

**CONSUMER PROTECTION IN THE
TELECOMMUNICATION MARKETS IN THE POST
LIBERALIZATION ERA – THE CASE OF TANZANIA**

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DEDICATION

This work is dedicated to my darling husband Dr. Goodiel Moshi and my beloved children Jadon and Joan

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ABBREVIATIONS

AAPOR – American Association for Public Opinion Research

AKFED – Aga Khan Fund for Economic Development

ADR – Alternative Dispute Resolution

APCON – Advertising Practitioners of Nigeria

ARICEA – The Association of Regulators of Information and Communications for Eastern and Southern Africa

AU – African Union

CC – Complaint Committee, Tanzania

CCU – Consumer Complaint Unit, Tanzania

CDR – Consumer Dispute Resolution

CEIR – Central Equipment Identification Register

CERT – Computer Emergency Response Team

CI – Consumer International

CLF – Converged Licensing Framework

COMESA – Common Market for Eastern and Southern Africa

CPA – Consumer Protection Act, Nigeria

CPC – Consumer Protection Council, Nigeria

EAC – East Africa Community

EC – European Commission

ECOSOC – Economic and Social Council

EIR – Equipment Identification Register

EPOCA – Electronic and Postal Communications Act

EU – European Union

FCT – Tanzania Fair Competition Tribunal

GMSS – Global Maritime Distress safety and System

GSM – Global System for Mobile communication

GSMA – GSM Association

HSDPA – High Speed Downlink Packet Access

HTT – Helios Towers Tanzania

ICASA – Independent Communications Authority of South Africa (ICASA)

ICT – Information and Communication Technology

IMB – Information Motivation Behavior

IMEI – International Mobile Equipment Identity

IPO – Initial Public Offer

IP-PoP – Internet Protocol Point of Presence

IPS – Industrial Promotional Services

ISO – International Standards Organization

ISP – Internet Service Provider

ITU – International Telecommunication Union

KCC – Kenya Communications Commission

KPI – Key Performance Indicator

LTE – Long Term Evaluation

MEK – Minimum Economic Knowledge

MIC – Millicom International Cellular

MNP – Mobile Number Portability

MoA – Memorandum of Agreement

MoU – Memorandum of Understanding

MST – Ministry of Science and Technology

NCA – National Communications Agency

NCC – National Communications Commission

NF – National Facility

NGO – Non Governmental Organization

NICTBB – National ICT Broadband Backbone

NLRC – National Lottery Regulatory Commission, Nigeria

NSN – Nokia Siemens Networks

NTP – National Telecommunications Policy, Tanzania

ODR – Online Dispute Resolution

OECD – Organization for Economic Co-operation and Development

OFCOM – Office of Communications, United Kingdom

RIO – Reference Interconnection Offer

SADC – Southern African Development Community

SDG – Sustainable Development Goals

SIM – Subscriber Identity Module

SMS – Short Message Service

SR – Self Regulation

TAEC – Tanzania Atomic Energy Commission

TBC¹ – Tanzania Broadcasting Commission

TBC² – Tanzania Broadcasting Corporation

TBS – Tanzania Bureau of Standards

TCC – Tanzania Communications Commission

TCRA – Tanzania Communication Regulatory Authority

TCRA-CCC – Tanzania Communications Regulatory Authority – Consumer Consultative Council

TD-LTE – Time Division Long Term Evolution

TPB – Theory of Planned Behavior

TPC – Tanzania Posts Corporation

TPTC – Tanzania Portal Telecommunications Corporation

TRA¹ – Tanzania Revenue Authority

TRA² – Theory of Planned Behavior

TRI – Technology Resources Industries, Berhad

TTCL – Tanzania Telecommunication Company Limited

TTMS – Telecommunication Traffic Monitoring System

UAE – United Arab Emirates

UMTS – Universal Mobile Telecommunications Service

UN – United Nations

UNCTAD – United Nations Conference on Trade and Development

UNGCP – United Nations Guidelines for Consumer Protection

USD – United States Dollar

VAS – Value Added Services

V-SAT – Very Small Aperture Terminal

WGTCP – Working Group for Trade and Competition Policy

WOM – Word of Mouth

WTO – World Trade Organization

EXECUTIVE SUMMARY

The telecommunications sector has grown tremendously since the turn of the century (ITU, 2015). This growth has been attributed to massive policy reforms such as the liberalization of markets and the subsequent technological developments. The policy rationales for liberalization include the improvement of consumer choices, sovereignty and bargaining power, which should in turn lead to higher perceived consumer satisfaction (Hulsink, 2012; Togan, 2010). However, even with the presence of liberalized markets, consumer satisfaction in the telecommunications sector is still low, both in developing and developed countries (Lopez, Amaral, Garín-Muñoz, & Gijón, 2015). Furthermore, it is now evident that competitive markets alone do not necessarily translate to better services, as research shows that even in competitive markets, there can be low quality service providers (Lopez, Amaral, Garín-Muñoz, & Gijón, 2015). This is because as competition becomes stiff and profit margins are eroded, service providers have little incentive to increase their investments in providing better quality services, if such decisions do not lead to comparable financial gains. Consequently, consumers are more likely to be exploited in the telecommunication markets, which has raised the need for consumer protection to ensure consumers get value for money and have bargaining power.

The Tanzanian market is not different from the rest of the world where consumers are prone to multiple challenges, from billing problems to poor network quality. For example, parliamentary sessions on consumer complaints have revealed that some mobile service providers charge their users automatically, without their consent. Similarly, there have been accusations of collusion among the service providers, as in February 2015 all major operators decided to increase their data prices within the same week, a practice that is against competitive markets. Although the Tanzanian regulatory authority has regulations to uphold consumer protection, in most cases regulations are offered ex-post, thus evoked after the consumer has filed his complaints to the responsible entities in accordance with the procedure instituted by the Tanzanian regulator. Thus, consumer protection is pegged against the ability of consumers to discern

when their rights have been abused, aware of the complaints procedures and entities that can enable them to pursue redress, and lastly actually file the complaints in accordance with the complaints procedure.

The thesis is guided by the Information Motivation Behavior (IMB) theory by Fisher and Fisher (1992) to understand the consumer behavior of telecommunication users in Tanzania. The IMB theory suggests that information is an important agent, with the ability to alter consumer behavior. Thus, consumers having the correct information are more likely to behave in a positive way and according to social norms. Since consumer protection is offered ex-post, it is crucial that consumers have proper information, to be able to discern negative experiences. In other words, information may offer consumers the ability to discern challenges in the markets, and hence provides operators and/or the regulator with the opportunity to correct market abuse. The underlining belief is that properly handled consumer complaints have benefits for the industry, as they offer a feedback mechanism to service providers and regulators alike, and thus can be used to improve the service design, management and delivery (Tronvell, 2008). Accordingly, this thesis has three specific objectives; first to analyze the level of information among telecommunication consumers; second to determine the antecedent of the level of information among consumers; and third to investigate the effect of information on consumer complaint behavior. To achieve this objective, the thesis aim to respond three research questions:

- What is the level of consumers' knowledge about their rights and its determinants in the telecommunication markets?
- What is the level of consumers' awareness of the complaints procedure and its determinants in the telecommunication markets?
- What is the effect of information on consumer complaint behavior?

Thesis uses three empirical analyses in response to the research problems. The first empirical analysis tackled the first research question. The study found that the level of consumer knowledge varies significantly among consumers and is skewed toward low knowledge. Furthermore, the study showed that

the respondents' knowledge levels are determined by socioeconomic background, media use (social media), and institutional awareness (the regulator-TCRA).

The second empirical analysis addressed the second research question. The study revealed that the level of consumer awareness on complaints procedure is low. Furthermore, the study demonstrated that awareness of the complaints procedure is determined by socioeconomic background, whereby urban consumers are more likely to be aware. Moreover, the use of newspapers and social media increases individuals' propensity toward awareness of complaints procedures in the telecommunications market.

The last research question was answered by the third empirical study. The study suggested that 40% of aggrieved consumers are not likely to complain. Furthermore, the study elucidated that the level of information influences consumers' complaint behavior. Thus, better informed consumers are more likely to complain. In addition, the study suggested that while information is the basic agent to consumer behavior, there are other factors that influence consumer complaint behavior in the telecommunication markets. Those factors include socioeconomic background, social media use, and the nature of the unpleasant experience.

Based on the results of each case study, this thesis has offered an academic contribution and implications for policy makers as well as service providers' management with respect to consumer protection in developing countries, particularly in Tanzania.

Academic contribution

- The thesis has contributed to literature by introducing new determinants of consumer complaint behavior in the telecommunication markets. Previous studies suggested that socioeconomic factors, the level of dissatisfaction and the nature of the unpleasant experience influence consumer complaint behavior. This thesis does not nullify previous studies that analyzed the determinants of consumer complaint behavior (CCB) in the telecommunication market, but rather

extended **the level of information** as another factor that is likely to affect CCB. In addition, the thesis suggests that social media use also influence consumers' behavior.

Implications for policy makers

- Education
 - As informed consumers - consumers who know their rights and are aware of complaints procedure are likely to complain when having unpleasant experiences, and thus eliminate a risk of consumer exploitation, informed consumers are vehicles toward a healthier telecommunication sector. Therefore, policy makers are recommended to offer consumer education programs targeting consumers in all socioeconomic groups, including vulnerable ones.
- Demand side based survey
 - As 40% of aggrieved consumers are not likely to complain, the policy makers are advised to conduct a demand side survey. This survey will aid policy makers and enable them to device better policies for consumer protection, by providing insights into challenges facing consumers in the telecommunication markets.
- Social media
 - The regulator is recommended to take social media more seriously, as one means of interacting with the consumers. Social media can be used by the regulator to provide information to consumers, and also as a means for obtaining feedback from consumer experiences in the market, which may be useful insights for consumer protection policy.

Implications for service providers' management

- Offer information

- While the regulator has the main responsibility of offering information to consumers, service providers also have a role to play. For instance, the consumers must be well informed by their service providers concerning complaints procedures to follow when having unpleasant experiences. Therefore, and due to the limited awareness of complaints procedures among consumers, service providers are recommended to offer information to consumers, including vulnerable ones.
- Improve quality of service
 - All respondents have reported to have had at least one unpleasant experience related to telecommunications; this can be minimized, even though service failure is inevitable. Therefore, service providers are advised to minimize service failures and eliminate them where technically possible.

CHAPTER 1 : INTRODUCTION

1.1 Background

The telecommunication sector has grown tremendously since the turn of the 21st century, in both developed and developing countries. Penetration of mobile services had reached 7 billion (equivalent to 95% of the global population) in 2015, from less than 1 billion in 2000, worldwide (ITU, 2016). The same trend of growth has been witnessed in the Tanzanian telecommunication sector: penetration of mobile services had reached 39.9 million (equivalent to 79% of the population) in 2015, from only 0.28 million (less than 1%) in 2000 (TCRA, 2015).

Rapid growth in the telecommunications sector is attributed to sector reforms, and mainly the liberalization of markets (Batuo, 2015). Liberalization of telecommunications markets started around 1980 and 1990 in most developed and developing countries, respectively (Chowdary, 1998). The Tanzanian telecommunication markets were partially liberalized in 1993 and fully liberalized in 2005. As a result of liberalization, investments in the telecommunication sector grew (Lestage, Flacher, Kim, Kim, & Kim, 2013; Kang, Hauge, & Lu, 2012; Garrone & Zaccagnino, 2015); this in turn encouraged technological advancements, which led to innovative services and products. For instance, most operators in Tanzania are currently offering 4G LTE services (Kitundu, 2016).

Furthermore, due to technological advancements, the telecommunication sector has become intertwined with and plays a major role in other sectors such as education, commerce, agriculture, and health. For instance, mobile money systems such as M-Pesa are important in the financial sectors of developing countries (Alampay and Moshi, *forthcoming*). The link between the telecommunication sector and other sectors explains the former's vitality and its potential to foster economic growth in the modern world, thereby playing a crucial role in attaining the Sustainable Development Goals (SDG) (ITU, 2016).

Apart from contributing to the growth of the telecommunication sector, liberalization was expected to improve consumer sovereignty by creating choices in the markets through competition, hence leading to higher consumer satisfaction (OECD, 2007; Jordana & Levi-Faur, 2004). However, according to Lopez et al. (2015), consumer satisfaction is still low in both developed and developing countries. In particular, the situation is worse in developing countries, where the quality of service (QoS) is persistently poor ("A growing number", 2013; Appiah, 2011; Fripp, 2012; Mumo, 2016; TCRA, 2015). This persistence of poor QoS and low consumer satisfaction in the telecommunication markets suggests that liberalization alone does not guarantee consumer sovereignty (Lopez, et al. 2015; Smith, 2010; Cherry 2010).

Moreover, Averitt and Lande (1997) suggest that competition may lead to consumer sovereignty only when consumers are able to make rational decisions in competitive markets based on the information offered. Thus, information is a crucial factor for consumers to make sound decisions, hence reaping the competitive advantages of the liberalized markets. In addition, Sappington (2005) and Xavier and Ypsilanti (2010) posit that even in competitive markets, consumers are faced with challenges such as incomplete information and behavioral biases. In a similar vein, the consumer protection manual prepared by UNCTAD (2016) elucidates that there is a disparity between consumer and supplier in the marketplace in terms of bargain power, knowledge, and resources, and suggests that consumers are more likely to be vulnerable in that relationship. Thus, studies (Ofcom, 2007; Xavier, & Ypsilanti, 2008) emphasize that consumer protection is crucial in the markets to improve consumer welfare, as well as to deliver the potential benefits of competition.

Consumer protection is becoming a common topic of discussion among policymakers, researchers, and other stakeholders worldwide. For example, international organizations such as the United Nations (UN), the Organization for Economic Co-operation and Development OECD, and the European Union (EU) have directives, manuals, or guidelines for consumer protection (UNCTAD, 2016). Consumer protection in the telecommunication markets has been adopted mainly to strike the right balance between consumers and service providers by first, protecting consumers against unfair business practices; second,

providing information and education to consumers; and third, helping the aggrieved consumer in the process of complaining and seeking redress. In addition to consumer welfare benefits, consumer protection is expected to oblige suppliers or service providers to offer a high quality of services and refrain from unfair business practices, thereby increasing efficiency in the marketplace (Hogarth & English, 2002).

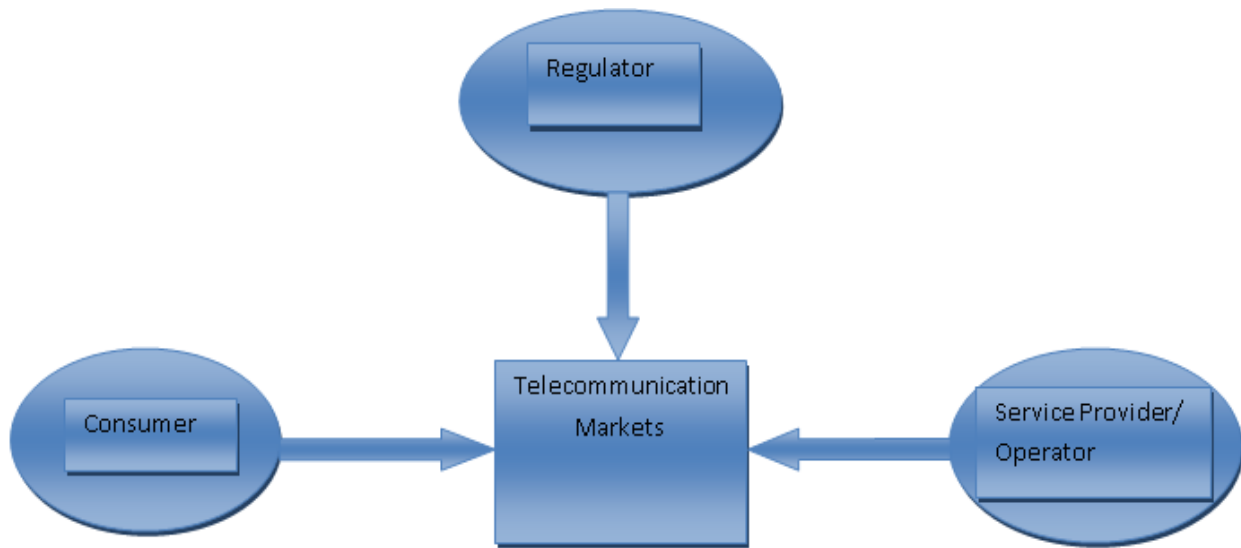
1.2 Problem Statement

1.2.1 Ideal Situation

In Tanzania, the task of consumer protection in the telecommunication markets is mainly left to the regulator: Tanzania Communication Regulatory Authority (TCRA). Specifically, the regulator is the overseer of the telecommunication markets with the responsibility of controlling the market failure by first, ensuring a level plain field among service providers; second, offering consumer protection; and third, managing scarce national resources such as spectrum. The regulator takes this responsibility by passing regulations for the market (as seen in Figure 1.1), where both consumers and service providers have to adhere to them for the telecommunication markets to operate efficiently.

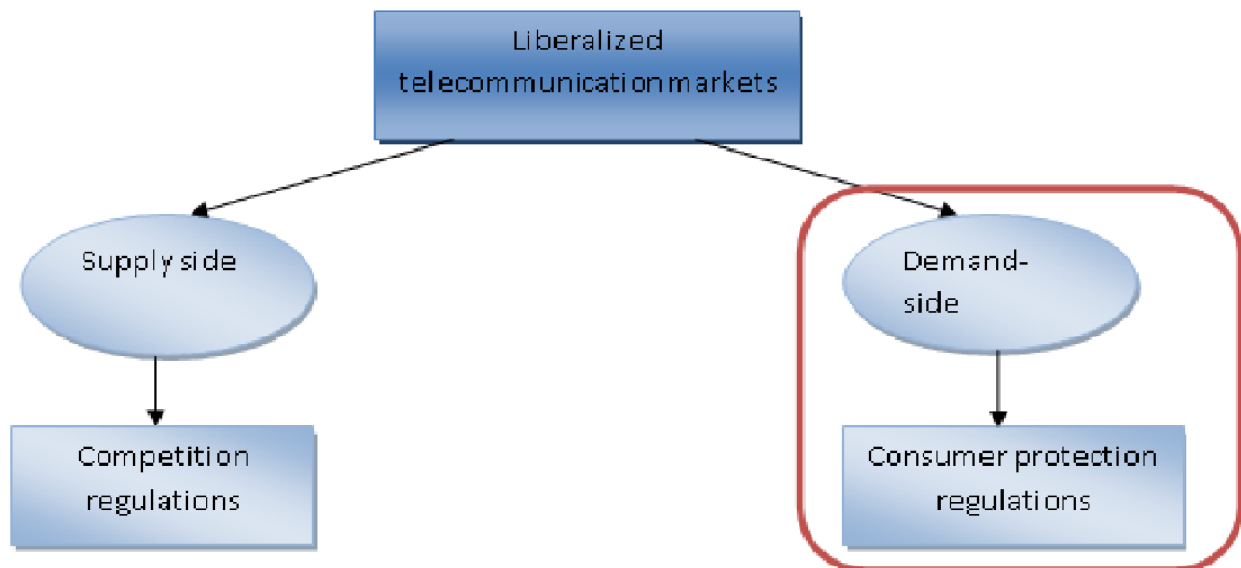
For instance, to ensure that liberalized telecommunication markets operate optimally, the regulator and policymakers have set regulations to ensure that both the demand and supply sides are protected by law. As figure 1-2 depicts, competition regulations have been enacted to guide the supply side by ensuring a level playing field among service providers, thus ensuring that all operators are protected and treated equally under the law. On the other side, consumer protection has been enacted to ensure consumers are empowered to make rational decisions and protected to obtain value for money. In other words, competition regulations offer protection to service providers, and consumer protection regulations offer protection and empowerment to consumers. Hence, these two regulations offer the desired balance in the market and eliminate the possibility of market failure.

Figure 1-1: Telecommunication market



Multiple scholars have researched on the supply side, thus competition policy (competition and anti-trust regulations). International Telecommunication Union (ITU) reported that competition policy is successful in most countries; however most countries were still working on developing consumer protection. Thus, ITU suggest that there is still a gap to be filled in the consumer protection. Therefore, this thesis will be based on the demand side, thus consumer protection and empowerment.

Figure 1-2: Liberalized telecommunication markets



1.2.2 Background of Consumer Protection

Ideally, the presence of competition and consumer protection regulations should guarantee optimum yields in the telecommunication markets. However, this is not always the case in Tanzania. This is because while the regulator has the responsibility to ensure consumer protection, regulatory intervention in the market is non-desirable and must be kept to a minimum. For that reason, consumer protection is mostly offered ex-post. As a result, in case of an unpleasant experience in the market, the aggrieved consumer is expected to act as a whistleblower. Thus, for the regulator to intervene in the market, this consumer must first, understand that his or her rights have been violated; second, be aware of the complaint procedure; and third, actually complain to his or her service provider, and then escalate the complaint to the regulator if unsatisfied by the resolution offered by the service provider. This means that unless consumers voice their complaint, the regulator cannot intervene in the market and offer the required protection.

Consumer complaints are sometimes considered negatively, but when properly managed can be used as feedback to improve the quality of service, thereby promoting growth in the sector. For instance, in the case of Tanzania, consumer complaints represent chances for the regulator to intervene in the market and offer consumer protection in two ways: first, service providers are required to submit all complaints filed by consumers and their resolution to the regulator; and second, consumers have the chance to escalate their complaints to the regulator when they are dissatisfied with the resolution offered by their service provider. Thus, through the reporting of complaints by service providers and escalated complaints by consumers, the regulator receives feedback on the challenges that consumers face. Based on complaints, the regulator can then intervene in the market, investigate the reported unpleasant experience, protect consumers where necessary, and correct market abuse. For example, this was the response from the TCRA's Head of Corporate and Communication following an unpleasant experience that raised public query, as reported by Tambwe (2015): *"Following the number of complaints we have received from*

numerous people and the public outcry on social media, by law we have a duty to follow up on the matter and will only make a public statement after thorough investigations.” Of note in this response is that due to the number of complaints, the regulator was allowed by law to intervene, investigate the matter, and make a public statement. Thus, the ability of the consumer to complain is crucial for consumer protection.

1.2.3 Challenges Facing Consumers in the Markets

As mentioned in the previous section, consumer protection is important as it gives the regulator a chance to intervene in the markets in the case of unpleasant experiences. The present section demonstrates some of the challenges encountered by consumers in the telecommunication markets and why consumer protection is important.

First, poor quality of telecommunication services still persists among service providers in African countries including Tanzania (Appiah, 2011; Fripp, 2012; Mumo, 2016; Osuagwu, 2012; TCRA, 2015). One of the reasons for this is an intensification of competition and technological advancements in the sector, so that service providers are forced to simultaneously reduce the cost of services and invest CAPEX into new technologies. Therefore, service providers sometimes have low incentives to improve QoS in places that offer them low return (such as rural areas), as high QoS imposes more costs for operators. Thus, unless the return on offering high QoS exceeds its cost, service providers’ incentive to do so may be jeopardized (GSMA, 2016; Wu and Lo, 2012). In the long run, low incentive to improve QoS among service providers may retard the growth of the telecommunication sector especially in developing countries where the majority of the populace lives in rural areas (GSMA, 2016).

For example, the regulator in Tanzania conducted a QoS test in December 2015 (in Dar es Salaam), and in February and March 2016 (in Dar es Salaam, Mwanza, Arusha, and Zanzibar). This revealed that the majority of service providers were offering poor QoS compared to the required standard parameters. However, while this offered insight to the regulator, such tests are rarely conducted. For instance, the last published QoS test was conducted in February and March 2016 (more than a year ago). Furthermore,

previous QoS tests covered only four large cities. Therefore, for the most part, consumer complaints are vital as they offer better feedback since QoS tests are not conducted periodically and do not cover the whole country (or even rural areas).

Secondly, because QoS test is not conducted periodically and throughout the whole country, due to lack of monitoring service providers tend not to adhere to the regulations stipulated by the regulator (Ofcom, 2009; TCRA, 2015). For instance, in February 2015, within a period of one week, three major operators in Tanzania raised their internet prices abruptly against the tariff regulations of 2011 (TCRA, 2015). The matter raised public concern among consumers. The regulator's Head of Corporate and Communication, Mr. Mungy, acknowledged receiving multiple complaints from consumers. Mr. Mungy elaborated that the regulator does not regulate retail prices. However, because consumers complained, that by law gave the organization the power to intervene in and investigate the matter. Following the investigation, three major service providers were penalized for failing to adhere to regulations (Tambwe, 2015). In addition, during the third session of the 41st parliamentary meeting on 13 June 2016, Hon. Cosato D. Chumi alleged that service providers are conducting a great deal of unfair business practices in the telecommunication markets.¹ Due to the persistence of these unfair business practices, it is crucial for consumers to complain, thereby bestowing power to the regulator for intervention.

In summary, consumer complaints are crucial as they give the regulator the chance to intervene in the market and offer the required protection to consumers. However, it is also important to analyze whether consumers have the basic information necessary to file their complaints –in other words, whether consumers know their rights and are aware of complaint procedures.

1.3 Purpose

The problem statement section has demonstrated the importance of offering information to consumers to empower consumer complaint behavior in the process of consumer protection in telecommunication

¹ <http://parliament.go.tz/polis/uploads/documents/1476712142-13JUNI,%202016.pdf>

markets. According to information, motivation, and behavior skills (IMB) theory, conceived to understand and explain social behaviors; information is one of the crucial aspects to attain the desirable behavior (Fisher and Fisher's 1992, 1993, 1999, and 2000). Moreover, Ong and Teh (2016) suggest that consumers who are informed on what, where, and how to complain are more likely to do so or seek redress compared to the uninformed. Similarly, Usman, Yaacob, and Rahman (2016) suggest that consumers who are informed about consumer rights and enforcement or complaint procedures are more likely to complain when they encounter unpleasant experiences in the marketplace. In other words, information gives consumers the ability to communicate dissatisfaction in the market, which is crucial for consumer protection (Brennan & Ritters, 2004).

However, to the best of the present author's knowledge, at the time of this writing neither study has analyzed the level of information and its determinants among consumers, nor the effect of information (that is, consumers who knows consumer rights and are aware of the complaint procedure) on consumer complaint behavior in the Tanzanian telecommunication markets. Studies (including (Chinedu, Haron, & Osman, 2017; Garín-Muñoz, Pérez-Amaral, Gijón, & López, 2016)) have made contributions on consumer complaint behavior in the telecommunication markets but have not considered the effect of information as another factor in this behavior.

Hence, the main purpose of this thesis is to protect and empower consumers in the Tanzanian telecommunication markets through information. Based on the IMB theory, information is an important aspect for consumers to exhibit desired behavior. Thus, informed consumers are expected to act rationally in the markets compared to those who are uninformed. Consequently, to protect consumers, it is vital to equip them with basic and necessary information for them to make sound decisions. However, the level of information among consumers, the factors affecting this level of information, and the effect of information on consumer complaint behavior in the telecommunication market are unknown. Thus, this thesis analyzes three subjects:

- The level of information among telecommunication consumers,
- Factors affecting the level of information among consumers, and
- The effect of information on consumer complaint behavior.

Based on the findings, the thesis addresses the implications for policymakers, including the regulator, with regard to consumer empowerment and protection.

1.4 Research Questions

Research questions have been formulated in accordance with the stipulated specific research objectives. These questions closely examine consumers as key stakeholders in upholding consumer protection practices in the market. In total, this thesis aims to respond to the following three research questions by conducting in-depth analyses.

1) What is the level of consumers' knowledge about their rights in telecommunication markets, and what factors determine this?

Consumers' knowledge, together with other psychological and social factors, plays an important role in altering consumers' behavior (Onel & Mukherjee, 2016). When consumers have limited knowledge in the market concerning their rights, unpleasant experiences become tenacious (CPC, 2014). A low knowledge level affects the ability of the aggrieved consumer to file complaints, thereby lowering the opportunity for operators and/or policymakers to correct unpleasant experiences in the market.

Knowledgeable consumers can engage more confidently and are more likely to consume services from the markets. Thus, these consumers are the vehicle towards sustainable competitive markets, hence growth in the sector and economy at large. Therefore, to empower consumers, it is crucial to understand the level of consumer knowledge and factors that determine it. As the result, the study will profile consumers and identify

vulnerable ones. Consequently, the recommendation for regulator and managerial policy implication consumer protection will be drawn.

2) What is the level of consumers' awareness of the complaint procedure in the telecommunication markets, and what factors determine this?

In addition to knowledge of consumer rights, a proper understanding of the complaints procedure is crucial to empower consumer complaint behavior. The Tanzanian regulator has published the procedure to be followed by the aggrieved consumer when seeking redress or complaining about unpleasant experiences. Ong and Teh (2016) suggest that consumers who are aware of complaint procedures are more likely to complain when they encounter unpleasant experiences in the market.

Thus, to empower consumer complaint behavior, it is vital to understand factors that determine their awareness of the complaint procedure in the telecommunication market. To this end, this research question analyzes these factors. As a result, vulnerable consumers can be identified. Further, the results of this study deepen policymakers' understanding of attaining the regulatory goal of empowering and protecting consumers. Finally, the results offer useful consumers insights to managers.

3) What is the effect of information on consumer complaint behavior?

Consumer complaints are vital for consumer protection in the Tanzanian telecommunication markets since they give the regulator the chance to intervene. Moreover, consumer complaints offer feedback to service providers, which may lead to improvements in QoS. The present research question analyzes the effect of information on the consumer complaint behavior. In other words, this research question is expected to unveil the likelihood of highly informed consumers complaining compared to those who are less informed.

1.5 Contribution

Through three case studies, this thesis makes both academic and social contributions in the Tanzanian telecommunication markets. Moreover, the results may be applicable to other countries with similar market structures. The contributions are as follows.

1.5.1 Academic Contribution

This thesis makes an academic contribution by investigating the effect of providing information to consumers, and how this information affects consumer behavior in the markets. To the best of the author's knowledge, this is the first study to investigate this in the Tanzanian telecommunication markets. Previous studies have suggested determinants of consumer complaint behavior in this context (see Figure 1-3), but none have considered the effect of information. This thesis in no way nullifies previous findings, but rather adds to the body of literature showing that basic information is crucial to empower consumer complaint behavior, hence consumer protection in the telecommunication markets.

Another contribution of this study is an in-depth and general understanding of the telecommunication markets before and after the liberalization era (from 1900 to 2016), which can be used by future studies to understand the stages of growth of telecommunication sector in Tanzania. Furthermore, the thesis focuses on consumer protection using the case of Tanzania, and thereby contributes to the limited body of literature on developing countries.

1.5.2 Social Contribution

The thesis makes a social contribution by determining the level of information among consumers and identifying vulnerable consumers (those who may require extra protection and empowerment in the markets compared to so-called “average consumers”). Furthermore, the thesis suggests means that may be used by policymakers to create information/knowledge-based consumers. Such consumers have the

ability to act rationally in the markets, and can thus challenge the markets to operate optimally. In turn, this may drive the improvement of QoS.

In addition, this thesis contributes general market insight to service providers on ways to improve their services. For instance, while the regulator has the basic responsibilities of providing information to consumers, part of this information must be offered by service providers, such as complaint procedures. Every service provider has a unique complaint procedure to be followed by its consumers. Moreover, factors influencing consumer complaint behavior may be of interest to service providers, since studies have proved that consumers who complain to their service providers are more likely to be loyal and less likely to adopt negative behaviors when the complaint is properly managed. All in all, the present study offers insights to service providers that may be used as competitive advantages.

1.6 Thesis Overview

This thesis comprises nine chapters. The second chapter provides an overview of the telecommunication markets in Tanzania before and after the liberalization era. The telecommunication sector in Tanzania can be traced back to 1900 during the Colonial Era, and has gradually developed over time. To increase investment in the sector, it was partially liberalized in 1993 and fully liberalized in 2005. This was accompanied by policy reforms, which resulted in a number of regulations and legislation. Prior to 2005, policymakers focused mostly on the supply side, on issues such as spectrum management, anti-trust regulations, numbering planning, and creating a conducive environment for investment. Subsequently, as the consumer base grew over time, the need for demand-related policy rose. In 2005, the first consumer protection regulations were enacted; they were later improved in 2010. As of February 2017, the telecommunication sector is operated by seven mobile network operators. Penetration has reached 79%, and most operators are now working on rolling out 4G-LTE and 4.5G-LTE-A.

Next, the third chapter provides insight into the consumer protection literature and theoretical framework. This chapter is generally based on the consumer protection manual and United Nations Consumer

Protection Guidelines (UNCGP). The chapter elucidates the meaning of consumer protection, organizations responsible for consumer protection, and ways to achieve consumer protection in liberalized markets. Furthermore, it discusses selected literature on consumer protection based on case studies included in this thesis. Lastly, the chapter concludes by presenting the general theoretical framework of the thesis.

The fourth chapter elucidates the methodologies used to conduct different empirical studies during the analysis phase. The chapter focuses on the discrete probabilistic models adopted in these studies. Specifically, it focuses on the order logistic regression model and binomial logistic regression model adopted in the case studies.

The fifth chapter determines consumers' knowledge levels regarding their rights. The chapter analyzes the level and antecedent of knowledge about consumer rights among telecommunication consumers. The study profiles consumers according to their knowledge levels and analyzes factors contributing to these knowledge levels using the ordered logistic regression model. Following the analysis, the results and implications are discussed.

The sixth chapter is entitled "Consumer Awareness of Complaint Procedure." The objective of this chapter is to analyze the level and factors contributing to consumer awareness of complaint procedures in the telecommunication market. To this end, consumers are clustered according to their awareness level, and then contributing factors are analyzed. The study uses the binomial logit model to analyze the likelihood of consumers being aware of complaint procedures. Subsequently, the last sections of the chapter present the results and implications.

The seventh chapter is entitled "Consumer Complaint Behavior in the Telecommunication Market." The chapter seeks to determine how information and other factors influence consumer complaint behavior. The study analyzes the likelihood of aggrieved consumers (those who have encountered at least one unpleasant experience in the market) voicing complaints to their service providers, and the antecedent of

this behavior. To determine statistical significant factors that influence consumer complaint behavior, the study uses the binomial logistic regression model. Subsequently, the results and implications are discussed in the last sections of this chapter.

Next, the eighth chapter is entitled “Key Findings and Implications.” This chapter mainly synthesizes the results of the three case studies (discussed in chapters 5, 6, and 7). Subsequently, the chapter offers implication for regulators and other key stakeholders in the telecommunication markets with regard to consumer protection. Lastly, chapter 9 concludes this thesis by summarizing the study, discussing its limitations, and offering directions for future research.

1.7 Summary

This chapter has generally introduced this thesis. It first presented the background of the growth and vitality of telecommunication markets in modern society. This demonstrated the disparity in the relationship between the demand and supply sides, which raises the need for consumer protection. Furthermore, the chapter presented the problem statement, along with the purpose, research questions, contribution, and organization of the thesis.

CHAPTER 2 THE OVERVIEW OF THE TANZANIA TELECOMMUNICATIONS MARKET

2.1 Introduction

The previous chapter introduces the subject of consumer protection in the telecommunication sector. This chapter offers an overview of the Tanzanian telecommunications sector. The growth of the telecommunication sector in the post-liberalization era, prior to the liberalization era, and during the liberalization era will be discussed in detail. The gradual growth of the sector has been traced from the end of the nineteenth century (during the colonial period) until 2016 (Deutsch, 2002; Gann and Duignan, 1969; Gann and Duignan, 1977; Ngowi, 2009).

2.2 Prior to the Liberalization Era

2.2.1 History of Tanzania

The United Republic of Tanzania was formed after the union of two states: Tanganyika (the mainland) and Zanzibar (a coastal archipelago) (Mwakikagile, 2008). Tanganyika was a colony and part of German East Africa from the 1880s until 1919, after World War “I” (Schabel, 1990). After World War I, from 1920, Great Britain was mandated to take over Tanganyika as a trustee territory of the League of Nations (which was later changed to United Nations in 1945) until December of 1961 when Tanganyika achieved its independence (Dougherty, 1966; Taylor, 1963).

On the other side, Zanzibar was under Portuguese colonial power for about two centuries starting in the sixteen century. Later Arabs took charge of the island under the sultan of Oman (Gray, 1958; Lofchie, 1965: 23-28). Consequently, Arabs ruled for about two centuries until 1890 when the British took over as a protectorate of Zanzibar until Zanzibar’s independence in December of 1963 (Lofchie, 1965: 52-60; Middleton and Campbell, 1965). Later, in 1964, Tanganyika and Zanzibar were united and The United Republic of Tanzania was born (Noam, 1999: 114).

2.2.2 History of the telecommunication in Tanzania

During the colonial era, communication was vital for colonial masters who would carry out their day-to-day administrative tasks. Following this, in 1885, a postal agency was first established as a stamp for mail; later, telegraphy services were administered by the Germany East Africa. Until the First World War I (WWI) in 1914, the German government set up 34 telegraphy offices and more than 2537 km of landlines (Smith, 1971). Following WWI, the British took over Tanganyika (it became their territory). During British rule, communication services were administered by the East African Post and Telegraph Company, which operated until 1951 in three countries: Kenya, Uganda, and Tanzania. In 1951, the East African Posts and Telecommunication Act was enacted. Consequently, the East African Post and Telecommunication Administration was born to replace the East African Post and Telegraphy Company (Smith, 1971).

After regaining the independence in the 1960s, the East African Community was founded in 1967. The community was founded by leaders from Tanzania, Kenya, and Uganda. Consequently, most sectors were managed by the community. Therefore, the East African Post and Telecommunication administration was replaced by the East Africa Post and Telecommunication Corporation under the EAC. The EAC collapsed ten years later, in 1977. As a result, EAC member countries were left with no option but to establish their own telecommunication companies. Consequently, in 1978, the Tanzania Post and Telecommunication Corporation (TPTC) was established. The TPTC operated for about fifteen years, until 1993. After this, telecommunication was liberalized (Gorp, 2008: 52-53).

2.2.3 Policies

On the policy side, prior to 1925, the postal and telecommunication services were used only for administrative purposes, and the sector was financed by the government through commercial loans. The financial dependence of the post and telecommunication sector on the government limited their autonomy.

According to Smith (1971), the lack of autonomy affected the business growth, which led to the retardation of the sector.

From 1925, the need for technological advancements posed another threat to the sector's growth as the need for heavy capital expenditure rose. The development of advanced services like the wireless telegraph and telephone required higher capital. The capital required was far from what countries were willing to invest. The 1929 depression in East Africa made the situation even worse, as capital became scarce. As a result, the sector's ability to keep up the pace with consumer demand and economic development was limited (Smith, 1971).

However, during World War II (WWII), the need for telecommunication services played a vast role. Consequently, this raised the need for sector reforms, which attracted more investment in high technologies and led to growth in the telecommunication sector. Consequently, in 1949, the sector became autonomous and free of government interference. Thus, the sector was able to plan and prioritize according to its goals and revenue. The autonomy of the sector proved to be the better policy, as the sector grew in five-fold between 1949 and 1966.

During the formation of the East African Community in 1967, member countries decided to change the name of the corporation yet retain previous policies. After the collapse of the community in 1977, the Tanzania telecommunication sector was handed back to the government as a parastatal until 1993, when liberalization reforms took place.

In summary, prior to 1993, telecommunication services were mostly used by organizations and a few individuals. The core service offered by the telecommunication companies was a fixed telephone. The first mobile telecommunication was not licensed until November of 1993. The main challenge which faced the telecommunication sector was the heavy capital expenditure required to invest in new technologies like mobile telecommunication services and the Internet. Other challenges included the lack

of the technical and managerial capabilities needed to match up to consumer demands and technological advancements worldwide.

Due to the aforementioned challenges and the low penetration of electricity in the country, the telecommunication sector was stagnant prior to liberalization. For example, there were fewer than 88,000 fixed-phone subscribers, and most of them lived in urban areas where electricity was accessible. Therefore, to revamp the growth of the sector, the liberalization of the telecommunication sector was inevitable.

2.3 The Liberalization-process Era

2.3.1 Introduction

The liberalization process of the telecommunication sector was a result of public sector reform, which was part the liberalization of the general economy. This liberalization was the enactment of the Communication Act No. 18 of 1993. Though the sector was officially liberalized in 1993, it was not fully liberalized until 2005. This means that the liberalization process of the telecommunication sector took twelve (12) year to be fully liberalized. Liberalization passed through several steps, which are discussed in details in this section. The first step was to establish the regulator. The second was to commercialize and privatize the incumbent operator. The third was partial liberalization, which was followed by full liberalization. The liberalization process was not smooth. The process was challenging at times, because technology was growing at high pace, the consumer base grew exponentially at a certain point, and the business structure was changing. Therefore, the whole process required many policy reforms.

2.3.2 The Regulator: Tanzania Communication Commission (TCC)

Until 1993, the telecommunication sector was regulated by the Tanzania Postal and Telecommunication Corporation. Following the Communication Act of 1993, Tanzania Postal and Telecommunication Corporation was split to form the Tanzania Communication Commission (TCC), the Tanzania

Telecommunications Company Limited, and the Tanzania Posts Corporation. In 1994, the TCC was established and mandated to be the overseer of the sector. In this respect, the commission had five major functions (Noam, 1999: 118):

- i. to offer licenses to operators of telecommunication services
- ii. to uphold fair competition among operators
- iii. to license and manage the use of satellites and spectra
- iv. to endorse communication tariffs and equipment to be used to provide telecommunication services, and
- v. to promote telecommunication penetration in the rural areas.

Upon looking closely at the regulatory functions, we can see that most of them were keen on the supply side. The main challenges ahead of this newly established commission were to create a conducive environment for investors (operators) by managing scarce resources like spectra and aid penetration especially in rural areas. In tackling the aforementioned challenges, the commission had to invest in developing human resources and in improving its technical capabilities to catch up with growth of the world. Also, the commission was geared to foster telecommunication penetration into rural areas. Therefore, the commission set up the rural telecommunication development fund. As a result, all licensed operators were obligated to contribute a certain amount of their profits to the fund.

2.3.3 Policy and regulations

2.3.3.1 National Telecommunication Policy 1997

Telecommunication policy reforms were pushed further in 1997 when the National Telecommunication Policy (NTP) was launched. The National Telecommunication Policy set the action plan of the ICT in Tanzania between 1997 and 2020. The plan outlined objectives and strategies during this time. The NTP objectives were, first to ensure the growth of the telecommunication sector by improving the

telecommunication-network infrastructure and universal service access to the rest of the population, and second, to encourage the use of telecommunication services by all sectors of the economy national wide. The third, long-term objective was geared toward promoting public-private investment in the sector and to improve the quality of and access to the service. The definite target was to reach a telephone density of six phone lines per one-hundred inhabitants over a planned period.

Before the full liberalization of the telecommunication sector, Tanzania was lagging behind (with only 0.32 telephones per 100 inhabitants) in comparison to Kenya (0.92), Europe (35.36) and the world (10.49) (MST, 1997:1). Many efforts were needed to boost the telecommunication sector, which was still in its infancy. Consequently, considering the sectors' dynamics, the NTP suggested that the TCC should collaborate in setting standards both with international organizations like World Trade Organization (WTO) and International Telecommunication Union (ITU) and with local organizations like Tanzania Bureau of Standard (TBS).

Furthermore, the NTP focused on the improving technical, business, and managerial skills. Therefore, for management purposes, an institution framework was put forward. The framework was clearly emphasized in the NTP, and the roles of the government, the regulator (TCC), and telecommunication operators were explained. The legal framework was also made clear and transparent. Also, regulations concerning competition and tariffs were made clear to ensure that all players could have equal rights in the market. Furthermore, the policy insisted on a rural development telecommunication fund to ensure that all villages, including those in rural areas, will be connected by the year 2020.

2.3.3.2 National Information and Communications Technologies Policy 2003

As a result of the NTP strategies, the teledensity grew to 1.2 per hundred inhabitants (MST, 2003:3), though penetration was concentrated in the capital city (Dar es Salaam). This was the great achievement for the sector. However, the demand for growth was to catch up with the world pace. At that point, the main challenge was to penetrate services into rural areas.

Another challenge arose during the turn of the millennium as technological advancements in the world led to the convergence of content, telecommunication computing, and broadcasting, thereby raising the need for policy intervention and regulations (Henten, Falch, and Tadayoni 2002). Therefore, the new national informational and communication technologies policy was put forward in 2003. The policy carried the vision and mission of ICT Tanzania from 2003 to 2025.

The main vision was to make Tanzania the hub of ICT in the region. Another vision was to use ICT to promote socio-economic growth, thereby to speed up the poverty-eradication rate. To attain the vision, the strategy was to create an environment conducive to investment through capacity building by promoting the use of ICT by the commercial sector (e-commerce) and public sectors (e-government) and by encouraging partnership and knowledge sharing both locally and globally.

2.3.3.3 Tanzanian Communication Regulatory Authority (TCRA) Act 2003

The TCRA act was passed in April of 2003. The act gave provision to the enactment of the Tanzania Communication Regulatory Authority (TCRA). The TCRA was formed after the Tanzania Communication Commission (TCC) was merged with the Tanzania Broadcasting Commission (TBC). The TCRA was formed in response to technological advancements which had eroded boundaries between the telecommunication and broadcasting sectors. For instance, while traditionally the consumer was required to have broadcast media like radio or television to watch the news, as technology evolved, the consumer was able to stream broadcast content over the Internet. Therefore, to improve the efficiency of the market economies and the effectiveness of regulations the need of having one authority to regulate both media (broadcast) and telecommunication sector was high (Henten, Samarajiva, and Melody, 2003). Therefore, in 2003, the TCRA Act No. 12 was enacted.

The TCRA act gave provision for the following:

- i)** functions and responsibilities of the authority,
- ii)** power and proceedings of the authority,

- iii) content committee and its functions,
- iv) roles and functions of Tanzania Broadcast Services as part of TCRA,
- v) roles and functions of TCRA Consumer Consultative Council (TCRA-CCC)
- vi) complaints and dispute resolution, and
- vii) financial provision for the authority (TCRA).

Tanzania was among the earliest Sub-Saharan country to have the converged regulator. TCRA's main vision was to be a high-class regulator. The mission was to create a level playing field among players (service providers), a pleasant environment for investors and accessible and affordable services to consumers—including those living in underserved areas. In attaining their functions, the regulator's role was to,

- i. promote effective competition and economic efficiency;
- ii. protect consumers' interest;
- iii. promote the accessibility of regulated services among consumers of all social and economic backgrounds—especially those in rural areas and with low income;
- iv. raise public knowledge, awareness, and understanding of communication services with respect to the rights and roles of consumers and proper awareness of complaint procedures.

The responsibility and function of the authority

The goal of the act was to establish an autonomous regulatory authority to serve both the telecommunication and broadcasting sectors under one umbrella: the communication sector. However, to achieve autonomous regulatory communication authority, financial sovereignty was crucial. Therefore, to ensure regulatory autonomy, TCRA does not obtain its financial provisions from the government but from the fees it collects by granting and renewing licenses, payment (like fines), and levies collected from suppliers of regulated services. Other financial sources are grants, donations, and contribution which the

authority receives. Furthermore, according to the act, the money collected had to be used for consumers' education (information projects), the daily budgeted expenditures of the authority, different projects towards sector developments, capacity building through training and research.

The TCRA Act also gave provision for the establishment of the Consumer Consultative Council (CCC). The act suggests that the council be formed of between seven and ten members. Members should be appointed by the minister responsible for the communication sector. The council member appointed has the right to hold the office for a period of three years. The main role of the council is to represent consumers and protect their interests. Another role is to consult and inform consumers and establish a consumer committee at district and regional levels.

The act also published consumer rights and consumer complaint procedures. The act bound service providers to deal with consumer complaints in the timely manner and, where possible, to the consumer's satisfaction. In the case a customer was dissatisfied with the resolution, the act gave the consumer the right to escalate claims to the regulator and higher authorities.

In synopsis, TCC and TCRA functions were more likely the same except for two main differences. First, TCC regulated only the telecommunication sector, but TCRA regulated multiple sectors under the umbrella of communication sector. Second, the TCC Act, was based more on the supply side. But the TCRA Act brought balance to the supply and demand sides by including consumers' interest. The TCC Act focused on the supply-side due to a low consumer base in the early 1990s (when the TCC was formed). Also, the partially liberalized market was in its infancy; thus, the main challenge for the regulator was to create a conducive environment for investment in the sector. Therefore, the TCRA Act was the first act to give provision to consumer-protection regulation. This means that consumer-protection plug-in initiatives were not considered prior to 2003

2.3.4 Market Structure during the Liberalization Process

2.3.4.1 Privatization of the incumbent

Following the split of the TPTC, the TCC granted the license to TCCL. The TCCL started its operations on 1 January of 1994. The duration of the license was for twenty-five (25) years and was non-revocable for the first fifteen (15) years. In the first two years of operations, the TTCL was faced with several constraints, as is pointed out by Noam (1999). These included technical problems, poor network quality (especially for inter-urban calls), billing problems, long-time fault repair, a lack of human resources (qualified workers) and spare parts. Due to the aforementioned constraints, the government decided to partially privatize the company. Joint venturing with other companies was the next step for the company. The government wanted to work with the venture with higher, technical and managerial skills and financial capabilities. The decision to privatize the TTCL was also a step towards the full liberalization of the sector.

In February of 2001, Celtel International (previously known as MSI Cellular)—which was headquartered in Amsterdam, the Netherlands, in association with Detecon of Germany—acquired a 35 percent share of TTCL from the Tanzanian government (Paul Budde, 2009:6-7). As a result, the association dealt with the day-to-day management of TTCL and managed the board of directors. The association had the ability to veto the board of director's decisions. The annual budget and any decisions concerning capital expenditures were solely in the hands of the association.

When TTCL went to the stock exchange and an initial public offering (IPO) took place, 29 percent of the shares were owned by TTCL employees, financial institutions, and local financial institutions. As a result, the Tanzanian government remained with 36 percent of the whole share.

However, the MSI-Detecon consortium failed to drive TTCL to flourish as previously agreed. For instance, the consortium was to install 41,000 fixed lines in 2001, but they installed only 51 percent of the target. In addition, in 2002, TTCL missed the fixed-line installation target by far (Paul Budde, 2009: 6-8). Moreover, the consortium failed to pay part of its stake due to a disagreement with the government

concerning TTCL's revenue in 2000. After a long discussion between the government and the consortium (namely Celtel International at the time) in August of 2005, they signed an agreement to restructure the company. Consequently, TTCL was not jointly managed anymore; rather, TTCL and Celtel became two independent companies legally, financially and operationally ("TTCL and Celtel ", 2005).

2.3.4.2 Licensing of Mobile operators

TIGO

During the liberalization process, telecommunication businesses were significantly altered in response to policy reforms and technological advancements. In the 1990s, the great innovation in the Tanzanian telecommunication market was the introduction of mobile-phone technology. MIC Tanzania Limited—currently trading as tiGO—was the first company to be licensed and to operate as a mobile telecommunication operator at the end of November, 1993. Note that TTCL had the mobile license but was offering only fixed-line services at the time (Africa, 2006). MIC Tanzania Limited was a joint venture between Millicom International Cellular (headquartered in Luxembourg) and Tanzania Post and Telecommunication Corporation (TPTC). TPTC owned 27.7 percent of the share in the company, which was then transferred to TTCL in early 1994. Then, shares were transferred to the government of Tanzania after privatization of TTCL in 2001 (Paul Budde, 2009: 20-21). Technology wise, tiGO was using analogue cellular network technology (Mwamunyange, 2000).

TRITEL

In 1994, Tri Telecommunication Limited (trading as TRITEL) was licensed as the second mobile company in Tanzania. The company was a joint venture of Technology Resources Industries Berhad (TRI), headquartered in Malaysia, and the VIP Engineering and Marketing of Tanzania. TRITEL was the first mobile operator to use GSM 900 MHz technology in Tanzania. The company was licensed to offer services in Dar es Salaam and Zanzibar. TRITEL operated in Tanzania for about ten years; following its

failure to abide by its license obligations, its license was suspended in January of 2003 (Mwakalebela, 2003).

The company damaged several petitioners. The damage was a result of the failure of the company to pay annual fees, interconnection charges and taxes to the regulator, TTCL, and the Tanzania Revenue Authority (TRA). In addition, VIP Engineering and Marketing Limited owed money to the company (Kapama, 2017).

After the suspension of the license, TRITEL requested that its customers switch to Celtel or claim compensation for loss of service ("MTN favored ", n.d. p.6).

VODACOM

Vodacom is the third international company to be licensed. Vodacom was a subsidiary of Vodacom Group (Pty) Limited, South Africa, which was itself subsidiary of Vodafone Group of the United Kingdom ("Vodacom Tanzania", n.d.). The Vodacom group was the majority shareholder of Vodacom Tanzania Limited, with 65 percent of the stake. The rest of the share was locally owned by Planetel Communications and Caspian Construction (which held 16 percent and 19 percent, respectively). The Planet and Caspian shares (35 percent) were later transferred to Mirambo Limited ("Vodacom Tanzania ", 2008). Vodacom was offered the license in December of 1999 and started to operate in August of 2000. Vodacom used dual-band GSM 900 MHz/1800 MHz technology, which at the time was considered extremely hi-tech for the telecommunication market in Africa. The company became the leading mobile telecommunication operator a year later.

ZANTEL

The Zanzibar Telecommunication Corporation (trading as Zantel) was licensed in 1996 following government disappointment due to the poor quality of service offered by TTCL. Zantel was licensed to operate only on the semi-autonomous Island of Zanzibar. The license allowed them to offer data and

voice services. The company was a result of a public-private partnership. The venture was formed by the government of Zanzibar, STET International of Italy and other local partners. Later, STET decided to pull off the venture; as a result, Etisalat of the United Arab Emirates (UAE) acquired 34 percent of the stake, leaving rest of shares to the Government of Zanzibar (18 percent), MEECO International of Tanzania (24 percent) and Kintbury Investment of Channel Island (24 percent) (Paul Budde, 2009: 9).

CELTEL

CelTel International is the fourth international mobile telecommunications company to be licensed in February of 2001. Because of the low teledensity in Tanzania, TCC decided to change from offering a zonal to a national license in 1998; as a result, CelTel was offered the national license. CelTel International was a result of the privatization of TTCL (the former incumbent company). At the beginning, CelTel was jointly owned by the government and CelTel international, which held a 65 percent and a 35 percent share, respectively. TTCL and CelTel were dependent on each other for its operations. However, in 2005, the joint venture failed, and the two companies became legally separated operators. The two companies were financially and operationally autonomous ("CelTel and TTCL", 2005). Later, CelTel's stake was changed, as the Government decided to sell 25 percent of their share to CelTel International. As a result, the government of Tanzania remained with a 40 percent stake, which made CelTel International the majority shareholder of CelTel. Within the first two years of its operation, CelTel became the second-largest mobile telecommunication operator after Vodacom. It also acquired former Tritel customers who switched to CelTel.

In synopsis, five mobile operators were licensed by TCC before the end of 2001, though only four were operating as mobile cellular operators (Zantel, Tigo, Vodacom, and CelTel) at the end of the year 2004. Mobile growth was stagnant prior to 2000. But growth spurred after 2000 and reached a penetration of 5.12 by the end of 2004. As shown in the table, Tigo was the leading mobile operator, followed by Vodacom in 2000. But in 2004, Vodacom became the leading operator, followed by CelTel. Vodacom's

growth is attributable to the type of technology it used (dual-band GSM 1800/900MHz) and to strategic marketing techniques. Vodacom was already operating in other African countries before coming to Tanzania. Thus, their prior experience gave them a competitive advantage in the Tanzanian market. On the other hand, Zantel's growth was struggling compared to that of other operators. The company was operating only in Zanzibar (a small semi-autonomous island with a limited population), which affected its growth.

Table 2-1: Teledensity in Tanzania between 1995 and 2004

Year	Teledensity		
	Fixed lines	Mobile	Total
1995	0.29	0.01	0.30
1996	0.33	0.01	0.34
1997	0.36	0.06	0.43
1998	0.38	0.11	0.49
1999	0.45	0.15	0.60
2000	0.51	0.33	0.84
2001	0.51	0.79	1.30
2002	0.45	1.69	2.14
2003	0.40	3.52	3.92
2004	0.39	5.12	5.51

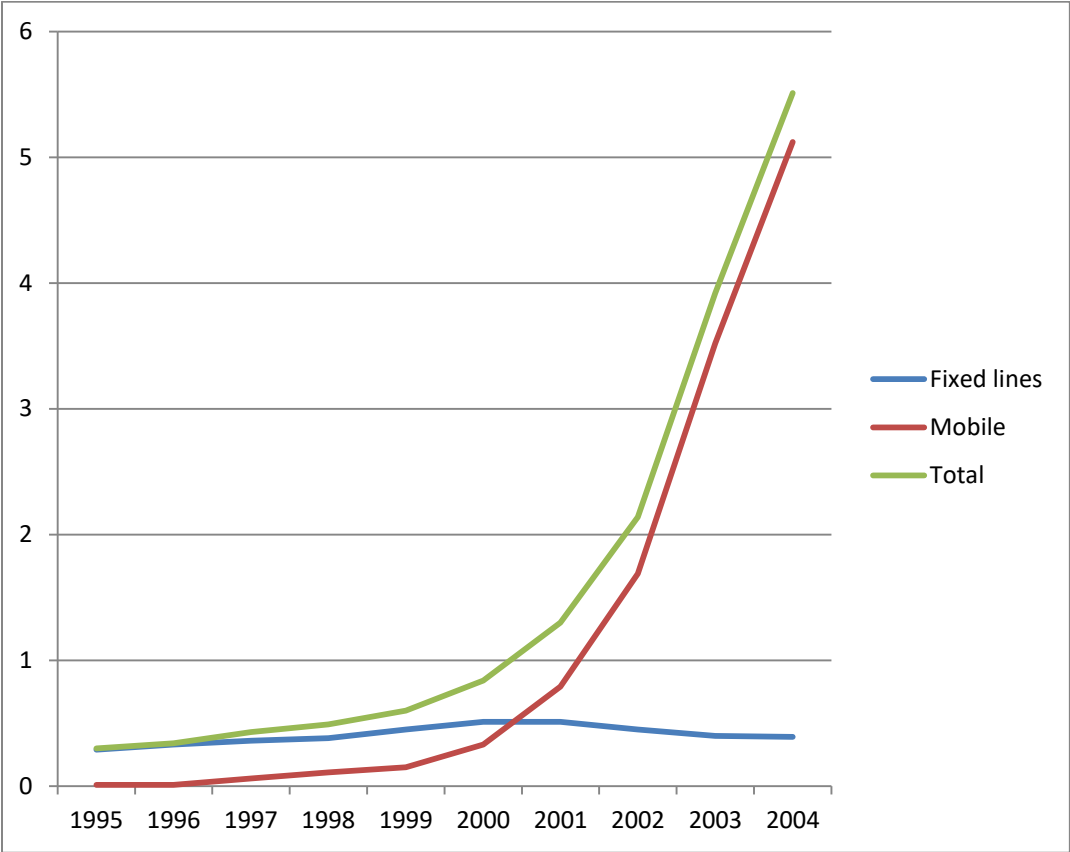
Source: TCRA report, 2005

Prior to 2000, most subscribers were using fixed lines. The fixed-line market was serviced only by TTCL, as the government gave the incumbent a few years before the full liberalization of the telecommunication market. However, TTCL failed to break even and compete with the mobile-service providers. Fixed-telecommunication lagged behind mobile, due to several challenges including the nature of the business

and the fact that mobile operators were using prepaid services (this helped people with informal income use service). As a result, mobile telecommunication was easily adopted by consumers with formal and informal income.

Second, electricity penetration was another limitation for fixed-line penetration in Tanzania, especially in rural areas. Thus, while fixed-line requires electricity at home, mobile does not. Most consumers in rural areas charge their phones at charging centres. Therefore, consumers in suburban and rural areas were more likely to subscribe to mobile services.

Figure 2-1: Telecommunications penetration in Tanzania (1995 - 2004)



Source: TCRA report 2005

Third, mobile operators introduced innovative services to the market which attracted more consumers. Services like mobile credit were used to transfer money. Mobile credit numbers were sent in the form of

SMS and the receiver to sell the credit and use the money for the intended purpose. Therefore, mobile phones were used both for communication like fixed line phones and as a means of money transfer.

The aforementioned factors paved the way for the faster mobile-phone penetration in Tanzania. By the end of 2004, fixed-line penetration was lagging behind mobile penetration by about eight percent. Therefore, mobile-phone technology experienced a spurt of growth in the telecommunication sector in Tanzania.

2.4 Post-liberalization Era

2.4.1 Overview of the era

The telecommunication sector in Tanzania was fully liberalized in February of 2005 ("Telecommunications: Connecting people", n.d.). Looking back eleven years (2005-2016) post-liberalization, we can see that the telecommunication market has grown rapidly. The penetration reached 79 percent in the second quarter of 2016 from less than six percent in 2004. Moreover, the growth of technology and innovation resulted in more user-friendly services, and telecommunication services were extended to play a major role in other sectors, such as commercial (through mobile money) and agriculture (through apps which forecast weather for farmers). Furthermore, in the eleven years from the full liberalization of the telecommunication sector, much has been done by the government to create enabling environments for investors through policy reforms. Therefore, the following sections explain legislation adopted over time, offer a market overview and discuss consumer protection.

2.4.2 Legislations and regulations

Subsequent to full liberalization, various policy reforms occurred in the sector. As a result of reforms, fourteen regulations were passed in 2005. In 2010, the Electronic and Postal Act (EPOCA) legislation was enacted. Consequently, EPOCA legislation enacted fifteen regulations in 2011. Also, the legislation gave provision to other regulations which were enacted in 2013 and 2014. The Electronic Transaction Act

and the Cybercrime Act were enacted in 2015. Therefore, in the following subsections, legislations are briefly discussed.

2.4.2.1 Universal Communication Service Access Act, 2006

The Universal Communication Access Act was established in 2006 and signed by the president in January of 2007. The main purpose of the act was to establish the universal communication access fund. The main motive for the fund was that telecommunication services penetrate into rural areas and thereby bridge the digital divide in rural and underserved suburban areas. The fund was geared to promote public-private partnership, promote social and economic development, and ensure access to quality communication at an affordable price to rural and underserved urban societies.

Moreover, the fund had to identify projects to be subsidized, evaluate submitted projects by operators to be subsidized, manage the fund's resources, enforce mechanisms for collecting universal service levies, and advise and recommend policy guidelines related to universal services to the minister and the authority.

In accord with the act, the fund was to be led by board members (a chairman, a manager, and eight non-executive members). All board members were appointed by the communication minister, who was to ensure that all stakeholders in the market were represented on the board. The board was to oversee and otherwise be responsible for the universal service fund by awarding contracts to contractors or operators. The government was responsible to fund the USF. Other sources of revenue included the regulator (TCRA), the universal service levy approved to be paid by all licensed operators with accord to their revenue, and any other legal local or international grants and contributions.

In summary, the act explained the objectives and functions of the USF, the USF board and its responsibilities, and financial support to the fund. More detailed explanation about the fund can be found on the regulator website ("Universal communication service access fund Act", 2006).

2.4.2.2 Electronic and Postal Communication Act (EPOCA)

The Electronic and Postal Act was signed and passed by the parliament clerk on January of 2010; it was signed by the president in March of the same year. The main motive of the act was to empower the sector to catch up with the global pace of growth in the sector. Following the act, new licensing procedures were stipulated. Also, communication licenses were clustered into six categories, including network facilities, network services, application services, content services, postal and courier services, and other services as determined by the regulator.

Following the act, the decision regarding the interconnection charges was left in the hands of the network service licensees. But the regulator was allowed to intervene whenever necessary to stop market failure. Operators were required to share infrastructure—especially passive infrastructure, where technically possible. It is the regulator's role to make clear arrangements for the infrastructure's sharing and for regulations to be followed by network facility licensees.

Furthermore, the EPOCA established competitive practices; the act says that dominant operators are not allowed to take advantage of the market. The regulator was given responsibility to ensure that all operators have a level playing field and to eliminate collusion. The regulator was responsible to allocate and manage spectrum resources and had the mandate to revise and revoke the spectrum plan. Also, the act gave provision for the establishment of a spectrum consultative committee with the mandate to deal with all issues of the spectrum comprised of communication stakeholders. According to the act, all equipment used by licensees for transmitting or receiving communication signals should first be approved by the regulator. The operators were directed to capture the IMEI of subscribers by using their networks. The act requires confidentiality in handling consumer information. Consumer information could not be shared with a third party except with a written document under the law. All consumer information had to be submitted to the regulator once a month.

The act required all subscribers to register their SIM cards within the set time by the regulator. Otherwise, after a set time, unregistered SIM cards were to be disconnected. Subscribers with new lines (bought after the deadline) would be registered during activation.

Other parts of this act explain enforcement, offenses, and penalties. The act suggests penalties for certain offenses including fines, revocation of license and jail. The act also explains postal services. Section 26 of the act was amended and signed in July of 2010. It dealt with minimum local shareholders for communication companies. As a result of this act, fifteen regulations were passed between 2011 and 2014 ("The electronic and Postal Communication Act", 2010).

2.4.2.3 The Electronic-transactions Act

The Electronic-Transaction Act was enacted in May of 2015 following the rapid growth of electronic government services and transactions. Following the act, e-governmental services, electronic payments, and online receipts were officially recognized by law. Though the law allowed the use of electronic documents, it gave no one the right to force a public institution to deal with an electronic document. Moreover, as of this act, electronic messages were officially recognized as evidence that could be used in legal proceedings on certain grounds: i.e., if the data was stored reliably, if the integrity of the data message is questionable, and if the originator cannot be identified. Electronic contracts, including online auctions, were officially accepted under law if both parties agreed on the specific grounds.

In protecting consumers against unfair business practices, the electronic supplier of online goods have the responsibility to supply basic information to consumers regarding name, address, legal business status, full description and cost of service or product and/or service and means of payment. In response, before the consumer can press a final order, the supplier is supposed to provide another chance for the consumer to review the entire transaction. The consumer is allowed to cancel the transaction anytime within the first 14 days. For certain products, the consumer can return goods to the supplier within seven days after receiving the product. The consumer is responsible to pay the return shipping cost and the supplier is

responsible to refund the product within thirty days unless stipulated otherwise in the contract. All cryptographic certification providers are required to apply for the license offered by the regulator. The rest of the act, give general provision and consequential amendments ("Electronic Transactions Act", 2015).

2.4.2.4 *The Cybercrime Act*

The Cybercrime Act was enacted in May of 2015 to criminalizing information communication technology (ICT) offenses. The act provides for the use of electronic evidence. Online offenses which have been criminalized by the act include child pornography, online forgery and fraud, and cyberbullying. In addition, the act criminalizes the use of electronic devices to publish false, racist or xenophobic information, and it forbids any information which can lead to genocide. The act criminalizes the disclosure and obstruction of an investigation, conspiracy in committee crimes, and violation of intellectual property rights. In addition, data espionage and illegal data access, interference, and interception are also condemned under the act ("Cybercrimes Act", 2015).

In synopsis, the telecommunication sector in Tanzania is governed by three acts: the Electronic and Postal Communication Act is the main act, and the Cybercrime and Electronic acts are supplementary acts. Of these three act, The Cybercrime Act raised much concern among the public and even among members of parliament. Whether The Cybercrime Act will be repealed in the future is a question to be pondered by stakeholders. The Electronic and Postal Communication Act gave provisions to seventeen regulations, including the Consumer-protection regulation of 2011.

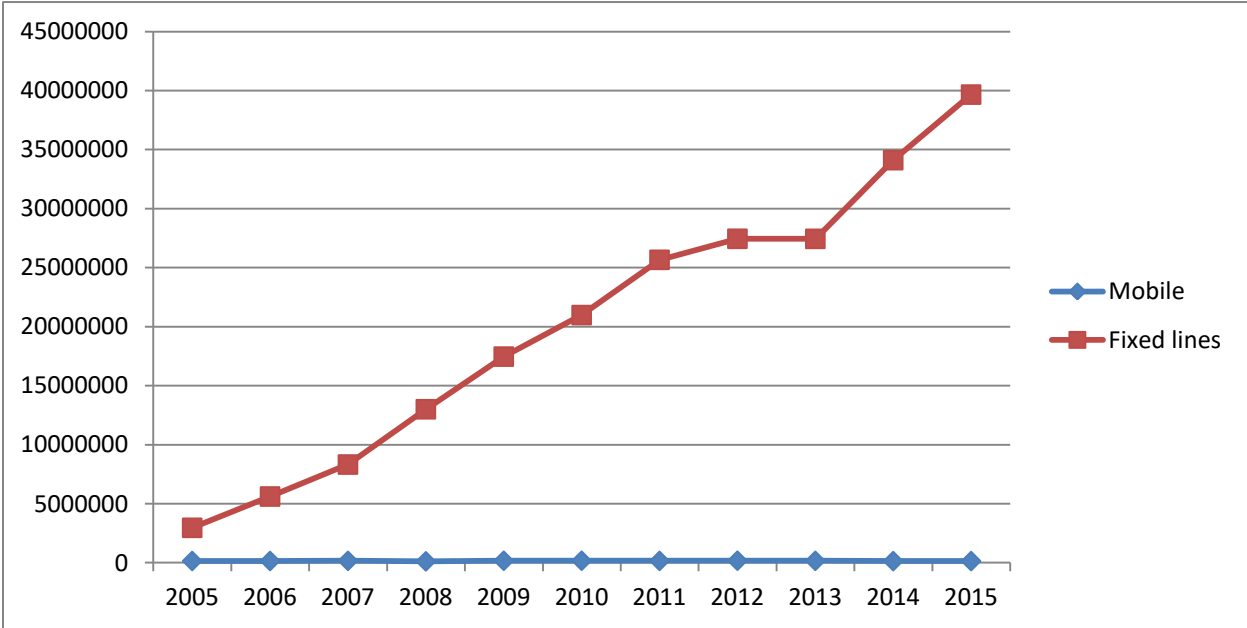
2.4.3 *Major Operators*

2.4.3.1 *Introduction*

Telecommunication markets have grown tremendously in the post-liberalization era. In particular, mobile-phone penetration reached about 79 percent in 2015 from less than five percent at the end of 2004. The mobile subscriber base has grown more than eleven fold since 2004, reaching 39.6 million by the end

of 2015. However, while the mobile market is flourishing, the fixed-line market has been stagnant or in decline. For instance, 0.142 million active lines were reported at the end of 2015, which is fewer than 0.148 million lines reported in 2004. Therefore, since fixed-line penetration is less than one percent, the Tanzanian market is dominated by mobile. The success of mobile telecommunication is partly attributable to policy. The new Convergence Licensing Framework (CLF), which reduces the entry barrier for operators, intensifies competition and innovation in the sector. Many service providers have been licensed under this framework.

Figure 2-2: Subscribers base for telecommunication services



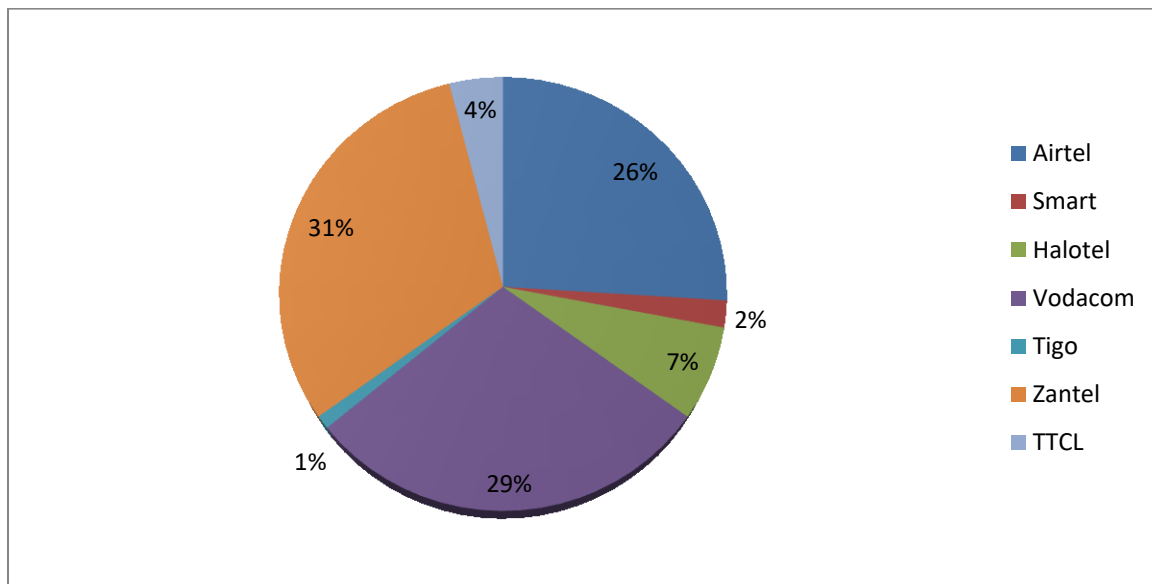
Source: (TCRA (c), 2016)

Smart and Halotel started their operations in 2013 and 2015, respectively. Most existing mobile operators have changed their business models and market shares. For instance, three major operators have decided to outsource tower-infrastructure management to Helios Towers Tanzania (HTT) to concentrate on the core business and customer care (Middleton, 2010). Mobile telecommunication operators in the post-liberalized era are described below.

2.4.3.2 Consumer Traits

As for consumers' traits in the Tanzanian market, about 98 percent of consumers subscribe to the pre-paid services. The higher pre-paid subscription is common in most developing countries due to the poor insertion of the formal income and fluctuating income among consumers (James, 2015). The pre-paid service system is popular in other developing countries in Africa, South Asia, Latin America and the Caribbean. Furthermore, according to Galperin and Mariscal (2007), consumers are subscribing to the pre-paid service system, as they perceive it to be cheaper than the post-paid system. It also provides a way to control spending.

Figure 2-3: Market share in June of 2016



Source: (TCRA (c), 2016)

Also, the ownership of multiple SIM cards is a common practice in Tanzania. According to GSMA (2012), Africans are calculated own an average of 1.96 SIM cards each. Oluwafemi (2015) suggests that 58 percent of consumers in Tanzania own more than one SIM card. Consequently, the Tanzanian market ranks third highest for multiple SIM card ownership, after Nigeria and Bangladesh (with 66 and 63 percent, respectively). Multiple SIM-cards ownership is common because most consumers are budget

conscious and are in search of better network coverage (to insulate themselves from downtime) (Gillet, 2012). Considering budget consciousness, consumers with multiple SIM cards can take advantage of spectacular promotions and myriad deals from different operators that help them communicate with their acquaintances and friends at an affordable cost. Moreover, as telecommunication operators are struggling to uphold the quality of service, consumers with multiple SIM cards have more options to insulate themselves from downtime in case of poor network coverage from their primary operator (Oluwafemi, 2015).

2.4.3.3 Market growth

In synopsis, the telecommunication market in Tanzania has grown tremendously. More companies are licensed, which stirs up the competition for and adoption of advanced technologies and innovative, consumer-friendly services and products. Specifically, as of November, 2016, there are 118 licensed companies: These are network facilities (20), network services (14), and application services (84). The number of licensees increased tremendously compared to a decade ago (end of 2006) when only 34 companies were licensed: network license (5), network service (5), and application service (14) ("Licensed Operators", n.d.). Also, the consumer base increased from fewer than 3.11 million in 2005 to 39.6 million a decade later.

In particular, the Tanzanian market has, within a decade, witnessed a technology migration from 2G to 4.5G LTE-A. Almost all major companies (except Airtel, which uses 3.75 G technology) have launched or announced a plan to launch 4G LTE technology. However, TTCL is ahead by announcing its intention to launch 4.5 G technology, which will put them ahead of their competitors in the market. Consumers in the big cities are expected to be the early beneficiaries of the new 4G LTE technologies, while consumers who live in suburban and rural areas may have to wait at least another year to be able to access 4G LTE services.

Furthermore, the installation of fibre-optic cables has enhanced speed. They are expected to quickly connect rural villages and to bridge the urban-rural digital divide. Also, government institutions, schools and hospitals are expected connect to the fibre-optic cables to foster the provision of e-government services.

The future of the Tanzanian telecommunication market seems bright. Almost all major operators have a plan to increase their capital investments and migrate to advanced technologies. However, the regulator is still faced with many challenges if it would ensure the health and growth of the sector and protect the interests of all stakeholders in the market. Challenges ahead of the regulator include providing ways to protect consumers in the competitive markets, creating a level playing field, catching up with technological growth (there is a new innovation almost every day in the industry), boosting penetration in rural areas and connecting the rest of the country to the advanced telecommunication services. Therefore, this thesis concentrates on one of the challenges—consumer protection—which is discussed in brief in the following section.

2.5 Consumer Protection

2.5.1 Introduction

The term *consumer protection* was first heard in the Tanzanian telecommunication market following the TCRA act of 2003. Prior to the liberalization, the telecommunication sector was operated as one of the public utility corporations of Tanzania. Therefore, as the government was offering telecommunication services, the consumer felt comfortable and protected. Also, under the incumbent operator, consumers' choices were limited; therefore, consumers did not complain in case of dissatisfaction unless the degree of damage was huge. Furthermore, in the absence of competition, the incumbent was not under pressure to offer high-quality services but rather offered only the minimum required.

Following the partial liberalization in 1993, the regulator concentrated more on the demand side rather than on the supply side which can be clearly seen in the function of the first communication regulator (TCC- Tanzania Communication Commission). The regulator had the responsibility to deal with the provision of licenses, to manage the spectrum, to endorse tariffs, and to foster penetration—all these functions based on the supply side. Although today it seems as if TCC did not pay much attention to the demand side, at the time, the consumer base was small, the competition was not as fierce, and the main challenge facing the TCC was creating a sustainable environment for investment and fostering penetration and competition in the sector.

A decade after partial liberalization in 2003, the regulator roles were changed under the TCRA Act. The TCRA Act assigned the regulator the responsibility to protect consumers and to raise public knowledge and awareness of consumers' rights and duties. Following the TCRA Act in 2005, consumer protection regulations were passed and later amended in 2010 under the EPOCA Act. However, whether consumers are aware that the law protects them remains uncertain.

2.5.2 Consumer Challenges

Consumers encounter several challenges in the telecommunication market. The most common challenge is the poor quality of services, which was reported in 2015 and 2016 by the regulator. Another challenge is fluctuation and abrupt change of tariffs. This was clearly witnessed in February of 2015 when three major operators (holding 90 percent of the market share) decided to change their bundle prices abruptly within the week. Consumers were left out of options. This event raised concerns of collusion in the market. The regulator decided to investigate the matter after consumer complaints were made based on the tariff regulations of 2011; operators were consequently fined and received directives from the regulator.

The regulator has the responsibility to protect consumers and raise awareness in accord with the TCRA Act of 2003. The regulator as an overseer of the market can only interfere when the consumer follows

procedures and escalates complaints to them. This means the consumer is required to have basic information (i.e., to know their rights, to understand the complaint procedure to follow when their rights are violated, and to actually report).

2.6 Conclusion

In conclusion, the telecommunication market in Tanzania has a long history starting around 1900. The development of the telecommunication market we see today started from telegraphy; about a century later, we talk about 4G LTE mobile phones. The telecommunication market has passed through a tremendous growth in world history in the last two decades. The growth is attributed to the advancement of technology which resulted in more user-friendly services, sophisticated products, and policy reforms like liberalization of the sector which led to competition and attracted investments.

The growth can also be witnessed in terms of technological advancements. Prior to 1994, services were offered using analogue technology. The situation changed when TRITEL deployed its network by using digital GSM technology in 1994. This was followed by Vodacom in 1999. The rest of the operators followed suit years later. The next major technological milestone was the digital migration from 2G to 3G technologies. All major operators in the country migrated to 3G technologies by 2010. Thus, the current trend is the digital migration from 3G to 4GLTE and 4.5G LTE-A. Tigo was the first company to migrate to 4G LTE (in 2015), and TTCL was the first company to launch 4.5G LTE-A (in October of 2016). Apart from Tigo and TTCL, the rest of the operators have launched or announced their plans to roll out 4G LTE—except for Airtel, which is recently using 3.75G. The challenge is that most of these advanced services can only be accessed in big cities. However, most operators promise to roll out 4G nationwide prior to 2020. Also, the deployment of fibre-optic cables by both the National ICT Broadband Backbone (NICTBB) operated by TTCL, and Halotel have boosted the robustness of Internet in the country.

Also, technological advancement has led to the introduction of consumer-friendly services and sophisticated products. When the sector was first liberalized, the main service offered was the voice. As

technology advances, more services evolved, such as text messages (SMS - short message service, and MMS –multimedia message service). Other value-added services like the Internet fostered communication between consumers and made it possible for consumers to download mobile apps for different purposes (like weather forecast apps which aids farmers, online learning apps, and the like). Also, the evolution has led to mobile-money services which are now offered by almost every major mobile operator.

Apart from services, communication devices have also become more sophisticated over time to accommodate new technologies. For instance, devices have evolved from the landline to the Smartphone. Also, services like roaming became possible, as did money transfer through mobile phones. Generally, telecommunication services changed from being a luxurious service to something ubiquitous and basic.

Policy reform has also played a major role in telecommunication growth in the Tanzanian market. The first step was the act, which liberalized the market. Following the liberalization of the sector, the TCRA Act of 2003, the EPOCA Act of 2010, the Cybercrime Act of 2015, and the Transactions Act of 2015 became the main acts controlling the sector. Considering the dynamic nature of the sector, the regulator is faced with new challenges every day which often require working at the fast pace to regulate the market.

Furthermore, as part of the consumer protection regulations under the EPOCA Act, the regulator has put forward procedures to be followed by consumers whenever their rights are violated by operators. These regulations are put forward to protect consumers against unfair business practices. Most consumers continue to have many unpleasant experiences in the market (e.g., poor quality of service and wrong billing charges). This study is geared to analyse the effect of information on consumer-complaint behaviour, thereby to empower consumer protection.

CHAPTER 3 CONSUMER PROTECTION LITERATURE AND THE THEORETICAL FRAMEWORK

3.1 Introduction to Consumer Protection

3.1.1 *Definition of Consumer Protection*

A consumer is anyone who buys goods or services from a trader for the purpose of consuming or owning them. Consumer protection involves protecting consumers from unfair business practices and empowering them to make informed decisions in the marketplace. Consumer-protection laws are regulations designed to ensure that consumers are protected in the market by observing consumer rights, competition or anti-trust policies, fair business practices, and accurate information in the marketplace. For instance, the laws are designed to prevent collusion among traders (service providers) in the market, thereby promoting competition and increasing consumer choices.

The current concept of consumer protection was first articulated by the former American President Kennedy in his landmark speech addressed to the U.S. Congress in March of 1962. The former president argued that,

Consumers, by definition, include us all. They are the largest economic group in the economy, affecting and affected by almost every public and private economic decision. Two-thirds of all spending in the economy is by consumers. But they are the only important group in the economy who is not effectively organized, whose views are often not heard.

Marketing is increasingly impersonal. Consumer choice is influenced by mass advertising utilizing highly developed arts of persuasion. The consumer typically cannot know whether drug preparations meet minimum standards of safety, quality, and efficacy. He usually does not know how much he pays for consumer credit; whether one prepared food has more nutritional value than another; whether the performance of a product will, in fact, meet his needs; or whether the "large economy size" is really a bargain

We cannot afford waste in consumption any more than we can afford inefficiency in business or Government. If consumers are offered inferior products, if prices are exorbitant, if drugs are unsafe or worthless, if the consumer is unable to choose on an informed basis, then his dollar is wasted, his health and safety may be threatened, and the national interest suffers.

The speech was the beginning of modern consumer rights, which will be explained in detail in Chapter 5. Therefore, consumer-protection laws were articulated to uphold the consumer rights stipulated for the first time by former U.S. President Kennedy and to keep them evolving over time.

In particular, consumer protection aims to offer bargaining power and equality between the demand and the supply sides, thereby protecting consumers' interests. For example, in the free-market economy, the consumer has the responsibility to choose the suitable service or goods based on the information offered by producers or service providers. Therefore, for the consumer to make a sound decision, consumer-protection laws require that producers/service providers provide accurate and sufficient information. Second, consumer protection aims to alleviate problems in the market between producers/service providers and consumers, especially including those suffered by vulnerable consumers. For instance, consumer-protection laws require utility regulators to establish minimum parameters for the quality of service to be offered by suppliers and the responsibilities of the consumer and supplier, thereby to reduce conflict between the demand and the supply sides. Third, consumer-protection laws offer mechanisms for handling consumer complaints. For example, the consumer protection regulations of 2011 in Tanzania under EPOCA law of 2010 stipulate procedures to be followed by consumers whenever they have unpleasant experiences in telecommunications markets.

3.1.2 Organizations responsible for consumer protection

Consumer protection in many countries is the shared responsibility of public and private bodies. According to the consumer-protection manual of the United National Trade and Development

organization (UNCTAD, 2016), the following bodies are responsible to uphold consumer protection as explained in the subsequently subsections.

3.1.2.1 Government Agencies

Government agencies include consumer-protection agencies formed by the government under law. The agencies can be dedicated government ministry agencies or part of the ministry which deal with consumer protection. The agencies have several roles, including but not limited to enforcing consumer-protection laws, advising the government concerning consumer protection, advising consumers and suppliers concerning their rights and responsibilities as stipulated by the consumer-protection laws, conducting market survey and research to understand the challenges facing consumers (including vulnerable consumers) in the markets, educating and otherwise raising awareness among consumers about their rights, and representing national consumers' interests to international bodies. Furthermore, agencies must represent consumers' interests in the government and suggest policies to protect consumers in the marketplace. Particularly, the government agencies' role is not to intervene but rather to advise consumers by educating and informing them so they can make sound decisions in the marketplace.

While consumer-protection agencies are the most common organizations used to protect consumers, their structures vary among countries. For instance, in New Zealand and Brazil, government agencies for consumer protection are administered by government ministries: the Ministry of Business, Innovation, and Employment, and the Ministry of Justice. Other countries have adopted consultation mechanisms—as in Japan and Thailand, where the Consumer Policy Council and the Consumer Protection Board are placed under the Prime Minister, who is also the chairperson of consumer matters. However, irrespective of the model adopted, the vital issue is to ensure the autonomy of the agency tasked to raise public knowledge and awareness and to also ensure the ability of that agency to protect consumers' interests (including those of vulnerable consumers).

3.1.2.2 Statutory/Non-Statutory Standard bodies

These bodies are responsible to establish rules or standards for safety and quality control. In accordance with standards, these bodies can issue certification marks to qualified products. While most bodies are governmental statutory organizations, some are non-governmental organizations that are recognized by the government. As a result of the establishment of the World Trade Organization (WTO) of the 1995 treaty, most national standards bodies are mirrored to international standards. Therefore, most of these standard bodies are affiliated with the International Organization for Standardization (ISO).

This being said, one country can have either a centralized standard body across industries or multiple standard bodies each of which deal with specific products and/or industries. For instance, the Tanzanian Bureau of Standards (TBS), a member of ISO and WTO, is responsible to set standards and issue certification marks across multiple sectors of the economy in Tanzania. The one motive behind standardization bodies and certification marks is to help consumers be confident and make informed choices in the market while ensuring that suppliers maintain standards. For example, in Tanzania, consumers are usually more confident when purchasing products with the TBS mark.

3.1.2.3 Ombudsmen

This concept started in the Nordic countries (Sweden) around the 17th century; however, it can be traced back to the Chinese Qin Dynasty. The system was adopted in the 1970s by Denmark, Sweden, Finland and Norway. Ombudsmen act as intermediates between consumers and public bodies. However, in recent decades, the role has been extended to private sectors—e.g., financial and telecommunication sectors—as a way to resolve consumer-supplier complaints. The ombudsmen model has been adopted by several other countries in Europe, including the United Kingdom and Germany.

The ombudsman was designed to ensure fair business practices among players in the markets which conform to the law. The ombudsman can be officially recognized by the law (statutory); however, despite having the power to investigate the matters in the markets, they cannot act in a judicial capacity. The

decision reached by the ombudsmen is based on good industry practice rather than law. Proceedings are informal; usually, they do not require legal representation and the consumer does not have to pay for the service. In addition, the ombudsman offers consumer advice and feeds back data to the marketplace; hence, it has a quasi-regulatory capability.

3.1.2.4 Professional and Industry Association

In the professional-and-industry association model, an industry association, in collaboration with professionals in a specific industry, reviews the industry and develops the mechanism for handling consumer complaints under their code of conduct. Usually, the association is required to negotiate a code of conduct with consumer-protection agencies or to follow their established standards. Usually, these associations train members on the subject of consumer rights and responsibilities to avoid conflict between their members (suppliers in the specific industry) and consumers. Furthermore, the association is used as a bridge between their members and the government.

3.1.2.5 Consumer associations

Consumer associations are well organized and broadly represented groups of consumers, formed for the purpose of advocating consumers' rights. According to UNCTAD (2016), in most countries, consumer associations are well recognized and can freely operate as legitimate representatives of consumers' interests. Specifically, in other countries, consumer associations are invited to participate as stakeholders in policy formation and to communicate on behalf of consumers in the marketplace.

According to UNCTAD (2016) consumer associations are crucial to the representation of consumers' interests because, first, consumers need to be represented without political or commercial interests. Second, there is disparity with respect to the consumer and supplier relationship which includes poor bargaining power, little knowledge, and limited resources among consumers. Consumer associations can be voices for vulnerable and underrepresented consumers. Lastly, as stakeholders in the market, their participation in policy formulation is crucial for sector development.

Despite variation in the roles of consumer associations among countries, the major roles include the following: conducting consumer-based surveys and research to understand challenges facing consumer in the market, offering information (following their market surveys and research results) to help consumers make sound choices in the marketplace, communicating consumers interests and challenges to the government on the consumers' behalf, and organizing public campaigns to protect consumer interests (like press campaigns and boycotting). In addition, in other countries, consumer associations are also responsible for organizing seminars or workshops to reveal their views to other stakeholders in the market, for counselling consumers about handling complaints and helping them obtain redress, and for educating and raising consumer awareness.

For consumer associations to accomplish the aforementioned roles, they must be as autonomous as possible to maintain their credibility. Associations are required to be consumer representatives. Furthermore, financial conflicts and conflicts of interests are supposed to be observed.

3.1.2.6 Self-regulations

Self-regulation is a regulatory process in which industries, firms, sectors or voluntary entities set their own rules and standards (codes of conducts) for operations in the industry. In self-regulation, government interventions are not desirable in the market. Therefore, self-regulation acts as an alternative to government/state-based regulations by involving non-governmental organizations in the regulatory process (Bies, 2010; Gibbons, 1996; Black 2001; Gunningham and Rees, 1997). To uphold consumer protection, the government may choose to rely on self-regulation. However, the efficiency of the scheme is debated among scholars.

Some scholars (Bartle and Vass, 2007; Gunningham and Rees 1997) have suggested multiple models of self-regulation depending on its purpose. For instance, the manual of consumer protection (UNCTAD, 2016) suggests common codes/models of self-regulation (SR) related to consumer protection. First, industry associations, groups of businesses and firms should voluntarily decide to commit to certain

market regulations (codes of conduct) to be used by the industry. Commitment should go above common legal requirements and standards to ensure that no one is offended by law. Second, in delegated self-regulation, governments or states delegate legal regulations to the self-regulatory bodies. Also, self-regulation has the responsibility of setting standards. However, to operate in the industry, all firms are mandated to be members (practitioners or firms are required to be members voluntarily) of the self-regulatory body. Third, in the hybrid-SR, the law does not mandate that firms be members of a self-regulatory body. However, the government has the responsibility to set criteria for self-regulation and to approve the code of conduct.

The efficiency of self-regulation in upholding consumer protection is still debate—especially because the market reveals a very large and growing number of vulnerable consumers and competitions. For example, in Kenya, the mobile-money market was self-regulatory; however, the market grows and new entrants are joining it, as does the need for regulations to ensure that the market operates smoothly and consumers are protected (UNCTAD, 2016:44-48). In addition, the SR scheme has both advantages and disadvantages that should be considered prior to its adaptation; for instance, while self-regulation standards (code of conducts) can easily be designed and amended compared to laws, some members may take them lightly, as they lack statutory power (UNCTAD, 2016: 47).

3.1.3 Ways to achieve consumer protection

In synopsis, consumer protection is crucial in the modern market due to lack of balance/equality between the demand and the supply side in terms of bargaining power, knowledge and resources. The consumer cannot bargain in his/her favour in a market unless he/she has enough information. At times, markets offer general information which is suitable for average consumers; vulnerable consumers (such as disabled, poor, elderly or uneducated consumers), however, are often left behind. While suppliers have more knowledge about their goods or services and their rights, most consumers are unaware of even their basics rights in the markets (Mwakatumbula, Moshi and Mitomo, 2016). Lastly, the supply side has all kinds of resources, such as financial and professional capabilities. In case of conflict between two parties,

the consumer is more likely to be on the losing end. Therefore, the consumer protection mechanism plays a major role in bringing equality to the marketplace. There are several ways countries use to uphold consumer protection. Such strategies are explained below.

3.1.3.1 Consumer-protection laws and policies

Most countries have consumer-protection policies which act as maps or manuals for protecting consumers in their markets. The policies usually enumerate consumers' rights and obligations and the roles of consumer-protection institutions. Furthermore, consumer laws are set forward to ensure the enforceability of consumer rights stipulated in the policy. Other states have included consumer laws as parts of their constitutions. Also, soft laws or codes of practice have been used to promote consumer protection through self-regulation and co-regulation. States with specific consumer-protection acts include Japan (1968), Canada (1971), Spain (1984) and Mexico (1976). Countries like Italy, Peru, Colombia and France established consumer codes in 2005, 2010, 2011 and 2014, respectively. However, other countries do not have stand-alone consumer protection but incorporate consumer protections into other laws. For instance, the 1914 Federal Trade Commission (FTC) Act has a framework to forbid traders from unfair business practices and thereby promote consumer protection (UNCTAD, 2016: 20-23)

3.1.3.2 Provision of consumer education and information

Consumer education is crucial to creating knowledgeable consumers who can act responsibly in the marketplace. The consumer-protection manual suggests the incorporation of consumer education into education curriculums. Another way to empower consumer protection is to raise consumer awareness through media and/or community activities. For example, in Kenya, the telecommunications regulator (the Kenya Communications Commission) runs a consumer consultation forum. The forum invites shareholders for discussions held in different public places across the country. This consultative forum is known locally as *Kikao Kikuu*. It is a forum whereby the regulator interacts with users to gauge

consumers' perception of the quality of the telecommunications services and ICT opportunities made available in various counties.

3.1.3.3 Establishment of agencies

Consumer-protection agencies are key organs used to uphold consumer protection, as they administrate all issues of interest to consumers. In addition, agencies have the responsibility to connect to other international agencies for the purpose of networking and establishing codes for international business. Most countries have established these agencies along with the legislation that liberalized the telecommunication sector (Moshi, 2016).

3.1.3.4 Mechanism for complaint handling and redress

Proper mechanisms for complaint handling and redress help the consumer feel confident and protected in the marketplace. On the other hand, such mechanisms offer a second chance for the supply side to impress the consumer after the damage so they can nevertheless encourage repurchase and acquire the consumer's loyalty. The aggrieved consumer deserves to air out complaints and obtain speedy redress. Therefore, to uphold and promote consumer protection, proper mechanisms are crucial.

3.1.3.5 Mechanisms for compliance and market surveillance

Compliance mechanisms are vital to shaping the behaviours of suppliers in the market. However, in competitive markets, competitions intensify, as suppliers tend to operate below the acceptable threshold. Therefore, market monitoring and surveillance are vital. Market surveillance includes analysis of whether suppliers are operating in accord with codes of conduct. For instance, the communication regulator in Tanzania (the Tanzania Communication Regulatory Authority - TCRA) conducted a market test in the first trimester of 2016 to determine whether communication operators were operating within the standard parameters. The results showed that all operators were not complying with the service-quality levels set by the regulator.

In synopsis, all the above strategies are used to ensure that consumers are protected in the market. Different countries have adopted suitable strategies for their markets by setting laws, establishing agencies as protectors of consumer interests stipulated by law, installing mechanisms to ensure that consumers obtain redress and that suppliers operate within agreed standards, and by empowering consumers by offering education and information necessary for them to make informed choices in the markets. Furthermore, as markets are dramatically shifting from being local to global, international organizations have a great role to play in harnessing consumer protection in the global market. Thus, the next section discusses the efforts taken by international organizations in harnessing consumer protections among their member states.

3.2 International Organizations and Consumer Protection

Online and international business is becoming a common practice in our communities since the turn of the millennium. Alibaba, eBay, Amazon and the Mastercard Foundation have facilitated the growth of online trade. This trend is likely to continue—especially as Internet penetration increases. Therefore, in modern society, the need for consumer protection is not bound within national borders. Consequently, to ensure the protection of global and local consumers, multiple international organizations have set directives, manuals and/or guidelines for consumer protection. These international organizations include United Nations agencies such as the World Trade Organization (WTO), the United Nations Conference on Trade and Development (UNCTAD) and the International Telecommunication Union (ITU). They also include regional organizations such as the European Union (EU) and Africa Union (AU). This section discusses the role played by the United Nations' agencies to empower consumer protection among member states.

3.2.1 UNCTAD and Consumer Protection

The United Nations guidelines-for-consumer-protection (UNGCP) document was first adopted in 1985 by the general assembly under the 39/248 resolution. However, the movement of establishing the international guidelines started more than two decades prior to the consensus adoption of the guidelines.

Consequently, in 1975, the international consumer association (currently known as Consumer International or CI) requested that the UN establish the model code for consumer protection. Then about two years later, the Economic and Social Council (ECOSOC) reviewed institutions among member states and prepared the draft for the guidelines, which were finally adopted in 1985. Due to technological advancement which alters market and growth markets in the developing countries, the UNGCP was revised in 2015.

In December of 2015, the UN assembly set UNCTAD to be the central player in fostering consumer protection among states. Therefore, UNCTAD has responsibility for ensuring the implementation of the set guidelines. It also has the role of promoting consumer protection in emerging market economies—including in developing countries—by exchanging best-practice ideas, by capacity building, and by offering technical assistance. Furthermore, UNCTAD is required to periodically review consumer-protection guidelines and to institutionalize the reviews of the guidelines.

3.2.2 WTO and Consumer Protection

The World Trade Organization is an international organization which deals with international trade to ensure that trade flows efficiently, predictably, and generously among nationals. The organization acts as a forum whereby nations can negotiate trade agreements and settle trade disputes. The organization offers capacity-building training and seminars to member states. Seminars and training aim at empowering local and international producers and suppliers. Generally, the WTO is like the mother of the liberalized markets (open trade). The WTO was at the centre of Uruguay negotiation of 1986-1994 and the Doha negotiation of 2001. One of the motives behind open trade or the free market was to pass benefits to consumers.

Therefore, Consumer International (CI) suggests the inclusion of competition policies at the WTO by proposing that competition policies will uphold consumer interests in the market. In 1996, the Working Group on Interaction between Trade and Competition Policy (WGTCP) was established following the

Singapore Ministerial conference². Furthermore, in 2003, CI published the “Technical report on Consumers, Multilateral Competition Policy, and the WTO”. In addition to competition policy, the report addresses the need for consumer protections (Consumers International, 2013). Subsequently, the WTO made consumer protections, Africa, and jobs creation the main agendas for the public forum in 2014 (WTO, 2014). As the organization that deals with international trade, WTO continues to work on ways to uphold consumer protection for smooth flow of trade.

3.2.3 ITU and Consumer Protection

The International Telecommunication Union (ITU) is the United Nations’ agency for dealing with information and communication technologies (ICT). The agency is comprised of 193 member states and about 800 members from private organizations and academic institutions³. The goal of ITU is to connect the world through ICT and protect the fundamental right of communication. One responsibility of ITU has been to promote consumer protection in the ICT markets. For instance, in 2013, the agency published regulations for consumer protection in the converged environment (ITU, 2013).

Furthermore, the agency has been conducting training to promote consumer protection. For example, on 21-23 of March, 2016, ITU conducted special training on consumer protection in ICT markets in India. Global symposia, conferences, and training on consumer protection have been used by the agency to share best practices and empower consumer protection. As in 2014, different countries got the chance to present best-practice guidelines for consumer protection in the digital world at the GSR conference. In addition, during such gatherings and through yearly reports submitted by member states, ITU has been collecting data and publish reports on different issues, including consumer protection. For instance, in July of 2016, ITU published a report on consumer protection in the field of digital financial services (Estopice, 2016).

² https://www.wto.org/english/tratop_e/comp_e/wgtcp_docs_e.htm

³ <https://www.itu.int/en/about/Pages/default.aspx>

The telecommunication sector is growing very quickly. Due to technological advancements, currently the sector is playing the major role into other sectors like commerce, and finance especially in the developing countries and transition economies. Consequently, the telecommunications sector alters the traditional way of doing business. For instance, consumers in Tanzania can pay for their online products through their mobile-money accounts (which means they can buy products online even if they do not have bank accounts). Furthermore, the number of consumers is increasing, which means the need for more protection as services become more sophisticated. ITU still has a major role to play to ensure consumer protection in collaboration with other international organizations, member states, private sectors, and academia.

In summary, in this section, we have witnessed the steps taken by international organizations to uphold consumer protection. Almost all of the organizations discussed here are at the earlier stages of incorporating consumer protections into their organizations and member states by setting guidelines, publishing manuals, establishing regulations, sharing best practices, and offering capacity building to consumers. As markets converge towards a single-market economy, services and goods become sophisticated. The market is becoming inclusive to vulnerable consumers. Therefore, consumer protection is crucial at the international level, as the world economy is moving towards a platform economy and global consumerism. Consequently, to the global-consumer phenomena, international organizations ensure that consumers can participate confidently in the market economy. The role of local consumer agencies cannot be underestimated, as they have more direct access to consumers and enforcement mechanisms.

3.2.4 Consumer protection in multinational and regional organizations

OECD is perhaps leading in its inquiry to understand consumer protection—especially in applying both conventional (information asymmetry) and behavioural economics (human biases) to understand causes of market failure, and device policies for better consumer protection (OECD, 2008, Anong and

Kunovskaya, 2013). The motivation behind these initiatives is the realization of consumer deficiencies in competitive markets—especially in newly liberalized industries such as telecommunications, energy, and gas. Major initiatives in this regard include the roundtable on the demand-side economics of consumer policy of 2006, the roundtable on economics for consumer policy of 2007, and the consumer-policy toolkit of 2010, which offers general policy recommendations on tackling consumer protection issues.

The European Union (EU), with most of its member states being members of OECD, provides a somewhat special case due to its semi-autonomous property. The European Commission, to foster its EU single-market policy (EC, 2015), has made advances by pushing a comprehensive consumer-protection policy across the union. Together with national entities, the EU ensures that monitoring and enforcement mechanisms are put in place and functioning throughout the region. To guarantee the effectiveness of the consumer policy, the EU has adopted the consumer programme, which is a six-year consumer-protection regulation that cut across industries. For example, the current regulation—European Union (EU) No 254/2014 of 20 March, 2014—covers 2014 to 2020. This regulation prioritizes promoting consumer safety and knowledge of consumer rights and strengthening the enforcement of consumer rules across four key sectors, including telecommunications. Thus, policy leadership and comprehensive monitoring and enforcement have strengthened the organization and effectiveness of consumer protection in the EU compared to other regions (Cherry, 2010).

Though Africa comprises several regional blocs, consumer-protection initiatives for telecommunication markets are found only in the countries of the Southern African Development Community (SADC) and Common Market for Eastern and Southern African (COMESA). SADC developed cross-industry, consumer-protection policy guidelines in 2004 (Lewis, 2013). Telecommunications sector guidelines were updated in 2011 (SADC, 2011). As observed by Lewis (2013), the new SADC guidelines reflect the global best practices on consumer protection; however, they lack details which reflect conditions that prevail in particular regions. Similarly, COMESA developed its first policy guidelines for consumer protection (Lewis, 2013) and a draft for reviewed guidelines specific for telecommunication and ICT

sectors in 2007 (ARICEA, 2012). Apart from efforts made by regional organizations, adoption and enforcement of these policies by Member states is sometimes delayed (ITU, 2009), which results in a wide implementation gap in the region.

In general, different countries in the world have adopted different initiatives to uphold consumer protection. Likewise, regional regulatory authorities in Africa have played an important role in shaping national policies in the African telecommunications sector (van Gorp, 2008). However, more has to be done than just adapting the global best policies to deal with the needs and peculiarities of countries for policies to yield positive results (Gillwald, 2005).

3.3 Consumer Protection literature based on the telecommunication markets

Consumer-based research has been explored by multiple scholars in different markets. In the telecommunications market, studies explored customer satisfaction, consumer complaints, and the application of behavioural economics in understanding the behavioural biases facing consumers when making decisions in the markets. In this section, consumer protection is discussed, and different kinds of literature are reviewed. Specifically, three subsections are related to the empirical chapters of this thesis (five, six and seven). Main subsections consider the literature of consumer knowledge, awareness of the consumer-complaints procedure, and consumer-complaint behaviour.

3.3.1 *Consumer knowledge*

Consumer knowledge is crucial if consumers are to act rationally in the market. Less-knowledgeable consumers are more likely to be vulnerable. A number of scholars have contributed to the literature by exploring consumers in the telecommunication markets. Most of them have analysed the determinants of consumer satisfaction, as most service providers are keen to get such data. Scholars have applied various theories while attempting to build a consumer-satisfaction index (see Aksoy, Buoye, Aksoy, Larivière, and Keiningham, 2013; Clifton, Díaz-Fuentes, and Fernández-Gutiérrez, 2014; Gerpott, Rams, and Schindler, 2001; Kim, Park, and Jeong, 2004; Lee, Lee, and Feick, 2001; Sarki, Azhar, Bhutto, Khuhro,

and Arshaad, 2012). Most studies in this segment use confirmatory and exploratory analysis to test determinants measured in latent variables. The example of consumer satisfaction is the study by Gijón, Garín-Muñoz, Pérez-Amaral, and López-Zorzano (2013). The study provides a detailed analysis of the determinants of consumer satisfaction in Spain. The study analyses consumer satisfaction by applying OLS to a dataset of 4249 telecommunication consumers in Spain. The study reports that consumers are more satisfied by smaller and new operators than by large ones.

Besides the area of consumer satisfaction, another research focus has been on analysing consumer complaints. In fact, consumer complaint is the opposite reaction to consumer satisfaction. Thus, the impetus has been to understand factors that trigger consumer complaints. It is crucial to understand the causes of consumer complaints, especially in the telecommunications sectors, because the sector has experienced a greater surge in consumer complaints than any other sector (Smith, 2000).

The first block, which is consumer satisfaction, has been analysed by different scholars. Cheung (2007) investigated consumer-related complaints in four telecommunication markets in Hong Kong: fixed line telephone services, mobile-phone services, international direct-dialling services, and Internet services using regression analysis and a dataset received from the Office of the Telecommunication Authority covering the period 1999-2006. The author found that consumer complaints have indeed increased as competition grew in the market. Contrary to Gijón et al. (2013), Cheung (2007) found that more complaints in Hong Kong came from new players than from established ones.

The second block of studies analysed the causes of consumer complaints. Garín-Muñoz et al. (2016) analysed consumer complaints in the mobile telecommunication sector. The results reveal that dissatisfaction is not a necessary condition for complaining; rather the nature of consumer experience is key. In particular, they report that consumers who experience problems in billing are more likely to complain than those who experience problems of a different nature.

The third block is behavioural economics. Behavioural economics is another interesting area scholars in the telecommunication industry are reviewing. Mainstream economics assumes that consumers are rational agents, able to evaluate products and services based on merits. When their expectations are met they are satisfied; otherwise, they complain. They assume that any bias is idiosyncratic and cannot be systematically observed across the population. Behavioural economics challenges this view. Consequently, it identifies and evaluates the consistent systematic errors and biases consumers are likely to make in their buying decisions. Lunn (2013) points out several sources of bias that are inherent to human beings, such as status quo, ambiguity aversion, and procrastination and inertia. Lunn (2013) suggests that, when the consumer is continuously exploited, this may lead to an unfair balance in the markets. Armstrong (2008) and Xavier and Ypsilanti (2008) reveal numbers of cases in which producers have the opportunity to exploit consumers based on behavioural-economics precepts.

In the same line, Mitomo et al. (2008) analysed the consistent preferences of consumers with respect to a flat-rate plan. They report that consumers more comfortable paying a fixed monthly charge which may be systematically higher than their actual use. The authors point to the fact that people tend to overestimate their future telecommunication services use. Thus, they make irrational buying decisions that do not serve their best interests.

The above literature has attempted to analyse consumers under various assumptions. Consumer satisfaction assumes that consumers have enough knowledge of their products and services. Thus, are able to make decisions in their best interest. When these expectations are met, they are satisfied. Otherwise, if they are not satisfied, they can act rationally by complaining, and seeking redress where applicable. The caveat is that customers who are not satisfied and are informed about the complaint procedure will report their complaints. Since most research in this area analyses the complaints that were reported, the literature at this point is silent about those who do not file complaints. Behavioural economics covers this space with the argument that consumers may not be satisfied with the service but, due to bias, fail to act in their best economic interests. Based on biases such as status quo, the aggrieved consumer may neither report

their complaint nor change the operator. Often, behavioural studies recommend that regulators and policymakers devise ways to increase consumers' education, thereby empowering consumers in the marketplace and empowering them to take action when they face violations in the market (Xavier and Ypsilanti, 2008).

This thesis, through the empirical study offered in Chapter 5, fills a gap by focusing on consumer knowledge of consumer rights. Since most regulators offer consumer protection in an *ex-post* way, unless consumers know their rights and are conscious of when they are exploited and aware of complaint procedures and institutions that work for them, it is unlikely that they will complain. Second, the study attempts to fill this literature gap by focusing on developing countries in which telecommunication has boomed quite recently and there is little literature on consumer empowerment and protection.

3.3.2 Consumer awareness about the complaint procedure

The complaint procedure/dispute resolution has been debated in recent years as consumer-spending representation to the GDP, and detriments are increasing in different markets. For instance, consumers' spending in the European Union represents 57 percent of the EU's GDP⁴. Moreover, consumer detriments only in the United Kingdom (UK) are estimated to have reached £4.15 billion in 2014, mainly due to the poor quality of goods and services. These facts indicate the need for an effective procedure for the process of seeking redress. The main challenge is to create an effective mechanism for handling complaints and redress. The ideal mechanism is supposed to be user-friendly and accessible to the majority of consumers—including vulnerable ones. Consequently, the area of dispute resolution and complaint procedures has attracted the attention of policymakers and researchers.

Traditionally, there was one procedure for handling complaints. Usually, in case of an unpleasant experience in the market, the consumer was responsible to try to resolve the dispute with the service

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http://ec.europa.eu/consumers/consumer_evidence/consumer_scoreboards/11_edition/docs/ccs2015scoreboard_en.pdf

providers. In case of failure to resolve the dispute, the next option was to take the matter to court. Escalating the dispute to court is time-consuming and costly for consumers. Thus, considering the court hurdles, aggrieved consumers sometimes decided not to take the matter to court. As a result, policymakers in different countries and regions decided to adopt a consumer-friendly complaints procedure to uphold consumer protection in their markets: e.g., alternative dispute resolution (ADR) and online dispute resolution (ODR).

Mnookin (1998) refers to ADR as comprised of practices and techniques intended to facilitate the resolution of legal disputes outside of court. The resolutions are usually attained through ADR by mediation, arbitration and negotiation without formal adjudication. Policy makers have adopted ADR because it is cost effective (it reduces the transaction cost of resolving disputes, as it is cheaper than court proceedings), enhances satisfaction (creates resolutions which are more suitable to parties' underlying interests and requirements), is efficient (improves compliance with the resolutions terms), and is often faster than court proceedings (HyoungSuk Ko, 2009; Stipanowich, 2004; Théocharidi, 2016). In detail, the ADR scheme act as a middleman between the consumer and the service provider. Therefore when the consumer fails to resolve the complaint, the service provider can take the complaint to them. The ADR operators, upon receipt of the complaint, are supposed to review the complaint and decide within a set time. If the ADR operator agrees with the complainant, the operator will require the service provider to take responsibility.

The ADR has been adopted by different countries in Europe and in OECD countries. For instance, the ADR mechanism was brought forward as an EU directive for consumer ADR (2013/11/EU) in May of 2013 and officially by to all member states of the European Union on 9 July, 2015. Following the directive, all EU member states were required to introduce the ADR mechanism in their markets. For example, the regulator of communication in the United Kingdom's Office of Communication (OFCOM), requires all communication-service providers to register to one of ADR scheme. Thus, in case the

consumer failed to resolve his or her complaint with the service provider, he or she can go to the ADR scheme to which the service provider has subscribed.

Moreover, online dispute resolution (ODR) is another complaint procedure which has been adopted by policymakers especially in the EU. The ODR system allows all or part of the complaint procedure to be conducted online. The system is expected to be more efficient in resolving international and e-commerce disputes. ODR can be a solution for resolving long-distance disputes in which it is physically impossible for the consumer and supplier to meet. The ODR mechanism was officially enacted by EU member states in January of 2016. The EU directives require all online service providers to subscribe to at least one ODR operator and to provide the link of their respective ODR on their websites as part of raising consumer awareness about the complaints procedure.

According to ITU's dispute-resolution report, consumers should first attempt to resolve the dispute with their service provider. Upon the failure of the first attempt to resolve the dispute, the report proposes that the regulator have clear procedure in place that is to be followed by the consumer in escalating unresolved complaints. Also, the report reveals that most communication regulators approach consumer complaints proactively and/or reactively.

For instance, the FCC, allows a consumer to address the complaint to them. Then the regulator notifies the service provider of their response. Consequently, the FCC decides on the complaint. In South Africa, the service provider is required by the regulator to establish the procedure for handling complaints, to submit a consumer-complaint report periodically, and to raise consumer awareness.

Furthermore, the Nigerian Communication Commission (NCC) took a step further by establishing the Telecom Consumer Parliament (TCP), which was held for the first time in August of 2003. The TCP acts as an interactive podium between service providers and consumers by aspiring to offer solutions to the consumer complaints and concerns in the markets. During the TCP sessions, every consumer (based on

the time) gets the chance to freely air complaints, and the service provider's representative is required to respond. Furthermore, the TCP educates the public and informs stakeholders about the rights and obligation, and it raises awareness of the complaint procedure. Also, TCP sessions involve panel discussions among stakeholders to discuss the burning issues in the sector. Sessions are often held in six geopolitical zones of Nigeria once a month and are broadcasted as a reality show⁵.

As mentioned, different countries have adopted different dispute-resolution mechanisms based on their market demands. However, the area still raises a lot of concern among stakeholders. In particular, several researchers (Luzak, 2016; Cortes, 2015; Rott, 2016; Creutzfeldt, 2014; HyounSuk Ko, 2009; Fowlie and Khan, 2016; Loos, 2016; Fejos and Willet, 2016; Théocharidi, 2016, Hodges, 2012) have raised concerns about the ADR directive adopted by the EU. Furthermore, Loos (2016) has analysed shortcomings of the ADR directives and argues that, though the directive may promote individual enforcement of EU consumer law, in the long run, it may hinder the development of EU consumer law. Consequently, Loos suggests specific procedures to be introduced for ADR operator/entities. Luzak (2016) argues that, though ADR encourages consumers to invoke their rights, hence upholding law enforcement, the directives are required to be fair and efficient. The study suggests that the policymaker uphold fairness and efficiency by considering all avenues (like consumer awareness and trust of ADR) as well consumer attitudes.

In the same vein, Cortes (2015) suggests that the ADR system undermines the impact of consumers' culture and trust. Furthermore, Cortes argues that intensification of competition among ADR operators/entities may lead to undesirable market practices like forum shopping or the refusal of the service provider to participate in the ADR process. Thus, Cortes recommends the need for close monitoring of the procedure. Moreover, Creutzfeldt (2014) has reviewed consumer-dispute resolution (CDR) in the EU against Tyler's procedural-justice model and concludes that the model cannot fully translate to the UK's Ombudsman model of CDR; hence, Creutzfeldt recommends further re-evaluation of the resolution system. Storkskrub (2016) has analysed the impact of the EU law to civil procedure and

⁵ <http://consumer.ncc.gov.ng/consumer-enlightenment-programmes/telecom-consumer-parliament-tcp/>

dispute resolution and suggests that it is crucial to analyse the EU justice mechanism to attain coherent and efficient justice. Théocharidi (2016) argues that ADR does not guarantee the effectiveness of consumer protection, as its directive mostly considers the idea of average consumer (assuming that consumer is well informed and aware). Théocharidi (2016) accordingly suggests that the directive consider the interests of vulnerable consumers. Having mechanisms in place for handling complaints is a formal and vital step towards enforcing consumer rights. However, consumers are required to be aware of the complaint procedures if they would take advantage of the system. For instance the EC (2015) suggests that consumer awareness is vital for the consumer to complain. Furthermore, EU/2013/11 directives require service providers and regulators to raise consumer awareness of the complaint procedure. In the same accord the OECD (2007) recommends that service providers, regulators, and consumer groups educate and raise awareness about consumer rights and the complaint procedure while leaving no consumer behind. Furthermore, Brenan et al. (2016) recommends the deployment of empirical studies to identify consumer needs and wants and suggests that insights captured from consumer complaints be shared with the respective sector.

In synopsis, with the growth of consumerism and competition in the markets, the need for a clear, effective and fast way to resolve disputes between consumers and service providers cannot be overestimated. In response, different countries and regions have adopted the complaint-handling procedure suitable for their respective market. Other countries like Nigeria have decided to adopt more than one way to ensure that consumer complaints are aired and resolved. Furthermore, researchers have analysed several shortcomings of the existing consumer-complaint handling procedure to pinpoint their recommendations. Furthermore, directives and studies insist on the need to raise consumer awareness of the complaint procedure and to consider vulnerable consumers rather than follow the implicit 'average consumer' (Willett, 2010).

Furthermore, Brenan et al. 2016) emphasize the need for empirical, consumer-related studies to identify vulnerable consumers and to create effective dispute-resolution mechanisms. Therefore, Chapter 6 of this

thesis analyses the antecedents of consumer awareness about the complaints procedure. Hence, it identifies vulnerable consumers (who tend to be less aware) and passes on recommendations to policy makers and service providers in the telecommunication markets.

3.3.3 Consumer-complaint behaviour

Despite the dynamics of the telecommunications sector, few studies have addressed aspects of consumer-complaint behaviour (Garin-Munoz et al., 2016). Studies focusing on consumer-complaint behaviour in the telecommunication markets have mainly focused on attributes of consumer-complaint behaviour, the motivation to complain, and whether complaining or not complaining affects satisfaction with respect to the telecommunication service offered.

Nimako and Mensah (2012) studied the motivation for consumer-complaint behaviour in the Ghanaian telecommunication market. Their study targeted 480 customers from four main mobile-service providers in the country. The effort yielded 86.3% usable questionnaires. The authors used Kruskal-Wallis ANOVA and chi-square for analysis. The study's result demonstrate that the main motivator for complaining behaviour among mobile-phone users is mainly to seek corrective actions. Other motivators are issues that needed psychological intervention by the services providers; they thus require minimal financial implications rather than good customer care. Other motivators include seeking explanations, seeking an apology, expressing emotions – most common anger to the service provider. The least likely motivator is seeking compensation. On the other side, delay in submitting complaints is the most-cited reason for not complaining. These results provide an interesting observation that can be useful to service-providing firms in the sense that their investment in consumer-complaints handling is likely to increase their consumer-retaining power. The study also finds that socioeconomic factors, particularly marital status and age, significantly affect the motivation to complain.

Another study was conducted by Garín-Muñoz et al.(2016) on consumer-complaint behaviour in the Spanish telecommunications market. The study uses one of the most extensive datasets for studies in

consumer-complaint behaviour in the telecommunications markets: It involves 4249 individuals in Spain. The study uses an econometric technique; specifically, logistic regression analysis is used to determine factors that influence consumer-complaint behaviour. Their explanatory variables include demographic factors, problem types, operators, monthly expenditures on telecommunications, overall satisfaction of the service, and the type of contract (whether post-paid or pre-prepaid). The study reveals that, while some customers are not satisfied with the services, satisfaction does not predict a consumer's propensity to complain. Similar results were also found by Nimako (2012) in the study that investigates customer satisfaction of complaining and non-complaining consumers.

Furthermore (Garín-Muñoz et al., 2016) report that the nature of the problem—e.g., incorrect billing, breach of a contract or commercial offer, and difficulty cancelling the service—significantly predict consumers' propensity to complain. Furthermore, Nimako and Mensah (2012) suggest that service providers should concentrate on engaging with complaining consumers, as it leads to a improved consumer loyalty.

Another study by Chinedu et al. (2017) was conducted to analyse predators of consumer-complaint behaviour among MTN mobile-telecommunication consumers in Nigeria. For data-collection purposes, the study applied a stratified sampling technique to collect data from 385 consumers. Later, the study used applied regression analysis to determine predators. The result of this study agrees with a former study (Garín-Muñoz et al., 2016) which suggests that socioeconomic factors also determine consumer-complaint behaviour. Chinedu et al. (2017) suggest that the level of dissatisfaction affects consumer-complaint behaviour.

In summary, Chinedu et al. (2017) and Garín-Muñoz et al. (2016) analysed consumers who decided to voice their complaints. They conclude that demographics, the nature of the problem (unpleasant experience), and dissatisfaction influence consumer-complaint behaviour. These studies do not consider the effect of the level information to which the respondent or consumer is exposed. Thus, are respondents

knowledgeable of consumer rights and aware of complaint procedures? As Ong and the (2016) suggest, consumers who are informed about what, where, and how to complain are more likely to complain or seek redress than uninformed consumers. In addition, Usman et al. (2016) explain that “when consumers know their rights and how to enforce them, it is likely that they would actively pursue it in event of violation”. Also, based on the information-motivation and behaviour-skills theory of Fisher and Fisher (2002), Usman et al. emphasize that information is the crucial element which influences the social behaviour of consumers. Therefore, informed consumers are more likely to behave rationally with respect to the socially desired behaviour in the presence of motivation. Therefore, this study fills the gap by analysing the effects of information, social-economic backgrounds, social-media usage, and the nature of unpleasant experiences towards consumer-complaint behaviour in chapter 7.

3.4 Consumer Protection in Tanzania

Tanzania does not have independent general legislation on consumer protection. Provisions for general consumer protection are embedded in the Fair Competition Act of 2003. Specific to the telecommunications sector, consumer protection is guided by two legislations. First, the Tanzania Communications Regulatory Authority (TCRA) Act of 2003 established the sector regulator after the act's name. The second regulation is the Electronic and Postal Communication Act (EPOCA) of 2010 with provisions for quality of service, consumer protection, and universal service obligation. Thus, failure of the licensee to comply with consumer-protection regulations implies breaking at least part of the license agreement.

In 2011, as part of the legal instruments for consumer protection, the Ministry for Communication, Science and Technology released two kinds of regulations following the enactment of EPOCA of 2010: consumer-protection regulations, and quality-of-service regulations. The former provides consumer protection against misuse of consumer information and inappropriate and misleading promotion and advertising services and deals with issues relating to consumer billing, charging, collection and credit

practices. For the later regulation, the regulatory authority has essentially set minimum standards for quality of service on multiple services ranging from voice services to PSTN and Internet services.

Part of the TCRA obligations is to protect consumer interests and enhance public knowledge, awareness and understanding of the telecommunication services offered, including rights and obligations. The regulator has the responsibility to set the minimum standard parameters, monitor the market and enforce sanctions where necessary. Thus, TCRA, the regulator, is the enforcement entity. However, in some instances, such as electromagnetic field (EMF), TCRA collaborates with the Tanzania Atomic Energy Commission (TAEC) to monitor activities and publish findings on annual basis.

As for consumer complaints, the Tanzanian model includes both the TCRA and the Fair-trade Tribunal, which is the authority implementing the Fair-competition Act of 2003. The two entities are involved in handling consumer complaints at various stages of the resolution process. The procedure begins with interaction between the consumer and operator to resolve the difference according to the service provider's complaint-handling guidelines approved by the TCRA. If the differences persist, the complaint can be filed in the TCRA for resolution. If resolution is not reached within the TRCA framework, the matter is carried forward to the Fair-trade Tribunal, which is the enforcing authority for the general economy or market consumer protection.

The mandate to sanction consumers and services providers are provided to the TCRA by the legislation and the regulations. The regulations dealing with consumer protection have a general clause that sets fines and penalties to a minimum of five million Tanzanian Shillings (Tshs), which is equivalent to approximately 3000 USD, and a maximum of three years of imprisonment for any offense against the regulations.

Based on the result of the study conducted by Mwakatumbula, Moshi, Mitomo (“forthcoming”) Most African countries—except Nigeria among the selected countries (Kenya, Tanzania, Nigeria, South Africa and Ghana)—had not instituted an exclusive consumer-protection law until recently. For instance, South

Africa and Kenya recently instituted an exclusive consumer-protection law, but there was none in Tanzania and Ghana. Indeed, this situation, together with rapid changes in the telecommunications sector, necessitated strong leadership within the sectoral legal framework to ensure consumer protection. The study revealed that, in all selected countries, the law that liberalized telecommunications markets provides general provisions on consumer protection in the telecommunications sector, which covers for lack of a general consumer law.

Along with sector legislation, the regulatory authorities have been established and are mandated as enforcing agencies in all selected countries. Only two countries, Nigeria and Tanzania, have broad parameters to access the quality of service beyond mobile voice telecommunications. Thus, the quality-of-service parameters so far do not reflect the growing importance and adoption of data communications in the regulations of most African countries.

Although for all selected countries, the regulator had the responsibility to set minimum standards and monitoring activities, not all countries publish their findings. As reported by Sappington (2005) and Sutherland (2007), there is a need to publish reports comparing prices and quality-of-service parameters among service providers so as to aid consumers in making their purchase decisions. In most developing countries, such services are not available, especially for the quality of service. In Kenya, reports are mainly published in the government gazette, which is not widely accessed by the public.

Lastly, sanctions, fines, and penalties constitute the third pillar of an institution to enable the enforcing entity to constrain participants who fail to comply with the guiding rules. Although all countries studied have some form of sanction provisions, they have more differences in this area than in any other pillar. Nigeria, Ghana and South Africa have comprehensive sanction provisions, depending on the criteria of non-compliance. However, in Kenya and Tanzania, there is rather a lax regulation that lacks specificity on offenses. In particular, the provision for sanctions under the licensing-and-quality-of-service regulation in Kenya have specified the sanction cap at 300,000 Kenyan shillings or three years imprisonment in case of

general non-compliance, and at 100,000 Kenyan shillings or one-year imprisonment in case of obstructing the investigator from conducting his/her duty. The maximum cap seems not to reflect the realities of the current telecommunications industry and is unlikely to affect the behaviour of service providers. Therefore, the regulator in Tanzania has the responsibility to improve the institutions as one way of ensuring consumer protection. This can be achieved by having specific sanction for an offense to reduce room for corruption. Also, the regulator is recommended to conduct market analyses more often and to publish results to aid consumers in making informed decisions in the market.

3.5 Conceptual and Theoretical Perspective

Scholars increasingly venture into the consumer protection area as the market economy continues to spread, as is the mainstream arrangement in most countries in the world. The theories, models, and conceptual frameworks that attempt to uphold consumer protection have also grown. The main challenge to offering consumer protection in the market economy is that, although governments and public institutions have laws and enforcement, a crucial role in the consumer-protection equation lies on consumers themselves. As Dommeyer and Gross (2003) assert, what consumers know has practical implications for how they are protected against fraudulent products, services or terms of business. Delgadillo (2012) refers to marketplace constituents, consumer issues which deal with consumer behaviour and the legal and institutional framework as important aspects in drawing the theoretical framework for consumer protection. Thus, consumer behaviour plays an important role in consumer protection (Esposito, 2016).

The role of consumer behaviour in consumer protection is specifically necessary when the market economy operates in developing countries where the society has limited consumer sophistication, particularly in knowledge and skills (Donoghue and De Klerk, 2009). Based on this fact, research in consumer behaviour and consumer protection has adapted behaviour-change theories (Ishak and Zabil, 2012).

The field of behavioural change has a number of theories. Major theories include a theory of planned behaviour and a theory of reasoned action, a social cognitive theory, a health-belief theory and a cognitive-affective system theory. In this section, we will briefly discuss these theories and provide arguments that provide the conceptual framework that guides this study.

3.5.1 Theory of Reasoned Action

The theory of reasoned action is one of the most prominent theories used in the scholarly literature to assess how people behave. Reasoned-action theory (TRA) was introduced by Fishbein and Ajzen (1967). The theory has two main constructs that are used to determine the likelihood of an individual exhibiting a particular behaviour. In the case of consumer behaviour, the target behaviour is any action that manifests the consumer's engagement. In the case of consumer-protection activities, the character to be manifested might be complaining when one's rights have been violated.

TRA posits a very simple model, as it has two main constructs: attitudes and subjective norms. *Attitudes* refers to individuals' preferences or opinions about a behaviour in question. On the other hand, *subjective norms* refers to the social pressures one is subjected to. These can be favourable or unfavourable with respect to the targeted behaviour. For example, in certain cultures, it is considered normal for consumers to express their views whenever they feel discontented with the service offered by a supplier. Such social norms are in line with consumer protection. In other cultures, the practice is just the opposite. In the latter, is more difficult for individuals to depict the consumer behaviour which may lead to consumer protection.

3.5.2 Theory of planned behaviour

The theory of planned behaviour (TPB) was conceived by Ajzen (1980) as an improvement of the theory of reason action. TPB's major improvement on TRA concerns the identification of various constructs which could be clogged in the TRA model. Under TRA, behaviour is assumed to be voluntary; the realization of the contrary introduces the idea of behavioural control, which could persuade an individual

to attain a desired behaviour (Ajzen, 1988, 1991). Thus, the TPB has three main constructs: behavioural beliefs, which describe one's belief about the possible ramifications of the behaviour; normative beliefs, which depict one's normative expectations of one's fellows; and control beliefs, which are beliefs about factors that may encourage or discourage a behaviour. The aggregated effect of these factors predicts the behavioural intention, which is the degree to which it is likely that a person will exhibit a behaviour. The higher the behavioural intention, the more confidently the targeted behaviour can be exhibited.

To apply any of the above-explained theories, it is paramount to understand the assumptions under which these theories have been constructed. Both TRA and TPB have two main assumptions: first, human beings make rational decisions by systematically analysing information available to them. Second, before people decide, they consider the ramifications of their decisions to engage in certain behaviours.

3.5.3 Information Motivation Behaviour Skills (IMB) theory

The information, motivation, behaviour skills (IMB) theory was conceived by Fisher and Fisher (1992, 1993, 1999, and 2000) to understand and explain social behaviour. IMB theory being relatively new to the prominent theories of social behaviour, it attempted to resolve the inadequacies and limitations of earlier theories—particularly those of the theory of planned behaviour and reasoned-action theory. As such, the limitations of previous theories are well documented in the literature (Fisher, Fisher and Harman, 2003). These limitations include the lack of a clear indication of relationships between the main constructs of the model (Bandura 1989, and Rosenstock, 1996). Thus, applying the theories to empirical problems has sometimes yielded mixed results (Bartholmae, 2016). Also, their main construct lacks predictive validity, thereby leaving much power on the hands of the researcher (Gerrard et al., 1996). This fact gives less guidance to the implementation of these theories. Therefore, the IMB model was designed to understand social behaviour by improving on earlier theories with the above-stated limitations in mind.

The IMB theory was devised by researchers in the field of public health (Fisher and Fisher, 1992). Furthermore, the theory and thus its constructs and associated relationships have been tested extensively

in the health behaviour—especially for those associated with HIV (Misovich et., al 1998; Murray, 2000; and Williams et al., 1998). Despite the narrow beginning of the IMB theory, its application has been extended and validated in many empirical studies, and it has been found to be useful for understanding and predicting other behaviours (Bartholmae, 2016; Chang et al., 2014; Kelly, Melnyk, and Belyea, 2012; Osborn et al., 2010).

Main tenants of the Information Motivation Behaviour Theory

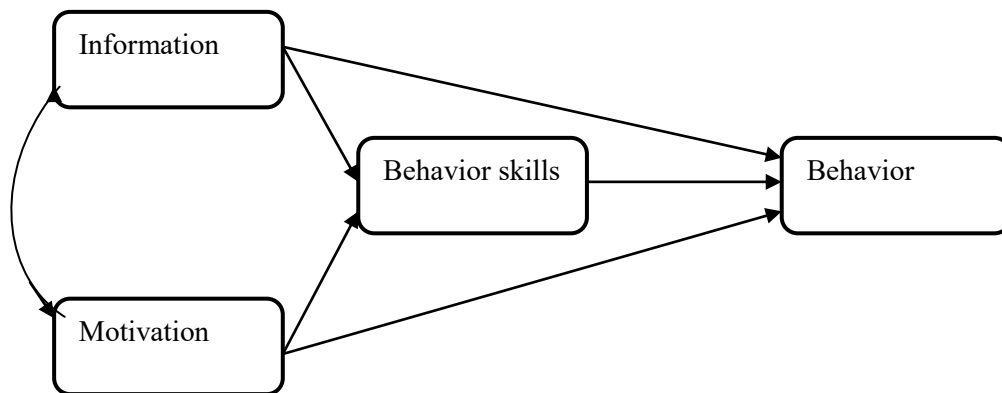
The main tenants of the information motivation behaviour theory are clearly depicted by its name. As such, the theory's main constructs are the information the subject is exposed to, the motivation to act, and the expected behaviour that is dependent on the earlier tenants. The theory assumes that, for an individual to act in a particular behaviour, information that has been accumulated from a benchmark and that motivation to act forms a necessary reason to use the knowledge accumulated; thus, we can expect the behaviour depending on the knowledge and motivation. More explicitly, if a person has the right knowledge, then, when the motivation to act appears, the person is expected to act in a socially right way. In the same manner, if the person has inadequate or wrong information when the motivation to act appears, the person will act in a socially wrong way. It is also important to note that, if an individual has the right information but no motivation to act, the opportunity to observe the behaviour is non-existent. As Stern (1999) puts it, both information and motivation act independently and their interactions have the effect on consumer behaviour and certain consumer protections. Figure 3.1 shows a conceptualization of the information motivation behaviour theory, its main constructs and the suggested relationships between them as offered by Fisher and Fisher (1992). In the next paragraphs, each of the main constructs is discussed in detail in the context of consumer protection.

Information

The IMB theory considers information as an agent of the particular behaviour. Information has the ability to influence positive or negative behaviour to an individual. In the context of consumer protection, the

consumer needs to be informed. Consumers require at least basic information to engage sufficiently and confidently in the market with reasonable protection from dishonest practices. First, consumers need to know their rights, such as the right to be informed about telecom products and services, including discounts, billing, quantity, quality, and prices.

Figure 3-1: Information Motivation and Behaviour Skills Theory



Source: (Fisher and Fisher, 2002)

Second, consumers need to know what happens when their rights have been dishonoured. In this case, consumers should be aware of complaint procedures. Third, consumers should be aware of what institutions they should approach if their rights have been breached. Unless the consumer is informed of the stipulated fact, it is difficult to act and consciously protect himself or herself in the market. For instance, a customer buys a monthly data plan that has a fixed monthly fee for a year; then the operator changes the plan's fee before the contract ends. Although the consumer may notice the difference and is aware of his or her rights, he or she may still be victimized if he or she is not aware of the complaint procedure to follow and who to approach when seeking redress.

Motivation

Motivation refers to influences an individual is faced with that compel him to respond or act according to the knowledge he or she has acquired in relation to a particular behaviour. According to IMB theory,

motivation is comprised of two distinct categories: individual motivation, and social motivation. The term *individual motivation* refers to triggers that influence an individual to act in line with accumulated knowledge. As far as consumer protection is concerned, these triggers include the actual occurrence of consumer rights violations. For example, when a consumer—who already knows that a misrepresented telecommunications data plan is an offense and a violation of his or her rights—encounters such a situation, it offers a personal motivation to act in accordance with her or his knowledge about consumer rights and complaints procedures.

On the other hand, there is social motivation. Social motivation includes social supports that allow an individual to act in line with expected behaviour. For instance, laws, regulations, policy on consumer protection, outlined complaint procedures, and institutions that handle consumer complaints to uphold consumer protection offer a critical social infrastructure that supports consumer protection. Tronvoll (2008) refers to social motivations as a macro environment that can either encourage or discourage customers from complaining. For example, one aspect assessed by Tronvoll (2008) includes the market structure whereby, in the monopolistic market, there are limited options and consumers tend to bear with the situation.

Both individual and social motivations are necessary for an individual to act and manifest in expected behaviour. More specifically, the two types of motivation reinforce each other to influence an individual to comply with the information he or she has accumulated to perform and exhibit a specified behaviour. For example, the presences of consumer-protection arrangements and the violation of consumer rights both compel individuals to act in ways that uphold consumer rights.

Behaviour skills and behaviour manifestation

The terms *behaviour skills* and *behaviour manifestation* refer to the actual performances of a behaviour in question. As Bartholmae (2016) asserts, behaviour emphasizes self-efficacy and actual abilities to act in expected ways. For example, actions that reflect consumer protection include seeking redress and

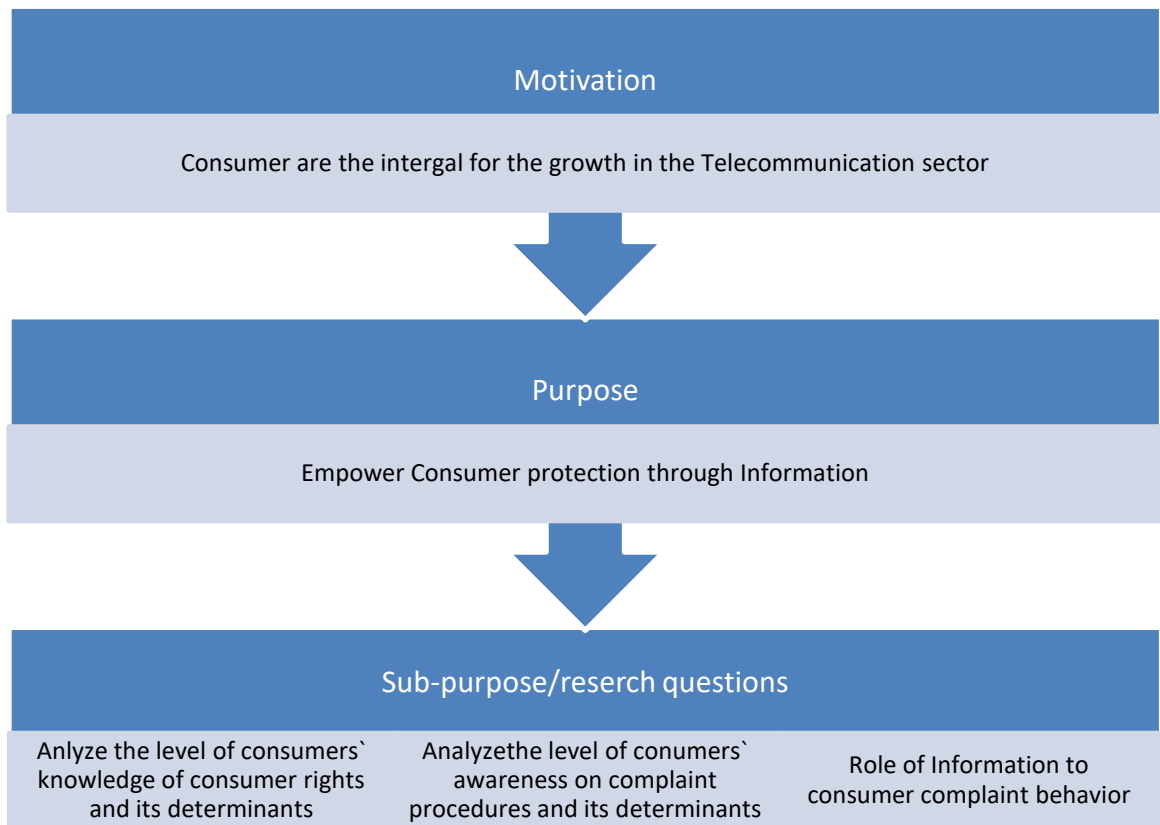
remedies when one has encountered a violation of rights. While some studies have combined behaviour skills and behaviour, the theory treats them separately. *Behaviour skills* refer to the know-how and experience of acting in line with consumer protection as a result of both information or knowledge and motivation. In other words, *behaviour skills* refer to the sophistication of the consumer to deal with consumer protection attributes. Behaviour manifestation is the actual act that reveals the behaviour as inherent to an individual. In this study, consumer-complaint behaviour is taken as a manifestation of a behaviour in line with consumer protection. In accordance with IMB theory, for consumers to act in a socially right way (e.g., a consumer who takes a step to launch a complaint against a violation of his rights), they must first be equipped with enough knowledge about their rights, complain procedures and responsible institutions. Second, they must be motivated by the occurrence of the violations and by a conducive social environment to handle consumer protection.

3.5.4 Adopted Study Model and Conceptual Framework

This thesis focuses on a part of IMB theory. The theory suggests that information is an important factor with an ability to alter consumer behaviour. The theory insists that informed consumers are likely to act rationally in the market. Subsequently, this thesis concentrates on the role of information on consumer behaviour in the Tanzanian telecommunication market. Thus, the thesis analyses the likelihood of informed consumers (those who know their rights and are aware of complaints procedures) to complain when encountering unpleasant experiences in the market.

This being said, as seen in Figure 3-2, the main motivation of this thesis is based on the fact that consumers are integral to the growth of the telecommunication sector. The goal of regulators is to ensure that consumers are sovereign in the market and protected against unfair business practices. However, because a regulator offers consumer protection *ex-post*, the ability of the consumer to act rationally after encountering an unpleasant experience is vital for consumer protection.

Figure 3-2: Adopted study model



Therefore the purpose of this thesis is to empower consumer protection through information. Since, information is of enormous importance if consumers are to behave rationally in the market and thereby give the regulator a chance to intervene and offer protection where needed, this study analyses the level and determinants of the information level among consumers (to be covered in the first and second empirical studies) and the effect of information on consumer-complaint behaviour.

CHAPTER 4 METHODOLOGY

4.1 Introduction

Methodology plays a significant part in any scientific inquiry. This section discusses the logical and systematic procedures that have been followed in the process of implementing the research. It describes assumptions, statistical techniques and analytical approaches that the researcher used to draw a conclusion about the phenomenon researched (Rajasekar, Philominathan, and Chinnathambi, 2014). The basic reason for a description of the study methodology is to ensure that the study can be successfully replicated by following the stated procedures.

In recent decades, research tools and techniques have increased enormously. Research methods have been fine-tuned depending on various assumptions, available data, data sampling and the objectives of the analysis. As a result, researchers can choose from a wide variety of tools to collect or analyse the research data. Thus, in addition to the research replication, methodology details the rationale behind the choice of particular research tools. These details build a foundation for the study and particularly for limitations of the study conclusion and the application of its results.

This chapter describes the methodology used in this thesis. The chapter will begin with the study design adapted and detail the concepts behind data sampling, population, and participants. Furthermore, data-collection techniques are explained together with the tools that were used for data collection. Given that this thesis uses the same data set to analyse various aspects of the constructs on consumer knowledge, awareness and complaints behaviour, most information about the data collection is covered in this chapter rather than in individual chapters.

Lastly, data analysis approaches and their rationale are also explained. In this chapter, for the reason given above, only the general framework of data analysis is documented. Given the varying nature of the analyses performed in testing each construct, there are differences in at least some of the variables and

techniques used in the analysis. Thus, only the general family of models and estimation techniques used in the thesis is described, leaving further details of the respective analyses to empirical chapters.

4.2 Study design

This thesis adopts a cross-sectional survey design. *Cross-sectional survey design* refers to studies that are carried out in one instance or over a short period of time in a targeted population or in a sample representing the population (Levin, 2006). They usually try to establish the frequency of occurrence of an attribute of interest in the targeted population. In some cases, the design is used to capture peoples' practices, attitudes and behaviours in the population under study (Santos Silva, 1999). As in the case of this thesis, the cross-sectional design is known to be appropriate for studies that seek to depict the prevalence of some attributes in the population.

The cross-sectional design is widely used to understand users in the telecommunications field, and it has been employed mainly by the consulting industry, regulators and academics (Mann, 2003). Most studies employing cross-sectional study design tend to be descriptive in nature (Health Knowledge, n.d). Examples of the cross-sectional survey include Deloitte's global mobile-consumer survey (U.S. edition)⁶ which depicts various patterns of mobile products and services in the United States. Similar studies have been carried out by the United Kingdom's telecommunications regulator, Ofcom, and by the European Union through its general EU consumer and business survey on telecommunication services.

In addition, to establish the prevalence of the outcome of interest at a particular time, cross-sectional studies are able to capture other attributes of a targeted population. This is also referred to as an analytical cross-sectional study (Health Knowledge, n.d). This type of study allows a researcher to further depict useful information about a population by studying associations between various attributes—particularly those that tend to vary with an attribute of interest (Mann, 2003). In this case, the design enables a researcher to evaluate differences between subgroups as related to the attribute of interest within a target

⁶ <http://www2.deloitte.com/us/en/pages/technology-media-and-telecommunications/articles/global-mobile-consumer-survey-us-edition.html>

population (Visser, Krosnick and Lavrakas, 2000). In particular, scholars tend to conduct cross-sectional studies in an attempt to explain associations and patterns in populations. For example, Covadonga, Garin-Munoz, Perez-Amaral, Lopez-Zorzano (2013) use a cross-sectional survey study design to investigate the satisfaction of individual mobile-phone users in Spain. Their cross-sectional survey depicted levels of customer satisfaction plus other attributes such as demographics, reported usage and subscribed carrier(s). They went on to assess the association between consumer satisfaction and the rest of the identified attributes.

The cross-sectional design has several advantages over other study designs. Some of the main benefits of cross-sectional studies include the fact that they are relatively inexpensive to conduct in terms of money and other resources (Mann, 2003). As most scholars are constrained by resources, cross-section studies are better suited. This was especially true after 1950 when researchers started to use the telephone as a means to conduct surveys, particularly in the developed world. Over-the-telephone surveys are easier to conduct than face-to-face surveys and mail surveys (AAPOR Task Force, 2013).

Despite the advantages of cross-sectional studies, the same attributes pose some weaknesses in the design. The first issue is that the data in such studies is collected only once. This includes outcomes, exposures, and confounding factors. Goldberg, McManus and Allison (2014) argue that,

[The cross-sectional] study design is prone, however, to a number of potential biases, including information, response, and selection bias, and confounding by time and other covariates. These concerns are important to consider in using this design since they make it difficult to derive meaningful inference from this type of investigation and one need to be very careful in the interpretation of any findings thereof.

The design on its own does not guarantee causation beyond associations—sometimes known as correlation (Sedgwick, 2014). To ensure that the researcher derives a causality relationship among phenomena in the targeted population, careful attention should be devoted to the sampling procedure, the

size of the sample and data collection to ensure the representativeness of the sample with respect to the targeted population (Health Knowledge, n.d).

4.3 Sampling technique

As already explained, the quality of survey studies—particularly those intended for analytical assessment—hinges on the ability of a researcher to design and employ sampling and data-collection techniques that are likely to yield a representation of the targeted population. Unless the data is a fair representation of the targeted population, the analysis is likely to provide biased estimates (Goldberg, McManus and Allison, 2014).

In ideal conditions, probabilistic sampling techniques are more likely to provide a representative sample and reduce bias among estimates. Probabilistic sampling techniques employ a random selection of the sample that provides a known and equal probability for each member of the population to be selected into the sample. To implement any design of probabilistic sampling, at least two conditions are necessary:

- The researcher should be able to have the list of all members of the targeted population. This is extremely important, as it enables the researcher to estimate the sampling probabilities and hence employ random sampling.
- A probabilistic algorithm is needed that will be used to randomly select the sample from the targeted population.

Despite the popularity and utility of conventional probabilistic-sampling methods, their applicability is limited to certain situations (Thompson, 2004). Examples of these situations include an infinite population or one for which it is almost impossible to establish a sampling frame (Seber and Salehi, 2013) and rare events that can hardly be predicted (Haldane, 1945). In such cases, the conditions set for conventional probabilistic-sampling methods are not fulfilled; thus, it is necessary to use advanced methods to resolve these bottlenecks if one still wants to estimate parameters under stochastic attributes.

4.3.1 Multiple Inverse Sampling

Inverse sampling is a type of adaptive sampling in which the data collection proceeds depending on information about the sample size. According to Seber and Salehi (2013), inverse sampling can be defined as,

a method that requires observations to be continued until certain specific conditions that depend on the results of those observations have been fulfilled.

The issue with the operationalization of the inverse is how to decide on the conditions one has chosen to determine the adequacy of the sampling. (Christman and Lan, 2001), as described in Seber and Selehi (2013), suggest three rules to when to stop the sampling exercise:

- a. One unit is selected at a time until a predetermined number of the targeted individuals in the sample have been observed. This is usually referred to as conventional or ordinary sampling.
- b. Initially, a random sample of a specified sample size is selected. The criterion is whether the number of rare individuals in the sample is underrepresented. If they are well represented, sampling stops; otherwise, the sampling continues until sufficient individuals in the sample are reached.
- c. Another design is similar to design (b); however, the sample stops when at least one individual of the underrepresented group is present in the initial sample. When the initial sample does not contain any of the underrepresented individuals, the sampling exercise continues until enough underrepresented individuals are observed.

The inverse-sampling method is by design directly applicable to general sampling where the researcher only needs one sample from the population. In case one has stratified the population into several categories, inverse sampling needs to be adjusted to appropriately result in a proper sampling. (Chang, Liu, and Han, 1998) introduced the multiple inverse sampling by its extending application of inverse

sampling in a stratified population. To apply the multiple inverse sampling, the population should be stratified and the size for each stratum should be known. Salehi and Chang (2005) have shown that multiple inverse sampling results in unbiased Murthy's estimators.

An empirical example of multiple inverse sampling is that of Sarraf-Zedegan et al. (2003). The authors studied cardiovascular disease in the Isfahan six-year project on disease-risk behaviors. The study chose design (b), as described earlier. Stratification was pegged on age groups (19-24, 25-34, 35-44, 45-54, 55-64, 65 and above). The condition for continuing sampling was based on a predetermined number of each group to match the age distribution of the community.

This thesis adopts multiple-inverse-sampling method based on design (a), on conditions pegged on age groups, as in Sarraf-Sedegan et al. (2003). According to Aggarwal and Pandey (2010), while the method provides a sample with stochastic characteristics compared to conventional sampling, it is preferable in terms of time spent and price.

4.4 Data Collection

4.4.1 Collection of Data Samples

Data used in this study was collected in Tanzania through a face-to-face interview-based survey in May and June of 2015. The face-to-face interview-based survey was preferred over an online survey because it is the best way to reach the offline community, considering the low Internet penetration in Tanzania. Other studies which have used face-to-face interview-based survey in the telecommunications field include Srinuan et.al (2012) and Dagli and Jenkins (2016). The sample data in the study is comprised of 400 respondents who were selected from three cities (Dar-es-salaam, Mwanza and Mbeya) and one municipality (Moshi) in Tanzania. In each city/municipality, one hundred respondents were interviewed. All respondents were phone owners above 18 years old. The average age is 35 years, and the gender ratio is 44 percent female to 56 percent male.

A questionnaire was used as the tool for data collection during the survey. General details about the respondents, such as demographic factors, were collected first. Then questions specific to respondents' experience with telecommunications services followed. The questionnaires were filled by trained persons who asked respondents the questions in the questionnaire. This technique was preferred over distributing the questionnaires and collecting them later. The technique reduced respondent attrition from the survey and so guaranteed a one-hundred-percent response from the interviewees. Furthermore, since the survey was based on consumer rights, awareness, and redress procedures, some of these concepts could have been hard for respondents to grasp. Thus, in such a case, enumerators took part in explaining the concepts to the respondents. The questionnaire was tested with a few interviewees before it was rolled out on the full scale.

One hundred respondents were arbitrarily selected in each of the four city/ municipality. The study sought random sampling as much as possible but randomness would not be assured in sampling due to the limitation of reaching a good number of users or consumers. The target was to interview 400 respondents. Since the number of telecommunication-service users in each region was unknown, the goal was to ensure that each socio-economic group is represented to make the result as nationally representative as possible. Therefore, the study followed steps explained below to select the data sample.

The first step was to select regions where interviews would be conducted. Four regions were selected from four different zones to ensure diversification of data. Regions included were Mbeya, Mwanza, Kilimanjaro and Dar es salaam in the south-highlands, lake, northern, and coastal zones, respectively. In the second step, two local markets were selected in one in rural and one in urban at each region. Local markets were selected depending on its popularity, meaning that the most popular local markets were selected. Thus, eight local markets were selected for four regions. The marketplace was used because it is the best place to meet with people from all socio-economic backgrounds. Moreover, rural areas in particular have special markets days, which are perfect days to collect data.

The third step after identification of data collection venue was respondent selection. Since it was not possible to achieve random sample, the target was to ensure that the sample is as representative as possible. In achieving the representation of consumers from different social-economic backgrounds, the study foremost ensured that every age group was represented. Then, the focus was to ensure that there is fairness in gender representation. Thus, in every age group, gender representation was required to be above 40 percent.

At the market places, enumerators picked anyone arbitrarily and request their consent to participate in the survey. Not all picked consumers agreed to be interviewed. Some refused, and others, especially in rural areas, do not own a phone. In case of refusal or when a selected individual does not own a phone, the enumerator continues with the sampling process until the targeted sample is reached. The whole exercise took almost fifteen days in each region.

4.4.2 The questionnaire

The questionnaire had six sections. The first section aims to understand challenges facing consumers in the telecommunication market and reporting behavior. In this section consumer was asked nine common challenges facing questionnaire in the telecommunication markets. Then consumer, who had unpleasant experience, was asked whether they report or not. Logically this section was crucial to understand challenges facing the consumer in the market. Furthermore, it is vital to investigate the extent of problem before empowering consumers. Also, Garin et. al (2016) used the more likely model to understand consumer complaint behavior in telecommunication sector. The study which was conducted in Spain used questions which represent challenges facing consumers in the Spanish telecommunication markets. This study has adopted some questions from Garin et.al (2016), and other questions were added to fit the Tanzanian market. Questions were designed by the author with the help of two telecommunication engineers, manager, and three lawyers. Consequently nine questions were designed and were used to understand challenges facing consumers in the market and their reporting behavior.

The second section, seeks to understand consumer knowledge of their rights. Nine questions were asked to consumer concerning their basic rights as telecommunication consumers in Tanzania. Consumer had the choice of answering “true”, “false”, or “I don’t know”. Since, not all consumers may know the answer for the specific question the “I don’t Know” option was set as suggested by number of studies (Moon, Cheng, Patel, Baumhaft & Scheidt, 1998; Kumar et al., 2010; West, 2006). Questions asked test the knowledge of consumers’ right. Consumer who answers the question correct was considered to know the specific right. Different scholars use the same procedure to analyze the knowledge level.

The third section was set to understand the consumer’s awareness of complaint procedures. Questions were set based on the consumer complaints procedure as stipulated by the communication regulator. Consumer had two choices of response “aware” and “not aware”. Sample question includes “Consumer can complain to their service provider when had negative/unpleasant experience?” and “Consumer can escalate their complaints to the regulator, if not satisfied with the resolution from the service providers?”. This section tested consumers’ awareness of four stages of the complaints procedure.

The fourth section analyzed the consumer awareness on the institutions which deals with consumer protections. Institutions were basically the regulator TCRA – Tanzania communication regulatory authority and FCC – fair competition commission. These institutions have several responsibilities and consumer protection is one of them. Therefore, sometimes consumers are aware of the institution but not aware of institutions’ responsibility as champions for consumer protection. For instance, TCRA is dealing with the demand side and supply side markets for telecommunication, broadcasting, and postal and courier services. Therefore, this question was set purposeful to measure whether telecommunications’ consumers who are aware of these institutions, are more informed than unaware consumers.

The next section analyzed the media use behaviour. Media had been used to pass knowledge as the channel of transferring information to the mass (Grégoire, et al., 2015; Hong & Lee, 2004; Hudson & Thal, 2013). Also, media had proven to alter behaviour in the society. Therefore, this section asks consumer on how frequent, do they consume media – thus radio, television, newspapers and social media. The frequency of use was categorized in four – daily, weekly, monthly, or never.

The last section collected the socioeconomic backgrounds data for all respondents. Demographic data collected included the gender, age, living location (rural/urban), education level, income level, employment status, and region. Socioeconomic background data was collected to identify the most probable vulnerable groups in the society. This was suggested by Brennan & Coppack, (2008) who argued that consumers are not average in the market, thus suggested vulnerable socioeconomic groups to be identified and offered protection.

4.5 Approaches to Data Analysis

4.5.1 Discrete-choice modelling

The beginning of discrete-choice modelling can be traced back to the 1860s. It was introduced by scholars who studied the relations between physical stimuli and sensory response. Its occurrence in the literature remained limited to biological studies until 1970, when it was revived by the work of McFadden (see Domencich and McFadden, 1975), who received a Nobel prize in 2000 for his contribution to developing the theoretical underpinnings of discrete choice.

In the past four decades, discrete-choice modelling has been used extensively in the transportation industry—especially to model travelling choices (for the review see Cirillo and Xu, 2009). Discrete-choice modelling received major contributions by their incorporation in the random-utility models of Marchak (1960) and later by Manski and McFadden (see Manski 1977; McFadden 1974). Following the developments in discrete-choice modelling, it is now one of the more prominent modelling techniques for

utility, labour choices, and welfare in economics. It is also used by social scientists in the areas of marketing, healthcare, energy, labour and other social-sciences fields.

Ample scientific inquiries have been conducted in an attempt to understand phenomena that exhibit continuous behaviour. Examples of dependent variables with continuous behaviour include consumption of a particular good or service; weight, and length in natural science; and investment, expenditure, and population in economics. In general, the main question in these studies is “what the quantity” of the variable in the question is. On the contrary, discrete-choice modelling attempts to answer a different question: Given finite list options, “which one” is the most appropriate or most likely to be chosen. For example, buy a new phone or not, subscribe to a new data plan or not. Sometimes the choice can be comprised of more than two options: e.g., an individual might commute to a workplace by using a train, a car, a public bus, or some combination of the above.

Discrete-choice modelling depends on key assumptions (sometimes referred to as criteria) for constructing a satisfactory model. These criteria form the basis and main constituents of the model. They include the following:

- i) **The decision maker and his/her attribute.** While the decision is usually taken to be an individual, in a real sense, *decision maker* also refers to an organization that engages in deciding between various options. Thus, these models may also be referred to as disaggregate models, as organizations are treated as individuals in the decision-making process. This criterion acknowledges that the attributes of a particular individual are likely to affect his or her choice patterns. Thus, individual characteristics contribute to the part of the model that attempts to predict a decision outcome. For example, individual attributes such as age, income, and education level can influence how an individual makes buying decisions on the phone or in data plans.

ii) **Alternative options and their attributes available to the decision maker.** Models are used to describe, explain or predict choices between alternatives. These alternatives must be available to the decision maker and must be exhaustive. Furthermore, attributes for each alternative must at least be apparent to the decision maker. When the decision maker is not aware of some of the alternatives available, they should be removed from the modelling as the individual cannot consider them in decision making. Thus, each group of individuals has a set of alternatives available; modelling considers only elements in the set of alternatives—not those beyond it. Similarly, if attributes cannot be observed by the decision maker, then the decision maker is not in a position to make an optimal decision that can be modelled. Thus, this criterion assumes that the decision maker is aware of alternatives and of the corresponding attributes necessary to distinguish one alternative from the other.

In addition, alternatives should be unique, that is, they should mutually exclude each other. This is because the model estimates the probability the decision maker will choose one alternative or a unique combination of alternatives from a set of possible alternatives or combinations of alternatives. Furthermore, the alternatives should be finite in number. For the model to make estimates, it should consider all alternatives available to the decision maker. This is analogous to the principle of opportunity cost in economics. Choice of one alternative or combination of alternatives also rests on the choice of the remaining alternatives. When the list of alternatives is infinite, the model fails to appropriately estimate the contribution of unobservable alternatives in the choice of the decision maker.

iii) **Decision rule comprises on the how the individual processes or evaluates alternatives and their attributes to reach any decision.** One example of a decision rule comes from random utility theory, which stems from consumer theory. This decision rule assumes that an individual evaluates various alternatives based on their associated values and strives to

maximize his or her utility in the decision-making process. The decision rule assumes that a decision maker has the ability to perfectly analyse a set of alternatives and its attributes. In reality, individuals do not have perfect discrimination capacity, which introduces various uncertainties. Some sources of uncertainty include unobserved taste variations between individuals, unobserved alternative attributes, measurement errors and instrumental variables. Thus, a better understanding of decision rules and their limitations is important to the modelling of discrete choices.

One key characteristic of discrete-choice modelling is the fact that an individual's decision to make a particular choice from among alternatives is based on individual characteristics and alternatives given in as probabilities. This does not mean the decision itself is probabilistic, but it portrays the lack of perfect information, which introduces uncertainty. As has already been said, these uncertainties can be due to unobserved characteristics or measurement errors. Thus stochastic assumptions and specifications of individuals and alternatives are used to solve the imperfect-information problem, thereby leaving the output as probabilistic. This means that discrete-choice modelling estimates the probability of an individual to select a particular choice given his or her attributes and those of the alternatives.

Estimation of discrete-choice modelling

The criteria given above provide the basis for the specification and estimation of discrete-choice modelling. In general, discrete-choice modelling can be categorized into two basic types.

- **The binomial or dichotomous choice model** is the discrete-choice model whose dependent variables consist of only two alternatives.
- **The multinomial or polytomous choice model** is a discrete-choice model whose dependent variable consists of three or more alternatives for the decision-maker to choose from.

To formulate the model, a discrete-choice model specifies the probability that an individual will choose a particular alternative based on that individual's attributes and the attributes of the alternatives. This

derivation follows the work of Green (2008) and Shalizi (2017). Initially, the probability of a statement can be presented in mathematical terms as follows:

$$P_{ij} = \text{Prob}(\text{Person } i \text{ makes choice } j \mid \text{choice set}), j = 1, \dots, J_i,$$

where

i indicates individual, and

j indicates an alternative.

Based on the necessary rules for specifying a discrete-choice model, the above equation should be further restricted to reflect theoretical underpinnings—particularly, individual characteristics. Let decision d of a person i for choice j be denoted as d_{ij} .

Therefore, $d_{ij} = 1$ if individual i makes choice j , and 0 otherwise.

Thus, the new discrete probability distribution will be defined by the following:

$$P_{ij} \equiv \text{Prob}(d_{ij} = 1 \mid X_i, z_i, u_i, \beta, \gamma, \dots), j=1, \dots, J_i,$$

where

X_i represents a vector of characteristics of choice j made by individual i ,

z_i represent vector of attributes of person i ,

u_i represent vector of unmeasured attributes and therefore random from the point of view of the analyst, for person i ,

β, γ are sets of preference parameters.

For instance, a telecommunications customer is to choose between several monthly data plans. Plans have a set of attributes such as amount of data, speed, and price. Similarly, each individual has a set of

attributes such as income, age, and gender. The probability resulting from this specification is an estimation of the probability that an individual will select a particular monthly data plan.

For modelling purposes, let us consider a latent-variable approach. In this case, there are only two outcomes, such as know/do not know, pass/fail, buy/do not buy, or success/failure. In case we cannot establish these states in exact terms, we consider a propensity towards one of the states, such as a propensity to subscribe or not. For instance, if y^* is the propensity that a customer will subscribe to a five-GB-per-month data plan, then we can model the output as follows:

$$y^* = \alpha + \beta\mathbf{x} + \varepsilon$$

$$y_{\text{ou}} = \begin{cases} 1 & \text{if } y_i^* > \tau \\ 0 & \text{if } y_i^* \leq \tau \end{cases},$$

where τ is the threshold.

One way to estimate this model is by using the maximum-likelihood-estimation method. Because y^* is not observed, and all we can depict is the propensity towards y^* , therefore, distribution of errors, ε cannot be determined. Understanding of errors is necessary to employ the maximum likelihood estimation method.

In other words, y^* can be of the following fashion,

$$-\infty < y^* < +\infty.$$

When the output of y^* allow such a range of output, it becomes unfeasible to our preferred output of a choice between two:

$$0 < y_i < 1.$$

The way to enforce these restrictions on the output function is to apply a function that restricts outputs to the desired range while maintaining the integrity of the estimation. The process of applying a function to

the model makes an estimation of the error term ε of the model and allows us to employ the maximum likelihood estimation method.

Binary Logistic Model

The binary logistic model solves the problem of undetermined errors by imposing a standard logistic distribution on the error term:

$$\log \frac{p_i}{1-p_i} = \alpha + \beta x_i + \gamma z_i + \varepsilon.$$

This treatment guarantees the desirable outcomes from $[-\infty, +\infty]$ to $[0, 1]$ while still using a linear expression on the right side of the equation (Shalizi, 2017).

Binary Probit Model

Logistic distribution is not the only distribution that can be imposed on model errors. Imposing a normal distribution on the error term, ε also accomplishes the same purpose of legitimately transforming the outcomes from $[-\infty, +\infty]$ to $[0, 1]$. Thus, with normal distribution, the equation becomes:

$$\Phi^{-1}(p_i) = \alpha + \beta x_i + \gamma z_i + \varepsilon.$$

Similar to the logistic-regression model, the probit model satisfactorily estimates the discrete-choice model as a similar model with latent variables. These two models have different underlining assumption on the distribution of the error term, ε ; nevertheless, the results are usually similar, and the decision regarding which to apply depends on one's preference.

Ordered logit model

Not all discrete-choice models are constrained to binary options. There are often cases in which an individual needs to choose one option from many alternatives. These alternatives might be random and unarranged: for example, choose one fruit in a basket with mangos, oranges, bananas and pineapple. In

this case, the alternatives are unordered. However, there is also a case in which alternatives are ordered—particularly in case of individual opinions—and a similar situation in which one can measure the state level, particularly on one subject/object. For example, preference with respect to a data plan can range from strongly dislike to strongly prefer; knowledge on a certain subject can range from not knowledgeable at all to highly knowledgeable.

Like the binary models,

$$Y_i^* = \alpha + \beta x_i + \gamma z_i + \varepsilon.$$

Peculiar to the ordered logit model is the fact that the individual n has multiple y^* discrete specified options and that these options have been ordered in a particular logical arrangement. Thus,

$y_i = 0$: strongly dislike,

1: mildly dislike,

2: indifferent,

3: mildly prefer.

4: strongly prefer.

Because the individual is now faced with more than two options, the model attempts to depict the probability of choosing one option from the available alternatives. The threshold or cut-off point when the level of a given state transforms from one stage to the next is important to many alternatives. In general, terms assume that the threshold is given as μ_i for each choice in the set of ordered alternatives; the observed y_i results in the ordered-choice model:

$$y_i = 0 \text{ if } y_i^* \leq \mu_0$$

$$1 \text{ if } 0 < y_i^* \leq \mu_1$$

$$2 \text{ if } \mu_1 < y_i^* \leq \mu_2$$

...

$$J \text{ if } \mu_{j-1} < y_i^* \leq \mu_j.$$

Based on the above specification,

$$\begin{aligned} \text{Prob}(y_i = j | \mathbf{x}_i, \mathbf{z}_i) &= \text{Prob}(d_{i,j} = 1 | \mathbf{x}_i, \mathbf{z}_i) \\ &= \text{Prob}(\mu_{j-1} < y_i^* \leq \mu_j) \text{ where } \mu_{-1} = -\infty. \end{aligned}$$

Like the binary discrete model, the boundary of this unconstrained model is between $-\infty$ and $+\infty$; however, this is not a desirable outcome of probabilities. Thus, we use laws of probability to transform the above probabilities into a desirable $[0,1]$ bound function. Extending from the above derivation,

$$\begin{aligned} \text{Prob}(y_i = j | \mathbf{x}_i, \mathbf{z}_i) &= \text{Prob}(y_i^* \leq \mu_j) - \text{Prob}(y_i^* \leq \mu_{j-1}) \\ &= F(\mu_j - \beta \mathbf{x}'_i - \gamma \mathbf{z}'_i) - F(\mu_{j-1} - \beta \mathbf{x}'_i - \gamma \mathbf{z}'_i). \end{aligned}$$

The above equation provides a general model without specifying the distribution of the error term which, as discussed before, is important for estimating the parameters using the maximum likelihood method. If the normal distribution is imposed, the resulting model is an ordered probit model; and if the logistic distribution is imposed, the resulting model is an ordered logistic model. As for this study, the ordered logistic model was preferred. This choice is not based on any scientific reason, because the choice of the estimation model from ordered probit and ordered logit is immaterial with respect to the results of the underlying process.

4.6 Summary

This chapter has introduced the main methodological assumptions and techniques used in this thesis. A general conceptualization of data collection and methods of statistical analysis has been provided. The discussion provided here is general, as the details of the methodology used in each application are provided in respective chapters so as to neatly connect the rationale involved in applying a particular analysis technique to a particular application.

CHAPTER 5 DETERMINANTS OF CONSUMER KNOWLEDGE ON THEIR RIGHTS

5.1 Introduction

Consumer rights constitute a set of rules entitled to the buyers or consumers of goods and services. Consumer rights have been enacted to ensure that consumer welfare is protected and to maximize surplus in the markets. The history of consumer rights can be traced back more than 50 years to 1962, when the former President J.F Kennedy delivered a special speech to the U.S. Congress about protecting consumer interest (Lampman and Douthitt, 1997). However, the need for consumer rights in the telecommunication sector ascended following the portfolio of policy reforms, which led to the liberalization of markets. Prior to the liberalization era, telecommunications services were provided by the public; thus, consumers were automatically protected (Rott, 2007).

In the post-liberation era, as competition grows fierce and services become more sophisticated, the threat of low-quality service providers is likely to emerge in the markets (Lopez, Amaral, Garín-Muñoz, and Gijón, 2015). In addition, complex products and services are likely to affect consumers' ability to make rational choices in the market (Hussein, Moshi, and Mitomo, 2013). For this reason, knowledge of consumer rights is crucial for consumers to make informed, rational, and prudent decisions in the marketplace for their economic interests (Benn, 2003).

Knowledge relevant to consumer rights is regarded as basic information for effective consumer protection. Furthermore, informed consumers (those with knowledge regarding consumer rights and enforcement procedures) have a positive correlation with the ability of the aggrieved consumer to complain in the market (Usman, Yaacob, and Rahman, 2016). Here the assumptions stipulated by Usman, Yaacob, and Rahman (2016) are that informed consumers are more likely to complain of unpleasant experiences in the marketplace. In other words, knowledge of consumer rights offers the consumer the ability to communicate dissatisfaction with the market, which is crucial for consumer protection (Brennan and Ritters, 2004).

As telecommunication services become ubiquitous and competition intensifies in developed and developing markets, the need for consumers to know their rights cannot be overstated. However, the knowledge of consumer rights has proven to be limited among consumers in different markets (Brennan, Vlaev, Blakemore, and Smith, 2016; Kitson, Dislere, and Harrison, 2003), which poses a threat of consumer exploitation in the marketplace (Brennan and Ritters, 2004). In most developed countries, several studies (including Goldsmith and Piscopo, 2013; Kitson, Dislere, and Harrison, 2003; McGregor, 2005; McGregor, 2015; Schuh and Kitson, 2003) have been geared towards consumer-rights education. Studies insist on the importance of offering consumer-rights education to youngsters and to adult population with emphasis on vulnerable consumers.

In synopsis, the presence of informed consumers (who know their rights and are aware of complaints procedures) is one of the early and crucial steps toward consumer decisions to seek redress or to complain of unpleasant experiences. Although some suppliers consider consumer complaints a complete threat, they provide important ways for a service provider to earn consumers' loyalty when properly managed (Álvarez, Casielles, and Martín, 2010; Urueña and Hidalgo, 2016). That being said, the proper management of complaints can be a vehicle to drive competitive markets to flourish (Garín-Muñoz, Pérez-Amaral, Gijón, and López, 2016; Olatokun and Ojo, 2016). Consumer complaints can be beneficial. First, they can help operators get feedback from the demand side that can help them improve their services ahead of their competitors (Asiamah, Nimako, Quaye, and Buame, 2016; Chinedu, Haron, and Osman, 2017). Second, they can help policymakers understand the challenges facing consumers in the market so they can intervene to control unpleasant situations (market abuses) which may lead to market failure (van Doorn et al., 2010). Following this, it is vital to understand, foremost, that consumers' knowledge of their rights and its determinants (discussed in details in this chapter), and factors contribute on the consumer awareness of complaints procedure (to be discussed in Chapter 6), as an important information to influence positive consumer-complaint behaviour. Therefore, this chapter responds to two research questions using the case of Tanzania. First, the study assesses how much telecommunications

consumers in Tanzania know about consumer rights with regard to telecommunications services. Second, the study determines factors that influence consumers' knowledge of their rights in the telecommunications sector. The results of this section contribute to the literature in three ways. First, the study offers insight into the communication regulator in Tanzania concerning consumers' knowledge of their rights. Second, the more vulnerable groups of consumers are identified, thereby to help regulators and related policy makers to carefully address, monitor, and advocate for consumer protection for these groups. Lastly, the antecedents responsible for enhancing general consumer knowledge are identified as inputs for regulators to use when shaping empowerment and protection schemes for telecommunications consumers.

The rest of this chapter is organized as follows. The background of consumer rights in the Tanzanian telecommunications market is covered in the next section. Next, the methodology applied is discussed in detail. In the next sections, empirical results are reported and discussed. In the last section, conclusion and policy recommendations are drawn.

5.2 Background of the consumer rights

5.2.1 *History of consumer rights*

Historically, the consumer rights' vision was first outlined when U.S. President John F. Kennedy addressed the U.S. Congress on March of 1962 (van Rooy, 2012). The president stipulated that everyone is a consumer. He further, elaborated that, though consumers are the majority populace with huge economic power to drive markets, their opinions are rarely heard (Agbonifoh and Edoreh, 1986). Consequently, the president identified four basic rights: the right to safety, the right to be informed, the right to choose and the right to be heard (Bello, Jusoh, and Md. Nor, 2016). Consumer rights were later extended to eight to include the right to consumer education, the right to redress, the right to satisfaction of basic needs and the right to a healthy environment (Ibarra and Revilla, 2017). As a result, consumer-protection guidelines (which involve consumer rights) were adopted by the United Nations in 1985 (Bello,

Jusoh, and Md. Nor, 2016). The United Nations Guideline for Consumer Protection (UNGCP) has been reviewed several times since 1985 and updated twice to accommodate changes in different markets. For instance, the guideline was revised in 1999 to accommodate environmental challenges which took place in the beginning of the 1990s (UN, 1999) and in 2015 to accommodate consumer protection for the global consumer⁷ (UNCTAD, 2016). The eight basic consumer rights have been widely defined and interpreted globally to fit consumers' needs in various sectors and nations. For instance, while the right to the satisfaction of basic needs in the water-utility sector means access to clean water, the same consumer right in the telecommunications sector means standard-quality telecommunication services.

Knowledge of consumer rights cannot be further emphasized in the competitive global economy of the twenty-first century. Consumers are faced with multiple choices every day from various suppliers worldwide; at the same time, suppliers are under pressure to improve their profit margins and share in the markets. For these reasons, in December of 2015, the UN general assembly mandated that the United Nations Conference Trade and Development (UNCTAD) be the focal point of consumer protection globally. UNCTAD has the responsibility to help UN member countries—especially in the developing world—to raise awareness of consumer rights in their markets, thereby eliminating the exploitation of consumers in the markets.

5.2.2 *Consumer rights in the telecommunication sector*

As mentioned in the previous section, the need for consumer rights in the telecommunication sector rose after the liberalization of markets. The complexity and variety of products and services in the liberalized markets sometimes makes consumers more vulnerable and confused and thereby abates their confidence and engagement in the market. As a result, the ITU (International Telecommunication Union), the UN agency for the telecommunication industry, emphasizes consumer-protection regulations and encourages their adoption among member states. For instance, 13 and 34 countries in Africa, Europe and CIS,

⁷ *Global consumer means a consumer who can purchase anywhere in the world without having direct physical contact with the supplier.*

respectively, had adopted or were in the final stages of adopting consumer-protection regulations or legislations which provide consumer rights. Furthermore, ITU interprets consumer rights to fit the need for consumers in the converged telecommunication markets (ITU, 2013). However, due to rapid technological advancement in the telecommunications sector, consumer protections and consumer rights are still at the centre of discussion among scholars.

The communication regulator in Tanzania (TCRA) as a member of ITU was obliged to put in place consumer protection policy, regulation or guidelines. Therefore, TCRA enacted consumer-protection regulations in 2005 under TCRA Act of 2003, which was later reviewed in 2011 under EPOCA law of 2010. Consumer-protection regulations stipulate that consumer rights be observed in the Tanzanian telecommunication markets. Consumer rights as interpreted by TCRA include the following:

- Right to access – Consumers have the right of access to basic communication services at reasonable cost.
- Right of information – Consumers have the right to get all necessary information concerning services, including pre-contractual terms. Information must be clear, accurate and adequate using simple language. Information should express specification on the quality of service and cost of service.
- Right to quality service – Consumer is entitled to a quality of service which reflects the cost of service. The service provider is required to offer service as stipulated in the service-level agreement.
- Fairness – Consumer is entitled to be treated fairly in the market; service should not be discriminated among consumers who pay the same amount of money. Also, the terms of service should be standard and non-discriminatory.
- Right to complain – Aggrieved consumers have the right to complain through a stipulated complaint procedure. Also, the service provider has responsibility to create a mechanism for consumer complaints which is accessible to all consumers.

- Right to seek redress – Consumers can seek redress by following the procedure stipulated by their service provider. In case a consumer is not satisfied with their service providers’ resolution, he or she can refer the dispute to the regulator (TCRA)
- Right to safety and security – All equipment supplied to the consumer should pass safety standards. Service providers have the responsibility to ensure that equipment does not pose any health-related risk to consumers.
- Right to consumer education – Consumer has the right to be informed of the information necessary to make a rational decision in the marketplace.
- Right to be notified in case of termination of service – Service providers are required to notify the consumer before the termination of basic services and Internet.
- The right of representation – Consumers have a right to represent themselves or other consumers to those providing and regulating telecommunication services with respect to affairs pertaining to the services offered them.
- Billing Information – Consumer has the right to access billing information any time. In addition, the consumer has the right to discuss his or her billing affairs with service providers.

In summary, this section has traced the background of consumer rights. Though the vision of the consumer-rights movement can be traced back as early as 1962, its development is ongoing. Consumer rights have been constantly reviewed to accommodate the dynamic nature of the markets driven by technological advancements. For this reason, most regulators and policymakers are under pressure to find ways to educate consumers concerning their rights in both developed and developing countries. For instance, the EU launched a consumer rights awareness campaign between the spring of 2014 and March of 2016 to raise awareness of consumer rights among consumers and traders in the markets⁸. The Consumer Protection Council (CPC) of Nigeria launched a compendium on consumer rights for

⁸ http://ec.europa.eu/justice/newsroom/consumer-marketing/events/140317_en.htm

telecommunication consumers to raise consumers' knowledge of their rights in the telecommunication markets (Alu, 2014).

Generally, the area of consumer rights has attracted the attention of both policymakers and scholars, although the need for further studies in the area cannot be overstressed. Specifically, since the turn of the century, the literature on consumer-related topics has grown considerably in the telecommunication markets as service becomes ubiquitous. Therefore, Chapter 3 reviews the literature on consumers in telecommunication markets.

5.3 Methodology

5.3.1 Data

Data used in this chapter was collected via a face-to-face, interview-based survey guided by a questionnaire. Detailed discussion of the whole data-collection process was offered in Chapter 4. Specifically, the pool used for the analysis of this chapter covers two regions: Kilimanjaro (Moshi Municipality) and Mwanza (Mwanza City). In each region, one hundred respondents were interviewed for a total pool of 200 samples. The main motive of the study is to analyse consumers' knowledge on consumer rights in the telecommunication markets and its determinants.

The respondents' knowledge levels were measured by nine questions. Respondents were asked questions related to their rights and were given the option to answer "true" or "false" or "I do not", depending on their knowledge. Based on the respondent's responses, they were ranked into five categorical levels (0 - 4). Knowledge levels are low, fairly low, fair, fairly high and high. Respondents in Category 4 (high knowledge level) were the most knowledgeable while those in Category 0 (low knowledge level) were the least knowledgeable.

In detail, respondents who answered 20 percent or less of the question correctly were categorized as having low knowledge while respondents who correctly answered between 21 and 40 percent (inclusively) were grouped in the fairly low-knowledge level. Consecutively, respondents who correctly answered between 41 and 60 percent (inclusively) and 61-80 percent (inclusively) were categorized in fair, and fairly high-knowledge levels, respectively. Then, respondents who correctly answered above 81 percent were clustered in the high-knowledge category (as seen in Table 5.1).

Table 5-1: Consumers` Knowledge level

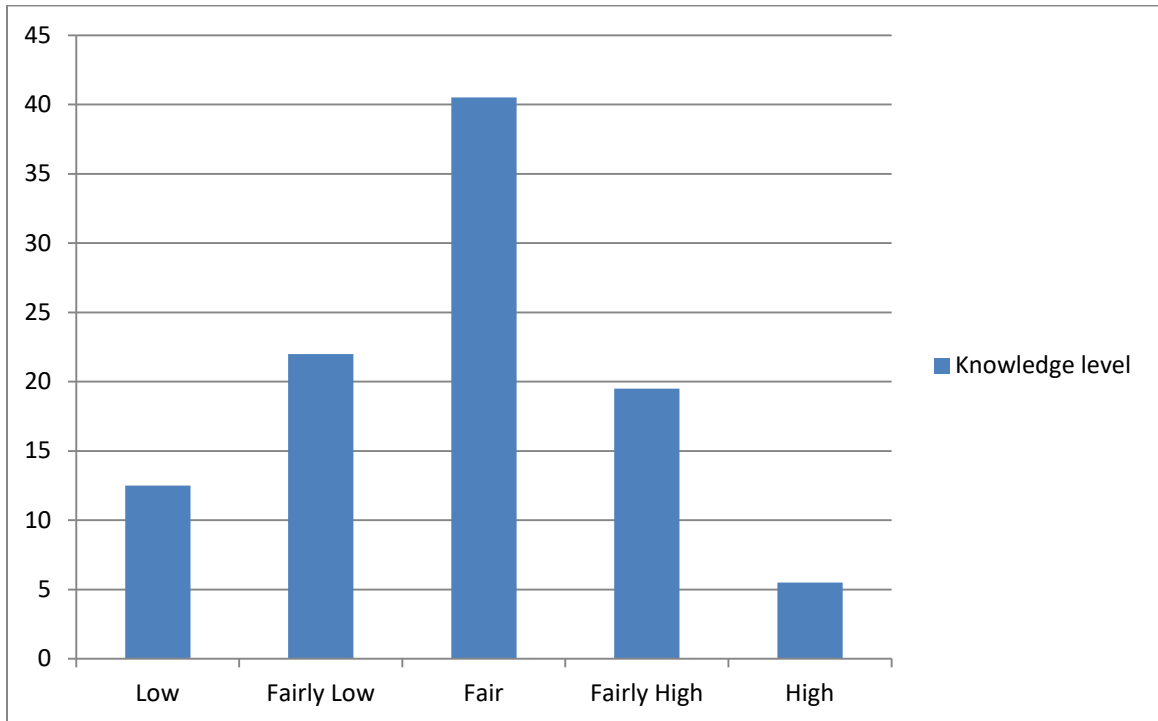
Score in percentage	Category level	Knowledge level	Respondent in Percentage
$X \leq 20$	0	Low	12.5
$20 < X \leq 40$	1	Fairly Low	22
$40 < X \leq 60$	2	Fair	40.5
$60 < X \leq 80$	3	Fairly High	19.5
$X > 80$	4	High	5.5

As seen in Table 5.1, consumer knowledge levels vary enormously. In detail, 40.5 percent of respondents fall in the fair-knowledge-level category whereas 25 percent are in high-knowledge-level categories. However, 34 percent of respondents are in low-knowledge-level categories. Generally, consumer knowledge among respondents was average for most respondents; nevertheless, the presence of variability in respondents` knowledge levels can be clearly witnessed. For instance, although a number of respondents were able to answer all nine questions correctly, quite a few of the respondents were not able to answer at least one question correctly.

Additionally, taking a closer look at the categories, respondents` knowledge levels are not perfectly symmetrical (see figure 6.1). For this reason, the skew measure was applied to measure the degree of skewness by using the STATA Version 12 software. The consumer knowledge levels are positively

(0.8692) skewed towards the right side with a kurtosis of positive 0.1033. In plain language, skewness indicates that there is a prevalence of low knowledge levels among respondents compared to high knowledge levels.

Figure 5-1: Knowledge levels



5.3.2 Variable and hypothesis

In this subsection, the explanatory variables are scrutinized to account for variability in the respondents' knowledge levels. Explanatory variables used here are categorized into three groups: social economic factors, media usage, and awareness of institutions dealing with consumer protection.

5.3.2.1 Socio-economic Background

Gender

Tanzania is still in the process of attaining gender parity, as is most of the world⁹. Based on the Tanzania National Bureau of Statistics booklet on *Women and Men, Facts and Figure*, male above 15 years old have higher literacy rates than their female counterpart (NBS, 2017). In other words, gender is more likely to predict the knowledge level of an individual. Different scholars have analysed the relationship between gender and knowledge have reached different conclusions. For instance, Lusardi and Mitchell (2011) conclude that women are less financially literate than men, which affects their decision making in the marketplace. A number of studies suggest that men are more likely to have high knowledge levels than women (see, Butchter-Koeren and Lusardi 2011, Caplan, 2001, Gleason and van Scyoc 1995; van Scyoc and Gleason 1993; Wood and Doyle 2002; William, Woldaves and Duggol 1992). Contrary to previous studies, McCright (2010) suggests that women convey greater scientific knowledge of climate change than do men. Therefore, gender and literacy or knowledge is still a debatable topic among scholars. While some studies suggest that men have higher financial knowledge, women have proven to have high knowledge of climate change, which affects their purchasing behaviour. This study is based on the gender literacy rate in Tanzania, which is based on previous studies and gender backgrounds in Tanzania. This study analyses the effect of gender on consumer knowledge and consumer rights.

Age

The general literacy rate in Tanzania decreases with age. Thus, the population above 50 years is less likely to have high literacy than other age groups. The relationship between age and literacy or knowledge has been treated by a number of scholars, but it is still a debatable topic. Xu and Zia (2012) suggest that knowledge and age follow the inverted U-shape curve. This means the age group (25-65) tends to have five time greater literacy than the age group above 65 and below 25. Thus, middle age tends to be associated with higher literacy. Lusard and Mitchell (2011) conclude that individuals tend to accumulate knowledge over time and then decay as they age. The same result was reported by Hogarth and Hilgert (2002), who also suggest that middle ages are more likely to have high knowledge. Therefore, based on

⁹ <http://www.unwomen.org/en/what-we-do/economic-empowerment/facts-and-figures>

previous studies and the literacy rate in Tanzania, this study analyses the level of consumer knowledge in the telecommunication market. Thus, this study analyses the effect of age on consumer knowledge.

Education

Several scholars report a close relationship between general knowledge or literacy and education level (Hogarth and Hilgert, 2002 and Lusardi and Mitchell, 2011). Thus, the educated tend to have high knowledge levels. Walstad and Rebeck (2002) suggest that education is the most important factor which determines economic knowledge among adults. Also, Wobker et al. (2014) examined minimum economic knowledge (MEK) among consumers in Germany (that is, the elementary economic knowledge required for the consumers to participate confidently in the economy). The study reveals that education has a strong effect on consumer knowledge. Therefore, this study also analyses whether the same result holds with respect to consumer knowledge in the telecommunication market in Tanzania.

Income

Knowledge and income have been associated by a number of scholars. Most scholars agree that a high-income populace is more likely to be more knowledgeable (Hogarth and Hilgert, 2002 and McCright, 2010). Furthermore, scholars have been trying to establish the relationship between wealth accumulation and financial literacy in the marketplace (Xu and Zia, 2012; Monticone 2010; Jappelli and Padula, 2011). A Behrman, Mitchell, Soo and Bravo (2010) study, which was conducted in the U.S. using instrumental variable regression analysis, concludes that financial literacy has an effect on wealth accumulation. Other studies (Jappelli and Padula, 2011, and Hastings and Mitchell, 2011) reveal a correlation between literacy and wealth. The same can be true in Tanzania: i.e., that persons with high income have more knowledge of their rights or not. Therefore, this study determines whether income has an effect on consumer knowledge level.

Employment

General individual knowledge has been proven to vary with the employment status of an individual (McCright, 2010; Davidson and Freudenburg 1996; and Hayes 2001). Disney and Gathergood (2013), report that households with a large number of employed individuals are more likely to have high consumer knowledge. The high knowledge level may be due to a knowledge transfer which took place in the workplace. Also, most workplaces are good avenues for people from different backgrounds to meet and exchange information and knowledge. For instance, according to the Tanzania National Bureau of Statistics booklet on *Women and Men, Facts and Figure*, the Tanzanian labour force is comprised of people from all levels of education. Thus, some participants in the labour force have university degrees while others never attended school. Specifically, 83.2 and 87.6 of men with a university degree who never attended school participate in the labour force (NBS, 2017). Therefore, this study aims to determine whether employment status in Tanzania is likely to determine knowledge level among consumers.

Rural/Urban

More than 65 percent of Tanzanians live in rural areas (Finscope, 2017). This variable has not been considered by most scholars who have analysed the level of literacy or knowledge in developed countries (Caplan, 2001, Gleason and van Scyoc 1995; van Scyoc and Gleason 1993; Wood and Doyle 2002). The reason may be high-level urbanization in countries which bridge the urban-rural gap. This is not the case in the rural of Tanzania, because most individuals who live there are still under poverty, are disadvantaged, and are likely to be vulnerable. Since telecommunication service has penetrated even to rural areas, these consumers may be likely to be vulnerable. Therefore, this study aims to analyse whether residence status determines knowledge levels among consumers.

With respect to socio-economic background, the study analyses the effects age, gender, income, education, residence status (rural, suburban, and urban), region (Moshi or Mwanza) and employment status on knowledge of consumer rights.

5.3.2.2 Media Usage

Since the rise of the Internet in the 1990s, many things have changed. The Internet is changing our lives like never before. It is connecting the globalized world and making what was impossible a few decades ago to be possible in our time (Kaplan and Haenlein, 2010). The connected online population has increased from a few millions to billions. Social media is a way of life for the majority of the online population. Through social media, individuals can now connect with loved ones, political leaders, organizations and brands (Men and Tsai, 2016). Social media has been used by civic leaders to raise awareness in communities and campaigns, protestors to coordinate political movements and companies to market their products (Mainsah, Brandtzæg and Følstad, 2016; Romero, 2016). Therefore, social media has come to be used as a channel to transfer knowledge or information to the public within a very short time.

Politically, social media has made society more complex and more participatory (Allcott and Gentzkow, 2017). A networked society is gaining higher access to information, which means that information shared online can reach up to thousands of people within and outside a country's border in a matter of seconds/minutes. Thus, the transfer of information and knowledge online can have a high impact in a limited time frame (Yang and DeHart, 2016). Second, it offers more opportunities for an individual to publically engage in speech. An individual can easily engage in forums and discussions and share views which may reach thousands of people (van Dijck and Poell, 2015). Third, it has improved the opportunity for society to take collective action. In most political movements, protestors have used social media as one means of communication.

Citizens are using social media to question governments and participate in policy formulation. Social media has been playing a major role in the signing of the online petitions. For example, The British Government requires an e-petition to have more than 100,000 signatures within a specified period if it is

to be discussed in the House of Commons¹⁰. Social media affects how people think and consequently affects individual behaviour. The interest citizens have to engage in civic activities increases, thereby increasing the number of active citizens in the community. Thus, consider a citizen who questions the government about everything from policy formulation to spending taxpayers' money. This trend poses a threat to many governments worldwide. Consequently, some governments are considering limiting freedom of speech online.

On the other side, social media is believed to disseminate information which can foster democracy and social capital. For instance, in the Netherlands, a study concluded that social media may have an impact on voting behaviour, because a politician with high NSN engagements received many votes in the general election. In Egypt's Tahrir Square protest, most of the protestors interviewed revealed that they learned about it online (Lim, 2011; Tufekci and Wilson, 2012). Therefore, social media has an impact on thinking, opinions and behaviour.

Social media has also facilitated consumer-to-consumer communication online (Steinfeld, Ellison and Lampe, 2008). Contrary to previous business models, the supplier can now have limited control over consumer discussions online; previously, it was easier for a supplier to collect consumer reviews. Consumers rarely had a chance to communicate with each other (Berthon, Pitt, Berthon, Campbell and Thwaites, 2008). Currently, it is common for consumers to check online reviews before purchasing products. Therefore, online reviews are likely to affect their opinions and purchasing intention. Having this in mind, suppliers are trying to get back in control by offering networking platforms for consumers by using blogs, social media, and promotional tools to engage a large number of consumers. This help suppliers control the discussions and use consumer comments and reviews as feedback for improvements.

Social media has also been used by marketers to promote brands and socialize with consumers. Stewart and Pavlou (2002) suggest that social media influences consumer behaviour in the market. This is

¹⁰ <http://www.bbc.com/news/uk-politics-14409032>

achieved when consumers participate in online discussions, share knowledge with other consumers and contribute to other consumers' activities. Therefore, socialization on social media affects consumer's knowledge, thinking, opinions and behaviour in the market. For instance, Heinonen (2011) analysed the effect of social-media communication on how consumers perceive brands. This study involved 504 Facebook users in Poland. Its result was analysed by structural equation modelling (SEM). The study reveals that consumer communication on social media increases brand equity and encourages a positive brand attitude. This means that consumer communication improves consumer knowledge concerning specific brands, which in turn influences their attitudes towards specific brands and thereby increases brand equity as it influences purchasing behaviour.

There are a number of challenges facing social-media platforms. The main one is the presence of fake news, which affects users trust in the platforms. There is currently a great deal of concern about people using social media to disseminate fake news. This concern took a different view during the 2016 U.S. election, as it is believed that fake news was propagated through social media during the campaign to ruin candidates' reputations. Therefore, it has also been reported that most users cross check any ambiguous news share on social media with another reputable source.

In summary, social media is playing a great role in consumers' knowledge, thinking and opinions and is thereby affecting behaviour (Becker and Dunwoody, 1982; Curran, Iyengar, Brink Lund, and Salovaara-Moring, 2009). Previous studies and reports have proven that social media plays a great role in impacting knowledge and in shaping the way individuals in our communities think and behave. Consequently, social media has proven to influence citizen civic engagement and consumer behaviour in the markets. Therefore, whether social media has an impact on consumer knowledge of their rights is an open question to be pondered.

Mass media has been proven to play a significant role in enhancing knowledge in society (Tichenor, Donohue, and Olien, 1970). Several international and national policymakers are advocating the use of

media to deliver education to citizen so as to create a knowledge base in society. For example, an OECD report on consumer education recommends that media be used to disseminate knowledge among consumers and thereby help consumers make right decisions in the market. Furthermore, the report suggests the need for more exploration about how to utilize media—especially social-media platforms. Moreover, several studies (Ma and Chan, 2014; Omar, Dahalan, and Yusoff, 2016; Yates and Paquette, 2011) confirm that media—especially social media—has an impact on knowledge. Despite the fact that knowledge can be easily transferred and shared among people within the short period of time through social media, the elderly are more likely to trust and use mass media over social media (Shneiderman, 2015). Mass media communication is mostly one way: from the media to the audience. This spurs knowledge transfer; however, social media is often two-ways traffic; it thus aids knowledge sharing between receiving and transferring channels. Therefore, both legacy media and social media are likely to impact consumer knowledge levels.

5.3.2.3 Consumer-protection institutions and agencies

Further, consumer knowledge levels may be curbed by an awareness of consumer-protection institutions or agencies (Haefner and Leckenby 1974). Nkamnebe, Idoko, and Kalu (2009), report that awareness of institutions is vital if consumers are to be empowered by their rights to make rational decisions in the competitive economy. The study later advocates for the need of consumer-protection agencies and institution to be properly funded. Moreover, the role of consumer-protection institutions and agencies with respect to consumer knowledge has been stressed by both international organizations (like UNCTAD and EU) and non-governmental organizations like CI (Consumer International).

TCRA – Tanzania Communication Regulatory Authority

The effect of consumer protections institutions and agencies on consumers' knowledge of their rights is analysed in what follows. Institutions to be analysed in this study include TCRA (the communication regulator with the mandate of protecting consumers) and the FCC (i.e, the Fair Competition Commission,

which is an institution dealing with competition and consumer protection across industries). Additionally, each explanatory variable used in the study is completely described in the table.

It is important to understand the effect of these institutions, because they have more than one responsibility. For instance, the TCRA deals with the general communication sector. This means that it regulates telecommunication and broadcasting together with postal and courier services. Thus, the consumer may be aware of the institution but not aware of his or her rights as a telecommunication consumer. However, it is more likely for the consumer who is aware of the institutions to know consumer rights. Based on a simple cross-tabulation table, Table 5-2 reveals that a number of consumers are aware of the regulator but have limited knowledge of their rights. This can be crucial information for a regulator in the process of consumer empowerment. Therefore, this study aims to analyse whether knowledge level is determined by an awareness of TCRA.

Table 5-2: Knowledge level and Consumer Knowledge

Knowledge Level	Aware of TCRA		Total
	0	1	
0	18	7	25
1	24	20	44
2	36	45	81
3	10	29	39
4	0	11	11
Total	88	112	200

FCC – Fair Competition Commission

The FCC is the competition body which ensures that there is fair trade and that consumers are protected in all sectors. This means that the FCC deals with more than one sector of the economy, including telecommunication, transportation and the energy sector to mention a few. Since the FCC deals with the general economy, and because studies suggest that awareness of consumer-protection institution affects knowledge of consumer rights, it is of interest to analyse whether awareness of this institution affects knowledge level.

Table 5-3: Cross tabulation FCC and Consumer Knowledge

Knowledge Level	Awareness of FCC		Total
	0	1	
0	23	2	25
1	42	2	44
2	75	6	81
3	35	4	39
4	8	3	11
Total	183	17	200

A Spearman correlation test was conducted for all explanatory variables before analysing them. Spearman correlation is used to estimate the monotonic relationship between two ordinal variables. Therefore, Spearman correlation is preferred over Pearson product moment because some of the variables used were measured in ordinal form. For instance, explanatory variables like media usage behaviour and awareness of institutions were measured as ordinal variables.

Table 5-4: Correlation result for Knowledge

Variables	Education	Age50	Lincome	Region	Urban	Employed	Gender	Smedia	TV	Radio	Npaper	TCRA	FCC
Education	1.0000												
Age50	-0.1251	1.0000											
Lincome	-0.4237	-0.1261	1.0000										
Region	0.1328	-0.0354	0.1024	1.0000									
Urban	0.2061	0.0299	-0.0617	0.4609	1.0000								
Employed	0.1209	0.1739	-0.2524	-0.1875	0.0659	1.0000							
Gender	-0.0152	0.0076	0.0849	-0.0403	0.0577	0.0907	1.0000						
Smedia	0.5181	-0.2669	-0.2389	0.2852	0.2928	0.0742	-0.1183	1.0000					
TV	0.3875	-0.1080	-0.2178	0.0983	0.1741	0.0302	-0.0240	0.3947	1.0000				
Radio	0.1384	0.0578	-0.0561	0.2413	0.1385	0.0254	-0.0903	0.0173	0.0905	1.0000			
Npaper	0.4362	0.1157	-0.3025	0.1993	0.1961	0.2772	-0.1645	0.3467	0.2633	0.1268	1.0000		
TCRA	0.5429	-0.1264	-0.3207	-0.1410	0.0959	0.1402	-0.1274	0.3905	0.3277	0.0119	0.3993	1.0000	
FCC	0.3292	-0.0844	-0.1944	0.0896	0.0613	-0.0418	-0.0535	0.3324	0.1946	0.0049	0.1199	0.2702	1.0000

Specifically, the Spearman correlation model evaluates the likelihood that one variable will have a linear relationship with another variable. Based on this study, a linear relationship (rho) above 0.49 will be

considered as higher multi-collinear between two explanatory variables. With respect to our data (as seen in Table 5.4), the education variable has a collinear relationship with social-media usage (Smedia) and awareness of the regulator (TCRA). Thus correlations suggest that more educated consumers are more likely to use social media and to be aware of regulators than consumers with less education.

5.3.2.4 Analysis

An ordered logit model was adopted to examine determinants of consumers' knowledge levels on their rights. The logistic ordered model is preferred here over a logistic-regression model, as it is more suitable for categorical results. Cameron and Trivedi (2005, Chap. 5) suppose that an ordered logit model can be embraced when the dependent variable is measured on an ordinal scale, meaning that the dependent variable can be categorized in a sequential order. For analysis, STATA 12 software was used, as explained by Long and Freese (2014, Chapter 7). Furthermore, other studies which have used an ordered logit model include Schmidt and Stork (2008), which used ordered logit (ologit) to analyse the determinants of e-skills among seventeen African countries.

5.4 Results

The previous section of this chapter discussed the methodology adopted by the study. It offered insights on data collection, explanatory variable selection, and the data-analysis technique. This section explains the results and offers discussion.

Table 5-5: Descriptive analysis

Variable	Description of Variables	Mean	Std. Dev.
Dependent Variable	Respondents' knowledge level between (0-4) where 4 = high and 0 = low	1.84	1.055
Socio-economic factors			
AgeAb50	1 if the respondent is age is above 50 years old, 0 otherwise	0.24	0.425
Lincome	1 if respondent has a monthly income below 500,000Tshs., 0 otherwise	0.66	0.475
Urban	1 if the respondent lives in urban areas, 0 otherwise	0.52	0.501

Employed	1 if the respondent is employed, 0 otherwise	0.36	0.481
Gender	1 if the respondent is male, 2 otherwise	1.44	0.498
Media Usage			
Smedia	3 if respondent uses social media daily, 2 if respondent uses social media weekly, 1 if respondent uses social media monthly, 0 if the respondent does not use social media	1.21	1.249
Npaper	3 if respondent reads newspaper daily, 2 if respondent reads newspaper weekly, 1 if respondent reads newspaper monthly, 0 if the respondent does not read newspaper	1.46	1.211
Radio	3 if respondent uses radio daily, 2 if respondent uses radio weekly, 1 if respondent uses radio monthly, 0 if the respondent does not use radio	2.58	0.718
TV	3 if respondent uses television daily, 2 if respondent uses television weekly, 1 if respondent uses television monthly, 0 if the respondent does not use television	2.33	1.017
Consumer-protection institutions			
FCC	1 if respondent is aware of FCC, 0 otherwise	0.09	0.280
TCRA	1 if the respondent is aware of TCRA, 0 otherwise	0.56	0.498

5.4.1 Cross tabulation results

Foremost, cross-tabulation was adopted to elucidate the relationship between social-economic backgrounds and consumer knowledge levels. Table 5.3 shows that knowledge levels vary among respondents of diverse social-economic backgrounds, as do education levels, type of settlement, region, age and income. In detail, 30 percent and 10 percent of respondents living in urban and rural places, respectively, are in the higher (fairly high and high) knowledge levels.

And 31 percent of young (30 years and below) and 10 percent of older (above 50 years) respondents are in higher knowledge levels. Considering the highest education level attained, 36 percent of respondents with tertiary education and 9 percent of respondents with primary education are in higher knowledge levels. Furthermore, 36 percent and 14 percent of respondents living in Mwanza city and Moshi municipal are in the higher knowledge levels, respectively. However, gender does not have an effect on a respondent's knowledge level. In summary, table 5-6 demonstrates that respondent with lower education,

the poor, those living in rural areas and the elderly; are less likely to be in higher (high and fairly high) knowledge levels; hence, they are more likely to be vulnerable in the marketplace

Table 5-6: Demography and Knowledge levels

	Knowledge levels				
	0	1	2	3	4
Gender					
Male	9.82	25.89	37.50	21.43	5.36
Female	15.91	17.05	44.32	17.05	5.68
Type of Settlement					
Rural	11.32	28.30	49.06	9.43	1.89
Semi-urban	13.95	27.91	27.91	23.26	6.98
Urban	12.50	16.35	41.35	23.08	6.73
Age					
18-30	7.92	14.85	45.54	23.76	7.92
31-50	7.69	36.54	30.77	21.15	3.85
Above 50	27.66	21.28	40.43	8.51	2.13
Income					
Below 200K	17.20	22.58	39.78	17.20	3.23
200k-1000k	8.08	23.23	39.39	22.22	7.07
Above 1000k	12.50	0.00	62.50	12.50	12.50
Education					
Primary and below	21.54	30.77	38.46	7.69	1.54
Secondary	8.89	21.11	38.89	26.67	4.44
Tertiary	6.67	11.11	46.67	22.22	13.33
Region					
Moshi Municipal	15.00	24.00	47.00	13.00	1.00
Mwanza City	10.00	20.00	34.00	26.00	10.00

5.4.2 Empirical results

The cross-tabulation results (Table 5-6) have enlightened the relationship between social-economic backgrounds and respondents' knowledge levels. In this sub-section, empirical results are discussed to elucidate the determinants of consumers' knowledge levels. Results from the ordered logistic model can be seen in Table 5.4. The study has analysed four models and concludes that Model 4 explained the result

better based on the Pseudo R^2 . The fourth model is more likely to explain the dependent variable at 11.60 percent. Therefore, the results of model four are discussed in detail.

Findings suggest that social-economic backgrounds determine consumers' knowledge of their rights. In detail, respondents with low income (below 500,000 Tanzanian shillings) are less likely to know their consumer rights. This result is in harmony with the findings of Hogarth and Hilgert (2002) and McCright (2010), which suggest that high-income consumers are more likely to be knowledgeable. Also, elderly respondents (above 50 years old) are more likely to have low knowledge levels. This result is in agreement with findings from other studies which suggest that old age is more likely to have low knowledge. Some have suggested that knowledge in individuals tends to accumulate over time and then decays with age (Lusard and Mitchell, 2011, Xu and Zia, 2012). Consumer living in municipalities (Moshi) rather than big cities (Mwanza) are less likely to know consumer rights. This is likely because, most consumers have higher incomes in bigger cities than in small cities. Hence, findings propose that age, income, and place of living affect consumer knowledge of their rights. Consequently, the study has identified vulnerable respondents to be elderly, low income, and those who live away from big cities.

Further, findings agree that media usage determines consumer knowledge of rights. In particular, findings demonstrate that social-media users are more likely to know their rights. However, the factors for mass media (television, radio and newspaper) were not statistically significant. Higher knowledge of consumer rights among social-media users may be partly attributed to the steps taken by regulator to launch pages on social media (like Facebook and Twitter). For instance, the regulator's page on Facebook acts as a platform on which consumers can learn about their rights. In other words, social media plays two roles: it is first a platform whereby consumers acquire knowledge from the regulator and from other social-media users; it is also a platform on which to transfer (share) knowledge with their friends. A number of studies have emphasized the role of social media in acquiring and transferring (sharing) knowledge in the society. This concurs with our findings. Conversely, while other studies (Becker and Dunwoody, 1982; Curran, Iyengar, Brink Lund, and Salovaara-Moring, 2009) accentuate the role that mass media plays

with respect to public knowledge, this study finds factors for radio, newspaper, and television to be statistically insignificant, which may be due to the idea that most respondents are using television and radio often, hence make it difficult to analyze due to lack of variability as argued by Pambo, Otieno, and Okello (2014).

Table 5-7: Results of Binomial Logistic for Consumers' Knowledge

Variables	Model 1	Model 2	Model 3	Model 4
Age50	-1.1800 ***		-1.105056 ***	-0.9854 ***
Lincome	-0.9971 **		-1.045135 **	-0.8852 *
Region	0.7094 ***		0.3496873 **	0.5693 ***
Employed	0.3935		0.2585636	0.2492
Gender	0.1637		0.1723191	0.2305
Urban	-0.2088		-0.15594	-0.2460
Smedia		0.5734547 ***	0.4472257 ***	0.3727 ***
Npaper		0.1351594	0.2341521 *	0.0931
TV		-0.1526631	-0.0771555	-0.1520
Radio		0.0226215	-0.045659	-0.0835
TCRA	1.3649 ***	0.8550059 ***		1.1321 ***
FTC	-0.1024	-0.2784616		-0.3873
Log-likelihood	-258.3397	-263.83156	-259.33534	-254.1324
No. of observation	200	200	200	200
LR chi2	58.28	47.3	56.29	66.7
Prob> chi2	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.1014	0.0823	0.0979	0.1160

Note: *** p<0.001; ** p< 0.05; *p<0.1

Furthermore, awareness of consumer-protection institutions shows that the factor for awareness of the regulator (TCRA) is positive and statistically significant. Results indicate that respondents who are aware of the regulator are more likely to know consumer rights. This may be due to the role the regulator is playing to enhance knowledge of consumer rights and to aid in generating empowered and knowledgeable consumers in the markets. For instance, the regulator has published information on consumer rights that can be accessed on the website, in offices, and on other online pages like Facebook. As a result,

respondents who are aware of the regulator are most likely to come across statements of consumer rights, thereby attaining higher knowledge compared to their counterparts who are unaware of the regulator.

Table 5-8: The result for marginal effects for each category

Variable	Category 0		Category 1		Category 2		Category 3		Category 4	
	Marginal effect	p-Value	Marginal effect	p-Value	Marginal effect	p-Value	Marginal effect	p-Value	Marginal effect	p-Value
Region	-0.0364	0.0100	-0.0636	0.0080	0.0206	0.1390	0.0641	0.0080	0.0153	0.0240
Employed	-0.0154	0.5180	-0.0269	0.5180	0.0087	0.5410	0.0271	0.5180	0.0065	0.5220
Urban	0.0110	0.6250	0.0192	0.6250	-0.0062	0.6350	-0.0193	0.6260	-0.0046	0.6270
AgeAb50	0.0771	0.0070	0.1348	0.0070	-0.0436	0.1440	-0.1359	0.0060	-0.0325	0.0240
Lincome	0.0664	0.0620	0.1160	0.0590	-0.0375	0.2010	-0.1169	0.0590	-0.0279	0.0800
Gender	-0.0164	0.4400	-0.0287	0.4410	0.0093	0.4760	0.0289	0.4410	0.0069	0.4510
smedia	-0.0276	0.0170	-0.0483	0.0140	0.0156	0.1600	0.0487	0.0130	0.0116	0.0340
Smedia	0.0057	0.6930	0.0100	0.6940	-0.0032	0.7020	-0.0101	0.6930	-0.0024	0.6960
Npaper	-0.0074	0.4760	-0.0130	0.4780	0.0042	0.5110	0.0131	0.4750	0.0031	0.4850
FTC	0.0280	0.5160	0.0490	0.5140	-0.0158	0.5460	-0.0494	0.5130	-0.0118	0.5180
TCRA	-0.0827	0.0050	-0.1445	0.0040	0.0467	0.1350	0.1457	0.0040	0.0348	0.0190
TV	0.0121	0.2800	0.0212	0.2790	-0.0069	0.3670	-0.0214	0.2740	-0.0051	0.2940

Finally, respondents' knowledge levels are determined by socio-economic backgrounds (age, income, and place of living), media usage (social media) and awareness of institutions (e.g., the regulator, TCRA). Table 5-8 offers. The table suggest that important factors which are highly significant in almost every category except category two is Age and awareness of the regulator. In detail, the marginal effect for every explanatory variable in the specific category. In the next section, the conclusions and implications are discussed.

5.5 Conclusion

This study has revealed that knowledge levels among consumers are normally distributed but lightly skewed towards low knowledge levels. On one hand, few respondents know almost all of the consumer rights tested in this study. On the other hand, a number of respondents did not know any of their rights. Furthermore, nearly half of the respondents have an average level of knowledge about consumer rights.

The study unveiled factors which determine consumers' knowledge of their rights. In particular, socioeconomic factors determine consumer knowledge about their rights, whereas the elderly, low income, and those living in small cities are relatively less likely to know consumer rights and are therefore more likely to be vulnerable in the markets. In addition to socio-economic factors, two other factors affect consumers' knowledge of their rights: awareness of regulatory authority (TCRA) and social-media usage are correlated with higher knowledge levels.

These results provide insight for policymakers and regulators: i.e., consumer knowledge varies enormously among consumers. Results also reveal that there are many vulnerable consumers in the markets. For this reason, the regulator has to devise ways to reach the most vulnerable consumers, as it is their responsibility to offer education to consumer—especially vulnerable ones—to ensure that they are not exploited by the market. Also, as regulatory intervention in the market is limited, it is high time for policymakers to conduct research and propose means of offering education to consumers, especially including vulnerable ones.

Furthermore, social media can be used as a tool with which to disseminate knowledge of consumer rights. The regulator is recommended to take social media more seriously to educate consumers. As of recently, their pages on social media—particularly on Facebook—are rarely updated; also their page is not verified (this may lead to confusion among consumers because there is currently more than one Facebook page which claims to be the official TCRA page, and both pages have followers). Social media plays an important role compared to traditional media, such as print brochures or radio, because social media offers instant interactivity and two-way communication that can be enjoyed by social-media users. As social media finds its way to more consumers in Tanzania, the TCRA is encouraged to take hold of the opportunity provided by social media to educate consumers. In the same vein, the service operators have more followers on social-media platforms. In addition, the TCRA can impose the provision of information on consumer rights upon operators' social media pages. This strategy will extend the reach of consumer-rights knowledge to the targeted audience.

Despite the contribution this study has made to understanding consumers' knowledge of their rights in the telecommunications sector in developing countries, it exposes some inadequacies in the literature that should be addressed to enhance the end goal of consumer empowerment and protection. First, while the study shows that social media plays a significant role in raising consumer knowledge of their rights, most vulnerable persons do not have access to smartphones or featured phones. They are thus shuttered from the social-media space. It is therefore important for further studies to conduct research into what ways are effective for enhancing consumer-rights knowledge and hence consumer empowerment with respect to these vulnerable consumers. Second, although knowledge of consumer rights is a prerequisite of positive consumer-complaint behaviour, it does not guarantee assertiveness when the consumer is not aware of the complaint procedure. Therefore, the next chapter analyses determinant factors of consumers' awareness of the complaint procedure.

CHAPTER 6 : CONSUMER AWARENESS OF THE COMPLAINTS PROCEDURE

6.1 Introduction

In the liberalized market, companies are competing to deliver high-quality services so as to attract more consumers and improve consumer's satisfaction. Consumer satisfaction has been linked to high consumer loyalty and a higher market share and revenue for companies. However, to attain high consumer satisfaction costs companies more resources and sometimes cannot be achieved due to technical complications. In a market where the cost of offering high-quality service seems higher, operators' incentives to attain a high quality of service can easily be jeopardized. As a result, the market fails to operate at required standards. Consequently, to control market failure, regulatory policy intervention is vital.

The primary role of regulatory policy is to ensure that regulations are for the public interest and that both current and prospective consumers are protected in the market (Brown, et. al, 2006). Regulatory authorities in the telecommunication sector have adopted several regulations, including consumer-protection regulations, to spur the sector's growth and control market failure. Consumer-protection regulations are required to maintain a standard quality of service for consumers, to provide remedy in case of breach of contract, to offer a mechanism with which to resolve complaints (redress) and to meet consumer's obligations (Brown, et. all, 2006).

The mechanism used to resolve complaints is crucial—especially when the market is operating below standards, as most markets unfortunately do. However, the regulated entities (service providers) are required to properly handle consumer complaints without regulatory intervention. Unfortunately, this is not always the case. Sometimes the regulator has to intervene—especially when the demand side is not satisfied with the supply sides' resolution. Furthermore, the proportionality principle of good regulation devised by the Better-regulation Task Force (recently known as the Better-regulation Commission) suggests that regulatory intervention in the market should be kept to a minimum. In this accord, the

regulator's intervention in complaints' resolution should also always be kept to a minimum chosen as the second option. This means that service providers have the main role to play in handling consumer complaints.

In accord with the Tanzanian consumer-protection regulations of 2011, all service providers are required to establish procedures for handling consumer complaints. Furthermore, service providers are required to inform their consumers of the complaint procedure and to publish it from time to time. Consumer-protection regulations require that the regulator also establish procedures for handling consumer complaints in case the aggrieved consumer is dissatisfied with the resolution.

Consequent to the regulations, the regulator has established the complaint procedure to ensure that consumers are protected and that abusive market practices are reported and corrected, thereby encouraging sector growth. Following the procedure, the consumer has the first responsibility to initiate the complaint process by reporting the unpleasant experience to the operator and/or regulator. Therefore, consumer awareness of the complaint procedure is crucial, as it is likely to empower consumers to act rationally in the marketplace. However, whether consumers are aware of the established complaint procedure remains in question.

Therefore, the main objective of this chapter is to analyse the determinant factors for consumer awareness on the complaint procedure by using the case of Tanzania, which represents the developing-country context. The objective is to be attained, first, by assessing how aware telecommunications consumers in Tanzania are of the complaints procedure; and, second, by analysing the determinant factors for consumer awareness on the complaints procedure in the telecommunications sector. The results of this section make three contributions to the literature. First, the study establishes telecommunications consumers' knowledge levels about their rights. Second, the most vulnerable groups of consumers is identified such that regulators and related institutions can carefully address, monitor, and advocate for protection of these groups. Lastly, antecedents responsible for enhancing general consumer awareness are identified and

saved as inputs for regulators in shaping consumer empowerment and protection schemes for telecommunications consumers.

The rest of chapter is organized as follows: The complaints procedure in the Tanzanian telecommunications market is covered in the next section. Then, consecutive sections concentrate on the literature review and methodology applied. In the subsequent section, the empirical results are reported, followed by detailed discussions. In the last section, conclusions and policy recommendations are provided.

6.2 Complaints Procedure and Institutions.

As mentioned in the previous section, the regulator established the complaints procedure for consumers to follow when seeking redress or reporting unpleasant experience. Therefore, in this section, the complaint procedure in the Tanzanian telecommunication market is discussed in detail. Basically, the complaint procedure has four levels. After an unpleasant encounter, the aggrieved consumer has to report first to the service provider through the walk-in customer care centre or by calling the customer-care toll-free number. The operator is required under law to have a mechanism to handle all consumer complaints without discrimination. For instance, walk-in customer centres are supposed to be designed for easy access for all consumers, including those with disabilities. Consequently, upon receipt of the complaint from the consumer, the customer-care staff must resolve the matter in a timely manner and as close to the consumer's satisfaction as possible. If the consumer is not satisfied with the resolution from the customer care staff, the consumer has the right to escalate their concerns to higher-level officials in the company.

Second, the consumer has the right to register complaints with the regulator in case of dissatisfaction with the resolution offered by the service provider and/or when service provider has failed to resolve the matter within 30 days from the complaint. To register complaints with the regulator, the complainant is required to submit a complaint form as evidence of communication with the service provider. Upon receipt of the complaint, the consumer complaint unity (CCU) within the regulator will investigate the matter. During

the investigation process, the CCU will attempt to resolve the matter amicably. If the complaint is not resolved to the complainant's satisfaction within sixty (60) days after being received by the regulator, the complainant may request the CCU in writing to refer the complaint to the complaint committee (CC) of the regulator for a decision.

Third, when a complaint is referred to the complaint committee (CC), the complainant and the service provider become parties to the complaint. Then the complaint hearing begins. Both parties are required to bring arguments and documents to the CC for the hearing. As a result of the hearing, within the time frame of 30 to 60 days, the CC is required to make a decision. The CC, upon ruling the complaint in accordance with Section 41 of the Tanzania Communications Regulatory Authority Act of 2003, can require dismissal of the complaint, command the supply of goods or services for a specific period, specify terms and conditions, impose a fine, order a refund, appoint trustees, set an escrow account, recommend a specific performance and/or require one party to pay another the cost of the hearing.

Fourth, a party that is not satisfied with the complaint committee's ruling may appeal to the Fair Competition Tribunal within twenty-one days (21) of the ruling. The aggrieved party may appeal only on the following grounds:

- the award ordered was not based on the evidence,
- there is an error in the law,
- the procedure or other constitutional requirements by the regulator were not complied with and non-compliance materially affected the award, and/or
- the regulator's power did not allow it to offer an award.

Upon receipt of the appeal, the tribunal (FCT) has the authority to dismiss all or part of the appeal. Also, the tribunal may set aside part or all of the award determined by the regulator and may refer any

outstanding matter back to the regulator for re-determination. In addition, the aggrieved party may appeal within fourteen (14) days for review of the decision to the internal review committee in accordance with Section 34 of the Tanzania Communications Regulatory Authority Act of 2003.

In synopsis, consumer complaint guidelines require the aggrieved consumer to be aware of the procedure to follow when launching a complaint. For instance, for the consumer to launch a complaint, she or he must be aware of his/her service provider's toll-free number or walk-in centre. Furthermore, the consumer is required to know that, in case of dissatisfaction with the resolution provided by the service provider, he or she can refer the case to the regulator after the specific time. As it is not the responsibility of service providers to inform consumers that they can refer the matter to the regulator, the regulator has the responsibility to make consumers aware of the matter. Therefore, throughout the whole process, the consumer is required to be aware of the procedure at least up to the regulator's level.

6.3 Methodology

6.3.1 Data

This chapter analyses four-hundred data points collected from telecommunication consumers via survey-based face-to-face interviews. Face-to-face, interview-based surveys have been adopted by several consumer-based studies of telecommunication markets (Srinuan and Bohlin, 2013; (Srinuan, Srinuan, and Bohlin, 2012).

More details on data collection and sampling are communicated in Chapter 4. Following data collection, consumers were categorized according to their awareness of four basic complaint procedures. The first category includes consumers who are aware of the complaint procedure to the service provider. The second category is comprised of consumers who are aware of complaint to the regulator: the TCRA. The third category consists of consumers who are aware of the referral procedures of the TCRA: those of the CCC (Consumer Consultative Council). The fourth category includes consumers who are aware of the

appeal procedure to the Fair Competition Tribunal. Table (6-1) demonstrates the awareness level of the respondents.

Table 6-1: Consumers' awareness categories

Awareness	Category	Respondents in percentage
Un-aware	0	9.50
First procedure	1	64.00
Second procedure	2	15.25
Third procedure	3	6.25
Fourth procedure	4	5.00

Furthermore, consumers are categorized in two groups: first, consumers aware of the second complaint are categorized as aware of the complaint procedure. Then, consumers unaware of the second complaint procedure were grouped as unaware. Consumers who are aware of at least the second complaint procedure are considered aware, because if they manage to complain to that level, the regulator is more likely to inform the aggrieved consumers about other complaint procedures. Following categorization as depicted in Figure 6.2, 73.5 percent and 26.5 percent of respondents fell into unaware and aware groups, respectively.

In summary, the data reveals that consumer's awareness of complaints procedures varies among respondents. Thus, while 9.5 percent of respondents are completely unaware of the complaints procedure, 5 percent are aware of the whole complaint procedure. Most respondents are aware of the first complaint procedure of complaining to the service provider. Data has revealed that about 10 percent of respondents are not aware of complaint procedures that pose a threat of consumer exploitation in the markets, as consumers in this group are less likely to complain at all and are therefore vulnerable in the markets.

Figure 6-1: Consumer Awareness Levels in percentage

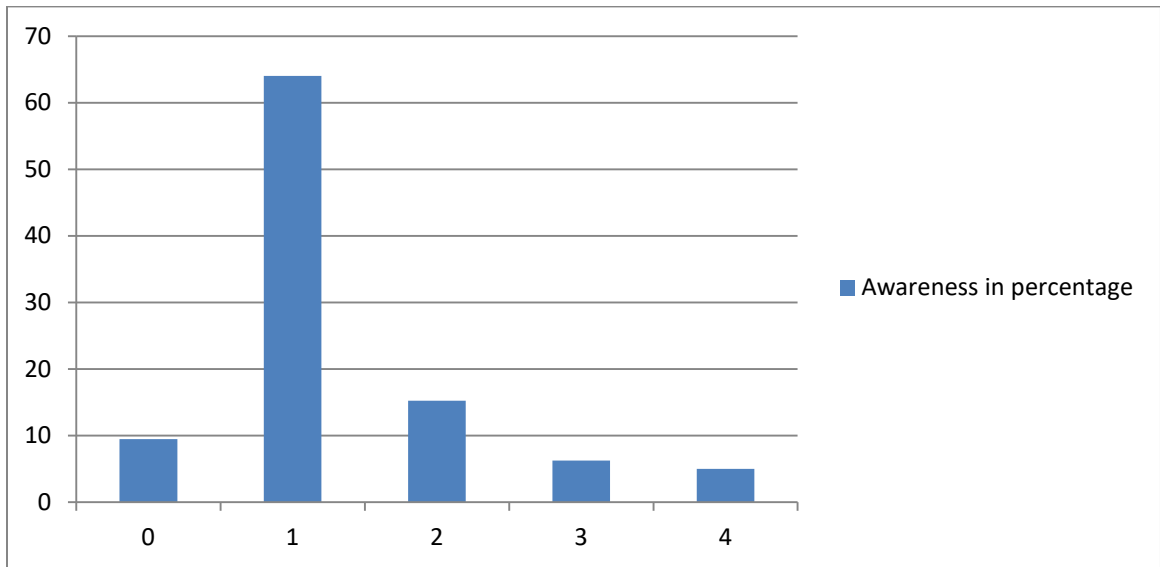


Figure 6-2: Consumer Awareness in Percentage

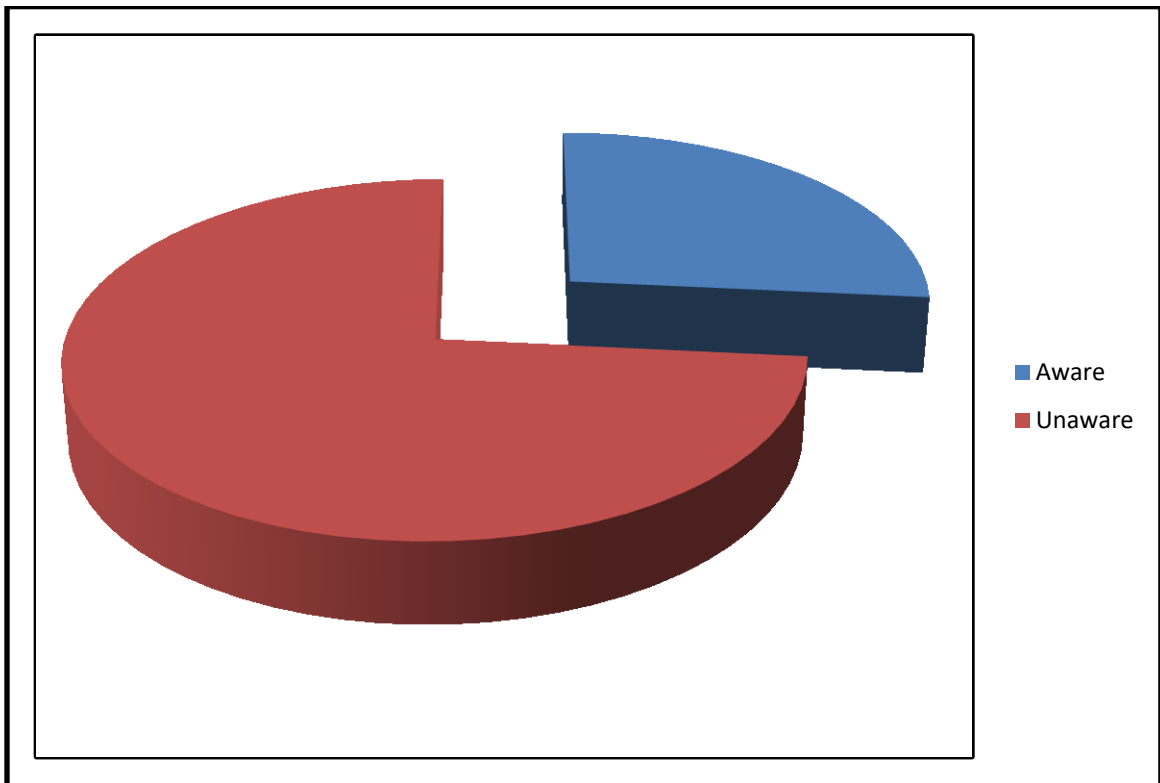


Table 6-2: Description of Variable for Consumers' Awareness

Variable	Description of Variables	Mean	Std. Dev.
Dependent Variable	Respondents' awareness of complaints procedure, where 1= aware and 0 otherwise	0.265	0.442
Socio - economic factors			
AgeAb50	1 if the respondent's is age is above 50, 0 otherwise	0.243	0.429
Hincome	1 if respondent has a monthly income above 1,000,000Tshs., 0 otherwise	0.078	0.268
Urban	1 if the respondent lives in urban areas, 0 otherwise	0.635	0.482
Employed	1 if the respondent is employed, 0 otherwise	0.443	0.497
Gender	1 if the respondent is male, 2 otherwise	1.463	0.499
Media Usage			
Smedia	3 if respondent uses social media daily, 2 if respondent uses social media weekly, 1 if respondent uses social media monthly, 0 if respondent does not use social media	1.530	1.320
Npaper	3 if respondent reads newspaper daily, 2 if respondent reads newspaper weekly, 1 if respondent reads newspaper monthly, 0 if respondent does not read newspaper	1.688	1.155
Radio	3 if respondent uses radio daily, 2 if respondent uses radio weekly, 1 if respondent uses radio monthly, 0 if respondent does not use radio	2.385	0.979
TV	3 if respondent uses television daily, 2 if respondent uses television weekly, 1 if respondent uses television monthly, 0 if respondent does not use television	2.385	0.979
Consumer-protection institutions			
FCC	1 if respondent is aware of FTC, 0 otherwise	0.180	0.385
TCRA	1 if respondent is aware of TCRA, 0 otherwise	0.595	0.492

6.3.2 Variable Selection

Therefore, it is crucial to understand determinants of consumers' awareness about the complaint procedure if we are to identify vulnerable consumers and empower them in the market place. For this reason, three groups of explanatory variables are adopted: socio-economic background (age, gender, employment, and income), media usage behaviour (newspaper, radio, television, and social media), and awareness of institutions/agencies (TCRA and FTC).

6.3.2.1 *Media*

Social Media

Social media as is becoming popular everywhere in the world. It changes ways of life and impacts knowledge and awareness in different sectors of the economy (Heinonen, 2011). Social media has been responsible for various political movements, including the Arab Spring. It has been suggested that social media was responsible for affect various elections through fake news. A good example is provided by the U.S. general election of 2016; candidates were from time to time lamenting the impact of fake news for ruining their reputations (Allcott and Gentzkow, 2017; Berghel, 2017). Generally, social media has effects on individual behaviour, opinions and confidence, as it is easy to transfer information by social media which is likely to impact awareness in the society (van Dijck and Poell, 2015). A number of advocacy organisations and social and political movement campaigners are currently using social media to raise awareness and organise movements (Tufekci and Wilson, 2012).

In Tanzania, the impact of social media was felt during the general election of 2015. Many people connected with their respective political parties through social media pages received updates from them. During the campaign, some used social media to disseminate fake news. In response, however, the government signed the Cyber Crime Act. The act allows law enforcement institutions to take charge of anyone who misuses social media. Moreover, people shared the election results from different constituencies in the social media. The medium was also used to raise awareness about the importance of citizens participating in civic activities and voting. All major telecommunication operators have social media pages which they use to interact, share knowledge, and raise awareness with respect to their respective consumers. Through social media pages, a consumer has an opportunity to ask, comment, and share anything with the public from the operator's page. In general, social media is used to disseminate information to the public, transfer knowledge and raise awareness. However, it is still unknown whether social media has an effect on consumer awareness in telecommunication markets. Therefore, this study analyses the role of social media on consumer awareness of complaint procedures.

Traditional media

Traditional media includes radio, television and newspaper. These three media have been used for more than a century to inform and raise awareness. In Tanzania, traditional media and legacy media have been the most trusted. It is common that most families in urban settings have at least radio and/or television. However, most households in rural areas use the radio as source of information and news. Most households in rural areas do not have a television due to the cost or limited access to electricity. Therefore, radio is the most common media for populace in Tanzania. Newspapers are also common. They constitute the most formal way used by institutions to communicate with the public. However, newspapers cannot be accessed and used by most of the populace—especially those living in remote areas and illiterates. This being said, the importance of traditional media even in the age of digital technologies cannot be overstated. Therefore, this study analyses the role of media (radio, TV, and newspapers) on consumer awareness in the telecommunication sector.

6.3.2.2 *Socioeconomic factors*

Gender

Gender is likely to determine the awareness level of an individual. Most women in Tanzania have limited awareness of and access to justice procedures. Different organisations (like TAMWA and TAWLA) have been working to ensure that women get equal access to justice. Therefore, women have been considered a vulnerable group in different industries. Different scholars are working to empower consumers to take charge of their daily lives (Brennan, Sourdin, Williams, Burstyn and Gill, 2017; Brennan, Vlaev, Blakemore and Smith, 2016). This being said, to empower consumer protection, it is vital to analyse the role of gender on consumer awareness of the complaint procedure used in the Tanzanian telecommunication markets.

Income

Low-income consumers are considered a vulnerable group by scholars. Scholars conclude that individual income has an effect on the awareness of justice procedures (Radin, 2017). Scholars suggest that individuals with higher income are more likely to be aware of the procedures to follow when their rights are violated (Howard, 2001). Studies (Balázs, Bene and Hidegkuti, 2017; Brennan, Sourdin, Williams, Burstyner and Gill, 2017; Brennan, Vlaev, Blakemore and Smith, 2016) suggest that vulnerable consumers should be identified and offered education and capacity building to empower them to act confidently.

Education

In Tanzania, the basic justice procedures are taught through the formal education system. But this education does not cover the procedures to follow specifically in the service industry. Only individuals who study in the field of law and enforcement—such as lawyers, advocates and judges—are trained in depth concerning the justice procedures in all industries. This being said, the education level of an individual is likely to affect the awareness level regarding the consumer complaint procedure in the market. There are also many studies which suggest that education level determines consumer awareness of justice procedures (Balázs, Bene and Hidegkuti, 2017; Brennan, Sourdin, Williams, Burstyner and Gill, 2017; Brennan, Vlaev, Blakemore and Smith, 2016). Therefore, this study analyses the significance of education level on consumer awareness. Specifically, the study analyses whether consumers with tertiary education are more likely to be aware of complaint procedures than non-tertiary consumers.

Urban and Region

Consumers in urban areas have media and other sources of information at their disposal, which is not the case in the rural areas. In most rural areas, information is limited due to poor access to media sources. Media plays a great role in knowledge transfer and awareness raising; thus, rural consumers are more likely to be less aware than those living in urban areas. Previous studies suggest that consumers in rural areas are less likely to be aware of procedures which affect their confidence in the market (Brennan,

Sourdin, Williams, Burstyner and Gill, 2017; Brennan, Vlaev, Blakemore and Smith, 2016). This study aims to analyse whether urban consumers are more likely to be aware of the consumer complaints procedure.

Regions

In Tanzania, economic development varies with the regions to a certain degree. Some regions are economically more advanced than others. There are a number of reasons for the regional-divide. Some can be traced to colonial rule. Thus, regions which manufactured raw materials in the highlands (cold weather) were more preferable to colonials. In those regions, infrastructures were built and had more access to social services. For instance, the region Dar es salaam was developed to facilitate the transportation of raw materials through its port. This being said, awareness of justice procedures is likely to be higher in more advanced regions. On the other side, consumers in advanced regions are more likely to experience high-quality services. It is possible that consumers in advanced regions are less aware of complaint procedures, as they are less likely to face them. Therefore, since the data was collected from four different regions, it will be interesting to analyse whether awareness of complaint procedures varies among regions.

Age

In Tanzania, the telecommunication service uptake started almost ten years ago. The service has recently become ubiquitous, and it is used by almost every age group. However, due to high technology, youth can easily follow the pace and dynamics of the industry. Thus, the elderly are less likely to participate fully in the market such that they are less likely to be aware of complaint procedures. A number of studies (Balázs, Bene and Hidegkuti, 2017; Brennan, Sourdin, Williams, Burstyner and Gill, 2017) conclude that the elderly are less likely to be aware of complaint procedures and dispute-resolution procedures, which affect their confidence in the markets. This study analyses whether age has an impact on the awareness of the complaint procedure in telecommunication markets.

Employment

Employed consumers are more likely to mingle with people from different backgrounds and education levels. This means that employed individuals have a greater chance to become aware of justice procedures than their unemployed counterparts. Depending on the workplace rules, an office is a good place for various people to meet learn, share, transfer knowledge, and raise awareness about different things. Therefore, it is very likely that the employed consumer will be more aware of complaint procedures. Consequently, this study will analyse whether employment status determines consumer awareness of complaint procedures.

6.3.2.3 *Awareness of Institutions dealing with consumer protection*

There are mainly two institutions which deals with consumer protection in relation to the telecommunication services. As explained in details in Chapter 5 those institutions are TCRA and FCC. These institutions have other tacks rather than protecting consumers, For instance TCRA deals with the general communication sector, thus the demand and supply side, as well it deals with broadcasting and postal services. Therefore, it is of interest to analyse whether consumers who are aware of these institutions are more likely to know complaint procedures. This being said, this study analyses the likelihood that consumers who are aware of the institution are aware of the complaint procedure.

Finally, since some independent variables are more likely to have higher correlations with each other, a co-linearity test was conducted. Following the co-linearity test, all variables with correlation rho above 0.49 were considered highly co-linear. Consequently, the Spearman correlation reported in the table reveals that the level of education correlates with TCRA and social media. This means that educated consumers are also aware of the regulator and use social media more often.

Analysis

The study uses a binomial logit model to analyse the collected data. Chapter 4 explained the binomial logit model in details. Data was first clustered into five categories so it could be analysed by the ordered

logit model. However, the binomial logit model was preferred, because the majority of consumers (almost 65percent) are aware of the first procedure only. Thus, the awareness level was grouped in two already. Second, when the aggrieved consumer reaches the regulator, the likelihood the regulator will inform the consumer concerning next referral or appeal procedure becomes higher. This is the reason for categorizing consumers into two rather than five categories (aware and unaware). Therefore, this study considers that consumers who are aware of the second complaint procedure and above are considered aware of the complaint procedures and vice versa. STATA 12 was used for the analysis purposes.

Table 6-3: Correlation matrix of variables

Variable	Education	AgeAb50	Gender	Hincome	Employed	Urban	Mwanza	Mbeya	Moshi	smedia	TV	Radio	Npaper	TCRA	FTC
Education	1														
AgeAb50	-0.1521	1													
Gender	-0.0507	0.0016	1												
Hincome	0.2642	0.2723	-0.0813	1											
Employed	0.2315	0.0949	0.0216	0.1747	1										
Urban	0.2319	0.0049	-0.0258	0.1032	0.1422	1									
Mwanza	0.0027	-0.0303	-0.0492	-0.1458	-0.2005	0.066	1								
Mbeya	-0.0389	0.0236	0.0434	-0.0594	-0.0262	0.0899	-0.3333	1							
Moshi	-0.1515	0.0101	-0.0029	-0.0162	0.0087	0.3418	-0.3333	0.3333	1						
smedia	0.5333	-0.2728	-0.0523	0.1012	0.202	0.245	-0.0003	0.1362	0.2963	1					
TV	0.3447	-0.0291	-0.0234	0.1845	0.1771	0.2176	0.0201	0.0486	0.0969	0.3157	1				
Radio	0.0741	0.0645	-0.0698	0.0075	-0.0527	0.0879	0.1216	0.1354	0.1614	0.0048	0.0036	1			
Npaper	0.4680	0.0607	-0.1612	0.1929	0.2635	0.2079	0.0022	0.0991	0.2174	0.3507	0.3116	0.1755	1		
TCRA	0.5257	-0.1154	-0.1131	0.1629	0.1506	0.1256	-0.1235	0.0059	0.0412	0.3855	0.2714	0.0066	0.3467	1	
FTC	0.4133	-0.0373	-0.0561	0.2293	0.0673	0.0714	-0.1052	0.1653	0.1803	0.3437	0.1438	0.065	0.2828	0.3865	1

6.4 Results

6.4.1 Cross tabulation

The cross-tabulation results as presented in 6.3 explain the variability in the respondents' awareness of complaint procedures among different socio-economic groups. In detail, findings indicate that respondent with high income (above 1000 K) and high education (tertiary education) are the only groups, whereas more than half are reported to be aware of the complaints procedure (precisely 51.61 and 51.79 percent,

respectively). Also, awareness of complaints procedure is directly proportional to education and income. For instance, while 51.61 percent of respondents with tertiary education are aware, 23.56 percent of respondents with secondary education are aware and only 6.14 percent of respondents with primary education and below are aware. It is likely that respondents' living in urban areas (30.71 percent) are the most aware compared to those living in semi-urban (23.68 percent) and rural areas (14.29 percent).

With respect to gender, male respondents are more aware by 8 points than their female counterparts. Age-wise, younger consumers – those between 18 and 30 years old (29.70 percent)—are the most aware of the age groups, followed by those above 50 years old (25.77) and middle age (between 31 and 50 years old) (20.79 percent). In addition, awareness varies among different regions; respondents in Mbeya (31 percent) and Mwanza (31 percent) are more aware than their counterparts in Dar es salaam (19 percent) and Moshi (25 percent). In summary, according to the cross-tabulation results, female, rural, low-income, less-educated and middle-ages respondents are the less aware socio-economic groups.

6.5 Empirical results

After cross tabulation (Table 6-3), Table (6-4) provides results from the binomial logit model. Results suggest explanatory variables with a likelihood of determining consumers' awareness on complaints procedure. With regards to socio-economic backgrounds, results reveal that respondents who live in urban areas are more likely to be aware of the complaints procedure than consumers living in semi-urban and rural areas. These results agree with studies by Pattnaik (2016) and Sabri (2014) in India and Malaysia, respectively. These studies suggest that rural consumers constitute the less aware and knowledgeable group; hence, they are more vulnerable and fall easy prey to unfair business practices in the markets. Furthermore, these studies suggest that consumer education should be encouraged and that NGOs and civic societies should be encouraged to advocate for this group.

Table 6-4: Demography and Awareness of Complaints Procedure

Awareness of Complaints Procedure		
Socio-Economic Backgrounds	Aware (26.5 %)	Not Aware (73.5 %)
Gender		
Male	30.23	69.77
Female	22.16	77.84
Type of Settlement		
Urban	30.71	69.29
Semi-urban	23.68	76.32
Rural	14.29	85.71
Age		
18-30	29.70	70.30
31-50	20.79	79.21
Above 50	25.77	74.23
Income		
Below 200K	21.98	78.02
200k-1000k	28.47	71.53
Above 1000k	51.61	48.39
Education		
Primary and below	6.14	93.86
Secondary	23.56	76.44
Tertiary	51.79	48.21
Region		
Moshi Municipal	25.00	75.00
Mbeya City	31.00	69.00
Mwanza City	31.00	69.00
Dar es salaam	19.00	81.00

In Tanzania, consumers living in rural areas like other developing countries are living under extremely poverty with a low level of education and have limited access to media, which affects their awareness. Besides having limited awareness of complaint procedures in the telecommunication sector, rural consumers have limited access to justice in general according to a study by Ubink and Mnisi Weeks, (2017).

Table 6-5: Results of Binomial Logistic Model of Consumers' Awareness

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
AgeAb50	0.3290	-0.3857	0.1027	0.2460	
Gender	-0.0719	-0.3654	-0.1738	-0.1568	
Hincome	0.5434	1.5926 ***	1.0553 **	0.5743	
Employed	-0.0454	0.3560	-0.2046	0.2265	
Urban1	0.7054 **	0.6181 **	0.4193	0.7603 **	
Mwanza	2.4585 ***	1.2216 ***	1.2364 ***	2.5530 ***	
Mbeya	1.2494 **	1.1148 ***	0.9502 **	1.2940 ***	
Moshi	2.4490 ***	0.9623 ***	1.7699 ***	2.0107 ***	
Smedia	0.2821 *		0.5478 ***		0.1099
TV	-0.1216		-0.0007		0.0755
Radio	0.1683		0.1730		0.2286
Npaper	0.4088 **		0.6300 ***		0.3809 **
TCRA	2.2157 ***			2.6494 ***	2.2251 ***
FTC	2.5471 ***			2.7319 ***	1.8234 ***
cons	-6.8882 ***	-1.9870 ***	-4.7387 ***	-5.7655 ***	-4.9022 ***
Log likelihood	-138.8127	-215.2636	-186.9454	-144.1584	-155.7353
No. of observation	400	400	400	400	400
LR chi2	184.95	32.05	88.69	174.26	151.11
Prob> chi2	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.3998	0.0693	0.1917	0.3767	0.3267

Note: *** p<0.001; ** p< 0.05; *p<0.1

Further results indicate that the level of awareness among consumers is more likely to be determined by the region in which a consumer is living. In Tanzania, development varies among regions. Different regions have different education and economic growth levels based on the productivity of the regions. Moreover, culture and beliefs also vary among regions. For instance, individuals from Kilimanjaro are believed to be the best businesspeople in the country and are very aggressive when it comes to money compared to individuals from other regions. Furthermore, quality of service varies among regions based on topology and on how the specific company has invested in the region. For instance, in a region like Dar es salaam, which is the capital city of business and trade, most operators invest more due to a high population density, high return on investment, and the topology of the region, which is less mountainous

than regions like Mbeya and Kilimanjaro. Therefore, it is likely that consumers in these regions face different challenges which may affect awareness of complaint procedures. The study has proven that awareness among consumers in these regions varies. Thus, based on the Table 6-6, the marginal effect suggests that consumers living in Mwanza and Moshi councils are 26 percent more aware than those living in Dar es salaam. While those living in Mbeya are 13 percent more aware than those living in Dar es salaam.

Table 6-6: Marginal effect results for the binomial logistic model

Variable	Model 1	p-value	Marginal effect
AgeAb50	0.3290	0.76	0.03
gender	-0.0719	-0.23	0.00
Hincome	0.5434	0.87	0.07
Employed	-0.0454	-0.13	0.00
Urban1	0.7054 **	2.05	0.07
Mwanza	2.4585 ***	4.4	0.26
Mbeya	1.2494 **	2.48	0.13
Moshi	2.4490 ***	4.31	0.26
smedia	0.2821 *	1.81	0.02
Tv	-0.1216	-0.59	-0.01
radio	0.1683	0.65	0.02
npaper	0.4088 **	2.35	0.05
tcra	2.2157 ***	4.14	0.20
ftc	2.5471 ***	5.99	0.47
cons	-6.8882 ***	-5.89	
Log likelihood		-138.8127	
No. of observation		400	
LR chi2		184.95	
Prob> chi2		0.0000	
Pseudo R2		0.3998	

Note: *** p<0.001; ** p< 0.05; *p<0.1

Furthermore, concerning media usage, results show that social-media users and newspaper readers are more likely to be aware of the complaints procedure. Newspapers comprise the most common media; they are accessed by most socio-economic groups in Tanzania. In addition, newspapers are considered the

official way institutions use to communicate with the public. This may be why consumers who read newspapers more often are more likely to be aware of the complaint procedure. This result agrees with a number of studies which suggest that media usage has an impact on individual awareness (Themba and Tanjo, 2013; Warren, 2013).

It is likely that social media may have impact on consumer awareness in the telecommunication markets. Therefore, this study analyses the effect of social media on consumer awareness of the complaint procedures due to social media. Youngsters (millennials– 18-30 years old) are less likely to buy daily newspapers. But most of them read news through newspapers' social-media pages, which may explain why social-media users are more likely to be aware of the complaints procedure. Social media plays a double role which helps consumers learn and share with their friends about the complaints procedure. In addition, the presence of service providers (operators) and the regulator in social media is another factor which contributes to a high awareness regarding complaints procedures among rural consumers.

Furthermore, results show that consumers who are aware of institutions (TCRA, and FTC) are more likely to be aware of complaints procedures. This suggests that the institutions emphasize consumer issues, but how many consumers are aware of these groups? Institutions have a legal mandate to ensure that markets operate at an optimum and that the consumer is protected in the market place. Thus, the institutions have to make their presence known to the public. As Ekanem (2011) argues, having the institution is crucial to consumer protection, but the importance of accessing their effectiveness and awareness among consumers cannot be overstressed.

In synopsis, results show that consumers in rural areas are less aware of complaint procedures and hence are more likely to be vulnerable consumers in the market. Media users are more likely to be aware; thus, media can be used as conduits for improving consumer awareness, and awareness of institutions is an important factor concerning consumer awareness of complaint procedures. The next chapter offers discussion and conclusion.

6.6 Conclusion

Consumer complaints are important if markets are to operate optimally, as a consumer can thereby communicate dissatisfactions and seek redress. Also, in case of unresolved disputes in the market, the regulator may intervene and offer protection. Moreover, when consumers are aware of the complaint procedures, the likelihood of complaining is high if they are faced with unpleasant experiences in the market. For this reason, this study has attempted to understand what factors determine consumers and to use them to empower consumer protections in Tanzanian telecommunications markets.

The study proposes that only 26.5 percent of consumers are aware of complaints procedures. Findings reveal that rural consumers are more likely to be unaware in the marketplace and hence are vulnerable to market exploitations by unfair business practices. This group of consumers requires special attention from the regulator and policy makers, as they exhibit a negative correlation with both mass media and social media. Poor exposure to the media contributes to a low awareness of complaint procedures. Thus, this study suggests that, to improve awareness to this group, consumer education should be designed specifically for them. Second, regulators can encourage consumer organisations to advocate for this group, as the regulatory intervention is limited in the market (however, this requires further studies). In addition, policy makers are advised to consider alternative means of dispute resolution (ADR), as firms which offer (ADR) usually take charge of educating consumers about complaint procedures.

Furthermore, the findings suggest that consumers who use media often and are aware of the consumer-protection institutions are more likely to be aware of the complaints procedure. This implies that the regulator may use media to inform the public about complaint procedures—especially newspapers and social media. In addition, regulators are advised to advertise themselves and their roles so as to publicize their existence. Awareness of consumer institutions is important if consumers are to register their complaints when they encounter unpleasant experiences. This finding may communicate two things: First, consumers are likely to complain above the operator level if they are aware of institutions dealing with consumer protection. Thus, for consumers to act rationally in the market, it is crucial that these

institutions advertise their roles in the community. Consumers need to know where to go in case the operator fails to resolve their complaints. This can be achieved only when institutions dealing with consumer protection advertise themselves and their services to the public. Second, operators are unlikely to educate consumers about further steps which can be taken to escalate complaints to the regulator. Consequently, to improve consumer awareness of complaint procedures, the regulator can require all operators to publish the complaint procedure up to the regulator level. When consumers are aware that they can communicate their unresolved dissatisfaction to the regulator, will feel more protected and confidently when using telecommunication services.

Finally, this study suggests that future studies may contribute to the literature by first analysing ways which can be used to offer education to vulnerable consumers. Second, since technology is changing and markets demand only one model to resolve disputes, the regulator can adopt other ways to be consumer friendly in Tanzania. Telecommunication markets are changing. While telecom companies traditionally operate within the country borders, we currently have Over the Top (OTT) services. These new technologies may require different way to resolve a dispute in case one arises, because most OTTs operate online. Therefore, it is important to have online dispute-resolution procedures for them also. Generally, it is high time to re-access the complaint handling process with regards to technological changes. For instance, the European Union has developed a number of strategies with which to offer consumer education to different socio-economic groups. For instance, they have embedded consumer education in school curricula to reach youth (Brennan, Vlaev, Blakemore, and Smith, 2016). Second, future studies may analyse alternative dispute-resolution methods popular in European countries. Studies can also analyse the cost of implementation and applicability of ADR in the Tanzanian market.

CHAPTER 7 CONSUMER COMPLAINT BEHAVIOR

7.1: Introduction

Consumer complaint behavior is undoubtedly an important phenomenon in the market economy, and more importantly in the service industry (Heung & Lam, 2003), as services constitute a large part of modern economies. Tronvoll (2008) defines consumer complaint behavior as

“the process that emerges when a services experience lies outside a customer’s ‘acceptable zone’ during the service interactions and/or in the evaluation of the value-in-use. This unfavorable experience can be expressed in form of verbal and/or non-verbal communications to another entity and can lead to behavioral change.”

This definition is tailored to the service industry and assumes that the user knows what he wants, which allows him to set a particular expectation toward the purchased services. For example, a mobile phone subscriber can expect that he can make a call without dropped calls at any location that is advertised as covered. A broadband subscriber may expect that he can use data services at a particular data speed, such as 100 Mbps. When the user interacts with the service, and fails to experience the expected performance of the service, the negative experience increases the likelihood of a consumer complaint reaction. This is usually known as service failure in consumer complaints behavior literature (Best & Andreasen, 1977; Day & Ash, 1979).

Consumer complaint behavior has been found to be different among various market structures. This is very important, particularly in the telecommunications industry, since the industry has moved from a monopolistic to an oligopolistic and competitive market structure (Tronvoll, 2007). The most crucial difference to former market structures is the ability of unsatisfied consumers to now opt for other providers on the market. While a monopolistic market structure presents next to no alternatives, the competitive market enables consumers to better their situation by choosing a better service option.

Despite the ease of choosing other options in the competitive market, there is a rising trend of consumer complaints in the service industry, particularly as regards telecommunications (Garín-Muñoz, et al., 2016).

These trends call for more in-depth understanding of consumer complaint behavior. Although consumer complaints might be perceived as a nightmare to firms, they may also provide valuable feedback to them. In fact, among consumers who will experience a service failure, only a portion will voice their complaints in the way that the service provider will easily notice (Andreasen, 1988). Thus, for a serious firm, it is important to consider consumer complaints as essential inputs to improve the firm's services (Nyer & Gopinath, 2005; Reynolds & Harris, 2006). These inputs to the service providers may help firms to discover cross-cutting disappointing features of its services (Johnston & Mehra, 2002; Tax and Brown, 1998), improve their management (Johnston & Mahra, 2002), improve quality of their present and future service offerings (East et al., 2000; Marquis and Filiatrault, 2002), and finetune their marketing and advertisement campaigns to improve their communication (Harrison-Walker, 2001, Johnston & Mehra, 2002). As a whole, proper handling of complaints may lead to higher consumer satisfaction, and hence ensure consumer retention and loyalty (Almossawi, 2012; Lai, et al., 2009; Murugan & Rajendran, 2013; Park, & Jeong, 2004).

Moreover, the rise of consumer complaints triggers communication regulators' interest in understanding consumer complaint behavior. Notably, the communication regulator in the Tanzanian (Tanzania Communication Regulatory Authority – TCRA) has the responsibility to offer consumer protection and eliminate consumer exploitation in the market. Regulators use consumer complaints in the telecommunication markets as an input for consumer protection and empowerment. Since regulatory intervention in liberalized markets is limited, consumer complaints bestow power to the regulator to intervene in the market and offer protection to consumers. Moreover, consumer complaints provide insight to regulators on challenges facing consumers in the markets.

In the Tanzanian telecommunication market there is only one way of channeling consumers' complaints. First and foremost, the aggrieved consumer is required to complain to his service providers. Then, if the consumer is not satisfied with the resolution offered by the service provider he can escalate his complaints to the regulator. If the consumer is still unsatisfied, he can refer to the Fair Competition Tribunal. Furthermore, according to the Consumer Protection regulation, section 11(3b), all service providers are required to keep and submit reports of handled consumer complaints and their resolution to the regulator after a specified period. Therefore consumer complaints are vital for consumer protection, as they offer insight to the regulator about the challenges facing consumers. For instance, in February 2015, three major operators in Tanzania raised the cost of data abruptly, which is against the tariff regulations of 2011. Consequently, consumers complained to the regulator. The complaints bestowed a chance for the regulator to investigate the matter (Tambwe, 2015). As a result the operators were punished, and the regulator offered market directives to ensure that consumers are not exploited but rather protected in the market.¹¹

Against this background, the purpose of this study is to analyze factors influencing consumer complaint behavior in the Tanzanian telecommunication market. Day and Landon (1977) divide consumer responses in two groups: complainer (voice and exit) and non-complainer (loyalty). This study categorized complainers in two additional groups: public (voice) and private (negative word of mouth and exit). This study analyzed consumer complaint behavior based on voice or consumers who complained to their service providers.

7.2 Methodology

7.2.1 Data

The data used in this study were collected in Tanzania through a face-to-face interview-based survey in May and June 2015, by using a questionnaire. The face-to-face method was preferred to an online survey, because it was the best option to reach an offline community, considering the low internet penetration in

¹¹ https://www.tera.go.tz/images/headlines/taarifa_kwa_UmmaGharama_za_Vifurushi_Feb_2015.pdf

Tanzania. Other studies that used face-to-face interview-based surveys include (Srinuan et al., 2012; Dagli & Jenkins, 2016). Multiple inverse sampling was used to collect data from 400 respondents who were selected from three cities (Dar-es-salaam, Mwanza and Mbeya) and one municipality (Moshi) in Tanzania.

Through the questionnaire, the respondents were first asked if they had made any of the nine listed negative experiences. Second, the respondents who reported having encountered such experiences were asked whether they complained to their service providers. Third, consumers' knowledge of consumer rights and awareness of complaints procedures was tested. Fourth, demographics (age, gender, education, occupation, area of residence) and social media use behavior data were collected (see Figure 7-1).

Figure 7-1: Study Framework

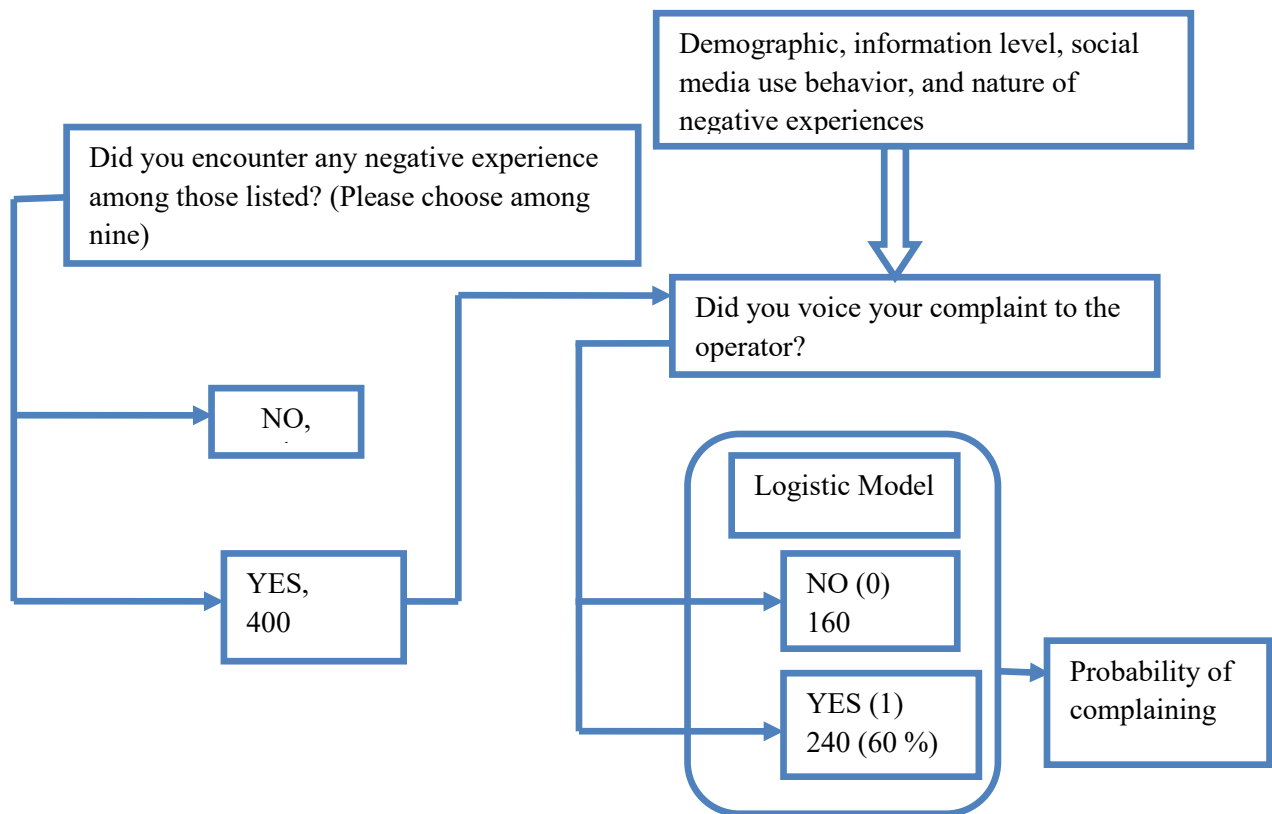


Figure 7-1 offers the general framework of the study; in the first stage consumers were asked whether they had encountered one of the nine negative experiences. Subsequently, those consumers who confirmed at least one negative experience were asked whether they voiced their complaints to their service providers or not. Consequently, the binomial logistic regression model was adopted to analyze the likelihood of consumer complaint behavior based on explanatory variables.

7.2.2 Socioeconomic backgrounds and consumer complaint behavior

Table one provides insight into consumer complaint behavior in relationship to their respective socioeconomic group. Based on socioeconomic background, descriptive statistics suggest that males are more likely to complain than females. As to area of residence, cross tabulation results show that rural respondents complain more than semi-urban and urban respondents. This finding is exceptional, and may communicate three things; the first may be that the service quality in rural areas is poor, which triggers more complaints. Second, may be due to the limited options of service providers, consumers in rural areas are forced to remain with one service provider, while most consumers in urban areas most likely subscribe to more than one service provider at the same time. That offers urban consumers the possibility to change between service providers whenever necessary, which may affect their likelihood of complaining. However, rural consumers do not have the same luxury, as in most rural and remote areas there is only one service provider. Third, the cause may be a cost-benefit analysis, which suggests before taking the step to complain, consumers analyze the cost and benefit, i.e. the time and money spent on the complaint against the benefit. Unless the benefit is higher than the costs, the consumer's incentive to complain may be jeopardized.

Moreover, consumers below 30 years of age are more likely to complain compared to their older counterparts. At the other side of the spectrum, respondents with an income below Tanzanian shillings 200 K and education below secondary school are less likely to complain. Following the cross tabulation, this study will use a binomial regression model to analyze the determinant of complaint behavior. The

binomial model result will confirm whether the cross-tabulation result will hold. Generally, among the respondents, 60% reported having complained after encountering negative experiences.

Table 7-I Socioeconomic Background and Consumer Complaint Behavior

Demographic factors	Complaining	Demographic factors	Complaining
	(%)		(%)
Gender		Type of settlement	
Male	64.19	Rural	70.00
Female	55.14	Suburban	63.16
		Urban	56.30
Age			
18-30	64.85	Region	
31-50	55.45	Moshi Municipal	79.00
Above 50	54.64	Mwanza City	50.00
		Mbeya City	58.00
Income (Tshs)		Dar-es-salaam City	53.00
Below 200K	56.03		
200K-1,000K	65.69	All samples	60.00
Above 1,000K	64.52		
Education			
Primary & Below	42.11		
Secondary/Diploma	71.84		
Undergraduate & Above	59.82		

7.2.3 Variables Selection

Following Figure 7-1, data revealed that 40% aggrieved respondents did not voice their complaints to their respective service provider. This subsection will analyze different independent variables with the

likelihood of influencing consumer complaint behavior in the Tanzanian telecommunication market, based on previous studies of the telecommunication market in Tanzania.

7.2.3.1 Socioeconomic background

Previous studies (Garín-Muñoz et al., 2016 and Manikas & Shea, 1997) have identified the correlation between socioeconomic background and consumer complaint behavior. For instance, on gender Garín-Muñoz et al., (2016) and Manikas & Shea, (1997) found that male consumers are more likely to complain than females. In the Tanzanian culture, men are considered superior and protectors within the family. The culture expects women to be less aggressive than males. Therefore, generally, we expect men to complain more than women. However, there have been some programs for women's empowerment that encourage women to stand up for their rights and take action whenever their rights are undermined.¹² Thus, women are expected to be more aggressive. Therefore, it is of interest to analyze the influence of gender on consumer complaint behavior, and to confirm whether the same result reported by Garín-Muñoz et al., (2016) and Manikas & Shea, (1997) hold in the Tanzanian telecommunication market.

Furthermore, different scholars have different views on the role played by income in consumer complaint behavior. Chinedu et al. (2017), who studied telecommunication consumers in Nigeria found that income influences consumer compliant behavior. Specifically, the study suggests that high-income consumers are more likely to complain when encountering negative experiences in the telecommunication markets. In contrast, and based on the cost-benefit analysis, other scholars (Bearden & Teel, 1983 and Davidow & Dacin, 1997) suggest that consumers analyze the cost and benefit of complaining before deciding to complain. Therefore, studies concluded that high-income consumers are less likely to complain unless the benefit of complaining is higher than the cost of their time. The cost-benefit analysis is also likely to affect urban consumers, since most people in urban areas are busy and the cost of their time is higher

¹² <http://tgnp.org/about/>

compared to those living in rural areas. Therefore, unless the benefit of complaining is very high, consumers are less likely to spend their time on complaining.

Jacoby & Jaccard (1981) argue that highly educated consumers are more likely to complain. Educated consumers are more likely to be informed about consumer rights and complaint procedures. Furthermore, Bearden & Mason, (1984) hypothesize that consumer complaint behavior is positively related to level of education. Thus, this study will analyze the likelihood of consumers with tertiary education to complain.

The study by (Bearden & Mason, 1984) hypothesizes that consumer complaint behavior is inversely proportional to age, suggesting that the elderly are less likely to complain when encountering negative experiences. Based on the findings of chapter five, elderly consumers are less likely to know their rights than other age groups. Therefore, this study will take the further step to analyze whether age influences consumer complaint behavior. Based on that literature and the Tanzanian market, this study is going to analyze the effect of socioeconomic background (age, education, type of settlement, income, employment, and gender) on consumer complaint behavior.

7.2.3.2 Nature of negative experience

In addition to socioeconomic background, another factor that has been reported to influence consumer complaint behavior is the nature of the negative experience. Thus, consumers tend to report problems of a certain nature. For instance, the study by Garín-Muñoz et al., (2016) in Spain concluded that the nature of an experienced problem influenced consumers' complaint behavior in the telecommunication market. The study found that consumer encountering negative experiences related to billing are more likely to complain than about problems of a different nature. In Tanzania there are mainly three kinds of problems. The first is billing; since most consumers use prepaid services, it is very hard at times for them to know exactly when they are overcharged, but whenever that happens consumers are usually very aggressive. The second problems are VAS (Value Added Services) related; when consumers encounter problems of this nature such as selecting a caller tune and the service provider sends a different one. In that case,

consumers are more likely to complain and usually service providers respond with urgency. Third are network related problems, like dropped calls or poor call quality; these problems are common on the Tanzanian market, especially in rural areas. Thus, very rarely people take the time to complain, because it usually takes a long time for service providers to resolve these problems, especially in rural areas where the return is low. For that reason, based on the literature and the Tanzanian market, this study is going to analyze whether the nature of negative experiences (billing, network related, or Value Added Service (like a problem related to mobile money or caller tunes)) influences consumer complaint behavior on the Tanzanian telecommunication market.

Table 7-2: Correlation matrix

Variables	Education	Urban	AgeAb50	Employed	Hincome	Gender	Mbeya	Mwanza	Dar	smedia	Billing	Network	VAS	Info
Education	1													
Urban	0.2319	1												
AgeAb50	-0.1521	0.0049	1											
Employed	0.2315	0.1422	0.0949	1										
Hincome	0.4371	0.1324	0.2567	0.3347	1									
Gender	-0.0507	-0.0258	0.0016	0.0216	-0.1003	1								
Mbeya	-0.0389	0.0899	0.0236	-0.0262	-0.0577	0.0434	1							
Mwanza	0.0027	0.066	-0.0303	-0.2005	-0.1443	-0.0492	-0.3333	1						
Dar	0.1877	0.1859	-0.0034	0.218	0.2454	0.0087	-0.3333	-0.3333	1					
smedia	0.5333	0.245	-0.2728	0.202	0.1795	-0.0523	0.1362	-0.0003	0.1605	1				
Billing	-0.0309	-0.0742	-0.0571	-0.1024	-0.0516	-0.0095	0.0066	0.1126	-0.2186	-0.0709	1			
Network	0.0009	0.049	-0.0044	0.1191	0.0211	-0.019	-0.0243	0.0243	0.0729	0.0889	0.2145	1		
VAS	0.1466	0.0935	-0.1159	-0.0058	0.0915	-0.1004	0.1643	-0.1291	-0.0352	0.1745	0.1962	0.125	1	
Info	0.4544	0.1467	-0.0993	0.2175	0.2756	-0.0765	-0.034	-0.1438	0.099	0.3567	-0.0147	0.0847	0.1164	1

7.2.3.3 Social media users

In addition to the previously mentioned likely determinants of consumer complaint behavior, studies have also revealed that social media users are more likely to complain. This is first because service providers' social media pages, despite being used as marketing channels, are also used by consumers as a platform for launching complaints. In addition, they are used as platforms for consumers to learn from each other,

which influences the consumers' complaint behavior (Hong & Lee, 2004; Hudson & Thal, 2013). For instance, Grégoire et al., (2015) investigate the good, bad and ugly of consumer complaints in social media; their study reports that social media motivates consumers to complain. The same study added that consumer complaints on social media have a ripple effect on other consumers, thus unless service providers deal properly with complaints, they pose threats for firms. Thus, these studies reflect that consumers who use social media more often are more likely to complain. The study will analyze the likelihood of social media users to complain when encountering negative experiences.

7.2.3.4 Level of Information

The last test variable will be the level of information, in line with the Information, Motivation and Behavior Skills (IMB) theory conceived by Fisher and Fisher (2002) to understand and explain social behaviors. The theory suggests that information is one of the crucial aspects to attain desirable behavior in the presence of motivation. Moreover, Ong & Teh (2016), and Usman et al., (2016) suggest that consumers who are informed about consumer rights, and aware of enforcement or complaints procedures are more likely to complain when they feel entitled to do so. In other words, these studies propose that information provides consumers with the ability to communicate dissatisfaction, which is crucial for consumer protection (Brennan & Ritters, 2004). Thus, the study will analyze the influence of information on consumers' complaint behavior.

In synopsis, this study is going to analyze the likelihood of consumer compliant behavior to be influenced by four groups of explanatory variables based on previous studies. The first is socioeconomic background (age, employment, gender, income, type of settlement, and region), the second is the nature of the negative experiences, third, social media users, and lastly the level of information. Descriptions of the explanatory variables can be seen in Table 2. To ensure that there is no collinearity, the Spearman correlation test was conducted as reported in Table 7-2.. Consequently, for this study all values with a correlation of rho above 0.49 were considered having a high correlation (see Table 7-3).

Table 7-3 Description of variables for Consumer Complaints behavior

Variable	Description	Mean	Std Dev
Dummy for Reporting	= 1 if the respondent reported a negative experience to operator	0.600	0.491
(Dependent Variable)	= 0 if the respondent did not report a negative experience		
Explanatory variables			
SMEDIA	= 3 if respondent uses social media daily;	1.530	1.320
	= 2 if respondent uses social media weekly;		
	= 1 if respondent uses social media monthly;		
	= 0 otherwise		
Billing	= 1 if problem is related to billing; 0 otherwise	0.950	0.218
Network	= 1 if problem is related to network; 0 otherwise	0.975	0.164
VAS	= 1 if problem is related to value added services; 0 otherwise	0.840	0.367
INFO	= 2 if respondent knows consumer rights and is aware of complaints procedures; = 1 if the respondent knows either consumer rights or complaints procedures; = 0 otherwise	0.980	0.469
Socioeconomic factors			
GENDER	= 1 if the respondent is male; 2 otherwise	1.463	0.499
EMPLOYED	= 1 if the respondent is employed; 0 otherwise	0.443	0.497
LINCOME	= 1 if respondent has a monthly income below 500,000Tshs.; 0 otherwise	0.800	0.401
AGEAB50	= 1 if the respondent is above 50 years of age; 0 otherwise	0.505	0.501
DAR	= 1 if the respondent lives in Dar City; 0 otherwise	0.250	0.434
MWANZA	= 1 if the respondent lives in Mwanza City; 0 otherwise	0.250	0.434
MBEYA	= 1 if the respondent lives in Mbeya City; 0 otherwise	0.250	0.434
URBAN	= 1 if respondent lives in an urban area; 0 otherwise	0.635	0.482

7.3 Results and discussion

This section provides the results and discussion based on the findings from the binomial logistic model presented in Table 7-4 and 7-5. The findings offer an explanation for factors that influence consumer complaint behavior in the Tanzanian telecommunication market. Table 7-4 analyzed three different models to scrutinize elements influencing consumer complaint behavior. The second model analyzed the influence of socioeconomic factors when all other factors are constant. The third model analyzed other factors, including information, social media and the nature of the negative experience when the socioeconomic factors are constant. The first model analyzed all factors (socioeconomic, information, social media, and nature of negative experience). The result revealed that the first model explains the result by 18.4%, which is higher than other models, with the log likelihood of -219.66251. Consequently, in Table 7-5, Model 1 results were translated to analyze the influence of statistically significant variables on consumer complaint behavior.

First, the results reveal that the level of information among respondents affects their complaint behavior. More specifically, the results suggest that informed respondents are 15.18% more likely to complain when faced with negative experiences. This finding proves the argument of the IMB theory model, which suggest that information is crucial and a basic agent toward attaining desirable behavior in society. That means that consumers who know their rights and complaints procedures are more likely to complain when faced with negative experiences, and hence are less likely to be exploited.

Second, the findings revealed that consumers who use social media often are more likely to complain. Social media have been used by service providers in different countries, including Tanzania, to advertise their brands, and hence to increase their brand equity, positive branding, and purchase intentions (Schivinski & Dabrowski, 2014). Consumers feel more connected with the brand by following its page. Also, consumers rate service providers through feedback and experiences posted by other consumers on social media pages. In addition, consumers feel more comfortable about complaining on social media, as

they expect a timely response (incite 2012; Xia, 2013), which may explain why social media users are more likely to complain.

Table 7-4: Binomial regression Model

Variables	Model 1	Model 2	Model 3
Urban	-0.6044 **	-0.2449	
AgeAb50	0.2004	-0.4925 *	
Employed	0.3238	0.5941 **	
Hincome	-0.2117	0.3869	
Gender	-0.4251 *	-0.4072 *	
Tert Edu		-0.0764	
Mbeya	-0.9216 **	-0.8948 ***	
Mwanza	-1.0632 ***	-1.1764 ***	
Dar	-1.2158 ***	-1.3069 ***	
Smedia	0.2992 ***		0.1173
Billing	0.4961 *		0.5247 **
Network	0.7876		0.5798
VAS	0.9902 ***		1.1478 ***
Info	0.7616 ***		0.8182 ***
cons	-1.1340 *	1.8556 ***	-2.5533 ***
Log likelihood	-216.8537	-249.87121	-230.6247
No. of observation	400	400	400
LR chi2	104.7	38.67	77.16
Prob> chi2	0	0	0
Pseudo R2	0.1945	0.0718	0.1433

Note: *** p<0.001; ** p< 0.05; *p<0.1

Third, the result reveals that consumers who have negative experiences related to billing and value added services are more likely to complain. This result conforms with Garín-Muñoz et al. (2016); it also implies that the nature of the negative experience influences consumers' complaint behavior. This means there are a number of negative experiences in the market that are not reported. Consequently, this robs the service provider and regulator of the opportunity to correct the service offers. That being said, the regulator and services providers are advised to conduct demand based research from time to time to understand the

challenges facing consumers, rather than to solely depend on consumer complaints. This is important because consumers have less incentive to report certain negative experiences.

Table 7-5: Marginal effect result for the Binomial Model

Variable	Coefficient	t-test	Marginal effect
Urban	-0.6044 **	-2.19	-0.1061
AgeAb50	0.2004	0.65	0.0371
employed	0.3238	1.23	0.0629
Hincome	-0.2117	-0.6	-0.0492
Gender	-0.4251 *	-1.78	-0.0754
Mbeya	-0.9216 **	-2.39	-0.1654
Mwanza	-1.0632 ***	-2.75	-0.1958
Dar	-1.2158 ***	-3.07	-0.2203
Smedia	0.2992 ***	2.73	0.0570
Billing	0.4961 *	1.73	0.0955
Network	0.7876	1.51	0.1444
VAS	0.9902 ***	3.96	0.2041
Info	0.7616 ***	4.04	0.1518
cons	-1.1340 *	-1.65	
Log likelihood		-216.8537	
No. of observation		400	
LR chi2		104.7	
Prob> chi2		0	
Pseudo R2		0.1945	

Note: *** p<0.001; ** p< 0.05; *p<0.1

The gender findings reveal that males are more likely to complain than females. This result is in agreement with other studies such as Manikas & Shea (1997) and Garín-Muñoz et al., (2016). However, it differs from Keng et al., (1995) and Heung & Lam (2003). In general, the findings confirm that information is crucial for the consumer to make rational decisions in the market. Thus, informed consumers are more likely to complain when their rights are violated, which gives service providers and the regulator the chance to correct market abuse. Furthermore, there are other factors that influence consumers' complaint behavior, including socioeconomic background (gender and location), the nature of negative experiences, and social media use. Lastly, and concerning socioeconomic background,

consumers living in urban areas are less likely to complain than those living in suburbs or rural areas. More specifically, consumers in urban areas are 10% less likely to complain compared to their rural or suburban counterparts. This finding agrees with the cost-benefit analysis, which suggests that prior to complaining the aggrieved consumer is likely to reflect on the cost and benefit of complaining (Bearden & Teel, 1983 and Davidow & Dacin, 1997). Thus, unless the benefit of complaining is higher than the cost of complaining, the consumer is less likely to complain. Furthermore, the cost-benefit analysis argues that due to the higher opportunity cost-time, consumers with high incomes and living in big cities are less likely to complain (Davidow & Dacin, 1997; Day, 1984; Sovern, 2014). Most urban consumers are busier than those in rural areas. This means that due to the higher cost of their time, urban consumers may fail to complain. Also, most consumers living in urban areas are more likely to own multiple SIM cards from different service providers, which make it easy for them to switch provider in case of a negative experience. Moreover, this result may reflect the quality of service or the service divide between urban and rural areas. Rural consumers may suffer more poor quality of service in their area, which may not be the case in urban areas.

7.4 Conclusion

The purpose of this study was to analyze the role of information on consumer complaint behavior in the Tanzanian telecommunication market. Day and Landon (1977) categorize consumer responses in two groups: complainer (voice and exit) and non-complainer (loyalty); the same study also categorized complainers in two groups: public (voice) and private (negative word of mouth and exit). This study analyzed consumer complaints behavior in the telecommunication market. The results show that 40% of aggrieved consumers did not voice their complaints to service providers. Furthermore, the results suggest that information is a crucial factor in consumer complaint behavior. However, information is not the only factor that affects consumer complaint behavior, other factors include socioeconomic backgrounds (gender, type of settlement, and region). Moreover, the nature of the experiences and social media use also influence consumer complaint behavior.

The result offers implication both for managers and the regulator. First, managers (mobile network operators/ service providers) are recommended to encourage consumer complaint behavior by providing clear information on complaints procedures to their customers. Informed consumers are more likely to complain when encountering negative experiences and feel confident to consume service, as they feel protected by law. Complainers are more likely to consume services when complaints are properly managed, and have a higher chance of being loyal consumers. Additionally, managers are recommended to properly utilize their social media pages, and handle consumer complaints from that channel with care, bearing in mind that their response on social media goes beyond the primary consumer (as many people may have access to their pages).

Second, the communication regulator (TCRA) mostly offers ex-post consumer protection, where consumers first have to complain. On that note, the regulator is advised to invest more in providing education to consumers. Consumer education can be a vehicle toward informed and confident consumers in the markets, and hence provide consumer protection. Informed consumers are more likely to act rationally in the market, and consequently may enhance efficiency in the markets, by reducing chances of consumer exploitation. In the same vein, the regulator is recommended to conduct studies on the antecedent of consumer information to analyze vulnerable consumers and offer education according to the consumers' needs.

Moreover, while information is an important agent to alter consumer behavior, it is also crucial for policy makers to understand other factors, which are more likely to influence consumer complaint behavior. It is recommended that policy maker and the regulator conduct demand side surveys to understand consumers' behaviors and analyze the cost-benefit analysis of consumer complaint behavior. As Sovern, (2014) explains, policy makers should consider the cost-benefit of a policy prior to its adoption, and advise them to adopt policies that confer benefits upon consumers.

Lastly, these results have added value to the body of literature by empirically proving that the level of consumer information and the use of social media influence consumers' complaint behavior. Following this contribution, and as the world is shifting towards platform economy and social media is becoming the way of life, future studies are recommended to analyze the impact of social media on consumer complaint behavior. While the result of this study may apply to other countries, it is advisable for researchers to understand their markets' structure before applying them. This is important because the telecommunication market is very dynamic and keeps on changing and advancing, which affects the market demand and structure.

CHAPTER 8 KEY FINDINGS, IMPLICATIONS, AND FUTURE RESEARCH

As previously stated, the purpose of this thesis is foremost to analyze the level of consumers' information and its determinants among telecommunication consumers, as well as to investigate the effect of information on consumer complaint behavior. This chapter will discuss and synthesize key findings of this thesis in accordance with the stipulated purposes, followed by the implication of the results for major stakeholders, particularly regulatory authorities and the management of telecommunications service providers, as well as international organizations dealing with consumers in the telecommunication sector. Finally, the limitations of this study and suggestion for future studies will be communicated.

8.1 Key findings

8.1.1 Level of Information

The first key finding of this thesis divulges that the level of information exposure varies significantly among consumers. Thus, while the average information level among consumers is moderate, a number of consumers still have a low level of information. For instance, 34.5% of consumers have a low knowledge of their rights. Moreover, 9.5% of consumers are completely unaware of any complaints procedure. This particular finding is in line with the study by Donoghue and De Klerk, (2009) and Donoghue, van Oordt and Strydom, (2015) that argues against the phenomena of 'average consumers', and elucidates that the level of information exposure varies among consumers, especially on emerging markets, due to the diverse levels of income and education. Consequently, studies suggest consumer protection institutions should conduct periodic demand side research, in order to identify vulnerable consumers and devise ways to reach them and offer the required education to create active consumers. Furthermore, the study suggests that vulnerable consumers should be considered during policy formulation, rather than considering that all consumers are equal.

8.1.2 Antecedent of Information Level

The second key finding unveils the determinants of consumers' information level. The main determinants include media use behavior, socioeconomic background, and awareness of consumer protection institutions. Foremost, the results imply that consumers who use media more frequently are more informed, compared to their counterparts who use media less often. Thus, media can be used as a conduit to create information-based consumers in our societies. In particular, consumers who often use social media are more likely to know about consumer rights and complaints procedures, and so are consumers who often read newspapers. A number of previous studies outlined the role of traditional media such as newspapers in creating informed-based societies, however due to technological advancements, social media platforms are now being used as hubs for information transfer.

Through social media, users can easily share and exchange information with their friends, companies, and government institutions. The report by NM Incite (2012) revealed that 47% of social media users utilize social media to interact directly with their suppliers or service providers. As internet penetration is expected to increase in Tanzania (see chapter two), it is high time for consumer protection institutions to utilize this media to empower consumer protection. However, this requires in-depth research to understand the features offered by social media platforms and learning from best practices. For instance, the United Kingdom communication regulator (Ofcom – Office of Communication) is using its Twitter and other social media pages to interact and pass on information to consumers; its Twitter page currently has 36,800 followers.

Moreover, the socioeconomic backgrounds play an important role in determining the level of information (specifically the level of income, age, and type of location). In detail, consumers with an income below 500,000 Tanzanian shillings (equivalent to US\$250), consumers above 50 years of age, and consumer living in rural areas are more likely to have low levels of information, and are hence more likely to be vulnerable to exploitation in the market. Older people are one of the socioeconomic groups that have been classified by multiple studies (including Barnard, 2015; Brennan and Coppack, 2008; Lee and Soberon-Ferrer, 1997; Moschis, Mosteller, and Fatt, 2011; Waddell, 1975) as having less exposure to information.

They are also more susceptible to unfair business practices(Cole and Gaeth, 1990; Cole and Houston, 1987; Nikou, 2015). Therefore, these consumers require special protection for them to confidently use telecommunication services.

Furthermore, results suggest that low-income and rural consumers are more likely to have low levels of information. Most rural consumers are poor or even live in extreme poverty, and have limited resources and choices in the market. Considering that almost 70% of the population in Tanzania lives in rural areas, it is high time to find a way to reach out to this group of consumers. The future and growth of the telecommunication sector lies in their hands. As most urban areas are connected with 3G or 4G networks, the challenge is to connect rural consumers and to empower them. Unless these consumers are connected and empowered to be active and confident users of telecommunication services, the growth of the sector is likely to become stagnant in the long run.

In addition, another determinant of the level of information is consumers' access or awareness of consumer protection institutions such as the regulator. The regulator in Tanzania has many responsibilities in the communication market. The regulator deals with telecommunication, broadcasting, and postal and courier services for the demand and supplier side. Therefore, consumers are more likely to come across the regulator from different angles. That is why it was very important to analyze the level of information of telecommunication consumers who are aware of the regulator. Consequently, since the result revealed that consumers who are aware of the regulator are more informed, this means the regulator empowers consumers with the right information. However, consumer awareness of the regulator is still low (below 50%). Therefore, more than half of consumers are not aware of the regulator and are more likely to be less informed consumers.

8.1.3 Effect of Information on Consumer Complaint Behavior

This thesis revealed that information affects consumers' complaint behavior. Well-informed consumers are more likely to make sound decisions. Thus, informed consumers are likely to complain about their

dissatisfaction in accordance with the stipulated complaints procedure. This result agrees with Donoghue, van Oordt and Strydom, (2015), who empirically concluded that informed consumers are more likely to take action when having unpleasant experiences, and hence state that *'Consumers who know where and how to complain about dissatisfactory products will probably also be more confident to do so'*. Furthermore, this thesis infers that while information is the crucial factor affecting consumer complaint behavior, sometimes even informed consumers fail to complain when faced with unpleasant experiences. This is due to a number of factors, including the socioeconomic background, social media use, and nature of unpleasant experiences.

In detail, and based on socioeconomic background, males are more likely to complain than females. This result is in agreement with other studies such as Manikas & Shea (1997). Conversely, it differs to the findings of Keng, Richmond and Han, (1995) and Heung & Lam (2003). This is one of the interesting findings in this study. There was no statistically significant difference in the level of information between males and females, but surprisingly, females are less likely to complain. This can be due to the culture and tradition in the Tanzanian society. The culture portrays the man as protector and leader, while women are more on the receiving side (expecting to be defended). Therefore, women are rarely ready to stand up for their rights, which may even affect their complaint behavior. However, currently there are a number of projects in the country that seek to empower women to take action in their communities and stand up for their rights. One example of an organization that works to empower women in Tanzania is USAID - the lead U.S. Government agency.¹³

Furthermore, consumers living in urban areas are less likely to complain to their service providers about negative experiences. The finding is in accordance with the cost – benefit analysis, which suggests that prior to complaining, the aggrieved consumer is likely to reflect on the cost and benefit of complaining. Thus, unless the benefit of complaining is higher than the cost, the consumer is less likely to complain. Moreover, the cost-benefit analysis implies that due to the higher value of their time, consumer with a

¹³ <https://www.usaid.gov/tanzania/our-work/gender-equality-and-women%E2%80%99s-empowerment>

high income and those living in big cities are less likely to complain when the return of the complaint is low (Davidow & Dacin, 1997; Day, 1984; Sovern, 2014). This connotes that although most urban consumers are informed, they may fail to complain due to their time being too valuable. In addition, most consumers living in urban areas are more likely to own multiple SIM cards from different service providers, which makes it easy for them to switch in case of an unpleasant experience.

Findings also revealed that consumers who use social media often are more likely to complain. Service providers in different countries, including Tanzania, use social media to advertise their brands, hence increasing their brand equity, positive branding, and purchase intentions (Schivinski & Dabrowski, 2014). However, consumers also use service providers' pages to launch complaints, therefore social media users have an extra avenue to complain compared to non-users. In addition, many brands offer timely responses on social media, which encourages consumers' complaint behavior (incite 2012; Xia, 2013).

The result reveals that consumers who had unpleasant experiences in billing and value added services are more likely to complain. This result conforms with Garín-Muñoz, et al., (2016), who also suggest that consumers who have negative experiences related to billing are more likely to complain to their service providers. This result suggests that consumers may not complain to their service provider when encountering certain problems, hence service providers and regulators may not be aware of some issues that consumers may face. Another way to look at this is that consumers are likely to report problems of billing and VAS because they believe that the service provider can act on them. For instance, if a consumer is liable for a refund and has evidence of that, it is more likely that the service provider can act on it. However, if consumers face network related problems such as a call drop or bad communication, they are less likely to complain because there is nothing much their complaint will change, as it usually takes service providers some time to improve the quality of service.

To summarize, the key findings show that information is the crucial factor that affects consumer behavior. Thus, consumers are likely to act rationally when they are empowered with the right information, which

will aid them to make the right decision. In addition, the result reveals that the level of consumer information varies significantly among consumers and is skewed toward low knowledge. Hence, the findings suggest that the antecedents of the consumers' level of information are socioeconomic backgrounds, media use, and awareness of consumer protection institutions. Therefore, in order to create active consumers in the telecommunication sectors, it is crucial to find ways to empower less informed consumers, in order to create informed consumers who are less likely to be exploited in the market. In the next section, policy and managerial recommendations for consumer protection empowerment will be discussed in detail.

8.2 Policy Implications and Managerial Recommendations

The most common rationale of a scientific work is to produce results that will enrich human understanding and improve our wellbeing. Drawing from the consolidated results of this thesis, there are policy implications that will be directed to the regulatory authority (TCRA) and international organizations dealing with consumer protection in the telecommunication markets. Furthermore, managerial recommendations will be proposed to service providers.

8.2.1 Policy recommendations

8.2.1.1 The regulator

The thesis suggests that consumer empowerment and education are crucial in the telecommunication markets, to protect consumers and encourage their effective participation. This is particularly important for the identified vulnerable consumer groups. Since these groups are the most susceptible to exploitation in the marketplace, proper design and implementation of consumer protection policies should focus on them. The importance of policy intervention to aid these groups cannot be overemphasized, as this is where policies and other interventions can make a real difference to consumers' wellbeing. Policies should offer easy access to information and justice for all consumers, including vulnerable ones, for instance by simplifying access to the complaints desk by extending the regulator's services or

representatives closer to these groups, and engaging them in issues concerning consumer protection in the telecommunications market. This can be done by fine-tuning, among other policies, such as the universal service policy that targets increasing access of telecommunication infrastructure to the disadvantaged groups in society. As the government extends the telecommunication infrastructure to these consumer groups, it should also consider equipping these groups with consumer protection education and skills.

Furthermore, unpleasant experiences alone are less likely to cause the consumers to complain, but rather the consumers' level of information, socioeconomic background, social media use and the nature of the experience. For instance, 40% of aggrieved consumers in the markets do not complain, thus the regulator may not be aware of certain issues. Therefore, the regulator is recommended to conduct periodic demand side surveys to gain insights into the challenges that consumers face. Consequently, the regulator can use the findings from the survey to form evidence-based policies that can be applied to empower consumers to act rationally. The demand side survey will also offer another avenue for the regulator to interact with consumers and make consumers' voices heard (leaving no one behind) rather than relying only on complaints received.

Moreover, as the penetration of the internet and social media in Tanzania is predicted to increase, this thesis proposes the regulator takes advantage of such media. The regulator may use its social media pages to interact with telecommunication consumers. Also, the regulator can use its social media pages to acquire insights, offer consumer education, and facilitate knowledge transfer among consumers. In addition, the regulator is advised to verify the official pages on social media to assure consumers that the page is authentic. For instance, Facebook offers a gray verification badge for organizations. This is important, because currently (at the time this thesis is written) there is more than one page that claims to be the official Facebook page for the regulator (TCRA), which may be confusing for consumers.

8.2.1.2 *International Organizations*

International organizations, as covered in chapter three, have played a great role in championing consumer protection among their member countries. The International Telecommunication Union (ITU) and UNCTAD have developed a manual for consumer protection, and have regular discussions with consumer protection specialists. A manual for consumer protection is the first crucial stage for consumer protection. However, for a number of reasons some member nations may require additional assistance to be able to implement the requirements from the consumer protection manual. These reasons can include a lack of financial and human resources, especially for developing countries such as Tanzania. For instance, Tanzania (as a member of ITU and UNCTAD) is still working toward identifying vulnerable consumers for empowerment; at the same time the United Kingdom (as member of ITU and UNCTAD) currently has a program in place to empower vulnerable consumers, consumers have the chance to compare operators' services, and has created multiple avenues for dispute resolution. That being said, international organizations are recommended to offer more assistance, be it financial and/or human resources, to developing countries to empower consumer protection.

8.2.2 *Managerial Implication*

The recommendations of this thesis can be extended to service providers - Managers of Mobile Network Operators (MNO). The fact that 40% of aggrieved consumers are less likely to complain is not a good sign for managers of telecommunication companies. Non-complainers are robbing the managers of the chance to receive feedback from their consumers. Moreover, non-complainers are stealing the opportunity for managers to improve the services. Therefore, this thesis recommends managers to encourage feedback from consumers. Although complaints can be negatively viewed by some managers, if handled properly they offer the service provider a second chance to impress their customers. Consequently, managers are recommended to offer basic information concerning consumer rights and complaints procedures, to ensure that their consumers are making informed choices. In addition, social media pages are used by

consumers as another avenue of launching their complaints. This thesis recommends service providers who have not yet approved their social media pages to do so, this way consumers can comfortably engage with them and launch their complaints whenever necessary. Furthermore, on top of using social media for advertising purposes, service providers are advised to use these media to provide consumer education and encourage interaction with and between their customers.

8.3 Limitation and Direction for Future Studies

This thesis has successfully identified vulnerable consumers (consumers who are more susceptible to exploitation) in the telecommunication market, and further recommended provisional education as the one means for empowering them to act rationally. However, this study did not cover a specific educational approach that may be used by policy makers to offer education to an explicit group. For instance, policy makers may devise different provisional educational approaches when targeting young and elderly rural consumers. For example, ICASA provides education to consumers through provincial awareness campaigns, which help them to educate the majority of rural consumers.¹⁴ Another approach is to incorporate consumer education into formal education systems targeting younger consumers (Hellman-Tuitert, 1999) and informal education to target adults (OECD, 2009).

That being said, to propose a specific educational approach for adoption by policy makers requires a long-time impact assessment, which is beyond the scope of this thesis. Therefore, as consumer education is ongoing and technology is advancing, future studies are recommended to analyze better educational approaches that may be adopted to reach all consumers, including vulnerable ones.

Another limitation of this study was inability to establish the sampling frame, that is, even though the total number of subscribers was known, it was not possible to locate the nth user in the population. Thus it was difficult to use the normal sampling techniques. For that reason, this thesis used multiple

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https://www.linkedin.com/search/results/content/?keywords=%23Get2KnowICASA&origin=HASH_TAG_FROM_FEED

inverse sampling to ensure the survey covered consumers from different socioeconomic groups to analyze the effect of information on consumer behavior. While the results are useful, they may not be nationally representative. Further improvement on this area remains to be the work of future studies.

CHAPTER 9 : CONCLUSION

The telecommunications sector has grown tremendously since the turn of the century (ITU, 2015). This growth has been attributed to massive policy reforms such as the liberalization of markets and the subsequent technological developments. The policy rationales for liberalization include the improvement of consumer choices, sovereignty and bargaining power, which should in turn lead to higher perceived consumer satisfaction (Hulsink, 2012; Togan, 2010). However, even with the presence of liberalized markets, consumer satisfaction in the telecommunications sector is still low, both in developing and developed countries (Lopez, Amaral, Garín-Muñoz, & Gijón, 2015). Furthermore, it is now evident that competitive markets alone do not necessarily translate to better services, as research shows that even in competitive markets, there can be low quality service providers (Lopez, Amaral, Garín-Muñoz, & Gijón, 2015). This is because as competition becomes stiff and profit margins are eroded, service providers have little incentive to increase their investments in providing better quality services, if such decisions do not lead to comparable financial gains. Consequently, consumers are more likely to be exploited in the telecommunication markets, which has raised the need for consumer protection to ensure consumers get value for money and have bargaining power.

The Tanzanian market is not different from the rest of the world where consumers are prone to multiple challenges, from billing problems to poor network quality. For example, parliamentary sessions on consumer complaints have revealed that some mobile service providers charge their users automatically, without their consent. Similarly, there have been accusations of collusion among the service providers, as in February 2015 all major operators decided to increase their data prices within the same week, a practice that is against competitive markets. Although the Tanzanian regulatory authority has regulations to uphold consumer protection, in most cases regulations are offered ex-post, thus evoked after the consumer has filed his complaints to the responsible entities in accordance with the procedure instituted by the Tanzanian regulator. Thus, consumer protection is pegged against the ability of consumers to discern

when their rights have been abused, aware of the complaints procedures and entities that can enable them to pursue redress, and lastly actually file the complaints in accordance with the complaints procedure.

The thesis is guided by the Information Motivation Behavior (IMB) theory by Fisher and Fisher (1992) to understand the consumer behavior of telecommunication users in Tanzania. The IMB theory suggests that information is an important agent, with the ability to alter consumer behavior. Thus, consumers having the correct information are more likely to behave in a positive way and according to social norms. Since consumer protection is offered ex-post, it is crucial that consumers have proper information, to be able to discern negative experiences. In other words, information may offer consumers the ability to discern challenges in the markets, and hence provides operators and/or the regulator with the opportunity to correct market abuse. The underlining belief is that properly handled consumer complaints have benefits for the industry, as they offer a feedback mechanism to service providers and regulators alike, and thus can be used to improve the service design, management and delivery (Tronvell, 2008). Accordingly, this thesis has three specific objectives; first to analyze the level of information among telecommunication consumers; second to determine the antecedent of the level of information among consumers; and third to investigate the effect of information on consumer complaint behavior. To achieve this objective, the thesis aim to respond three research questions:

- What is the level of consumers' knowledge about their rights and its determinants in the telecommunication markets?
- What is the level of consumers' awareness of the complaints procedure and its determinants in the telecommunication markets?
- What is the effect of information on consumer complaint behavior?

Thesis uses three empirical analyses in response to the research problems. The first empirical analysis tackled the first research question. The study found that the level of consumer knowledge varies significantly among consumers and is skewed toward low knowledge. Furthermore, the study showed that

the respondents' knowledge levels are determined by socioeconomic background, media use (social media), and institutional awareness (the regulator-TCRA).

The second empirical analysis addressed the second research question. The study revealed that the level of consumer awareness on complaints procedure is low. Furthermore, the study demonstrated that awareness of the complaints procedure is determined by socioeconomic background, whereby urban consumers are more likely to be aware. Moreover, the use of newspapers and social media increases individuals' propensity toward awareness of complaints procedures in the telecommunications market.

The last research question was answered by the third empirical study. The study suggested that 40% of aggrieved consumers are not likely to complain. Furthermore, the study elucidated that the level of information influences consumers' complaint behavior. Thus, better informed consumers are more likely to complain. In addition, the study suggested that while information is the basic agent to consumer behavior, there are other factors that influence consumer complaint behavior in the telecommunication markets. Those factors include socioeconomic background, social media use, and the nature of the unpleasant experience.

Based on the results of each case study, this thesis has offered an academic contribution and implications for policy makers as well as service providers' management with respect to consumer protection in developing countries, particularly in Tanzania.

Academic contribution

- The thesis has contributed to literature by introducing new determinants of consumer complaint behavior in the telecommunication markets. Previous studies suggested that socioeconomic factors, the level of dissatisfaction and the nature of the unpleasant experience influence consumer complaint behavior. This thesis does not nullify previous studies that analyzed the determinants of consumer complaint behavior (CCB) in the telecommunication

market, but rather extended **the level of information** as another factor that is likely to affect CCB.

In addition, the thesis suggests that social media use also influence consumers' behavior.

Implications for policy makers

- Education
 - As informed consumers - consumers who know their rights and are aware of complaints procedure are likely to complain when having unpleasant experiences, and thus eliminate a risk of consumer exploitation, informed consumers are vehicles toward a healthier telecommunication sector. Therefore, policy makers are recommended to offer consumer education programs targeting consumers in all socioeconomic groups, including vulnerable ones.
- Demand side based survey
 - As 40% of aggrieved consumers are not likely to complain, the policy makers are advised to conduct a demand side survey. This survey will aid policy makers and enable them to device better policies for consumer protection, by providing insights into challenges facing consumers in the telecommunication markets.
- Social media
 - The regulator is recommended to take social media more seriously, as one means of interacting with the consumers. Social media can be used by the regulator to provide information to consumers, and also as a means for obtaining feedback from consumer experiences in the market, which may be useful insights for consumer protection policy.

Implications for service providers' management

- Offer information

- While the regulator has the main responsibility of offering information to consumers, service providers also have a role to play. For instance, the consumers must be well informed by their service providers concerning complaints procedures to follow when having unpleasant experiences. Therefore, and due to the limited awareness of complaints procedures among consumers, service providers are recommended to offer information to consumers, including vulnerable ones.
- Improve quality of service
 - All respondents have reported to have had at least one unpleasant experience related to telecommunications; this can be minimized, even though service failure is inevitable. Therefore, service providers are advised to minimize service failures and eliminate them where technically possible.

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