used the recommended *ρ-value,* $\rho = 0.5$ (United Nations, 2005) for this study. Moreover, the survey sample was adjusted for the expected non-response. This study used the previous BOCRA customer satisfaction survey non response rate of 6% (translating to an expected response rate of 94%).

A stratified random sampling technique was employed for the selection of the localities and users from households within the selected areas. The stratified two-stage probability sample design was used for the selection of the sample. The first stage entails the selection of enumeration areas (localities) as primary sampling units. One criterion to inform the choice of localities is the availability of service sectors that are regulated by BOCRA and considered for this study. Moreover, the choice would ensure that the five levels of area classification are represented in the sample to avoid bias.

The second stage of sampling is the selection of the actual number of households (users) systematically selected within each selected enumeration area (locality). The selection of households (users) was made using the probability proportional to measure of size; with the measure of size being the total estimated number of households enumerated during the 2011 Population and Housing Census.

Due to the non-availability of information (sampling frame) on the number and geographical distribution of users of various services considered for the study, we based the size distribution on 586,440 individuals as per the 2011 Population and Housing Census data, although the study included other users such as non-profit organisations and providers of certain services. Therefore, using the Cochran's (1977) correction formula to calculate the sample size, we get

$$n = \frac{n_0}{1 + \frac{n_0}{N}} \qquad (1)$$

Where; N= population size (in our case N is the number of individuals across the selected localities) = 586,440.

and $$n_0 = \frac{Z^2_{\alpha/2}(\rho)(1-\rho)}{\delta^2} = \frac{1.96^2(0.5)(1-0.5)}{(0.03)^2} = 1{,}067.111 \qquad (2)$$

Where:

n = the sample size
Z = the statistic that defines level of confidence
ρ = baseline indicator
δ = margin of error of survey results

Therefore, substituting equation (2) into equation (1) we get

$$n = \frac{1{,}067.111}{1 + \frac{1{,}067.111}{586{,}440}} = 1{,}065.17 \qquad (3)$$

Adjusting for a non-response rate of 6%, we get a total sample of 1,001.26 which we rounded to 1000 users. The sample size of 1000 is large enough to make inference about the whole population. In line with statistical best practice, all the samples below 30 were adjusted to 30 to allow for statistical inference and this resulted in adjustments of other samples. Care was undertaken to ensure that all service sectors (mobile, fixed line, broadcasting, internet and postal) were included in the sample as indicated in Chapter 3. Table 1 shows how the sample was distributed.

Table 1: Sample Distribution

Locality	Population	Proportion	Sample	Adjusted sample	Adjusted Proportions
Gaborone	231,626	0.395	395	280	0.280
Francistown	98,963	0.169	169	150	0.150
Jwaneng	18,016	0.031	31	35	0.035
Ghanzi	14,809	0.025	25	40	0.040
Tsabong	8,945	0.015	15	30	0.030
Letlhakane	22,948	0.039	39	45	0.045
Maun	60,273	0.103	103	90	0.090
D'Kar	1,668	0.003	3	30	0.030
Kasane	9,084	0.015	15	30	0.030
Lesoma	613	0.001	1	30	0.030
Bobonong	19,389	0.033	33	40	0.040
Serowe	50,820	0.087	87	80	0.080
Palapye	37,258	0.064	64	60	0.060
Good Hope	6,362	0.011	11	30	0.030
Masunga	5,666	0.010	10	30	0.030
Total	**586,440**	**1.00**	**1,000**	**1,000**	**1.000**

Source: Author Computed from Statistics Botswana (2011)

2.2.3 Selection of Localities

After determining the sample size, the next step was to select the localities from which the 1,000 respondents were selected. The selection of localities was based on two factors, coverage of the whole country, as well as inclusion of all types of localities. The types of localities included were categorised into cities, towns, urban villages, rural villages and remote areas as defined by the 2011 Housing and Population Census. Thus, the selection of localities ensured that there was representation of all localities in Botswana. One of the objectives of the study was to compare the consumer awareness of the sectors and the level of service provision as identified in the 2015 survey with the present comprehension to determine the trend, as such the same localities used in the 2015 survey were selected to achieve this objective.

Table 2: Sampled Respondents by Type of Locality

Type of Locality	Locality	No. of respondents	Percent
Cities	Gaborone	280	28
	Francistown	150	15
Towns	Jwaneng	35	3.5
Urban Villages	Serowe	80	8
	Ghanzi	40	4
	Tsabong	30	3
	Letlhakane	45	4.5
	Maun	90	9
	Kasane	30	3
	Palapye	60	6
	Bobonong	40	4
Rural Villages	Masunga	30	3
	Good Hope	30	3
Remote Areas	D'Kar	30	3
	Lesoma	30	3
Total		**1000**	**100**

Source: Author Computed from Statistics Botswana (2011)

Table 2 shows the distribution of the sampled respondents by type of locality and locality name. As indicated in the table, most (46.5%) of the respondents are from cities and towns, followed by urban villages (41.5%), while the rural villages and remote areas had an equal proportion of 6%. In 2011, the national population distribution was such that most (42.3%) resided in urban villages, followed by rural villages (25.9%), cities and towns (21.7%) and remote areas (10.1%). This implies that our sample overrepresented cities and towns, while rural villages were underrepresented.

2.2.4 Data Collection and Entry

As indicated earlier primary data was collected from a sample of 1000 consumers who use BOCRA regulated services through the use of an administered questionnaire. The advantages of this method is that it allows the interviewer to clarify issues as they arise during the interview process. Experienced interviewers drawn from BIDPA database and supervised by BIDPA researchers were used to collect data. These interviewers are highly experienced and have previously been engaged by BIDPA. The interviewers are fluent in both English and Setswana and are all Bachelor's Degree holders.

The interviewers were accordingly trained using a training manual specifically prepared for this purpose. The manual covered basic items needed to prepare interviewers for the survey. The training manual included among others; how to prepare for an interview, how to conduct an interview, opening the interview and how to ask questions, receiving and recording answers and closing the interview. The interviewers were firstly introduced to the survey objectives so that they have a thorough understanding of what the survey entails. They were also taken through the survey questionnaire. In addition, there was preparation of protocols, training curriculum and materials for the interviewers. Some of the interviewers are conversant with the use of Statistical Package for Social Sciences (SPSS) and were engaged before by BIDPA for data entry.

Before finalisation of the questionnaire, it was pretested to ensure its clarity. Pretesting is one of the most important components of the survey procedure. It allows the research team and the interviewers to both improve the proficiency of interviewing and the capacity of the instrument to generate useable responses. During pretesting, the respondents were randomly selected around Gaborone (owing to its ease of accessibility to the research team). The purpose of the pre-test was to establish if the questions were all understood by the respondents and if the respondents were willing to answer the questions as presented to them. In addition, pretesting also helped to check if the coding of the questionnaire was sufficiently clear, as well as whether it was necessary to create new codes or improve the existing ones. It also helped in establishing the time it takes to complete the interview which is useful in determining the length of time required to complete the survey.

Before the start of data entry, a data entry template was designed using SPSS software. The software has been used by BIDPA in previous surveys and is user friendly for data entry clerks. To make data cleaning and questionnaire rechecking easier, questionnaires were assigned serial numbers. The questionnaires were stored in a manner that is fully confidential so that no external individual or institution can identify any specific individual in the data in order to ensure the integrity of the data, and that of the questionnaires.

After the field work, questionnaires were checked for consistency and completeness as well errors. Data was then entered into data file using SPSS software. Coding was deemed unnecessary as the questionnaire was pre-coded. The data was then cleaned by running preliminary analysis and checking for outliers in the results. To ensure data consistency, supervisors assessed each questionnaire at the end of each day during field work. Such assessment included daily discussions of challenges and other experiences with research assistants with a view to address them. This regular assessment resulted in limited errors as errors found were corrected in the field during data collection.

2.2.5 Data Analysis

Following data entry, data cleaning commenced, and it took 2 days as there were few issues to correct with the data. Preliminary analysis was undertaken to identify any outliers or errors. Serial numbers were used to identify questionnaires with errors, indicating the need to put serial numbers on the questionnaires before data entry exercise commenced. After completion of data cleaning, data analysis followed. Data analysis mainly involved the use of descriptive statistics such as frequency tables and cross tabulations and results are presented in both tabular and graphical forms.

2.3 STUDY LIMITATIONS AND CHALLENGES

This section outlines the experiences and challenges encountered during the study as well as their mitigation. One of the challenges of the study was that the list of service providers provided by BOCRA contained missing information on details of service providers and in some cases the information provided was outdated and hence it was difficult to contact the service providers to arrange for interviews. This resulted in a reduction in the service providers interviewed. This challenge was more pronounced in the internet service sector, where 40 out of 87 providers had wrong contacts. A plausible explanation for this is that some ISPs registered with BOCRA and never actually operated or changed their contacts without informing the regulator. However, every effort was made to update the contact details whenever possible through the use of telephone directory.

Another challenge during the collection of data from the service providers was that some of them did not turn up for meetings as agreed, while others cancelled meetings at short notice. This prolonged the data collection period and hence left researchers with limited time to analyse the data. The non-attendance of some service providers can be attributed to lack of interest in the study as they are not aware as to how it will benefit them. In addition, some of the service providers felt that the information they were giving the researchers will not be given the strict confidentiality it deserves. These problems were mitigated by making follow ups and rescheduling of interviews as well as emphasising that confidentiality will be strictly observed.

In order to determine the sample, there is need to have a proper sampling frame which can be used as a base for determining the sample size. The study used the 2011 Housing and Population Census results as a proxy for the sampling frame. The survey covered 1000 respondents in all the 5 communication sectors and it was a challenge to include equal representation of all the service sectors. It is however, important to note that some of the service sectors do not have as many users as others, for example mobile phone service sectors has more users compared to fixed line telephone users. Due care was however undertaken to ensure that all the 5 sectors had at least minimum of 30 respondents.

Although the study had limitations as stated above, these are not expected to alter the results. For instance, while BOCRA provided a list of 87 internet service providers, only 40 had the correct contact details. This suggests the majority (47) were either not operating or had changed their contacts without informing the regulator. Based on this, we can safely conclude that the 20 internet service providers with which focus group discussions were conducted represent the majority and hence are representative of the sector. In addition, 5 service providers were interviewed outside Gaborone as shown in Annex 2. As mentioned earlier, the sample size of 1,000 is large enough for making statistical inferences as it represents the whole population of communication users.

CHAPTER 3

PROFILE OF THE RESPONDENTS

This chapter provides a brief description of the respondents used in the study, both the service providers and the consumers. The chapter starts with the number of service providers interviewed as well as those used in the focus group discussions in each sector. The chapter then proceeds to discuss the type of licences held by the service providers and the date when licences were issued. This is followed by a profile of respondents who were used in the survey and these include their demographics as well their usage of different services regulated by BOCRA.

3.1 SERVICE PROVIDERS PROFILE

This section is aimed at outlining the characteristics of the service providers which were interviewed either through an in-depth interview or focus group discussion. Table 3 shows the number of licenced service providers as per the records from BOCRA (details on the service providers list are provided in Annex 1) and the number of service providers who were interviewed. The study covered 39 service providers out of the total 115 licenced service providers, thus the study covered 33% of licenced service providers. The telecommunications sector had the least number of licenced service providers and majority (3 out of 4) of the service providers were interviewed against a target of 100%. Only, 20 out of 87 of the internet providers targeted in Gaborone participated in the focus group discussions. As mentioned earlier, the main reason for this might be that a majority of ISPs never operated their businesses after registering with BOCRA. Similarly, 9 out of 22 of the postal and courier services service providers participated in focus group discussions in Gaborone. However, some of the internet service providers (5) and postal/courier services service providers (1) were interviewed in other locations outside Gaborone (Annex 1). Annex 2 shows a list of confirmation status for all the communication industry service providers.

Table 3: Number of Licenced Service Providers and Number of Service Providers Interviewed

	No. of Licenced SPs	No. of Interviewed SPs	Survey Ratio
Telecommunication	4	3	75%
Broadcasting	10	7	70%
Internet	87	20	23%
Postal & Courier	22	9	41%
Total	115	39	32%

Source: BOCRA and Author computed from survey
Key: SP – Service provider

Table 4 presents the characteristics of the service providers' licences. As indicated in the table, the regulator issued the first licence in the year 1998 and the latest licence was issued in 2018. This implies that the oldest licensee has been in operation for 20 years. The number of years that the service provider has been licenced is very crucial in understanding their relationship with the regulator. The perception of the service provider may also be different depending on the number of years the service provider has been licenced and operational.

In terms of clientele, most service providers service both the corporate and individual clients. However, the telecommunication and broadcasting service providers have a large share of clients as individuals, whereas the internet and postal service sectors have large corporate clients with a smaller share of individual (residential) clientele.

Table 4: Service Providers Licence Details

	Licenced Services	Licence Issue Period	Licence Type	Clientele
Telecommunication	Local, International, Mobile services (Voice, SMS and Data)	1998 -2013	PTO, PTNL, NFP, SAP,	Wholesalers and Retailers - mainly to local market
Broadcasting	Free to air, subscription broadcasting services	1998-2016	Broadcasting, CB Radio, PRC, Aircraft & Amateur Radio	Mainly local market
Internet	Internet reseller Web & Mail hosting ICT Supply services	2013-2018	VANS, VoIP	Mainly local market
Postal & Courier	Parcels less than 20Kgs	2016-2018	Postal Licence, Courier Services Licences	Both local and International Cross broader

Source: BOCRA and Author computed from survey

It is also important to note that some of the licences in the telecommunication sector have been renewed over the years.

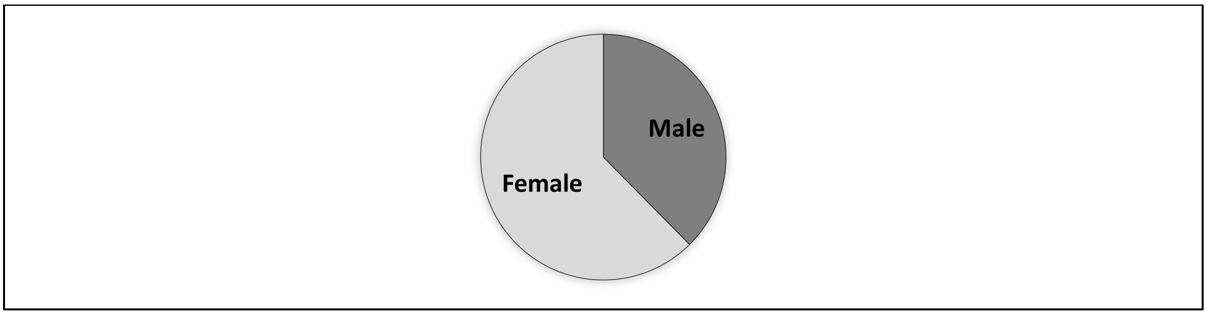
3.2 PROFILE OF THE CONSUMERS

This section gives a brief description of consumers of the BOCRA regulated services in terms of their gender and age; marital status and income; education and employment as well as the services they use.

3.2.1 Gender and Age Profile

The study used a sample of 1,000 individual users of services regulated by BOCRA. As indicated in Figure 1 a large proportion (62.4 %) of the respondents were females, with only 37.6% being male. The 2009/10 Botswana Core Welfare Indicators indicates that the majority (52.3%) of the population were female, while the males represented 47.7%. Thus, the proportion of females in the sample exceed those obtained nationally, suggesting that females have been overrepresented in the sample.

Figure 1: Respondents by Gender



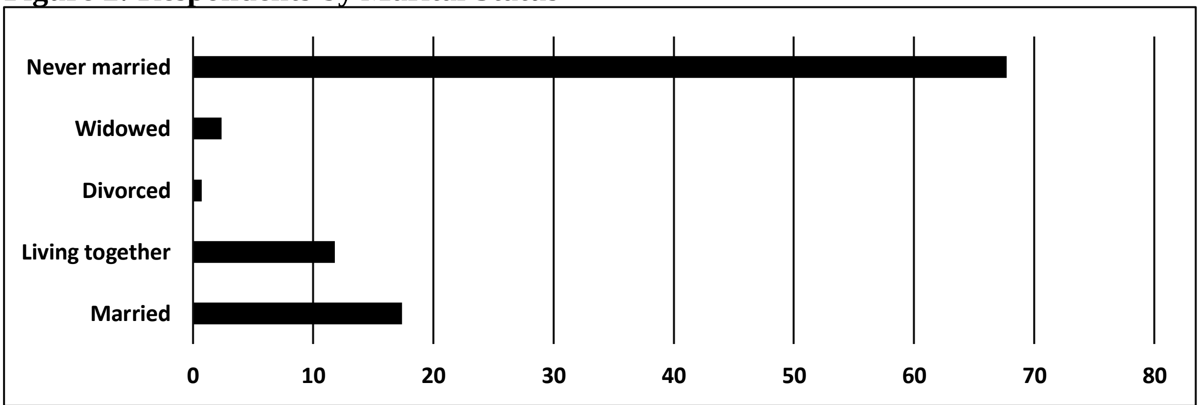
Source: Author computed from survey

In terms of age of the respondents, the youth (17-35years) accounted for the largest proportion (62.4%), followed by adults (36-55years) who accounted for 32.6% and the elderly (56 years and above) who accounted for 3.5% of the sample. Some (1.2%) respondents refused to indicate their age, while 0.1% indicated that did not know their ages. Nationally, in 2013 the youth (15- 34) made the majority (57.8%) of the population, followed by adults (35-54) at 28% and the elderly at 14%. Thus, in terms of age, our sample closely follow the national age distribution.

3.2.2 Income and Marital Status

Regarding the marital status, the majority (67.7%) of respondents indicated that they were never married, followed by those that are married (17.4%) and living together (11.8%) as indicated in Figure 2. Only 2.4% and 0.7% were widowed and divorced respectively. The national statistics show that in terms of marital status, never married persons comprise 37.2%, followed by married persons (26.9%), living together (20.4%); widowed (11.9%); divorced (2.2%) and separated (1.3%). This implies that our sample underrepresented the never married, while the married and living together were overrepresented.

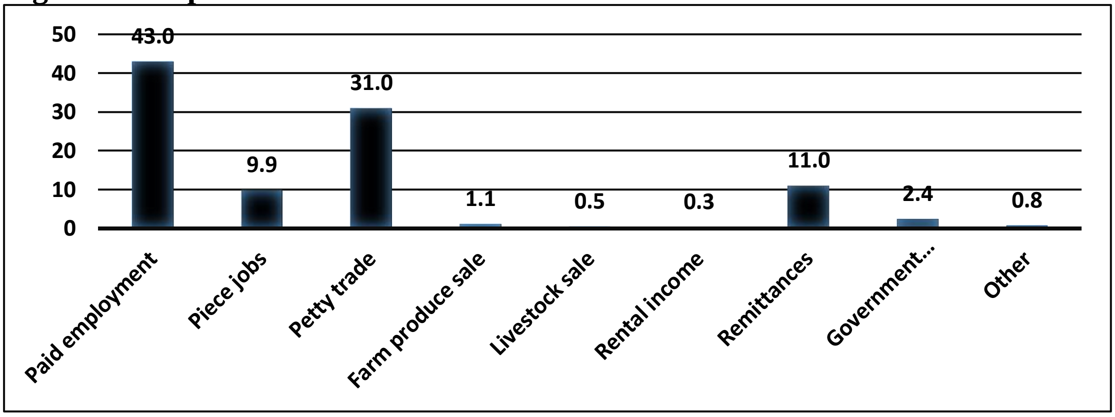
Figure 2: Respondents by Marital Status



Source: Author computed from survey

When respondents were asked about their sources of income, the majority (43%) indicated paid employment as their main source of income, followed by those whose income is from petty trade at 31%, while 0.3% source their income from rentals (Figure 3). Nationally, the majority (48%) source their income from employment; followed by 9.6% with no income sources, pension (8.8%); rental (3.6%); government rations (3.2%), destitute allowance (1.9%); maintenance (1.6%) and student allowances (0.3%). Our sample had the majority of respondents whose main source of income is paid employment, which is in line with the national distribution. However, our sample over represents the respondents who reported that their main income source was derived from petty trade.

Figure 3: Respondents Sources of Income

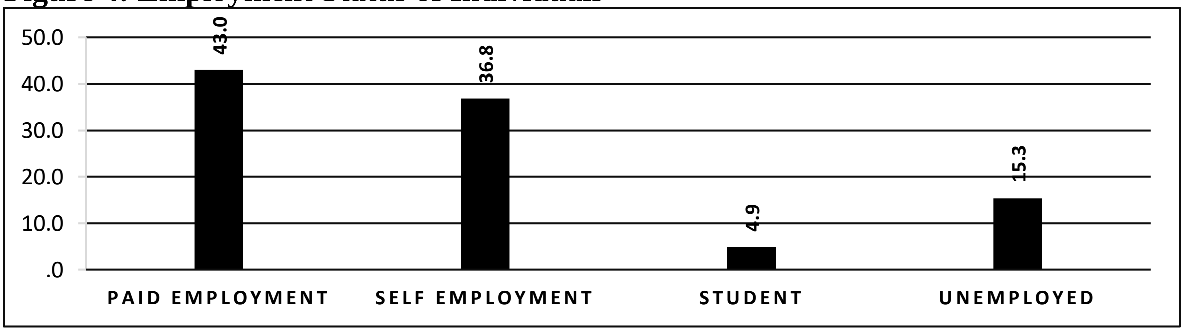


Source: Author computed from survey

3.2.3 Employment Status of the Respondents

Figure 4 below shows the employment status of the respondents. As shown in the figure, the majority (43%) of respondents were in paid employment, while 36% were self-employed. The remainder of the respondents indicated that they were unemployed (15.3%), while 4.9% indicated that they were students. In terms of employment status, the national figures indicate that, the majority (54.4%) of the population above 18 years are employed; followed self-employed (15.2%); unemployed (11.6%); and students (4.5%). The employment status of our sample is similar to the national one.

Figure 4: Employment Status of Individuals

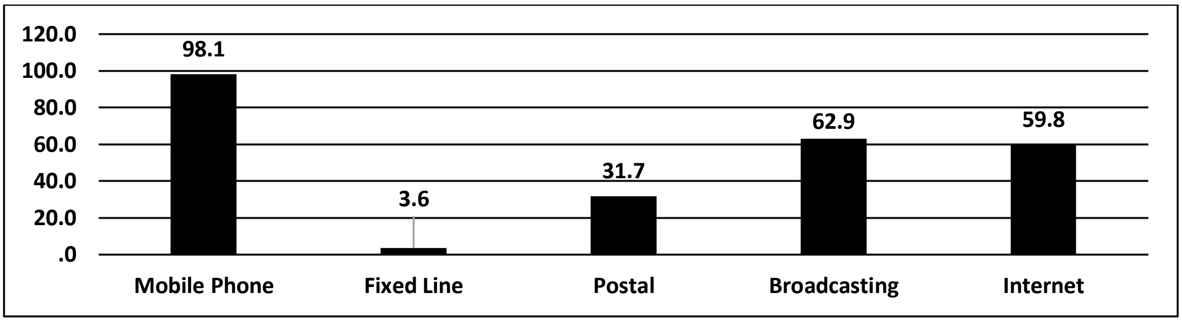


Source: Author computed from survey

3.2.4 Service Sectors

Figure 5 shows the distribution of customers by communication sectors. The majority (98.1%) indicated that they were mobile phone users, followed by 62.9%, 59.8% and 31.7 % of users who used broadcasting, internet and postal services respectively. Fixed line services were used by only 3.6% of respondents.

Figure 5: Distribution of Respondents by Sector

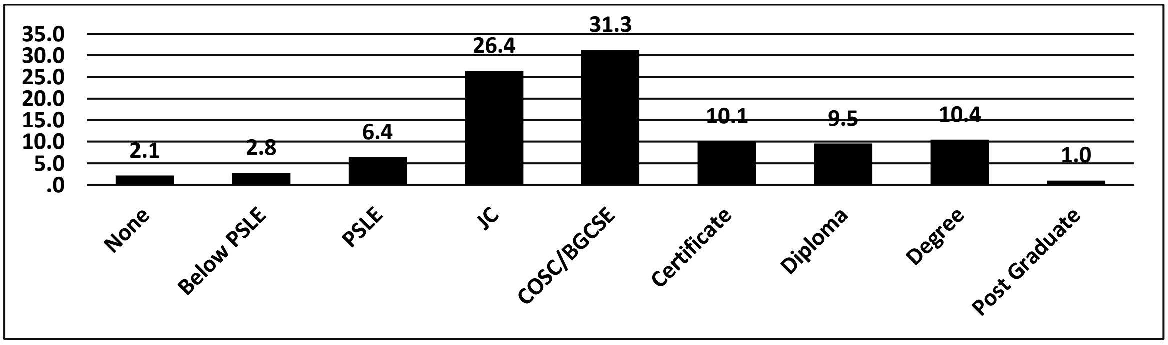


Source: Author computed from survey

3.2.5 Education Status of Respondents

Regarding the educational status of the respondents, the majority (31.3%) had completed Botswana General Certificate of Secondary Education/Cambridge Ordinary School Certificate (BGCSE/COSC), while 26.4% attended school up to Primary School Living Examination (PSLE) level and 10.1% obtained education up to certificate level. Those who attained tertiary education were distributed as; diploma (9.5%), degree (10.4%) and only 1% of respondents attained post graduate level of education. The results are provided in Figure 6 below.

Figure 6: Educational Status of Respondents



Source: Author computed from survey

CHAPTER 4

SERVICE PROVIDERS' SATISFACTION AND INVOLVEMENT ON REGULATION AND POLICY DEVELOPMENT

One of the objectives of this study is to *"probe operators' perception of the regulator in areas of fairness, promptness, neutrality and effectiveness"*. This chapter presents the results from both in-depth interviews and focus group discussions with BOCRA licenced service providers under the different communication sub-sectors in Botswana. The interviews and focus group discussions sought to get the views of the service providers regarding the following: their understanding of the regulator's mandate, their views on BOCRA's mandate execution in the areas of fairness, promptness, neutrality and effectiveness, and regulatory challenges that service providers face and suggestions to address the challenges. The interviews and focus group discussions also sought to determine the participation of service providers in regulation and policy development.

4.1 SERVICE PROVIDERS PERCEPTION OF BOCRA

4.1.1 Telecommunications Service Sector

The telecommunications service sector comprises 4 service providers (Botswana Telecommunication Corporation Limited (BTCL); Botswana Fibre Networks (BOFINET), Mascom Wireless Botswana; and Orange Botswana). The sector was one of the first to be licenced by BOCRA (then Botswana Telecommunications Authority). Figure 7 summarises the telecommunication sector service providers' views regarding the performance of (BOCRA) in areas of fairness, promptness and neutrality as well as their understanding of its mandate. As indicated in the figure, service providers in the telecommunication sector understand the mandate of BOCRA to include; licensing, regulation and the protection of both the service providers and consumers. This understanding is broadly in line with the mandate of BOCRA as stipulated by the CRA Act of 2012.

When asked about BOCRA's performance in executing its mandate in the areas of fairness, promptness, neutrality and effectiveness, the telecommunication service providers complained about the slow turnaround time to respond to their complaints. Thus, the telecommunication sector service providers are of the view that BOCRA has not been effective in dealing with their complaints. In addition, the telecommunication service providers indicated that BOCRA uses poor infrastructure to monitor contention. This leads to poor network services as the service providers overload their equipment without BOCRA's knowledge. The general feeling within the telecommunication sector is that BOCRA is fair and neutral when dealing with the operators, as a result there is cordial relationship between the operators and BOCRA.

In the area of regulation, the telecommunications service providers noted that BOCRA does not regulate retail prices for internet as it does with mobile telephone prices. As a result, some of the service providers feel that the prices charged by internet service providers are too high and hence should be regulated by BOCRA. In response, BOCRA indicated that they do not see any need for regulating the internet retail prices as there are many players in the industry. The expectation is that the market should be competitive unlike in the mobile service sector where there are only three service providers. However, in order to enhance competition BOCRA publishes quarterly reports on the prices charged by different internet service providers as a way of providing price information to users in order for them to make informed choices. The challenge might be that the information does not reach a large number of users.

In order to improve the performance of the telecommunication sector, the service providers suggest that BOCRA should introduce a price ceiling for ISPs. In addition, the service providers suggest that BOCRA should benchmark with other countries to learn best practices in regulating the communications sector in order to improve its operation.

Figure 7: Telecommunications Sectors' Satisfaction with BOCRA Mandate Execution

Undersstanding of BOCRA'S Mandate
- regulate telecommunication sector
- licencing
- consumer and service provider protector

Effectiveness of BOCRA'S Mandate Execution
- cordial relationship; neutral and fair
- effectiveness lacking in the area of monitoring contention ratio
- the turn around time in response and technological relevance is still lagging behind
still more room to improve the relationship

SPs Challenges on the regulatory space
- no pricing for end users of the internet services

Suggestions by the SPs
- include price ceilings for ISPs
- need more capacity and to benchmark from other countries

Source: Author constructed

4.1.2 Broadcasting Service Sector

The CRA Act mandates BOCRA to regulate all broadcasting; subscription management services and re-broadcasting activities, save for the state/public broadcasting. The broadcasters include radio and television stations. As shown in Figure 8, it is clear that the broadcasting service providers fairly understand the regulator's mandate in the broadcasting sector as "*to regulate, ensure service providers produce quality content as well as to prevent others from taking advantage of the broadcasting service platform*." The other mandate is to handle complaints and queries from broadcasters as well as customers.

In terms of the effectiveness, promptness and fairness of BOCRA in executing its mandate, the broadcasters pointed out that the regulator is slow in responding to their requests and complaints, and in some cases, the regulator does not respond to their complaints at all. The service providers indicated that in some cases the regulator will mention the queries received more than once in its quarterly reports without necessarily addressing them.

Regarding the complaints handling procedures, the broadcasters are familiar with the procedures as they indicated that they knew who to contact in case they wished to make a request or complaint. In addition, the broadcasters indicated that they interact with the regulator on regular basis through the Broadcasting Officer. Regarding fairness and neutrality, the broadcasters are of the view that BOCRA treats them equally and hence was fair to them.

In the area of regulation, the broadcasters felt that the fact that the CRA Act does not have provision for BOCRA to licence and hence regulate the public broadcasters was unfair to them. This is so because the public broadcasters are subsidised by Government The broadcasters decried the fact that they have to compete with unregulated public broadcasters which according to them is unfair. In addition, having unregulated broadcasters goes against the objective of ensuring uniform performance standards across all the service sectors. The exclusion of the public broadcasters from regulation also leaves a huge gap as the public broadcasters, both radio and television have the largest audiences.

Another challenge faced by the broadcasters in the area of regulation is the restriction on political party advertising, which they argue limits their advertising market. In addition, the broadcasters decry the local content regulations which they argue limit them to target their audiences who may not be interested in local content, such as the youth.

In order to improve regulation and bring level playing field in the broadcasting sector, the private broadcasters are of the view that BOCRA should be given the mandate to regulate all the broadcasters (public and private) as this will greatly improve competition in the broadcasting industry. In addition, this will also ensure uniform standards across the broadcasting sector.

The broadcasters suggested that in order to improve the operations of the broadcasting sector, there is need for the regulator to facilitate the inclusion of TV channels in other providers' decoder's such as Multichoice. According to the broadcasters, only DSTV decoder owned by Multichoice includes BTV channel, this in their view is unfair. The other channels have to negotiate for themselves with the decoder owner and feel that BOCRA should facilitate the negotiations. Additionally, the broadcasters feel that BOCRA should be proactive on request for regulation of the public broadcasters.

Figure 8: Broadcaster's Satisfaction with BOCRA's Mandate Execution

Regulator's mandate understanding	• regulate quality and content broadcasted • ensure fair competition within the broadcasting space • assist in compliance of regulatory frameworks
Effectiveness of regulator on mandate execution	• cordial relation • neutral among broadcasters • moderate responsiveness to requests, queries and complaints
SPs Challenges on the regulatory space	• unregulated public broadcasters who play in the same market - unfair competition • restriction on the party political advertising- leading to loss in market • local content play requirement
Suggestions by the SPs	• BOCRA should faciliate inclusion of TV channels in other providers decorders such as Multichoice • BOCRA should also regulate the public broadcasters as they compete with private broacasters • Uninversal Access Fund (UAF) should include digital migration (both TV and radio)

4.1.3 Internet Service Sector

The preamble of the CRA Act 2012 suggests that BOCRA is responsible for the regulation of the communications sector in Botswana, comprising among others the internet and information and communications technologies (ICTs). Figure 9 summarises the views of internet service providers towards the regulator and the execution of its mandate. As indicated in the figure, ISPs understand the mandate of BOCRA as standardisation of services provided by operators as well as ensuring competition by regulating prices. In addition, the ISPs understand BOCRA's mandate to include handling of complaints and dispute resolutions.

Figure 9: Perception of Internet Service Providers

Regulator's mandate understanding	Effectiveness of BOCRA on mandate execution	Challenges on the regulatory space	Suggestions for improvement
• standardization of internet & ICT services provided • ensure competition and regulate pricing • complaints & querries resolution	• skewed relation • biased and unfair attetion to ISP growth vs PTOs • minimal interaction with the regulator • poor responsiveness to requests, queries and complaints	• unfair competition of PTOs that wholesale and retail • no clear guidelines on the type approval licence requirements • minimal infrastructure sharing • poor information dissermination	• need to assit other PTOs to wholesale to ensure competition • foster infrastructure sharing to improve quality of service • need to engage other institutions to best work on the type approval processing

When asked about BOCRA's effectiveness in its mandate execution, the ISPs indicated that they were not satisfied with the responsiveness of BOCRA to enquiries, application for licences and the process of approval. They decried that there was no guaranteed response to their enquiries. In addition, the regulator is perceived to be unfair in its internet service provision as more attention is given to the public telecommunication operators (PTOs) at the expense of private operators.

The ISPs indicated that their relationship with BOCRA was not cordial as they felt that communication channels were poor as it was not clear who the focal point person/office for the internet sector at BOCRA was. For instance, there was lack of information on the universal access fund application requirements. Most internet service providers indicated that they were not aware of the escalation process in cases of no responses. In addition, the ISPs indicated that there was no defined application handling time. One of the main challenges that was mentioned by the ISPs was that there was limited sharing of infrastructure in the sector, despite initiatives by BOCRA to promote this.

In order to address these challenges, the ISPs made the following suggestions:

- BOCRA should licence other PTOs so that they provide wholesaling of internet in order to increase competition in the wholesaling of internet as currently only one PTO is licenced to do this. However, BOCRA indicated that there are no regulations preventing other providers from wholesaling of internet services as well as retailing.
- There must be full implementation of the shared infrastructure guidelines to assist in market penetration as well as avoid duplication of infrastructure. Example of infrastructure that could easily be shared include towers. This was particularly mentioned by smaller service providers who felt that they are yet to benefit from the shared infrastructure guidelines.
- Engagement of other stakeholders such as Botswana Bureau of Standards (BOBS) to assist in Type Approval Agenda for new equipment. This could perhaps include a joint

laboratory which will minimise outsourcing of technical assistance. BOCRA should think of offloading this mandate to BOBS as the latter sets standards.
- In order to speed up approval of telecommunications equipment, BOCRA should enforce approval of a product model once through the use of data base that will show products that have been licenced and adopt available automating technology for business to be efficient.
- The regulator should have a database or information on their website (an interactive map) locating service providers and infrastructure coverage.
- The complaints resolution procedure should be clarified to the ISPs.

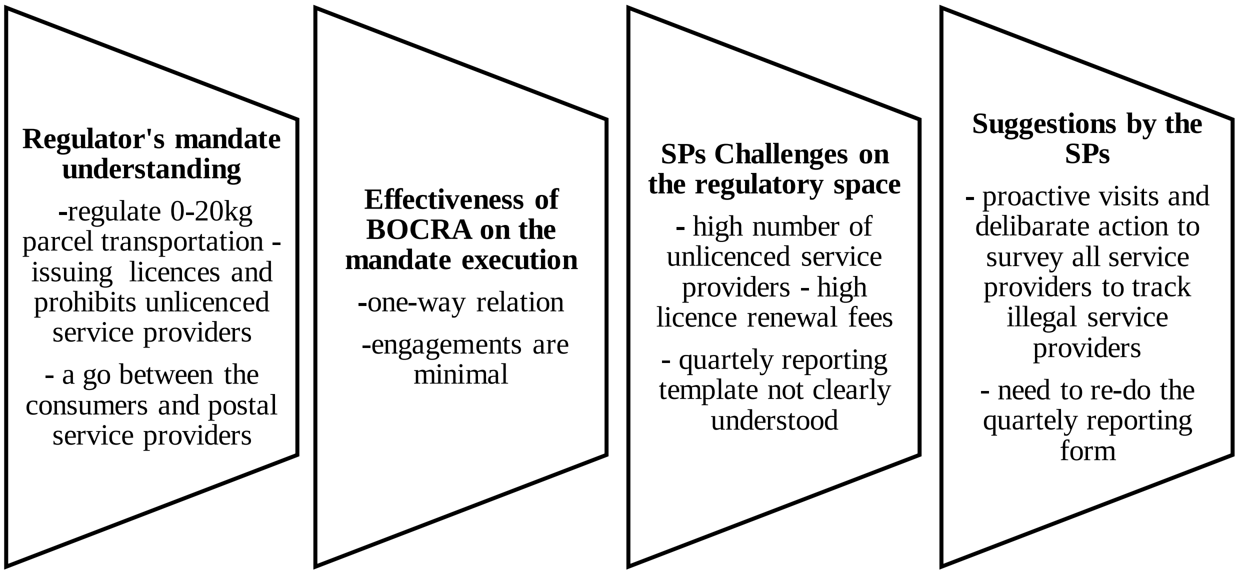
4.1.4 Postal and Courier Service Sector

The postal and courier service sector comprises of one postal service provider and a number of courier service providers. The newly revised CRA Act provide for the regulation of the postal services sector and its supervision by BOCRA. The CRA Act prohibits any person from providing postal services without a valid licence issued by BOCRA. The regulator is also mandated to ensure that there is provision of safe, reliable, efficient and affordable postal services throughout Botswana. The postal service provider understands BOCRA's mandate to be monitoring, and evaluation of the quality, pricing and handling of complaints within the postal service market. The couriering service providers indicated they understand BOCRA's mandate to be only service operation and licensing of parcels (less than 20 Kgs). Thus, the courier service providers have limited knowledge of BOCRA's mandate and the reason for this might be due to the fact that regulation of the sector by BOCRA is knew.

The postal service providers feel their relationship with the BOCRA to be cordial, while majority of the interviewed courier service providers feel that the relationship is one-sided and very minimal.

The courier service providers indicated that they are not aware of both who the focal person at the BOCRA is and the escalation process for enquiries and queries/complaints. Thus the postal service providers are of the view that BOCRA has been less effective in fulfilment of its mandate.

Figure 10: Perception of Postal &Courier Service Providers



With regard to the regulatory environment in the courier services sector, the service providers indicated that the presence of the regulator is not felt and as such the industry seems to operate as if it is not regulated. The courier service providers are of the view that the sector still experiences a high number of unlicensed and illegal service providers. This leads to unfair competition in the market as the unlicensed service providers do not pay fees. In order to improve regulation in the sector, the service providers propose that the regulator carry out a detailed market check exercise to identify unlicensed and illegal service providers and take corrective action so that fair competition is restored in the market.

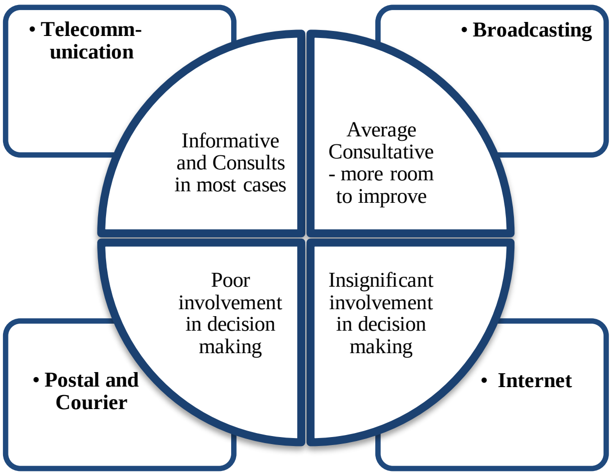
The service providers also suggested that the regulator engage both the public and private procurement bodies to enforce provision of postal licence as part of the requirements during public procurement tendering process. In order to improve public awareness of licenced service providers, the list of licenced service providers provided to the public through media such as website posting, should also include prices charged by different service providers as is done with the ISPs.

The service providers also noted that in order to provide effective quality service in parcel transportation, time is critical. Therefore, the proposed suggestion is for the regulator to assist in advocating for the exemption of speed limit for couriering vehicles from the 80KM/H with the relevant institutions.

4.2 SERVICE PROVIDERS' PARTICIPATION ON THE DEVELOPMENT OF REGULATIONS AND POLICIES

Service providers in the telecommunication industry were asked to indicate the level of participation in decision making and regulatory policy development in their respective sectors. The results of such analysis are presented in Figure 11. As shown in the figure, the telecommunication service sector service providers indicated that they were satisfied with the level of information dissemination by the regulator. Specifically, the sector differentiates information dissemination from the participation in the decision making process and policy development. However, the telecommunication sector service providers are of the feeling that there is still room for improvement in terms of engaging the service providers in making decisions and policy development.

Figure 11: Participation of SPs on the Decision Making and Regulatory Policy Development Process



The broadcasting service providers are not fully satisfied with their involvement in the decision making process and feel that more needs to be done in order to increase their involvement in the decision making and policy formulation process. They noted that the regulator invites them to communication and training seminars. According to them this is positive and has in the past improved their participation in decision making. However, the broadcasters noted that despite their invitations to these workshops and seminars, there are frequent instances where decisions have been taken without their input. They cited instances such as the decisions on special code of conduct on elections broadcasting and the local content percentage air play requirements as example where they felt that they were not fully consulted.

The internet service providers on other hand felt that their involvement in decision making process is weak. Majority of the interviewed service providers noted that they have not received any invitation to workshops or communication *Pitsos* since they were licenced. They suggested that the quarterly reports they submit to the regulator should form the basis on which communication between them and the regulator could start. According to the internet service providers, this will improve their involvement in the decision making process as well as policy development

Lastly the courier service providers were of the view that their involvement in the decision making process was insignificant and poor, whereas the postal service providers view their involvement in the decision making process to be satisfactory.

4.3 SUMMARY

Most service providers understand the mandate of BOCRA as licensing and regulation for the protection of both the service providers and customers. The feeling of most service providers is that their relationship with the BOCRA is cordial, but there is room for improvement. However, some service providers are of the view that their relationship with the regulator is one sided and note that decisions that affect their regulatory environment are often made without their input. The service providers in the telecommunications industry generally believe that BOCRA is fair and neutral in its mandate execution.

In terms of effectiveness of BOCRA on its mandate execution, the service providers decry slow turnaround time to their complaints, as well as license applications. Additionally, service providers complain that it takes a long time for their complaints to be addressed and in some instances their complaints are never addressed.

Most service providers are aware of the complaints handling procedures. However, some (ISPs) stated that they did not know who to contact when they wanted to lodge their complaints.

Within the broadcasting service sector, the major complaint is that of unfair competition with public broadcasters as they are not regulated by BOCRA. This creates unfair competition as the public broadcasters are funded by Government and are likely to be subsidized. In addition, this works against application of equal standards across all industry players.

The regulatory environment in the postal services sector is viewed to be weak, leading to unlicensed service providers in the market. There is therefore a need by BOCRA to intensify its efforts and clear unlicensed service providers from the market in order to enhance competition.

CHAPTER 5

CONSUMER SATISFACTION AND USAGE OF BOCRA REGULATED SERVICES

This chapter presents the results of consumer satisfaction and usage of BOCRA regulated services obtained from a survey of 1,000 customers as indicated in Chapter 2. The satisfaction level was measured using a Linkert type scale with the following description: 1 = very dissatisfied; 2 = dissatisfied; 3= neutral; 4 = satisfied; and 5 = very satisfied. The satisfaction level and usage of services were determined in following sector: mobile, fixed telephone line, postal and courier, broadcasting and internet services sectors.

One of the objective of the study is to probe consumer perceptions on the services provided by in terms of quality, range and efficiency of the services. This chapter presents the level of consumer satisfaction and usage of all BOCRA regulated services. The results are obtained from a survey of a sample 1000 customers as indicated in Chapter 2. The profile of the sampled respondents has been discussed in Chapter 3.

5.1 MOBILE SERVICE SECTOR

This section presents the customer usage and satisfaction level in the mobile services sector. The sector comprises of three mobile service providers, namely; Mascom, Orange and BTC Mobile which is part of Botswana Telecommunications Corporation Limited (BTCL).

5.1.1 Mobile Network Users and Market Shares

Respondents were asked to specify whether they used mobile services and to state which mobile service providers they used. The results of the survey show that 981 out of 1000 (98%) respondents use mobile services in Botswana. Table 5 shows the mobile service providers used by the respondents. As indicated in the table, of the 981 respondents who indicated that they used mobile phone, 83.9% use Mascom network, 66.4% use orange network, while only 36.1% use BTC Mobile network. It should be noted that the figures exceed 100% as some customers use more than one mobile network.

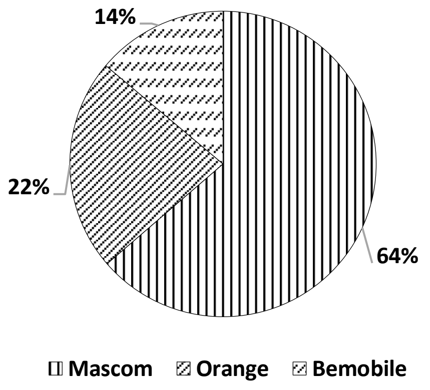
Table 5: Respondents Use of Mobile Services by Service Provider

Mobile Service Provider	Number of Respondents	Share of mobile users (%) in 2018
Mascom	824	83.9
Orange	651	66.4
BTC Mobile	354	36.1

Source: Author computed from survey

Furthermore, the respondents were asked to specify their main mobile service provider, since some respondents use more than 1 network service provider. The results presented in Figure 12 show that Mascom is the network that is mostly (64%) by respondents as the main network. This is followed by with 22% and BTC Mobile with 14%.

Figure 12: Respondents Main Service Provider



Source: Author computed from survey

The location in which a customer resides can play a vital role on his/her choice of a mobile network service provider. Table 6 shows the choice of mobile service providers by locality. From the table, it is clear that Mascom network dominates in all the locations, except Ghanzi, D'kar and Tsabong where BTC Mobile is the leading network provider. The dominance of BTC Mobile in remote areas (Ghanzi, D'kar and Tsabong) might be partly explained by the fact that it has a wider coverage than the other mobile providers.

Table 6: Main Mobile Network Providers by Locality (%)

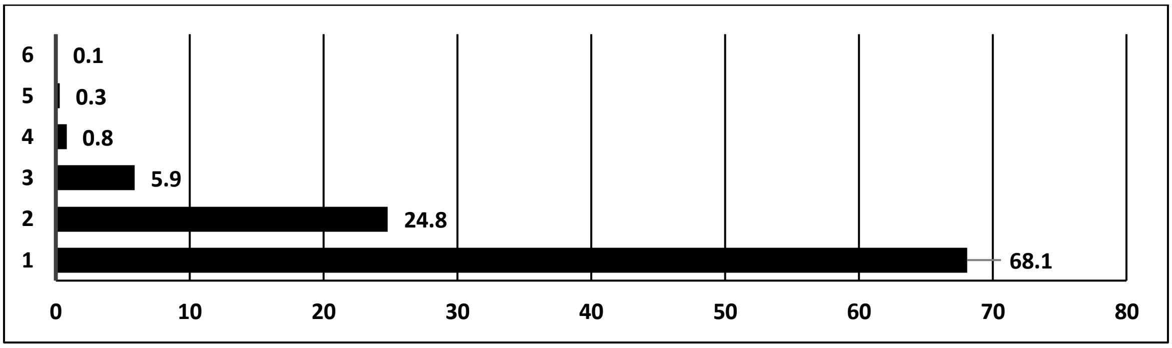
Locality	Mascom	Orange	BTC Mobile	Total
Gaborone	63.3	28.1	8.6	100
Francistown	81.5	14.4	4.1	100
Jwaneng	42.9	31.4	25.7	100
Palapye	91.4	6.9	1.7	100
Serowe	61.3	37.5	1.2	100
Letlhakane	75.6	13.3	11.1	100
Bobonong	80	12.5	7.5	100
Kasane	60	13.3	26.7	100
Lesoma	75	17.9	7.1	100
Maun	52.8	30.3	16.9	100
Ghanzi	30	20	50	100
D'kar	0	27.6	72.4	100
Tsabong	26.7	16.7	56.6	100
Goodhope	56.6	26.7	16.7	100
Masunga	93.3	6.7	0	100
Total	**63.7**	**22.5**	**13.8**	**100**

Source: Author computed from survey

5.1.2 Ownership of Sim Cards and Mobile Phones

Respondents were asked to indicate the number of mobile phone handsets they owned as well as the number of sim cards owned. Figure 11 shows that 681 out of 1,000 (68.1%) respondents own one mobile phone handset, while 39,1% own more than 1 handset. A significant proportion (24.8%) own two mobile handsets, while 5%, 0.8% and 0.3% own, three, four and five handsets respectively.

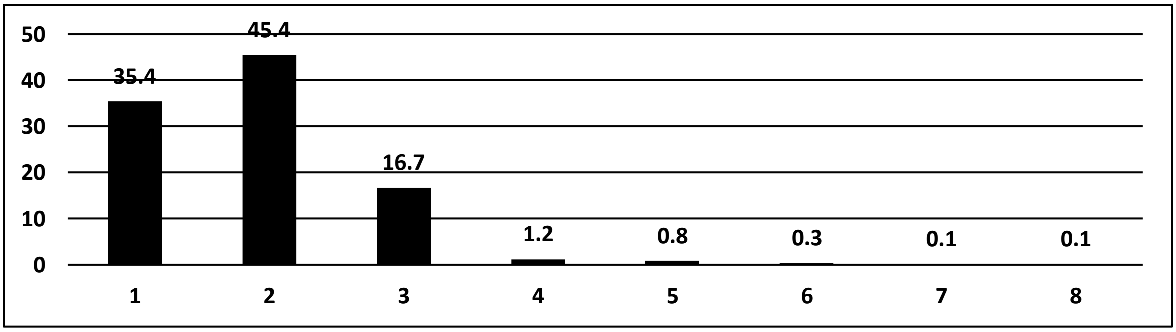
Figure 11: Ownership of Mobile Handsets



Source: Author computed from survey

As shown in Figure 12, in terms of ownership of sim cards, most (45.4%) customers own one, followed by those who own two at 35.4%. Respondents with more than one sim card were further asked to state the reasons for having more than one sim card. Most (37%) of the respondents stated that the main reason was to obtain benefits from the different promotions and freebies. The other reasons stated by 32.2% and 18.2% of customers were to have an additional line for business and/or personal use as well as have a more effective network (coverage) respectively.

Figure 12: Ownership of Sim Cards



Source: Author computed from survey

5.1.3 Change of Mobile Service Provider

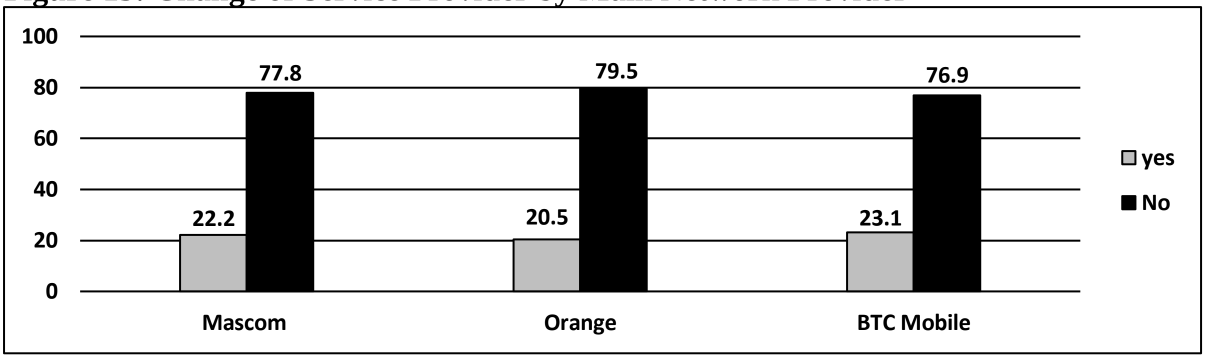
A few questions were posed to the respondents to find out whether they had changed their sim cards before and the reasons for doing so. The results show that 49% of the respondents had changed their sim cards in the past, while 49% had not. The main reasons for changing network providers were to go for a more effective network (26.6%) and to enjoy a variety of services such as mobile money services (24.9%). Those who did not change their sim cards cited the following reasons; they were happy with services offered by current service provider (51.2%) and they not want to lose their current phone numbers (35.2%).

Customers were further asked on whether they would consider changing their sim cards in future and the reasons for this. The majority (78%) indicated that they would not change their network providers and their reasons were that they were happy with the current service provider (44.5%) and they did not want to lose their phone numbers (44.2%). When asked to state reasons that would make them change their network provider, most (40.4%) indicated that they would change because of cheaper prices for calls, SMS and data bundles, while 27.6% indicated that they would change to a network which is more effective and has wider coverage.

5.1.4 Main Mobile Service Provider and Change of Service Provider

A further analysis was done to determine the proportion of customers that would change their network providers in the future given their main current network providers. As shown in Figure 13, 23.1% of those that had indicated BTC Mobile as their main network provider would change to a different service provider in the future. About 22.2% and 20.5% of Mascom and Orange users respectively, indicated that they would change their service provider in the future.

Figure 13: Change of Service Provider by Main Network Provider

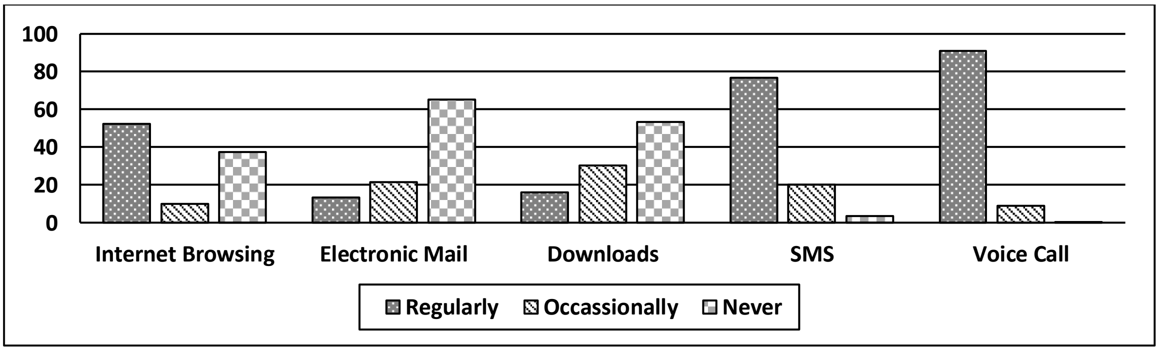


Source: Author computed from survey

5.1.5 Mobile Services Utilization and Customer Satisfaction

The objective here is to find out the respondent's consumption of each service offered by their mobile phone handsets, as mobile phone handsets have multiple uses. The respondents were asked the frequency (regularly, occasionally and never) at which they use their mobile handsets on a variety offered such as was internet browsing, electronic mail, downloads, SMS and voice calls. As shown in Figure 14, an overwhelming majority (90.9%) of users regularly use mobile phones for voice calls, while 76.6% and 52.5% regularly use their mobile phones for SMS and internet browsing respectively. Electronic mail and downloading (games, ringtones, music etc.) are the least used services on the mobile phones, with 63.3% mobile phone owners indicating that they never use electronic mail, while 53.5% indicated that they never download.

Figure 14: Frequency of Mobile Services



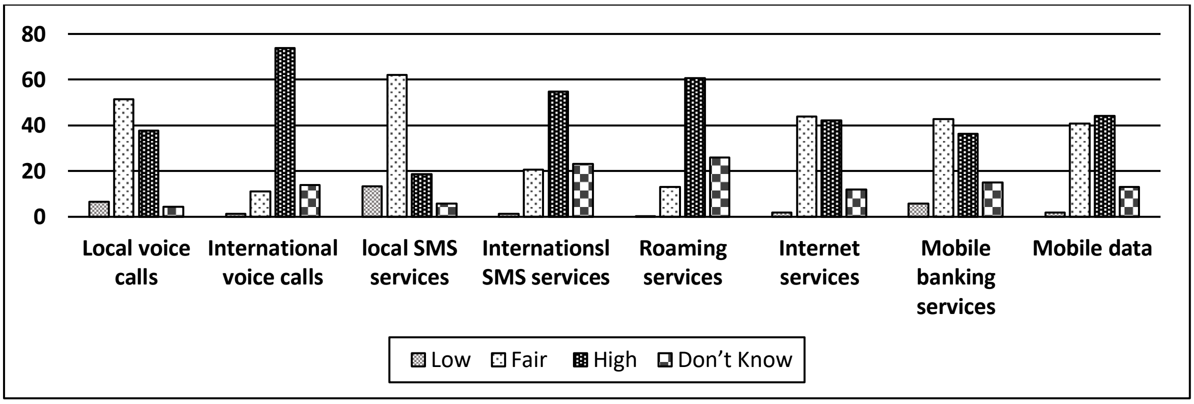
Source: Author computed from survey

A further analysis on the services of internet browsers was done to determine which age group regularly uses internet browsing on their mobile phones. The results show that respondents in the age group of 26-25 years use the service the most (44.1%), followed by 17-25years (39.8%). This shows that the younger the individual, the more likely they are to access internet services using their handsets.

5.1.6 Consumer Satisfaction with Pricing, Quality, Availability of Service and Other Attributes of Mobile Services

Consumers were asked to rate their perception on the prices charged for different services offered by mobile network providers, in terms of whether the prices were low, fair or high. This results of this analysis show that the prices of international calls, international SMS and roaming were considered to be high by more than half of the respondents (Figure 15). The respondents were inconclusive as to whether the prices of the internet, mobile banking and mobile data services were fair or high, with the same proportion (41% and 38%) indicating that the prices were either fair or high. The prices of local call and SMS services were perceived to be fair by the majority (51.4 % and 62.1% respectively) of respondents.

Figure 15: Consumers' Perception on the Prices Charged for Mobile Services



Source: Author computed from survey

When respondents were asked to indicate their level of satisfaction on a number of attributes related to the mobile services, an overwhelming majority (80%) of the respondents indicated that they were either very satisfied or satisfied with the following attributes: confidentiality of customer information (87.2%), availability of helpful information about services (86.8%), quality of customer service (84.9%), value for money (82.9%), and variety of services available to them (80.4%) as indicated in Table 7. About half of the respondents were happy with the ability to make calls without being cut off, while about 41% were satisfied (very satisfied and satisfied) with their network coverage. A significant proportion of respondents indicated that they were either dissatisfied or very dissatisfied with the services provided, with network coverage (27.3%) and ability to make calls without being cut off (25.1%) as the main areas of dissatisfaction.

Table 7: Customer Satisfaction with Mobile Services

Attributes/Level of Satisfaction	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
Network Coverage	3.3	24,0	13.9	40.8	18.0
Ability to make calls without being cut off	1.6	23.5	11.2	48.9	14.8
Choice/Variety of services available to you	0.5	9.0	10.1	61.8	18.6
Quality of customer service from service providers	0.4	7.2	7.6	64.1	20.8
Availability of helpful information about services	0.4	4.3	8.5	66.2	20.6
Confidentiality of customer information	0.8	3.5	8.5	66.2	21.0
Value for money	0.4	8.5	8.3	63.5	19.4

Source: Author Computed from survey

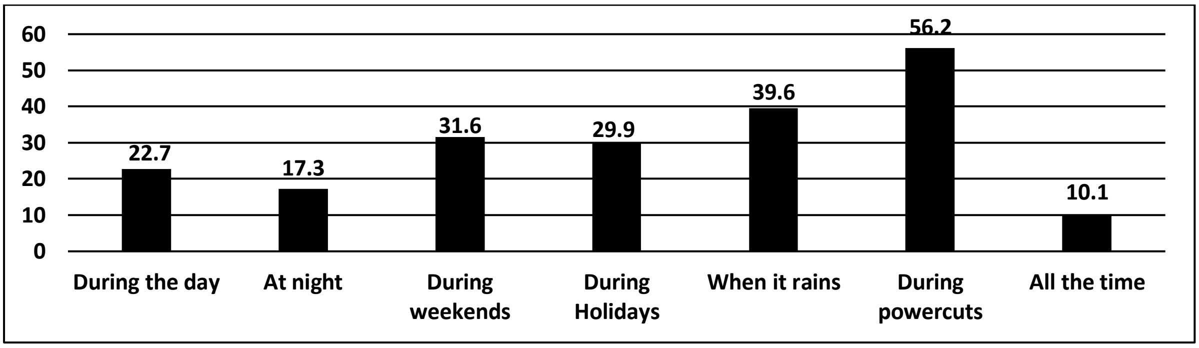
5.1.7 Pricing and Awareness of Mobile Services

Respondents were asked about their awareness of the prices charged by both their own service providers and other mobile service providers. The majority (70.6%) of the respondents indicated that they were aware of the prices charged by their own service providers, while 29.4% indicated that they were not aware. Regarding their awareness of the prices charged by other mobile service providers, a sizeable proportion (44.8%) indicated that they were not aware, while the majority (55.2%) were aware.

5.1.8 Mobile Network Effectiveness

When respondents were asked whether they had experienced any network problem and the times at which problems occurred, the majority (65.2%) of the respondents indicated that they had experienced network problems, while 34.8% of the respondents did not. As shown in Figure 16, the majority (56.2%) of respondents indicated that the network problems mostly occurred during power cuts as well as during rains (39.6%). A sizeable number (31.6%) of respondents and 29.9% indicated that the network connection problems occurred during weekends and holidays respectively. This suggests that the cause of the problem could be congestion. While the majority of consumers indicated that they experienced network problems during power cuts, which is beyond the control of the network providers, a sizeable number also experience problems during rains and weekends which is within the control of the network providers.

Figure 16: Times when Connection Problems Occur



Source: Author computed from survey

5.1.9 Awareness on General Issues in the Mobile Service Sector

When asked whether they were aware that it was an offence to send offensive, indecent, obscene or menacing messages using their mobile phones, an overwhelming majority (91.2%) of respondents indicated that they were aware. Similarly, an overwhelming majority (87.8%) indicated that they were aware that it was an offense to send pornographic material through their mobile phones, while 98.7% were aware that it was an offence to damage, destroy or steal communication equipment. Respondents were also asked whether they knew it was an offence to wilfully interfere with the erection, altercation, maintenance or inspection of any communications equipment and 98.1% indicated they were aware. Similarly, the majority (84.6%) indicated that they were aware of complaints handling procedures. A large proportion (92.3%) indicated that they take their complaints to the service provider. Thus, generally the awareness of the mobile telephone users is high, suggesting that both the regulator and the mobile service providers have done well in sensitising mobile users of legality surrounding the use of their mobile equipment.

5.2 FIXED LINE SECTOR

This section presents the consumer usage and satisfaction of the fixed line services in the communication sector. There is currently only one fixed line service provider, BTCL.

5.2.1 Use of Fixed Line Phone at Home

In terms of usage of fixed line telephony, only 36 out the 1,000 (36%) sampled respondents indicated that they use fixed telephone lines at their homes. These were individuals who are responsible for payment of the fixed telephone line services. A further analysis was undertaken to determine the relationship between location and usage of fixed telephone line service. The results show that of the 36 respondents who use fixed telephone line, most (44%) of them were from Gaborone, followed by Francistown (19%), Bobonong (11%), Goodhope (8%), Ghanzi (5.6%), Tsabong (5.6%), Palapye (2.8%) and Masunga (2.8%). The other localities did not have respondents who used fixed line telephone, especially the rural localities. A plausible explanation for this is that there is lack of infrastructure to support fixed line connections. The large proportion of fixed telephone line users in Gaborone and Francistown can be explained by the fact the two localities had a large sample because of their large population and better infrastructure than other localities. In addition, the localities have more businesses which are more likely to be connected to fixed line telephone services.

When asked as to how long they had owned a fixed line in their respective homes, 78.8% of respondents indicated that they have owned a fixed line for more than 5 years, while 12.1% and 9.1% of the respondents indicated that they have had a fixed telephone line for 1-5 years and less than 1 year respectively. This suggests that there is limited number of new fixed line telephone users as consumers prefer the easily accessible mobile telephone services.

There are two payment methods for fixed line telephone. The customer can use pre-paid or post payment method. Under the pre-paid payment method, the customer pays an agreed amount monthly before using the service, while under post-paid method the user pays for the service after usage and he/she is billed every month and the amount differs according to usage. The majority (72%) of respondents indicated that they use a pre-paid payment system, while the remaining 28% use a post-paid payment system.

An analysis was undertaken to determine whether employment status influences the choice of payment method. The results of this analysis indicate that 31.3% and 30.8% of the employed and self-employed use the post-paid billing system, while the none of the unemployed use the post-paid billing system (Table 7). However, it is apparent that there is preference of the pre-paid payment method, even among the employed (paid employment and self-employment) as the majority (69.2% of paid employees and 68.8% of self-employed) of them use pre-paid payment method.

Table 8: Billing Type by Employment Status

Source: Author computed from survey

5.2.2 Customer Satisfaction with Fixed Line Telephone Services

Respondents were asked to state their level of satisfaction regarding several services provided by the fixed-line service provider. As shown in Table 9, generally customers are satisfied with the services.

Installation and relocation time: A majority (68.8%) of fixed line subscribers indicated that they were either very satisfied or satisfied with the time taken to install their fixed line, 5.3% were very dissatisfied, while 26.3% were neutral. A majority (53.9%) of respondents indicated that they were satisfied and very satisfied with the time the service provider took to reconnect their landlines after they relocated (relocation time).

Service charges and pricing information: Fixed line subscribers were asked to rate their level of satisfaction in relation to prices they were charged for the fixed line services and their knowledge of the service provider's pricing information. As shown in Table 9, 36.4% were satisfied, 13.6% were very satisfied, while 31.8% were neutral about charges and 18.1% were dissatisfied. In terms of pricing information, 57.1% were satisfied (very satisfied and satisfied) with the information on pricing by the service provider.

Table 9: Rate of Satisfaction with Fixed Line Telephone Services

Service/Level of Satisfaction	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
Installation time	5.3	0	26.3	47.4	21.1
Relocation Time	0	7.7	38.5	38.5	15.4
Call centre services	3.6	10.7	21.4	46.4	17.9
Service Charges	4.5	13.6	31.8	36.4	13.6
Pricing Information	0	14.3	28.6	38.1	19
Disconnection of services for non-payment	5.3	10.5	36.8	31.6	15.8
Cancellation of contract process	0	13.3	26.7	33.3	26.7
Network Quality	3.1	15.6	6.3	65.6	9.4
Network Reliability	3.1	9.4	9.4	71.9	6.3
General customer service	3.2	6.5	12.9	64.5	12.9
Ease of Fault reporting	3.3	13.3	13.3	56.7	13.3
Fault Repair	3.7	14.8	18.5	48.1	14.8
Handling of customer complaints	3.4	6.9	20.7	55.2	13.8
Value of money	3.2	6.5	12.9	64.5	12.9

Source: Author computed from survey

Disconnection of Services for Non-Payment: In cases where the respondents could not pay for their fixed line services and had to be disconnected, the survey sought to find out how satisfied the respondents were with the process of disconnection. Results show that in total 47.7% of respondents were satisfied (very satisfied and satisfied) with the process, 36.8% were neutral and 15.8% were dissatisfied (dissatisfied and very dissatisfied).

Cancellation of Contract Process: Respondents were also asked to rate their satisfaction in a situation where they cancelled a contract, 60% of respondents were either satisfied or very satisfied with the cancellation process.

Network Quality and Reliability: A large proportion (75%) of fixed line subscribers indicated they were either very satisfied or satisfied with the quality of network offered by the service provider, while only 18.7% were either very dissatisfied or dissatisfied. Similarly, the majority (78.2%) of customers were either very satisfied or satisfied with network reliability, while only 12.5% were dissatisfied (dissatisfied or very dissatisfied).

General Customer Service and Call Centre Services: When respondents were asked to rate the general customer service of the fixed line service provider, 64.3% indicated that were either very satisfied or satisfied, while only 14.3% indicated they were either very dissatisfied or dissatisfied. Results show that 77.4% of respondents were either very satisfied or satisfied with the call centre services, while 9.7% were not satisfied.

Ease of Fault Reporting and Repairing: Table 9 shows that the majority (70%) of customers indicated they were either satisfied or very satisfied with the ease of fault reporting. Similarly, 62.9% of respondents indicated that they were either satisfied or very satisfied with fault repairing.

Handling of Customer Complaints: Customers were asked to indicate their level of satisfaction regarding the way the service provider handles their complaints. As shown in Table 9, 69% of respondents were either satisfied or very satisfied with complaints handling procedures by the service provider.

Value for Money: Results of the survey indicate that 77.1% (satisfied or very satisfied) of respondents felt that they were getting value for their money, and only 9.7% felt they were not getting value for their money from the services offered by BTCL.

5.2.3 Satisfaction with bills

Respondents were asked to state the extent to which they were satisfied with bills, queries/complaints, customer service and security of information by the service provider. As shown in Table 10, the majority of respondents were generally satisfied with these services offered by the fixed line service provider.

An overwhelming majority (81.8%) of respondents were either very satisfied or satisfied with the readability and clarity of their bills. In addition, the majority of respondents were either very satisfied or satisfied with the accuracy of the bills (75%); timely receipt of bills (80%), and that bills only charge for services used (81.8%). In terms of complaints/queries handling procedures, the majority (78.6%) indicated that they were either very satisfied or satisfied with the way BTCL resolves their complaints. An overwhelming majority (90.3%) indicated they were either very satisfied or satisfied with recommending the service provider to friends and family. The majority (81.5%) of respondents were either very satisfied or satisfied with the way the service provider protected their information. A large proportion (80.6%) of the respondents also felt that they got relevant customer service from their service provider.

Table 10: Satisfaction with Bills, Complaints, Customer Service and Security of Information

Service/Level of satisfaction	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
My bills are easy to read and understand	4.5	0	13.6	59.1	22.7
My bill is always accurate	0	5	20	50	25
I always receive my bill on time	0	5	15	60	20
My bill only charges me for the service I use	0	4.5	13.6	59.1	22.7
My query/complaint is resolved to my satisfaction	3.6	7.1	10.7	60.7	17.9
I will recommend my fixed line service provider to a friend or relative	3.2	3.2	3.2	74.2	16.1
My information is protected to my operator	3.7	0	14.8	66.7	14.8
I always get relevant customer service from my operator	0	3.2	16.1	67.7	12.9

Source: Author computed from survey

5.2.4 Respondents Awareness

Respondents were asked whether they were aware of complaints handling procedures of as well as how they address a complaint if they have one and the results of such analysis are presented in Table 11. The results indicate that 75% of the fixed line users were aware of complaints handling procedures, while 25% were not aware. Results also show that when a consumer has a complaint, the majority (93.8%) complain to the service provider through the customer care line, while only 6.2% did nothing about the complaint.

The survey also sought to find out whether fixed line users were aware that it was an offence to wilfully interfere with the erection, altercation, maintenance and inspection of communication equipment as well as damaging of communication equipment. All the fixed-line respondents were aware that damage of communication equipment was an offence. However, 6% of the respondents were not aware that it is an offence to wilfully interfere with the erection, altercation, maintenance and inspection of communication equipment.

A further analysis was done to determine the relationship between age and awareness of the complaints handling procedures and offences. The results show that all the respondents indicated that they were aware that it was an offence to damage communication equipment irrespective of their age. Awareness of the complaints handling procedures and interference with communication equipment tends to increase with age, with the young being less aware as shown in Table 11.

Table 11: Awareness of Consumers by Age

Age group/Attributes	Complaints Handling Procedure (%)	Interference of Communication Equipment (%)	Damage of Communication Equipment (%)
17 - 25	66.7	66.7	100
26 - 35	75	100	100
36 - 45	70	90	100
46 - 55	83.3	100	100
56 - 79	80	100	100

Source: Author computed from survey

5.3 POSTAL SERVICES SECTOR

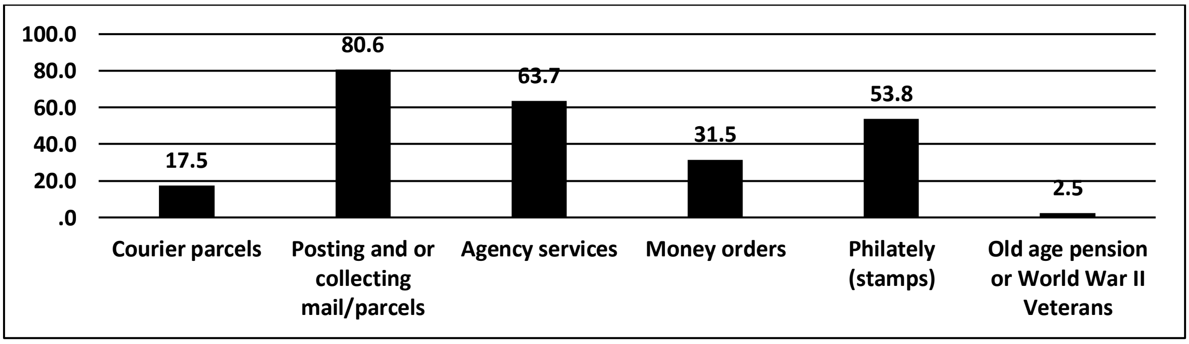
The postal service sector comprises of the Botswana Post Services and several courier service providers. This section analyses the respondents' usage and satisfaction on the postal services. The postal service sector is made up of a variety of services which are offered to different users based on their level of preference or need. These services include the traditional post office services such as traditional mail, parcel services, philatelic products, express mail, and money transfers. Moreover, the services of the post office are extended to non-traditional postal services, which include Mobile Money, Botswana Meat Commission (BMC) cheques, Botswana Power Corporation (BPC) Power credit, Department of Transport Road Services (DTRS) transport levy etc. as well as mobile post services. Other services provided are the payment of Old Age Pension (OAP), World War Veterans (WWV) and registered destitute on behalf of the Department of Social Protection (DSP) in the Ministry of Local Government and Rural Development (MLG&RD).

A total of 317 out of 1,000 (32%) respondents indicated that they used postal services, indicating that there were low use postal services. The respondents were further asked to indicate which postal services they used, and 85% indicated that they used post office services, followed by 66.6% of those using postal agencies and only 1.3% used mobile posts.

5.3.1 Services Accessed at the Post Office

Figure 17 depicts the distribution of post office users by services they seek at the post office. The results show that of the 6 services that the respondents seek at the post office; posting or collection of parcels/mails is the most accessed service (80.6%), followed by agency services (63.7%), philately/stamps (53.8%) and money orders (31.5%). The least postal services accessed are OAP/WWII, (2.5%), followed by courier services (17.5%).

Figure 17: Postal Services Accessed at the Post Office

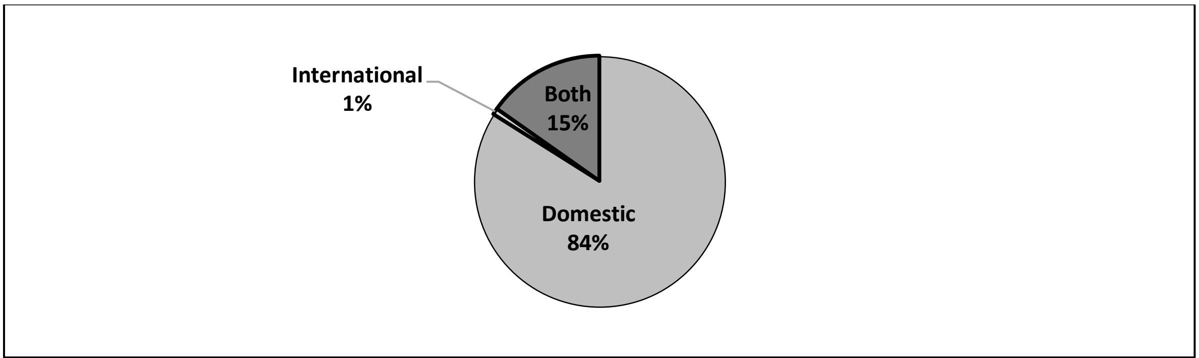


Source: Author computed from survey

5.3.2 Origin of Mail Received

From the discussion above, it is evident that posting or collection of parcels/mails is the most utilised service. Respondents were asked about the origin of the mail they receive and out of the 242 respondents who indicated that they use postal services for posting or collection of parcels/mails, 84% indicated that they received domestic mail compared to only 1% who received international mail. The remaining 15% indicated that they received both the domestic and international mail as shown in Figure 18.

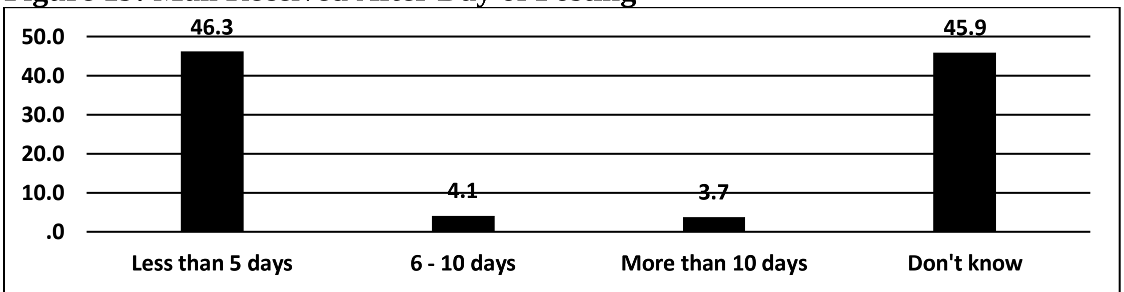
Figure 18: Type of Mail Received



Source: Author computed from survey

When asked on the length of time it took for them to receive their mail after the date of posting, 46.3% of the respondents indicated that it took less than 5 days, while 4.1% indicated that it took between 6 and 10 days and 3.7% reported that it took more than 10 days to receive their mail. The remaining 45.9% indicated that they did not know (Figure 19).

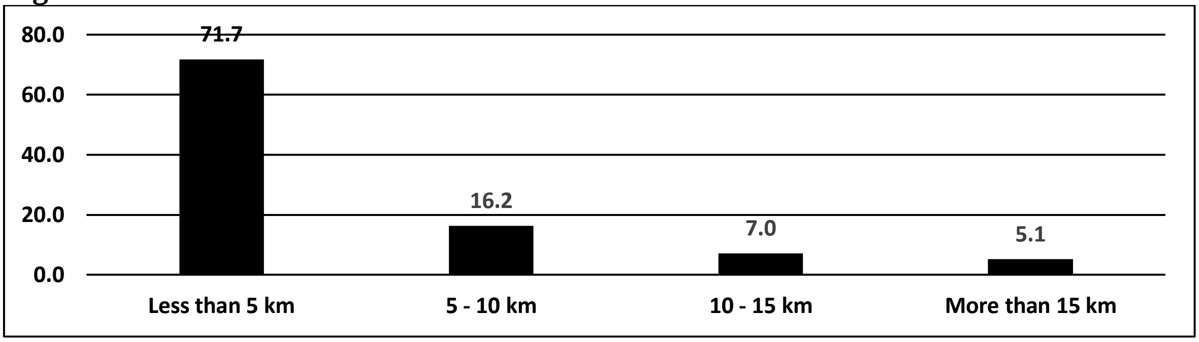
Figure 19: Mail Received After Day of Posting



Source: Author computed from survey

The respondents were further asked the distance they travel in order to access postal services. The majority (71.7%) indicated that they travelled for less than 5 kilo meters, while 16.2% travelled between 5 and 10 kilometres. Others (7%) indicated that they travelled between 10 and 15 kilo meters, 5.1% indicated that is how far they travelled more than 15 kilometres to the post office.

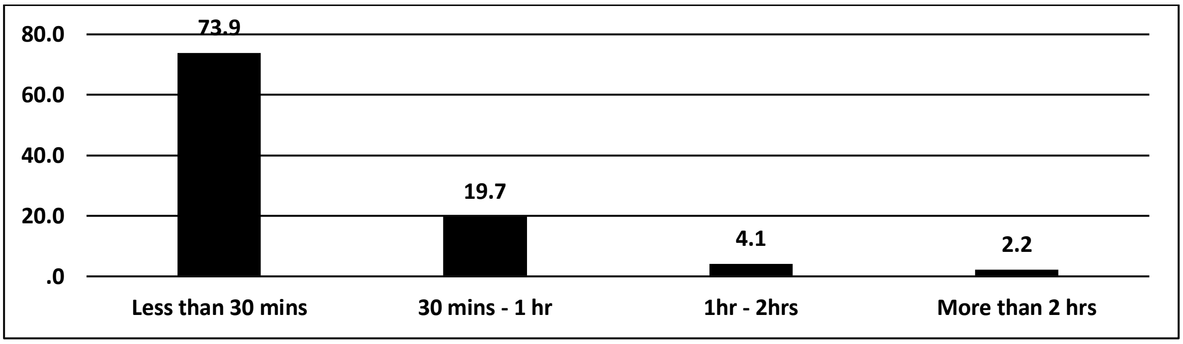
Figure 20: Distance Travelled to the Nearest Postal Service



Source: Author computed from survey

Respondents were asked the length of time they usually take queueing at the post office for a service. The results show that most of the respondents do not wait long in order to access a service at the post office, with 73.9% queueing for less than 30 minutes, while 19.7% queue for about 30 minutes to an hour, 4.1% queue for between 1-2 hours, while 2.2% queue for more than 2 hours. (Figure 21)

Figure 21: Time Spent Queuing at the Post office for a Service



Source: Author computed from survey

5.3.3 Satisfaction with Postal Services

Customers were asked to rate their satisfaction level on the postal services with regard to; price, speed, customer service, confidentiality and safety. The results of this analysis are presented in Table 12, which shows that 84.1% were either very satisfied or satisfied with customer service, while 77.2% were either very satisfied or satisfied with the speed, while 43.8% of the respondents are either very satisfied or satisfied with the price of stamps. The analysis also shows that respondents are happy (very satisfied or satisfied) with the customer service they receive when purchasing stamps, even though a sizable proportion (42%) are dissatisfied (very dissatisfied and dissatisfied) with the price they pay for stamps.

Table 12: Level of Satisfaction with Stamps (Percentage)

Attribute/Level of satisfaction	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied	Total
Price	14.2	27.8	14.2	34.9	8.9	100
Customer Service	0.6	4.1	11.2	66.5	17.6	100
Speed	0.6	9.9	12.3	62.6	14.6	100

Source: Author computed from survey

Table 13 shows the customers' level of satisfaction with customer service, confidentiality, safety/security, speed and price with respect to money orders. With regard to the level of satisfaction for services provided for money orders in terms of price, customer service, speed, confidentiality and safety, out of 99 respondents who indicated that they use money orders, 49.5% indicated that they were either very satisfied or satisfied with the price, while 37.4% were either dissatisfied or very dissatisfied with the price of money orders, and 13.1% were neutral. With respect to the customer service, 86.8% were either very satisfied or satisfied, while only 4% were dissatisfied. The results further indicate that customers were either very satisfied and satisfied with the speed (78.8%), confidentiality (88.9%) and safety or security of money orders (84.9%).

Table 13: Level of Satisfaction with Money Orders

Attribute/Level of Satisfaction	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied	Total
Customer Service	0	5.1	8.1	63.6	23.2	100.0
Confidentiality	0	2.0	9.1	63.6	25.3	100.0
Safety/security	0	4.0	11.1	58.6	26.3	100.0
Speed	0	12.1	9.1	60.6	18.2	100.0
Price	6.1	31.3	13.1	41.4	8.1	100.0

Source: Author computed from survey

Table 14 presents satisfaction level of respondents with regard to agency services. The results indicate that customers were either very satisfied or satisfied with confidentiality (89.5%), good customer service (89%), speed (79%), and the safety (89%) of agency services and the price of agency services (71.2%). Of all the postal services, the results are indicative that respondents were more pleased with the services of agency services than any other postal service.

Table 14: Level of Satisfaction with Agency Services

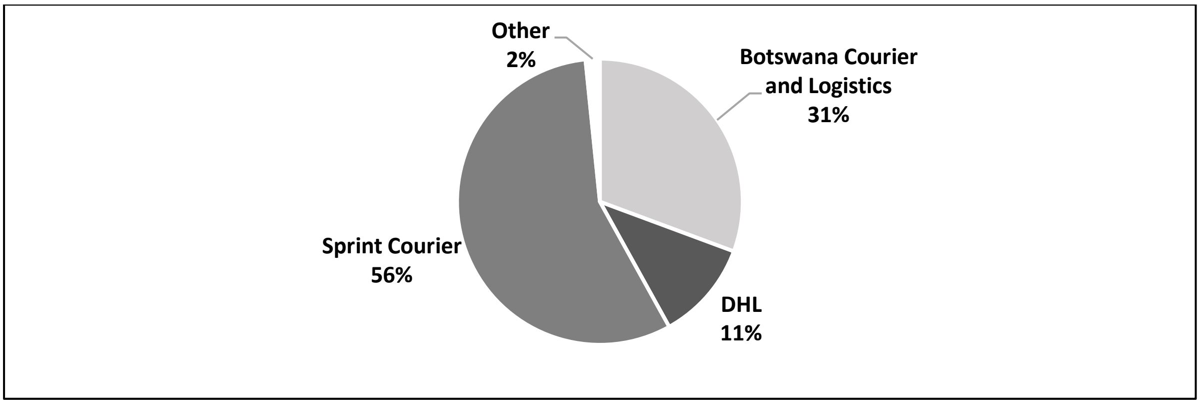
Attribute/Level of Satisfaction	Strongly Dissatisfied	Dissatisfied	Neutral	Satisfied	Strongly Satisfied	Total
Customer Service	0.5	3.0	7.5	65.0	24.0	100.0
Confidentiality	0	1.0	9.5	65.5	24.0	100.0
Safety/security	0	1.5	9.5	65.0	24.0	100.0
Speed	0.5	6.5	14.0	59.0	20.0	100.0
Price	2.0	14.1	12.6	53.0	18.2	100.0

Source: Author computed from survey

5.3.4 Satisfaction with Courier Services

In terms of courier services, the results indicate that different consumers have different preferences when it comes to the use of courier services. Out of 62 respondents who indicated that they used courier services, the majority (56%) indicated that they used Sprint Couriers, followed by Botswana Courier and Logistics (31%) and only 11% and 2% used DHL and other courier services providers respectively as indicated in Figure 22.

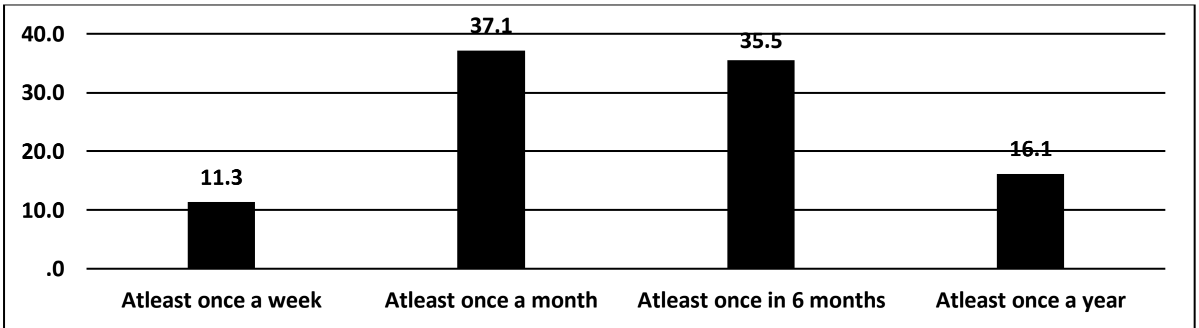
Figure 22: Courier Services Providers Used



Source: Author computed from survey

In terms of the frequency of usage, 11.3% indicated that they used courier services at least once a week, while 37.1% at least once a month, 35.5% at least once in six months, while 16.1% utilised these services at least once a year (Figure 23). Thus, courier services are less frequently used.

Figure 23: Frequency of Usage of Courier Services



Source: Author computed from survey

Furthermore, respondents were asked to state the reasons for using a particular courier service provider and the majority (77.4%) of respondents indicated that speed was the main reason for choosing a courier service provider, followed by reliability (72.6%), customer service (69.5%), and safety (66.1%). The majority (64.5%) of respondents indicated price was their main reason for choosing a courier service provider.

5.3.5 Complaints Handling

Knowledge on complaints handling procedures play a very critical role and has a bearing on the relationship between the service provider and the customer. Customers need to be well aware of the process they ought to follow when having complaints in order for them to be assisted effectively. Furthermore, service providers need to have proper processes for complaints handling to ensure efficiency in managing such cases and making customers happy.

In light of the above, respondents were asked if they were aware of complaints handling procedures in the postal services sector. The majority (72.6%) indicated that they were aware of complaints handling procedures, while 27.4% were not aware (Table 15). When asked about what they do when they have complaints with the service provider, 76.2% indicated that they lodge a complaint with the service provider, while the remaining 23.8% do nothing. Out of the 76.2% that lodge a complaint with the service provider, 80.1% were either very satisfied or satisfied with the speed of complaint resolution, 89.1% with customer service, while 88.6% with confidentiality of complaints resolution (Table 15).

Table 15: Satisfaction Level with Complaints Handling of Courier Services

Attribute/Level of Satisfaction	Strongly Dissatisfied	Dissatisfied	Neutral	Satisfied	Strongly Satisfied	Total
Customer Service	0	1.9	9.0	75.4	13.7	100.0
Confidentiality	0	1.9	9.5	73.9	14.7	100.0
Speed	0.9	10.9	8.1	71.1	9.0	100.0

Source: Author computed from survey

Respondents were further asked whether they knew that it was an offence to send offensive, indecent, obscene or menacing messages and 91.2% of the respondents answered in the affirmative. Moreover, 84.4% of the respondents indicated that they were aware that it was an offence to relay pornographic material through postal/courier services. An overwhelming majority (98%) of the respondents indicated that they were aware that it was an offence to willingly interfere with erection, alteration, maintenance or inspection of the equipment, while 98.3% indicated that they were aware that it was an offence to damage, destroy or steal any communication equipment.

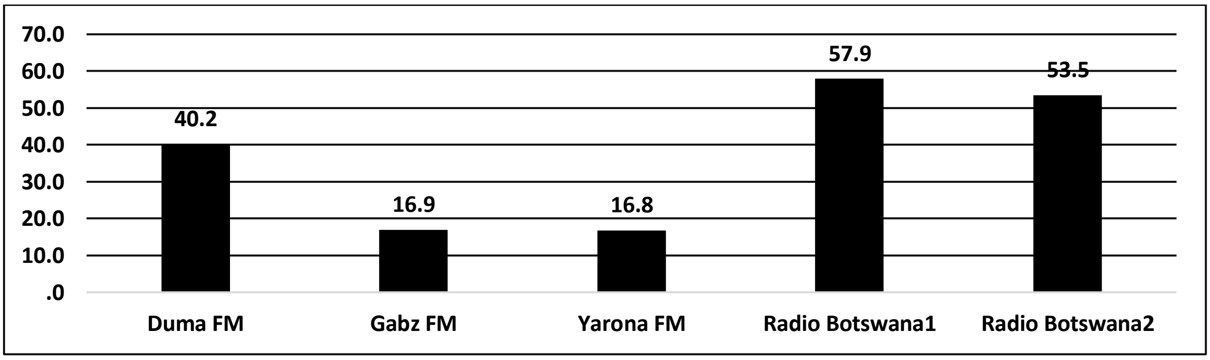
5.4 BROADCASTING SECTOR

This section presents results on the broadcasting sector which consist of both radio and television broadcasters in both public and private sectors. There are currently three private radio stations in Botswana; Duma FM, Gabz FM and Yarona FM, and two public radio stations: Radio Botswana (RB1) and Radio Botswana 2 (RB2). The television stations also comprise public station, Botswana Television (BTV) and private television stations; eBotswana, Multi-Choice Botswana, Multi-Choice South Africa and South African Broadcasting Corporation (SABC), KWESE TV, Star Times TV, Maru TV, and OVY Network. Other broadcasting media include Rera Online Radio, CENE Media and ICE 100. It must be noted that the public radio and TV subscription management service stations are not included in the analysis that follow, except for listenership and viewership as they are not regulated by BOCRA.

5.4.1 Radio Listenership

Respondents were asked to indicate the radio stations they listen to and the results presented in Figure 24 indicate that public radio stations have the largest radio listenership with 57.9% listening to RB1 and 53.5% listening to RB2. Furthermore, 40.2% of the respondents indicated that they listen to Duma FM, while 16.8% and 16.9% listen to Yarona FM and Gabz FM respectively. The public stations have a large audience because of their wider coverage throughout the country compared to private radio stations.

Figure 24: Radio Listenership (Percentage)

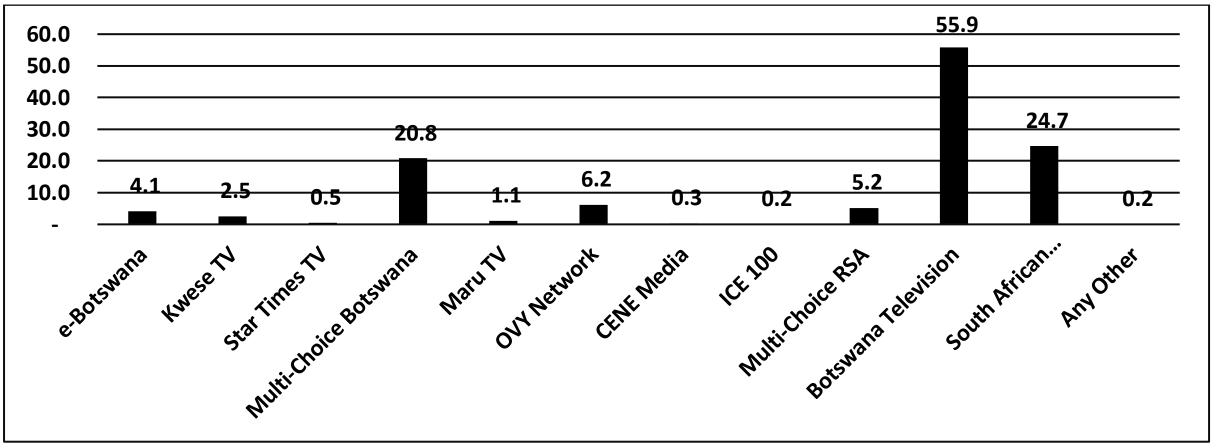


Source: Author computed from survey

5.4.2 Television Viewership

Respondents were further asked to state the television stations they watch and the results are presented in Figure 25. As shown in the figure, BTV was the most watched television station with 55.9% viewers, while SABC was the second most viewed with 24.7% viewers followed by Multichoice Botswana with 20.8% viewers. These were followed by; OVY Network (6.2%), Multi-Choice South Africa (5.2%) and eBotswana (4.1%). Kwese TV (2.5%), Star Times (0.5%), Maru, (1.1%), CENE Media (0.3%) and ICE 100 (0.2%). The reasons for limited viewership for some of these TV stations were that, their geographic coverage is limited (for example e-Botswana covers a radius of 60 km^2 from Gaborone) and others require viewers to pay subscriptions, while others can be viewed through the internet, a service which some respondents do not have access to.

Figure 25: Choice of Television Station (Percentage)



Source: Author computed from survey

5.4.3 Customer's Satisfaction with Radio and TV Stations

In terms of customer experience, respondents were asked to rate different radio and television stations they listen to and watch on signal quality, programmes, news and current affairs, code of practice (ethics), price and complaint handling procedures. Respondents indicated different levels of satisfaction in each of the aspects. The results on each follows below.

Satisfaction with Signal Quality: Table 16 shows satisfaction levels for the three private radio stations Yarona FM, Gabz FM and Duma FM, as well as private TV stations; eBotswana and Mutichoice Botswana. The findings indicate that 84.4% of the respondents were either very satisfied or satisfied with Duma FM's signal quality, compared to Yarona FM (70.6%) and Gabs FM (79.2%). For television, respondents for Multichoice Botswana and eBotswana indicated satisfaction levels (satisfied and very satisfied) of 81.6% and 79.3% respectively.

Table 16: Signal Quality

Radio Station/Level of Satisfaction	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied	Total
Yarona FM	2.8	9.2	17.4	34.9	35.8	100.0
Gabz FM	1.9	13.2	5.7	36.8	42.5	100.0
Duma FM	1.6	10.0	4.0	44.8	39.6	100.0
eBotswana	3.4	13.8	3.4	62.1	17.2	100.0
Multichoice Botswana	.0	8.8	9.6	60.3	21.3	100.0

Source: Author computed from survey

Satisfaction with Programmes: Respondents were further requested to rate their satisfaction with programmes aired by different stations and the results of this analysis are shown in Table 17. The results indicate a high level of satisfaction (very satisfied and satisfied) regarding programmes aired by Duma FM (96.8%), followed by Gabz FM (94.3%) and Yarona FM (91.7%). For the TV stations, respondents indicated their satisfaction (very satisfied and satisfied) with eBotswana and Multichoice Botswana as 81.5% and 67.6% respectively.

Table 17: Satisfaction with Programmes

Station/Level of Satisfaction	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied	Total
Yarona FM	0	0	8.3	51.9	39.8	100.0
Gabz FM	0	0	5.7	49.1	45.3	100.0
Duma FM	0.4	0	2.8	51.6	45.2	100.0
eBotswana	3.7	3.7	11.1	66.7	14.8	100.0
Multichoice Botswana	6.6	14.7	11.0	50.0	17.6	100.0

Source: Author computed from survey

Satisfaction with News and Current Affairs: Table 18 shows that 97.6% of respondents were either very satisfied or satisfied with the news and current affairs programmes of Duma FM, followed by Gabs FM (94.3%) and Yarona FM (90.6%). For the TV stations, 88.1% and 85.2% of respondents indicated that they were either very satisfied or satisfied with Multichoice and eBotswana programmes respectively.

Table 18: Satisfaction with News and Current Affairs

Station/Level of Satisfaction	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied	Total
Yarona FM	0.2	0.9	8.5	50.0	40.6	100.0
Gabz FM	0	0	5.7	47.6	46.7	100.0
Duma FM	0.4	0.4	1.6	50.6	47.0	100.0
eBotswana	3.7	3.7	7.4	66.7	18.5	100.0
Multichoice Botswana	0	0.7	11.2	67.2	20.9	100.0

Source: Author computed from survey

Satisfaction with Code of Practice (Ethics): Table 19 presents results of respondents' satisfaction regarding the code of practice of broadcasting media. In response to this question, respondents indicated that they were either very satisfied and satisfied with the code of practice for Duma FM, Gabz FM and Yarona FM with satisfaction levels at 94.4%, 93.3% and 88.9% respectively. Regarding the television stations, 81.5% indicated their satisfaction with eBotswana, while 86% were satisfied (very satisfied and satisfied) with Multichoice Botswana.

Table 19: Satisfaction with Code of Practice

Station/Level of Satisfaction	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied	Total
Yarona FM	0	0	11.1	49.1	39.8	100.0
Gabz FM	0	0	6.7	46.7	46.7	100.0
Duma FM	0.4	1.6	3.6	51.6	42.8	100.0
eBotswana	3.7	3.7	11.1	63.0	18.5	100.0
Multichoice Botswana	0.7	2.2	11.0	63.2	22.8	100.0

Source: Author computed from survey

5.4.4 Complaint Handling

Respondents were asked to rate their satisfaction levels regarding the complaints handling procedures. The results are presented in Table 20 show that 96.4% of the respondents were either very satisfied or satisfied with complaints handling procedures for Duma FM. For Gabz FM, Yarona FM, eBotswana and Multichoice, the satisfaction (very satisfied and satisfied) levels are 91.7%, 87.2%, 81.8% and 76.5% respectively.

Table 20: Complaints Handling

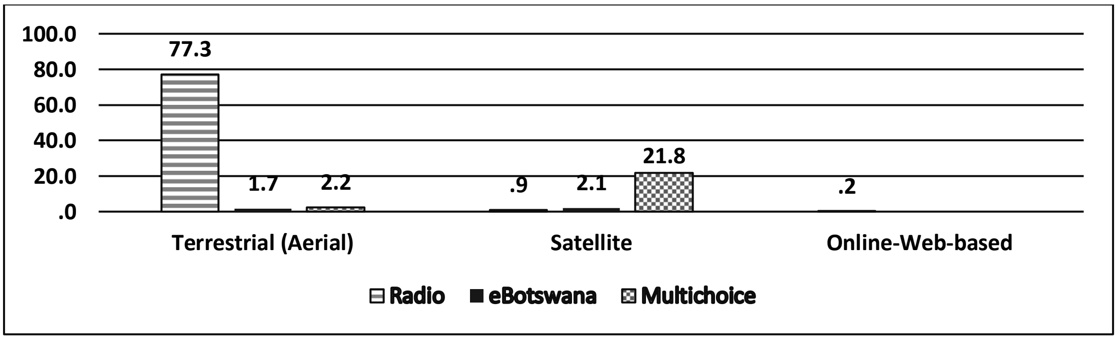
Station/Level of Satisfaction	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied	Total
Yarona FM	0	1.1	11.7	41.5	45.7	100.0
Gabz FM	0	0	8.3	39.6	52.1	100.0
Duma FM	0.9	0.4	2.2	50.4	46.0	100.0
eBotswana	4.5	9.1	4.5	59.1	22.7	100.0
Multichoice Botswana	0	6.7	16.8	52.9	23.5	100.0

Source: Author computed from survey

5.4.5 Mode of Transmission Used for Broadcasting Services

In terms of the mode of transmission used for broadcasting media services, the results presented in Figure 26 indicate that a majority (77.3%) of radio listeners use terrestrial (aerial) as their preferred mode of transmission, while 0.9% and 0.2% use satellite and access the radio online respectively. For television media, respondents indicated that they use terrestrial and satellite for eBotswana, while those who watch Multichoice Botswana mostly use satellite. These results imply that DSTV uses satellite as the main mode of transmission countrywide.

Figure 26: Mode of Transmission used for Broadcasting Services



Source: Author computed from survey

5.4.6 Disability

Respondents were requested to indicate whether they had any form of disability which could prevent them from accessing both radio and television services. The results indicate that a small proportion (8.4%) of the respondents had visual impairment, while 1.7% had hearing impairment. Of the 8.4% who indicated that they had visual impairment, 83.1% had a challenge watching television, while only 13.8% of the 1.7% who had hearing impairment had a challenge listening to the radio.

5.4.7 Broadcasting in Botswana - Code of Practice

Respondents were asked to indicate their level of satisfaction regarding the code of practice in the broadcasting sector in Botswana. Table 21 shows the level of satisfaction on various attributes of the broadcasting media. As indicated in the table respondents indicated varying degrees of satisfaction (very satisfied and satisfied) as follows; the broadcasting media respect people's privacy (71.4%), acceptable conduct of interviews (70.7%) and uphold community standards (70.4%). However, a certain percentage of respondents questioned the ability of broadcasting media to ensure neutrality (7.6%) and exercise impartiality (balance), fairness and accuracy in reporting (7.1%).

Table 21: Broadcasting in Botswana-Code of Practice

Attribute/Level of Satisfaction	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
Exercise impartiality (balance), Fairness and Accuracy in reporting	1.4	5.7	24.7	57.1	11.1
Ensure neutrality (equality for all affected parties)	1.4	6.2	24.8	55.2	12.3
Promote protection of children	0.2	4.9	27.2	54.3	13.4
Uphold community standards	0	3.0	26.6	57.0	13.4
Depiction of violence and intimidation	0.2	4.3	25.8	56.2	13.6
Explicit sex and nudity in video or lyrics	0	6.3	26.1	54.0	13.6
Acceptable conduct of interviews	0	1.3	28.1	56.9	13.8
Respect people's privacy	0	1.3	27.4	57.6	13.8

Source: Author computed from survey

5.4.8 Interference with Broadcasting Media Equipment

Respondents' were asked whether they knew that it was an offence to interfere with broadcasting media equipment. The results indicate that respondents knew that it was an offence to willingly interfere with erection, alteration, maintenance or inspection of any communication equipment. The majority (93.7%) of the respondents indicated that they knew that it was an offence to interfere with any communication equipment, while 6.3% of the respondents did not know. Further, 94.1% stated that they knew that it was an offence to damage, destroy or steal any communication equipment, while 5.9% of respondents did not know.

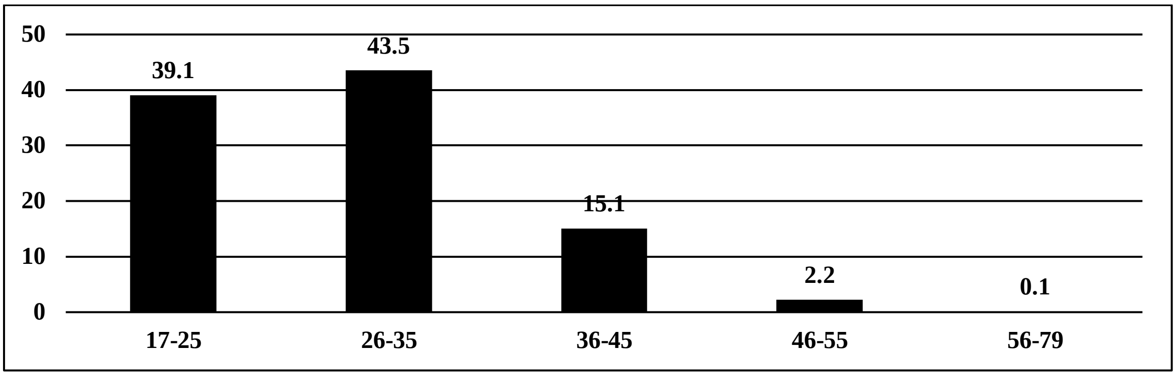
5.5 INTERNET SERVICE SECTOR

This section analyses the perceptions of respondents regarding their usage of internet services as well as the level of satisfaction on services provided.

5.5.1 Internet Usage

Respondents were asked to state whether or not they used internet services and 600 out of 1000 (60%) of the respondents indicated that they used internet services. Most of the internet users were females, who accounted for 60.1% compared to 39.9% of their male counterparts. Majority of internet users were the youth aged 17-35 years accounting for 82.6% (Figure 27).

Figure 27: Internet Usage by Age

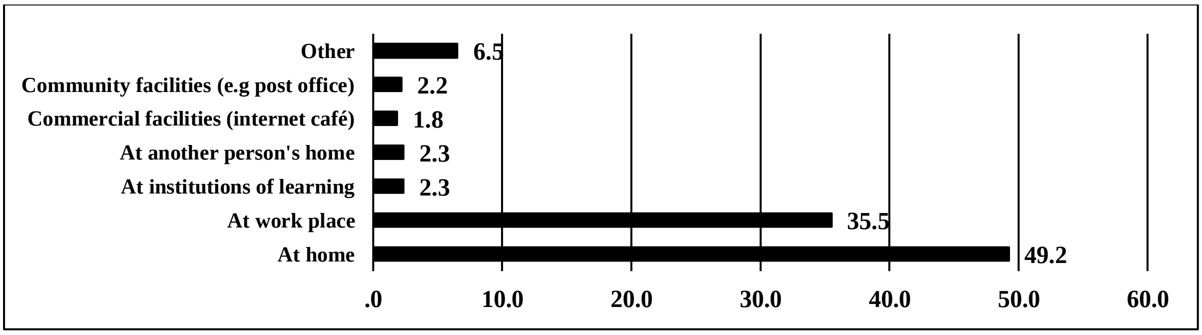


Source: Author computed from survey

5.5.2 Internet Usage by Location

Figure 28 shows the usage of internet services by location and as shown in the figure the majority of the respondents use internet at home (49.2%), while 35.5% use the internet at work.

Figure 28: Internet Usage by Location (percentage)

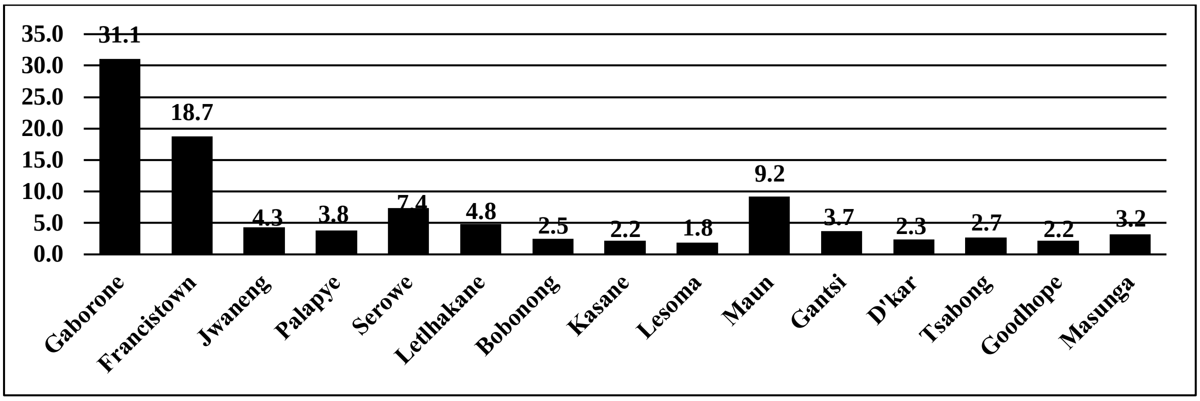


Source: Author computed from survey

5.5.3 Internet Usage by Locality

Figure 29 depicts internet usage by locality. Clearly, most internet users are based in the urban centres with 31.1% of users in Gaborone and 18.7% in Francistown. The urban villages such as Serowe, Palapye and Maun have a smaller share of internet users at 7.4%, 3.8% and 9.2% respectively.

Figure 29: Internet Usage by Locality

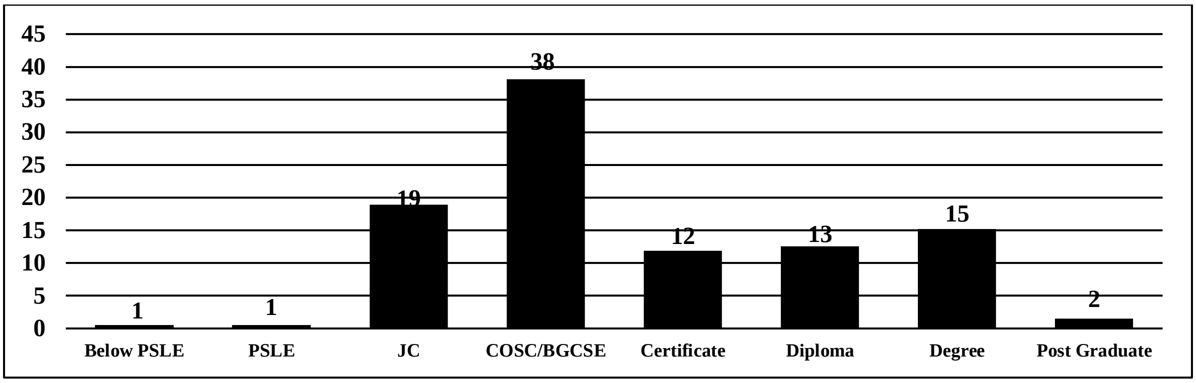


Source: Author computed from survey

5.5.4 Internet Usage by Educational Attainment

Figure 30 shows the relationship between internet users and educational attainment. The figure indicates that, those with Cambridge Ordinary School Certificate (COSC)/Botswana General Certificate of Secondary Education (BGCSE) accounted for the largest share of 38%, followed by those with Junior Certificate (JC) at 19%, and those with degree, diploma, certificate and post graduate accounted for 15%, 13%, 12% and 2% respectively. The results indicate that those with or below Primary School Leaving Examination (PSLE) have limited use of internet and that those with education level above PSLE use internet services more.

Figure 30: Internet Usage by Educational Attainment



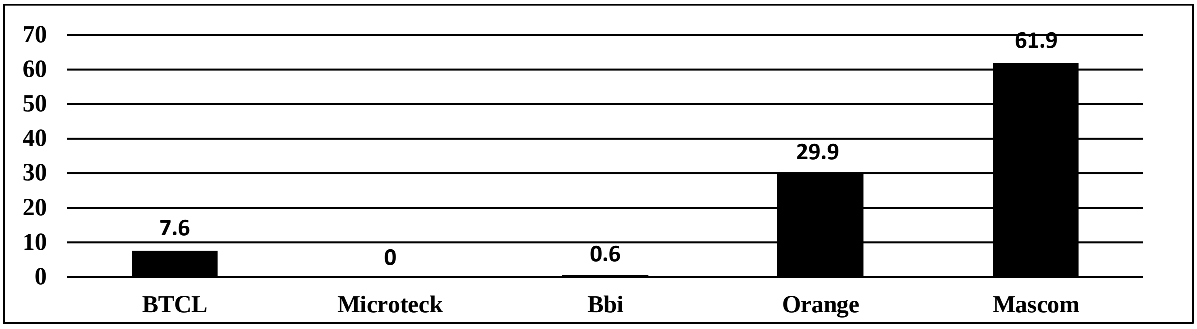
Source: Author computed from survey

5.5.5 Internet Service Provider

Respondents were further requested to indicate their main internet service provider. Figure 31 shows that majority (61.9%) of internet users use Mascom as their main internet service provider followed by Orange with 29.9% and BTCL with 7.6%. BBi accounted for 0.6%, while none of the respondents used MicroTeck.

Respondents were further asked to give the reasons why they chose the service provider and 64.3% indicated price affordability as the main reason. This was followed by 34.1% of respondents who indicated that their main reason was that the network is reliable and stable. About 2.2% indicated that they had no choice since there was only one service provider in their area, 19.7% said they wanted to enjoy a variety of services, whilst 6.8% indicated that they have other reasons for their choice of a main internet provider.

Figure 31: Internet Service Providers



Source: Author computed from survey

5.5.6 Types of Internet Used

As a way of understanding whether the respondents understood the implications of the type of internet they used and whether they were informed about the choices they had; respondents were asked to state the types of internet used. The results show that majority (96.8%) of the respondents used Mobile data, and only 1.8% used a Mobile modem. Other types of internet such as Dial-up, ADSL and Satellite were not used by the respondents. The increased use of smart phones has led to a high number of people with access to the internet. Consequently, the low uptake of fixed telephone lines reduced the uptake of ADSL.

5.5.7 Type of Internet Used by Age (Percentage)

Table 22 shows that in terms of age profile, the younger respondents (17-45 age range) are more likely (98%) to use a mobile phone as a preferred mode of internet access. The elderly (46-79 age range) on the other hand seem to prefer more static forms of internet access such as satellite.

Table 22: Percentage Share of Type of Internet Used-By Age

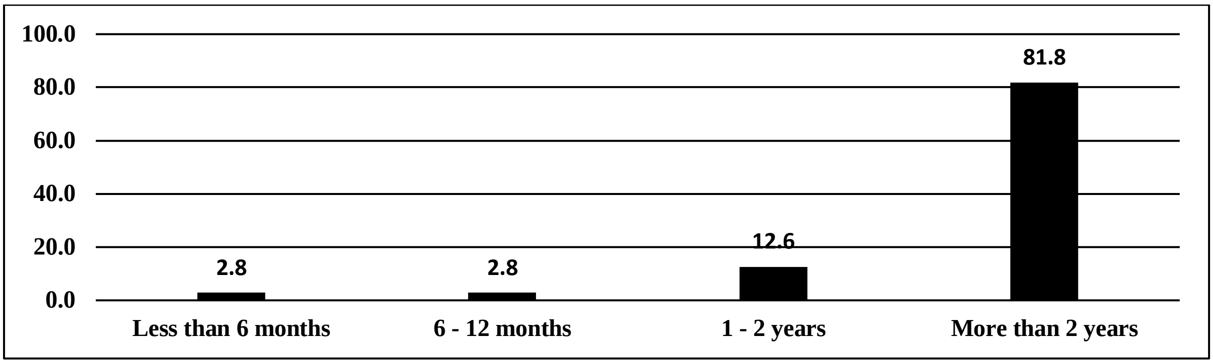
Age Group	Type of Internet Used				
	Dial up	ADSL	Satellite	Mobile modem	Mobile data
18-25	0	0	0	0	41
26-35	33	67	0	50	44
36-45	67	33	0	50	13
46-55	0	0	0	0	2
56-79	0	0	100	0	0
Total	**100**	**100**	**100**	**100**	**100**

Source: Author computed from survey

5.5.8 Period with Internet Service Provider

Respondents were asked to indicate the period they have been with their internet service provider. Figure 32 shows that the majority (81.8%) of the internet users had more than two years with their respective service providers. This is followed by those who have between 1-2 years with their provider (12.6%), 6-12 months (2.8%) and lastly, those with less than 6 months (2.8%)

Figure 32: Period with Internet Service Provider

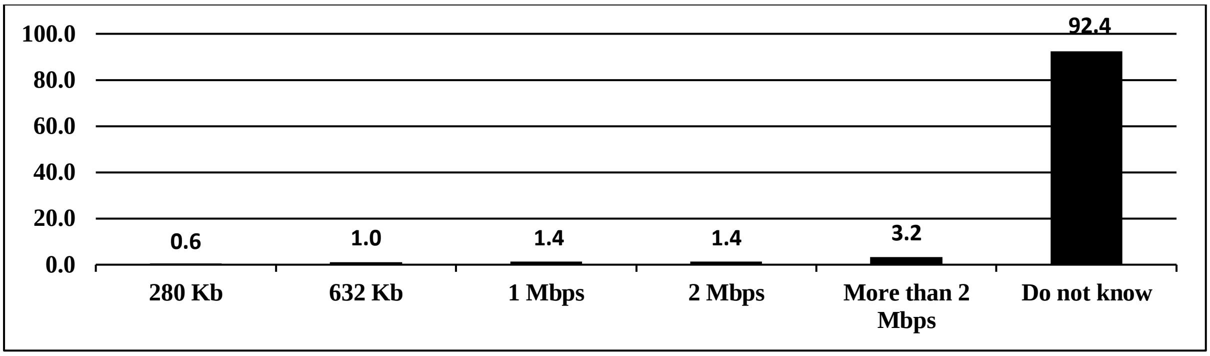


Source: Author computed from survey

5.5.9 Speed of the Internet

The respondents were asked as to whether they knew the speed of the internet they were using as this has implications for pricing and other quality measures such as efficiency. A majority (92.4%) of the respondents indicated that they do not know the speed of the internet they use, while only 3.2% use internet speed of more than 2 megabits per second (Figure 33). The results show that the majority (92.4%) of the respondents were not aware of the speed of the internet they were using regardless of their educational status.

Figure 33: Internet Speed



Source: Author computed from the survey

5.5.10 Satisfaction with Internet Service Quality

Respondents were further asked to rate their satisfaction with quality of service, and results are presented in Table 23 show that internet users are satisfied (very satisfied and satisfied) with; customer service (88.2%), connectivity (82.5), reliability (79.3%), flexibility to use on multiple devices (75.8%), price (72.2%), and internet speed (52.7%).

Table 23: Satisfaction with Service Quality

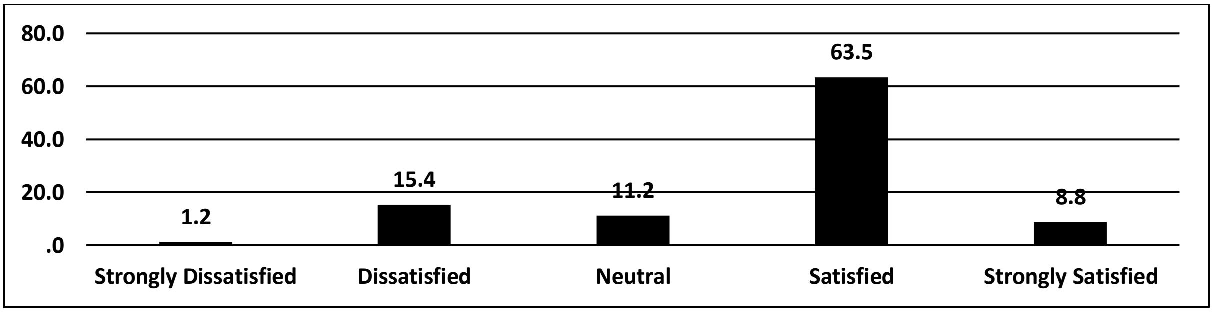
Level of Satisfaction/Attribute	Internet Speed	Price (installation and subscription fees)	Reliability	Customer Service	Connectivity	Flexibility to use in multiple devices
Strongly Dissatisfied	3.2	1.2	0.4	1.2	0.6	0.8
Dissatisfied	32.7	15.4	10.6	2.6	6.4	9.6
Neutral	11.4	11.2	9.8	7.9	10.5	13.8
Satisfied	43.5	63.4	70.9	76.5	71.5	63.8
Strongly Satisfied	9.2	8.8	8.4	11.7	11	12
Total	**100**	**100**	**100**	**100**	**100**	**100**

Source: Author computed from the survey

5.5.11 Satisfaction with Internet Pricing

When asked as to whether they were satisfied with internet prices, the majority (72.3%) indicated that they were either very satisfied or satisfied, while 15.4% indicated that they were dissatisfied and 1.2% indicated that they were strongly dissatisfied. Only 11.2% of the respondents were neutral (Figure 34). In general, this implies that majority of the respondents are satisfied with the pricing of internet. This refutes the claim made by one service provider whose view was that the retail prices of internet were very high.

Figure 34: Satisfaction with Internet Pricing

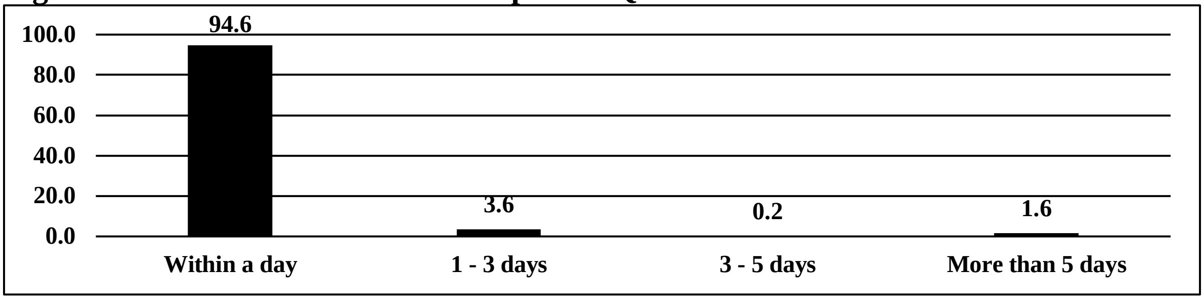


Source: Author computed from the survey

5.5.12 Turnaround Time of Complaints/Queries

Respondents were asked to indicate the time it takes for their service providers to resolve their problems and queries. Responses are as follows; within a day accounted for by 94.6%, 1-3 days (3.6%), 3-5 days (0.2%), and more than 5 days (1.6%) as shown in Figure 35. It is possible that the fast turnaround times are due to the fact that the majority of internet users access it on their mobile phone handsets.

Figure 35: Turnaround Time of Complaints/Queries



Source: Author computed from the survey

5.5.13 Change of Service Provider

Respondents were asked if they are currently considering moving to another service provider. A large proportion, (64.8%) said they were not considering moving; while 35.2% said they were considering moving to another service provider. This may be associated with the large number of respondents who indicated that they have been with their service providers for a long time, and are satisfied with the pricing and quality of service.

5.5.14 Awareness of Complaints Handling Procedures and Offences

Respondents were further asked if they were aware of the complaints handling procedures as users of the internet services. A majority (92.8%) indicated that they were aware and the remaining 7.8% were not aware. The majority of the respondents who were aware were from cities (Francistown and Gaborone).

Additionally, a related question on awareness of the offensiveness of sending indecent material indicates that 90.8% of the respondents were aware that it was an offence to send offensive, indecent, obscene or menacing messages. Similarly, a large proportion (87.6%) of the respondents indicated that they were aware that it was an offence to relay pornographic material through internet. An even higher proportion (96.8 %) of respondents, indicated that they were aware that it was an offence to willingly interfere with erection, alteration, maintenance or inspection of the equipment. Generally, it can be concluded that most customers are informed about internet ethics and this can be linked to educational attainment since majority of them have received formal education.

5.6 SUMMARY

Mobile services: As expected the majority (90%) of mobile users regularly use mobile phones for voice calls followed by SMS (76.6%) and internet browsing (52.5%). When mobile phone customers were asked about the perception of the prices charged for different services, their views were that the prices of international calls and international SMS were high, while the prices of local calls and SMS were perceived to be fair.

With regard to the satisfaction, more than half of the mobile phone users indicated that they were satisfied with the following attributes in relation to the services offered to them: value for money, confidentiality, availability of helpful information about services and quality of customer service from mobile service providers. An insignificant number of customers were however, dissatisfied with network coverage and ability to make calls without being cut-off.

In terms of the effectiveness of mobile networks regarding their connectivity, a majority (65.2%) indicated that they experienced some network problems. The majority (56.2%) of these problems occur when there are power cuts and when it rains (39.6%). More importantly a sizeable proportion (31.6% and 29.9%) of respondents indicated that the problems occur during weekends and holidays respectively. These suggests that the problems are caused by congestion as many users are likely to use the network during these times.

Fixed line services: The use of fixed telephone line is limited and very few users have entered into the sector. The majority of fixed telephone line users are located in Gaborone and Francistown probably as a result of better infrastructure, while there were virtually no users in the remote areas as a result of lack of infrastructure. In addition, the towns and cities are likely to have more businesses and hence more connection to the fixed line phones.

In terms of their satisfaction with the services offered by the fixed line service provider, generally the customers were satisfied with most of the services offered such as: time taken to install and relocate a fixed line; service charges and pricing information; cancelation of service contracts and network quality and reliability. The other services that customers were satisfied with include; customer service and call centre services, ease of reporting a fault, handling of customers' complaints, clarity of bills and getting value for money on the services provided.

Postal Services: The postal services were used by 32% of the sampled respondents. The mostly (80.6%) sought out service collection of parcels/mail, followed by agency services (63.7%), philately/stamps (53.8%) and money orders (31.5%). In terms of origin of the mail, it was mainly (84%) local, with limited (1%) international mail being received. The majority (46.3%) mail users indicated that it took less than 5 days to receive their mail after posting.

Overall postal services customers are satisfied with the services they receive from the service providers. These services include; customer service, speed, confidentiality for money orders, agency services, and courier services. However, a sizeable proportion (42%) of postal services customers indicated that they were dissatisfied with the price paid for stamps.

Broadcasting services: In terms of broadcasting, the most listened to and watched radio and TV stations are public ones which BOCRA does not regulate. This is expected because these have a larger geographic coverage compared to private radio and TV stations. Regarding signal quality, most (over 70%) respondents were satisfied from all the three private radio stations. Similarly, respondents were satisfied with the signal quality of the private TV stations. The respondents were also satisfied with the programs, news and current affairs, code of practice of the private radio stations as well as TV stations. However, an insignificant (7.6% and 7.1%) questioned the ability of broadcasting media to ensure, fairness, and accuracy and neutrality respectively.

Internet services: A sizeable proportion (60%) of respondents indicated that they used internet services, with their main provider being mobile service providers. The main reason for choosing an internet providers was affordability followed by reliability. The mostly (96.8%) used type of internet is mobile data suggesting the limited use of other types of internet such as dial-up, ADSL and satellite probably because of they are relatively expensive to connect and uses fixed line phone.

In terms of satisfaction provided by internet service providers, the customers indicated that they were satisfied with the following services: prices for installation and subscription, reliability, customer service, connectivity, internet prices and flexibility to use multiple devices. A significant proportion (35.9%) of customers were dissatisfied with the speed of internet

Most of the customers using BOCRA regulated services were aware of customer complaints handling procedures and indicated that whenever they had a complaint, they take it directly to their service provider. Most respondents were also aware of the fact that it was an offence to use their communication gadgets to send offensive, indecent, obscene, and pornographic materials. In addition, the customers were aware that it was an offence to damage, destroy, tamper with the erection, altercation maintenance or inspection of any telecommunication equipment.

CHAPTER 6

CONSUMER AWARENESS AND THE LEVEL OF SATISFACTION: THE 2015 AND 2018 RESULTS

This chapter compares the 2015 customer survey results with the current (2018) results. The objective is to determine the trends in terms of consumer awareness as well as satisfaction level on the services provided in the different communication sectors regulated by BOCRA. The sectors used for comparison are the: mobile, fixed line, postal, broadcasting, and internet service sectors. It should be noted that no comparison was made for the operators as the 2015 study did not include operators. In order to make comparison easier, only the dissatisfaction (very dissatisfied and dissatisfied) and satisfaction (very satisfied and satisfied) levels are reported at the exclusion of the neutrals.

6.1 MOBILE SERVICE SECTOR

6.1.1 Pricing and Awareness of Mobile Services

A comparison was made to determine whether there was any difference in terms of consumers' awareness of prices they were charged by their service providers and prices charged by other service providers for services they use between 2015 and 2018. Figure 36 shows that in 2015, 59% of the respondents indicated that they were aware of the prices they were charged by their service providers, while in 2018, the proportion increased to 70.6%. Regarding the awareness on prices charged by other service providers, there was a huge increase in the proportion of respondents who indicated that they were aware from 27% in 2015 to 55.2% in 2018. These results show an increase in overall awareness of consumers in terms of prices charged by their service providers and competing service providers. This suggests that the intensification of public education campaigns by BOCRA has started to bear fruits in areas of public awareness as well as prices charged by service providers.

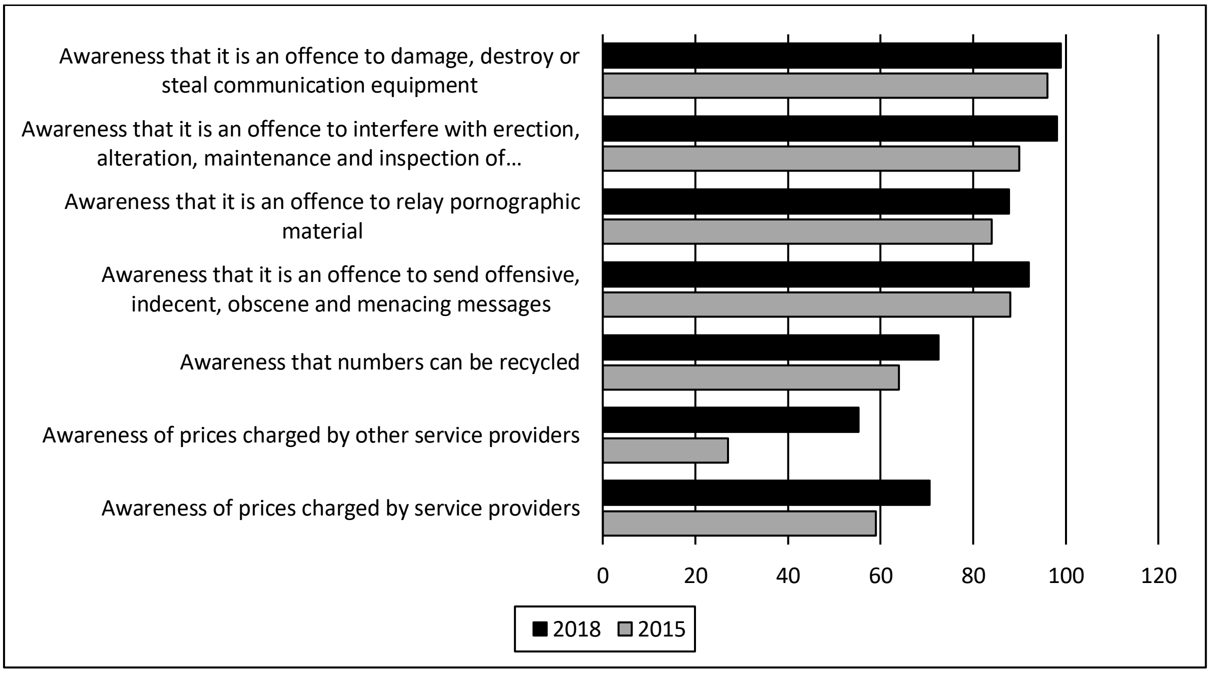
6.1.2 Awareness on General Issues in the Mobile Industry

Respondents were requested to indicate whether they were aware that their mobile phone number can be recycled or given to another person for non-use. As shown in Figure 36, 64% of the respondents indicated they were aware that their number can be recycled or given to another person for non-use in 2015 compared to 72.6% in 2018. This shows a slight improvement of about 8.6% from the previous study. The increase in awareness is important for both BOCRA and the service providers as there will be less complaints about deactivated numbers from consumers.

Regarding awareness on the illegality of sending offensive, indecent, obscene or menacing messages through their mobile devices, there was a slight increase from 88% to 92% as shown in Figure 36 who indicated that they were aware. Similarly, there was an increase (90% to 98%) in the percentage of respondents who indicated that they were aware aware that was an offence to interfere with erection, alteration, maintenance or inspection of any communication equipment. Additionally, there was an increase in the proportion of respondents who indicated that they were aware that it was an offence to damage, destroy or steal any communication from 96% and 99% between 2015 and 2018. The awareness levels of consumers' awareness have generally increased between 2015 and 2018.

The increase in the level of awareness by customers on pricing, general issues in the mobile telephone industry and legal issues can be attributed to BOCRA's efforts on public education campaigns. BOCRA has continued to engage the public through a variety of methods in order to ensure that the public is conversant with its regulatory mandate and latest developments in the communication industry as well as their rights as consumers.

Figure 36: Comparison of the 2015 and 2018 Consumer Awareness in the Mobile Telephone Sector



Source: Author computed from the survey and BOCRA 2015

6.1.3 Perceptions on Prices Charged by Mobile Service Providers

Table 24 shows a comparison of consumer perceptions regarding prices charged by mobile telephone service providers between 2015 and 2018. As shown in the table, the percentage of respondents who indicate that prices for local voice calls were fair decreased from 59.6% to 51.4% between in 2015 and 2018. There is a noticeable increase from 27.3% in 2015 to 37.7% in 2018 of respondents who perceived that the prices for local calls were high. Further, 32.5% and 43.1% of respondents were of the view that prices for international voice calls were high in 2015 and 2018 respectively. The same trend was also noted for roaming services as there was an increase in the proportion from 16.2% in 2015 to 24% in 2018 of respondents who indicated that the prices for roaming services were high. Thus, generally in 2018 more consumers viewed prices of local, and international calls as well as roaming services to be high compared to 2015.

The increase in the proportion of customers who feel that mobile prices are high occurred despite efforts by BOCRA to regulate them. For example, in 2015/16 BOCRA issued a Regulatory Directive mandating operators to reduce tariffs, including fixed and mobile termination rates. In addition, BOCRA through Southern African Development Community (SADC) reduced the roaming services in four countries: Botswana, Namibia, Zambia and Zimbabwe. However, customers in Botswana still feel that roaming charges are still high probably because the bulk of the services are with South Africa which is yet included in this initiative. Lastly, 24.4% of respondents indicated that prices for internet services were fair in 2018 compared to 30.1% in 2018, while 23.9% and 29% of the respondents were of the view that the internet prices were high in 2015 and 2018 respectively.

Table 24: Consumers' Perception on Prices Charged by Mobile Service Providers: 2015 and 2018

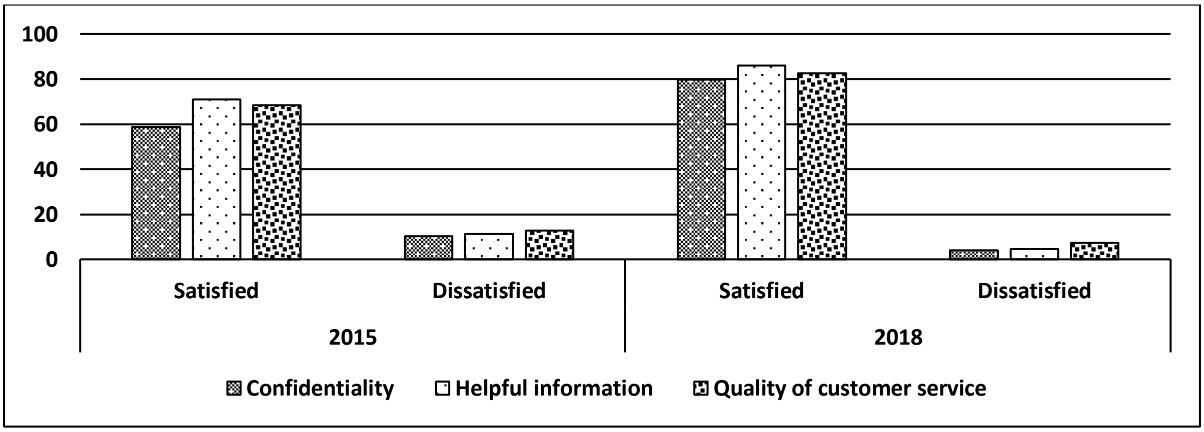
Year	2015 (%)			2018 (%)		
Service/Perceptions	**Low**	**Fair**	**High**	**Low**	**Fair**	**High**
Local voice calls	9.3	59.6	27.3	6.6	51.4	37.7
International Voice calls	2.2	14.2	32.5	0.7	6.5	43.1
Roaming Services	0.4	6.6	16.2	0.1	5.2	24
Internet Services	1.8	24.4	23.9	1.3	30.1	29

Source: Author computed from the survey and BOCRA 2015

6.1.4 Consumers Level of Satisfaction with Mobile Service Providers: 2015 and 2018

The proportion of consumers who were satisfied with regards to: confidentiality, helpful information and quality of service increased from 58.6%, 70.8% and 68.5% to 2015, to 79.8%, 85.9% and 82.6% in 2018 respectively. The results show that generally the proportion of consumers who are satisfied with mobile services increased between 2015 and 2018. This suggests that mobile service providers have improved the quality of services they offer to consumers in terms of confidentiality, provision of helpful information and the quality of customer service. This improvement can be attributed to compliance monitoring by BOCRA which ensures that operators meet set standards and when they fail to meet the standards they are required to come up with convincing reasons or else punitive action is taken against them.

Figure 37: Consumers level of satisfaction with mobile services: 2015 and 2018



Source: Author computed from the survey and BOCRA 2015

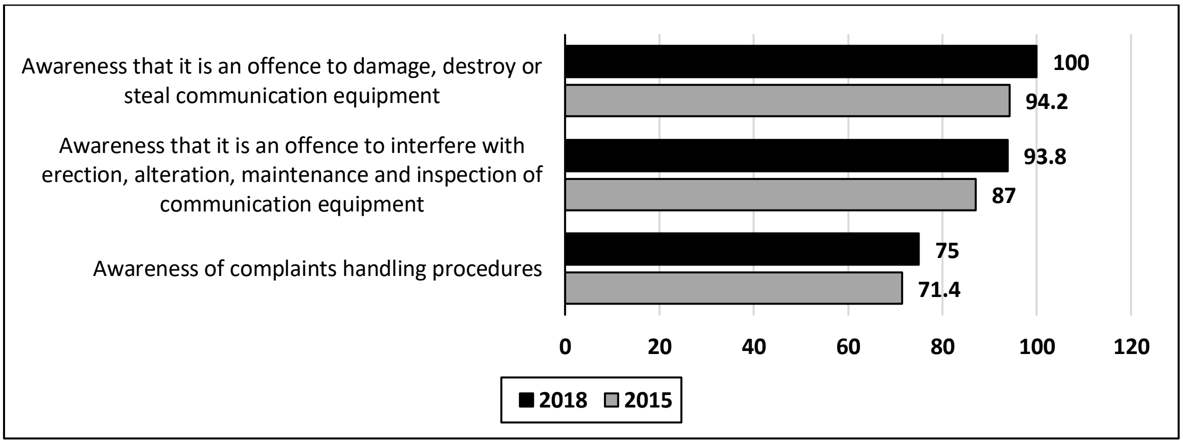
6.2 FIXED LINE SECTOR

6.2.1 Consumers Awareness on Fixed Line Services: 2015 and 2018

In terms of usage of the fixed line service sector, there was a decrease in the proportion of respondents from 15.4% to 3.6% between 2015 and 2018. This suggests that the use of fixed line telephone services is becoming less popular as consumers switch to mobile telephone services.

Figure 38 gives a comparison between the 2015 and 2018 consumer awareness levels in the fixed line sector, and shows that in 2015, 93.8% of fixed-line users were aware that it was an offence to interfere with the erection, altercation, maintenance and inspection of communication equipment. compared to 87% in 2018. Moreover, 94.2% and 100% of fixed-line users were aware that damage of communication equipment was an offence in 2015 and 2018 respectively. Lastly, the respondents were asked about their awareness on complaints handling procedures and the results show that in 2015, 71.4% were aware of complaints handling procedures, while 75% were aware of the complaints handling procedures in 2018. It is evident from these results that generally, consumer awareness on fixed-line concerning complaints handling procedures and other areas of awareness has improved between 2015 and 2018.

Figure 38: Comparison of the 2015 and 2018 Consumer Awareness in the Fixed Line Sector



Source: Author computed from the survey and BOCRA 2015

6.2.2 Consumers Level of Satisfaction with Fixed Line Services: 2015 And 2018

Table 26 compares the 2015 and 2018 results on consumers' level of satisfaction on a wide range of issues from installation time, pricing, fault repair and general customer service. As indicated in the table, there was a noticeable decline in satisfaction level (from 51.9% in 2015 to 37.5% in 2018) regarding pricing information. The same trend is noted on service charges as 70.1% indicated that they were satisfied with the service charges in 2015 compared to 34.4% in 2018. Lastly, satisfaction levels on queries/complaints resolutions have increased from 57.9 in 2015 to 68.8% in 2018. This may be an indication that service provider has improved on how they deal with customer queries and complaints. There was also improvement in the level of satisfaction regarding the accuracy of bills, timeliness and clarity of bills.

Table 25: Consumers Level of Satisfaction with Fixed Line Services: 2015 And 2018

Year	**2015 (%)**		**2018 (%)**	
Service/Level of Satisfaction	**Satisfied**	**Dissatisfied**	**Satisfied**	**Dissatisfied**
Installation time	49.4	7.1	40.6	3.1
Call centre service	66.9	20.1	56.2	12.1
Service charges	70.1	5.8	34.4	12.5
Pricing information	51.9	14.9	37.5	9.4
Ease of fault reporting	70.1	20.8	65.6	15.6
Network quality	77.9	12.9	75	18.7
Fault repair	66.2	22.7	53.1	15.6
Handling of customer complaints	68.8	14.9	62.5	9.4
Value for money	70.1	12.3	75	9.4
Bills easy to read and understand	41.6	5.8	56.2	3.1
Bill is always accurate	31.8	7.1	46.9	3.1
Bill arrives on time	28.6	14.2	50	3.1
Queries/complaints resolution	57.9	16.5	68.7	9.4
Customer information protection	56.5	4.5	68.8	3.1

Source: Author computed from the survey and BOCRA 2015

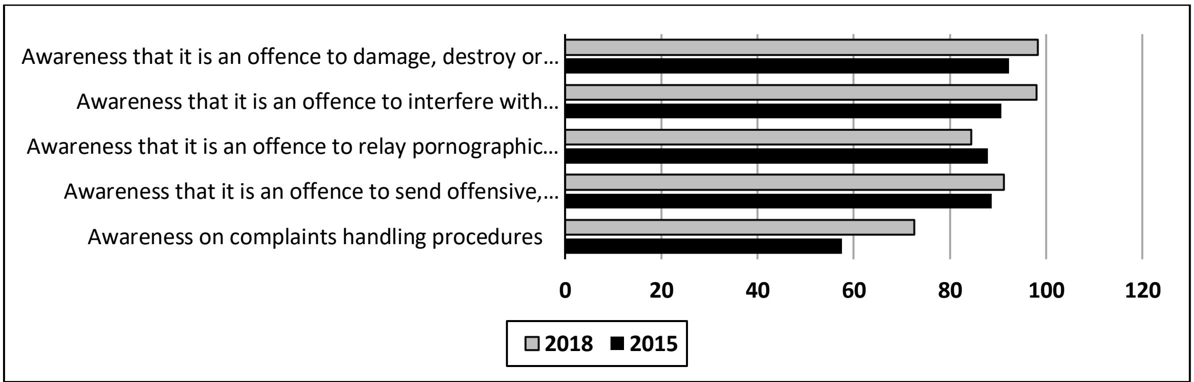
6.3 POSTAL SERVICES SECTOR

6.3.1 Comparison of the 2015 and 2018 Consumer Awareness in the Postal sector

Figure 39 compares consumer awareness in the postal services sector. As indicated in the figure, 57.5% and 72.6% of the respondents indicated that they were aware of the complaints handling procedures in 2015 and 2018 respectively. The results show an improvement in awareness of 14.6% since 2015. This may be an indication that the service providers have improved their public awareness campaigns or that the users are more informed. Regarding awareness on the sending of offensive, obscene or menacing messages, 89% and 91.2% indicated awareness in 2015 and 2018 respectively.

In 2015, 87.9% of respondents indicated that they are aware that it was an offence to relay pornographic material through a communication device, while 84.4% indicated awareness in 2018. Similarly, there was an increase in the proportion (from 90.7% in 2015 to 98% in 2018) of respondents who indicated that they were aware that it was an offense to willingly interfere with erection, alteration, maintenance or inspection of the communication equipment. Additionally, the proportion of respondents who indicated that they were aware that it was an offence to damage, destroy or steal any communication equipment increased from 92.3% in 2015 to 98.3% in 2018.

Figure 39: Comparison of the 2015 and 2018 Consumer Awareness in the Postal Sector



Source: Author computed from the survey and BOCRA 2015

6.3.2 Consumers Level of Satisfaction with Courier Services

Table 27 compares consumers' satisfaction levels with courier services in terms of: price, speed, customer service, confidentiality and security between 2015 and 2018. The table shows that in 2015, 66.1 % of respondents were satisfied with pricing of courier services, compared to 71.4% in 2018. In 2015 and 2018, 82.6% and 95.2% of the respondents indicated that they were satisfied with customer service respectively. Moreover, 87.9% and 95.2% of the respondents were satisfied with the speed of the courier services in 2015 and 2018 respectively. Thus, there was improvement in the consumer satisfaction levels between 2015 and 2018 with a high proportion indicating that they were satisfied with several services and attributes offered by the courier service providers. These improvements can be attributed to the implementation of a market study recommendations for the postal services conducted by BOCRA which led to the development and implementation of a licensing framework for the sector in 2016/17.

Table 26: Consumers Level of Satisfaction with Courier Services: 2015 and 2018

Year	2015(%)		2018(%)	
Attribute/Level of Satisfaction	**Satisfied**	**Dissatisfied**	**Satisfied**	**Dissatisfied**
Price	66.1	19	71.4	12.7
Speed	87.6	3.3	95.2	1.6
Customer service	82.6	5.8	95.2	3.2
Confidentiality	80.2	4.1	92.1	0
Security	79.3	4.9	95.2	0

Source: Author computed from the survey and BOCRA 2015

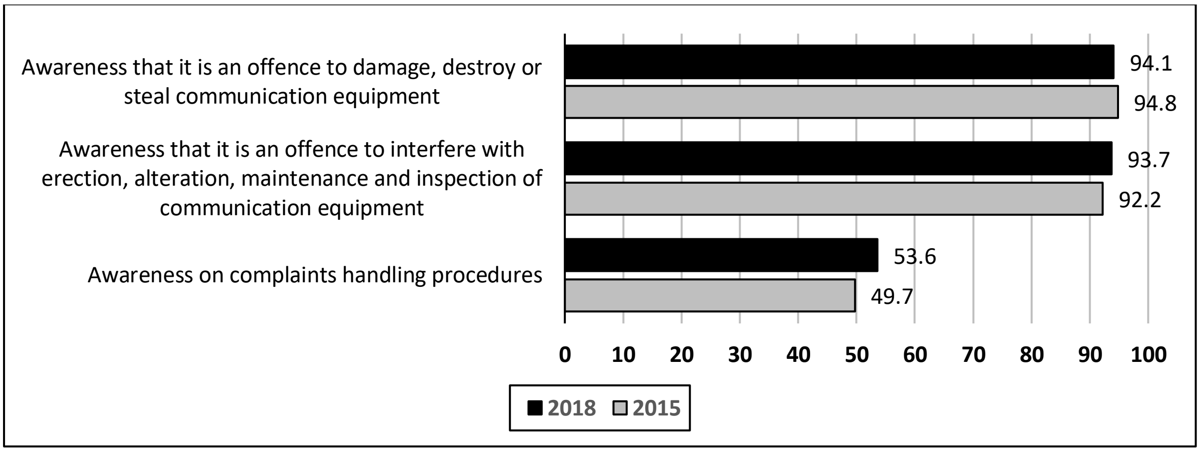
6.4 BROADCASTING SECTOR

6.4.1 Comparison of the 2015 and 2018 Consumer Awareness in the Broadcasting Sector

Figure 40 compares of consumer awareness of certain attributes in the broadcasting sector between 2015 and 2018. In terms of awareness on complaints handling procedures, the proportion of consumers who were aware rose from 49.7% in 2015 to 53% in 2018. This shows a slight improvement in the level of consumer awareness regarding the complaints handling procedures.

Regarding interference with broadcasting media equipment, there was a slight increase in the percentage of (from 92.2% in 2015 to 93.7% in 2018) of respondents who indicated that they were aware that it was an offence to willingly interfere with erection, alteration, maintenance or inspection of any broadcasting media equipment. Moreover, 94.8% of the respondents stated that they knew that it was an offence to damage, destroy or steal any broadcasting media equipment in 2015, compared to 94.1% in 2018. Thus, generally the level of awareness remained the same between 2015 and 2018.

Figure 40: Comparison of the 2015 and 2018 Consumer Awareness in the Broadcasting Sector



Source: Author computed from the survey and BOCRA 2015

6.4.2 Consumers Level of Satisfaction with Broadcasting Services: 2015 and 2018

Table 28 shows consumers' level of satisfaction with broadcasting services, and as shown in the table, there was a notable improvement in the level of satisfaction regarding accessibility of broadcasting services region wide. In 2015, 50.3% of the respondents indicated that they were satisfied with the accessibility of broadcasting services region wide compared to 78.4% in 2018. This may be an indication of improvement in signal coverage roll-out efforts by media houses. The results also indicate that in 2015, 23.1% of the respondents were satisfied with subscription prices compared to 41.2% in 2018. Satisfaction levels on service availability rate also improved from 62.7% in 2015 to 78.5% in 2018. Thus, generally there was improvement on satisfaction levels of consumers with the broadcasting services. However, there is a decline in showing of clear broadcasting signal from 72.6% in 2015 to 66.5% in 2018.

Table 27: Consumers Level of Satisfaction with Broadcasting Services: 2015 and 2018

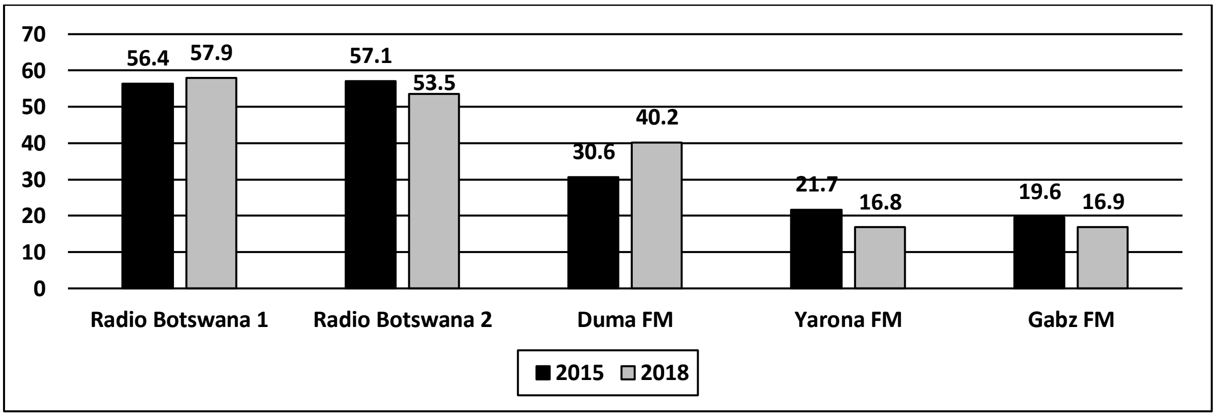
Year	**2015 (%)**		**2018 (%)**	
Attribute/Level of Satisfaction	**Satisfied**	**Dissatisfied**	**Satisfied**	**Dissatisfied**
Show clear broadcasting signal	72.6	19.1	66.5	23.6
Have 99% service availability rate	62.7	22.8	78.5	10.9
Have adequate levels of audio	76.9	9.4	76.4	13.9
Is accessible region wide	50.3	12.3	78.4	12.7
Have a variety of services	50	21.7	60.9	16.5
Have fair subscription prices	23.1	21.4	41.2	8.6

Source: Author computed from the survey and BOCRA 2015

6.4.3 Radio Listenership: 2015 and 2018

Figure 41 provides a comparison of radio listenership in 2015 and 2018. The most listened radio stations are RB1 and RB2, with an increase in the proportion of listenership for RB1 from 56.4% to 57.9%, while that of RB2 fell slightly from 57.1% to 53.5%. Amongst the private radio stations, Duma FM as the most listened station increased its listenership from 30.6% to with 40.2%, Gabz FM listeners decreased from 19.6% to 16.9% and those of Yarona FM also decreased from 21.7% to 16.8% between 2015 and 2018. The improvement in satisfaction level in the broadcasting sector, especially accessibility can be attributed to BOCRA assistance to increase private radio coverage through the use of Universal Access and Service Fund.

Figure 41: Radio Listenership: 2015 and 2018

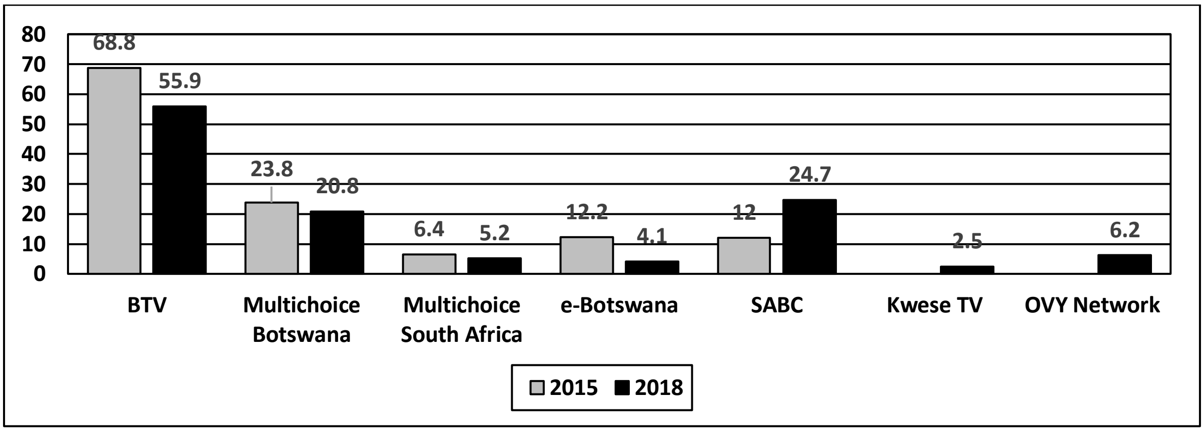


Source: Author computed from the survey and BOCRA 2015

6.4.4 Television Viewership: 2015 and 2018

Figure 42 shows that BTV is still the most viewed television station, although its viewership declined from 68.8% in 2015 to 55.9% in 2018. However, subscription to SABC has increased from 12% in 2015 to 24.7% in 2018. This might be due to a growing number of unlicensed decoders entering the local market from the neighboring South Africa. The viewership of e-Botswana has declined from 12.2% in 2015 to 4.1% in 2018. Multichoice Botswana has also experienced a slight decline in viewership from 23.8% in 2015 to 20.8% in 2018. This may be due to entrance of new players in the market, notably OVY network and Kwese TV. These have given consumers a variety of decoders to choose to buy at competitive prices.

Figure 42: Television Viewership: 2015 and 2018



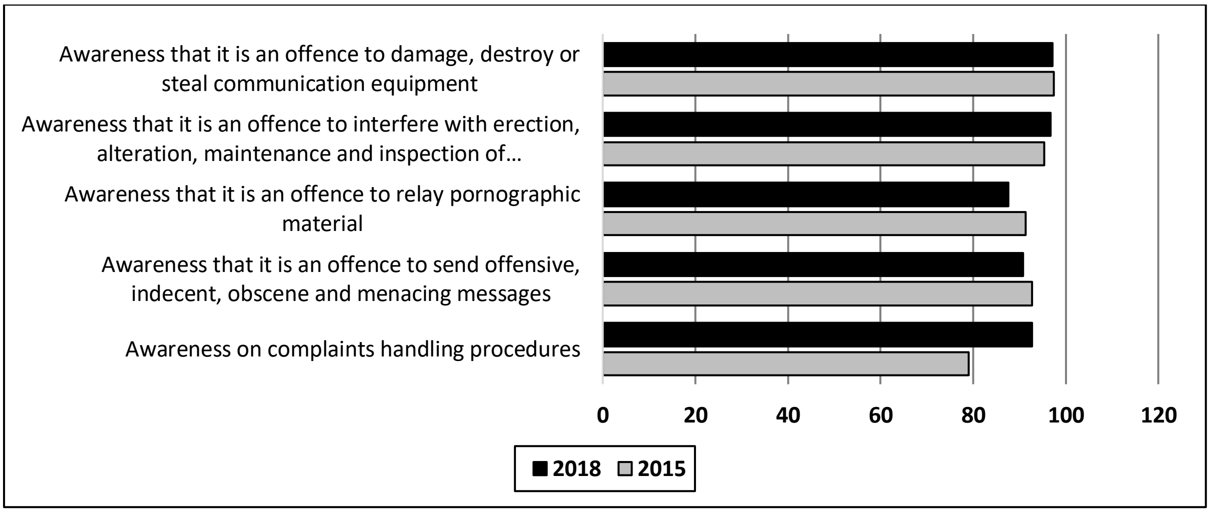
Source: Author computed from the survey and BOCRA 2015

6.5 INTERNET SERVICE SECTOR

6.5.1 Comparison of the 2015 and 2018 Consumer Awareness in the Internet Sector

Figure 43 gives a comparison of consumer awareness in the internet sector between 2015 and 2018. As indicated in the Table, the proportion of consumers who were aware of complaints handling procedures increased from 79% in 2015 to 92.8% in 2018. Similar to 2015, most of those who were aware were from cities (Gaborone and Francistown). Regarding awareness of the offensiveness of sending indecent material, 92.7% and 90.8% of the respondents indicated awareness in 2015 and 2018 respectively. In 2015, 91.3% of the respondents indicated that they are aware that it is an offence to relay pornographic material through the internet, while 87.6% indicated awareness in 2018. Lastly, 95.4% and 96.8 % of the respondents were aware that it is an offence to willingly interfere with erection, alteration, maintenance or inspection of the equipment in 2015 and 2018 respectively. Although there has been slight decrease the proportion of consumers who indicated that they were aware of the offensiveness of doing certain things, generally the majority of internet users are informed about internet ethics and procedures. This may be due to the fact that majority of internet users have received some formal education. Moreover, the service providers as well as the regulator may be doing well in terms of making internet users aware of the regulations that govern the use of the internet.

Figure 43: Comparison of the 2015 and 2018 Consumer Awareness in the Internet Sector

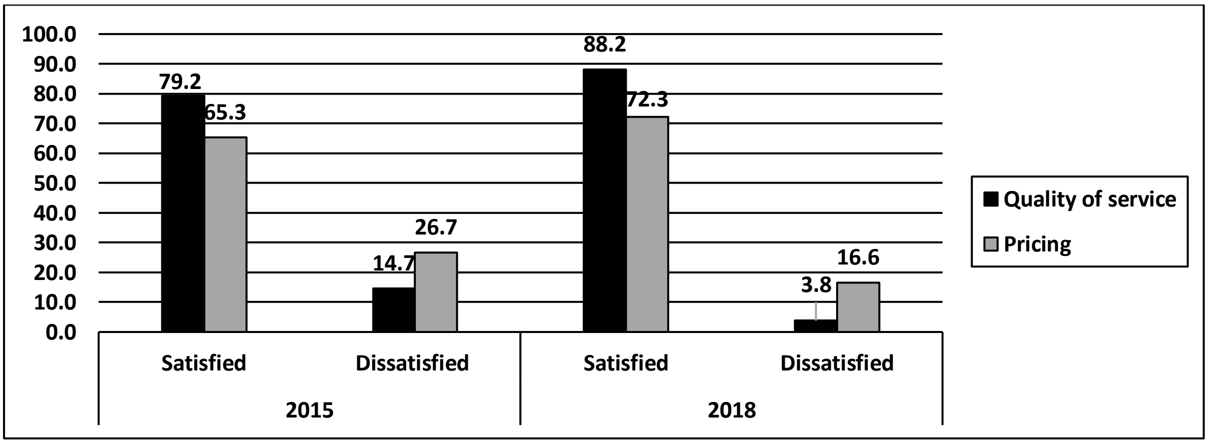


Source: Author computed from the survey and BOCRA 2015

6.5.2 Consumers Level of Satisfaction with Internet Services: 2015 and 2018

Figure 44 shows comparison between consumer satisfaction on the quality of service and pricing of internet services between 2015 and 2018. As shown in the table the proportion of consumers who indicated that they were satisfied with the quality of service increased from 79.2% in 2015 to 88.2% in 2018. Similarly, the proportion of consumer who indicated that they were satisfied with pricing of internet services increased from 65.2% in 2015 to 72.3% in 2018. The results show that there has been an increase in satisfaction levels on these two key elements of internet services.

Figure 44: Consumers Level of Satisfaction with Internet services: 2015 and 2018



Source: Author computed from the survey and BOCRA 2015

6.5.3 Internet Usage by Locality: 2015 and 2018

Table 29 shows comparison of the results of internet usage by locality in 2015 and 2018. The table shows that cities accounted for a larger share of internet users in 2015 and 2018. In 2015, Gaborone and Francistown had 33.7% and 15.3% internet users respectively, while in 2018 Gaborone had 31.1% of respondents who used internet and Francistown had 18.7% respondents as internet users. The results do not show any significant difference in terms of internet usage by locality between the 2015 and 2018 study. In addition, majority of internet users are the youth in the age group 17-35 who account for 82.6%. This was also the case in 2015 where majority of internet users were youth (18-35) with a share of 86%. The table further shows that in 2015 most internet users were females at 53% and we observe the same result in 2018 with 60.1% of internet users being females. The table shows that the percentage of people who use internet has increased from 48.3% in 2015 to 59.8% in 2018. BOCRA through the Universal Access and Service Fund has embarked on promotion of digital literacy and increased usage of broadband by connecting schools and other public places.

Table 28: Internet Usage by Locality: 2015 and 2018

Locality	2015 (%)	2018 (%)
Gaborone	33.7	31.1
Francistown	15.3	18.7
Jwaneng	4.6	4.3
Serowe	6.2	7.4
Ghanzi	2.9	3.7
Tsabong	2.5	2.7
Letlhakane	4.8	4.8
Maun	9.1	9.2
Kasane	3.5	2.2
Palapye	5	3.8
Bobonong	2.9	2.5
Masunga	3.7	3.2
Good Hope	1	2.2
D'Kar	3.1	2.3
Lesoma	1.7	1.8
Total	100	100
Average	48.3	59.8

Source: Author computed from the survey and BOCRA 2015

6.6 CONSUMER SATISFACTION INDEX

Consumer satisfaction levels in the five communication sectors (mobile, fixed telephone, postal, broadcasting, and internet) was measured using a 5 point Likert type scale with the following attributes: (1= very dissatisfied; 2= dissatisfied; 3 – neutral; 4 = satisfied and 5=very satisfied). This means that the higher the score the higher the level of consumer satisfaction. Consumer satisfaction index is defined as percentage of satisfied consumers. The consumer satisfaction index in each communication sector was measured by taking an average score for each attribute and an overall arithmetic average calculated for each sector. To obtain consumer satisfaction index, the overall average score for each sector was converted into a percentage. This implies that the consumer satisfaction index lies between 0 and 100 inclusive, with higher scores indicating higher levels of consumer satisfaction.

6.6.1 Mobile Sector

Table 29 shows consumer satisfaction levels for each attribute and the overall consumer satisfaction index expressed as percentage in parentheses for the mobile sector. As shown in the table, in 2015 consumer satisfaction index increased from 66% to 76% in 2018, indicating a ten percentage point improvement. In all the attributes there was improvement from 2015 to 2018.

Table 29: Comparison of Customer Satisfaction Index in the Mobile Sector: 2015 and 2018

Attribute	Level of satisfaction	
	2015	2018
Network coverage	-	3.5
Ability to make calls without being cut-off	2.7	3.5
Quality of customer service	3.7	3.9
Availability of helpful information services	3.6	4
Confidentiality	3.1	4
Value for money	-	3.9
Average satisfaction	**3.3[66]**	**3.8[76]**

Source: Author computed from survey.
Key: Numbers in parentheses represent Consumer Satisfaction Index

6.6.2 Fixed Telephone Line

A comparison of the consumer satisfaction level in 2015 and 2018 reveals that overall consumer satisfaction increased from 74% in 2015 to 76% in 2018 as shown in Table 30. However, some attributes recorded lower scores in 2018 compared to 2015 and these are: relocation time; network quality; cancellation of contract process; network reliability; ease of fault reporting and clarity of bills. These decreases are, however, more than offset by increases in the other attributes resulting in the overall increase in consumer satisfaction.

Table 30: Consumers Satisfaction with Fixed Line Services: 2015 and 2018

Attribute	Satisfaction Level	
	2015	2018
Installation time	3.8	3.8
Call centre services	3.4	3.6
Service charges	3.9	3.4
Disconnection of services for non-payment	3.0	3.4
Cancellation of contract process	2.2	3.8
Pricing information	3.4	3.6
Relocation time	3.6	3.2
Network quality	3.9	3.6
Network reliability	3.9	3.7
General customer service	3.8	3.8
Ease of Fault reporting	3.7	3.6
Fault Repair	3.5	3.6
Handling of customer complaints	3.7	3.7
Value of money	3.8	3.8
Average	3.5	3.6
Bills, complaints Customer Service		
My bills is easy to read	3.9	3.8
My bill is always accurate	3.4	4
I always receive my bill on time	3.4	4
My bill only charges me for the service I use	3.7	4
My query/complaint is resolved to my satisfaction	3.6	3.8
I will recommend my fixed line service provider to a friend or relative	3.8	4
My information is protected to my operator	4.4	3.9
I always get relevant customer service from my operator	3.8	3.9
Average	3.8	3.9
Overall	**3.7[74]**	**3.8[76]**

Source: Author computed from survey.
Key: Numbers in parentheses represent Consumer Satisfaction Index

6.6.3 Postal Services

Consumer satisfaction level in 2015 and 2018 remained at 76% as indicated in Table 31. In all the attributes, consumer satisfaction scores improved expect for speed at which posted items reach their destination; price of agency services; and customer services and speed under the courier services.

Table 31: Consumer Satisfaction with Postal Services

Attribute	**Level of satisfaction**	
	2015	**2018**
Stamps		
Price	3	3
Speed	4.3	3.8
Customer service	-	4
Average	3.7	3.6
Money Orders		
Customer service	3.9	4.1
Confidentiality	3.9	4.1
Safety/security	3.9	4.1
Speed	2.6	3.8
Price	3	3.1
Average	3.5	3.8
Agency services		
Customer service	4	4.1
Confidentiality	3.9	4.1
Safety/security	4	4.1
Speed	3.9	3.9
Price	3.9	3.7
Average	3.9	4
Courier services		
Customer service	4.1	4
Confidentiality	4	4
Speed	4.3	3.8
Average	4.1	3.9
Overall	**3.8[76]**	**3.8[76]**

Source: Author computed from survey.
Key: Numbers in parentheses represent Consumer Satisfaction Index

6.6.4 Broadcasting

In the broadcasting sector, there was a significant improvement in consumer satisfaction index from 76% in 2015 to 83% in 2018 as shown in Table 32. However, there was some slight decreases in some of the attributes for Multichoice Botswana in terms of signal quality; programmes, and news and current affairs and eBotswana in the code of practice. However, these slight decreases were more than offset by improvements in other attributes and broadcasters, resulting in overall improvement in consumer satisfaction for the broadcasting sector.

Table 32: Consumer Satisfaction with Broadcasting Services

Attribute/Radio/TV Station	Satisfaction level	
	2015	**2018**
Signal Quality		
Yarona FM	3.8	3.9
Gabz FM	3.9	4
Duma FM	4	4.1
eBotswana	3.1	3.8
Multichoice Botswana	4.3	3.9
Average	3.8	3.9
Programmes		
Yarona FM	4	4.3
Gabz FM	4.2	4.4
Duma FM	4.2	4.4
eBotswana	3.7	3.9
Multichoice Botswana	3.9	3.8
Average	4	4.2
News and current affairs		
Yarona FM	3.6	4.3
Gabz FM	4.2	4.4
Duma FM	4.2	4.4
eBotswana	3.9	3.9
Multichoice Botswana	4.3	4
Average	4	4.2
Code of practice		
Yarona FM	3.6	4.2
Gabz FM	3.9	4.4
Duma FM	4	4.3
eBotswana	3.6	3.9
Multichoice Botswana	4	4.1
Average	3.8	4.2
Complaints handling		
Yarona FM	3.3	4.3
Gabz FM	3.5	4.4
Duma FM	3.4	4.4
eBotswana	3.2	3.9
Multichoice Botswana	3	3.9
Average	3.3	4.2
Overall	**3.8[76]**	**4.1[83]**

Source: Author computed from survey.
Key: Numbers in parentheses represent Consumer Satisfaction Index

6.6.5 Internet Services

Table 33 shows consumers' satisfaction in the internet services sector in 2015 and 2018. As indicated in the table, there was an overall improvement in consumers' level of satisfaction, from 72% in 2015 to 74% in 2018. All attributes showed an improvement from their 2015 levels.

Table 33: Satisfaction with Internet Services

Attribute	Satisfaction Level	
	2015	**2018**
Speed	-	3.2
Price of installation	3.4	3.6
Reliability	-	3.7
Customer service	3.8	4
Connectivity	-	3.9
Flexibility to use multiple devices	-	3.8
Average	**3.6[72]**	**3.7[74]**

Source: Author computed from survey.
Key: Numbers in parentheses represent Consumer Satisfaction Index

6.6.6 Consumer Satisfaction in the Communication Sector

Table 34, shows consumer satisfaction in each of the five communication sectors and overall for both 2015 and 2018. As indicated in the table in all the sectors, consumer satisfaction improved, with significant improvements in the mobile and broadcasting sectors where satisfaction levels increased by ten and seven percentage points respectively in 2015 to 2018. The other sectors (fixed line telephone, internet) recorded percentage increases of two points, while for the postal services sector the satisfaction level did not change. There was overall improvement consumer satisfaction in the communication sector by four percentage points from 74% in 2015 to 76% in 2018.

Table 34: Customer Satisfaction by Communication Sector

Sector	Satisfaction level	
	2015	**2018**
Mobile	3.3[66]	3.8[76]
Fixed line telephone	3.7[74]	3.8[76]
Postal Services	3.8[76]	3.8[76]
Broadcasting	3.8[76]	4.1[83]
Internet	3.6[72]	3.7[74]
Overall	**3.6[72]**	**3.8[76]**

Source: Author computed from survey.
Key: Numbers in parentheses represent Consumer Satisfaction Index

6.7 Botswana's Performance in Information Communication Technology

It is not possible to compare the results of this study with studies from other countries because the methodologies and scope differ across countries. The only study that makes a comparison across through the use of same methodology is the one conducted by the International Telecommunications Union (ITU) using performance in information and communication technologies. This section therefore briefly compares Botswana's performance in information and communication technologies both globally and regionally.

The International Telecommunications Union (ITU) publishes the "*Measuring the Information Society Report*" which is an annual report that presents a global and regional overview of the latest developments regarding information and communication technologies (ICTs). This measure is developed using internationally comparable data and agreed methodologies (ITU, 2017). This section reviews Botswana's performance both globally and regionally using the ICT Development Index (IDI) between 2015 and 2017. The index is compiled using eleven indicators covering three areas ICT access, ICT use and ICT skills.

In 2015, Botswana was ranked 111th out of 176 countries with ICT Development Index of 3.82, while in 2016 Botswana's ranking increased to 102 out 176 countries, with an index of 4.51. In 2017, the country's ranking fell to 105, despite a slight improvement in the index from 4.51 to 4.59. Thus, in terms of global rankings, these have fluctuated during the period under review, while the index has improved. Regional comparison reveal that in 2015, Botswana was ranked 6th in Africa, while in 2016 and 2017 Botswana's rankings improved to 5th position in both years. Between 2016 and 2017, the largest improvement in terms of IDI was from the sub-index on ICT use, which recorded an improvement of 0.14 (from 3.60 to 3.73), while access sub-index improved by 0.06 (from 4.84 to 4.90). Thus, in terms of performance in the IDI index, Botswana's performance has been spearheaded by the two sub-indices; the ICT usage and ICT access. This has been made possible by BOCRA's efforts to increase ICT usage and access through among others the use of Universal Access and Service Fund.

6.8 SUMMARY

Mobile phone sector: In the mobile telephone sector, the level of awareness of the prices charged by their service providers and other providers increased from 59% in 2015 to 70% in 2018 and 27% to 55.2% respectively. Regarding consumers' perception on the prices charged, there has been an increase in the proportion of consumers who feel that prices of local calls are high from 27.7% in 2015, to 37.7% in 2018. Similarly, there was an increase in the proportion of consumers who feel that prices of international calls and roaming services were high from 16.6% to 24% and 24.4% to 30.1% between 2015 and 2018 respectively. Moreover, there was an increase in the proportion of consumers who felt that internet prices are high from 23.9% in 2015 to 29% in 2018. In terms of satisfaction, on the following attributes: confidentiality, helpful information and quality of service, the 2018 results indicate an improvement compared to 2015 in all the stated attributes.

Fixed line sector: An improvement in the proportion of consumers who are aware of complaints handling procedures was observed between 2015 and 2018. This suggests that the service provider is doing a good job in terms of making its customer aware of complaints handling procedures. In terms of level of satisfaction on the following; confidentiality, helpful information, and quality of service, consumers were more satisfied with these services in 2018 compared to 2015.

In 2018 less consumers were satisfied with the following: installation time, call service center, service charges, pricing information, ease of fault reporting; network quality, fault repair, and handling of customer complaints. This suggests that the quality of service provided by the service provider has not improved, in fact it has deteriorated. A plausible explanation for this is that there is only one service provider in the fixed line telephone service provision, hence lack of competition acts as a disincentive to improvement in service delivery. However, slight improvements were observed in the following: value for money, clarity of bills and their timely arrival as well as their accuracy.

Postal services sector: Similar to the fixed line telephone sector, a greater proportion (72.6%) of consumers indicated that they were aware of complaints handling procedures in 2018, compared to 2015 (57.5%). This shows an improvement in awareness of the complaint handling procedures probably as a result of increased public education campaign by the service provider. In terms of satisfaction in the courier services, there was increased proportion of consumers who were satisfied with the following: price, speed, customer service, confidentiality and security. This suggest that competition in the courier services sector has increased the efficiency of the operators as most licenses were issued between 2015 and 2018.

Broadcasting sector: There was slight improvement in customers who indicated that they were aware of customer handling procedures in 2018 (53.6%), compared to 2015(49.7%). However, the level of awareness is still low, and this suggests that the service providers do not have effective public education campaigns which inform their customers on the complaints procedures. Customers' level of satisfaction improved between 2018 and 2015 on the attributes; service availability, accessibility region wise and a variety of services. While, there was an improvement in the level of satisfaction in terms of fair subscription prices between 2015 (23.1%) and 2018 (41.2%), the level of satisfaction is still low. This suggests that there is less competition in the subscription TV stations because of limited number of such stations.

Internet services: The customers of the internet service sector are more aware in 2018 of customer handling procedures than they were in 2015. This implies that the service providers are doing a good job in promoting consumer awareness of complaints procedures. Comparison of satisfaction level in 2015 and 2018 indicates that more consumers were satisfied with the quality of service offered in 2018 compared to 2015. In addition, more consumers were satisfied with the prices of internet in 2018 than in 2015. However, there is still a sizeable proportion (16.6%) who are dissatisfied with prices charged for internet services.

Consumer satisfaction index: Comparisons of the 2015 and 2018 consumer satisfaction results reveal that overall consumer satisfaction has improved with consumer satisfaction index increasing from 72% to 76% in 2015 and 2018 respectively. However, there was a slight decrease in the satisfaction level in the broadcasting sector which fell from 76% in 2015 to 74% in 2018. In some sectors the level of satisfaction in some attributes fell, it is therefore recommended that BOCRA engage with the same providers with the view of improving their services and hence overall consumer satisfaction.

ICT Development Index: Botswana's global ranking in IDI has fluctuated between 2015 and 2017, while regionally the country's ranking improved between 2015 and 2016 and stabilised between 2016 and 2017. The IDI improved mainly as a result of improvement in both the ICT usage and access.

CHAPTER 7

NEGATIVE EXPERIENCES DURING THE SURVEY

The objective of this chapter is to identify any negative experiences during the survey and pointers for future development to address these negative experiences.

7.1 DATA COLLECTION

The main negative experience encountered during the survey is that there were difficulties in organising focus group discussions especially for internet service providers (ISPs) in Gaborone. Part of the problem was that the list that was provided by BOCRA appeared to be outdated, and hence contained wrong information on the contact details of the ISPs. This made it difficult for the consulting team to reach the ISPs.

Another problem was that some of the service providers, especially ISPs seemed to be disinterested in the study. This is because many failed to honour arranged meetings with the consulting team as they resorted to cancelling meetings at short notice or failing to turn up at all. This suggests that the operators do not understand the significance of the study to their daily operations.

The consulting team found that some of the operators were not aware of the complaints handling procedures. For instance, some were not aware as to whom their contact person/office were where they could lodge their complaints, while others (ISPs) felt that they were not fully aware of the license application procedures, particularly processing of application in terms of the time it takes.

Another element of unfairness as expressed by operators in the ISP is that only one operator (BTCL) is allowed to wholesale and retail. This to them is unfair as this operator is given competitive advantage over other operators. It was however, clarified that all the licensed operators could choose to do both wholesaling and retailing.

Service providers, especially in the broadcasting sector, felt that there was a degree of unfairness in their sector. This unfairness emanates from the fact that public operators are not licensed by BOCRA and hence unfairly competes with them especially when it comes to advertising.

7.2 RECOMMENDATIONS FOR ADDRESSING NEGATIVE EXPERIENCES

In order to address the above negative experiences, the following are suggested solutions:

BOCRA should have an updated data base of all its licensed operators, with current contact details to use in similar studies.

All the service provides should be fully sensitised about the importance of these studies in their sectors in order to increase their interest and hence their participation.

BOCRA should increase its awareness campaigns on some of its operations especially on license processing and complaints handling procedures for all its licensed operators, particularly ISPs. In addition, BOCRA should sensitise the operators on the fact that there is no additional license requirement for to undertaking both wholesaling and retailing of internet.

In order to improve fair competition and comprehensive regulation that sets standards across the communication industry, BOCRA should engage with Government on the possibility of regulating the public broadcasters especially in the area of commercial advertising.

CHAPTER 8
CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the major conclusions of the study and suggested recommendations to improve the communication industry in Botswana. The chapter starts with the perception and satisfaction of service providers as well as their involvement in decision making and policy development. This is followed by consumer perception and satisfaction of BOCRA regulated services, a comparison of the 2015 and 2018 consumer perception and satisfaction results. The chapter is concluded by recommendations for improving Botswana's communications industry.

8.1 SERVICE PROVIDERS PERCEPTION AND INVOLVEMENT IN DECISION MAKING AND POLICY DEVELOPMENT

The view of most service providers is that their relationship with the BOCRA is cordial, expect the internet service providers who felt that their relationship with the regulator was one sided. The operators are of the view that BOCRA is fair, and neutral when dealing in dealing with them. The majority of service providers felt that BOCRA was less effective when dealing with their complaints and queries. They felt that BOCRA takes a long time address their complaints and in some instances their complaints are never addressed.

Regarding the regulatory environment in the communication industry, the feeling of the operators was that some of the regulations such as local content and conduct during elections were too restrictive as they prevented them from playing content that their audiences demand and restricted them to carry out political party advertising. In fact, service providers indicated that although usually BOCRA consult them in policy and regulation formulation, they were not consulted when the decisions on local content and political party advertising were taken. Thus, some of the service providers (broadcasting) noted that decisions that affect their regulatory environment are often made without their input.

Most service providers are aware of the complaints procedures, while some (ISPs) stated that they did not know who the contact person or office was to lodge their complaints. Within the broadcasting service sector, the major complaint is that of unfair competition with public broadcasters as the latter are not regulated by BOCRA. The public broadcasters can therefore charge prices they wish. These prices are likely to be lower than market prices as the public broadcasters are funded by Government and are likely to be subsidized. According to the private broadcasters this introduces unfair competition in the market. Additionally, non-regulation of the public broadcasters mean that a large portion of the broadcasting sector is left unregulated as the public broadcasters have a wide coverage. This means that it is not possible to set uniform standards throughout the sector through regulation.

8.2 CUSTOMER PERCEPTIONS AND SATISFACTION

Mobile services: As expected the majority (90%) of mobile users regularly use mobile phones for voice calls followed by SMS (76.6%) and internet browsing (52.5%). When mobile phone customers were asked about the perception of the prices charged for different services, their views were that the prices of international calls and international SMS were high, while the prices of local calls and SMS were perceived to be fair.

With regard to the satisfaction, more than half of the mobile phone users indicated that they were satisfied with services offered to them. An insignificant number of customers were however, dissatisfied with network coverage and ability to make calls without being cut-off.
In terms of the effectiveness of mobile networks regarding their connectivity, a majority (65.2%) indicated that they experienced some network problems, and the majority (56.2%) of problems occur when there were power cuts and/or when it rains (39.6%). More importantly a sizeable proportion (31.6% and 29.9%) of respondents indicated that the problems occur during weekends and holidays respectively. These suggests that the problems are caused by congestion as many users are likely to use the network during these times.

Fixed line services: The use of fixed line telephone is limited and very few users have entered into the sector. The majority of fixed line telephone users are located in Gaborone and Francistown probably as a result of the large number of respondents sampled in these localities. In terms of their satisfaction with the services offered by the fixed line operator, generally the customers were satisfied with most of the services offered.

Postal Services: The postal services were used by 32% of the sampled respondents. The mostly (80.6%) sought out service was collection of parcels/mail, followed by agency services (63.7%), philately/stamps (53.8%) and money orders (31.5%). In terms of origin of the mail, it was mostly (84%) local, with limited (1%) international mail being received. The majority (46.3%) mail users indicated that it took less than 5 days to receive their mail after posting. Overall postal services customers are satisfied with the services they receive from their service providers. These services include; customer service, speed, confidentiality for money orders, agency services, and courier services. However, a sizeable proportion (42%) of postal services customers indicated that they were dissatisfied with the price paid for stamps.

Broadcasting services: In terms of broadcasting, the most listened to and watched radio and TV stations are public ones which BOCRA does not regulate. This is expected because these have a larger geographic coverage compared to private radio and TV stations. Regarding signal quality, most (over 70%) of respondents were satisfied with all the three private radio stations. Similarly, respondents were satisfied with the signal quality of the private TV stations. The respondents were also satisfied with the programs, news and current affairs, code of practice of the private radio stations as well as TV stations. However, an insignificant (7.6% and 7.1%) proportion questioned the ability of broadcasting media to ensure, fairness, accuracy and neutrality respectively.

Internet services: A sizeable proportion (60%) of respondents indicated that they used internet services, with their main provider being mobile service providers. The main reason for choosing an internet provider was affordability followed by reliability. The mostly (96.8%) used type of internet is mobile data suggesting limited use of other types of internet such as dial-up, ADSL and satellite probably because of they are relatively expensive to connect.

In terms of satisfaction provided by internet service providers, the customers indicated that they were satisfied with the following services: prices for installation and subscription, reliability, customer service, connectivity, internet prices and flexibility to use multiple devices. A significant proportion (35.9%) of customers were dissatisfied with the speed of internet and they did not know the speed of the internet they were using.

Most of the customers using BOCRA regulated services were aware of customer complaints handling procedures and indicated that whenever they had a complaint they take directly to their service provider. Most respondents were also aware of the fact that it was an offence to use the internet provided by service providers to send offensive, indecent, obscene, and pornographic materials. In addition, the customers were aware that it was an offence to damage, destroy, tamper with the erection, altercation maintenance or inspection of any telecommunication equipment.

8.3 COMPARISON OF THE 2015 AND 2018 CONSUMER RESULTS

Mobile phone sector: In the mobile telephone sector, the level of awareness of the prices charged by own service providers and other service providers increased from 59% in 2015 to 70% in 2018 and 27% to 55.2% respectively. Regarding consumers' perception on the prices charged, there has been an increase the proportion of consumers who feel that prices of local calls, international calls and roaming services were high. Moreover, there was an increase in the proportion of consumers who felt that internet prices were high from 23.9% in 2015 to 29% in 2018. In terms of satisfaction, on the following attributes: confidentiality, helpful information and quality of service, the 2018 results indicate an improvement compared to 2015 in all the stated attributes.

Fixed line sector: An improvement in the proportion of consumer's who are aware of complaints handling procedures was observed between 2015 and 2018. This suggests that the service provider is doing a good job in terms of making its customer aware of complaints handling procedures. In terms of level of satisfaction on the following; confidentiality, helpful information, and quality of service, consumers are more satisfied with these services in 2018 compared to 2015. However, consumers were less satisfied with the following: installation time, call service center, service charges, pricing information, ease of fault reporting; network quality, fault repair, and handling of customer complaints. This suggests that the quality of service provided by the service provider has not improved, in fact it has deteriorated. A plausible explanation to this is that there is only one service provider in the fixed line telephone, hence lack of competition acts as a disincentive to improvement in service delivery. However, slight improvements were observed in the following: services provided being value for money, clarity of bills and their timely arrival as well as their accuracy.

Postal services sector: A greater proportion (72.6%) of consumers indicated that there were aware of complaints handling procedures in 2018, compared to 2015 (57.5%). This shows an improvement in awareness of the complaint handling procedures probably as a result of increased public education campaign by the service provider. In terms of satisfaction in the courier services, there has been an increase in the proportion of consumers who indicated that they were satisfied with the following: price, speed, customer service, confidentiality and security. This suggests that competition in the courier services sector has increased the efficiency of the operators as more licenses have been granted between 2015 and 2018.

Broadcasting sector: There was slight improvement in consumers who indicated that they were aware of customer complaints handling procedures in 2018 (53.6%), compared to

2015(49.7%). However, the level of awareness is still low and this suggests that the service providers do not have effective public education campaigns which informs their customers on the complaints procedures. Consumers' level of satisfaction improved between 2018 and 2015 on the following attributes; service availability, accessibility region wise and a variety of services. While, there was an improvement in the level of satisfaction in terms of fair subscription prices between 2015 (23.1%) and 2018 (41.2%), this level is still low. This suggests that there is less competition in the subscription TV stations because of limited number of such stations.

Internet services: The consumers in the internet service sector were more aware in 2018 of customer complaints handling procedures than they were in 2015. This implies that the service providers are doing a good job in promoting consumer awareness of complaints procedures. Comparisons of consumer satisfaction level between 2015 and 2018, revealed that more consumers were satisfied with the quality of service offered in 2018 compared to 2015. In addition, more consumers were satisfied with the prices of internet prices in 2018 than in 2015. However, there is still a sizeable proportion (16.6%) who are dissatisfied with prices charged for internet services.

Consumer satisfaction index: Comparisons of the 2015 and 2018 consumer satisfaction results reveal that overall consumer satisfaction has improved with consumer satisfaction index increasing from 72% to 76% in 2015 and 2018 respectively. However, there was a slight decrease in the satisfaction level in the broadcasting sector which fell from 76% in 2015 to 74% in 2018. In some sectors the level of satisfaction in some attributes fell, it is therefore recommended that BOCRA engage with the same providers with the view of improving their services and hence overall consumer satisfaction.

8.4 RECOMMENDATIONS

Based on the above results, the study suggests the following recommendations in order to improve the effectiveness of BOCRA in its mandate execution, service providers' perception of the regulator and their participation in regulation and policy development as well as improve customers' perception and level of satisfaction on the BOCRA regulated services.

8.4.1 While the majority of the service providers perceive their relationship with BOCRA as being cordial, others view it as being minimal and characterised by one sided communication. It is therefore recommended that BOCRA should improve its communication with the service providers and engage them more in the process of policy development and formulation of regulations as well as decision making affecting the operation of communication industry.

8.4.2 In order to improve competition in the communication sector, especially the broadcasting sector, BOCRA should engage government with the view to regulate the public broadcasters. These will go a long way in providing a level playing field as both the public and private broadcasters will operate in the same regulatory environment and hence enhance competition. Additionally, this will ensure uniform standards throughout the communication industry as well the players will conform to the same policies and regulations.

8.4.3 Enforcement of regulation in some sectors such as the postal services is weak, leading to a number of illegal service providers in the market. These illegal service providers do not pay license fees as they are not licenced with BOCRA leading to loss of revenue by the regulator and unfair competition with the licensed service providers.

8.4.4 In order avoid situation where infrastructure belonging to service providers is underused, it is recommended that BOCRA in consultation with service providers develops a policy on infrastructure sharing and fully implement the policy for the benefit of all stakeholders in the communication industry.

8.4.5 Licensed operators have indicated that monitoring of the contention ratio is weak, at times leading to overload of equipment and eventually poor service delivery by the service providers. BOCRA should therefore improve its monitoring of the contention ratio by improving its infrastructure.

8.4.6 Regarding licensing of equipment, service providers decry that the process of licensing equipment takes long and at times BOCRA follows the same tedious process of licensing equipment even though it has licensed similar equipment, with the only difference being the brand names. It is recommended that BOCRA maintains a data base of all licenced equipment, including their technical specification and use this data base as reference for future license applications. This will speed up the licensing of similar equipment and deal with the complaints by the service providers.

REFERENCES

1. Ary, D., Jacobs, L. C., & Razavieh, A. (1996). *Introduction to research in education*. Fort Worth, TX: Harcourt Brace College Publishers.
2. BOCRA (2015). 2015 BOCRA Customer Satisfaction Survey
3. Cochran, W. G. (1977). *Sampling techniques (3rd Edition)*. New York: John Wiley & Sons.
4. International Telecommunication Union (2017). *Measuring the Information Society Report*. Geneva, Switzerland.
5. Krejcie, R. V. & Morgan, D. W. (1970). Determining sample for research activities. *Educational and Psychological Measurement*, 30, 607-610.
6. Statistics Botswana (2011). 2011 Botswana Population of Towns and Villages. Gaborone, Botswana: Statistics Botswana
7. United Nations (2005). Designing Housing Sample surveys: Practical guidelines, New Work: Department of Economic and social affairs

ANNEXES

ANNEX 1: LIST OF INTERVIEWED SERVICE PROVIDERS

Internet	Postal and Courier	Broadcasting	Telecommunications
In Gaborone			
Radio Solutions	Aramex	Star Times	BofiNet
ZebraNet	Sprint Couriers	OVY Networks	Mascom
Global Broadband Solutions	Botswana Couriers and Logistics	e-Botswana	BTCL
Conduitwire	SkyNet	Gabz FM	
Internet Options Botswana	TriOptimum Logistics	Duma FM	
MicroTeck	Courier Solutions	Kwese TV	
Ki-tech	TMS Logistics	Yarona FM	
Corp Tech	Botswana Post		
ICT Dynamix			
Integrated Digital Networks			
Mega Internet			
Pula Tower			
Paqlink			
GC-Set			
VBN			
Outside Gaborone			
William's Consulting	Northguys Messenging and couriers		
Magic Web			
Winnagain			
Byte Soft			
Ngami. Net			

ANNEX 2: LIST OF CONFIRMATION STATUS

	Telecommunications	Broadcasting	Postal and Courier	Internet
ATTENDED				
	Mascom	Duma FM	Botswana Post Services	CONDUITWIRE HOLDINGS (Pty) Ltd
	BTCL	Gabz FM	Aramex Botswana	CORP TECH INC (PTY) LTD
	BOFINET	Yarona FM	Botswana Couriers and Logistics	DESERT ROAD T/A **ZEBRANET**
		eBotswana	Skynet worldwide express	ELECTRO-METIC ENTERPRISES (PTY) LTD- **INTERNET OPTIONS BOTSWANA**
		OVY Networks	Sprint Couriers	GC-SAT
		Star Times Satellite	Tri Optimum Logistics (UPS)	GLOBAL BROADBAND SOLUTIONS
		Kwese TV	TMS Logistics	ICT DYNAMIX
			Courier Solutions	INTERGRATED DIGITAL NETWORKS (PTY) LTD
			NorthGuys Messenging & Couriers	KI-TECH (PTY)Ltd
				MICROTECK ENTERPRISES
				PAQLINK ENTERPRISES
				PULA TOWERS
				RADIO SOLUTIONS
				SEA BREEZE **T/A MEGA INTERNET**
				VIRTUAL BUSINESS NETWORK SERVICES
				BYTE SOFT (PTY)Ltd
				MAGIC WEB (PTY) LTD
				NGAMI.NET (PTY) LTD

				WILLIAM'S CONSULTING **T/A KASANE COMPUTERS**
				WINAGAIN
CONFIRMED BUT DID NOT ATTEND				
		Alfaview	Bollore Africa Logistics Botswana (TNT)	4 SITE HOLDINGS (PTY) LTD
		Clouds TV	FedEx Botswana	BUSINESS SOLUTIONS CONSULTANTS (PTY) LTD
		Urban TV	Pinnacle Express	BYTES TECHNOLOGY
			Zebra Hub of Excellence	CLICK CONNECT (PTY)LTD
				DAPIT VENTURES
				EMAXALOT INVESTMENTS (PTY) LTD
				FONEWORX (PTY) LTD
				MARKET LYNX
				MISSION COMMUNICATIONS (PTY) LTD
				MMELEGI (Pty) Ltd
				NUCRAFT (PTY) LTD
				SOLID TRIANGLE
				TECHNO TRENDS (PTY) LTD
Wrong Contact Details				
	Orange		Enlink Freight Services	iTALK AFRICA (PTY) LTD
			Fast and Furious	SYNDHURST (PTY) LTD
			First Connections Couriers	ABARI COMMUNICATIONS BOTSWANA (PTY) LTD
			KTU Express	AFRICA TELECOMMUNICATIONS/ CROC 684
			Omega/ S Couriers	ALFA INTERNET SERVICES
			Triton Express	BLUE PEARL COMMUNICATIONS (Pty) Ltd
			MontelView Holdings T/A Drop it	BOLOA (PTY) Ltd
			Logistixware Botswana	BROADBAND BOTSWANA INTERIOR

				CARAX (PTY)Ltd
				CLOUDSEED
				CONCEROTEL
				DEPARTMENT OF INFORMATION TECHNOLOGY
				FUSION (PTY) LTD
				HOPE SERVICES