



Master's degree thesis

LOG950 Logistics

**Title: The Drivers of Supplier Satisfaction in
Telecommunication Industry: An Empirical Study of
Mobile Money Service Agents in Tanzania**

**Authors: Theobaldina Francis Michael and Neema Daniel
Kaaya**

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List of Abbreviations

ATM	Automated Teller Machine
BOL	Benson Informatics Limited
BOT	Bank of Tanzania
EFA	Exploratory Factor Analysis
ESI	Equity Sensitivity Instrument
FSDT	Financial Sector Deepening Trust
GDP	Gross Domestic Product
GSMA	Global System Mobile Association
ICT	Information and Communication Technology
ID	Identification
KMO	Kaiser-Meyer-Olkin
ML	Maximum Likelihood
MNO	Mobile Network Operator
M-PESA	Mobile PESA
NBS	National Board of Statistics
OLS	Ordinary Least Square
PIN	Personal Identification Number
RCT	Relational Contracting Theory
TCRA	Tanzania Communication Regulatory Authority
TSH	Tanzania Shillings
TTCL	Tanzania Telecommunication Company Limited

Abstract

Purpose: To investigate the effect of distributive fairness of rewards, attractiveness of competitors, information exchange, commission and relationship duration on supplier satisfaction in the telecommunication company-mobile money service agent dyadic business relationship.

Design/methodology/approach: Convenience sampling method was used to make the sampling frame of mobile money service agents from different parts of Dar es Salaam city. The respondents answered all the questions concerning one telecommunication company (their most important buyer between the two companies i.e. Tigo Tanzania and Vodacom Tanzania). 100 questionnaires were collected, comprising of the respondents from the two companies. Multiple regression analysis was used to test the hypotheses.

Findings: Distributive fairness of reward has a positive effect on supplier satisfaction. Moreover, its effect on supplier satisfaction is more enforced with the presence commission and the relationship is of monotonic nature over the range of commission levels. Presence of economically attractive competitors in the market deteriorates supplier satisfaction. Nevertheless, the presence of information exchange in a relationship posits supplier satisfaction. The longer the relationship duration the higher the supplier satisfaction.

Research limitations/implications: Relatively small sample size was used; this may lead to a wrong representation of the population. The study uses on a cross-sectional design; this may miss out some elements that are caused by relationship dynamics. Future study can be done by using longitudinal design and over a wider geographical area.

Theoretical implications: distributive justice and information exchange in a buyer-supplier relationship tend to induce supplier satisfaction. When a supplier perceives that input/output ratio from the current relationship is lower than that of the comparison other in the market, they feel distressed and will eventually shift to the alternative buyer given a condition of lower switching cost.

Managerial implication: This study has clearly delineated antecedents to supplier satisfaction that the buyers can use to improve their business relationship. When suppliers are satisfied, the performance also improves in the supply chain. Therefore, it is important for business managers to improve those factors that improves supplier satisfaction and eliminate those that reduces.

Key words: Supplier satisfaction; Distributive fairness of rewards; Attractiveness of competitors; Information exchange; Relationship duration; Commission; Mobile money service agents; Telecommunication companies; Telecommunication industry; Tanzania; Relational Contracting theory; Equity theory.

CHAPTER 1

INTRODUCTION

1.1 Background Information about buyer-supplier relationship

Scholars in the marketing literature have carried studies on various factors and constructs that are critical for business continuity and successful channel relationships. Various studies address a wide variety of constructs that applies in business relationships and determines the quality of such relationships. Scholars of channel relationships in marketing literature emphasizes the importance of dynamic business relationships and further postulates that, the nature of interactions and levels of outcomes is highly contingent on the stage of the relationship (Dwyer et al., 1987; Jap and Ganesan, 2000; Frazier et al., 1988). The constructs include; trust (Dwyer et al., 1987; Zaheer et al.,1998), satisfaction (Essig and Amann, 2009; Ramsay and Wagner, 2009), information sharing (Whipple, Frankel and Daugherty, 2002), commitment (Ghijssen et al., 2010), cooperation, communication and all collaborative efforts (Nyaga et al.,2010), adaptations, (Palmatier, Dant and Grewal, 2007) as well as corrosive factors of a relationship i.e. destructive conflicts (Gaski, 1984); and Opportunism (Wathne and Heide, 2000).

Relationship satisfaction is explained in the literature as an important factor in the creation and maintenance of channel relationship between exchanging partners. It has further been counted as the central concept in the literature on interdependence in business market relationships (Thibaut and Kelley, 1959). Dwyer et al., (1987) argues that development of buyer- supplier relationships is highly contingent on satisfaction while the dissolution of the relationships is contingent on the dissatisfaction in the business relationships (Dwyer et al., 1987).

Supplier satisfaction as one of the factors for a successful business relationship in the upstream supply chain, which has been less researched on in the previous decades in the purchasing field (Morgan and Hunt, 1994; Perkins, 1993; Kemp and Omta, 2001; Beekman and Robinson, 2004; Varey et al., 2005; Wong, 2000). The papers discussing supplier satisfaction in the academic literature, is very limited and insignificant. Essig and Amman (2009) postulates that satisfaction in the supply chain management research as elementary

and immature, one reason to this condition is the neglect of the impact of supplier satisfaction for a successful business relationship, (Leenders et al., 2005) as well as more exploration into customer relationships as being relevant to business relationships (Anderson and Narus, 1990; Dwyer et al, 1987; Siguaw et al.,1998).

Wong, (2000) in his research study postulated that, if businesses are to be successful then the business partners have to consider the inclusion of supplier satisfaction in their business relationships. If partnering efforts does not direct towards the supplier satisfaction as one of the factors upon which business success are contingent on, then the suppliers tend to be less committed into putting their full efforts towards a successful business relationship. Essig and Amman (2009) postulates that the quality of buyer-supplier relationship is highly contingent on supplier satisfaction.

Authors in purchasing and supply chain management postulates that, supplier satisfaction is primarily determined by supply chain strategies that are primarily relationship-based (Wong, 2000; Forker and Stannack, 2000). Buyers put more importance on outcomes and performance levels, whereas suppliers are more interested in relationship norms and relationship atmosphere (Benton and Maloni, 2005; Nyaga et al., 2010). This mismatch in the supply chain strategy between buyers and suppliers in their dyadic relationship creates an unsatisfactory relationship to either party and hence influence the relationship performance and a quality business relationship.

This research aims at explaining the supplier satisfaction in buyer-supplier relationship through addressing various constructs that are important for a business performance and a relationship quality. This study is based on empirical and conceptual consideration by examining the relationship between telecommunication companies in Tanzania and their mobile money agents as well as the determinants of agents' satisfaction in the context of Relationship contracting Theory and Equity Theory respectively, which determine the key findings in this study.

1.2 Supplier satisfaction in buyer-supplier relationship

Business relationships are termed as interactions efforts that involves a series of coping with and confrontations with activities and attitudes between buyers and suppliers (Håkansson and Sharma, 1996; Ford et al., 2003). However, many buyer-supplier relationships are

mostly asymmetrical provided that, smaller suppliers have to deal with more powerful and larger buyers who have to buy their services (Kumar et al., 1995) which then create different perceptions of fairness and unfairness among both organizations and how they both react to them (Brown et al., 2006).

Fairness perception, which is embedded in Relational contracting theory has emerged and gained attention in the relationship marketing as a critical factor for relationship and services quality (Yilmaz et al., 2004; Brown et al., 2006) and is highly related to the literature on complaint management, Equity Theory (Yi and Gong, 2008; Patterson et al., 2006; Smith et al., 1999).

Previous research focused more on the perception of fairness in the business marketing approached from buyers' side (Griffith et al., 2006). In the light of this gap, this research will address perceived fairness based on suppliers' perspective taking into account that business relationships are characterized by the series of interactions of activities and attitudes which are highly interdependent, suppliers' entity are equally important in the total outcome of a given relationship.

Attractiveness of alternative relationship is embedded on the Equity theory whose main assumption is on social comparison with other firms internal and external to the organization. Attractiveness of alternative relationship and satisfaction on the other hand has been a focal construct in the existing literature on marketing channel relationships (Thibaut and Kelley, 1959; Johnson, 1982; Rusbult et al., 1988), the two constructs are highly inter-correlated and both contribute to commitment and relationship continuity (Ping, 1993; Rusbult et al., 1988). Scholars argue for satisfaction to be contingent on comparison to alternatives as well as costs, rewards and perceptions of fairness (Thibaut and Kelley, 1959; Johnson 1982).

Information exchange as mentioned by (Ivens, 2002) is one of the operationalized norms of Relational Contracting theory that is a critical factor that stimulates interactions between business parties and largely influence channel outcomes in a buyer-supplier relationship i.e. commitment and satisfaction by organizing capabilities and efforts towards the attainment of common goals and hence results to a committed and a satisfactory buyer-supplier relationship (Mohr and Nevin, 1990; House and Stank, 2001).

This study presents both theoretical rationale on Relational contracting theory and Equity theory as well as empirical rationale from Telecommunication Company especially on mobile money services. Mobile money service is an important facility that uses mobile phones to transfer money and make payments including bulk disbursement, bill payments and merchant payments to the underserved (unbanked and under-banked people). This service must offer an interface for transaction between the agents and customers on their mobile devices for customers with mobile phones but have a limited or no access to banks to enable them to send or receive money through a network of agents in the developing countries, Tanzania in this context. Mobile money services reduce transaction cost substantially when compared to other formal and semi-formal mechanisms of receiving and sending money (Kikulwe et al., 2014).

1.3 Research Problem

Supplier satisfaction is an important prerequisite to access full supplier potentials and resources, however the concept did not receive much exploration before 1970's but then the literature search indicates that there has been about 71 studies on channel relationship which, incorporated satisfaction in their models in a period between 1970 and 1996. Scholars such as (Anderson and Narus, 1990; and Frazier, 1983) justified this with a fact that current research studies incorporate and consider satisfaction as a major outcome or consequence of a relationship between channel members. (Geyskens et al., 1999) defines satisfaction as “a channel member's positive affective response to the economic rewards that flow from the relationship with its partner, such as sales volume and margins”. The dissatisfied suppliers may be reluctant to give their optimum best or provide preferential treatment to the buyers. While in the past channel member satisfaction, was not given much attention but scholars later emphasized the incorporation of this aspect in marketing channels and business relationship at large. Wong, (2000) further suggested that in a partnership the supplier satisfaction should be given enough consideration. He further mentioned that relationship goals in the buyer-supplier relationship cannot be reached if the suppliers expectations and needs can not be met in the process therefore ensuring their full commitment.

In another survey done by two researchers, (Forker and Stannack, 2000), the study found out that, suppliers in collaborative relationship were more satisfied than the suppliers in the

competitive relationships, however they both have the same feeling when it comes to the compensation, they both want the equal value to the level of efforts they provide. Whipple et al., (2002), in their empirical work assessed the usefulness of information exchange in a dyadic relationship. They found out that buyers are more interested in the accuracy of the information they receive from suppliers while suppliers are more concerned with the degree of timeliness of information they receive from the buyers.

Dimensions of supplier satisfaction were further grouped into business related dimensions and communications related dimensions. While the former include value-based facts like agreements, profitability, business continuity plans early supplier involvement as well as forecasts. The later dimension includes some human values and softer constructs like responsibilities and role playing, trust and transparency, timely feedback as well as buying companies values/reputation, (Maunu, 2003).

(Forker and Stannack, 2000) research findings and other authors (Benton & Maloni, 2005) in their research work came up with the observation that supplier satisfaction is basically influenced by relationship based strategies in which they are more concerned with the relationship atmosphere and relationship norms than are buyers who are more concerned with performance based outcomes. The potential mismatch in the concerns by suppliers and buyers result into dissatisfaction in their relationships.

Currently in Tanzania, there are 4 major telecommunication companies that offer mobile money transfer services to their customers (Vodacom, Tigo, Airtel and Zantel). The agents that are mostly used for the provision of mobile money transfer service are usually the less educated or uneducated population because provision of this service does not require much knowledge and expertise. Therefore, due to this situation the suppliers (who are the agents) are many compared to the buyers of this service, giving the buyers more power over their suppliers. In our research study, we want to assess the determinants of suppliers' satisfaction in the relationship they have with the buyers of their service. These telecommunication companies 'posses higher powers over the agents and therefore agents are forced to abide to whatever decisions made by the telecommunication companies. This is because these buyers have largely established themselves with a large market share while at the same time there are a lot of unemployed people who are willing to work with them as their suppliers therefore the suppliers become highly dependent on the buyers for financial benefits than are the

buyers' dependent on them (suppliers). Based on the problems mentioned above, this research seeks to answer the following questions:

1. What factors influence suppliers' satisfaction?
2. How does distributive fairness of reward affect suppliers' satisfaction?
3. Does the attractiveness of competitive firms (buyers) have an impact on suppliers' satisfaction?
4. How does Information exchange affect supplier's satisfaction?

1.4 Objective of the study

This study aims at studying the suppliers' satisfaction in the dyadic relationship with the buyers. Suppliers in this context are mobile money transfer services agents who works for two Telecommunication companies in Tanzania, namely Tigo (Tanzania) and Vodacom (Tanzania). Specifically, the study will assess the following variables that form the specific objectives of this study;

- a) Antecedents to suppliers' satisfaction; distributive fairness of rewards and attractiveness to competitive firms and information exchange.
- b) Control variable on satisfaction such as relationship duration that moderates the buyer-supplier relationship between telecommunication companies and their mobile money service agents.

1.5 Significance of the study

The Telecommunication industry in Tanzania by year 2010 earned the revenue that was double the amount that the mining industry contributed to the nation's economy i.e. \$2.684billion (TSh3.6trillion) per year, this makes telecommunications be the country is leading profitable industry. The research conducted by the University of Dar es Salaam, indicates that there is 10% increase in penetration rate of telecommunication services in Tanzania that has pushed the country's gross domestic product (GDP) up by 1.2%. Furthermore, Economists in Tanzania say spending on telecommunications may help nurture the growth of the country's economy even though the growth depends on a number of factors such as ownership of the telecommunication firms, investment guidelines and the level of transparency in operations of the companies (Ishengoma, 2011). Mobile money

transfer services provide a great positive impact to the economic development in Tanzania. It enhances economic activities, it also provides secure and easily accessible platform for transferring money and as a storage medium, it is convenient, offers lower costs of remittance compared to bank charges, it removes the need for physical presence and ensures timely and secure method of transaction (Hawaiju, 2013).

Moreover, the M-money services include a very large population of poor people and rich people as well, everyone who can afford buying a phone is already a part of this service, therefore it caters for the needs of all levels of people in the country.

1.6 Scope of the study

This study aims at analysing buyer-supplier relationship in telecommunication industry. Telecommunication industry in Tanzania is a very competitive industry with a variety of services such as fixed and mobile phones, internet as well as radio and television services. Mobile phone services are provided by eight registered mobile phones companies, but for the purpose of this study, we are going to assess two major companies that has many subscribers compared to all other companies, therefore they form a larger part of the market share (i.e. Vodacom and Tigo Tanzania).

These mobile phone companies provide a variety of services to their customers such as call services, text messages, emails, MMS, internet business applications, money transfers, games and photography. This study is more interested in money transfer services. It is therefore is going to assess the buyer-supplier relationship in mobile money services, as one of the facilities that is growing very fast in the country, thus M-Pesa and Tigo-Pesa in this context. Presence of mobile money service agents across the country provides a research setting for the availability of respondents therefore a good empirical setting for theory testing. The study focuses on the relationship that mobile money service agents (suppliers) have with the two buyers (Tigo and Vodacom). The unit of analysis is the relationship between buyers and suppliers that studied from suppliers' perspective in the light of distributive fairness, attractiveness of competing firms and information exchange that altogether determines suppliers' satisfaction in this context.

This study covers the mobile money agents that are located in Dar es salaam region, within its three districts of Kinondoni, Ilala and Temeke. The data collection involved the agents in highly populated areas and low populated areas of the region of Dar es salaam.

1.7 Organization of the study

This research consists of nine chapters. Chapter 1 describes the background of study, research problem under study, significance of this study and the scope of the study. Chapter 2 describes the background of Telecommunication industry especially on mobile money services, its operations in Tanzania, service characteristics and service trends. Chapter 3 describes literature review related to our area of study, by using the extant literature and the related theories; Relational Contracting Theory and Equity Theory.

Chapter 4 present the conceptual model of this study and the main hypotheses tested in the study, while chapter five describes research design and methodology of this study. Chapter 6 presents definition and operationalization of variables. Chapter 7 presents measurement assessment and data validation while chapter eight presents the regression model and the results of hypotheses tested in this study. Research results, theoretical and managerial implications, limitations and suggestions for further research studies are presented in chapter 9 that is the final chapter of this study.

1.8 Chapter Summary

This chapter has presented the background of this study based on buyer-supplier relationship followed by the research problems, objectives of the study, scope of the study and organization of the study. The next chapter presents an overview of telecommunication industry in Tanzania.

CHAPTER 2

OVERVIEW OF TELECOMMUNICATION INDUSTRY IN TANZANIA

2.1 Introduction

This chapter provides the overview of the telecommunication industry in Tanzania concerning the evolvement of surging telecom market in the country. It includes the history of the industry, establishment of Telecom companies in general and specifically the introduction of mobile money services by Tigo and Vodacom companies.

2.2 Overview of Telecommunication industry in Tanzania

Telecommunication industry in Tanzania is a competitive industry with two fixed lines operators (TTCL and Zantel) and four dominant mobile lines operators (Vodacom, Airtel, Tigo and Zantel). Tanzania Telecommunication Company Limited (TTCL) was formed in 1993, by the Tanzania Telecommunication Incorporation Act of 1993, that was formed as a fully state owned operating company. It had a monopoly position in fixed-lines services in the Tanzanian mainland and duopoly position in the Zanzibar Islands until 2005 when Zantel (formerly was operating only in Zanzibar) was also allowed to operate fixed-lines services in Tanzanian mainland. Mobitel Tanzania pioneered mobile services in the country since late 1999 that stirred up the competition in the mobile sector from year 2000.

Since then (2005), the industry was liberalized allowing the entrance of other mobile operators in the country and inclusion of more players into the industry to increase competition, this allowed for new mobile operators, these are; Benson Informatics Limited (BOL) in May 2006, Vodacom Tanzania in August 2000 and Zain which is now Airtel Tanzania in November 2008.

The regulatory framework for Tanzanian Telecommunication industry in the country, TCRA (Tanzanian Communication Regulatory Authority), was formed by the Tanzania Communications Regulatory Authority Act 2003, as a regulating authority for telecommunications, broadcasting and postal services.

Development of this industry since then has been surging in the recent years due to a very rapid increase in the number of fixed and mobile lines subscribers across the country. According to the annual report by Tanzania Communications Regulatory Authority (TCRA) as at June 2011, the country had about 22,251,964 subscribers which is almost about 50% of the country total population of about 44.9 million (National Bureau of statistics, 2013).

Table 2.1: Fixed and mobile phones subscribers in 2011

YEAR	MOBILE CELLULAR (VODACOM, CELTEL(AIRTEL), ZANTEL, MIC(T)(TIGO)	FIXED LINES (ZANTEL, TTCL)	TOTAL
2004/2005	2,963,737	154,420	3,118,157
2005/2006	5,076,310	52,720	5,229,030
2006/2007	6,720,072	169,135	6,889,207
2007/2008	10,268,673	159,370	10,428,043
2008/2009	14,723,175	179,849	14,903,024
2009/2010	19,424,264	168,531	19,592,795
2010/2011	22,076,715	175,249	22,251,964

Source: (TCRA Annual report, June 2011)

2.3 Mobile money services in Tanzania

Mobile money services as a facility that uses mobile phones to transfer money and make payments including bulk disbursement, bill payments and merchant payments to underserved (unbanked and under-banked people). This service offers an interface for transaction between the agents and customers on their mobile devices. It is a useful facility for customers with mobile phones but have a limited or no access to banks to enable them to send or receive money and in some other markets, customers can receive the sort term credit facilities (loans) through the same facility (GSMA Report, 2013).

According to GSMA 2015 report, mobile money was reported to be available in 93 countries around the globe in Europe & Central Asia region, Middle East & North Africa region, East Asia & Pacific region, Latin America & the Caribbean region, South Asia region as well as Sub-Saharan Africa.

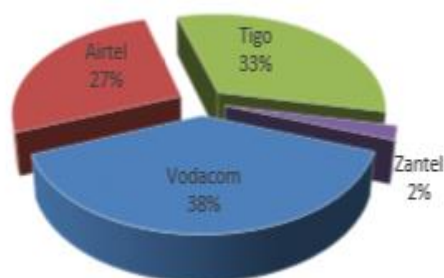
In Tanzania, it is estimated that, 30% of adult population in the country use at least one of the mobile money services provider (USAID, 2013). The two most successful mobile money deployments in the country, i.e. Vodacom and Tigo have over one million active users-who have carried at least one transaction in the last 30 days. The success is attributed to among many factors the wide penetration of mobile phones in the market with around 50% of total population (TCRA, 2011) as well as a wide mobile network coverage, young population, enabling regulatory environment as well as a relatively high literacy rate.

Tanzania like many other developing countries are characterised as not having a wide range of well-established banking services due to the cost of establishing the ATM services and unreliable internet services to conduct the transactions online due to unavailability of enough computers and internet facilities. However, the number of mobile phones subscribers has been increasing up to 50% of total country population (TCRA, 2011). This has posed a potential influence for the increase in use of mobile money services that covers a large number of population in rural and urban areas largely.

Vodacom Tanzania introduced M-Pesa services in 2008; just one year after the same services was introduced in Kenya as Safaricom M-Pesa service. After the launch of this service, it did not flourish well in the beginning but then they later introduced among other things a flat rate fee to attract customers that enabled this new facility to take off in a fast speed. The service was later introduced by Tigo, Airtel and Zantel. Bank of Tanzania reported the transactions worthy of Tsh 19,953,359 million has been transacted since the introduction of M-pesa in 2008 to September 2013, (GSMA mobile money for unbanked).

The figure below illustrates the market share of four mobile money service companies according to the percentage of the subscribers that they have.

Figure 2.1: Mobile Money service market share



Source: (TCRA Quarterly Report, September 2015)

Currently in Tanzania, Vodacom M-Pesa dominates the market share of mobile banking services with 38% of market share followed by Tigo with 33% and Airtel with 27% while Zantel has the lowest market share of 2% (TCRA, 2015).

Figure 2.2: Example of a typical mobile money services shop in Tanzania



Source: <http://www.thinkm-pesa.com/>

Overview and Operations of Vodacom M-Pesa and Tigo-Pesa

2.3.1 Vodacom M-Pesa

Vodacom Tanzania is owned by South African Vodacom Group (Proprietary) Limited as its subsidiary company in Tanzania, it owns a majority share of about 65% and the remaining

35% is owned by two indigenous Tanzanian shareholders, Planetel Communications limited with 16% of shares and Caspian Construction Limited with 19% of total shares. It obtained the license to operate in December 1999 and became operational in August 2000, (Vodacom Group Annual Report, 2005).

Vodacom Tanzania established M-Pesa services in April 2008 but did not have a smooth take off until 14 months later in June 2009 when the company introduced flat rate charges that made it successful with more customers. In 2015 as reported by Vodafone group annual report, M-Pesa has 5.6 million active customers that gives about 23% of total services revenue in Vodacom Tanzania. (Vodafone Group Plc. Annual Report, 2015).

Vodacom has a majority market share in Tanzania Telecommunication market with a total market share of 35% followed by Tigo 30%, Airtel 30%, Zantel 4% and TTCL 1%. (TCRA Quartely Report, September 2015).

2.3.2 Tigo Pesa

Tigo (Tanzania) is a subsidiary company of Millicom that is a telecommunications and media company with headquarters in Luxembourg and corporate offices in London, Stockholm and Miami. It has the subsidiaries operating in Africa and Latin America in countries such as; Paraguay, Colombia, Bolivia, El Salvador, Guatemala, Chad, Democratic Republic of Congo, Ghana, Rwanda, Mauritius, Senegal and Tanzania. Apart from mobile calls and SMS the company also offers cable and digital media services, mobile financial services and e-commerce and online services. (Millicom Annual Report, 2013).

According to 2013 Annual Report, Tigo Tanzania had a revenue of US\$ 351 millions. It is estimated that mobile financial services are used by 23% of total number of customers served by Millicom in Africa. This service is redirecting the cash based economies to electronic economy by transacting electronically. It helps the governments to trace the transactions and therefore reduce the tax evasion and corruption level, it is also useful to customers to increase the control over their finances and also the security of their money just at the tip of their fingers on their mobile phones. By December 2013, Tigo in Tanzania transacted the amount equivalent to \$690 million through mobile money services.

Tigo Pesa joined World Remit in August 2015; this is an online facility for money transfer based in London that help the Tanzanians in diaspora to send money to their friends and

families through their tablets, smartphones and computers. (Millicom press release, august 19, 2015).

2.3.3 Operational Overview of M-Pesa and Tigo-Pesa

M-Pesa operational overview explained by (Jack and Suri, 2010; Jekins, 2008)

1. Customer register themselves at agents' locations by providing their identifications such as a passports or a national ID, get registered and receive a PIN code from the agents which is actually offered by the telecommunication company.
2. M-Pesa agents can accept cash deposits from customers who have registered themselves
3. M-pesa agents issues the deposited money amount in electronic form as e-float and records the money in the respective customers account which is then available to be transferred from one customers account to another registered customers' account.
4. The customer may decide to withdraw all or some of the funds that he/she might have received.
5. When the customer wants to send money, he/she can transfer to the receiving person by putting the recipient mobile number, an amount and then the PIN code
6. The recipient can withdraw the cash or save into own mobile account for future use in paying at retail points or send to other mobile account users.

2.4 Mobile Money Agents

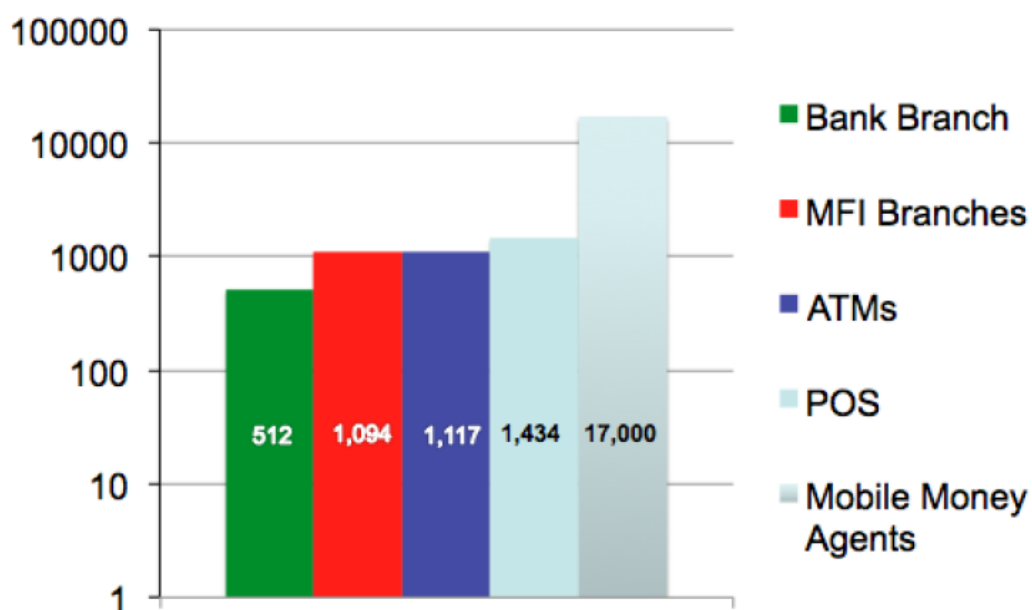
These are people contracted to facilitate mobile money transactions, each agent is located in locations called agent outlet (GSMA Report, 2015). They perform various services such as; cash in and cash outs, where they load and unload money value into the mobile money system; register new customers as well as providing front-line services such as directing new users on how to use the mobile money facility. They earn commission in return to providing these services. There were 3.2 million registered agents globally in December 2015 for all the telecommunication companies, among those the active agents are 51.4% and inactive is 48.6%, by active it means those agents that performed at least one transaction in December 2015 on average.

Mobile money agents usually conduct other businesses beside mobile money services such as small-scale trading, microfinance services, chain stores and even some banking branches in some markets offer mobile money services (GSMA Report, 2015).

Mobile money agents in Tanzania have an impressive network of points for cash in and cash outs. Recently, there has been a survey by Financial Sector Deepening Trust in Tanzania, which came out with finding that, there are around 17,000 M-Pesa agents throughout Tanzania.

Due to a rapid growth of mobile subscribers in the country in comparison with the growth of commercial bank account holders, mobile money services indicates a great potential to extend the financial services to people in the country side (USAID, 2013). However, mobile money agents require close proximity to banking branches to maintain their liquidity level, when they run out of cash, they can go to the bank branch to receive some cash and in return they send the electronic money equal to the cash they have received. However, when compared to the traditional financial services providing points, mobile money services are growing at a faster rate as indicated in the figure below

Figure 2.3: Mobile money agents compared to traditional financial services points



Source: Adopted from USAID, 2013

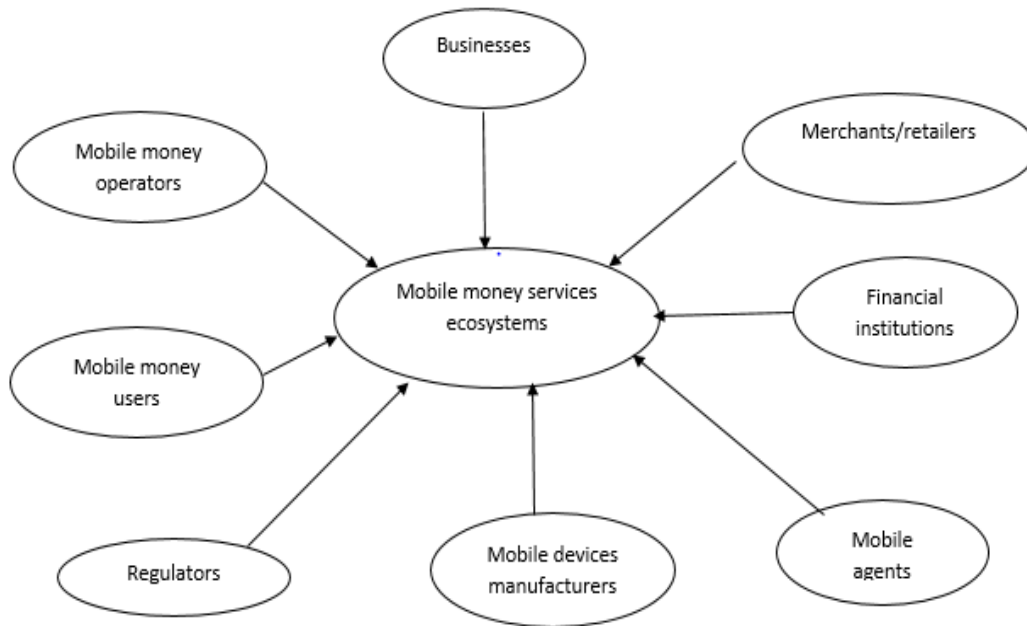
2.5 Mobile Money Ecosystem in Tanzania

Mobile money services include various players with different roles that altogether form a mesh of partnership networks (Jenkins, B. 2008). The players in mobile money ecosystem in Tanzanian context are; Agents, Mobile Network Operators (MNO), payment networks, regulators, merchant and retailers as well as banks and device manufacturers (Masabila, B. 2014; Jenkins, B. 2008).

- Mobile Network Operators (MNO) are telecommunication companies, in this context are Tigo and Vodacom with their established mobile infrastructure and customers who are their final customers. The MNOs in Tanzania ensure compliance with regulations by TCRA procedures and policies of running communication services in the country. Mobile money services are important for telecommunication companies in creating additional revenue as well as maintaining the customer base.
- Regulators include Tanzania Communication Regulatory Authority (TCRA), the central bank, Bank of Tanzania (BOT), which oversees the mobile money services in the country by setting policies and various regulations.
- Agents network are employed by Mobile Money Operators (MNOS), to facilitate the cash transactions by ensuring efficient cash-in and cash-out services to customers who are located across the country and in turn they receive the commission for facilitating these transactions.
- Businesses that accepts mobile money payments in exchange to their services for example Microfinance Institutions, insurance companies as well as bill users
- Merchants and retailers that accept payments in return of various goods offered by them to customers with M-Pesa /Tigo-Pesa accounts.
- Equipment manufacturers that create the mobile devices as well as application providers like mobile phones makers and vendors of network equipment
- Mobile banking subscribers are final users who use the services of receiving or sending money through the mobile agents' networks, they are subscribers to Mobile Money Operators (MNOs).

The figure below illustrates the typical mobile money services ecosystem

Figure 2.4: Mobile money service ecosystem



Source: Authors own compilation based on Jenkins, B. (2008)

2.6 Regulation of Telecommunication industry in Tanzania

Tanzanian Communication Regulatory Authority (TCRA) is an independent authority for Broadcasting and Electronic Communication as well as postal services in Tanzania that was established in 2003 by Tanzanian Communication Regulatory Authority TCRA Act No. 12 of 2003 and became operational in November 2013. Its roles include;

- Providing licenses and regulating postal services
- Providing licenses and regulating broadcasting and electronic communications in Tanzania
- TCRA also enhances the welfare of Tanzanians through monitoring performance and implementation of ICT applications, regulating rates and tariffs, as well as establishment standards for regulated services in the industry and a good environment that ensures efficiency in the industry at the same time protecting customers' interests. (TCRA, 2011).

2.7 Relationship between mobile money service agents and Telecommunication companies

This part forms a core area of our study by examining the buyer-supplier relationship between mobile money agents and the telecommunication companies namely Tigo and Vodacom Tanzania.

This business relationship does not operate based on some established formal contracts but rather on a simple contract with terms and conditions, that has to be read and signed by the agent and then the business commences from that point.

Due to the nature of the agreement, the suppliers of the services in this context being mobile money agents can be satisfied or dissatisfied in their relationship with their buyers who are, telecommunication companies of Tigo and Vodacom who decides on terms and conditions of business as well as the distributive mechanism of outcomes of the relationship.

Satisfaction as has been defined as the level of positivity in a working relationship, which is determined, by the level of which partners in a relationship expects that their expected goals will be met (Anderson and Narus, 1984). Scholars went further and mention the key elements of satisfaction in a working relationship as; communication, longevity of relationship, time, money, trust, commitment, flexibility and innovation, degree of trust, (Essig, M., and Amman, M. 2009). Suppliers can try to create a defensive mechanism among themselves to maintain short-term transactional exchange relationships and therefore affect the business because they cannot put in their best efforts. According to (Dwyer et al., 1987), and the various practitioners' suppliers are an important driving force behind the successful businesses in the buyer-supplier relationships.

This research studies the satisfaction in a buyer-supplier relationship between telecommunication companies being Vodacom and Tigo (Tanzania) and the mobile money service agents using the Relational Contracting Theory and Equity Theory.

2.8 Relevance of Tanzania as a Research Setting

Tanzania like many other developing countries is faced with a weak network of bank branches due to a high initial income required for their establishment and a small size of transactions due to poor economic services in many areas of the country, internet services are also very unreliable due to poor established computer networks characterizing population as an under-banked population. According to Financial Sector Deepening Trust for Tanzania (FSDT), the most recent data available indicates that less than 10% of adult Tanzanians reported having access to a formal banking such as having a bank account; this leaves a percentage of more than 90% unbanked population for mainstream banking such as conventional tellers or ATM networks of banks. So to say mobile money transfer such as M-Pesa for Vodacom, Tigo-Pesa for Tigo, Airtel-money for Airtel are essential opportunities for consumers to narrow down the gaps left by traditional banking systems. The service already reaches unbanked persons in rural and urban areas in Tanzania, most agents happen to be air time distributors or retail outlets for handsets that manage cash transactions during money transfer, (TCRA, 2011).

Statistics from Bank of Tanzania reported that, the amount that was collected through mobile money services according to BOT skyrocketed from 1.9 million in 2010 to 48 million in September 2012 while at the same time the transacted amount of money that was withdrawn and deposited in the agents' network increased from 1.8 billion to 1.7 trillion Tanzanian shilling (BOT, 2012). Recently, there has been a survey by Financial Sector Deepening Trust in Tanzania, which came out with findings that, there are around 17,000 M-Pesa agents throughout Tanzania. According to the report by the central bank, there were 5.4 million mobile money accounts registered in 2010, but this number shot up to about 15 million mobile money accounts in September 2012, which was estimated to be 63% of country's total adult population.

Due to the nature of the agreement between mobile money transfer agents and telecommunication companies of Tigo and Vodacom, suppliers can try to create a defensive mechanism among themselves to maintain a short-term transactional exchange relationships and therefore affect the business. According to (Dwyer et al., 1987), and the various practitioners' suppliers are an important driving force behind the successful businesses in the buyer-supplier relationships. Given the condition of fast growing mobile money services

and its contribution to economic development in Tanzania, this fact justifies the use of Tanzania as a research setting for this study as well as the expected contribution to policy formulation and better exchange practices after this study.

2.9 Chapter Summary

This chapter has presented an in-depth discussion of Tanzania Telecommunication industry with great emphasis on Mobile Money Services. The Chapter has presented major actors in mobile money ecosystem as well as the relationship between money agents in the telecommunication network. It has further justified Tanzania as the relevant research setting of this study. Theoretical review follows in the subsequent chapter.

CHAPTER 3

THEORY AND LITERATURE REVIEW

3.1 Introduction

This chapter establishes the theoretical base of this study; Relational Contracting Theory and Equity theory are main theories of this research study. Theory is a body of tested and organized insights/knowledge by connecting a set of empirical laws with generalized statements that helps to unify the area of this study (Griffiths, 1988), it is aimed to specify the existing relationship among variables in the buyer-supplier relationship. Business relationships characteristics are multidimensional consisting of various dimensions such as adaptations, commitment, trust, satisfaction, cooperation and communication (Palmatier, Dant and Grewal, 2007). This study is based on supplier satisfaction as one of the main outcomes of a business relationship. Main antecedent factors to supplier satisfaction are; forecasting, profitability, suppliers' involvement and agreements/contracts, feedback, trust, degree of transparency as well as the defined responsibilities and roles (Maunu, 2003), Alternative attractiveness, investments and switching cost (Ping, 2003), Power and Justice (Skinner et al., 1992; John, 1984). This study specifically analyses the satisfaction of the mobile money agents who are suppliers of the mobile money agency service to two telecommunication companies in Tanzania based on Relational Contracting Theory and Equity theory. Further study on supplier satisfaction regards supplier satisfaction as a supply chain strategy that is more of relationship based. Essig and Amman (2009) views supplier satisfaction as an antecedent of relationship quality.

Relational Contracting Theory explains how the adherence of established norms affect the long-time business relationships. This theory has its origin from social exchange theory, which incorporate the concept of justice as one of antecedent to long time relationship (Yilmaz et al., 2004). Justice is contingent on its three dimensions; Distributive justice, procedural justice and interactional justice. Research has conceptualized supplier satisfaction as one-dimensional and multidimensional construct that incorporates both social and economic satisfaction (Geyskens and Steenkamp, 2000; Skinner, Gassenheimer and Kelly, 1992). This study is one-dimensional focusing on economic satisfaction with distributive fairness as the construct that defines supplier satisfaction in this context. Procedural and Interactional justice explain more on suppliers' social satisfaction.

Therefore, distributive fairness is the underlying criterion towards economic satisfaction in marketing channels relationships given the fact that, firms are economic institutions (Kumar et al; 1995; Brown et al., 2006). The study also incorporates the role of information exchange as a factor for satisfaction (Eckerd and Hill, 2011). The theory specifically points to distributive fairness and information exchange as core antecedents to suppliers' satisfaction.

Equity Theory draws from exchange and social comparison of costs and benefits in a relationship (Adams, 1963, 1965) to determine the perception of equity among different individuals in an exchange relationship. Research indicates that people differs in their reactions towards the perception of perceived inequity in their organisations as explained by Equity Sensitivity Construct by (Hauseman et al., 1985,1987) and tends to compare their relationship with the comparison other outside their relationship. Entitleds in this context represents the kind of people who are only satisfied provided that, their output to input ratio exceed those of the comparison other outside the relationship (Hauseman et al., 1985, 1987; Miles et al.,1989).

The theories in this context lays a firm foundation on the understanding of impact of distributive fairness justice, information exchange and attractiveness of competing firms that is drawn from the extant literature. The chapter will further predict what is to be expected in the research field and later form a basis for the hypotheses that are to be tested in the subsequent chapters.

3.2 Supplier Satisfaction

In the previous research, supplier satisfaction has not been a major topic of interest from the academic or practitioner point of view of industrial and purchasing context, yet it is difficult to manage buyer-supplier relationship without taking into account suppliers' satisfaction (Essig, M. &Amann, 2009). According to Dwyer et al., (1987), suppliers' contribution is important for the success of any organization. It and has emerged as important value-adding party in inter-firm relationships (Asanuma, 1989; Gadde).

Supplier satisfaction is a facet of buyer-supplier relationship that is directed upstream in the value creation chain. Satisfaction is defined as the perception of equity as well as the feeling of fulfilment in the relationship that is achieved when outcomes are achieved in a

relationship (Benton and Maloni, 2005). Essig and Amann (2009), define supplier satisfaction as a feeling of fairness by suppliers in relation to the incentives from the buyer's side as well as own contribution in the relationship when compared to their need fulfilment, in terms of more earnings and other benefits. Schiele et al., (2012) further define supplier satisfaction based on the perceived value in a buyer-supplier relationship such that, satisfaction is achieved when the relationship outcomes meet the expectation of suppliers. Buyers are expected to display value hence trigger the perception of fulfilment despite of existing or possible unequal power distribution (Benton and Maloni, 2005).

Maunu (2003), in his study explained supplier satisfaction dimensions into two groups; business related and communication related dimensions. While business related dimensions include concrete and value based aspects such as forecasting, profitability, suppliers' involvement and agreements/contracts on the other side communication related dimension is related to human values and softer aspects like feedback, trust, degree of transparency as well as the defined responsibilities and roles. Essig and Amman (2009) views supplier satisfaction as an antecedent of relationship quality.

Authors on supplier satisfaction, explain some antecedent factors to satisfaction based on the social comparison with other suppliers in the industry. This is determined by the level of attractiveness to the competing firms as explained by (Thibaut and Kelley, 1959; Johnson, 1982; Ping and Dwyer, 1988), and also the positive or negative feeling due to the existing discrepancy between what the suppliers expected and what they received (Locke, 1969, 1976) which is termed as distributive fairness of rewards by (Kumar et al. 1995b; Patterson et al. 2006; Brown et al., 2006) as widely explored by Relational Contracting Theory and Equity Theory respectively.

3.2.1 Social comparison consideration in supplier satisfaction

Alternative attractiveness, investments and switching cost; the study by Ping (2003) on satisfaction in marketing relationships centres the study in these three interrelated antecedent variables that leads to satisfaction. (Thibaut and Kelley, 1959; Johnson, 1982 explains satisfaction as the outcome of comparing own relationship with an alternative relationship with respect to costs, rewards and the degree of fairness. Alternative attractiveness is

postulated to reduce the level of satisfaction in an incumbent business relationship. Authors further postulates that, firms tend to devalue other competing relationships if at all they are involved in a more satisfying relationship such that they become less aware in other alternative relationships. On the contrary, they become more aware of other alternative relationships if their incumbent relationship is not in the committed phase yet and therefore they become less satisfied (Ping and Dwyer, 1988; Thibaut and Kelley, 1959; Johnson and Rusbult, 1989). However, the degree of attractiveness to alternatives relationship can be affected by how much of the relationship-specific investments exist in the current relationship and cannot be transferred to another relationship. This increases the switching costs and therefore reduces the degree of attractiveness to alternative firms (Walster et al., 1976; Frazier, 1983), on the contrary, increased alternative attractiveness to competing firm reduces the level of satisfaction given the condition of low switching costs and relationship specific investments as well as the increased level of competition in the industry.

3.2.2 Relational comparison consideration to supplier satisfaction

Researchers regard justice as one of key factors behind the establishment of long-time relationship between buyers and suppliers in the business relationship (Yilmaz, et al., 2004). Previous research identifies variables that causes satisfaction in buyer-supplier relationship, these are; reputation, communication, coercive and non-coercive power, bonds, adaptation, relationship benefits and dependency. Reputation; is the degree with which business partners believe that their partners are honest and possess a good credibility, unquestionable trustworthiness and the clear image. Suppliers tend to be dissatisfied if the image of the buying company is poor, this tends to predict an uncertain future of their business relationship (Anderson and Weitz, 1989; Ganesan, 1994). This study is based on incorporating the concept of justice between less powerful and more powerful exchange partners concerning relationship benefits (pay and other rewards).

Power and justice; Research in buyer-supplier relationship indicates the influence of power on how just the relationship is thought to be and will further influence the commitment and the lengthy the particular business relationship. According to Skinner et al., (1992), power is based on the amount of resources owned by one party that gives the authority to influence the decision level. Power bases can be either coercive or non-coercive. Coercive power base indicates the use of force to influence the decision making hence decrease the level of

cooperation and increase the satisfaction level while non-coercive power does not use force and therefore promote mutual interest and cooperation hence increases the level of satisfaction (Skinner et al., 1992; John, 1984).

(Lind and Tyler, 1988; Konovsky, 2000), argue that, behaviours and relational attitudes are stimulated and influenced by the perceived justice on a member who is more powerful by the less powerful member of the exchange relationship. Researchers regard justice as one of key factors behind the establishment of long-time relationship between buyers and suppliers in the business relationship (Yilmaz, et al., 2004). Authors further explained three dimensions of justice in an organization; Distributive fairness, procedural justice and interactional justice. The study by (Brown, et al., 2006) found distributive fairness as the underlying criterion towards economic satisfaction in marketing channels relationships. This study is based on economic satisfaction by considering the fact that marketing channels are economic institutions. Distributive justice is the degree with which partners perceive a fair distribution of outcomes; it further incorporates the risk sharing aspects in a business relationship (Kumar et al., 1995; Patterson et al., 2006).

Relationship benefits; Authors in economic literatures postulates that trust is an output of a calculated process where a party in a business relationship calculates the associated benefits, rewards and costs of relationship therefore determines the durability of a buyer-supplier relationship (Williamson, 1991; Dasgupta, 1988). In addition, there exists a positive relationship between benefits, cooperation and satisfaction according to (Anderson and Narus, 1984; Dwyer, 1989; Skinner et al., 1992). The perceived high relationship benefits can lead to satisfaction even in a condition of low trust and commitment in a relationship (Gronhaug and Gilly, 1991)

Information sharing; in a buyer-supplier is a critical factor that stimulate interaction between the business parties and largely influence channel outcomes i.e. commitment and satisfaction by organizing capabilities and efforts towards the attainment of common goals and hence results to a committed and a satisfactory buyer-supplier relationship (Mohr and Nevin, 1990; House and Stank, 2001).

3.3 Relational Contracting Theory

Relational contracting theory has its origin in the study by Ian R. Macneil on Relational contracting which was done to challenge contract law's functions model. His study mainly is designed to study the differences between living contracts (contractual based relations on social relationships) and contracts at laws (relies on promise).

Macneil, (1985), does not group exchanging systems by using the governance forms but only focus on explaining behavioural aspects in an exchange relationship. He further argues that, the governance form within which the exchange relationship takes place does not determine the application of norms but rather depends solely on the atmosphere or relationship within which the exchange takes place.

Relational Contracting theory postulates that, relational norms in inter-firm interactions, when developed overtime, acts as a point of reference to set in place the interactions, terms and conditions of trade as well as overall contractual relationships (Macneil 1978, 1980). This theory assumes that overtime; relational contracts will emerge depending upon the current practices and the history of this relationship. With time, the initial contractual agreements that existed at the beginning of the relationship will adjust overtime (Macneil, 1978).

Heide and John (1992) explain relational norms as the values that are shared among the exchange partners that defines what are the appropriate behaviours within their inter-organizational relationship. Studies on relationship norms explain various factors behind the norms existence, these are; relationship level variables (Dwyer, 1993; Heide, 1994) environmental variables (Heide and John, 1990) as well as behaviour of various actors (Kim, 2000). Scholars integrate norms with various variables that are drawn from other backgrounds of Transaction Cost theory, Agency Theory, Dependence Theory, Agency Theory as well as Relationship marketing (Ivens, B. and Blois, K., 2004).

(Blois and Ivens, 2006; Kaufmann and Dant, 1992; Heide and John, 1992; Kaufmann and Stern, 1988; Macneil, 1980) identified ten relational norms that bind members of a group and serves to control, guide and direct towards acceptable and proper behaviour. The norms are; Role integrity, Reciprocity, Effectuation of consent, Implementation of planning,

Contractual solidarity, Flexibility, Linking norms of reliance, restitution and expectations of interests, Creation and restraint of power, Propriety of means as well as Harmonization with the social matrix. However, (Ivens, 2002) in his study pinpointed the norms that have been widely researched on empirical studies and therefore are operational in marketing research these are: Role Integrity, Long-term orientation, Mutuality, Planning behaviour, Solidarity, Information exchange, Flexibility, Restraint in the use of power, Conflict resolution, and Monitoring. The author further points out more operationalized norms in literature with a large number of scales, these are: Solidarity, Flexibility, Long-term orientation and Information exchange (Ivens, 2002). (Kauffmann and Stern, 1988; Kauffman and Dant, 1992; Heide and John, 1992) point Role integrity, Solidarity, Information exchange and Reciprocity as more important norms for the preservation of exchange relationship.

This study endorses *solidarity* and *information exchange* as key relevant norms to this study, and will therefore determine a suitable psychological climate for supplier satisfaction. Solidarity norm acts as a general norm that bind the exchanging partners together (Kauffman and Stern, 1988; Macneil, 1980), because it determines the psychological climate of the exchange relationship which incorporates *fairness* among its six dimensions which are key to the establishment of successful long time relationship (Koys and DeCotiis, 1991). Information exchange acts as a glue that determines the efficiency and effectiveness of business relationship as well as binding the members together (Mohr and Nevin, 1990).

Contractual solidarity; (Macneil, 1980:1) regards society as the fundamental basis upon the formation of contracts because societies cannot operate when there are no exchange relationships. Considering this there must be an order in performing the business exchanges through the existence of set of procedures and rules that define what the appropriate behaviours are and are believed to be just by the majority of the society members. Strong norms of contractual solidarity ensure that members of an exchange relationship view the relationship to be beneficial to both sides and as a result, this motivates both parties to keep the relationship (Macneil, 1980). Solidarity is referred to as a general norm that binds the exchange partners together (Kauffman and Stern, 1988; Macneil, 1980). This norm determines the psychological climate of the organization with fairness among its six dimensions; others are autonomy, pressure, cohesiveness, recognition and innovation. Folger and Konovsky, (1989) postulates that by justice means the presence of both distributive and procedural justice. However, (Williams and Sashkin, 1990) in their study

conclude that, the fairness of rewards in an organization gives a clear reflection of its value and the existing normative structure.

Information exchange: is at the heart of supply chain because it is one of the major flows in the supply chain value creation (efficiency, performance and effectiveness) in exchange relationships (Thomas, Esper and Stank., 2010; Mentzer et al., 2001). It has been defined by Anderson and Narus (1990) as “the formal as well as informal sharing of meaningful and timely information between firms”. (Hsu et al., 2008) also define information sharing as the extent with which the crucial information is available to members of the business-relationship. The information varies from tactical (logistics, purchasing, operations scheduling) to strategic (Marketing, corporate objectives and customer information). The information shared can be either formal or informal but altogether enhances the extent of visibility in the business relationship as well as reducing the uncertainty level (Handfield and Bechtel, 2002; Brennan and Turnbull, 1999). The shared information between buyers and suppliers has to incorporate five dimensions; adequacy, credibility, timeliness, completeness and accuracy (Mohr and Sohi, 1995), this dimensions altogether forms a communication quality. (Eckerd and Hill, 2011) proposes that information exchange between firms enhances supplier’s commitment and therefore increase satisfaction with the relationship, through reducing the perceived unethical behaviour of the buying firms by the suppliers.

However, if the information is not well designed and adequately communicated leads to uncertainty and ambiguity and therefore lead to dissatisfaction among the parties in a business relationship and hence threatens performance and possibility of a long term relationship (Eisenberg, 1984; Spiker and Daniels, 1981; Wagner, 1994; Schweiger et al., 1987)

The perception of solidarity as well as accurate, credible and timely communicated information in the context of this study, between mobile money agents who are examined in this study as the less powerful exchange partner with their counter parties i.e. telecommunication companies who are more powerful in this context, will pave a way toward understanding how and to what extent they lead to suppliers’ satisfaction.

3.3.1 Main Assumptions of Relational Contracting Theory

(Macneil, 1980; Morgan and Hunt, 1994) explain the main assumption underlying this theory that is the existence of relational constructs; trust and norms as the unique mechanism of governance that prescribe behaviours in the inter-organizational relationships. The authors further distinguish this governance mechanism with market and hierarchical governance such that behaviour in relational contracting is not regulated through incentives as in market and hierarchical governance respectively, but is rather regulated through mutual moral control and self-regulations and further ensure the development of inter-firm exchange relationships into the future.

According to (Bradach and Eccles, 1989), Relational Contracting Theory posits that overtime, there tends to emerge strong relational ties which gets stronger as time passes, these ties forms relational norms which will then be used as the base upon which the behaviour of business partners will be built upon. These relational norms tend to guard member firms against exploitation behaviours of one member against another.

3.3.2 Foundational Premise of Relational Contracting Theory in Supplier Satisfaction

Distributive fairness is concerned with distribution of benefits, costs and rewards as well as risk sharing aspects in a business relationship (Kumar et al., 1995b; Patterson et al., 2006). (Brown et al., 2006 and Yilmaz et al., 2004) also pinpoint that distributive fairness is determined by evaluation of potential gains or relative rewards and losses in comparison to the amount of resources/inputs that channel members put in that particular relationship. (Frazier, 1983) conceptualizes that, a firm regards distributive fairness in comparison to the outcomes that they deem to deserve.

Distributive and procedural fairness are considered differing elements but they are both considered to have effect on the business relationship since procedural justice creates a positive energy to strengthen ties among the channel members and therefore relationship continuity and low level of channel conflict (Konovsky and Cropanzano, 1991; Kaufmann and Stern, 1988).

According to (Brown, J. R et al., 2006), they found distributive fairness to be the underlying criterion towards economic satisfaction in marketing channels relationships with procedural fairness acting as a bonus point under a condition of high distributive fairness but has no mitigating effect on distributive fairness when it is low. Locke (1969, 1976) postulates that satisfaction is a result of how much an individual channel member regards the rewards from the relationship depending on the discrepancy between what they expected to receive and what they actually receive. In the study on Antecedents and Simultaneity of Satisfaction in Industrial Sales Force by Bagozzi, R. P (1980) postulates that job satisfaction is determined by the extent with which individuals evaluate the outcomes from the value they place on their jobs, the greater the outcomes that are received, the greater is the satisfaction level.

3.3.2.1 Relationship between Distributive Fairness and Supplier Satisfaction

Distributive fairness is concerned with distribution of benefits, costs and rewards as well as risk sharing aspects in a business relationship (Kumar et al., 1995b; Patterson et al., 2006). (Brown et al., 2006 and Yilmaz et al., 2004) also pinpoint that distributive fairness is determined by evaluation of potential gains or relative rewards and losses in comparison to the amount of resources/inputs that channel members put in that particular relationship. (Frazier, 1983) conceptualizes that, a firm regards distributive fairness in comparison to the outcomes that they deem to deserve.

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3.3.2.2 Information Exchange and Supplier Satisfaction

Information exchange defined by (Lusch and Brown, 1996) as the expectation among supply chain members that important information will be shared between them. Information sharing is termed as the crucial element in building long-term and trusting relationship (Doney and Cannon, 1997; Ring and van de Ven, 1992) and to a big extent demonstrates efficient interactions in the buyer-supplier relationship and therefore it is considered as one of the factors for suppliers' satisfaction (Maunu, 2003; Gawantka, 2006). Information sharing enhances effectiveness in a relationship and tends to bind the relationship (Kim et al., 2006; Narasimhan and Nair, 2005).

Information sharing largely influences channel outcomes i.e. commitment and satisfaction by organizing capabilities efforts and common goals and hence results to a committed and a satisfactory buyer-supplier relationship (Mohr and Nevin, 1990; House and Stank, 2001). It also indicates a positive relationship between business-relationships and performance. A study by (Hsu et al., 2008) on multi-region analysis in USA, New Zealand and Europe on Information sharing, buyer-supplier relationship and firms' performance indicates a positive relationship between information sharing playing a driving role and buyer-supplier relationship performance.

In a working relationship, the parties that are not given enough relevant job-related information are likely to experience a feeling of failure and therefore can result to dissatisfaction compared to those that are given enough job related information (Locke and Latham, 1990). This is empirically supported and therefore the study concluded that the presence of relevant information sharing improved job satisfaction.

In the study by Wasti et al., (2006) on buyer-supplier relationship in Turkish Automotive Industry, indicated the existence of perception gap between buyers and suppliers in Turkish manufacturing industries which is attributed to the absence of clear communication and lack of mutual understanding, suppliers indicated that they were not aware on what was expected

of them and did not have a clear platform to express their views and share the beneficial information (Ulusoy, 2003; Wasti et al., 2006).

Research indicates that inadequate information leads to a series of uncertainty and ambiguity (Eisenberg, 1984; Spiker and Daniels, 1981). This limited access to important information leads to dissatisfaction among people in a relationship with no enough access to important information and decisions (Wagner, 1994; Schweiger et al., 1987). In a research by (Zhu et al., 2004) on Information Adequacy and Job Satisfaction During Merger and Acquisition of One Chinese Internet Company by another, found out that employees of the acquired company experienced more dissatisfaction which was attributed to uncertainty regarding their roles, tasks, responsibilities and any expected promotions, especially because they were not communicated to on any useful information such as on what to do better and any existing structure or expected future structure of their work. However, the study concluded that adequate information sharing does not always lead to job satisfaction but it is mostly relevant when it is designed carefully and communicated purposefully (Zhu et al., 2004).

Information sharing is indicated in the research as the antecedent factor to economic and non-economic satisfaction in business relationships according to (Rodriguez, Agudo and Gutierrez, 2006). This is further justified by the study on The Role of personal interaction in relationship value and subsequent distributor performance among 472 tile and electrical appliances distributor in Vietnam by (Nguyen and Nguyen, 2010). The study found personal interaction to be the key underlying factor in creating relationship value i.e. value creation in a relationship network (Ulaga, 2001) in buyer-seller context which is relevant to this study. Based on the discussion above, presence of information exchange between mobile money agents (suppliers) and the respective telecommunication companies (buyers) is expected to result in a satisfactory exchange relationship between them.

3.4 Equity Theory

Exchange in buyer-supplier relationship is termed as most important element in market relationship (Bagozzi, 1974, 1975). The author further pinpoints satisfaction as one of the important facet foundation for a long-term business relationship. (Bagozzi, 1975) points to the perceived equity or inequity as the main components of a satisfactory business exchange

relationship. The perception of equity or inequity and its results in the business relationship is widely explored by Equity Theory (Adams, 1963,1965). Equity theory in the context of buyer-supplier relationship is applied in extant literature for example in the work of (Huppertz et al., 1978) in the retail exchange situation to assess subjects' behaviours given the perception of inequity in their relationships. John Stacey Adams first developed this theory in 1963. The theory explains the perceptions and beliefs of parties to a business relationship on what is fair outputs derived from their exchange relationship, this is done by comparing the outputs in relation to their inputs as well as in comparison with other referent people outside their relationship (Adams, 1963, 1965). This theory in organization behaviour literature was introduced in the marketing theory by Huppertz and his colleagues who did their study on fairness concept to price and service inequity, although they did not directly point to satisfaction but laid a foundation for more literature on the subject matter (Oliver and Swan, 1989; Huppertz et al., 1978; Mowen and Grove, 1983).

3.4.1 Assumptions of Equity Theory

Adams (1965) offers a simple view of exchange in business in adhering to the norm of equity in which, people experience cognitive dissonance when they experience inequity in their business relationships. Carrell and Dittrich (1978) discusses three main assumptions underlying the determination of equitable payments that underlies the Equity theory.

First assumption postulates that, individuals perceive and seek for equitable returns or outcomes (Promotion, pay, and status) by comparing to their input (efforts, education, skills) into their business relationship.

Second assumption incorporate the notion of social comparison by comparing their outcome to income ratio to those of other people outside their relationship.

Third assumption is based on cognitive distortion of inputs or outcomes by business partners or by leaving their incumbent organizations in attempts to reduce the inequity. The series of distress exist when inequity is experienced in exchange relationships and significantly affects the satisfaction due to social comparison with other similar exchange partners outside the respective relationships.

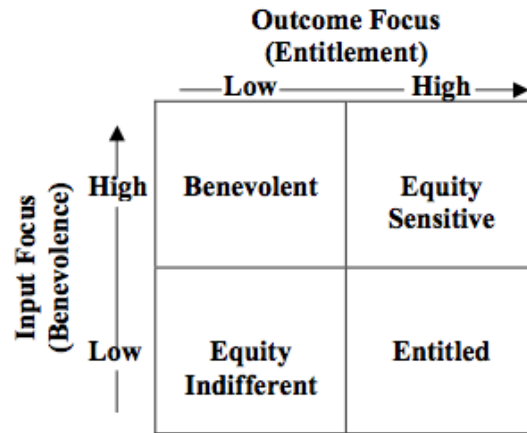
Main propositions of this theory however is based on the individual comparison of the outcome in their current relationship with regards to the amount of efforts, skills and resources inputted compared to the comparison outside relationship. Inequity is perceived when the ratio of output/input is unequal and so this exchange partner become distressed and less satisfied in the current relationship, the distress keeps on increasing as the perceived comparison gap keeps on increasing (Adams, 1963,1965; Houseman et al., 1987). However, the theory did not incorporate individual differences in their perception to equity, which would add the prediction power of this theory as noted by (Greenberg, 1979; Greenberg and Wetcott, 1983; Miner, 1980; Major and Deaux, 1982) while only incorporating early noticed demographic variables like sex, age, nationality and the like as postulated by (Major and Deaux, 1982). However, Houseman et al., (1985, 1987,1989) incorporated the psychological differences among individuals in the exchange relationship and developed Equity Sensitivity Construct to explain the psychological differences

3.4.2 Equity Sensitivity Construct

This construct originates from Equity Sensitivity Instrument (ESI) that was developed by Houseman et al., (1985), this is a forced distribution scale with five pairs of sentences or statements. Each pair represents either a benevolence statement or entitlement preference. The construct conceptualizes into deep understanding of how individual differs in their reaction to inequity. It is a personality paradigm, which illustrates the relationship between various psychological, and demographic characteristics in relation to how individual differ in their reaction to perceptions of inequity in the exchange relationships (Houseman et al., 1987).

This construct in relation to equity theory further postulates that, people react individually when they perceive unequal treatments in their business relationships because individual business partners are significantly different in their individual preferences. Three classes of individuals with different preferences and different ways of reacting to inequity are further classified as; Benevolents, Equity sensitives and Entitleds (Houseman et al., 1987). The figure below shows categories of individuals in Equity Sensitivity construct

Figure 3.1: Categories of Individuals in Equity Sensitivity Construct



Adapted from Davison and Bing (2008)

Benevolents; these are individuals who are explained in the psychological literature as having altruistic behaviour (Hatfield and Sprecher, 1983). They are considered as givers in the relationships, such that they contribute more while expecting to receive less in return to their level of giving, individual in this class are considered more of social responsible individuals than reciprocity conscious individuals (Rushton, 1980; Hatfield and Sprecher, 1983). In relation to their comparison other, benevolents prefer own lower outcome/input ratio in relation to the comparison other therefore their level of satisfaction increases when their outcome/input ratio is lower compared to their comparison other (Huseman et al., 1987).

Equity sensitives; Literature define these as individuals who are more sensitive to the norm of equity such that they prefer an equitable outcome/input ratio to that of their comparison other. In case their ratio is higher or smaller, they feel distressed and less satisfied. Individuals in this class experience both feelings of distress and guilt when they are under or over rewarded respectively (Hauseman et al., 1987).

Entitleds; This name is derived from a work of Coles, (1977) which used a term Entitled to label a character of a child who has much in store but still expects and want more things. The Entitlement notion was further extended by Greenberg and Westcott (1983) which postulated the individuals in a relationship who feel the awe and high feelings of indebtedness and tends to expect more regardless of how obliged they feel in contributing

to the total output. This group is labelled as getters; they expect more outcome/input ratio than their comparison other. Satisfaction and distress level of entitleds is high only when they feel their output/income ratio is higher as compared to their comparison other, otherwise they tend to be less satisfied.

Study by Houseman et al., (1987) proposes a positive linear relationship between entitleds perceptions of equity and their job satisfaction if they are over-rewarded. This proposition also postulated a potential connection to the expectancy theory (Lawler, 1968) which predicts a linear relationship between the expectation of rewards and the level of satisfaction. Table 3.1 below shows in summary the equity formula by the three classes of individuals based on their individual reactions to inequity that differs according to social preferences.

Table 3.1: Equity formulas

$\frac{\text{Outcomes}}{\text{Inputs}} < \frac{\text{Outcomes}}{\text{Inputs}}$ <i>Person Other</i>	$\frac{\text{Outcomes}}{\text{Inputs}} = \frac{\text{Outcomes}}{\text{Inputs}}$ <i>Person Other</i>	$\frac{\text{Outcomes}}{\text{Inputs}} > \frac{\text{Outcomes}}{\text{Inputs}}$ <i>Person Other</i>
Benevolents	Equity Sensitives	Entitleds

Source: Adams, (1963,1965) and Houseman et al., (1987)

In the study by King et al., (1993) on refinement of equity construct in both experimental and field setting found out that, manipulation of outcomes (pay) leads to a big impact on satisfaction than manipulation of inputs in a business relationship because none of the benevolents or entitleds will tolerate injustice in the distributive fairness of the outcomes. However, manipulating a pay of an entitled will cause a dramatic effect on their job satisfaction as compared to benevolent also the job satisfaction of entitled will be greatly affected in case one alters the pay of another comparison person for the entitled.

Thibaut and Kelley, (1959) argue for relative attractiveness as the main determinant of satisfaction and incorporates costs, rewards and fairness. (Johnson and Rusbult, 1989; Thibaut and Kelley, 1959) in their study incorporates social comparison concept in determining the level of satisfaction with the current relationship given the presence of attractiveness to competing firms and proposed that channel members tend to devalue their current relationship when they are highly attracted to other firms outside their relationship.

In the study done by Robert Ping (2003) on antecedents of supplier satisfaction of Hardware retailers, the study found out that, high alternative attractiveness decreased the satisfaction level under the condition of low switching costs and investment as previously proposed by Johnson (1982).

Based on this study, the two theory discussed above have set a framework towards integrating their construct to the variables in this research study. Relational contracting theory has laid a critical explanation of fairness and information sharing in the buyer-supplier relationship and intensified on distributive justice that is more of an economic aspect for satisfaction (Brown, J. R et al, 2006; Anderson and Narus, 1984; Dwyer, 1989; Skinner et al. 1992; Bagozzi, R. P 1976; Locke 1969, 1976). Equity theory has given a good framework based on equity sensitive construct towards understanding the perception of outcome to input ratio by three individual classes based on their comparison other individuals. With respect to this study, entitlements are more relevant because they tend to expect more rewards than their comparison other. If they receive rewards contrary to their expectation, then they are unsatisfied and experience a series of distress (Adams, 1963, 1965; Huseman et al., 1985,1987,1989; Greenberg and Westcott, 1983; King et al., 1993; Miner, 1980; Major and Deaux, 1982).

3.5 Chapter Summary

This chapter has discussed the main theoretical overview of this study by using Relational Contracting Theory (RCT) and Equity Theory. The chapter links various antecedents of supplier satisfaction i.e. mobile money agents in the context of this study based on main theories and the extant literature of this study. Theoretical review lays a framework for the formulation of main hypotheses of this study that are to be discussed in the subsequent chapter of conceptual framework.

CHAPTER 4

CONCEPTUAL FRAMEWORK

4.1 Introduction

This chapter aims to lay down a conceptual framework of our study. The theoretical review that is explained in the previous chapter lays down a foundation to draw into the conceptual framework that is to be established in this chapter. The chapter will further draw into the research hypothesis for this study that are traced from theoretical framework of the study. This study analyses supplier satisfaction as one of the antecedent to business relationship in the upstream supply chain, as researched in research studies by (Morgan and Hunt, 1994; Perkins, 1993; Kemp and Omta, 2001; Beekman and Robinson, 2004; Varey et al., 2005; Wong, 2000). It is analyzed based on Relational Contracting Theory (Macneil, 1978, 1980, 1985) which incorporates the concept of justice/fairness and information exchange as among the determinant factors of long term relationship. (Yilmaz, et al., 2004; Ivens, 2002) as well as Equity Theory (Adams, 1963,1965) which is built on the concept of cognitive dissonance, that traces satisfaction based on social comparison between one exchange relationship and another (Adams, 1963,1965; Huseman et al., 1987). Based on these theories, satisfaction is analyzed in the light of; distributive fairness of rewards, attractiveness of competitors, information exchange, interaction effects between distributive fairness of rewards and commission and a control variable of relationship duration that will tested in our research study to assess their effect on supplier satisfaction. These variables will be displayed in Figure 4.1 below.

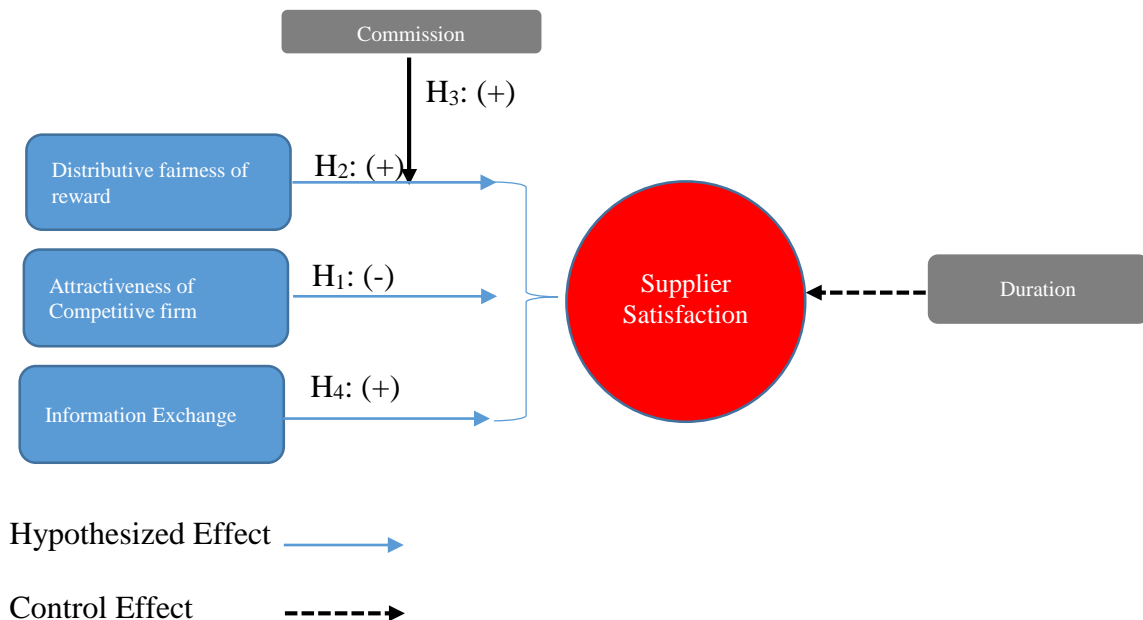
4.2 An Overview of the Research's Conceptual Model

The model for our research seeks to assess the factors for satisfaction in a buyer-supplier relationship in the telecommunication industry in Tanzania. Specifically, the study will assess the mobile money agents' relationship with the telecommunication companies; Tigo (Tanzania) and Vodacom (Tanzania). The study will test the impact posed by; Distributive Fairness of rewards (DFRewards), which is the channel member perception of how fair are the earnings and other related benefits they receive from the relationship, how the channel member evaluates the potential gains or relative rewards and losses, in comparison to the amount of resources/inputs that they put in that particular relationship (COMPFRM2) and on how information exchange (INFOX) affects their satisfaction. (Frazier, 1983) conceptualizes that, a firm regards distributive fairness in comparison to the outcomes that

they deem to be deserving, the study will also assess the impact posed by Attractiveness of Competitive Firms (COMPFIRM2) which is explained by scholars (Thibaut and Kelley 1959; Johnson 1982) as having impact on satisfaction when firms compare own relationship with an alternative relationship with respect to costs, rewards and the degree of fairness. Alternative attractiveness is postulated to reduce the level of satisfaction in an incumbent business relationship (Ping and Dwyer, 1988; Thibaut and Kelley, 1959; Johnson and Rusbult, 1989; Huseman et al., 1987), interaction effect of distributive fairness of rewards and commission (DFRewards*Commission) which emphasizes on how outcomes fairness which is an economic factor and is related to economic satisfaction (Wagner et al., 2011; Brown, J.R et al., 2006) as well as as Information exchange (INFOX) which is regarded as an important tool for coordinating economic exchange in relational governance and also important tool for enhancing buyer-supplier relationship survival and prosperity (Gligor and Autry, 2012; Sheng et al 2006) while holding relationship duration (Duration) as a control variable. The hypotheses formulated in this study (H₁, H₂, H₃, and H₄) propose relationship that is to be tested in the subsequent chapters starting from data analysis.

4.3 Research Conceptual Model

Figure 4.1: Research Conceptual Model



4.4 Attractiveness of Competitive Firms and Supplier Satisfaction

Customers (buyers) attractiveness can be viewed as the ability to offer high potential price. However, other factors that can contribute to attractiveness are technological expertise or interacting modes of cooperation, Pulls et al., (2014).

Scholars explain the concept of alternative attractiveness as the estimation of one business partner on the possible satisfaction that can be available if they were to engage in the alternative business relationship (Ping 1993; Rusbult, 1980). If a business party lacks an alternative favourable offer, or are not aware of other available alternative business offers they can simply settle in one relationship even if their perception of satisfaction in this one relationship is less favourable and unsatisfactory (Ping, 1993). Suppliers' satisfaction is affected when they start comparing their current business relationship with other business relationships of the same kind which is basically the extent with which they are attracted to the alternative buyers, Ping (1993).

One dimension of relational contracting theory is reciprocity, this emphasizes that parties will freely enter into an exchange relationship when they both perceive that their positions will significantly improve from before the exchange, Evens and Blois (2004). Satisfaction will occur when these expectations are met. Over a period each party compares the economic/social outcomes to those available from alternative exchange relationship and reappraises the value of the relationship, (Dwyer et al., 1987; Lambled et al., 2001). Suppliers are more prone to feel unsatisfied and exit the current relationship to a new one if they perceive attractive alternatives in terms of better location, better services and treatment as well as high-expected financial rewards (Ping, 1993).

When other advisers (buyers) become attractive in terms of offering better quality service, less fees, locational proximity a client (supplier) may easily sever the relationship with their current adviser if they consider it not satisfactory, Nero et al., (2000).

In the context of this study, suppliers who are mobile money agents, are prone to be dissatisfied in their current relationship, when they consider the other telecommunication company to be more important because they estimate that they will be better off in an alternative telecommunication company than if they could not be aware of the presence of a better competitive firms. Therefore;

Hypothesis 1: There is a negative association between the attractiveness of competitor firms and suppliers' satisfaction in their current relationship.

4.5 Distributive Fairness of Rewards, Commission and Supplier Satisfaction

4.5.1 Distributive Fairness of Rewards and Supplier Satisfaction

Distributive fairness of rewards (DFRewards) is one of the key factors that leads to suppliers' satisfaction in a buyer-supplier relationship. It is a perception of fairness that is derived from their interactions with each other if they are in an economic relationship with each other (Brown, J.R et al., 2006). It is fairly important because firms are economic institutions so the extent with which the outcomes of engagement in a business relationships are divided and shared fairly determines to a large extent whether one of the interacting firms will be satisfied or not.

There exist the interaction effect of procedural fairness and distributive fairness on satisfaction. This is mainly valid in intra-organizational level but firms are more concerned with distributive fairness economic institutions that are more dominated by economic concerns (Brown, J.R et al., 2006)

Wagner et al. (2011) emphasizes on how outcomes fairness which is an economic factor and is related to economic satisfaction. The perception of fairness in outcome distribution is emphasized in this study as strongly leading to suppliers' satisfaction and minimizes the possibility to quit the relationship.

In the marketing channel, when one-member experience or perceive unequal sharing in the exchange of their benefits and contribution, they feel injustice and there exists a high possibility that conflicts may arise (Kumar et al., 1995; Brown et al., 2006), opposite to this is the existence of a long time relationship and a high level of satisfaction.

- The perception of low distributive fairness between telecommunication companies and their mobile money agents has largely deteriorated the level of satisfaction of

these mobile money agents who are suppliers in this context and buyers, i.e. Tigo (Tanzania) and Vodacom (Tanzania).

Also, a positive perception of distributive fairness from the supplier's side will significantly increase the level of supplier's satisfaction.

Hypothesis 2: There is a positive association between distributive fairness of rewards and suppliers' satisfaction.

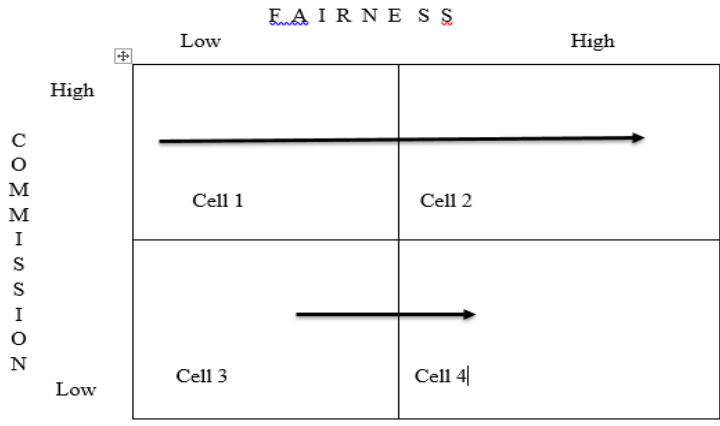
4.5.2 Interaction Effect of Distributive Fairness of Rewards and Commission on Supplier Satisfaction

Commission is the amount of payments that mobile money agents are paid on a monthly basis, as the reward from their engagement in the mobile money services business. Commission results to satisfaction when agents get paid the amount of rewards that is associated with their performance in buyer-supplier relationship (Prince, 1991). Mobile money agents depend solely on their commissions for their personal usage as well as covering of various overhead costs of their business so it should also incorporate the aspect of timely payment in order to positively influence the level of satisfaction.

Therefore, in a buyer-supplier relationship between two telecommunication companies i.e. Tigo (Tanzania) and Vodacom (Tanzania) and the mobile money agents, commission is expected to result into a positive relationship between them.

Figure 4.2 below illustrates the relationship between the interaction effect of distributive fairness of rewards and commission. The arrows in the figure below indicates the increase in the satisfaction level given a high level of commission from low level of distributive fairness to a high level of distributive fairness from Cell 1 to Cell 2. The second arrow indicates a small increase in satisfaction level given low level of commission and when the perception of distributive fairness increase from low to high perception when moving from Cell 3 to Cell 4. Cell 2 indicates high level of satisfaction when high perception of distributive fairness interacts with high level of commission. Cell 3 indicates low level of satisfaction when low perception of distributive fairness interacts with low level of commission.

Figure 4.2: Interaction effect of distributive fairness of rewards and commission on suppliers' satisfaction



Source: Own Compilation based on literature review

In the context of this study, mobile money agents are expected to be satisfied when they have a positive perception of justice towards distributive fairness of reward and given that they get high commission in the distribution of outputs.

In the study done by (Strutton and Pelton, 1994) regarding sales-managers' solidarity and its relationship with the sales people psychological climate found out that, sales managers could affect sales persons' fairness perceptions by being more open, consistent and indicate the substantial level of outcome and justice of rewards. This finding regarding the level of justice on outcomes and rewards is proposed to result to mobile money agents' satisfaction in their relationship with Vodacom and Tigo by considering the amount of efforts and time they engage in the provision of mobile money services.

Hypothesis 3: The association between distributive fairness of rewards and suppliers' satisfaction is enforced when commission increases.

4.6 Information Exchange and Supplier Satisfaction

Information exchange is defined as the “formal as well as informal sharing of meaningful and timely information between firms”, (Anderson and Narus, 1990). Communication is a very important tool for coordinating economic exchange in relational governance and

predictor of overall performance, (Gligor and Autry, 2012; Sheng et al., 2006). More intense, frequent and diverse exchange of information between supply chain partners enhances buyer-supplier relationship survival and prosperity, (Gligor and Autry, 2012).

Communication is said to be an important antecedent to relationship strength and consequently to a higher satisfaction levels in business relationships, (Hausman 2001). The exchange of information through communication is suggested to be a determining factor for both economic and non-economic satisfaction that are the main dimensions of satisfaction, (Rodriguez et al., 2006).

Therefore, in the view of the above discussion, information exchange between mobile money agents and the telecommunication companies is expected to lead to a satisfactory buyer-supplier relationship. Mobile money service agents' perception of information exchange between them and the Telecommunication companies will influence positively on how satisfied they feel about the relationship.

Hypothesis 4: There is a positive relationship between information exchange and suppliers' satisfaction.

4.7 Control Variable

4.7.1 Relationship Duration

Lengthy of the relationship in the buyer-supplier relationship and all inter-firm relationships mainly depends on how they both regards their past experiences and the possibility that their relationship will still be satisfactory in the future (Dwyer et al., 1987). Explicitly, this is the amount of time, that partners in inter-firm relationship has interacted in their business relationship (Buvik and John, 2000; Heide and Miner, 1992).

Due to prior history of a business relationship, there emerges trust and some relational norms. As the relationship duration keeps on increasing, shared values and social ties acts as a guide that determines the behaviours and tends to replace formal contractual relationships that initially determined the relationships (Bradach and Eccles, 1989).

Buvik and Halskau (2001) further postulates that, long-term relationship will result into more personal relationships that will be governed by relational norms between the partners to a business relationship on the basis and therefore replaces the need for formalized contracts.

In this context, long duration of a relationship is expected to create an atmosphere of confidence and a sense of friendliness between telecommunication companies i.e. Tigo (Tanzania) and Vodacom (Tanzania) and the mobile money agents. As relationship duration increases in the business context, mobile money agents and telecommunication companies gets enough time to understand each other capabilities and create more relational inter-firm networks therefore minimizes the distress tendencies in the relationship and therefore significantly affects satisfaction positively.

4.8 Chapter Summary

This chapter has presented the conceptual framework of this study by referring to theoretical perspective of this study in chapter three. Theories that are used in this study i.e. Relational Contracting Theory (RCT) and Equity Theory has laid a good foundation to the formulation of main hypotheses of this study based on main independent variables and control variable which offer alternative elaboration for the observed variation in the main variables of this study.

CHAPTER 5

RESEARCH METHODOLOGY

5.1 Introduction

This chapter gives the overall picture of how this research is systematically structured in order to solve the research problem at hand. It explains various techniques on how the problem is solved scientifically. It will show various methods and techniques that are used in this research and underlying assumptions that will determine which techniques are more relevant. It explains the research design, the population of interest to our research, sampling methods, sampling frame, sampling size as well as the questionnaires development and administration.

5.2 Research Design

(Saunders et al., 2009) defines research design as, the mechanisms through which research question is turned up into the research project through research strategies, choices and time frame available to carry such a particular research. Research question will influence the research strategy, data collection technique, data analysis and the period. He further defines the research design as a general plan through which the researcher will answer the research question, the authors emphasize on the importance of clearly defining the research question in the research process.

(Hakim, 2000) makes a comparison between a research design and an architect work as endeavors that both seek to fulfill a certain purpose in the end, but must take a consideration on certain associated constraints of time and the resources available.

5.2.1 Types of Research Design

(Saunders et al, 2009) further explains that, basing on research purpose at hand, research design can be exploratory, descriptive and explanatory. Descriptive studies intend to portray a profile of an event, a person or situations. It tends to get the frequency of occurrence of a certain event. Exploratory studies tend to get the causal relationship between variables, a way in which one variable results into the occurrence of another variable. The study goes further into studying various situations and existing problems in an attempt to study the causal-effect relationship between variables. The data obtained in this process will be tested

statistically to test their relationships. While exploratory research studies tend to seek new knowledge and insights in order to obtain the precise nature of problems. It is done when the researcher does not have the precise insight into the nature of the problem. This type of research is flexible because it can change to a new direction according to new findings in the course of collecting new data. The flexibility that exists in this kind of research does not mean that it lacks direction to the problem but it means that when a researcher starts his/her study can have a broad picture of the problem whose focus will narrow down as new insights are obtained and become more specific (Adams and Schvaneveldt, 1991).

5.2.2 Research Approach

Research designs can differ depending on the approaches used in a certain research. Research approaches as defined by (Creswell, 2003) are; Quantitative, Qualitative and Mixed Method Approach.

Quantitative approach is the approach in which a researcher uses post positivist claims to establish a certain body of knowledge by using measurements and observations to test the pre-established theories through carrying out experiments and survey techniques that will provide knowledge that will prove or reject the pre-established hypothesis at the end of the particular research studies. Qualitative approach on the other hand is referred to as the one that come up with a knowledge formulation based on certain existing social and historical perspectives to develop a particular pattern from the observed constructs by using strategies such as observing phenomena, theory and case studies. While mixed methods approach involves a researcher that seek the knowledge in more pragmatic basis (dealing with things more realistically to gather facts and actual occurrences). Data collection in this approach involves both numerical data as well as gathering qualitative data in interviews, so the approach uses qualitative and quantitative data inclusive. However, the common feature among all these approaches is that, data are collected for different purposes and in different ways.

This study uses a descriptive research design that is referred to as ex-post facto research because it is characterized by lack of researcher's control over the variables, the researcher can only report the trend he/she observes or what has happened before. It also seeks to find out about the causes of occurrences but cannot control the variables (Kothari, 1990). This

kind of research use various methods such as field survey to gather information that will later be subjected to various comparative studies and correlational methods. (Malhotra and Birks, 2006) postulates that descriptive research can be divided into longitudinal and cross-sectional research. While cross-sectional research design collects data from a given sample of population only one time, longitudinal research involves data collection from a sample in repetitive manner (more than once). This study used cross-sectional research to find out the extent of association between variables.

For the purpose of this research, some qualitative methods of data collection were applied in the initial development of this study through interviews with some informants from Telecommunication companies specifically on mobile money services, which helped in getting the clear insight on how the practices are. The insights we gained led to the formulation of the research problem under this study. The study also incorporated the quantitative aspects with cross-sectional correlational design to measure the effect of correlation between various independent variables and our dependent variable.

5.3 Empirical Setting: Telecommunication Industry in Tanzania

5.3.1 An Overview of the Industry

The Tanzanian telecommunication industry in Tanzania has recorded an impressive growth since the liberalization of the sector in 1990's. The communication sector growth in terms of telephone subscribers was almost half of Tanzanian population in 2011 with 22,251,964 subscribers which is 49% of total country population of about 45 million people (TCRA, 2011). The communication activities recorded highest contribution to country's GDP of 23.0% according to the National Bureau of Statistics (NBS) Quarter report of October to December 2015. In addition, the industry offers opportunities to people who are employed in various activities of communication industry as defined in the mobile money services ecosystem.

Mobile money service is the facility which uses mobile phones to transfer money and make payments including bulk disbursement, bill payments and merchant payments to the underserved (unbanked and under banked people). This service must offer an interface for transaction between the agents and customers on their mobile devices. It is a useful facility

for customers with mobile phones but have a limited or no access to banks to enable them to send or receive money and in some other markets customers can receive the sort term credit facilities (loans) through the same facility (GSMA, 2015). So to say mobile money transfer such as M-Pesa for Vodacom, Tigo-Pesa for Tigo, Airtel-money for Airtel are essential opportunities for consumers to narrow down the gaps left by traditional banking systems. According to the 16th Annual Conference of Financial Institution by the central bank, (BOT) on Financial Inclusion and Financial Innovation (2012), term mobile money services as a success story of financial services delivery in rural and urban areas to millions of people across the country especially the poor segment of population (BOT, 2012).

5.3.2 Mobile Money Value Chain

Mobile money services include various players with different roles that altogether form a mesh of partnership networks (Jenkins, 2008). The players in mobile money ecosystem in Tanzanian context are; Agents, Mobile Network Operators (MNO), payment networks, regulators, merchant and retailers as well as banks and device manufacturers.

The value chain starts from Mobile Money Operators (Tigo and Vodacom in this context). They own the mobile infrastructure, and a customer base. Master agents are immediate actors with a more direct relationship with telecommunication companies then follows the mobile money agents who perform the mobile money services to customers and in return are paid commission for the service they provide; finally, it follows a group of customers who are end users in this value chain. There are also regulators who are secondary actors to this value chain to ensure compliance to regulations by either of the parties. Based on the players in the mobile money ecosystem, they both play a role in creating an industry value chain as illustrated in the figure 5.1 below.

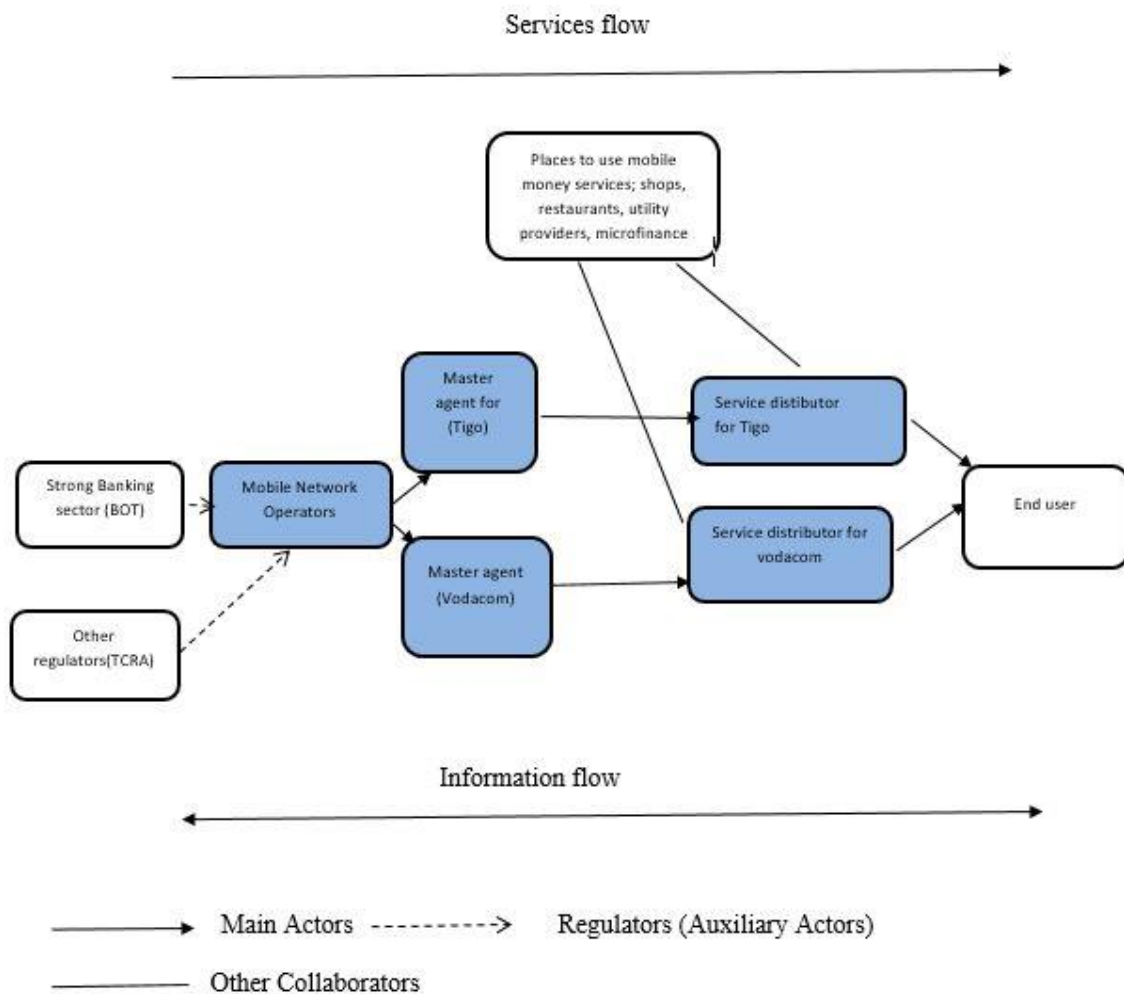
5.4 Data Collection, Sampling Frame, Sampling Size

5.4.1 Data Collection

(Kothari, 1990) explains data collection process as a task, which emerges in the research process after a researcher, has finished the task of defining research process and research design. Data collection method are decided considering the kind of data that are collected, be it primary or secondary data. Primary data are first hand data that are collected for the

first time hence displaying the character of originality. The author further suggests the methods of collecting primary data by using observation methods, through questionnaires and schedules, interviews and other methods like consumer panels, depth interviews and content analysis. Secondary data are the type of data that are compiled from the existing literal sources that had been collected and processed before through various statistical processes. Sources of secondary data are such as government publications, books,

Figure 5.1: Mobile Money Value Chain in Tanzania



Source: Own creation based on Jenkins (2008)

Based on the figure above, the highlighted tiers altogether form an empirical setting of our research study. It includes mobile money operators (Telecommunication companies i.e. Vodacom and Tigo Tanzania) which are buyers of services provided by mobile money agents (suppliers) in this context, it also include master agents who help the agents in case

of inconveniences in the course of their business operations on behalf of the mobile network operators in various regions across the country.

newspapers, magazines, international bodies publications, journals, reports and previous research studies. The author recommends that already established data should be used with enough precautions by observing how reliable they are and their suitability in relation to the respective research study.

The primary data in this research has been collected by the means of self-administered questionnaires. (Churchil and Brown, 2004) indicate various means of administering questionnaires through mail, fax, telephones and by administering personally. In this research the authors approached respondents that were conveniently available in their business locations and interviewed the respective mobile money agents in their locations by progressively interviewing them until a total sample of 100 questionnaires were all filled up.

Secondary data in this study formed a foundation for establishment of theoretical base of this study in the light of Relational Contracting Theory and Equity Theory that depicted main factors that influence the satisfaction of mobile money agents in Tanzanian industry, as well as the conceptual model based on theoretical framework. Secondary data also depicted the insights on the nature and characteristics of telecommunication industry in Tanzania that formed an empirical setting of this study. Secondary data were collected through various existing sources that relates to telecommunication industry in Tanzania specifically on mobile banking services. The sources of secondary data for this research are based on scholarly articles and scientific journals, books, previous researches and theses, Ministry of transport and communication in Tanzania, National Bureau of statistics, Bank of Tanzania Reports, Tanzania Communication Regulatory Authority (TCRA), GSMA reports, Tigo (Tanzania) and Vodacom(Tanzania) websites.

5.4.2 Sampling Frame

(Saunders et al, 2009) explains sampling as a technique that is used in the research study in identifying a subset of a certain population (total elements in a certain field under study), that the researcher will have to collect data from. Authors further defines a sampling frame as a complete list of population elements from which a researcher can draw the sample from.

The sampling frame has to be accurate, updated and complete. (Saunders et al., 2009) further explains the two sampling techniques into two categories; Probability sampling or representative sampling and non-probability sampling also known as judgmental sampling.

Probability sampling is the one in which each case or element in a population has an equal chance/probability of being included in the sample. It includes surveys and experimental methods which gives a possibility that the research questions and intended purpose of the research under study can be answered from the available sample. Forms of probability sampling are such as; simple random sampling, systematic sampling, stratified sampling, cluster sampling as well as multi-stage sampling. On the other hand, non-probability sampling does not give equal probability for every cases in the population to be included in the sample, making it hard to make statistical inferences about the characteristics of the population. Forms of non-probability sampling are such as; Quota sampling, purposive sampling, snowball sampling, self-selection sampling as well as convenience sampling.

Mobile money agents form a network of agents with impressive network of points for cash in and cash outs and are widely spread in locations such as near or in petrol station, shopping centers, market centers or just in agents' shops. Recently, there has been a survey by Financial Sector Deepening Trust in Tanzania, which came out with a finding that, there are around 17,000 M-Pesa agents throughout Tanzania according to the census done by this trust on cash outlets in the country in year 2012 and again in 2014.

Sampling frame for this study involves a number of mobile money agents working for two telecommunication companies (Vodacom and Tigo) in Tanzania located in various areas of Dar es Salaam region based on its three districts of Temeke, Ilala and Kinondoni. The agents' locations were selected randomly based on the convenient approach of agents who had a good knowledge of the business and were conveniently available to be interviewed with questionnaires that we self-administered. We approached the respondents consistently until we were able to fill 100 questionnaires.

This study employs convenience sampling which is one type of non-probability sampling which involves haphazard selection of population elements that are accessed conveniently in random places. The process is progressive randomly until the needed sample size is reached.

5.4.2.1 Convenience Sampling Technique

Convenience sampling is one of non-probability sampling technique. In non-probability sampling samples are not extracted with definite probability but are extracted purposively depending on voluntary participation and subjective selection of sample cases from a population based on researchers own selection when the decision is to be done quickly (Schreuder et al., 2001; Thompson, 1992).

Convenience sampling technique is based on the need of a researcher to get a research sample on a faster way given the researcher little control of elements of a population and there is little possibility to get representative sample to make statistical inference on the total population (Saunders et al., 2009). (Schreuder et al., 1999) postulates that, samples are selected from population in such a way that units of a population have zero probability of being selected, in the sample and therefore sample cases are more of microcosm of a given population under study, a population attribute can be estimated from this method but objective precision measure cannot be well established in design-based framework. The authors further illustrate scenario suitable for the application of non-probabilistic sampling technique based on the cheapness (cost effectiveness), less time consuming and usefulness of this techniques in small samples and the sample whose population cannot be estimated accurately.

Convenience sampling also known as haphazard sampling involves unsystematic selection of cases to include in a sample in a manner that the cases are easiest accessible in their areas of convenience and then the researcher randomly interview them (Saunders et al., 2009). This method is most appropriate for a researcher to use when there are no so much variations in the population.

This study employed convenience sampling technique to obtain total sample cases for this study. The main reason underlying the selection of this technique is lack of precise total population number of mobile money agents in Dar es Salaam region due to existence of stiff competition between Tigo and Vodacom telecommunication companies in Tanzanian market, therefore, most of their information is kept confidential to avoid competitors using this information at their expense. Also a short time frame as well as the cost effectiveness of convenience sampling method technique. The target respondents were mobile money agents from various rural and urban areas of Dar es salaam region working for two

telecommunication companies (Vodacom and Tigo) in Tanzania. The respondents were approached in their business location by the two of us, with questionnaires that we self-administered meaning that we asked them questions and filled the questions ourselves in order to ensure accurate filling of every part of questionnaire as well as ensuring high response rate. We approached the respondents consistently until we were able to fill 100 questionnaires that we needed in our survey making a response rate of 100%.

5.5 Sample Size and Data Collection

(Kothari, 1990), defines sample size as the number of elements that are collected from the population to make a sample. This number should be optimum neither too small nor too big for it to be reliable, efficient, representative and flexible. Literature does not point to the exact number of sample size that has to be selected, when doing research. It rather suggests the important points to consider when selecting a sample size, these are; nature of the population either homogeneous population which can be well represented by a small sample or heterogeneous population which requires a relatively larger sample which can capture more elements of a given population. Also depends on the nature of study, type of sampling, the expected confidence interval, availability of resources as well as other considerations like time available and conditions under which to carry a study.

(Saunders et al., 2009), posits that when deciding a suitable sample size in non-probability sampling, there are no definite rules in deciding the exact sample size but rather the logical relationship between the sample and the purpose of carrying out that particular research, making sample size to be decided basing on research objectives and research questions. Generalization in this kind of research is done based on the theory rather than a population.

Various factors determine the decision on sample size in a research, these are: availability of resources like financial resources, personnel and time, type of sample and homogeneity of population as postulated by (Malhotra and Birks, 2006; Kline, 2011). Some scholars suggest a reasonable sample size of 100 respondents or between 100-150 according to (Schumaker and Lomax, 2000) and (Hair et al., 2006) respectively. Authors suggests a ratio of five observations for every construct in a sample (Lawley and Maxwell, 1971). However, in multiple regression analysis, there is a rule of thumb for calculating the sample size according to (Tabachnik and Fidell, 2007) these are:

- 1) For testing predictor variables: $N > 104 + m$
- 2) Cases to independent variables ratio: $N > 50 + 8m$. N indicates the sample size, m indicates number of independent variables

This study has five independent variables, the minimum sample based on criterion (2) is $50 + 8 * 5 = 90$ which fits well in the criterion (2) that is $N > 50 + 8m$, with 100 sample cases in this research, factors are analyzable and offer the exploratory insights on the nature of the population under study.

For the purpose of this study, we selected a sample size of 100 respondents in Dar es Salaam region, in its three districts Ilala, Kinondoni and Temeke. The data were collected in urban and rural areas of Dar es Salaam by approaching the agents in their locations. This sample is expected to represent the population of mobile money agents in Dar es Salaam. it incorporates the sample's characteristics and there was high response rate which was argued by (Fowler, 2009) to be a more important aspect in learning about the population under study, also scholars suggested a reasonable sample of at least 100 cases (Schumaker and Lomax, 2000). We collected a sample size of 100 cases with approximately 50 case for Tigo and 50 cases for Vodacom, for comparing the relative attractiveness between each other and gain explorative insights in the context of this study.

5.6 Questionnaire Development and Data Collection Techniques

5.6.1 Questionnaire Development

We performed preliminary study on our research study in order to gather the potential insights regarding the field of our research study. In addition to prior familiarity with mobile money services, we did telephone interviews with some key informants in Tigo (Tanzania) and Vodacom (Tanzania), to hear from their end on how they do the mobile money business as well as the telephone interviews with mobile money agents to understand the real nature of the relationship with telecommunication companies hence the depth understanding into the nature of the problem.

We were able to conceptualize our research problem based on Relational Contracting Theory and Equity Theory. We also incorporated the input from our supervisor as an experienced

researcher. Before the data collection exercise started we visited some master agents for further review of the constructs in the questionnaire before we made a last version of the questionnaire for survey.

The questionnaire was made in English language as seen in **Appendix 1**, where the respondents were asked to grade the survey items in a 7-point Likert scale from 1-strongly agree to 7-strongly disagree with respect to their most important telecommunication company.

The questionnaire was divided into three main parts. Part 1 was made to gather background information of the respective mobile money agent with respect to their gender, age and their most important telecommunication company. Part 2 consisted of 7-point Likert scale ranging from 1-strongly agree to 7-strongly disagree which are designed to measure the constructs for the independent variables under this research study. Part 3 is made up of single item questions consisting of size of the agent and the relationship duration with their most important telecommunication company.

5.6.2 Data Collection Techniques and Procedures

Data collection in this research study was done by using a survey method incorporating the use of a questionnaire instrument. However, (Fowler, 2009) mentioned various other methods beside questionnaire survey, that can be used to collect data in a cross-sectional survey approach, these are; telephone interview, mails, and internet, however, in order to establish which method is most appropriate given the research environment, a researcher has to take into account the associated costs, the research question as well as the nature of the respondents and the expected response rate.

In the context of Tanzania as a research field, like many of the developing countries where internet based tools like emails are not well established. it was most convenient for researchers to use personal interview to gather information from Mobile money agents in their business locations by face to face interviews and administer the questionnaires ourselves in order to ensure accurate filling and a fast response rate. The interview was conducted in Dar-es-salaam region, within its three districts; Ilala, Kinondoni and Temeke by visiting mobile money agents shop in both populated and less populated areas around the region.

We collected a total of 100 questionnaires, we collected a sample size of 100 cases with approximately 50 case for Tigo and 50 cases for Vodacom company respondents. It was a very challenging exercise since some agents were busy especially in the populous areas of Dar es Salaam region so sometime it took us longer time to wait for them to attend their customers and then attend us or we had to move to the next convenient available agent. Data collection was based on the individual capability of mobile money agents to communicate well with us as postulated by (Campbell, 1955).

5.6 Chapter Summary

This chapter has presented the methodology used in this empirical study. The relevant research setting for this study has been presented and discussed. The chapter further explains the questionnaire development, sampling methods, techniques and size as well data collection methods and techniques. Operationalization of variables is done in the subsequent chapter.

CHAPTER 6

DEFINITIONS AND OPERATIONALIZATION OF VARIABLES

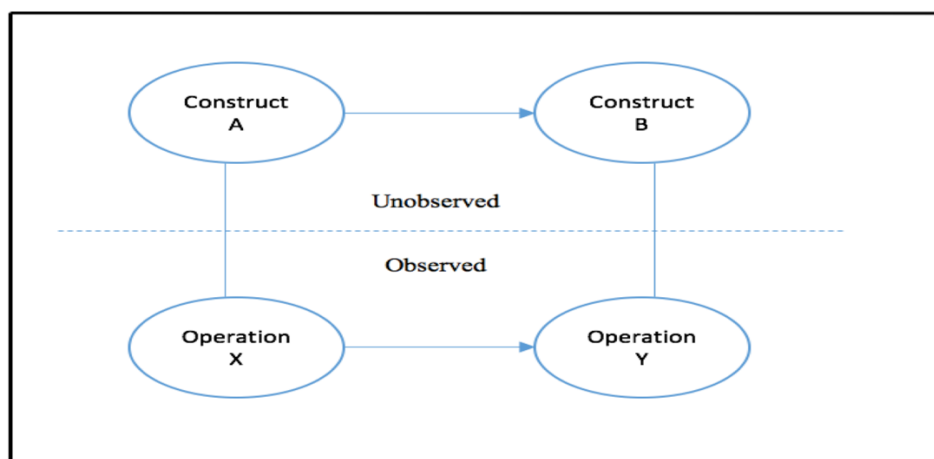
6.1 Introduction

This chapter gives an overview of the operationalization and measurement of variables used in this study. The measurement procedure involved the use of questionnaire with variables of interest in this study that have been discussed in the earlier chapter of theoretical framework. The constructs that were used in the study are defined and their measures are widely elaborated below. All the perceptual items that were used in our study are operationalized on a likert scale with a range of 1-7 points, while the non-perceptual items are measured by using a single item scale. All the measurements items used in this study have been adapted from various previous research works and modified accordingly to fit with the context of our study.

6.2 Operationalization and Measurement of Latent Variables

Measurement is defined as the assignment of numbers in such a way as to correspond to different degrees of quality or property of some object or event, (DeVellis, 2012). Latent variables are theoretical variables that stand for abstract phenomena that cannot be observed directly. The researcher must clearly define the rules of observation in order to avoid errors in making the observations. These unobserved variables (constructs) which are the area of interest of reseachers can only be visualized by operationalizing them as shown below in figure 6.1 and 6.2.

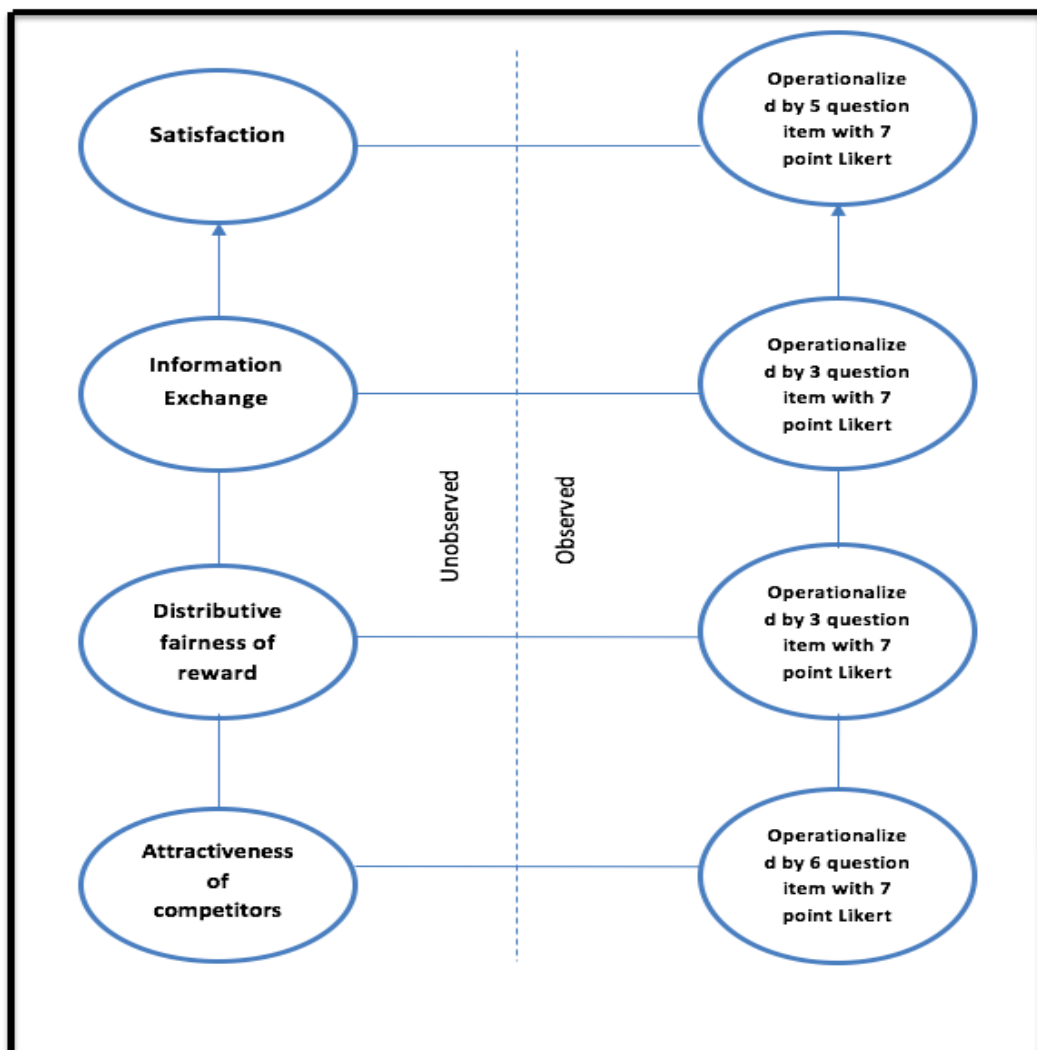
Figure 6.1: Construct Operationalization



Source: Adapted from Strube (2000)

The unobserved variable is linked to the observable to make the measurement of the unobserved variable possible (Byrne, 2012). Researcher connects the unobserved constructs with the observable operations that have been measured by different questions in a likert scale in order to be able to observe the unobserved constructs. The quality of the observations is very important because an error or mistake made in the observation level can be transformed to the constructs and therefor-creating errors of inference about constructs leading to faulty scientific knowledge, (Cook and Campbell, 1979; Gerbing and Anderson, 1988; Strube 2000). The individual constructs have been operationalized by the use of questionnaire with question items anchored on a 7-point Likert scale with 1 as “Strongly agree” to 7 “strongly disagree”. Figure 6.2 below illustrates construct-operation links in terms of distributive fairness of reward, attractiveness of competitors, information exchange and satisfaction as has been used in this research study.

Figure 6.2: Construct operationalization of various variables and satisfaction



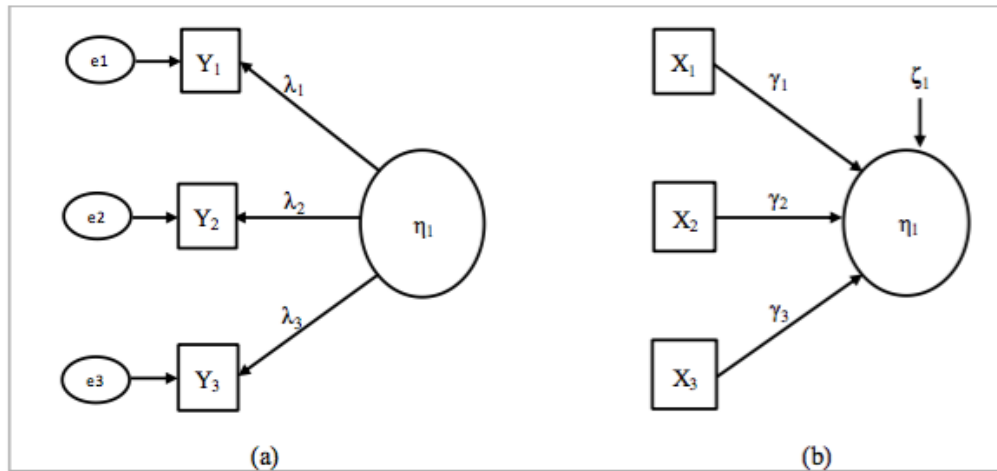
Source: Author’s own illustration based on Strube (2000).

6.3 Measurement Model

The indicators of a construct that are used to measure unobservable phenomena are categorized into two main groups; reflective measures and formative measures, (Bollen and Lennox, 1991; Jarvis et al., 2003). According to Bollen (1989), reflective measurement model represents an unobservable hypothetical construct that influences more than one observed measure in a reflective way such that variation in the construct results into variation in the measures, and hence accounting for the correlation among the observed measures. The observed measures are said to be inter-correlated because they share a common cause and are influenced by the same construct. Reliability is ensured in this measurement model since measures are expected to portray internal consistency, (Jarvis et al., 2003). On the other hand, in formative measurement model the causality effect starts from the item to the construct, the items are not correlated and there is no internal consistency therefore the model demands criterion reliability and it accounts for errors at the construct level, (Jarvis et al., 2003). Formative measurement model is not based on the classical test theory because the indicators are independent variables that are linked to the latent variable in a multiple regression model. The covariance and correlations among indicators do not follow a specific pattern or of a certain magnitude, thus omitting an indicator may change the meaning of the formative construct, therefore indicators are not interchangeable, (Damantopoulos and Winklhofer, 2001).

An example of a formative construct is “social status”, whereby this construct is formed by different individual features such as occupation, religion, education, gender, income among others. These indicators determine the social status of an individual, an increase in income or education is expected to cause an increase in social status while an increase in social status is not expected to lead to a simultaneous increase in an individual’s religious background, gender, education or any of the other factors that cause social status to increase, (Bollen and Lennox, 1991). Figure 6.3 shows the path diagrams of reflective measurement model (a) and formative measurement model (b).

Figure 6.3: Measurement Models: (a) Reflective Model; and (b) Formative Model



Source: Bollen and Lennox (1991)

The figure 6.3(a) above shows a path diagram of a reflective model with three effect indicators (Y_1, Y_2, Y_3) which are influenced by η_1 . The errors pointing to each indicator on the left indices indicates the effect of measurement error on the observed variables. The indicators are dependent on the latent variable and can be measured by the following summarized equations:

- (i) $Y_1 = \lambda_1\eta_1 + \varepsilon_1$
- (ii) $Y_2 = \lambda_2\eta_1 + \varepsilon_2$
- (iii) $Y_3 = \lambda_3\eta_1 + \varepsilon_3$

The general equation for these three equations is as follows:

$$Y_n = \lambda_{1n}\eta_1 + \varepsilon_n \quad \text{.....Equation 1.}$$

Whereby; Y_n is the n th indicator, η_1 is the latent variable or factor that influences the indicator, ε_n is the measurement error which represents variance unique to the n th indicator and is independent of all η_s and all other ε_s . λ_{1n} is the coefficient giving the expected effect of η_1 on Y_1 . It represents the factor loadings relating the indicator n to the m th factor η_1 (in this case the $m=1$ a single factor as shown in figure 6.3(a)) in a factor analytic model, (Glavee-Geo, 2012; Bollen and Lennox, 1991; Brown, 2006). However, formative measurement model shown in figure 6.3(b) above has indicators that cause the latent variable and therefore expressed as:

$$\eta_1 = \gamma_1X_1 + \gamma_2X_2 + \dots + \gamma_{1n}X_n + \zeta_1 \quad \text{.....Equation 2.}$$

whereby; η_1 and all x_s are deviation scores, $COV(x_1, \zeta_1) = 0$ for all n and $E(\zeta_1) = 0$. Equation 1 and 2 differ from one another in such that the indicators determine the latent variable rather than the reverse case, (Bollen and Lennox, 1991).

In order to achieve valid scientific results, a researcher must properly specify reflective and formative constructs in order to avoid type I error and/or type II error. Type I error occurs when the research study requires formative operationalization but the researcher chooses to use reflective operationalization. Type II error occurs when the research study requires reflective operationalization but a researcher chooses to use formative operationalization (Diamantopoulos and Siguaw, 2006). In this research study, constructs are operationalized as latent variables and all variables are measured as reflective scales.

6.4 Measurement Process

In this section each variable is defined and all question items that make up a particular latent construct are listed. This study has one dependent variable; supplier satisfaction (SUPPSAT) and three independent variables; attractiveness of competitors (COMPFRM2), distributive fairness of rewards (DFReward) and information exchange (INFOX).

6.4.1 The Dependent Variable

Supplier Satisfaction (SUPPSAT)

Supplier satisfaction is used as the dependent variable which is influenced by the independent variables mentioned above. The question items in this construct have been adopted from previous studies based on Kumar et al., (1992), Geyskens and Steenkamp, (2000), Benton and Maloni, (2005), and Crosby, Evans and Crowles, (1990). The construct is made up of five items which are anchored from “1= Strongly agree to 7= Strongly disagree”.

The following items have been used to measure supplier satisfaction as perceived by the suppliers.

- SUPPSAT 1 My relationship with this telecommunication company has been a highly successful one.
- SUPPSAT 2 My relationship with this telecommunication company is very attractive with respect to the amount of commission that I receive.
- SUPPSAT 3 I am very satisfied with working with this telecommunication company

SUPPSAT 4 This telecommunication company is very good to work with in terms of working terms and conditions

SUPPSAT 5 I am pleased with dealing with this telecommunication company always

6.4.2 The Independent Variables

- **Attractiveness of competitors (COMPFRM2)**

Attractiveness of competitors as a latent construct was measuring by using a 7-point likert scale anchored from “1= Strongly agree to 7= Strongly disagree”. This construct is adapted from the previous works of Li-Wie Wu, (2011), Ping, (1993), and Kumar et al., (1995). The following items have been used to measure attractiveness of competitors as perceived by the suppliers.

COMPFRM2 1 The commission I receive from the other telecommunication company is much better compared to what I receive from this telecommunication company.

COMPFRM2 2 The system of the other telecommunication company is more user-friendly than that of this telecommunication company.

COMPFRM2 3 There is better information flow from the other telecommunication company than there is from this company.

COMPFRM2 4 I am more satisfied to working with the other telecommunication company than with this company

COMPFRM2 5 The other telecommunication company is more trustworthy than this Company.

COMPFRM2 6 The other telecommunication company is more friendly to deal with than this telecommunication company.

- **Distributive fairness of rewards (DFReward)**

This construct is made of three items by using a 7-point likert scale anchored from “1= Strongly agree to 7= Strongly disagree”. The measurement items were adapted from the previous research studies by Holbrook and Hirschman, (1982), and Brown et al., (2004). The following items have been used to measure distributive fairness of rewards as perceived by the suppliers.

DFReward 1 This telecommunication company pays me commission that corresponds

to what I expected to receive.

DFReward 2 The commission that I receive from this telecommunication company on each transaction reflects (is fair compared to) the amount of earning this company receives from that transaction

DFReward 3 This telecommunication company does not benefit at my detriment in our relationship by paying less than what I deserve.

- **Information Exchange (INFOX)**

This construct is made of two items by using a 7 point likert scale anchored from “1= Strongly agree to 7= Strongly disagree”. The measurement items were adapted from the previous research work by Heide and Miner, (1992) and Dalhstrom and Nygaard (1999). The following items have been used to measure information exchange as perceived by the suppliers.

INFOX 1 Information about changes and defaults in the systems are clearly communicated to me by this telecommunication company.

INFOX 2 Important information from the telecommunication company is timely communicated to me.

INFOX 3 Information from the telecommunication company pass swiftly to me through the master agent.

- **Duration**

Duration represents the amount of time that suppliers have been working with the telecommunication company in terms of number of years. The construct was adapted from Heide an Miner (1992), Buvik and Andersen (2002) and Kumar et al., (1995) and has been operationalized by computing the natural logarithm of the actual duration in years. The construct is measured by a single open-ended question:

How long have you been working with this telecommunication company?.....years

6.5 Chapter Summary

This chapter has explained all the constructs that were used in our research study and their respective measures delineated. Operationalization and measurement of variables were

also discussed in this chapter. Measurement model that was used and the question items for both dependent and independent variables were presented. In the next chapter, reliability and validity tests are presented and thoroughly discussed.

CHAPTER 7

MEASUREMENTS ASSESSMENT AND DATA VALIDATION

7.1 Introduction

This chapter presents the assessment of data quality and validation in order to ensure credibility of our data to be used for further statistical analyses. We have performed descriptive statistics, reliability and data validation tests in order to check that the parametric assumption of the regression analysis have been met. The results of exploratory factor analyses, scale validity and reliability tests results are presented in this chapter.

7.2 Preliminary Data Screening and Cleaning

We first started by going through the data set to check for any missing data. We did not find any missing data in our sample set of 100 questionnaires collected from Tigo and Vodacom agents. This is because we self-administered the collection of questionnaires and therefore we made sure all the question items were being filled by all the respondents. Then we checked for outliers in our research data set. Outliers are defined by (Pallant, 2011) as the cases whose values lie well above and below the majority of other cases in the sample. They tend to have much more impact on the value of regression coefficient, this may lead to causing both Type I and Type II errors, (Tabachnick, 2007). Outliers can be identified by looking at the histogram for the points that are sitting on their own out in the extreme, also by the use of boxplots. Outliers appear as little circles that extend beyond 1.5 box-length from the edge of the box, (Pallant, 2011). By using histogram and box-plot we did not find any outliers in our data set, except for 3 items in duration and commission were circled outside the box-plot. With the use of 5% Trimmed Mean we checked the significance of these outliers to the mean, and we found out that they had no significant impact to the mean. (Duration mean was 2.31 and its 5% Trimmed mean was 2.21 and Commission mean was 5.38 while its 5% Trimmed mean was 5.40). therefore we decided to leave them since they had no impact to the variable mean. According to Pallant (2011), 5% Trimmed Mean indicates how much of a problem the outlying cases can be to the analysis, whereby, when there is a big difference between the two mean values (Mean and the 5% Trimmed Mean). The data cases need to be investigated further, however if the difference is small they can be retained in the data set.

7.3 Assessment of Skewness, Kurtosis and Normality Check

Descriptive statistics needs to be computed after checking for the missing data or any out-of-range values in any of the variables in order to check for the characteristics of the sample and to check for violation of any assumptions of the statistics techniques, (Pallant, 2011). According to Gaur (2006), descriptive statistics provide numerical and graphical representation of data. The methods providing numerical summary are central tendency and variability, the central tendency outputs being mean, median and mode and variability output are range, variance, standard deviation, percentiles, skewness and kurtosis. Normality of variables distribution can be presented statistically or graphically, the components for checking variability are skewness and kurtosis, (Tabachnick, 2007). The distribution is skewed if its variables that are below and above the mean are not symmetrically distributed, creating a positive skewness when the mean is greater than the median and negative skewness when the mean is less than the median, (Gaur, 2006). Kurtosis shows the peakness of the distribution, whether too high or too low (flat), (Tabachnick, 2007). We conducted descriptive analysis for our data to produce mean, maximum, minimum, and standard deviations for each variable shown in Table 7.1 below. We also conducted a normality test for our data, the results indicated that most of our variables were normal, with their variables' skewness and kurtosis being within the range of ± 1 and ± 3 for skewness and kurtosis respectively, (Kline, 2005). The results are presented below in Table 7.2.

Table 7.1: Descriptive Statistics of Constructs characteristics

	N	Minimum	Maximum	Mean	Std. Deviation
DFRewards1	100	1	6	3.02	1.189
DFRewards2	100	1	6	3.57	1.241
DFRewards5	100	1	6	3.58	1.208
INFOEXC1	100	1	4	2.50	.732
INFOEXC2	100	1	4	2.31	.662
INFOEXC5	100	1	4	2.69	.861
COMPFIRM2B	100	1	7	4.91	1.478
COMPFIRM2C	100	2	7	5.13	1.405
COMPFIRM2D	100	1	7	4.98	1.435
COMPFIRM2E	100	2	7	5.41	1.164
COMPFIRM2F	100	2	7	5.14	1.295
COMPFIRM2G	100	2	7	5.12	1.444
SUPPSAT1	100	1	5	2.90	1.115
SUPPSAT2	100	1	6	2.82	1.266
SUPPSAT3	100	1	5	2.92	1.107
SUPPSAT4	100	1	5	2.85	.936
SUPPSAT5	100	1	5	2.97	1.105
Commission	100	10000	700000	285400.00	164890.046
Duration	100	1	7	2.99	1.259
Valid N (listwise)	100				

Table 7.2: Descriptive Statistics of Constructs

Descriptive Statistics					
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
DFRewards1	100	.660	.241	-.134	.478
DFRewards2	100	-.002	.241	-.335	.478
DFRewards5	100	-.367	.241	-.142	.478
INFOEXC1	100	-.158	.241	-.238	.478
INFOEXC2	100	-.012	.241	-.218	.478
INFOEXC5	100	-.222	.241	-.541	.478
COMPFIRM2B	100	-.628	.241	-.114	.478
COMPFIRM2C	100	-.526	.241	-.648	.478
COMPFIRM2D	100	-.571	.241	-.336	.478
COMPFIRM2E	100	-1.051	.241	.977	.478
COMPFIRM2F	100	-.494	.241	-.382	.478
COMPFIRM2G	100	-.706	.241	-.723	.478
SUPPSAT1	100	-.067	.241	-.806	.478
SUPPSAT2	100	.408	.241	-.602	.478
SUPPSAT3	100	-.021	.241	-.890	.478
SUPPSAT4	100	.156	.241	.103	.478
SUPPSAT5	100	-.123	.241	-1.032	.478
Commission	100	.598	.241	-.461	.478
Duration	100	.422	.241	.202	.478
Valid N (listwise)	100				

7.4 Reliability

This section presents the reliability of data scale that has been used for our analysis. Checking the reliability of the scale of your study is important to determine how the scale is free from random error, (Pallant, 2011). Reliability test measures to what extent the variable has true values and is free from error, if the same measure is performed a number of times how consistent will the results be, a greater consistency will indicate a more reliable scale (Hair et al, 2010). Reliability test can be measured in four principle approaches depending on the primary goals of the research study; test-retest, split half, internal consistency, and inter-judge (Mentzer and Flint, 1997). The commonly used reliability tests are test-retest reliability and internal consistency; test-retest reliability is performed for the same sample at different times to check whether time/situational differences will have an impact to the

results, a higher correlation indicates higher reliability of the scale. Internal consistency reliability test checks whether all the items in the scale are measuring the same thing, (Pallant, 2011). In our study we have used internal consistency test of reliability where the results were analysed by the use of Cronbach alpha. According to Mentezzer and Flint (1997) internal consistency approach is a very important tool in survey research to determine whether variable cases work consistently before they are tested for validity. By using Cronbach alpha, the cases in a variable in order to be considered as having a correlation with one another (measuring the same thing) need to have a value of at least 0.7, the closer the value is to 1 the stronger is the internal consistency between the items and the closer the value is to 0 the weaker the correlation (Nunnally, 1967). In our study all the variables used had values above 0.7 as indicated in the result Table 7.3 below. Indicating that our variable cases have strong internal consistency with each other.

Table 7.3: Construct Reliability Scores

Construct	Items	No. of Items	Cronbach Alpha (α)
DFRewards	RW1, RW2, RW5	3	0.834
Competitive Firm2	Compfirm 2B,2C,2D,2E,2F,3G	6	0.886
Supplier Satisfaction	SUPPSAT1, 2, 3, 4, 5	5	0.932
Information exchange	Infox1, Infox2, Infox5	3	0.770

7.5 Validity

Validity is defined as the degree of which the instrument used in a research study measures what it was supposed to measure (Kimberlin, 2008). It is the level of confidence we have in the conclusion, we make concerning our research study (Mentezer and Flint, 1997). Validity assessment tests the relationship between the measure and the traits it is trying to measure. There are four types of validity tests; face validity, predictive validity, content validity and construct validity. Face validity measure decides whether the instrument looks like it is measuring the correct characteristics, an expert who looks at the instrument and its subjects qualitatively decides this. Predictive validity measure if the instrument is able to predict other measures of the same thing. Content validity checks if the instrument reflects all the intended specific domain of the variable. Construct validity measures the

expected pattern of the relationship among variables, (Gaur, 2006). In this study we used construct validity measure.

7.5.1 Construct Validity

Construct validity measures how well the scale assesses the magnitude and direction of a representative sample of the characteristics of the construct and the degree that the measure is not contaminated with the elements from the domain of other construct or error (Dunn, 1994). The main construct validity components are discriminant validity and convergent validity, (Mentzezer and Flint, 1997).

7.5.1.1 Discriminant Validity

In discriminant validity, all the items relating to the same construct are discriminated and loaded in one factor component and all the other items of a different construct are loaded into a different factor component. Convergent validity bring together several different items that measure the same construct and are related to one another (Mentzezer and Flint, 1997). In our study we performed a discriminant validity by using exploratory factor analysis (EFA-Principal Component Analysis). For data to be considered as having a good validity, factor analysis test by using exploratory factor analysis-the Bartlett's test of sphericity should be significant ($p < .05$) and the Kaiser-Meyer-Olkin (KMO) should have a minimum value of 0.6 (Pallant, 2011). Items loading for each construct are presented in Table 7.4 below. Principal components analysis revealed the presence of 4 components with factor loadings above 0.50 the recommended threshold by Hair et al., (2010); Distributive Fairness of Rewards (DFReward), Attractiveness of competitive firm (COMPFIRM2), Information exchange (INFOX) and Supplier Satisfaction (SUPPSAT), with eigenvalues exceeding 1, explaining 9.9%, 42.32%, 7.1% and 14.25% of variance respectively, making a cumulative variance of 73.5%. The Keiser-Meyer-Olkin (KMO) value was 0.831 exceeding the recommended value of 0.6 by Kaiser 1970, Pallant (2011).

Table 7.4: Exploratory Factor Analysis

Rotated Component Matrix ^a				
	Component			
	1	2	3	4
COMPFIRM2D	.887			-.211
COMPFIRM2C	.778	-.117	-.174	
COMPFIRM2G	.753	-.272		-.149
COMPFIRM2B	.741	-.112	-.172	-.150
COMPFIRM2F	.733	-.305		-.301
COMPFIRM2E	.631	-.263	.179	
SUPPSAT5	-.349	.831	.131	.280
SUPPSAT3	-.368	.818	.121	.248
SUPPSAT2	-.230	.792	.264	.232
SUPPSAT4		.780	.129	
SUPPSAT1	-.291	.768	.182	.285
DFRewards2	-.127	.130	.921	
DFRewards5	-.178	.127	.853	
DFRewards1	.134	.428	.697	
INFOEXC1	-.262			.850
INFOEXC5		.275		.763
INFOEXC2	-.269	.207		.738

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

7.6 Chapter Summary

This chapter has presented the initial stages of data analysis comprising of data screening, descriptive statistics and characteristics of the sample. It has also presented the reliability and validity test results of the data to be used for further analysis. We used Cronbach alpha to check the constructs reliability and the validity was checked by using exploratory factor analysis. Regression analysis is presented in the next chapter.

CHAPTER 8

HYPOTHESES TESTS AND EMPIRICAL FINDINGS

8.1 Introduction

In this chapter we conducted further analysis on our data. We tested hypotheses used in our model and presented the results. We used Multiple regression analysis to conduct such tests. Explanation of the model and the results of the hypotheses tests are presented below.

8.2 Regression Model

Regression analysis is the study of dependence of one variable on one or more variables. Bivariate regression analysis is the one where a dependent variable is related to a single explanatory variable and a Multivariate regression is the one that the regressand is related to one or more regressors (Gujarati, 2009). In our study we have more than one explanatory variable that explains the dependent variable therefore, the regression analysis that fits best is the multivariate/multiple regression analysis. Multiple regression analysis uses two types of estimation methods; Maximum Likelihood (ML) and Ordinary Least Squares (OLS). The most commonly used approach is the OLS due to its appealing features and it also produce results that are much simple to interpret (Gujarati, 2009). In this study we have used OLS method to estimate the independent variables relation to the dependent variable in our model. According to Pallant, (2011) there are three main types of multiple regression; standard or simultaneous regression, hierarchical or sequential regression and stepwise regression. In standard/simultaneous multiple regression all the independent variables are entered simultaneously and each variable is evaluated according to the predictive power it has on the dependent variable. In hierarchical regression analysis the variables are entered in the equation in the sequence or order that has been specified by the researcher basing on the theoretical background he/she has on the study. In a stepwise regression analysis, the program decides which variables to enter and in which order depending on a set of statistical criteria. In our study we have used the hierarchical multiple regression approach.

We tested our model by using the Ordinary Least Squares regression to estimate the variables that have an effect in our dependent variable of supplier satisfaction and the interaction effects between variables that has influence on the dependent variable. In our model we found a relation between the independent variables; distributive fairness of

rewards (DFReward), attractiveness of competitive firm (COMPFRM2) and Information exchange (INFOX) and the dependent variable of supplier satisfaction (SUPPSAT). Also, the interaction effect between commission received and distributive fairness of rewards (DFReward*Commission) had an impact to the supplier satisfaction. Whereby relationship duration was used as a control path for the model.

Research model:

$$\text{SUPPSAT} = b_0 + b_1\text{DFRewards} + b_2\text{Compfrm2} + b_3\text{Infox} + b_4\text{Commission} + b_5\text{Duration} + b_6\text{DFReward*Commission} + \varepsilon \quad \dots \text{Equation 8.1}$$

Where:

Dependent variable:

SUPPSAT = Supplier’s Satisfaction

Independent variables:

DFReward = Distributive Fairness of Rewards

Compfrm2 = Attractiveness of competitive firm (Other telecommunication Company)

DFReward*Commission = Distributive Fairness of Rewards x Commission

Commission = Commission received by the supplier in terms per month

Infox = Information exchange

Duration = Relationship duration in terms of years

ε = Error term

b_0 = Constant

$b_1, b_2, b_3, b_4, b_5, b_6$ = Regression coefficients.

8.3 Further Data Analysis

Multiple regression analysis is based on assumptions, and violations of those assumption is not tolerated (Pallant, 2011). Therefore, before running a multiple regression analysis we checked our variables if they meet all the underlying assumptions. Explanation and results for the tests of each assumption is provided below.

8.3.1 Normality Assumption

Normality assumption requires that residuals should be normally distributed about the predicted dependent variable scores (Pallant, 2011). Normality is achieved when residuals have a uniform variance across all levels of the predictors (Kline, 2011). Normality of variables can be checked through the use of a scatterplot whereby for a normal distributed data, the graph will show a pile up of residuals at the centre of the plot (Tabachnick and Fidell, 2007). It can also be measured by using a normal probability plot (P-P), for a normally distributed data the points will lie in a reasonable straight diagonal line from bottom left to top right, Pallant (2011). Normality of distribution can also be measured by using skewness and kurtosis. According to Gaur (2006) a distribution is normal if the observations are symmetrically distributed about the mean value and its peak has the value of 3 (neither flat nor peaked).

We checked the normality of our data by using the skewness and kurtosis measures, where by all of our data were within the limits of a normally distributed data; skewness value less than 3 and kurtosis value less than 10 (Kline, 2005). The result of this skewness and kurtosis test is presented in the Table 7.2 above. And also the graphical result of normality test in shown in **Appendix 8.1**, showing that our data set was normally distributed.

8.3.2 Multicollinearity Assumption

Multicollinearity is the dependence among independent variables when the correlation between them is 0.9 and above (Pallant, 2011). Calculation of regression coefficients requires inversion of the matrix of correlations among independent variables which becomes unstable if they are multicollinear (Tabachnick and Fidell, 2007). Failure to meet the multicollinearity assumption contributes to creation of a bad regression model (Pallant, 2011). Multicollinearity can be measured by using Tolerance value and Variance Inflation Factor (VIF) value. Tolerance indicates how much of the variability of the specified independent variable is not explained by the other independent variable, a very small value of less than 0.10 indicates a high correlation between variables. VIF, which is the inverse of the Tolerance value, will indicate the presence of multicollinearity if its value is above 10 (Pallant, 2011). Table 8.1 below presents the correlation matrix, descriptive statistics and collinearity diagnostics which shows that our data set meets the regression assumption of multicollinearity.

8.3.3 Homoscedasticity Assumption

Homoscedasticity is the assumption that the variance of the residuals about the predicted dependent variable scores is the same for all predicted scores (Tabachnick and Fidell, 2007). Homoscedasticity assumption can be checked by using the normal probability plot (P-P) of the regression standardized residual or the scatterplot, whereby for data set that have homoscedasticity the residuals will be distributed at the center of the graph creating a rough rectangular shape in a scatterplot graph (Pallant, 2011). The scatter plot indicating the result of this test is shown in **Appendix 8.2**, whereby the points are appearing to be scattered around the center stage forming a rectangular shape, therefore meeting the homoscedasticity assumption.

Table 8.1: Correlation Matrix, Descriptive Statistics and Collinearity Diagnostics

	1	2	3	4	5	6	7
1. SuppSat	1.0	0.42	-0.55	0.49	-0.19	0.15	0.04
2. DFRewards		1.0	-0.20	0.09	-0.16	-0.05	-0.16
3. Compfirm2			1.0	-0.44	-0.20	-0.14	0.16
4. Infox				1.0	-0.13	0.18	-0.03
5. Commission^b					1.0	0.47	0.01
6. Duration^b						1.0	0.09
7. DFRewards*Commission							1.0
Mean	2.89	0.00 ^a	5.12	2.50	0.00 ^a	0.99	-0.05
Std. Deviation	0.98	1.05	1.09	0.63	0.75	0.48	0.42
Tolerance		0.90	0.68	0.69	0.64	0.70	0.94
VIF		1.11	1.47	1.45	1.57	1.43	1.06

^aMean-centered variables

^bTransformed variables into natural logarithm

8.4 Regression Analysis

The regression analysis used in this study includes main effects, interaction effect and control effect. We ran a hierarchical multiple regression analysis by using SPSS 22 software. Hierarchical regression model clearly delineates the interpretation of both main, control effect and interaction effects that may not be provided by a single regression model containing main, interaction and control terms (Pallant, 2011). Clear comparison of the results of the two models; the one with only independent variables and a control variable

(Model 1) and the one that included the main terms, control term and interaction terms (Model 2) to see the impact of the interaction effect in the regression analysis model are presented below in Table 8.2. All the variables entering the interaction terms were mean-centered in order to avoid the potential problem of multicollinearity. Whereby, both VIF and Tolerance statistics of all the items were within the recommended criterion threshold of <10 and >0.10 respectively.

Hierarchical multiple regression was used to assess the ability of four measures; distributive fairness of rewards (DFReward), attractiveness of competitors (COMPFRM2), information exchange (INFOX) and interaction effect of distributive fairness of rewards and commission (DFReward*Commission) together with a control variable of duration to predict the level of supplier satisfaction (SUPPSAT). Preliminary analyses were conducted to ensure there was no violation of assumptions of normality, multicollinearity and homoscedasticity.

In Model 1 distributive fairness of rewards (DFRewards), attractiveness of competitors (COMPFIRM2), Information exchange (INFOX) and control variable of duration were regressed. As depicted in Table 8.2, the model provided adequate prediction of supplier satisfaction by explaining explaining 55% with $R^2_{Adj} = 0.529$, significant at $p < 0.01$. Model 2 incorporated contribution of one interaction term; distributive fairness of rewards and commission (DFRewards*Commission). The overall goodness of fit for the estimated regression model 2 was significant with $F(6, 93) = 20.875$, $p < 0.01$, $R^2 = 57\%$ and $R^2_{Adj} = 0.546$. Such good fit indicates that our model gives an adequate description of the data set, (Pallant, 2011). The inclusion of one interaction term in our model improved the model's overall explanatory power by 2.1%. The contribution of interaction term is shown in the F -change statistics where by; $F(1, 93) = 4.684$, $p < 0.05$ (see **Appendix 8.3**). Nonetheless both Model 1 and Model 2 have significant F -value at $p < 0.01$ implying that the inclusion of independent variables and interaction term significantly explains variations in supplier satisfaction. Therefore, it can be concluded that our estimated model fits the data very well.

Table 8.2: Hierarchical Regression Analysis: Dependent Variable – Supplier Satisfaction

Independent Variables	Unstandardized Coefficients (b)	Standardized Coefficients	t-values
Constant (b ₀)	8.076		4.662 ^a
DFReward (b ₁)	0.260	0.278 ^a	3.850 ^a
Compfirm2 (b ₂)	-0.401	-0.447	-5.394 ^a
Infox (b ₃)	0.295	0.188	2.262 ^b
Commission (b ₄)	-0.421	-0.320	-3.699 ^a
Duration (b ₅)	0.449	0.218	2.663 ^a
Model 1 Fit:	$R^2 = 0.552, R^2_{Adj} = 0.529, F(5, 94) = 23.204, p < 0.01, n = 100$		
Constant (b ₀)	8.119		4.777 ^a
DFReward (b ₁)	0.278	0.297	4.164 ^a
Compfrm2 (b ₂)	-0.422	-0.471	-5.729 ^a
Infox (b ₃)	0.290	0.184	2.261 ^b
Commission (b ₄)	-0.415	-0.315	-3.725 ^a
Duration (b ₅)	0.412	0.200	2.478 ^b
DFReward*Commission (b ₆)	0.351	0.151	2.164 ^b
Model 2 Fit:	$R^2 = 0.574, R^2_{Adj} = 0.546, F(6, 93) = 20.875, p < 0.01, R^2\text{-change} = 0.021, F\text{-change}(1, 93) = 4.684, p < 0.05, n = 100$		

^aSignificant at $p < 0.01$

^bSignificant at $p < 0.05$

8.5 Test of Hypotheses

After applying our specified regression coefficients in Table 8.2 to our model, our research model becomes as follows:

$$\text{SUPPSAT} = 8.119 + 0.278\text{DFRewards} - 0.422\text{Compfrm2} + 0.290\text{Infox} - 0.415\text{Commission} + 0.412\text{Duration} + 0.351\text{DFRewards*Commission} + \varepsilon$$

.... Equation 8.2

The regression model in Equation 8.2 demonstrates the relationship between dependent variable supplier satisfaction (SUPPSAT) and independent variables; distributive fairness of rewards (DFRewards), attractiveness of competitors (COMPFRM2) and information exchange (INFOX), and an interaction term; distributive fairness of rewards and commission (DFRewards*Commission) together with a control variable of duration (Duration).

The effect of attractiveness of competitive firm (COMPFRM2) on supplier satisfaction (SUPPSAT) is negative and significant ($b_2 = -0.422, t = -5.729, p < 0.01$, one tail), therefore, hypothesis H₁ is supported. The interpretation of hypothesis H₁ is that, as the mobile money service agent perceive the competing telecommunication firm(s) to be more attractive economically than the current firm, their satisfaction with the current firm becomes significantly weakened. Thus, there is a negative relation between the attractiveness of the competing firms and the satisfaction level of the supplier in the current relationship. The effect of distributive fairness of rewards (DFRewards) on supplier satisfaction (SUPPSAT) is positive and significant with ($b_1 = 0.278, t = 4.164, p < 0.01$, one tail), hence, hypothesis H₂ is supported. The interpretation of hypothesis H₂ is that, as the mobile money service agents perceive a higher level of distributive fairness of rewards from the telecommunication company that they are working with, the supplier's satisfaction in this relationship becomes significantly improved. The effect of information exchange on supplier satisfaction is significant and positive at ($b_3 = 0.290, t = 2.261, p < 0.05$, one tail), hence, hypothesis H₄ is supported. The interpretation of hypothesis H₄ is that, the presence of a information exchange between the telecommunication companies and the suppliers has a significant positive effect to the suppliers' satisfaction. The interaction effect of distributive fairness of rewards and commission (DFRewards*Commission) is positive and significant at ($b_6 = 0.351, t = 2.164, p < 0.10$, one tail), thus supporting hypothesis H₃. The control variable of duration in this study has significant and positive effect on supplier's satisfaction at ($b_5 = 0.412, t = 2.478, p < 0.05$, one tail), this indicates that, the longer the relationship duration the higher the supplier's satisfaction.

8.5.1 Interpretation of Interaction Effects

As pointed out earlier, the variables entered into the interaction effect were mean-centered so as to overcome the potential problem of multicollinearity, (Kline, 2011; Jaccard and Wan, 1996). The presence of multicollinearity can render correlations between interacting terms and their constituent variables to be inflated and therefore leading to artificial results (Kline, 2011). Therefore, when mean-centering, the main effect of variable constituting the interaction terms is taken when the variable with which it interacts is at its mean level, (Buvik et al., 2014; Rokkan et al., 2003). This practice can be seen in the previous research works by Buvik et al., (2014), Wang et al., (2013), Rokkan et al., (2003) and Buvik and Gronhaug, (2000).

According to Buvik et al., (2014) in order to assess the effect of interaction terms in our regression model Equation 8.1 above we have taken the partial derivative of distributive fairness of rewards (DFReward) with respect to supplier satisfaction (SUPPSAT). We considered the partial effect of the distributive fairness of reward on supplier satisfaction in the presence of commission they receive. The partial derivative is as follows:

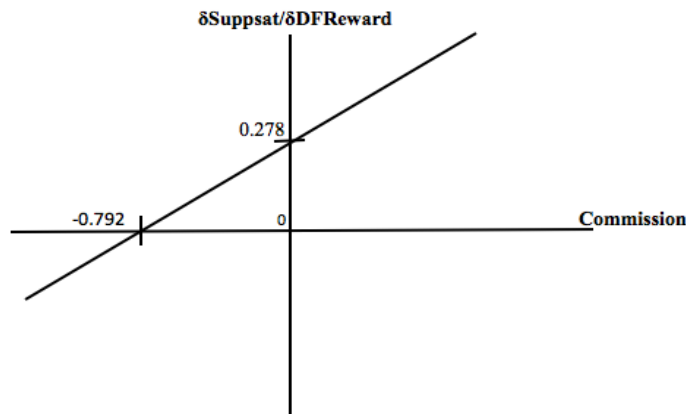
$$\frac{\delta \text{SUPPSAT}}{\delta \text{DFReward}} = b_1 + b_6 \text{Commission} \quad \dots \text{Equation 8.3}$$

After conducting the multiple regression analysis test we obtained the results indicated in the Table 8.2 above. Upon substitution of the coefficient values obtained from the results of our regression model in Equation 8.3 above, the results of our interaction derivative becomes as follows in Equation 8.4 below:

$$\frac{\delta \text{SUPPSAT}}{\delta \text{DFReward}} = 0.278 + 0.351 \text{Commission} \quad \dots \text{Equation 8.4}$$

By using the results presented in Equation 8.4 we plotted a graph depicted in Figure 8.1. The graph demonstrates the plot of partial derivative of supplier satisfaction with respect to distributive fairness of reward in consideration with the commission the suppliers receive. The graph shows a positive slope of the moderator variable suggesting that, distributive fairness of rewards (DFReward) becomes more positively related to supplier satisfaction (SUPPSAT) as the amount of commission received increases. We expressed the commission as a natural logarithm of the Tanzania shillings the suppliers receive per month, which is Ln (TSh amount), therefore the graph below is in logarithmic scale.

Figure 8.1: The Effect of Distributive Fairness of Rewards on Supplier Satisfaction at Different Levels of Amount of Commission



Source: Own creation

Figure 8.1 above portrays the estimated effect of distributive fairness of reward on supplier satisfaction for the different levels of commission suppliers receive. As pointed out earlier, the variables entered in the interaction effect were mean-centered to avoid the problem of multicollinearity. Therefore, the mean value of commission (the zero) depicted in the graph above is the centered mean that corresponds to a real value of 12.349. The commission intercept value of -0.792 shown in the graph above represents a real value of 11.557 (i.e. 12.349 minus 0.792).

The interpretation of the finding is that as the supplier's amount of commission increases, the effect of distributive fairness of rewards on supplier satisfaction is enforced. Also, the effect of distributive fairness of rewards on satisfaction decreases as the amount of commission decrease, therefore, there is a positive relationship between the effect of distributive fairness of rewards on supplier satisfaction as the amount of commission increases. Distributive fairness of rewards has a positive effect on supplier satisfaction above valued amount of Tsh 104,506/=, which is equivalent to anti logarithm value of 11.557. As the amount of commission exceeds this level, the effect of distributive fairness enforces supplier satisfaction positively. As from our data set there are only 10 mobile agents who received amount of commission below this amount of Tsh 104,506/=, representing only 10% of the sample size, therefore 90% of the correspondents fall on the right side of the graph from point -0.792 (i.e. 11.557), providing an empirical support for hypothesis H₃.

8.6 Summary of Hypotheses Test

Table 8.3: Summary of Hypotheses and Results

Hypothesis	Coefficient	t-value	Findings
H₁ : Attractiveness of competitive firm has a negative effect on the suppliers' satisfaction of their relationship with the current firm	-0.422	-5.729 ^a	Supported
H₂ : There is a positive relationship between the distributive fairness of rewards and suppliers' satisfaction	0.278	4.164 ^a	Supported
H₃ : There is a positive association between the distributive fairness of rewards and suppliers' satisfaction when the commission received increases	0.351	2.164 ^b	Supported
H₄ : There is a positive association between information exchange and supplier satisfaction	0.290	2.261 ^b	Supported
Control variable: There is a positive relationship between relationship duration and supplier satisfaction	0.412	2.478 ^b	Supported

^aSignificant at $p < 0.01$

^bSignificant at $p < 0.05$

8.7 Chapter Summary

In this chapter OLS regression technique has been used to derive the estimated regression model used in this study. The chapter has also presented the outcome of a hierarchical regression analysis of the estimated supplier satisfaction and subsequent tests of hypotheses. All hypotheses (H₁, H₂, H₃ and H₄) and a control variable in this study have been strongly supported. The chapter presents a summary of findings and gives a thorough discussion in light of the relevant theoretical underpinnings.

CHAPTER 9

SUMMARY, DISCUSSIONS, IMPLICATIONS, LIMITATIONS AND FUTURE DIRECTION

9.1 Introduction

This chapter is the culmination of the foregoing discussion in the previous chapters. It brings together discussions raised in the previous chapters with regard to the relevant theories. This chapter further presents a thorough discussion on the key findings of the study in light of the research questions and objective of the study. Theoretical and managerial implications are also presented, together with the limitation of this study and suggestions for further directions.

9.2 Summary of the Findings

This study was focused on examining and explaining supplier satisfaction construct. This was fulfilled by examining factors contributing to mobile money service agents' satisfaction in their relationship with the telecommunication companies in Tanzania. The satisfaction construct is very important in the supply chain because it affects channel members' moral and the incentive to participate in the channels activities. Suppliers are very important in the industry such that the success of the industry hinges on the way suppliers perceive their relationship with their customers as this can influence their performance within the dyad, hence the success or otherwise of the industry and subsequently the supply chain, (Essig and Amann, 2009). The motivation for channel members to maintain in the relationship increases most especially when there is a high level of outcomes i.e. economic benefits and therefore making the need for the replacement of the exchange partner not necessary. This study was mainly focused on the impact that suppliers' perception of distributive fairness of rewards has on their satisfaction level. Moreover, it also investigated on the impact that the presence of high attractive of competitors in the market affect suppliers' satisfaction in their current relationship and also the effect of information exchange on suppliers' satisfaction. The result found in this study were targeted to review managerial practices and policies that telecommunication companies set for the purpose of improving mobile money service agents' satisfaction in Tanzania. We also were interested in knowing how relational contracting theory and Equity theory as used in the study could be useful in predicting the research findings and in contributing more insights to the theory from the results obtained.

The study results provided in Table 8.2 provide a clear view of a hierarchical regression analysis and the key findings of this study are shown in Equation 8.2 above. Four hypotheses were formulated (H_1 , H_2 , H_3 and H_4) to be tested and they have all been strongly supported as shown in the previous chapter. The control path that was used was also supported. With the hypotheses being supported, our findings conform to the existing empirical work and the relevant theories we have used in this study which are Relational Contracting Theory and Equity Theory.

The findings in this study suggests that, suppliers view of the level of fairness that exist in the way rewards are distributed in the relationship impacts their satisfaction level in that relationship. This association has been found to be positive and significant such that, perception of a high level (or existence) of fairness in distribution of rewards will increase supplier's satisfaction level and vice versa holds. Moreover, the findings also suggest that this perception of fairness in distribution of rewards is positively and significantly influenced by the amount of commission that the supplier receives. Suppliers that receives higher reward/commission tend to perceive distribution of reward to be of a fair nature, while those that receive lower rewards/commission perceive that the distribution of reward is unfair, and therefore they end up not to be satisfied in their relationship.

On the other hand, the study has also come up with another finding that, the presence of high attractiveness of competitors in the industry render suppliers to be less satisfied in their relationship. This association has been found to be negative and significant. Therefore, when there is presence of other competitors in the industry that a supplier can easily substitute to, and in the context of our study, there exist no switching cost or any sort of specific investments on the supplier's side thus making the process of substituting buyers to be easier. Therefore, suppliers will tend to compare the benefits they receive in the current relationship with the potential benefits they would get from the relationship with the competitors. When the potential benefits from the competitor outweighs the benefits from the current relationship the satisfaction level of the supplier in the current relationship becomes significantly lessened.

Other findings that were obtained were that; presence of a smooth and constant information exchange between buyer and supplier contributes positively to the supplier's satisfaction. Information exchange has also depicted a positive relationship with supplier's satisfaction.

The presence of a free-flow of information enforces the development of a relationship because exchange partners believe that they are working towards a common goal, (Griffith, 2002). Mobile money agents perceive that the information flow they have with the telecommunication companies is frequent, timely, swift and reliable and therefore, this has resulted for them to feel satisfied with the relationship.

9.3 Discussions and Implications

9.3.1 Theoretical Implications

The main focus of this study was to show the empirical evidence of supplier satisfaction in the supply chain specifically the service industry of telecommunication companies in Tanzania in light of the Relational Contracting Theory and Equity Theory. The theories were used to provide the research questions that were developed to hypotheses and in predicting the research results.

Supplier satisfaction has been conceptualized as a one-dimensional and as a multidimensional construct consisting of economic satisfaction and social satisfaction, (Skinner, Gassenheimer and Kelly, 1992; Selnes, 1998; Geyskens and Steenkamp, 2000). This study focuses on supplier satisfaction as a one-dimensional, mainly economic satisfaction. The study has found support from Relational Contracting theory and Equity theory that economic reasons such as distribution justice of rewards that suppliers receive and the potential rewards they would expect to receive from the competing firm as well as the presence of reliable, accurate and complete flow of information are contributing factors to suppliers' satisfaction.

Distributive fairness of rewards' influence on supplier satisfaction

Because of the increasing need for dealing with suppliers and other external sourcing agents, a strong focus on buyer-seller exchanges and the corresponding mechanisms for governing these exchanges has emerged, (Griffith and Myers, 2005). One of these governance strategies is relational governance strategies such as relational norms, (Heide and John, 1992). Macneil's Relational Contracting Theory (RCT) postulates that relational norms in inter-firm interactions act as a point of reference to set in place the interaction terms and conditions of trade, (Macneil, 1978). One of the RCT norms, role integrity suggests that partners in a relationship are expected to be more rational in striving to achieve goals, this

results to reduction of the feeling of unfairness in business conflicts/disputes by ensuring that both parties engage in enacting their roles respectively, (Kaufmann and Stern, 1988). Further more, Relational Contracting Theory (RCT) in connection with social exchange relationship incorporates justice as a key factor for long-term relationship in buyer-supplier relationship (Yilmaz et al., 2004). Distributive fairness being one of the dimensions of justice is the perception of how fair are the earnings and other related benefits received in the business relationship. It is the firm's comparison of its actual outcomes to those outcomes the firm deems it deserves (Kumar et al., 1995). Distributive fairness has been found to be the underlying criterion for economic satisfaction in marketing channel relationships (Brown et al., 2006). Unfair distribution of rewards creates tension and results in a negative affective response in virtually all forms of exchange relationships (Adams, 1963). Supplier's perception of fairness is of critical importance for developing and maintaining supplier satisfaction. Distributive justice performs a significant role in achieving satisfaction and relationship performance among the supply chain members, (Yilmaz et al., 2004).

The findings in this research thesis is consistent with the predictions of RCT with its organizational concept of distributive justice, where distributive fairness of rewards was found to significantly positively influence supplier satisfaction. This finding corroborates with the works done by Kumar et al., (1995), Brown et al., (2006), Yilmaz et al., (2004), among others. This study contributes to organizational justice research specifically distributive justice by extending justice to inter-organizational context, the buyer-supplier relationships in supply chains.

Attractiveness of competitors and supplier satisfaction

Satisfaction has been conceptualized by different researchers from the Equity Theory. According to Adams (1963), when employees believe they are being unfairly treated by the organization or their supervisor, they will likely believe that the social exchange has been violated. And if these employees perceive that the cost of remaining in the relationship outweighs the benefits, they will withdraw from the relationship. Equity Sensitivity Theory (EST) which has emanated from the Equity theory suggests that, individuals are motivated by a comparison of their inputs versus their outputs relative to the same ratio of others (Adams, 1963, 1965). Researchers have recognized that individuals vary in their sensitivity to violations of Adam's Equity theory (Huseman, Hatfield and Miles, 1985; Huseman,

Hatfield and Miles, 1987). Entitleds is the category of individuals that tend to be more focused on outcomes with less regard for inputs and prefer their outcomes to input ratio to be greater than a comparison other (Huseman et al., 1987). Research examining equity sensitivity in under and over reward situations has been consistent in their findings that, in under reward situation entitleds have the least level of job satisfaction while in over reward situation, the level of job satisfaction for entitleds is the highest (Huseman et al., 1985; Miles, Hatfield and Huseman, 1989). Entitleds are concerned with fairness, but are less likely to react to fair treatment unless the treatment is extremely fair in comparison to the alternatives (i.e. over-reward), in which case they will withhold from the organization when organizational fairness is low (i.e. under-reward) (Blakely, Andrews and Moorman, 2005). Research done on organizational employees revealed that entitleds reduce work efforts and has greater turnover intentions than others when they receive less pay for the same work as their referent other (Allen and White, 2002). Most individuals are highly distressed when they are under-rewarded relative to their peers therefore resulting to their dissatisfaction (Adams, 1965). In shore (2004) research study it was found that people were most satisfied when their outcome/input ratio exceeded that of their referent other. Entitleds have appeared to be more likely to react to pay inequities. When less is paid for the same work as compared to the others, they were more likely to respond to the inequitable situation by looking for a new job (Allen and White, 2002). According to Ping (1993), suppliers' satisfaction is affected when they compare the benefits from their current business relationship with other business relationships of the same kind. When the benefits of the alternative business relationship appear more favorable than the current business relationship, the supplier tends to feel less satisfied with the current relationship.

The results found in this study is consistent with the predictions of Equity Sensitivity Theory (EST), whereby attractiveness of competitors was found to significantly influence supplier satisfaction in a negative way. Specifically, attractiveness of competitors was negatively related to supplier satisfaction. This finding corroborates with the work done by Huseman et al., (1985), Allen and White (2002), Ping (1993), Adams (1965) among others.

Distributive fairness of rewards and commission on supplier satisfaction

Research has found that perception of fairness is considered to be high when there is a situation of high reward. According to King et al., (1993), highly rewarded individuals had significantly high satisfaction. Exchange interactions involve economic outcomes as well as

social outcomes. Over a period of time each party compares the economic/social outcomes to those available from alternative exchange relationships and reappraises the value of the relationship (Dwyer et al., 1987; Lambe et al., 2001). Research study done by Douglas and David (1992), suggests that lower-echelon employees who are paid much less than upper-echelon managers believe that the interclass pay differential is inequitable and thus there is distribution unfairness.

The findings in this study thus corroborate with the above research works. That is suppliers tend to view distribution of reward as being fair and just when the commission received is high. Therefore, the highly paid suppliers are more pleased and satisfied with the reward distribution because they feel that their efforts have been paid/rewarded fairly and this results to a higher satisfaction level of the relationship. While, those suppliers that receive less commission, feel that their efforts have not been fairly rewarded and therefore, they perceive distributive fairness of rewards to be low and become less satisfied with the relationship. This has become evident in the research findings whereby, the interaction effect of distributive fairness of rewards and commission has produced a positive, significant effect towards suppliers' satisfaction.

Information exchange influence on supplier satisfaction

Communication has become a key factor for quality business relationships. Researchers stress the importance of honest and open communications, as well as transparency in procedures, for favorable fairness judgments and supplier satisfaction (Yilmaz et al., 2004). Frequent informal communication, explanations based on objective and factual data and opportunities given to exchange partners to voice their objections and viewpoints have shown potential positive effects to perception of fairness and satisfaction (Lind et al., 1990). This has been evident in our study whereby; information exchange has shown significant positive relationship towards supplier satisfaction. A supplier that openly communicates policies and procedures, share information about its plans and objectives, provides advanced notice for unexpected changes and offers reasonable justifications for critical decisions is likely to go a long way to smoothing its relationships with the resellers and enhancing their fairness perceptions and also their satisfaction in the relationship.

Relationship duration is expressed as the number of years that two partners in a buyer-seller dyadic relationship have interacted over a period of time (Buvik and John, 2000; Buvik and Halskau, 2001; Heide and Miner, 1992). The history of a relationship brings about norms

development, trust and personal relationships that are expected to influence the quality of buyer-seller relationship (Buvik and Halskau, 2001; Macneil, 1980). The duration of the relationship between buyer-supplier companies should increase the quality of the relationship between the two parties and hence result in a more satisfactory relationship between them (Glavee-Geo, 2012). The findings in our study corroborates with the aforementioned research studies, whereby relationship duration which has been used as a control variable has produced a positive, significant effect towards supplier satisfaction.

9.3.2 Managerial Implications

Satisfactory buyer-seller relationships are pre-requisite for successful business performance and a possible guarantee for future business between the exchange partners. This study lays a foundation on which telecommunication companies stakeholders such as managers, shareholders, government, mobile money service agents and customers can improve the quality of services offered by these companies and their agents to the final customers. Suppliers satisfaction will to a larger extent improve their performance. Quality of buyer-supplier relationship can influence performance (Bagozzi, 1980; Maloni and Benton, 2000). Satisfaction in business relationship is one of the overriding factor that affects how far exchange partners might want to continue their business relationship (Benton and Maloni, 2005). And this is because, dissatisfaction might make it difficult for suppliers to put their utmost best which can in turn affect performance (Wong, 2000).

It is important that telecommunication companies review and improve their commission payment rates, because by paying the mobile money agents low fees like they currently do, render them to feel unfairly rewarded and this impacts their performance. Therefore, telecommunication companies need to improve their payment rates per transaction paid to the agents, this will eventually improve their total commission received and agents' satisfaction, thus performance.

The procedures for distribution of commission should be made clear to the agents. Because as the current situation is, the agents are not aware of the precise formula or distribution pattern/procedure for the commission they receive from the transactions performed. Procedural justice provides a guide upon which exchange outcomes are determined (Rice and Huang, 2012; Kumar et al., 1995). This induces the feeling of being treated fairly since

they can monitor their income (Kumar, 1995b; Yilmaz et al, 2004). With respect to procedural distribution of rewards, mobile money agents are not well informed of how their exchange outcomes are distributed by their partners, therefore, these procedures need to be made clear and communicated to the agents at the time of signing the contract and continuous updates sent to them as they happen throughout the contractual relationship. By increasing the mobile money service agents' awareness on the procedures of the distribution of rewards, and by increasing the commission payment rates, agents' perception of the distribution of the reward will improve and this will make them to be more satisfied with working with these Telecommunication companies.

Telecommunication companies should start a program of providing their agents with extra commission in form of bonus on semi-quarterly or annually basis when agents perform more transactions above the preset minimal limit. This will increase their morale and make them feel that their hardworking is being noticed and appreciated.

Information exchange is a key factor for enhancing relationship satisfaction. Lack of timely, reliable and effective flow of information between exchange partners may cause unsatisfactory business relationship. Mobile phone providers need to make sure that master agents are playing an active role in transferring information to the agents and from the agents back to the telecommunication companies. This can be done by having each agent visited by the master agent at least once a month to convey any updates of information or receiving agent's views on various areas of their operations.

Telecommunication companies need to set training programs to train the agents on all aspects of operations and anti-money laundering policies. These training programs need to be on continuous basis example on semi-annually basis. This will improve their effectiveness and efficiency in their operations. They also should provide the agents with copies of point-of-sale materials such as; brochures, banners, posters and agent number stickers.

The Mobile Service Provider need also to address the security concerns of mobile money agents to make the business vibrant since most of mobile money agents complained that the mobile money business is exposed to potential risks of robbery. This can be done by the telecommunication companies coordinating with the security service companies, whereby

agents in one area will be under the protection of certain number of security service officers responsible for that area.

Furthermore, telecommunication companies need to be in constant check of the economic and social rewarding systems of the competing firms, and therefore, use those as benchmark to improve their own rewarding mechanisms. This will make their agents not to be easily tempted by the competing firms and become more satisfied with their current business relationship.

Telecommunication companies in Tanzania need to involve mobile money service agents more in the decision making process by allowing mobile agents to select their representatives who will represent them in making business negotiations and in discussing business regulations, policies and contractual terms. This will give mobile money agents more power and increase their sense of organizational citizenship which has an impact in their performance.

Moreover, mobile money agents have to put a mechanism in place for establishment of suppliers' association with the help from telecommunication companies in mobilizing the wide spread agents' associations across the country. This will help the agents in forming a coalition of suppliers which is independent of political dynamics embedded in the management of each telecommunication companies. As the association keeps on increasing and members get to meet other agents and share the market experience, it forms a group identity and later form the programs for own improvements and a platform to evaluate each other. Furthermore, suppliers' association creates an environment of mutual trust which incorporate even the smaller agents for improvement process. After the forming and norming stages of the suppliers' associations, the suppliers can join forces to fight for their competitive priorities from the buyers inclusive of better contracts and a well communicated rewards system.

9.4 Limitation of the Study and Areas for Further Research

This study analyses only one industry (Telecommunication industry) and on mobile money service agents from only two Telecommunication companies in Tanzania (Tigo company and Vodacom Tanzania company), as a result it is difficult to apply the findings of the study

to other industries like Manufacturing industry, Agriculture industry, Banking industry and others. Single industry analysis provides a researcher with higher degree of internal validity and makes it easier for a researcher to find out more accurate, specific and detailed information about the nature of the industry and the relationship between key actors of the industry (buyer and suppliers). Therefore, there is a room for further research to be done on other industries.

This study was based on mobile money service agents' satisfaction by the Telecommunication companies they serve. This opens a door for further studies to examine bilateral satisfaction by studying satisfaction from both parties in the relationship between mobile money service agents and the Telecommunication companies.

This research study involved a small sample size due to limitation of time. Further research study could be done with regard to increasing of the sample size for more accurate and reliable data in terms of advocating smaller standard errors.

This research study employed the approach of cross sectional design, where by data was collected only once. And thus makes it difficult to demonstrate causality. Causality can best be expressed by the use of longitudinal research design. Therefore, further research could be done by using a longitudinal research design.

This research study was only based on Dar es Salaam region of Tanzania due to limited amount of time. Therefore, it renders it difficult to generalize the research results to represent all the mobile money service agents around the whole of Tanzania. Geographical differences in the region which influences the number of people living in the area and the occupational type of the people in that region which in turn, has an impact to the financial capacities of these people, could have an impact on the performance of Telecommunication companies and their mobile money service agents in different areas, therefore, resulting to different results than those found in this study. Thus, further research studies could be done in regions of the country or for the whole country (sample size comprising mobile money service agents from all the regions in the country).

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APPENDICES

Appendix 1: Questionnaire

Dear Respondent,

RE: SURVEY ON DRIVERS OF SUPPLIER'S SATISFACTION IN TELECOMMUNICATION INDUSTRY: A CASE MOBILE MONEY SERVICE AGENTS

We are Master's students under the supervision of Professor Arnt Buvik, at Molde University College, a specialized University in Logistics, Molde Norway. We are conducting a study on the relationship between mobile money service agents and Telecommunication companies for our master's degree thesis.

This study is based on Suppliers' Satisfaction in mobile money market in Tanzania mainly to find out key factors that affect suppliers' satisfaction. The results of this study will help in better understanding the factors that lead to mobile money service agents' satisfaction and therefore enhance better performance in Telecommunication industry. It will also act as a catalyst towards formulation of better policies by the telecommunication companies.

Please use the given value scales where 1 represent strongly agree up to 7 which represent strongly disagree for responding to all questions. Kindly circle the value which best describe your answer to any particular question. These answers should best describe your perception of any situation that runs through the questionnaire. The last part of the questionnaire requires filling in the answers to the various questions as required.

We promise to maintain confidentiality of this information and no any respondent can be traced as all information gathered will be summed up to come up with results for improving agents' satisfaction in their buyer-supplier relationship with the respective telecommunication companies.

Finally, we expect to receive much cooperation from you as information that will be collected from you will enhance this study to be accomplished.

Kind regards,

Theobaldina Francis Michael
Molde University College
P.O.Box 6411, Molde
Norway
+255 713559 909 +47 471 74 467
theobaldina.f.michael@stud.himolde.no

Neema Daniel Kaaya
Molde University College
P.O.Box 6411, Molde
Norway
+47 457 80 380
neema.d.kaaya@stud.himolde.no

Professor Arnt Buvik (Supervisor)
Molde University College
P.O. Box 6402 Molde
Norway
Arnt.buvik@himolde.no

- (i) Please indicate your gender: Female..... Male.....
- (ii) Tick the appropriate range for your age
Below 30..... 31-40.....41-50..... Above 50.....
- (iii) Name of the most important telecommunication company you are working with: 1
being the most important
 - TIGO.....
 - VODACOM.....
 - Other.....

A: Please circle the number that represents your views regarding the following statements.	Strongly agree				Strongly disagree		
1. This telecommunication company pays me commission that corresponds to what I expected to receive.	1	2	3	4	5	6	7
2. The commission that I receive from this company on each transaction reflects (is fair compared to) the amount of earning this company receives from that transaction.	1	2	3	4	5	6	7
3. This company pays my commission on a timely basis.	1	2	3	4	5	6	7
4. When errors have occurred on my payments, the company makes sure they are corrected promptly.	1	2	3	4	5	6	7
5. This telecommunication company does not benefit at my detriment in our relationship by paying less than what I deserve.	1	2	3	4	5	6	7
6. This telecommunication company pays me extra commission when I perform above the normal limits	1	2	3	4	5	6	7
7. This telecommunication company also offers me other benefits in terms of life and health insurance at work	1	2	3	4	5	6	7

B: Please circle the number that represents your views regarding the following statements.	Strongly agree	Strongly disagree					
1. Information about changes and defaults in the systems are clearly communicated to me by this telecommunication company.	1	2	3	4	5	6	7
2. Important Information from the telecommunication company are timely communicated to me.	1	2	3	4	5	6	7
3. This telecommunication company informs me on prior basis regarding new product development before they are implemented.	1	2	3	4	5	6	7
4. This telecommunication company provides me with information regarding market competition patterns/changes regularly.	1	2	3	4	5	6	7
5. Information from the telecommunication company pass through swiftly to me through the master agent	1	2	3	4	5	6	7

C: Please circle the number that represents your views regarding the following statements.	Strongly agree	Strongly disagree					
1. The other telecommunication company provides me with on-time assistance when am faced with technical difficulties compared to this company.	1	2	3	4	5	6	7
2. The commission I receive from the other telecommunication company is much better compared to what I receive from this telecommunication company.	1	2	3	4	5	6	7
3. The system of the other telecommunication company is more user-friendly than that of this telecommunication company.	1	2	3	4	5	6	7

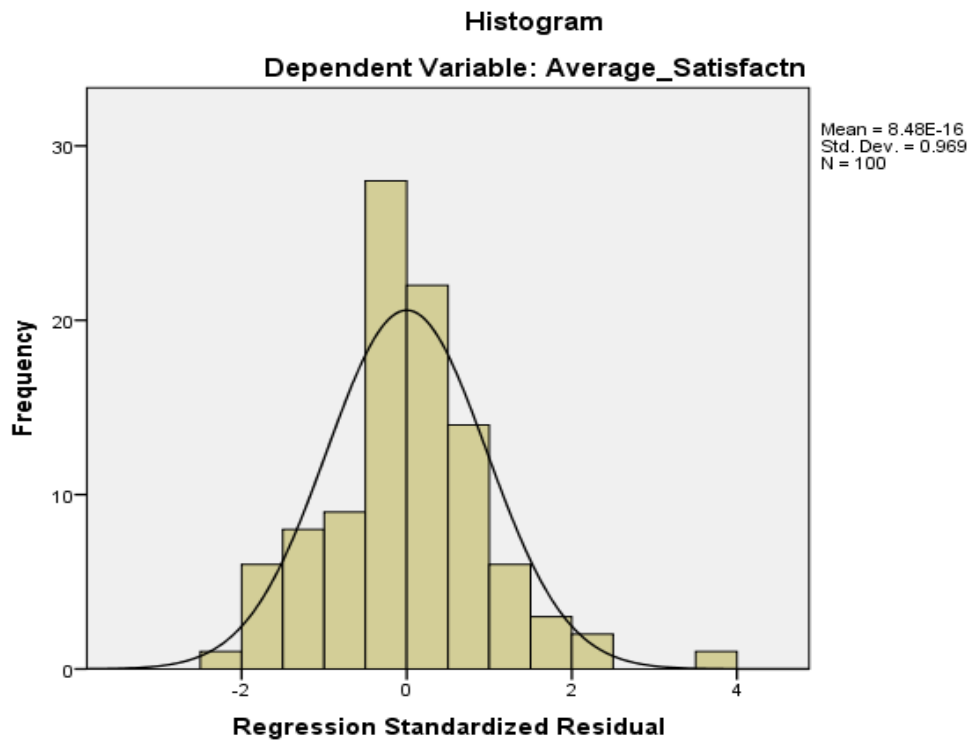
4. There is better information flow from the other telecommunication company than there is from this company.	1	2	3	4	5	6	7
5. I am more satisfied to working with the other telecommunication company than from this company.	1	2	3	4	5	6	7
6. The other telecommunication company is more trustworthy than this company.	1	2	3	4	5	6	7
7. The other telecommunication company is more friendly to deal with than this telecommunication company.	1	2	3	4	5	6	7

D: Please circle the number that represents your views regarding the following statements	Strongly agree		Strongly disagree				
1. My relationship with this telecommunication company has been a highly successful one.	1	2	3	4	5	6	7
2. My relationship with this telecommunication company is very attractive with respect to the amount of commission that I receive.	1	2	3	4	5	6	7
3. I am very satisfied with working with this telecommunication company	1	2	3	4	5	6	7
4. This telecommunication company is very good to work with in terms of its working terms and conditions	1	2	3	4	5	6	7
5. I am pleased with dealing with this telecommunication company always	1	2	3	4	5	6	7

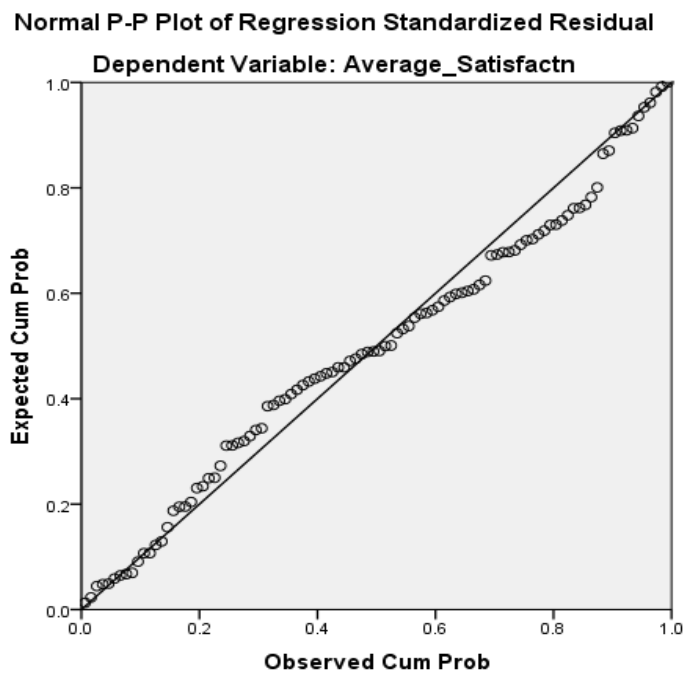
E: Please kindly complete the following statements by filling in the blank spaces or ticking where appropriate
1. How much amount of commission do you receive per month on average?
2. How long have you been working with this telecommunication company? Approximate number of years.....
3. Where is your business located (a) A populated area..... (b) less populated area.....

THANK YOU

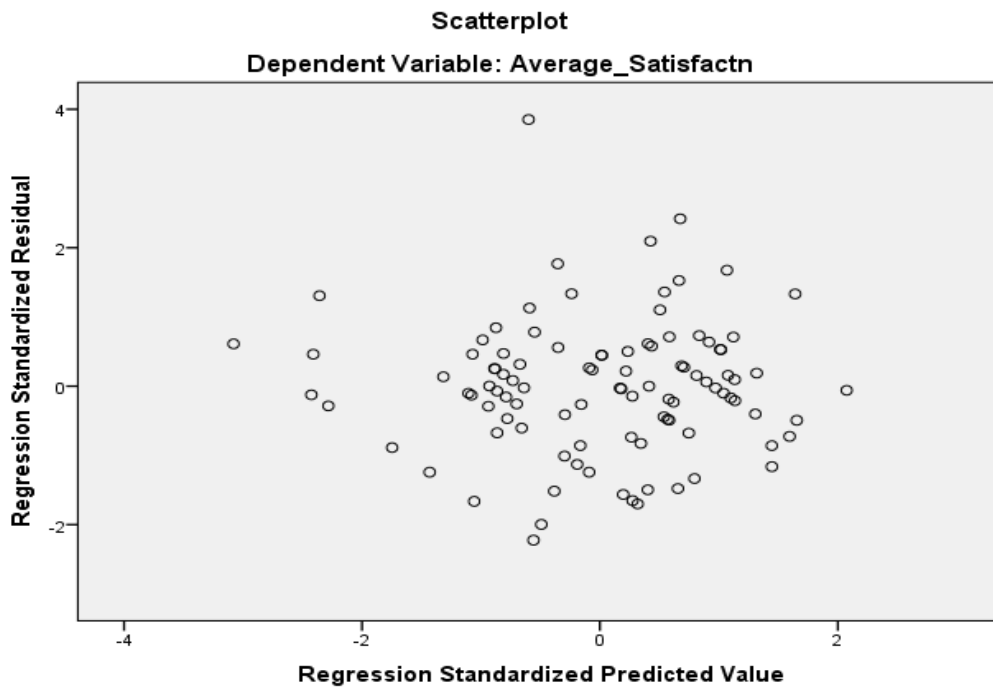
Appendix 8.1 (a): Residual Distribution Chart



Appendix 8.1 (b): Normal Probability Plot for Normality Assessment



Appendix 8.2: Graphical Portrayal of Heteroscedasticity



Appendix 8.3 (a): Research's Model Summary

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.743 ^a	.552	.529	.67621	.552	23.204	5	94	.000
2	.758 ^b	.574	.546	.66334	.021	4.684	1	93	.033

a. Predictors: (Constant), duration_log, Average_DFRewards, avrginfox125, Average_Compfrm2, commn_log

b. Predictors: (Constant), duration_log, Average_DFRewards, avrginfox125, Average_Compfrm2, commn_log, DFRewaeds_Commission_Centered

c. Dependent Variable: Average_Satisfactn

Appendix 8.3 (b): Analysis of Variance (ANOVA)

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	53.051	5	10.61	23.204	.000 ^b
	Residual	42.983	94	0.457		
	Total	96.034	99			
2	Regression	55.112	6	9.185	20.875	.000 ^c
	Residual	40.922	93	0.44		
	Total	96.034	99			

a. Dependent Variable: Average_Satisfactn

b. Predictors: (Constant), duration_log, Average_DFRewards, avrginfox125, Average_Compfrm2, commn_log

c. Predictors: (Constant), duration_log, Average_DFRewards, avrginfox125_8, Average_Compfrm2, commn_log, DFRewaeds_Commission_Centered

Appendix 8.4: Bivariate Correlation Coefficients

Correlations

		Satisfactn	DFRwards	Compfrm2	infox	commissn	duration	DFRwaeds*Commission
Satisfactn	Pearson Correlation	1	.424**	-.553**	.491**	-.195	.152	.037
	Sig. (2-tailed)		.000	.000	.000	.052	.130	.717
	N	100	100	100	100	100	100	100
DFRwards	Pearson Correlation	.424**	1	-.200*	.090	-.157	-.045	-.158
	Sig. (2-tailed)	.000		.046	.375	.119	.656	.117
	N	100	100	100	100	100	100	100
Compfrm2	Pearson Correlation	-.553**	-.200*	1	-.441**	-.200*	-.144	.162
	Sig. (2-tailed)	.000	.046		.000	.046	.153	.107
	N	100	100	100	100	100	100	100
infox	Pearson Correlation	.491**	.090	-.441**	1	-.129	.181	-.032
	Sig. (2-tailed)	.000	.375	.000		.201	.072	.753
	N	100	100	100	100	100	100	100
commissn	Pearson Correlation	-.195	-.157	-.200*	-.129	1	.474**	.011
	Sig. (2-tailed)	.052	.119	.046	.201		.000	.910
	N	100	100	100	100	100	100	100
duration	Pearson Correlation	.152	-.045	-.144	.181	.474**	1	.092
	Sig. (2-tailed)	.130	.656	.153	.072	.000		.362
	N	100	100	100	100	100	100	100
DFRwaeds*Commission	Pearson Correlation	.037	-.158	.162	-.032	.011	.092	1
	Sig. (2-tailed)	.717	.117	.107	.753	.910	.362	
	N	100	100	100	100	100	100	100

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Appendix 8.5 (a): Scale: Satisfaction

Reliability Statistics

Cronbach's Alpha	N of Items
.932	5

Appendix 8.5 (b): Scale: DFRewards

Reliability Statistics

Cronbach's Alpha	N of Items
.834	3

Appendix 8.5 (c): Scale: Compfirm2

Reliability Statistics

Cronbach's Alpha	N of Items
.886	6

Appendix 8.5 (d): Scale: Infox

Reliability Statistics

Cronbach's Alpha	N of Items
.770	3