



# Master's degree thesis

**LOG950 Logistics**

**Title: Exploring Drivers of Agent's Satisfaction: An Empirical Study of Tricycle Drivers in Tanzania Transport Industry**

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## **List of Abbreviations**

AfDB	African Development Bank.
AVE	Average Variance Expected
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CR	Composite Reliability
EFA	Explanatory Factor Analysis
EWURA	Energy and Water Utilities Regulatory Authority
GDP	Gross Domestic Product
IFI	Incremental Fit Index
KMO	Kaiser-Meyer-Olkin
LGAs	Local Government Authorities
MSV	Maximum Shared Squared variance
OEM	Original Equipment Manufacturer
OLS	Ordinary Least Squares
PMO-RALG	Prime Minister's Office Regional Administration and Local Government
RSMEA	Root-Mean-Square Error of Approximation
SUMATRA	Surface and Marine Transport Regulatory Authority
TANROADS	Tanzania National Roads Agency
TRA	Tanzania Revenue Authority
VIF	Variance Inflation Factor
$X^2$	Chi-square
ZPRED	Standardized Predicted Value
ZRESID	Standardized Residue Value

## Abstract

**Purpose:** To explore the effect of information exchange, dependence, trust, reward structure, the level of conflict and monitoring on agent's satisfaction in the tricycle transport service principal-agent dyad relationship.

**Design/methodology/approach:** The sampling frame of the study was tricycles' drivers registered by the municipality of Ubungo and Kinondoni in Dar-Es-Salaam city in Tanzania. Convenience sampling technique was used to administer 100 questionnaires. A total of 100 responses filled properly were collected. Hierarchical multiple regression analysis was used to test the hypotheses.

**Findings:** Information exchange, trust, and dependence impact the level agent's satisfaction positively. Similarly, reward structure of strong incentives that are compatible with agent's efforts increases the level of agent's satisfaction. Moreover, the negative impact of monitoring on satisfaction depends on the level of conflict.

**Research limitations and Implications:** The study was based on small-scale transport industry only which may limit a generalization of the findings in medium, large or different industries. Moreover, the study is based on cross-section design which does not present the causality. Further studies, should employ longitudinal design to overcome that drawback.

**Theoretical Implications:** This study strengthens the role of the agent's dependence on the principal in enhancing the relationship between principal and agent to achieve high levels satisfaction. Similarly, contributes how trust, information exchange, and contracts with strong incentives tend to increase the level of agent's satisfaction.

**Managerial Implications:** The study provides the acumens on how monitoring, information exchange, trust, dependence and reward structure can affect agent's satisfaction. Parties in agency relationship including government must ensure that reward structure are well formatted and legally binding underlying clearly each exchange partners' responsibilities and rights.

**Keywords:** Agent's satisfaction; Social exchange theory; Agency theory; Information exchange; Reward structure; Trust; Dependence; Monitoring and Conflict

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background information with Agency Relationship**

In cities of developed countries, a good transportation mix generally exists, that is, the presence of non-motorized and private motor vehicles and a good range public transportation system notably buses in different sizes as well as choices in trains and monorails. On the other hand, especially with that of public transportation, the opposite seems to be happening in most cities in developing countries, particularly in Sub-Saharan African cities (Sietchiping, Permezel and Ngomsi 2012).

The origin and growth of tricycle transport in sub-Saharan countries fundamentally can be traced to the collapse of bus transport services either directly provided by the state or contracted for (Kumar 2011) and low level of public intervention (Olvera et al. 2015). The commercial use of tricycles is facilitated by the combination of three factors; the shortage of transport supply, which includes the lack of means of transport (private vehicles and public transport) and the quantitative and qualitative deficiencies of the road network; the availability and low cost of operations (Olvera et al. 2015)

Moreover, this is the innovative mode of city transport run by individual entrepreneurs and governed by the municipality councils and the National Regulation of 2010 whilst agency relationship is a predominantly existing business relationship (Sietchiping, Permezel and Ngomsi 2012). An agency relationship is present whenever one party (the principal) depends on another party (the agent) to undertake some actions on the principal's behalf thus any employment relationship is an agency relationship (Crawford, Thompson and Dunipace 2011; Bergen, Dutta and Walker 1992). In this study, the principal who is the owner of the tricycle employs the driver (the agent) to work on the owner's behalf. However, in any agency relationship actors have varying silent expectation sets depending on which aspects are most important to the actor, thus satisfaction has been recommended as a strong determinant to determine the actor's desire to remain in agency

relationship, performance, commitment and turnover (Koroth 2014; Crawford, Thompson and Dunipace 2011).

In recent years, different scholars have carried studies on understanding the nature of agency relationship focusing primarily on those constructs that contribute to business continuity and effective agency relationships (Crawford, Thompson and Dunipace 2011). With the increasing interest in agency relationships, relationship satisfaction has become an important factor in business relationships (Noor, Perumal and Hussin 2010). Satisfaction is one of the most widely studied constructs in business relationships (Koroth 2014) which fosters a greater commitment to the actors in the relationship (Noor, Perumal and Hussin 2010; Bergen, Dutta and Walker 1992), higher performance (Koroth 2014) and increase long-term orientation and continuity (Walton 1996; Noor, Perumal and Hussin 2010).

## **1.2 Agent's Satisfaction in Agency Relationship**

Drawing from previous studies (Crawford, Thompson and Dunipace 2011; Koroth 2014; Noor, Perumal and Hussin 2010), agent satisfaction with his/her vital principal has been defined as the degree to which the agent's expectations are met within the principal/agent relationship. According to (Ellis, Gudergan and Johnson 2001), most of the agency relationship is characterized by the potential incongruent goals across the actors, this is due to the fact that principal will prefer to select those actions that are most conducive to achieving self-interest desired outcomes likewise the agent (Walton 1996). Thus, the presence of goal congruence is likely an important variable in determining the satisfaction of the agent in the principal-agent relationship (Crawford, Thompson and Dunipace 2011; Bergen, Dutta and Walker 1992).

Satisfaction is an important measure of an inter-firm relationship; thus, relationship satisfaction of parties is a vital turning point in the development of principal-agent relationships, whilst it is a core determinant of success (Noor, Perumal and Hussin 2010). Similarly, satisfactions allow an agency relationship to continue to the point where a high level of commitment exists between the parties involved, and where the dissolution of the relationship becomes increasingly difficult because of the strong bond that has developed (Rodríguez, Agudo and Gutierrez 2006).

Moreover, satisfaction plays a larger role in agency relationship including; potential mediator of the effects of other controls on performance outcomes, intentions to exit and commitment (Ellis, Gudergan and Johnson 2001) therefore satisfaction is regarded as one important indicator of relationship quality between agent and principal in the whole life of the business (Bronnenmayer, Wirtz and Gottel 2016). Satisfaction affects actors' morale and resulting incentive to participate in collective activities, thus satisfaction construct is of fundamental importance in understanding agency relationship (Geyskens, Steenkamp and Kumar 1999). Thus, the aforesaid justification calls for the study of drivers of satisfaction in agency relationship existing in tricycle micro transport service.

Furthermore, most previous scholars (Geyskens, Steenkamp and Kumar 1999; Goail, Perumal and Noor 2014), have shed light on two satisfaction dimensions; economic and social satisfaction in the principal-agent relationship, therefore relationship satisfaction has multiple dimensions but few previous studies have examined on agent's economic and social satisfaction as two distinct variables (Goail, Perumal and Noor 2014). In this study, both dimensions of satisfaction; economic and social are considered because an agent may be socially satisfied with a principal but not economically satisfied in contrary (Noor, Perumal and Hussin 2010). According to (Geyskens, Steenkamp and Kumar 1999), agent who is satisfied economically sees the relationship as being successful in the light of goal attainment, effectiveness, and productivity, whilst an agent perceives socially satisfied when shows the appreciation of interactions with the principal and finds satisfied when is convinced that the principal is concerned, respectful and willing to exchange ideas (Goail, Perumal and Noor 2014)

This study presents both theoretical justification of agency theory and social exchange theory, similarly the empirical justification from transport industry specifically on tricycle transport services. The use of tricycles in Tanzania has increased rapidly in recent years, which has resulted in an increase of its numbers from 59 in 2003 up to over 50,000 in 2014, thus changing the face of accessibility and mobility. In urban areas, tricycles are used to avoid congestion whilst provide employment and business opportunities for tens of thousands of youths in particular (Bishop and Amos 2015). The foresaid theories utilized in this study helps to explore the drivers of agent satisfaction considering both socio-economic dimensions in agency relationship within this micro transport industry in Tanzania.



### **1.3 Statement of the Problem**

In recent years, satisfaction has attracted a considerable research interest in principal- agent relationships studies such as manufacturer- distributor (Rodriguez, Agudo and Gutierrez 2006), car dealers (Lai 2007; Noor, Perumal and Hussin 2010) and manufacturer's agent (Crawford, Thompson and Dunipace 2011). Satisfaction within the overall exchange relationship reflects a party's cognitive state of feeling adequately or inadequately rewarded for the sacrifice underdone in facilitating that relationship (Noor, Perumal and Hussin 2010).

The increase in the demand for the transport services to the remote area from alongside the main roads or centers due to poor transport infrastructures and city planning in Tanzania, then tricycle transport plays an important role and has attracted many young and youth aged person into the business (Bishop and Amos 2015). The drivers are faced with many problems including education level, incentive alignment with the owners, accessibility to information (Sietchiping, Permezel and Ngomsi 2012) and high level of power-dependence between principal and agent (Rodriguez, Agudo and Gutierrez 2006). Even though the tricycle transport activities are ranged within the low level of the economy, they constitute a heterogeneous sector which has, yet, been subjected to little study (Olvera et al. 2015).

Agency theory has been utilized to build arguments for the drivers of satisfaction that are in line with (Douma and Schreuder 2008) relationships. The focus of the theory is to determine the most efficient contract mechanism (Bergen, Dutta and Walker 1992), incentive alignment and system for contract monitoring (Tosi, Katz and Gomez-Mejia 1997) to govern a particular relationship given assumption of people's self-interest, bounded relationality, risk aversion, firm; goal conflict among members, incentive alignment, and information: operations costs, customers and competition (Douma and Schreuder 2008; Eisenhardt 1989). Similarly, Social-Exchange theories have been used to assess agent's satisfaction as the result of evaluation of social outcomes in its interaction experience with the principal (Goaill, Perumal and Noor 2014).

This study is one of few empirical research endeavors on tricycle transport system in Tanzania in an agency relationship, whilst much of the previous studies has put efforts on the examining the accidents and environmental hazards that occur within this small-scale transport system (Bishop and Amos 2015). There are few studies that have focused on determining agent's satisfaction in

this small-scale transport (Lai 2007; Noor, Perumal and Hussin 2010), therefore this research study will focus on exploring both driver's social and economic satisfactions.

Based on aforesaid problems existing in this small-scale transport agency relationship in Tanzania transport sector, thus this research based on the theoretical framework of agency and social exchange theories seeks to answer the following research question;

- What are the drivers of agent's satisfaction in facilitating the relationship between agent and principal

#### **1.4 Objective of the Study**

The objective of this study is to explore the drivers of agent's satisfaction in a principal-agent relationship in the micro-scale transport sector in Tanzania. Specifically, the study examines the following constructs that form the general objectives

- Antecedents of agent's Satisfaction: How rewards structure, monitoring, information exchange, trust, and dependence affects agent's satisfaction in an agency relationship.
- Control variable on satisfaction including a location that moderate agency relationship between driver and owner of the tricycle.
- The moderating effect of conflict in monitoring within agent-principal relationship for increasing satisfaction

#### **1.5 Significance of the study**

This innovative mode of Transport especially motorcycles (common known as bodaboda in Tanzania) and Tricycles (Common is known as Bajaj in Tanzania) is considered to be low-cost transport, intermediate public transport, and source of employment (Bishop and Amos 2015). It is demand-driven from the community that has an infrastructure deficit as well a lack of available alternative modes to use for mobility (Sietchiping, Permezel and Ngomsi 2012). Nonetheless, related urban and transportation issues that are still persistent in the public transportation sector are the problems of traffic congestion, poor public transport, decrease safety, worsening environment and insufficient transport service (Lai 2007).

Apart from the socio-economical significant of this study, there is the potential usefulness of agency theory for examining the marketing issues by the fact that transaction cost analysis (TCA) has been usefully applied in the marketing literature (Bergen, Dutta and Walker 1992).

Agency relationships are often intangible and transactions cost analysis does not provide a sufficient explanation of social, political, legal and behavioral dynamics, therefore, overlooks two key considerations; the first involves contractual obligations and the way in which transaction costs are often dissipated throughout the relationship (Bergen, Dutta and Walker 1992). Arguably, shortcomings of transaction costs analysis with respect to explaining agency relationship dynamics can be largely offset through the application of agency theory and social exchange theories (Fayezi, O'Loughlin and Zutshi 2012).

The study also describes the complement ability of the social exchange theories and agency theory to examine efficiency aspects of how firms organize functional relationships that are motivated by economic self-interest and power-dependence and trust (Crawford, Thompson and Dunipace 2011).

## **1.6 Scope of the study**

This research study examines the principal-agent relationship in the small-scale public transport industry. Public transport in the cities of Tanzania is poor due to the low quality of services provided by mini buses (known as Daladala), tricycles; bajaj and motorcycles; bodaboda (Bishop and Amos 2015; Kiunsi 2013). According to (Kiunsi 2013), the poor quality of public transport is the result of a limited number of spatial coverage provided by mini-buses, lack of fixed bus time schedule, rough roads and remoteness of dwellers from the main road (Bishop and Amos 2015). Therefore, tricycle transport provides an ideal public transport respect to the aforementioned problems. For the purposes of this study, the research examines the agent's satisfaction resulting from the relationship between the entrepreneurs who owns these tricycle (herein referred as principal) and the driver (herein referred as agent) of the tricycle.

Moreover, this study addresses the role of trust, monitoring, information exchanges, dependence and conflict in driving the agent's satisfaction with agency relationship in small-scale transport relationship by utilizing the use of agency and social-exchange theories.

## **1.7 Organization of the study**

This study comprises nine chapters. Chapter one describes background with agency relationships of the study, agency relationship satisfactions, statement of the problem and significance of the study. The second chapter presents the background of the industry subject to the study and its operations in Tanzania. Chapter three present the literature review relevant to the study: agency and social-exchange theories used in the study as the main theoretical framework for analyzing the relationships between the constructs. The fourth chapter describes the theoretical research model and the hypothesis of this study whilst chapter five presents the methodology of the study, including research design, population and sampling frame, and procedures. The sixth chapter presents the operationalization of study variables, whilst chapter seven present measurement assessment; screening, outliers, normality and EFA and data validation; content, convergent, discriminant and construct validity of measurement model. The eighth chapter presents multiple regression model estimates and testing of the hypothesis whilst the last chapter presents the empirical research results, theoretical and managerial implications, suggestions and limitations of the study.

## **1.8 Chapter Summary**

This chapter has explained the background of the study with an agency relationship. Similarly, this chapter presented the agent's satisfaction in an agency relationship. Moreover, statement of the problems and significance of the study were delineated. Finally, the objective of the study was explained subject to the statement of the problem in micro scale tricycle transport system. The next chapter covers transport industry background.

## **CHAPTER TWO**

### **OVERVIEW OF TRANSPORT INDUSTRY IN TANZANIA**

#### **2.1 Introduction**

This chapter presents an overview of transport industry in Tanzania. The chapter is divided into sections examining the tricycle transport from global perspectives with focus on Tanzania. Furthermore, the chapter examines the introduction of tricycles in developing countries and Tanzania in particular hence explains the relevance of conducting this study.

#### **2.2 Overview of Transport industry in Tanzania.**

The provision of transport infrastructure has grown extensively across the globe through a range of networks of modes which have undergone technological improvements (Dinye 2013). The proportion of individual's income spent on transport has increased leading to an increase of movement of the goods and transactions between cities or intra-cities (Kumar 2011; Dinye 2013).

Investment in infrastructure, particularly in the development of the road network has been a major priority of the government as it is stipulated in Tanzania's 2025 vision. Tanzania transport sector rose by 55% in value during the years 2009-2014, from USD1.3blns to USD 2.1blns due to improved road networks, urbanization and an increase in the number of passengers (Sumatra 2011, AfDB 2013).

Moreover, the contribution of transport to Gross Domestic Product (GDP) accounts for about 6% whilst transport costs are estimated to account for about 10% of the total household expenditures (AfDB 2013). Improvements in transport services in terms of availability, reliability, and accessibility significantly reduce the household expenditures on transport services and improve the contribution of transport to the GDP (Sumatra 2011; Kumar 2011; Olvera et al. 2015).

The Tanzania transport system is divided into surface transport: roads and railways, inland waterways; lakes and rivers, air transport and sea transport. Tricycle transport services operate under road transport form (Sumatra 2011). Thus, road transport is a major concerned form of transport in this study.

## **2.3 Tanzania Road Transport**

Tanzania road network currently comprises 86,472km roads, of which 12,786km are trunk roads, 21,105km are regional roads and the remaining 52,581km are a district, urban and feeder roads. The trunk and regional roads are under the responsibility of the Tanzania National Roads Agency (TANROADS) which is a semi-autonomous agency under the Ministry of Works. On another hand, local government authorities (LGAs) under the oversight of the Prime Minister's Office Regional Administration and Local Government (PMO-RALG) are responsible for the district, urban and feeder roads. Whilst, road transport industry is regulated by Surface and Marine Transport Regulatory Authority (SUMATRA) organization responsible for licensing and regulating passenger's fares, monitors freight rate and conducts roadside compliance (AfDB 2013).

Road transport is widely and predominantly used form of transport in the country carrying over 75% of the freight traffic and 90% of the passengers in Tanzania (AfDB 2013). Apart from an improved road network still people face different challenges related to road transport problems including limited feeder roads, public transports and traffic congestion, and interior accessibility in most of the urban areas (AfDB 2013).

## **2.4 Road Transport Service Providers**

Public transport services in the city mainly depend on road transport services (Sumatra 2011). Reliance on road based transport services coupled with the high growth of transport demand has led to the inadequate supply of transport services and increased dependence on the use of private cars and consequently road congestion and poor traffic flow (Dinye 2013; Kumar 2011). Thus, the scenario has caused people and the market to develop creative solutions to address daily travel need in addition to the existing public transport (Dinye 2013).

The majority of people in Tanzania use mini-buses, tricycles, motorcycles, rapid transit busses, and intra-city train (in Dar es salaam region) for movement in daily operations. Akin-Tepede (2010) pointed out that, the increase in urban population, particularly those residing in smaller settlements away from city centers is the primary reason why there is the demand for the services of transport systems. However, tricycle and motorcycle are mostly preferred transport services due

to its relative affordability, availability, and safety (Kumar 2011; Akin-Tepede 2010). This study explains the major commercialized forms of transport in Tanzania as follows;

#### **2.4.1 Tricycles and Motorcycles service operators**

Tricycles are a popular mode of public transportation among commuters due to their high accessibility, availability, affordability, and convenience. This type of transport is much less expensive in fares than another mode of road transport such as taxis, thus they play an important role in Tanzania's overall transportation system. Tricycles are the most convenient transportation in most of the cities and usually are located both in big and smaller roads (Kumar 2011).

Moreover, despite the need to popularize the tricycles over other means of road transport in Tanzania, which are characterized by fatal crashes and other forms of vulnerabilities, these three-wheel vehicle poses environmental and social challenges such as fine particles emission, noise, absence of paved roads, lack of parks and terminals on designated routes for hitch-free conveyance of passengers (Akin-Tepede 2010; Bishop and Amos 2015).

On another hand, motorcycles are used for profit-making through being rented to carry passengers, and less often, goods in both urban, peri-urban and rural areas in Tanzania (Bishop and Amos 2015). The increasing growth of motorcycles in the municipality can be attributed partly scarcity of public transport, accessibility to remote areas, high unemployment rate, poor road infrastructure, affordability (most are imported from china) and traffic road congestion (Dinye 2013). However, this form of transport is faced with challenges of road traffic crashes and high rate of death (Mangu 2016).

#### **2.5 Tricycle Transport in Tanzania**

Over the past decade, there has been a significant growth in the use of tricycles as a commercial public transport mode in countries in sub-Saharan Africa, Latin America, and Asia (Kumar 2011). Despite the major part played by tricycles transport service in public transport, little is known about their origin, cost structure, environmental, ridership characteristics, the political economy and other impacts (Kumar 2011). The recent influx of affordable tricycles into Tanzania is creating a revolution in mobility and accessibility. Journeys that were previously made by foot or bicycle,

or were simply not made, are now being made by motorcycle or motorized tricycle (Bishop and Amos 2015).

Use of tricycle as means of transport is very common in Tanzania, but mostly applicable in Dar es salaam region, Tricycle is commonly known as “*Bajaji*”, the name was driven from Indian manufacturing company known as Bajaj which was among the first suppliers of tricycles in Tanzania (Bishop and Amos 2015). By use of Bajaji, the majority have been benefited as it’s one of the comfortable, cheaper and quick ride with prevailing hard condition of public transport whilst employing a lot of young and energetic population, hence boosting their economic and social life (Kitabu 2012).The tricycle operators are mostly recruited from unemployed youth living in urban areas (Sietchiping, Permezel and Ngomsi 2012)

Tricycle business in Tanzania is governed by transport licensing (Motorcycles and Tricycles) regulations of 2010. This act provides a legal framework on how the business should be conducted, covering several areas which include application of road service license, issuance of a road service license, responsibilities of local government on regulating the tricycle business. Furthermore, the regulations cover procedures, suspension, and revocation of the road service license and offenses, penalties and other general provisions (SUMATRA 2010).

**Figure 2.1: Photos of typical tricycles in Dar es Salaam region**

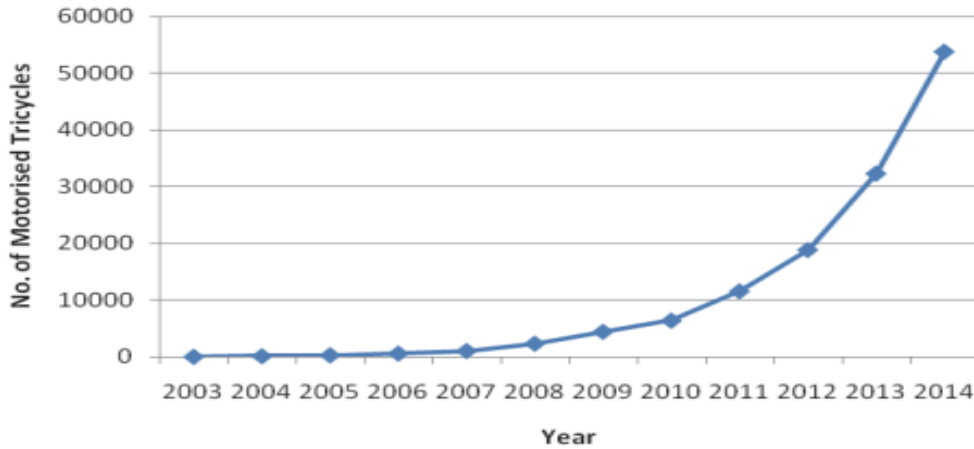


a) Tricycle driver with customers

b) Parking area source; (Kitabu 2012)



**Figure 2.2: Number of motorized tricycles registered in Tanzania, 2003 to 2014**



source: (Bishop and Amos 2015).

From the figure 2.2 above, in 2003 registered number of tricycles were 59, the number has been increasing rapidly reaching 53,874 motorized tricycles in 2014, In ten years' time, we have witnessed an increase of more than 90,000%. This has been accelerated by the high demand for this service in Tanzania, particularly Dar es salaam region.

### **2.5.1 Competition**

The most common transport service in Dar es salaam is the use of mini-buses which have specific routes, however, this kind of transport have a lot of problems which have been mentioned earlier, thus, the main competitor of tricycle business is motorcycles and taxis. In Tanzania, motorcycle transport is relatively cheap comparing to tricycle and taxis (most expensive as the tricycle consumes little fuel compared to a taxis), also by use of motorcycle you can reach a lot of places where no any other form of transport above can reach. However, a lot of accidents in Tanzania have been caused by motorcycle for example according to (Bishop and Amos 2015), Muhimbili Orthopedic Institute in Dar es Salaam admits around 15 to 20 motorcycle-related injury victims per day, amounting to 80% of all injury admissions. This has led most customers to switch from motorcycle to tricycle hence promoting this business to establish strongly.

### **2.5.2 Tricycle transport; contractual and operations agreement.**

Despite the massive influx of Indian tricycles since 2003 that made the price of vehicles decrease significantly, the availability of capital for the purchase of the tricycles remains the main barrier (Olvera et al. 2015). Hence the majority of drivers do not own the tricycles and are employed under a different contractual agreement. The contractual arrangement of the tricycle transport in Tanzania takes into mainly two forms,

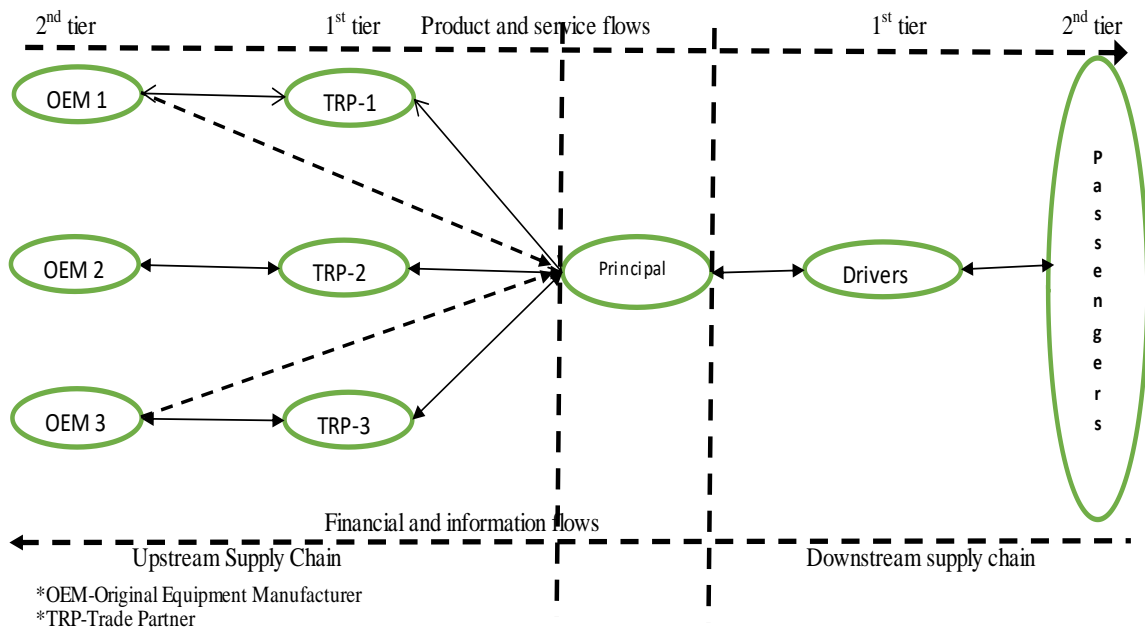
- I. The tenant; the driver (“agent”) hires the tricycle from the vehicle owner (“principal”) and pays a fixed sum on a weekly basis. The commercial relation between both may be formalized through a contract and conditions may vary from case to case. The contract duration may be rather long but the tenant will never become the owner of the tricycle. Costs are shared between both parties: the owner bears the administrative expenses in relation to the vehicle ownership, as in the case of the “work and pay” plans, but also heavy repairs, if any; the driver oversees all the operating costs (Olvera et al. 2015).
- II. The “work and pay”, the driver becomes the owner of the tricycle after some period. The terms of the “work and pay” are specified in the contract established between the tricycle owner (the “Principal”) and the driver (the “Agent”): the contract duration, the fixed sum to be paid by the driver, usually on a weekly basis; the costs generated by the activity (e.g. fuel, maintenance, repairs) must be supported by the driver while the vehicle owner bears the initial administrative expenses (insurance for the first year, registration license) (Olvera et al. 2015)

### **2.6 Tricycles’ Supply Chain in Tanzania**

The figure 2.3 below, presents the supply chain of the tricycle in Tanzania. Manufactured tricycle are imported by the principal (who in this study is the owner of the tricycle) from either trading partners of the original equipment manufacturer(OEM) or directly from the factory. The trading partners, wholesalers, and retailers are responsible for distribution and warehouse of tricycles all over in Tanzania. The upstream supply chain of tricycle ends when the product is in the hands of the principal as described in figure 2.3. The most dominant countries where tricycles are imported from are India and China (Kumar 2011).

In addition, drivers (termed agents in this study) hire the tricycle from the principal in an agreed form of contractual arrangement to run the business. All commercial tricycles operate in a specified route arranged by the relevant municipality within the city, thus the drivers register with the municipality for the route they want to ply (Bishop and Amos 2015). Moreover, drivers get their returns from the passengers who are the end-user in this supply chain.

**Figure 2.3: The Supply Chain of Tricycle in Tanzania**



Source: Authors' formulation based on insight and observation of the industry, 2017

## 2.7 Relevance of Tanzania as a Research Setting

In Tanzania, motorcycles are the most essential and effective means of transport in daily life and overall livelihood. The country is characterized by underdeveloped infrastructure, largest population and high concentration of low-income groups (Dinye 2013; Sumatra 2011). This business has come with its accompanying challenges like motorcycle accidents involving fatalities, environmental and public health concerns from the emissions and non-compliance to motor traffic regulations (Dinye 2013).

Tricycle transport provides a living for over 50,000 people in Tanzania, most of them young, as more than 80% of the drivers are between 18 and 35 years of age (Kumar 2011; Bishop and Amos 2015). On another hand, the job of tricycle taxi driver seems to be the activity of limited period since two-thirds of the drivers have been working as such for less than five years (Olvera et al. 2010). Thus, drivers are subject to difficulties in their day to day operations including; long working days, difficult working conditions, and vulnerable to accidents and attacks (Mangu 2016).

Furthermore, from the aforesaid problems facing this industry, this justifies the use of Tanzania as a research setting for this study, which is expected to contribute to infrastructure policy and good practices between exchange partners. Moreover, there is few empirical quantitative research in Tanzania in the same industry conducted to investigate the relationships between exchange partners.

## **2.8 Chapter Summary**

This chapter has presented the transport industry in Tanzania, including challenges facing the industry. Moreover, the chapter has explained into details the tricycle transport business by introducing its supply chains to a contractual agreement in a principal-agent relationship. Finally, the chapter presented the relevance of tricycle Tanzania as a research setting for this study. The next chapter presents the theoretical framework of this study.

## CHAPTER THREE

### LITERATURE AND THEORETICAL REVIEW

#### 3.1 Introduction

This chapter reviews the theoretical framework and literature that is used to argument and develop the conceptual model of the study related to the research problem. Specifically, the chapter is focusing on agency theory and social exchange theory. Different constructs have been derived from the two used theories to explore the drivers of agent's satisfaction in the principal-agent relationship.

#### 3.2 Agent's satisfaction

The satisfaction literature has not yet, explicitly or implicitly, established a generally accepted definition of satisfaction (Giese and Cote 2000). However, (Fečiková 2004) tried to define satisfaction by stating that, the word satisfaction is central to many definitions and in a marketing context it is used to have many "specific" meanings: satisfaction is merely the result of "things not going wrong" or "satisfying the needs and desires of the consume and satisfaction-as-pleasure, satisfaction-as-delight.

The predominantly used interpretations reflect the notion that satisfaction is a feeling which results from a process of evaluating what was received against that expected, the purchase decision itself and/or the fulfillment of needs/want (Fečiková 2004). The perception of the word "satisfaction" influences the activities which we conduct to achieve it. If we think of satisfaction as "things not going wrong", the company goal will be to reduce the number of complaints (Fečiková 2004).

Steenkamp and Geyskens (2000) Points out that, Satisfaction can either be the economic or social satisfaction that arises from a simple to complex relationships in the supply chain. Considering the Tricycles' Drivers (Agent) and the owner (Principal) of the Tricycle relationship, it is obviously that economic and social satisfaction can exist.

### **3.2.1 Economic satisfaction**

Economic satisfaction is defined as a channel member's evaluation of the economic outcomes that flow from the relationship with its partners such as sales volume, margins, and discount. An economically satisfied member within relationship considers the relationship to be a success with respect to goal attainment. It is satisfied with the general effectiveness and productivity of the relationship with its partner, as well as with the resulting financial outcomes (Steenkamp and Geyskens 2000).

### **3.2.2 Social satisfaction**

Social satisfaction is defined as a channel member's evaluation of the psychosocial aspects of its relationship, in that interactions with the exchange partner are fulfilling, gratifying, and facile, A channel member satisfied with the social outcomes of the relationship "appreciates the contacts with its partner, and, on a personal level, likes working with it, because it believes the partner is concerned, respectful, and willing to exchange idea (Steenkamp and Geyskens 2000).

Traditionally, agency theory has treated satisfaction as one of a number of potential outcomes resulting from the application of behavioral and outcome-based controls. The presumption is that the principal will prefer and select those forms of control that are most conducive to achieving the desired outcomes, given a set of constraints imposed by the environment and the risk preferences of both the agent and principal (Crawford, Thompson and Dunipace 2011).

In exchange relationships, satisfaction is viewed as an important element in the development and maintenance of long-term exchange partner relationships (Ganesan 1994). Satisfaction is becoming vital in business relationships and it has been found that successful business relationship has contributed to lowering transaction costs and foster greater economic value for both marketers and their customers (Selvan, Noor and Zolkafli 2010) In other words, the satisfaction of business relationship has huge potential for enabling companies, small and large, to develop better collaboration and coordination for long-term based strategies and commitment in business relationship. Entirely new opportunities and competitive advantages would open up for companies. As a result, the importance of relationship satisfaction is emphasized (Selvan, Noor and Zolkafli 2010).

### 3.3 Agency Theory

Agency theory in early 1960's started to attract people's attention. Informational economics is its main origin and it deals with risk sharing among cooperating parties (Eisenhardt 1989). Agency theory is not a new concept, rather it has been developing over time, with the main aim of exploring how agent and principal relate with a set of different varieties of relationships and ideas (Shapiro 2005).

In the simplest form, Agency theory elaborate more the relations between two people, a principal and agent who makes decisions on behalf of the principal (Douma and Schreuder 2008), In an agency relationship, one party acts on behalf of another (Shapiro 2005). Douma and Schreuder, (2008) pointed some few examples of principal-agent relationship as follows;

- a lessor who is the principal and a lessee who is an agent and makes decisions which affect the lessor's property
- a manager who is the principal and his/her subordinate who is an agent and makes a decision which affects the manager's reputation. And,
- a patient who is the principal and her/his physician who is an agent and makes a decision which affects the patients' wealth.

In agency theory, two concepts of literature can be differentiated, the positive theory of agency and the theory of principal and agent (Eisenhardt 1989; Douma and Schreuder 2008). The two streams share a common unit of analysis: the contract between the principal and the agent and common assumptions about people, organizations, and information (Eisenhardt 1989).

Positivist agency theory is mostly applied to intra-organizational relationships and seeks to understand the impact of contracts on the behavior of participants. And how different organization forms differ from one organization to another (Douma and Schreuder 2008), also is concerned with describing the governance structure mechanisms that will solve the agency problems and satisfactions (Eisenhardt 1989). It explains non-rational behaviors of the agents and principal when there is unwillingness to share information from either party of the supply chain relationship and provide a useful framework for explaining how problem surrounding the issue of the separation of control from ownership (Fayezi, O'Loughlin and Zutshi 2012).

Positivist agency theory is not yet to be fully expressed in the mathematical model compared to the theory of principal and agent (Bergen, Dutta and Walker 1992; Douma and Schreuder 2008). On the other hand, the theory of principal and agent, the main and important question is how the agent's reward structure should be designed by the agent, and this question has been possible to express in the mathematical model (Douma and Schreuder 2008). Thus, this study focused on applying principal-agent theory to describing a number of variables which lay down the foundation of this study.

Agency exists whenever one party (the principal) delegates authority to another party (the agent) to undertake some action on their (the principal's) behalf (Crawford, Thompson and Dunipace 2011) and when the agent is acting for the principal it resembles behaviors such as performing for the benefit of the principal or acting as the principal's representative or employee. (Fayezi, O'Loughlin and Zutshi 2012) points out that the agency theory is concerned with resolving two problems that arise in agency relationships (a) when the desires or goals of the principal and the agent conflict and (b) when it is expensive or hard for the principal to verify what the agent is doing.

In principal-agent relationships, naturally, the principal seeks to minimize the agency costs, such as, policing the agent's behavior and specifying rewarding and monitoring systems, while the agent works towards maximizing rewards and reducing principal control. The right way of managing agency problems such as information acquisition (or communication), effort (or moral hazard), preference mismatch (or conflict of interest), and capability (or adverse selection), mainly associated with the agent is also imperative to any principal-agent relationship (Fayezi, O'Loughlin and Zutshi 2012)

The focus for the principal-agent stream is on determining the optimal contract, behavior versus outcome which involves careful specification of assumptions, which are followed by logical deduction and mathematical proof. To date, Agency theory has been used by scholars in sociology, economics, marketing, political science, organizational behavior, accounting, and finance (Eisenhardt 1989)



### 3.3.1 Two Types of Agency Problems

Normally a principal encounters two different kinds of problems when deciding to enter a relationship with an agent. These problems are known as Precontractual problems (hidden information) and post-contractual problems (hidden action) (Bergen, Dutta and Walker 1992). On the first problem, the agent strives to find an agent who matches his/her desired characteristics given the nature of the work the agent is supposed to be doing on behalf of principal. (Bergen, Dutta and Walker 1992). (Woodbine 2008) termed this problem as adverse selection. Adverse selection occurs as agents have unknown private information which hinders principal from making right selection of agents.

The second problem arises after principal and agent engage in a relationship, the main issue is how the principal is supposed to reward the performance of the agent, which will motivate the agent to work towards achieving principal's goal in a consistent way (Bergen, Dutta and Walker 1992). Woodbine (2008) termed this problem as moral hazard. Moral hazard occurs when the principal is unable to observe agent's efforts when performing the assigned task, thus the agent is tempted to shirk.

#### Goal conflicting

This also on its own is the most common problem in principal-agent relationship, this problem commonly falls under moral hazard category, and it's because the principal cannot monitor what the agent is doing. The agency problem in this relationship arises from incongruence between the goals of principal and agent and because of difficulty in monitoring or verifying agent behavior (Roth and O'donnell 1996). The difference in goals of the parties in a contract leads to goal conflict between them. Commonly, many studies explain that agents strive to maximize their utility at the expense of principals, and try to evade from performing agreed tasks and obligations (Shapiro 2005; Brown and Potoski 2003). This situation lead to conflicts between the parties in a relationship. Conflict is of interest in this study and it, as its one of the construct used under prevailing condition of monitoring. More details on this will be discussed in the subsequent chapters.

Both two mentioned major problems above are associated with information asymmetry (Eisenhardt 1989). This means that the information is available but it is not evenly distributed among the parties (principal and agent), leading to the creation of different problems to parties in a relationship (Douma and Schreuder 2008). And both problems arise due to problem of unobservability of agent's actions (Douma and Schreuder 2008). In agent-principal relationship, it's much desire for every part to have clear information on what is going on.

Thus, this study will focus more to see how well the agent and principal share information, and information sharing will be used as one of the constructs in determining the agent's satisfaction. More details on this will be discussed in the subsequent chapters.

#### Mechanism for solving hidden Information (adverse selection) problems

The principal faced with hidden information problems may decide to overcome this problem by employing several solutions before entering any kind of relationship with an agent. The predominantly suggested solutions include; a) screening b) examining signal from suitable agents and c) providing opportunities for self-selection (Bergen, Dutta and Walker 1992).

#### Screening

A principal must come up with the proper strategies on how to gather information which will enable him/her to know the true color concerning behavior of the agent intended to be hired (Bergen, Dutta and Walker 1992), these strategies are not limited to run thorough background check via the mentioned references, conduct face to face interviews and assessment centers which in reality are costly and increase make hiring process to be expensive (Bergen, Dutta and Walker 1992)

#### Signaling

Bergen, Dutta and Walker (1992) defined signaling as a condition whereby the principal is convinced to choose the agent who is suitable for the work based on the activities which are done by the agent. Spence (1974) pointed out that signaling assists the principal to understand the hidden attributes of the agent, hence the principal will be able to anticipate how well the agent will be

performing. Normally the agent incurs costs for extra training if he/she lacks some knowledge which is required for him/her to be selected for the job.

#### Mechanism for solving hidden action (moral hazard) problems

For the agent to be motivated so that he/she can be engaged in desired actions and reduce the possibility of shirking behavior, the principal might apply various solutions. The principal may decide to collect a lot of information about the agent's behavior by putting monitoring systems on place either can decide to draft the contract that with the rewards which are based either on the information about his/her behavior or achieved outcomes aligning with principal's goals (Bergen, Dutta and Walker 1992). The said mechanism will solve the problems associated with moral hazards problems.

#### Monitoring

Douma and Schreuder (2008) pointed out that, a monitored agent would likely to produce more than an agent without a monitor. By having a proper monitoring system, activities done by an agent can be monitored. Agent's output and behavior can be monitored by use of different types reports, doing an inspection or use of specialized third party. Jensen and Meckling (1976) However, monitoring an agent can be costly depending on the systems employed, therefore an agent must choose the monitoring systems which are affordable and manageable.

Thus, monitoring is one of the interesting aspects of our study and will be used as one of the constructs with an interaction effect of conflict on determining the agent satisfaction, more details on this will be discussed in the succeeding chapters.

#### Bonding

By use of this mechanism, the agent must take initiatives to be monitored and bind on it, whereby commitment is made by agents to share certain information with the principal (Douma and Schreuder 2008). Tricycle driver(agent) could make a commitment to timely share all required information to tricycle owner(principal) like kilometers covered, hours spent per every trip, and any valuable information which can help the principal (Jensen and Meckling 1976).These commitments can be part of the contract with their respective consequences in case of violations.

## Contracting

The principal can use different types of contract to manage the level of efforts put by his/her agent and to reduce the common problem of information asymmetry (Douma and Schreuder 2008). The contract can be either wage contract or rent contract, on wage contract, there is a fixed salary for an agent irrespective of pay-off, the only challenge of this type of contract the agent has no motive to put more effort because the income does not depend on the effort (Douma and Schreuder 2008). Under this type of contract, the principal bears all the risks.

Rent contract, there is a fixed amount which an agent must pay to a principal, an agent income is an amount which remains after paying the agreed fixed amount to a principle. These contracts are very common on farming contracts where a farmer hires the land and pays a fixed amount irrespective of the harvests. With this type of agreement, the agent has a motive to put more efforts to obtain the maximum income possible. (Douma and Schreuder 2008). All risks fall to the agent because under any condition he/she must pay the principal regardless of the business performance if it's either good or bad. (Douma and Schreuder 2008).

Contract type/reward structure is of our interest and most important aspect of our study, it will be discussed in detail in the subsequent chapters by looking on how different reward structures can affect agent's satisfaction.

### **3.4 Social Exchange Theory**

A different individual or subgroups interact for reward or with the expectation of a reward from their interaction with others, thus the social exchange contends a basic motivation for interaction seeking of rewards and avoidance of punishments (Griffith, Harvey and Lusch 2006; Cook and Rice 2003). On the other hand, a basic principle of social exchange theory is that individuals form and maintain a relationship if the relationship offers better or greater individual profits than alternatives (Lawler, Thye and Yoon 2008). This principle is one reason that issues of power-dependence, rewards, trust, and conflict have been central to the exchange theories (Lawler, Thye and Yoon 2008; Griffith, Harvey and Lusch 2006).

Social exchange theory works under a basic assumption of parties enter and maintain relationships with the expectation that doing so will be rewarding (Lambe, Wittmann and Spekman 2001). Blau (1964) argues that social exchange theory is comprised of series of propositions that explains the central premises of social exchange. For example, reward propositions deposits that, a member of an exchange is regarded more valuable as the result of his/her action, thus when an exchange member's action does not receive the expected reward or receives unexpected punishment, the exchange member will avoid the action in the future (Griffith, Harvey and Lusch 2006).

Social exchange relationships develop between parties through a series of mutual exchange and yield a pattern of reciprocal obligations in each party (Masterson et al. 2000; Blau 1964). Therefore, one party contributes or provides a service to another party, with the expectation of returns in future time, whilst the other party, having received something in value, develops a sense of obligations to reciprocate (Masterson et al. 2000). Previous studies (Blau 1964; Griffith, Harvey and Lusch 2006; Masterson et al. 2000) have persuasively developed that in any employment relationship, an employee is involved at to two social exchange relationship; one with his or her immediate supervisor and one with his or her organization. Thus, in this study, the agent is involved with at least one social exchange relationship with his or her principal.

Social exchange theory is among the most influential conceptual models for understanding workplace behavior that involves a series of interactions (Cropanzano and Mitchell 2005) which are seen as interdependent and contingent on the actions of another person that generate obligations (Emerson 1962) and also that emphasizes that these interdependent transactions have the potential to generate high-quality relationships which occur under certain circumstance (Cropanzano and Mitchell 2005). Therefore, social exchanges theory's explanatory value includes social power-dependence, psychological contracts, networks, satisfaction, distributive justice and trust.

#### 3.4.1 Dependence, trust, satisfaction and social exchange theory

The most prominent topic in previous research in social exchange theory is power and justice (Griffith, Harvey and Lusch 2006). This study exploits the previous research to explore the relationship between dependence, trust, conflict, and satisfaction using social exchange theory. According to (Blau 1964), satisfaction has been used in a business relationship as an operationalization variable of the success of the exchange relationship. Social exchange theory,

satisfaction plays a fundamental role in the relationship, thus agent who receives benefits that meet or exceed their expectations and are equal to or superior to outcomes available from alternatives are likely to maintain and expand the relationship (Lambe, Wittmann and Spekman 2001). Therefore, satisfaction serves as a measure of agent's view of the outcomes of the relationship.

### *Dependence*

The relationship between power and social structure was the central theoretical problem in social exchange theory. Dependence and power are, thus, a function of the value one actor places on resources controlled by another and the relative availability of alternative sources of supply for those resources (Cook and Rice 2003). Emerson (1962) defines power in relational terms as a function of the dependence of one actor upon another. In principal-agent relationship being as exchanging partners, the power of a principal over an agent is a function of the dependence of agent on the principal for valued resources and behaviors, thus dependence is a casual explanation of power (Emerson 1962). Social exchange is viewed as an instrument such a more powerful member in agency relationship builds up social credit that creates social indebtedness allowing the agent to extract compliance from the principal (Griffith, Harvey and Lusch 2006).

An agent's desire to maintain a relationship with a principal may also be influenced by the extent to which the principal fulfills its needs and whether the needed resources are available elsewhere (Andaleeb 1996; Griffith, Harvey and Lusch 2006). From the aforesaid reason, then when one party is dependent on another party, it should value and maintain the relationship and finally willing to sever the relationship because of the reward expectation. According to (Emerson 1962), power imbalances cause relationships to be unstable and, thus, interdependence is crucial to the continuance of a social exchange relationship.

Moreover, dependence construct has been used to argument sources of positive reinforcement and satisfaction in particular. Consistent with previous scholars (Lambe, Wittmann and Spekman 2001), dependence has been used in a business relationship as an operationalization of the social exchange theory facet whereas social and economic satisfactions obtained from agency relationship by the agent are compared to alternatives. Thus, this study utilizes dependence construct to determine its influence on agent's satisfaction between exchange partners in the next chapter.

## *Trust*

According to (Lambe, Wittmann and Spekman 2001), trust is a vital aspect of social exchange because the social exchange is governed to a large degree by social obligations. The mutual reciprocation of beneficial action over time through principal-agent interactions creates trust, thus one must trust that the other will return the benefit in time, or that the other will reciprocate when proving another with the benefit (Blau 1964). Therefore, when trust is created between the principal and agent, the obligations for two parties is easily stipulated which fosters the continuity of agency relationship.

Blau (1964) argue that social exchange theory suggests that, trust-building between two parties may start with small transactions, and that as the value of the rewards one receives increases, the more valuable the rewards one must give in return. Similarly, (Lambe, Wittmann and Spekman 2001) points out that trust is important in social exchange since it contributes significantly to the level of satisfaction with the exchange relationship. This ensures the party to put forth the effort and make the necessary actions to produce mutually desirable outcomes, thus increases the partners' desire to continue in a relationship (Blau 1964). Therefore, social exchange theory deposits the anticipation of large commitments by exchange parties when the other party experiences high levels of reciprocal rewards which in turn facilitate trust (Cook and Rice 2003; Emerson 1962). Therefore, this study adopts trust construct to determine its influence on agent's satisfaction between exchange partners in the next chapter.

### **3.5 Chapter Summary**

This chapter has presented the theoretical frameworks applied in this study. Moreover, the main theoretical review focused on social exchange social exchange theory in which two constructs were adopted from including trust and dependence. Similarly, agency theory was explained where information exchange, monitoring, reward structure and conflict constructs were adopted from the theory. Finally, satisfaction was defined and explained thoroughly as the main construct of the study. The next chapter addresses research conceptual model and hypotheses.

## CHAPTER FOUR

### RESEARCH MODEL AND HYPOTHESIS

#### 4.1 Introduction

This chapter presents the conceptual model and hypotheses of this study based on the theoretical framework explained in the preceding chapter. Moreover, the chapter starts by explaining the conceptual model that explains the relationship between dependent and independent variables constructed from social exchange and agency theories. The chapter also presents the rationale of the hypotheses and finally, we conclude by providing the overall summary of this chapter.

#### 4.2 Overview of the Conceptual Model of the Research

The conceptual model of this study presents drivers of agent's satisfaction in a principal-agent relationship from tricycle transport industry in Tanzania. Building on social exchange and agency theories explained in preceding chapter, information exchange (INFOEX), trust (TRS), dependence (DEP), reward structure (WorkPAY), conflict (CONF) and monitoring (MON) as independent variables were used to examine their influence on dependent variable; satisfaction (SATIFS). Moreover, location is contained in the research model as a control variable.

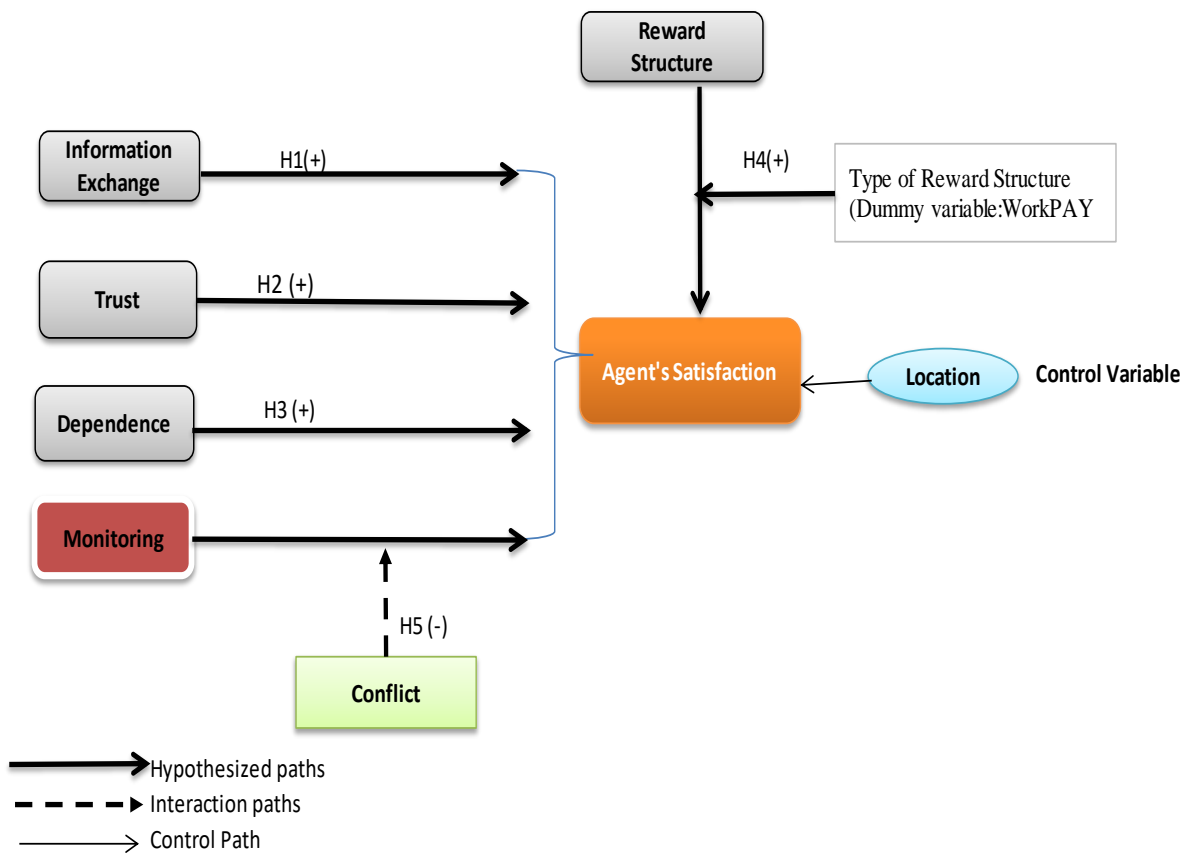
Information exchange (INFOEX) between the principal and agent was introduced as the driver of satisfaction which forms a party of five hypotheses of this study. Information exchange leads to an improvement in efficiency by facilitating an effective means of coordination, thus information exchange has been positively associated with an increase of the level of satisfaction (Rodriguez, Agudo and Gutierrez 2006). Similarly, trust (TRS) and dependence (DEP) were introduced as the determinants of satisfaction in the preceding chapter, whereby trust and dependence tend to increase agent's commitment in a relationship which contributes an increase of output or performance by the agent (Geyskens, Steenkamp and Kumar 1999). Therefore, trust (TRS) and dependence (DEP) have been positively associated with satisfaction in business relationships.

Furthermore, reward structure was introduced as an independent variable to capture its influence on satisfaction. Several previous studies have explained how reward structure of different level of incentives impacts the level of agent's performance and satisfaction, particularly in principal -



agent relationship (Douma and Schreuder 2008). Moreover, the research model presents how monitoring impact agent’s satisfaction at the different level of conflict existing in a principal-agent relationship. Finally, the control variable; location was introduced in research model to determine how it impacts the level of satisfaction in an agency relationship. The research conceptual model presenting research hypotheses and control variable are described in figure 4.1 below;

**Figure 4.1: Conceptual Model and Research Hypotheses**



Source: Authors’ formulation based on theoretical and literature review, 2017

### 4.3 Research hypotheses

Theoretical and literature review presented in the preceding chapter have been used to develop the hypotheses of this study based on social exchange and agency theories. Furthermore, the research hypothesis was developed based on insights and observation from Tanzania tricycle transport industry.

### **4.3.1 Information exchange and Agent's Satisfaction**

Information sharing refers to the extent that critical information is conveyed to a party's relationship partners. This may include involving other parties in early stages of product design, opening the books and sharing cost information, discussing future product development plans, or jointly providing supply and demand forecasts. Inter-firm communication was found to be an important part of a buying firm's supplier development effort (Nyaga, Whipple and Lynch 2008).

Li and Lin (2006) pointed out that, information shared should possess a number of quality aspects which are accuracy (information shared has to be as accurate as possible and organizations must ensure that it flows with minimum delay and distortion), timeliness, adequacy, and credibility of information exchanged.

Moreover, information sharing is a critical factor if partners are to realize benefits of collaboration. Information sharing is essential in the trust-building process since sharing of critical information enables firms to develop an understanding of each other's routines and develop mechanisms of conflict resolution, which signals that (Nyaga, Whipple and Lynch 2008). For instance, an expert agent might be unwilling to share sensitive information with its principal because of lack of trust which underpins Supply Chain relationship.

Several previous studies (Rodriguez, Agudo and Gutierrez 2006; Mohr and Sohi, 1995), find a positive relationship between information exchange and satisfaction. According to (Mohr and Sohi, 1995), agent's perceptions of the quality of information exchanged with the principal is positively associated with an increased level of satisfaction. This is because an information exchange can lead to an improvement in efficiency in the development of functions within the relationship (Rodriguez, Agudo and Gutierrez 2006). Similarly, poor quality information exchange could leave agent feeling frustrated in their ability to effectively achieve principal's goals, thus agent is likely to be less satisfied with the relationship (Mohr and Sohi, 1995). Furthermore, information exchange appears as a determining factor of both economic and non-economic dimensions of satisfaction (Rodriguez, Agudo and Gutierrez 2006). Based on the empirical evidence from the previous studies, we hypothesize that;

*H1: As the information sharing increase in agent and principle relationship, the more Agent is satisfied*

### **4.3.2 Trust and Satisfaction**

Razzaque and Boon (2003) points out the grounds for trust to be present; trusting parties must be vulnerable, outcome uncertainties and the possibility of abusing trust by either party exists. Thus, trust is the ability of the parties to make a leap of faith that helps overcome the aforesaid problems implying that each party is concerned about the other's welfare and that neither will do something that can hurt the other.

Trust is a willingness to rely on an exchange partner in whom one has confidence, whilst trust has been viewed as a belief, sentiment, or expectation about an exchange partner's truth worthiness that results from the partners' reliability and integrity (Moorman, Zaltman and Deshpande 1992; Lambe, Wittmann and Spekman 2001). On the other hand, trust has been viewed as a behavioral intention or behavior that reflects a reliance on a partner and involves vulnerability and uncertainty in the part of trustor (Moorman, Zaltman and Deshpande 1992).

Moreover, according to (Nyaga, Whipple and Lynch 2008), trust refers to the extent to which relationship partners perceive each other as credible and benevolent. Credibility reflects the extent to which a firm in a relationship believes that the other party has the required expertise to perform the expected task effectively, while benevolence occurs when one relationship partner believes that the other party has intentions and motives that will benefit the relationship.

Trust is seemingly important to understanding exchange, that mediates the relationship of justice (distributive, procedural, and interactional) on job satisfaction, turnover intentions, and organizational commitment. Therefore trust, as the critical social exchange mediator, is posited to cause job satisfaction, commitment (Cropanzano and Mitchell 2005). Beccerra and Gupta (1999) pointed out that, trust is necessary for individuals and relationships to function adequately thus reduces conflict, improves individual performance, promotes inter-organizational cooperation and increases commitment. Similarly, (Razzaque and Boon 2003; Andaleeb 1996) have suggested that the composite trust, mutual respect, and support is associated with higher level of satisfaction.

Several previous studies find a strong positive relationship between trust and satisfaction (Lambe, Wittmann and Spekman 2001; Geyskens, Steenkamp and Kumar 1999; Andaleeb 1996; Kavak, Sertoglu and Tektas 2016). One perspective that explains this positioning is that trust lowers risk (Payan and McFarland 2005), increases performance (Razzaque and Boon 2003) and increases commitment (Rodriguez, Agudo and Gutierrez 2006). The agent's satisfaction in a principal-agent relationship is likely to be affected by the extent of trust present in the relationship, whilst a high level of trust in the principal is likely to exhibit low uncertainty associated with the outcomes hence a high degree of satisfaction (Razzaque and Boon 2003). Moreover, when an agent trusts its principal, the agent feels secure by the way of an implicit belief that the actions of the principal will result in the positive outcomes which will lead to high satisfaction (Payan and McFarland 2005; Andaleeb 1996). Based on previous aforesaid studies, the second hypothesis of the study is;

*H2; The greater the level of agent's trust in a principal, the greater will be the agent's satisfaction in principal-agent relationship*

#### **4.3.3 Dependence and Agent's Satisfaction**

Dependence of firm A upon firm B in an exchange relationship is “(1) directly proportional to A's motivational investment in goals mediated by B, and (2) inversely proportional to the availability of those goals to an agent outside of the A-B relation” (Emerson 1962). For the purpose of this study, firm A and firm B represent agent and principal respectively.

Dependence is defined as the degree to which a target firm needs the resources provided by the source firm to achieve its goals (Andaleeb 1996). That is, firms are dependent upon an exchange relationship to the degree to which rewards sought and gained from the relationship are not available outside of the relationship (Lambe, Wittmann and Spekman 2001).

Several previous studies (Payan and McFarland 2005; Andaleeb 1996; Razzaque and Boon 2003) have pursued the link between dependence and satisfaction either indirect or directly. According to (Andaleeb 1996), a direct relationship between dependence and satisfaction is confusing, however introducing another variable as interactive effect tend to explain agent satisfaction better. Similarly, (Geyskens, Steenkamp and Kumar 1999) suggests that dependence is causally antecedent to trust and that satisfaction is a consequence of trust. In contrast; (Payan and

McFarland 2005), find that higher level of dependence is associated with higher levels of satisfaction, thus there is a direct link between satisfaction and dependence.

Furthermore, (Lewis and Lambert 1991; Lawler, Thye and Yoon 2008) argue that the greater a party's dependence on its partner, the greater the attribution of performance outcomes to the partner and hence greater the satisfaction with the partner. From this perspective, dependence should explain a party's satisfaction to the relationship, by suggesting that, agent, satisfaction will depend on the power that the principal exercises within the relationship. This suggest that;

*H3: There is a positive association between agent's dependence and satisfaction in principal-agent relationship*

#### **4.3.4 Reward structure and Agent's Satisfaction**

Agency theory provides insight into what reward mix best aligns organizational and individual objectives (Bergen, Dutta and Walker 1992). It outlines how the separation of organizational activities from ownership presents the problem of ensuring that owners' interests are aligned to those responsible for operating the business (Brown, Cobb and Lusch 2006). Owners look to ensure that employees direct their work effort in line with the owners' interests. This can be achieved through adjusting the reward mix, in particular, the balance between fixed and variable rewards, to ensure that appropriate incentives are in place for the employee to act in the owners' interest (Tosi, Katz and Gomez-Mejia 1997). Thus, contract is the central, most crucial concept in agency theory because it distinguishes agency theory from classical and neoclassical economics, in which market forces act as a disciplining mechanism on the owner/entrepreneurs who actively manage firms (Tosi, Katz and Gomez-Mejia 1997)

Tosi et al. (1997) pointed out that there must be incentive alignment whereby an alignment of an agent's and principal's interests that can be achieved through contracts that make the agent's compensation contingent on outcomes of her performance that are desired by the principal. Incentive alignment as a control mechanism is based on the notions that manager's utility is generally assumed to be function of their compensation, executive tasks are nonprogrammable so that financial incentive can provide an efficient form of self-regulation and that managers prefer strategies and choices that maximize their total pay packages.

Efficient wage contracts are likely to become the more important focus of attention in the ensuing decades, the form of compensation may be more critical in attracting and motivating talented people than its amount. Although evidence about the use of executive pay that is contingent upon firm financial performance indicates a declining trend. Senior executives are trying to turn employees into entrepreneurs who earn a direct return on the value they create in exchange for putting their pay at risk (Parks and Conlon 1995).

Moreover, (Lim and Tang 1999) pointed out that, the central focus of the principal-agent relationship is the determination of an efficient reward structure that lead to a successful business relationship between partners. Moreover, according to (Bergen, Dutta and Walker 1992), the contract should be designed so that the actions with the highest payoffs to the agent are also the actions that are most appropriate from the principal's view. That is, the principal's goal is to frame the contract that will obtain the outcome that is incentive compatible for the agent.

Different previous studies find the positive relationship between contracts with high incentive compatibility and satisfaction in agency relationship (Brown, Cobb and Lusch 2006; Bergen, Dutta and Walker 1992). According to (Lim and Tang 1999), agent tends to remain in relationship with the principal when is satisfied with the outcome of this job. Ellis et al. (2001) argue that contracts with well-aligned incentive between the employee and employer yield less moral hazards and greater efficiency (at least from agent's perspective), thus increases agent's satisfaction.

Also, (Olvera et al. 2015) supported this association by pointing out that, the agents who own contracts with high incentives work more intensely than those who owns contracts with low incentives compatibility, thus increases positively to agent's satisfaction level. Drawing from the aforesaid research studies, we hypothesize that,

*H4: Contracts with strong incentives are positively related with agent satisfaction*

#### **4.3.5 Monitoring, conflict and Agent's Satisfaction**

As agent satisfaction may help to increase its performance, exploring the drivers of the construct; satisfaction has been considered as vital in agency relationships (Kavak, Sertoglu and Tektas 2016). Conflict and monitoring between relationship members have been considered being two of

the most important elements of principal-agent relationship in previous studies. Monitoring, by reducing information asymmetry and uncertainty, distrusts the agent's willingness to perform to work together with the principal, which in turn has a negative impact on agent's satisfaction (Parks and Conlon 1995; Frey 1993). Similarly, high levels of conflict negatively affect the agent outcome and cooperation between principal- agent thus impacts agent's satisfaction level (Kavak, Sertoglu and Tektas 2016).

Conflict is defined as a situation in which one partner perceives another relationship member to be engaged in behavior that is preventing or impeding the other party from achieving his/her goals (Lusch 1976; Gaski 1984). Conflict exists in agency relationship through two phenomena; first is that which is associated with competitive intentions, such as goal incongruent between exchange partners and on the other hand conflicts is a result of one party's behavior, perceptions, and emotions (Thomas 1992; Kavak, Sertoglu and Tektas 2016). Moreover, conflict arises as the result of a process in which one party seeks the advancement of its own interest in its relationship with the others (Lusch 1976).

According to (Gaski 1984; Anderson and Narus 1984), conflicts can be classified into five stages which provide other meaning of conflict; (1) *latent conflict; underlying sources of conflicts* (2) *perceived conflict; perception only, when no conditions of latent conflict exist*, (3) *felt conflict; tensions, anxiety, disaffection in addition to the perception*, (4) *manifest conflict; behavior which blocks another's goal achievement* (5) *conflict aftermath; post-conflict conduct, either resolution or suppression*.

Different previous studies (Lusch 1976, Thomas 1992, Kavak, Sertoglu and Tektas 2016), have defined conflict being as dysfunction that is behavior designed to destroy, injure, frustrate or control another member in dyad relationship. Consistent with the previous studies (Chung, Sternquist and Chen 2006; Mohr, Fisher and Nevin 1996; Thomas 1992; Kavak, Sertoglu and Tektas 2016), in this study conflict is constructed as a dysfunctional concept. Conflicts between exchange partners cause the feelings of unpleasantness about the relationship, which blocks the achievement of one party's goal and this may destroy the level of performance which in turn affects the level of satisfaction (Kavak, Sertoglu and Tektas 2016).

Several previous researchers (Kavak, Sertoglu and Tektas 2016; Chung, Sternquist and Chen 2006) have pursued to the link between conflict and satisfaction either indirect or directly. According to (Kavak, Sertoglu and Tektas 2016) suggests that there is a direct negative association between conflict and satisfaction and supported this from a buyer-supplier relationship perspective. In contrast, (Emerson 1962; Frazier and Rody 1991) argue that a direct relationship between conflict and satisfaction is insufficient, however introducing a moderating variable tends to explain satisfaction better. Mohr, Fisher, and Nevin (1996) point out that, monitoring is the outcome of power, thus disagreement between parties exists when one party exercises its power outcomes; monitoring (Lusch 1976) this was supported by manufacturer and car dealer relationship. From the aforesaid empirical evidence, in this study, the link between conflict and satisfaction have been pursued indirectly considering the level of monitoring exercised by the principal to the agent.

### *Monitoring*

Agency theory suggests that high monitoring raises an agent's work effort and will be applied given that the costs of doing that are low (Frey 1993). Monitoring plays a central role in applications of agency theory, in which agents are assumed to have more information regarding their own talents and efforts than their principals have. This information asymmetry enables agents to shirk by substituting leisure for work or otherwise acting opportunistically (Parks and Conlon 1995).

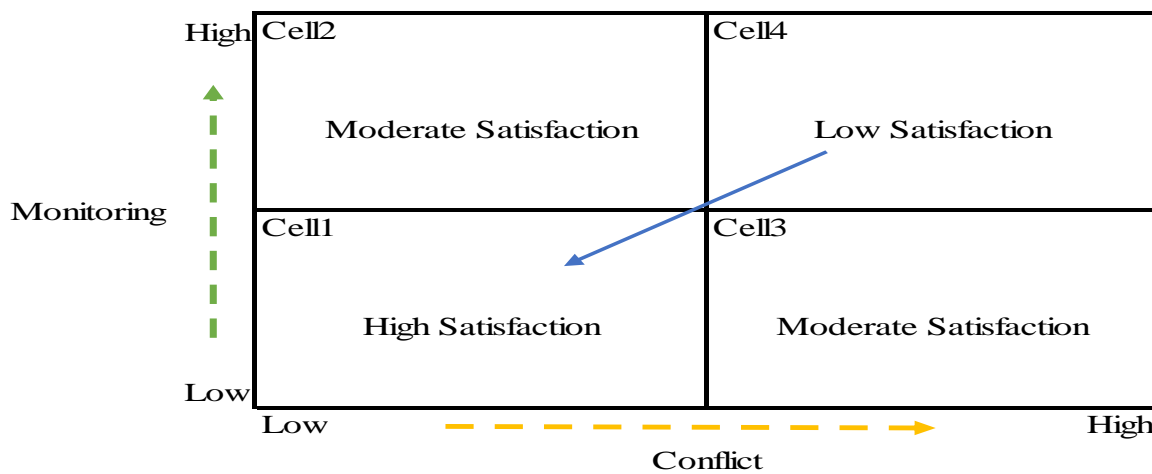
The principal can prevent such actions either by monitoring agent behavior or negotiating a performance-contingent compensation agreement. Which of the two is chosen will depend on relative cost. Monitoring cost depends on the ease with which principal can observe the relationship between agents' efforts and performance. These costs, which include the risk borne by the agent and the payment of risk premium are frequently lower for tasks for which it is possible to anticipate and specifically appropriate agent behaviors in advance (Parks and Conlon 1995).

The view that agents can be prevented from shirking by stricter monitoring (or other such disciplinary devices) is one-sided and captures only part of the reality, under readily identifiable conditions, increased monitoring reduces agents' overall work effort. The reason is that an implicit (psychological) contract often existing between principal and agent is broken (Frey 1993).



Anderson and Narus (1984) argues that monitoring captures the control of other party’s action in agency relationship and is viewed as the outcome of power and results when a firm is successful in modifying its partner's behaviors (Mohr, Fisher and Nevin 1996) supported by the previous study in a manufacturer-distributor relationship. In the same previous study (Anderson and Narus 1984) find that monitoring is inversely related to satisfaction depending on the level of conflict existing in an agency relationship. Thus, from the aforesaid previous studies, in this study agent’s satisfaction has been pursued considering the indirect link between conflict and satisfaction at different level of monitoring as described in figure 4.2 below,

**Figure 4.2: Moderating effect of Conflict**



Source: Authors’ formulation

Cell\_1: In figure 4.2 above, this cell presents a situation where the agent is constrained in the low-monitoring situation, thus agents feel they are valued and important with the principal (Mohr, Fisher and Nevin 1996). Under this condition, the agent exercises high degree of freedom in terms of decision making which in turn has the high positive impact of agent’s satisfaction. On the other hand, under the same condition, where the disagreements between exchange partner are low, leads higher levels of partner satisfaction (Chung, Sternquist and Chen 2006).

Cell\_2: In this cell, the agent is constrained in the high-monitoring situation, that is agent feels low valued and crucial with the principal (Anderson and Narus 1984). This situation underlines the

causes of conflict (Gaski 1984) thus the agent's performance decreases (Mohr, Fisher and Nevin 1996) which lead to the decrease of satisfaction level compared to cell\_1.

Cell\_3: This indicates that, when the principal exercises his/her power to monitor the agent's actions and behavior over his/her daily operations, the agent perceives that action blocks agent's goal achievement which leads to the decrease of the level of satisfaction (Anderson and Narus 1984).

Cell\_4: In this situation, the principal exercises high-level monitoring thus the agent is constrained the agents feels less valued and important in decision making. This results in a high level of disagreement between agent and principal which in turn affects agent's satisfaction negatively (Mohr, Fisher and Nevin 1996).

Therefore, in the view of the above discussion, this study hypothesizes that;

*H5: As a principal exercise high monitoring on agent in principal-agent relationship, under high level of conflict the less agent is satisfied*

#### **4.3.6 Control Variables**

To understand the other cause of agent's satisfaction apart from above mentioned independent variables, this study has one control variable which is Location. We believe Ubungo district and Kinondoni as our main area of study have different setting in terms of population, income and choice of transport mode. Thus, in this study are looking to find out if location have any effect on determining agent's satisfaction.

#### **4.4 Chapter Summary**

This chapter has presented the research model and hypotheses of the study. In addition, various constructs developed from theoretical review and literature were examined to determine their empirical association with agent's satisfaction. Based on the developed conceptual model, we developed five research hypotheses and subsequently discussed them into details with four having a direct link with satisfaction whilst one having an indirect link. Finally, one control variable was

added to investigate the possibility of other variables in driving agent's satisfaction. In the subsequent chapter, the research methodology is discussed.

## CHAPTER FIVE

### RESEARCH METHODOLOGY

#### 5.1 Introduction

This chapter gives an overview of the research methodology related to this study. It gives the details of research design, data sources, furthermore, it gives the overview of the targeted population of our study, sample size and sample frame. Finally, it presents how the questionnaire was developed and data collection techniques.

#### 5.2 Research Design

The research design is a plan or framework for conducting the study and collecting data. Also, it is defined as the specific methods and procedures you use to acquire the information you need (Smith and Albaum 2012). Research designs are types of inquiry within qualitative, quantitative, and mixed methods approach that provide specific direction for procedures in a research study (Creswell 2014). Research design gives us many ways in which research can be conducted to answer the question being asked. We conduct research to systematically study specified variables of interest, any variable that is not of interest, but that might influence the results, can be referred to as a potential confound, artifact, or source of bias (Marczyk, DeMatteo and Festinger 2005).

The research design is employed so that suitable research methods are used to ensure the attainment of the goals and objectives set out in the introductory chapter. Hence, research design provides the blueprint or plan for the research and this enable the researcher to anticipate the appropriate research design, to ensure the validity of the study and the results (Bhattacharjee 2012). The primary purpose of research design is to eliminate these sources of bias so that more confidence can be placed in the results of the study (Marczyk, DeMatteo and Festinger 2005).

Furthermore, research design can be either cross-sectional and longitudinal, using questionnaires or structured interviews for data collection with the intent of generalizing from a sample to a population (Fowler 2009). In research design, researchers must indicate whether the study will be cross-sectional which means the data will be collected at one point in time or whether it will be longitudinal which means the data will be collected over time (Creswell 2014).

This study made use of both qualitative and quantitative as both are the attributes of research design, on qualitative aspects, authors had preliminary interviews with few key Informants of tricycle business so that to gather the information which enabled the authors to develop questions which reflect the industry at the moment. Use of key informants was suggested by (Kumar, Stern and Anderson 1993) as it helps the researcher to get adequate knowledge of and information on the research problem on hand. On the aspect of quantitative, the authors adopted use cross-section and correlation design whereby, correlation design is defined by (Creswell 2014), as the use of non-experimental quantitative research in which researchers use the correlational statistic to describe and measure the degree or relationship between two or more variables or sets of scores.

### **5.3 Data Sources**

To test the proposed hypotheses and scientifically address the research problem, authors used both primary and secondary data. Primary data are data that are collected for the specific research problem at hand, using procedures that fit the research problem best, (Hox and Boeije 2005) also (Stewart and Kamins 1993) defined primary data as information collected by a researcher specifically for a research assignment. In other words, primary data are information that a researcher must gather because no one has compiled and published the information in a forum accessible to the public. Primary data are the data which are collected through different methods such as questionnaires, interviews, and surveys. To gather primary data, authors made use of questionnaires which was self-administered in the field during data collection period.

On the other hand, secondary data are those which have already been collected by someone other than the investigator himself, the secondary data can be collected directly either from published or unpublished sources (Maxwell 1996). Secondary data can be collected from Official publications, Semi-Official publications, publication of trade-association, chambers of commerce, co-operative societies, and unions, research publication, submitted by research workers, economists, University bureaus, and other institutions and technical or trade journals (Stewart and Kamins 1993). In this study authors used secondary data to substantiate empirical findings as well as developing theoretical framework for this study, agency theory and social exchange has been widely used and all hypotheses are developed based on these theories, all variables to measure agent's satisfaction has been developed from these theories obtained from published journal articles, books, research

and various reports. Also, data from Tanzania Revenue Authority(TRA), Energy and Water Utilities Regulatory Authority (EWURA) in Tanzania, Tanzania newspapers and magazines has been used

#### 5.4 Population, Sampling Frame, and Sample Size

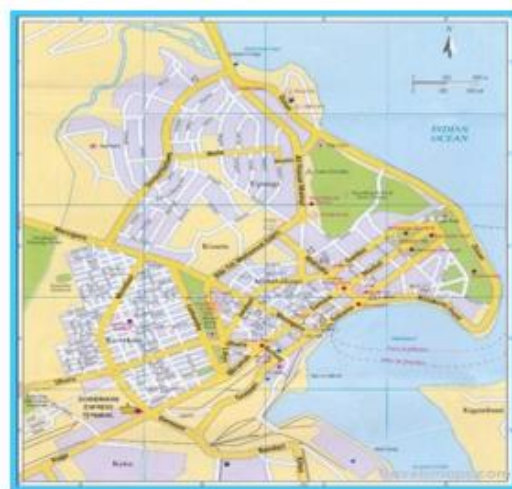
The first thing a researcher must do is to identify the population in the study (Creswell 2014), the population is the aggregate from which the sample is chosen (Cochran 1997), research population is generally a large collection of individuals or objects that is the focus of a scientific query (Explorable 2012). Given the large sizes of populations, researchers fail to test every individual in the population because it is time-consuming and costly. Therefore, researchers choose a sample size and sample frame (Explorable 2012)

Thus, the population for this study consists of registered tricycles in Tanzania mainland., According to (Bishop and Amos 2015) in 2014 there were 53,874 tricycles registered by Tanzania Revenue Authority 2014, in which more than 65% are operated commercially in Dar es salaam region as the means of transport, the rest 35% are being operated in upcountry regions, therefore our population on which the sample size was drawn is approximately more than 35,000 tricycle drivers.

Figure 5.1: Study area



a. Tanzania



b. Dar es Salaam region

### **5.4.1. Sample size**

A sample is defined by as a subset of a population or universe (Farrokhi 2012). One of the questions most frequently asked of a statistician is: How big should the sample be (Canada 2010), and determining the sample size is one of the most complicated parts of a research design (Smith and Albaum 2012). Pallant (2011) pointed that, if you have a small sample with many predictors, you may have problems with the analysis. Hair et al. (2009) suggested a sample size ranging from 100-150 elements A lot of existing literature does not give clear description on the common agreement as to appropriate sample sizes, for example (Smith and Albaum 2012) suggest that larger sample sizes generally produce a more accurate picture of the true characteristics of the population, though has not mentioned clearly how large the sample should be.

However, (Gaur and Gaur 2009, Pallant 2011) suggests a formula for calculating sample size requirements, considering the number of independent variables that you wish to use:  $N > 50 + 8m$  (where the  $N$ = number of sample size and  $m$  = a number of independent variables). In our study, we have five independent variables, therefore applying the above formula  $N > 50 + 8(5) = 50 + 40$ ,  $N > 90$ . Which means that, to get the accurate results our sample size should be at least 90 tricycle drivers.

In this study, we selected a sample size of 100 tricycle drivers (respondents), the number is large enough as suggested by (Gaur and Gaur 2009, Pallant 2011) by use of the above formula, the selected sample is expected to represent the population of tricycle drivers operating in Tanzania.

### **5.4.2. Sampling frame**

Visser, Krosnick and Lavrakas (2005) suggest that, once a survey design has been specified, the next step in a survey investigation is selecting a sampling method, and use proper sampling methods regarding with the research problem. In most studies, elements are the people who make up the population of interest, but elements can also be groups of people, such as families, corporations, or departments. The population is the complete group of elements to which one wishes to generalize findings obtained from a sample

There are two general classes of sampling methods: probability and nonprobability. Probability sampling refers to selection procedures in which elements are randomly selected from the sampling frame and each element has a known, nonzero chance of being selected (Visser, Krosnick and Lavrakas 2005), types of probability sampling includes Simple Random Sampling, Stratified Random Sampling, Systematic Random Sampling, Cluster Random Sampling and Multi-Stage Sampling (Explorable 2012). Non-probability sampling refers to selection procedures in which elements are not randomly selected from the population or some elements have unknown probabilities of being selected (Visser, Krosnick and Lavrakas 2005). Forms of non-probability sampling include, convenience sampling, quota sampling, snowball sampling, judgmental sampling and consecutive sampling, among all five types, convenience sampling is mostly used (Explorable 2012).

Convenience sampling is a type of non-probability in which members of the target population are selected for the purpose of the study if they meet certain practical criteria, such as geographical proximity, availability at a certain time, easy accessibility, or the willingness to volunteer (Farrokhi 2012). Convenience sampling method is set of techniques in which respondents are selected by convenience due to their proximity, availability, accessibility or another way that researcher decides (Explorable 2012)

In this study convenience, sampling as one of the types of non-probability sampling, was used for selecting the sample from the entire population, the reason behind of choosing this method was due to nature of operation of this business, whereby tricycle drivers have no clear schedule on their availability as they serve different customers randomly. Therefore, during data collection, a tricycle driver was chosen based on his availability. Authors visited drivers at their business areas which have been allocated to them by the municipality of the Ubungo and Kinondoni and managed to collect 100 questionnaires which was the targeted number.

## **5.5 Questionnaire Development and Data Collection Techniques**

### **5.5.1 Questionnaire Development**

The main target in use of questionnaires is to achieve common meaning through the exchange of questions and answers. This can be achieved by asking questions in the simplest form possible



(Explorable 2012). In this study questions were adopted from studies done by various scholars and modified to fit our study. More inputs were given by our supervisor who has done a lot of research works and other inputs were obtained from meeting we had with key informants where by more clarity was given on ambiguity terms and use of simple and clear language was considered on coming up with the final draft of questionnaire. The original questionnaire was in English but given that the national language of Tanzania is Swahili and majority of tricycle drivers do not understand English, all questionnaires were translated into Swahili,

The questionnaire was formulated such that it has only two main parts, part one consisted question items anchored on a seven-point Likert scale from 1= 'strongly disagree' to 7= 'strongly agree' for the first five variables while items for the last variable were anchored on a seven-point Likert scale from 1= 'strongly agree' to 7= 'strongly disagree'. Items were designed to measure the constructs for independent and dependent variables used in this study. The last part consisted single items questions designed to get the information on agent's contract type and location of business, the questions used in this part were closed ended.

### **5.5.2 Data Collection Techniques**

In general, there are two basic forms of data collection: those with an interviewer (interviews) and those without an interviewer (self-administered questionnaires) (De Leeuw, Hox and Dillman 2003) A researcher must consider cost of doing survey, form of question and required response rate in deciding the appropriate data collection method which suits the research environment (Fowler 2009), the researcher can use internet, fax, telephone, post office or personal face-to-face interview for collecting data.

Tanzania falls under developing countries where use of internet services is still low and majority of Tanzanians do not have post address. Due to these reasons, we used personal face-to-face interviews in collecting data because other data collection methods would most likely lead to poor response rate or not getting any data at all. As noted earlier, data collection was conducted in Dar es Salaam region, Tanzania where we selected two districts, Kinondoni and Ubungu, in which commercial transportation service by using tricycle is mostly used compared to other districts.

We visited tricycle drivers on their designated parking places and asked for those who were idle waiting for the customers to fill out the questionnaires. We administered the interview process and managed to collect 100 questionnaires which were our targeted number, all questionnaires were accurate filled. Data collection was a more challenging task given that at some point the tricycle driver was forced to cancel the interview to attend the customer, in this case, we were either to choose a new respondent or wait for him to return where in most cases we waited for three to five hours.

## **5.6 Chapter Summary**

This chapter presented and discussed research methodology used in this study, research design has been discussed in details which include cross-sectional and correlation design as the main setting of the study. More explanations on, population, sample size, sampling frame, questionnaire development and data collection techniques has been presented thoroughly. The next chapter presents operationalization and measurement of variables.

## CHAPTER SIX

### OPERATIONALIZATION AND MEASUREMENT OF VARIABLES

#### 6.1 Introduction

This chapter gives an overview of operationalization and measurement of independent and dependent variables. Authors selected use of questionnaires as the tool of collecting data. To come up with constructs, a thorough literature review of previous studies was done and various items were adopted and academically modified to suit the context of this study.

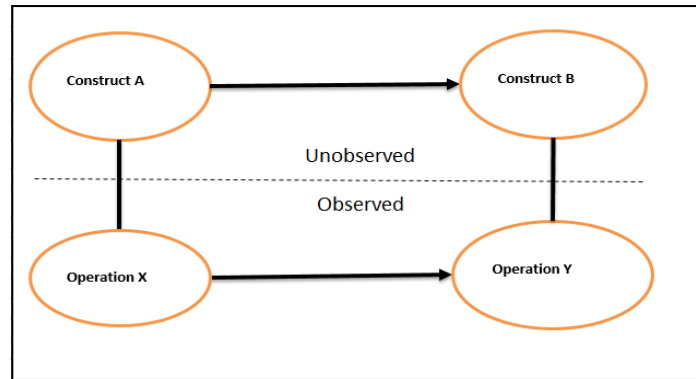
#### 6.2 Measurement.

To develop a measurement scale that will lead to valid and reliable results is a challenging task in any research field, (Slavec and Drnovšek 2012). The selection of measures is a recurrent problem in research when it comes on how to measure hypothetical constructs (Kline 2011), therefore a researcher must choose appropriate measure which will lead to the accuracy in collecting data (Kline 2011) and avoid the problem of mismatching of the level of hypothesis and level of analysis, which may lead to faulty conclusions (Ullman 2006).

The researcher can choose to use single-indicator measurement or multiple-indicator measurement. Single indicator measurement means that there is only one observed measure of each construct and multiple indicator measurements means, that more than one observed variable is used to measure the same construct (Kline 2011). In our study, we used both single and multiple indicator measurements to measure the relationship between constructs, whereby agent's satisfaction, information exchange, monitoring, dependence, trust, and conflicts the multiple-indicator measurement were employed, on the other hand , single measurement indicator was used for location and reward structure.

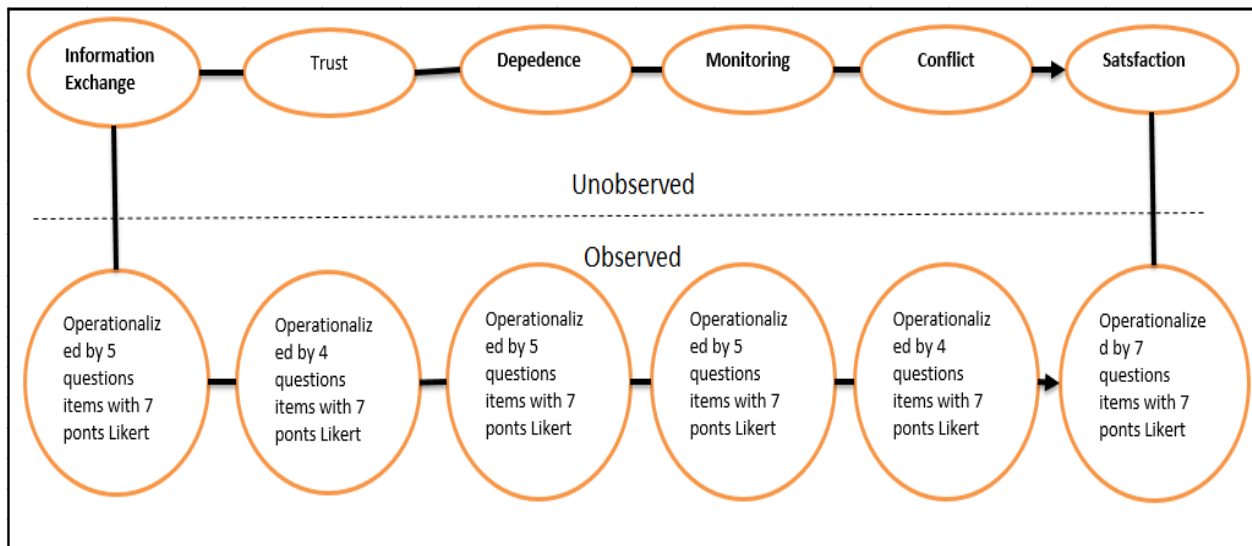
Unobserved variables are also known as either latent variables or factors. Even though latent variables cannot be directly observed, information about them can be obtained indirectly by noting their effects on observed variables (Long 1983), latent variables (unobserved variables) which researchers are mostly interested to measure, can be visualized by operationalizing them as shown below in figure 6.1 and 6.2

**Figure 6.1: Construct Operationalization**



Source: Author’s own drawing based on (Glavee-Geo 2012)

The quality of observations is important because errors or faults made at the level of observation can be transferred to the constructs thereby creating errors of inference about constructs leading to faulty scientific knowledge. (Glavee-Geo 2012). Figure 6.2 below exemplifies construct-operation links of unobserved variables which are; information exchange, trust, dependence, monitoring, conflict, and satisfaction which have been used in this study. Items for individual constructs were operationalized by the used of questionnaires and every item was anchored on a seven-point Likert scale from 1= ‘strongly disagree’ to 7= ‘strongly agree while conflict items were anchored on a seven-point Likert scale from 1= ‘strongly agree’ to 7= ‘strongly disagree’

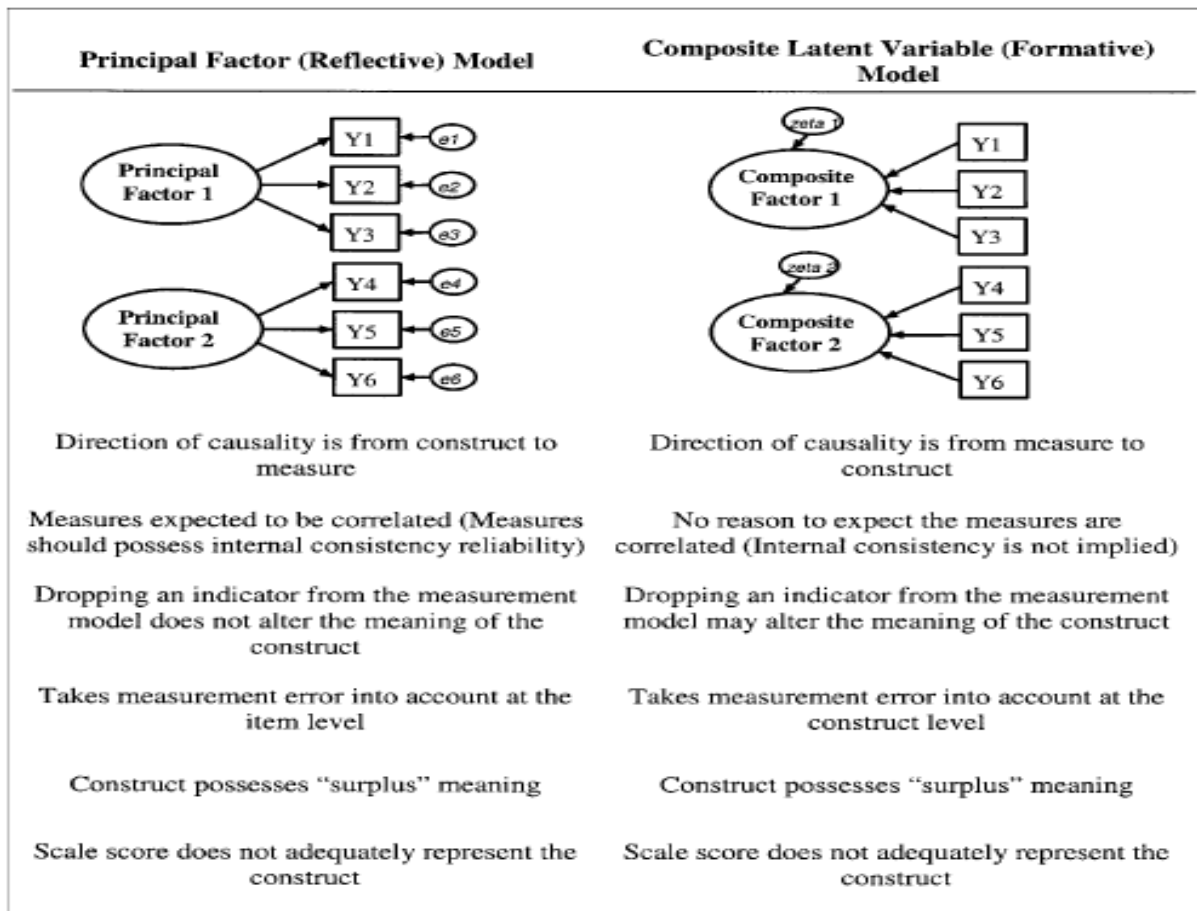


Source: Author’s own drawing based on (Glavee-Geo 2012)

### 6.3 Measurement Model

Measurement model is the part of the model that relates the measured variables to the factors (Ullman 2006), in traditional measurement studies, there are two types of measurement models which are using multiple indicators of latent constructs known as the principal factor model alternatively known as reflective model and the composite latent variable model also known as formative scales (Jarvis, Mackenzie and Podsakoff 2003). When measuring constructs which are used to measure unobserved variables one can use either reflective or formative measurement reflective measurement (Wang, French and Clay 2015). The unobserved constructs can be viewed either as underlying factors or as indices produced by the observable variables.

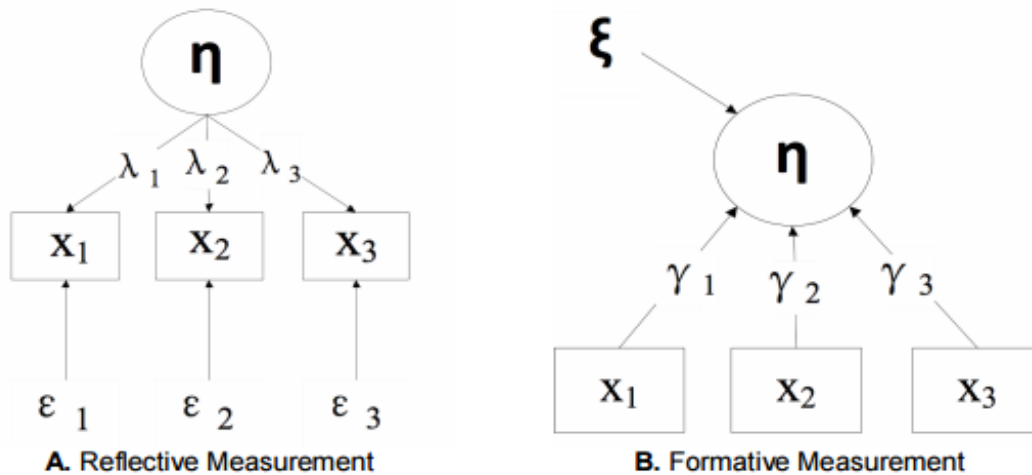
**Figure 6.2: Measurement Models: Reflective Model and Formative Model Differences**



Source: (Jarvis, Mackenzie and Podsakoff 2003)

For valid and effective scientific results, it is advised that researchers must correctly specify reflective and formative constructs to avoid type I error which occurs when a researcher’s choice of measurement approach is reflective while the “correct” operational definition by theory suggests formative operationalization. Type II error occurs when a researcher’s choice of measurement approach is formative while the “correct” operational definition by theory suggests reflective operationalization (Glavee-Geo 2012; Diamantopoulos and Sigauw 2006)

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



Source: (Wang, French and Clay 2015)

Diamantopoulos and Sigauw (2006) explained that, if  $\eta$  is a latent variable and  $x_1, x_2, x_3 \dots x_n$  a set of observable indicators, the reflective specification implies that  $x_i = \lambda_i \eta + \varepsilon_i$ , where  $\lambda_i$  is the expected effect of  $\eta$  on  $x_i$  and  $\varepsilon_i$  is the measurement error for the  $i$ th indicator ( $i = 1, 2, \dots, n$ ).

It is assumed that  $COV(\eta, \varepsilon_i) = 0$ , and  $COV(\varepsilon_i, \varepsilon_j) = 0$ , for  $i \neq j$  and  $E(\varepsilon_i) = 0$ . In contrast, the formative specification implies that  $\eta = \gamma_1 x_1 + \gamma_2 x_2 + \dots + \gamma_n x_n + \zeta$ , where  $\gamma_i$  is the expected effect of  $x_i$  on  $\eta$  and  $\zeta$  is a disturbance term, with  $COV(x_i, \zeta) = 0$  and  $E(\zeta) = 0$  (Diamantopoulos and Sigauw 2006)

In a reflective model, the latent construct exists (in an absolute sense) independently of the measures. The obvious examples of reflective scenarios consist personality and measures of attitudes that are measured by eliciting responses to indicators (Devinney, Midgley and Venaik

2008), Therefore it must be clearly noted that all constructs used in this study were operationalized as reflective scales

#### **6.4 Measurement Process**

In this part, every variable is defined and all question items that make up a latent construct are listed. Agent Satisfaction (SATSF) in this study represents a dependent variable and we have only one dependent variable which captures both economic and social satisfaction of agents. Apart from one dependent variable, this study has five Independent variables which are Information Exchange (INFOEX), Trust (TRS), Dependency (DEP), Monitoring (MON) and Conflict (CONF). We introduced one dummy variable which comprises two different rewards structure to help us determine the drivers of agent's satisfaction among all listed independent variables and one control variable (LOC)

#### **6.5 The Dependent Variable,**

To measure both economic and social satisfaction of agents, authors adopted items/constructs from the previous studies which have been done by Geyskens and Steenkamp (2000), Koza and Dant (2007), Curry et al. (1986) and Rich (1997) on which 16 items were constructed. All items were anchored on a seven-point Likert scale from 1= 'strongly disagree' to 7= 'strongly agree, the items are as follows;

Economic satisfaction

- SATSF1      My relationship with this owner is very attractive with respect to the income I get.
- SATSF2      I am very pleased with my decision to work with this tricycle's owner since this type of transport service is of high demand
- SATSF3      The reward structure of this owner helps me to get my work done effectively
- SATSF4      This owner provides me with Tricycle service and maintenance support of high quality

SATSF5 The owner pays all government statutory fees which allow continuity of business without any interruption

SATSF6 Even if the benefits are not gained on weekly basis, they balance out over time

SATSF7 I benefit and earn in proportion to the efforts I put in

#### Social satisfaction

SATSF8 I find real enjoyment in my Job

SATSF9 I like my job better than the average worker does

SATSF10 I would not consider taking another job

SATSF11 I feel very satisfied with my Job

SATSF13 In general, I like working with this tricycle's owner

SATSF14 The working relationship with this owner is characterized by feelings of agreement

SATSF16 The owner expresses criticism sensitively

## **6.6 The Independent Variables**

This study has five independent variables which are information exchange, trust, dependency, monitoring, and conflicts

### Information Exchange

To measure how information is exchanged between the agent and the principle, authors adopted constructs from the previous studies which have been done by Saleh, Ali and Mavon (2014), Li and Lin (2006) and Griffith, Harvey and Lusch (2006), on which seven items were constructed. All items were anchored on a seven-point Likert scale from 1='strongly disagree' to 7='strongly agree, the items are as follows;

INFOEX1 I keep the owner informed about changes in day to day operations



- INFOEX2 The owner and I always exchange information that may benefit both parties
- INFOEX3 This owner and I keep each other informed about events and changes in the market
- INFOEX4 The owner informs me immediately if any problem arises
- INFOEX5 The owner frequently discusses and informs me about new possibilities for getting more customers
- INFOEX6 I inform the owner in advance of changing needs
- INFOEX7 I provide any information that might help the owner

#### Trust

To measure the extent of trust agents, have on their principles, authors adopted constructs from the previous studies which have done by Obadia (2010), Saleh, Ali and Mavon (2014) and Doney and Cannon (1997), on which eight items were constructed. Every item was anchored on a seven-point Likert scale from 1= 'strongly disagree' to 7= 'strongly agree, the items are as follows;

- TRS1 This owner has high degree of integrity
- TRS2 This owner is perfectly honest
- TRS3 This owner can be trusted completely
- TRS4 This owner is truthful
- TRS5 Promises made by the owner are reliable
- TRS6 This owner is open in doing business with me
- TRS7 I believe the information that this owner provides me
- TRS8 I trust this owner keeps my best interests in mind

## Dependence

To measure the dependence of agents on their principles, authors adopted constructs from the previous studies which have been done Obadia (2010) and Ganesan (1994), on which six items were constructed. Every item was anchored on a seven-point Likert scale from 1= 'strongly disagree' to 7= 'strongly agree, the items are as follows;

- DIP1            If our relationship ended, I would have difficulty in replacing the income I get from this owner
- DIP2            I am very dependent on this owner
- DIP3            This tricycle business is very crucial to my future family plans
- DIP4            I do not have good alternative to this job
- DIP5            This owner is important to my businesses
- DIP6            If our relationship is discontinued, it could be difficult for me to replace this owner

## Monitoring

To measure the level of monitoring, authors adopted constructs from the previous studies which have been done Obadia (2010) and Ganesan (1994), on which seven items were constructed. All items were anchored on a seven-point Likert scale from 1='strongly disagree' to 7='strongly agree, the items are as follows;

- MON1            The owner visits me regularly at my place of work (parking)
- MON2            The owner demands a report of services and maintenance done regularly
- MON3            The owner monitors the income I get regularly
- MON4            The owner demands a report of number of km covered regularly
- MON5            The owner monitors day to day operations

MON6           The owner has hired the third party to monitor my day to day operations

MON7           The owner makes regular calls regarding my returns

#### Conflict

To measure the level of conflicts, authors adopted constructs from the previous study which have been done by Grace et al. (2013), on which four items were constructed. Every item was anchored on a seven-point Likert scale from 1= 'strongly agree' to 7= 'strongly disagree, the items are as follows;

CONF1           There rarely any conflict in the relationship between me and the owner

CONF2           I rarely disagree with the owner

CONF3           The disagreements I have with the owner are usually quite amicable

CONF4           The owner and I rarely argue over important issues

#### Dummy Variable

In this study, we have one dummy variables which represent reward structure existing between agent and principle, the question was formulated based on study which was done by (Olvera et al. 2015), The construct is measured by a single open-ended question

What type of contract do you have? (a) Tenant\_\_\_\_\_ (b) Work and Pay\_\_\_\_\_

#### Control Variable

To account for other causes of agent's satisfaction, we selected one control variable to be used in this study which is Location, the question was adopted from studies done by previous different scholars. The construct is measured by a single open-ended question

What is your business operation location? (a) Ubungo \_\_\_\_\_(b) Kinondoni \_\_\_\_\_

## **6.7 Chapter Summary**

This chapter has presented operationalization and measurement of constructs, it clearly depicts how both independent and dependent variables were measured, by outlining all questions for every variable. The next chapter covers measurement assessment and data validation.

## CHAPTER SEVEN

### MEASUREMENT ASSESSMENT AND DATA VALIDATION

#### 7.1 Introduction

This chapter presents data examination and measurement of the model used as a source of empirical evidence for the hypothesis suggested in this study. The chapter is divided into two sections; data examination (screening and initial analysis) and validation of measurement items. The first section is concerned with evaluating the quality of data for further analysis, which involves data screening, checking for missing values and outliers, examining the assumption of normality, and descriptive statistics. Moreover, explanatory factor analysis (EFA) and confirmatory factor analysis are performed in culminating the second stage to validate the measurement items. The section will involve series of assessments including reliability and validity.

#### 7.2 Data screening and Initial Analysis

This study will apply multivariate techniques to ensure the results obtained are truly valid and accurate to support the hypothesis suggested in the preceding chapter. Before the application of any multivariate technique, data screening was compulsory. Hair et al. (2010) argues that data screening is the indispensable part of any multivariate analysis, thus ensures, the data underlying the analysis meet all the requirements for a multivariate analysis. In this study, IBM SPSS 22 software was employed to carry out data screening for the subsequent issues including examining missing values, checking for outliers and the underlying assumption of normality.

##### 7.2.1 Missing Values Assessment

Missing data is one of the most pervasive problems in data analysis, which can be as a result of either any systematic event external to the respondents; data entry errors, or data collection problems or any action on the part of the respondents; refusal to answer the questionnaire (Hair et al. 2010; Tabachnick and Fidell 2007). Thus, it is essential to carry out missing data assessment prior to further analysis in order to select the appropriate course of action. There are two general patterns of missing data; item nonresponse and attribution or wave nonresponse (Graham,

Cumsille and Elek-Fisk 2003) and the pattern of missing data is more important than the amount missing (Tabachnick and Fidell 2007). There are several methods of handling missing data, including pairwise deletion, mean substitution, and regression-based single imputation (Hair et al. 2010), however (Graham, Cumsille and Elek-Fisk 2003) recommends to ignore the amount of missing values less than 5% in a single variable and (Kline 2011) argues that the missing value should be ignored only if the reason for data loss is ignorable. In this study, before examining missing data, the data set was assessed for data entry accuracy, hence data entry was ruled out of the possible cause of missing values. Focusing on the pattern of missing data in our analysis, no variable found to have a missing value, this was due to the methods we employ to collect the data. The procedure of assessing the missing values was handled by IBM SPSS 22.

### **7.2.2 Outliers Assessment**

Outliers are cases with extreme value in one variable (univariate outlier) or extreme values on a combination of scores of two or more variables (multivariate outlier) (Tabachnick and Fidell 2007). There is no solitary definition of term extreme, rather a common rule of thumb that, scores more than three standard deviations beyond the mean are considered being outliers (Kline 2011). There are numerous likely causes for the presence of outliers in the dataset including incorrect data entry, failure to specify missing values, non-representative of population intended for sampling and existence of more extreme values than a normal distribution (Tabachnick and Fidell 2007). Thus, cases with significantly scores above or below the majority of other cases and that which are not representative of the population, in particular, can seriously distort statistical tests (Hair et al. 2010).

In this study, potential outliers were scrutinized based on the values of standardized scores (z-scores) of each individual variable, thus all cases with z-score above the cut-off point were considered being outliers. Hair et al. (2010) recommends that, for small sample size (80 or fewer observations) the cut-off point of standard score is up to 2.5 and up to 4 with large sample whilst (Tabachnick and Fidell 2007) argues that cases with standardized scores in excess of 3.29 are potential outliers with a large sample. Furthermore, the standardized scores of each variable were examined using SPSS 22, and the maximum value was 3.84 that falls under cut-off point which shows the absence of outlier problem (see Appendix 1a).

### **7.3 Normality Assessment**

Normality refers to the shape of the data distribution for an individual metric variable and its correspondence normal distribution thus is considered being the fundamental assumption in multivariate analysis (Hair et al. 2010). However, normality is used to describe a symmetrical, bell-shaped curve, with the greatest frequency of scores in the middle and smaller frequencies towards the extremes, therefore can be assessed by considering skewness and kurtosis values (Pallant 2011). Skewness describes the symmetry of the distribution; a mean is not in the center of the distribution for skewed variable whilst kurtosis designates the peakedness of a distribution; either too peaked or too flat (Tabachnick and Fidell 2007, Kline 2011).

The distribution is perfectly normal when the values of skewness and kurtosis are both zero (Hair et al. 2010; Kline 2011; Tabachnick and Fidell 2007). Any values below or above zero depict the deviation from normality, thus the vital concern is to determine how far the values of skewness and kurtosis are considered to violate the assumption of normality. For skewness, the acceptable range for normality is skewness lying between -1 to +1 (Hair et al. 2010) whilst the acceptable range for kurtosis for normality is kurtosis values lying between -3 to +3 (Kline 2011, Field 2009).

In this study, we employed a statistical method to examine the normality of variable using IBM SPSS 22. The results from SPSS shows that all variables fall with the recommended range for skewness and kurtosis (see appendix 1b).

### **7.4 Descriptive Statistics**

Descriptive statistics summarize the statistical data (Pallant 2011) and bring forth the underlying information (Gaur and Gaur 2009). Descriptive statistics use both numerical and graphical methods whilst numerical methods include measures of central tendency and variability (Gaur and Gaur 2009). In this study, SPSS 22 was employed to depict the measure of central tendency; mean and median, and a measure of variability; standard deviation of constructs: information exchange, satisfaction, monitoring, dependence, trust, conflict and conflict X monitoring. Therefore, the descriptive statistics of the measurement constructs are presented in table 7.1 below

**Table 7.1 Descriptive Statistics of Measurement constructs**

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
InfoExchange	100	3.00	7.00	5.5660	1.11882
Satisfaction	100	3.00	7.00	5.4814	.78421
Monitoring	100	1.00	4.00	1.9100	.74312
Dependence	100	2.00	7.00	5.6160	1.01252
Trust	100	2.25	7.00	5.6275	1.16097
Conflict	100	1.00	5.00	1.9475	.79399
Mod_ConfMon	100	-3.36	5.64	.0089	1.05956
Valid N (listwise)	100				

### **7.5 Exploratory Factor Analysis (EFA)**

Exploratory Factor Analysis is a multivariate analysis technique (Hair et al. 2010) with the goal of identifying number of common factors, pattern of factor loadings (Norris and Lecavalier 2010) and underlying the correlations among measured variables (Kim, Seo and Choi 2017; Tabachnick and Fidell 2007; Fabrigar et al. 1999).

Exploratory factor analysis has been widely used in statistical research for the purpose of either simple data reduction or understanding latent construct (Fabrigar et al. 1999). In a former purpose, the goal is to reduce variables into small that fairly represent a large set of variables while retaining as much as original variance with no attempt to interpret the resulting variables in terms of latent structure (Conway and Huffcutt 2003). In this study, the purpose is to establish a latent structure of measurement items of satisfaction, trust, dependence, monitoring, information exchange and conflict, therefore the later purpose of EFA have been employed which supports the preparation of theoretical hypothesis testing that is central to the study.

Moreover, the fundamental challenge with exploratory factor analysis is decision on what factor extraction model to use: principal components or common factors, number of factors to retain: single or multiple criteria, and methods of rotation: orthogonal or oblique (Conway and Huffcutt 2003; Norris and Lecavalier 2010; Hair et al. 2010). For the purpose of the study, principal



components have been employed for factor extraction to reduce the number of variables in order to establish linear combinations among constructs (Conway and Huffcutt 2003; Pallant 2011), whilst deciding the number of factors to retain, the multiple criteria techniques was employed including Kaiser criterion: eigenvalue greater than one rule, factor loading estimates and cross-loading criterion which helps to produce the consistency and accurate number of factors (Fabrigar et al. 1999). Furthermore, the study has employed orthogonal rotation using varimax to find interpretability which is supported by the assumption of the independence of measured variables (Hair et al. 2010; Tabachnick and Fidell 2007).

Additionally, statistic tests including the Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity were employed to assess the applicability of exploratory factor analysis. The Bartlett's test of sphericity and KMO measure the appropriateness of correlations and degree of intercorrelations among variables respectively. According to (Hair et al. 2010; Pallant 2011; Tabachnick and Fidell 2007), the KMO minimum value of 0.6 is considered being good for data factorability and Bartlett's test of sphericity should be significant at ( $p < 0.05$ ) to indicate the presence of significant correlations among variables.

For the purposes of this study, using the aforesaid decisions, the table 7.2 below and appendix (2a) depicts the results of exploratory factor analysis using IBM SPSS. The findings of Bartlett's test of sphericity for correlation matrix was significant (chi-square value ( $X^2$ ) = 2552.872; degree of freedom (df) = 435;  $p < 0.000$ ), Similarly, the KMO measure of sampling adequacy was 0.772 signifying the presence of adequate degree of intercorrelations among variables which is enough for applicability of factor analysis.

Moreover, in this study, multiple criteria were used to determine the number of factors to retain to improve the interpretability of the initially rotated solution for constructs. The results in table 7.1 shows, the rotated factor matrix converged into six factors which had eigenvalues over Kaiser's criterion of 1 and in combination explained 76.184% of the variance (see appendix 2(b)) whilst factor 1 represents information exchange, factor 2; satisfaction, factor 3; monitoring, factor 4; dependence, factor 5; trust and factor 6; conflict. The rotation was further improved by deleting items with loading factor estimated below than 0.55 for 100 sample size (Hair et al. 2010; Conway and Huffcutt 2003) and with high cross loading above 0.5 were also deleted (Hair et al. 2010).

**Table 7.2: Exploratory Factor Analysis (n=100)**

<b>Rotated Component Matrix<sup>a</sup></b>						
<b>CONSTRUCTS</b>	<b>FACTOR 1 INFOEXCH</b>	<b>FACTOR 2 SATISFACT</b>	<b>FACTOR 3 MONITOR</b>	<b>FACTOR 4 DEPENDE</b>	<b>FACTOR 5 TRUST</b>	<b>FACTOR 6 CONFLICT</b>
INFOEX5	<b>.902</b>			.129		
INFOEX3	<b>.901</b>	.161			.104	
INFOEX4	<b>.895</b>					
INFOEX6	<b>.887</b>	.106				
INFOEX7	<b>.850</b>	.129		.109		
SATISF7		<b>.758</b>				
SATISF11		<b>.754</b>		.197	.204	-.137
SATISF8		<b>.744</b>		.161	.150	
SATISF12		<b>.712</b>	-.323			
SATISF3		<b>.703</b>		.153	.118	
SATISF6	.268	<b>.689</b>			.110	-.120
SATISF13	.123	<b>.659</b>	-.268			
MON4		-.105	<b>.931</b>			
MON6			<b>.893</b>			
MON5		-.210	<b>.864</b>			
MON1	.129	-.201	<b>.848</b>	.106		
MON3			<b>.811</b>		-.171	
DEP4	.105	.155		<b>.930</b>		
DEP5	.131			<b>.919</b>		
DEP1	.183	.223		<b>.856</b>		
DEP2				<b>.763</b>	.387	-.113
DEP3	.106			<b>.716</b>	.428	-.123
TRS4		.172		.162	<b>.906</b>	
TRS5	.116	.122		.151	<b>.892</b>	
TRS7		.130		.181	<b>.859</b>	
TRS6		.282			<b>.806</b>	
CONF1		-.113				<b>.933</b>
CONF3		-.125			-.108	<b>.927</b>
CONF4		-.156		-.127		<b>.895</b>
CONF2						<b>.793</b>
Eigen Value	7.174	4.8	3.360	3.250	2.198	2.074

## 7.6 Reliability Assessment

Reliability is the degree to which the measurement items consistently reflect the construct that is measuring (Field 2009; Hair et al. 2010). There are several forms for measuring reliability estimates including internal consistency, test-retest, and alternative forms whilst the commonly used form is internal consistency reliability (Kline 2011). Internal consistency reliability is used

to measure a latent construct (Dunn, Seaker and Waller 1994) which identifies the degree to which responses are consistent across the items within a measure (Kline 2011). According to (Hair et al. 2010), the rationale of internal consistency reliability is the individual items should all be measuring the same construct and thus be highly intercorrelated. Thus, in this study, the internal consistency has been employed to determine the precision and accuracy of the scale items.

Reliability is predominantly estimated using Cronbach’s coefficient alpha ( $\alpha$ ) (Dunn, Seaker and Waller 1994; Churchill 1979) which reflects a measure of the relationship among all the items (Zhong et al. 2017) and expressed as a number between 0 and 1 (Tavakol and Reg 2011). According to (Kline 2011, Hair et al. 2010), the value of Cronbach’s coefficient alpha ( $\alpha$ ) above 0.7 indicate significance internal consistency among measurement items of a scale and that alpha levels as low as 0.6 are acceptable for new scales (Dunn, Seaker and Waller 1994).

This study used, Cronbach’s alpha to examine the internal consistency reliability of measurement items and composite reliability to assess whether the individual items are sufficient in their presentation of their respective constructs (Segars 1997). The assessment of reliability with Cronbach’s alpha showed that the values of items ranged from 0.870 to 0.942 (see table 7.3) which is above the recommended threshold of 0.7 for satisfactory internal consistency. Similarly, the composite reliability values of all constructs ranged from 0.870 to 0.940 which above the recommended threshold of 0.7 (Churchill 1979; Segars 1997). Therefore, there is a clear evidence that the individual items measures reflect the same construct of measurement.

**Table 7.3: Construct Reliability Scores**

Construct	Items	No of Items	Cronbach’s Alpha ( $\alpha$ )	Composite reliability
INFO EXCHANGE	INFOEX 3,4,5,6,7	5	0.942	0.940
SATISFACTION	SATISF 3,6,7,8,11,12,13	7	0.870	0.870
MONITORING	MON 1,3,4,5,6	5	0.929	0.930
DEPENDENCE	DEP 1,2,3,4,5	5	0.922	0.920
TRUST	TRS 4,5,6,7	4	0.924	0.940
CONFLICT	CONF 1,2,3,4	4	0.920	0.920

## **7.7 Validity**

Validity refers to the degree to which a scale measures what it is supposed to measure and accurately represent the concept of interest (Pallant 2011; Hair et al. 2010). There is no clear-cut indicator of a scale's validity (Pallant 2011), however, validation of scale is measured using several forms including theoretical and empirical evidence perspectives. Hair et al. (2010) argue that the most widely accepted form of validity are convergent, discriminant and content or face validity. Moreover, all forms of empirical validity; Convergent and discriminant are counted under the broader concept of construct validity (Kline 2011), thus when convergent and discriminant construct are found, construct validity is supported (Dunn, Seaker and Waller 1994; Churchill 1979, Segars 1997).

Convergent validity assesses the extent to which the multiple attempts to measure the same concepts are in agreement (Dunn, Seaker and Waller 1994; Bagozzi 1993). Thus, if two or more measures designated to measure the same thing should strongly correlate if they are valid measures of concept (Churchill 1979). Discriminant validity is the degree to which scales measure the distinct construct, thus if two or more concepts are unique then valid measures of each should not correlate to highly (Dunn, Seaker and Waller 1994; Bagozzi 1993). Construct validity is the extent to which a scale measures the construct it was intended to measure, thus it is explored by the use of maximally both distinct and similar methods in the same investigation (Pallant 2011; Bagozzi 1993). In this study, construct validity evidence is focused upon, which deals with convergent and discriminant validity to provide empirical evidence of observed values that measure associations.

### **7.7.1 Convergent Validity**

Convergent validity provides evidence that multiple measurement items obtained by multiple methods potentially indicate the same underlying construct (Bagozzi 1993), thus they strongly correlate each other (Hair et al. 2010). The convergent evidence is provided when different indicators of theoretically similar or overlapping constructs are strongly interrelated (Wang, French and Clay 2015), thus consistent with previous scholars (Segars 1997; Fornell and Larcker 1981; Bagozzi 1993; Hair et al. 2010) this study, has employed the use of factor loadings, ratio of factor loadings to standard error, average variance expected (AVE) and composite reliability (CR) to assess the evidence of convergent validity. The findings from CFA (see appendix 3) show that

the ratio of factor loadings to standard error was significant at the 0.05 level with t-values above | 2 | thresholds recommended for acceptable convergent validity, whilst the AVE values ranged from 0.500 to 0.760 (see table 7.4) which is above the 0.5 thresholds suggested by (Segars 1997; Fornell and Larcker 1981) for convergent validity. Similarly, composite reliability (CR)<sup>1</sup> values (see table 7.4) were all evidently above the verge of the recommended value of 0.7 (Bagozzi 1993; Zahoor et al. 2017), thus it follows the support of convergent validity. Furthermore, the table 7.1 of EFA findings provided the evidence of convergent validity as each factor loaded with eigenvalues greater than whilst factor loading estimated were above 0.55 threshold for 100 samples to support the convergent validity (Hair et al. 2010).

### **7.7.2 Discriminant Validity**

Fornell and Larcker (1981) suggests that neither item estimate of reliability nor a composite measure indicate the amount of variance that is captured by the construct in relation to the amount of variance due to measurement error, thus (Zait and Berteau 2011) recommends the use of average variance expected (EVA) to examine discriminant validity which act as a means of acquiring the variance information (Segars 1997). The basic assumption of discriminant validity is that items correlate higher among them than they correlate with other items from other constructs (Zait and Berteau 2011), thus for the purpose of this study we have employed several methods of examining the support of this assumption which is consistent to previous scholars (Segars 1997; Fornell and Larcker 1981; Hair et al. 2010), including average variance expected (AVE), average shared variance (ASV), square root of AVE, maximum shared squared variance (MSV) and cross-loading estimates.

Findings from the exploratory factor analysis (EFA) shown in table 7.1 provide evidence for discriminant validity by examining the cross loading values which was below 0.5 thresholds as suggested by (Hair et al. 2010). Items were loading strongly among the same construct compared to another construct with loading estimate (see table 7.1) above 0.6 thresholds recommended by

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<sup>1</sup> Composite Reliability (CR) =  $SSI / (SSI + SSV)$ ; whereby SSI = square of the sum of all factor loadings of a construct, SEV = sum of all error variances of a construct, and error variance is equal to one minus squared multiple correlation (Zahoor et al. 2017)

(Segars 1997) to support evidence of discriminant validity. Similarly, the AVE<sup>2</sup> values computed from the results of confirmatory factor analysis (CFA) of this study were greater than their respective ASV<sup>2</sup> and MSV<sup>2</sup> value (see table 7.4), thus providing evidence of discriminant validity (Segars 1997; Churchill 1979). In addition, the evidence for discriminant validity was examined by comparing the squared value of AVE with bivariate correlation (see table 7.4) whereby all values of squared AVE were found to be greater than bivariate correlations suggesting that discriminant validity is supported (Segars 1997; Zait and Berteau 2011).

**Table 7.4: Correlations, Average Variance Expected(AVE), Composite Reliability(CR), Average shared squared variance (ASV) and Maximum shared squared variance (MSV)**

<b>Constructs</b>	1	2	3	4	5	6	7	8	9
1. InfoExchange	1	.248*	.100	.239*	.162	-.039	-.017	-.034	-.169
2. Satisfaction		1	-.252*	.261**	.359**	-.242*	.381**	.039	-.176
3. Monitoring			1	.104	-.095	.009	-.050	-.211*	-.071
4. Dependence				1	.375**	-.062	-.113	-.153	.004
5. Trust					1	-.093	-.061	.132	-.045
6. Conflict						1	.137	-.004	.297**
7. Work and Pay_Dummy							1	-.137	.151
8. Kinondoni_Dummy								1	.040
9. Conflict x Monitor									1
AVE	.760	.500	.730	.700	.760	.750			
SQRT(AVE)	.872	.707	.854	.837	.872	.866			
MSV	.080	.090	.001	.110	.010	.020			
ASV	.030	.040	.000	.060	.010	.010			
C.R	.940	.870	.930	.920	.930	.920			

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

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

<sup>2</sup> AVE, ASV and MSV was computed using Excel StatTools (Gaskin, 2016) from [http://statwiki.kolobkreations.com/index.php?title=Main\\_Page](http://statwiki.kolobkreations.com/index.php?title=Main_Page)

## 7.8 Hypothesized Measurement Model Assessment

A confirmatory factor analysis (CFA) using multiple fit indices was employed in this study to assess the fit of the estimated measurement model (Hair et al. 2010) and test of unidimensionality that provides evidence of items of a scale estimate one factor (Dunn, Seaker and Waller 1994). The results revealed from SPSS Amos 22 (see table 7.5), indicate satisfactory fit of our model to the data. Consistent with previous studies (Zahoor et al. 2017; Hair et al. 2010; Kline 2011; Xiong, Skitmore and Xia 2015) four mostly goodness-of-fit indices were utilized to assess the measurement model fit in this study including Chi-square ( $X^2$ ), adjusted Chi-square ( $X^2/df$ ): Chi-square to degree of freedom ratio, RSMEA; root-mean-square error of approximation, comparative fit index (CFI) and Incremental fit index (IFI). The results from CFA depicted in table 7.5 and appendix 4, shows that, IFI=0.913, CFI=0.911 were above 0.9 threshold for acceptable model fit (Xiong, Skitmore and Xia 2015) whilst the value of RMSEA=0.075 was in the range of 0.05 to 0.08 threshold of moderate model fit thus the measurement model fitted the data (Zahoor et al. 2017; Kline 2011).

Furthermore, the Chi-square ( $X^2$ ) and adjusted/normalized Chi-squared was used to assess the overall model fit by analyzing the discrepancy between the sample (Xiong, Skitmore and Xia 2015). The results shown in appendix 4, revealed that Chi-square goodness fit of overall model was significant ( $X^2= 606.009$ ,  $df =390$ ,  $p=0.000$ ) which indicates insufficiently good fit (Kline 2011), however Chi-square has been criticized for being sensitive to sample size which tends to reject the model when sample size increases (Xiong, Skitmore and Xia 2015), therefore adjusted Chi-square was used to assess the overall model fit which takes the impact of sample size (Zahoor et al. 2017). The value for adjusted Chi-square ( $X^2/df$ ) were 1.554 which is below of 3.1 or 2.1 thresholds of recommended overall model fit (Kline 2011; Hair et al. 2010; Xiong, Skitmore and Xia 2015). Moreover, each item of scale estimated one factor which provides the evidence of unidimensionality.

**Table 7.5: Measurement Model Confirmatory Factor Analysis (CFA), AMOS Results (n=100)**

Construct	Factor Loading (t-value) <sup>b</sup>	Seven-point Likert-scale type-items with end points strongly disagree and strongly agree
Information Exchange INFOEX: Items 5 $X^2(5) = 22.168, \rho = 0.000$ CFI=0.963, IFI=0.963 RMSEA = 0.186 $\alpha = 0.942, CR = 0.940$	0.809 <sup>a</sup> 0.862 (10.351) 0.887 (10.765) 0.891 (10.605) 0.926 (11.136)	INFOEX7: I provide any information that might help the owner INFOEX6: I inform the owner in advance of changing needs INFOEX5: The owner frequently discusses and informs me about new possibilities for getting more customers INFOEX4: The owner informs me immediately if any problem arises INFOEX3: This owner and I keep each other informed about events and changes in the market
Agent Satisfaction STATISF: Items 7 $X^2(14) = 11.982, P = 0.608$ CFI = 1, IFI = 1 RMSEA = 0.000 $\alpha = 0.870, CR = 0.870$	0.642 <sup>a</sup> 0.707 (5.953) 0.810 (6.388) 0.727 (5.969) 0.653 (5.586) 0.692 (5.833) 0.659 (5.557)	SATISF13: The working relationship with this owner is characterized by feelings of agreement SATISF12: In general, I like working with this tricycle's owner SATISF11: I feel very satisfied with my Job SATISF8: I find real enjoyment in my Job SATISF7: I benefit and earn in proportion to the efforts I put in SATISF6: Even if the benefits are not gained on weekly basis, they balance out over time SATISF3: The reward structure of this owner helps me to get my work done effectively
Monitoring MON: Items 5 $X^2(5) = 4.852, P = 0.970$ CFI = 1, IFI = 1 RMSEA = 0.000 $\alpha = 0.922, CR = 0.930$	0.848 <sup>a</sup> 0.849 (10.892) 0.942 (12.965) 0.766 (9.129) 0.855 (10.981)	MON6: The owner has hired third party to monitor my day to day operations MON5: The owner monitors day to day operations MON4: The owner demands a report of number of km covered regularly MON3: The owner monitors the income I get regularly MON1: The owner visits me regularly at my place of work (parking)
Dependence DEP: Items 5 $X^2(5) = 39.412, P = 0.000$ CFI = 0.922, IFI = 0.923 RMSEA = 0.264 $\alpha = 0.922, CR = 0.920$	0.920 <sup>a</sup> 0.969 (18.839) 0.678 (8.345) 0.698 (8.745) 0.886 (14.293)	DEP5: This owner is important to my businesses DEP4: I do not have good alternative to this job DEP3: This tricycle business is very crucial to my future family plans DEP2: I am very dependent on this owner DEP1: If our relationship ended, I would have difficulty in replacing the income I get from this owner
Trust TRS: Items 4 $X^2(2) = 0.744, P = 0.689$ CFI = 1, IFI = 1 RMSEA = 0.000 $\alpha = 0.924, CR = 0.940$	0.852 <sup>a</sup> 0.796 (9.734) 0.893 (11.949) 0.938 (12.809)	TRS7: I believe the information that this owner provides me TRS6: This owner is open to doing business with me TRS5: Promises made by the owner are reliable TRS4: This owner is truthful
Conflict CONF: Items 4 $X^2(2) = 11.295, P = 0.004$ CFI = 0.974, IFI = 0.975 RMSEA = 0.217 $\alpha = 0.920, CR = 0.920$	0.853 <sup>a</sup> 0.950 (13.832) 0.651 (7.421) 0.969 (14.485)	CONF4: The owner and I rarely argue over important issues CONF3: The disagreements I have with the owner are usually quite amicable CONF2: I rarely disagree with the owner CONF1: There rarely any conflict in the relationship between me and the owner

<sup>a</sup> Fixed Variable,

<sup>b</sup> Standardized loadings significantly at  $P < 0.001$



## **7.9 Linearity Assessment**

Linearity assesses the relationship between dependent and independent variable, thus examine the extent to which the change in the dependent variable is associated with the independent variable (Hair et al. 2010). The basic assumption of linearity is that there is a straight-line relationship between two variables (Tabachnick and Fidell 2007) thus the concept of correlation is based on a linear relationship which makes it critical in multivariate regression analysis (Hair et al. 2010). Drawing on contribution from previous scholars (Field 2009; Hair et al. 2010; Pallant 2011), the assumption of linearity was examined by observing the scatter graph plotted standardized residue value (ZRESID) against standardized predicted value (ZPRED) (see appendix 5), which showed the absence of clear dot pattern thus provides the evidence of linearity assumption to the model (Field 2009). Moreover, the normal P-P regression plot (see appendix 5) was used to examine the assumption of linearity, thus the residual values revealed a linear relationship between dependent and independent variable (Field 2009; Pallant 2011).

## **7.10 Homoscedasticity Assessment**

Homoscedasticity assumes that the variability in scores for independent variables should be the same for all values of the dependent variable, thus at each level of predictor(s) variables, the variance of the residual values should be constant (Field 2009; Tabachnick and Fidell 2007). For the purposes of this study, the residual plot (see appendix 5) was plotted, the results show that points were randomly and evenly dispersed throughout the plot, thus the assumption of homoscedasticity was not violated (Field 2009).

## **7.11 Multicollinearity Assessment**

Multicollinearity refers to the relationship between the independent variables and exists when the independent variables are highly correlated ( $r = .9$  and above) (Pallant 2011). The findings in table 7.6 revealed that the correlation coefficients between the independent variables were less than 0.4.

Moreover, (Field 2009; Hair et al. 2010; Pallant 2011) suggests the use of variance inflation factor (VIF) and tolerance examine the problem of multicollinearity and suggests that a VIF value greater than 10, and tolerance values below 0.1 indicate a clear problem of multicollinearity. Tolerance is

an indicator of how much of the variability of the specified independent is not explained by the other independent variables in the model whilst VIF is the inverse of the tolerance value (1/Tolerance) (Pallant 2011). The findings of this study from multiple regression analysis (see table 7.6) revealed that VIF values ranged from 1.083 to 1.312 which were below 10 thresholds of the recommended value for absence of multicollinearity problem. Similarly, the values of tolerance ranged from 0.801 to 0.924 above 0.1 thresholds suggested for the absence of multicollinearity problem. Therefore, from the aforesaid findings, we concluded that multicollinearity was not a problem to the model.

**Table 7.6: Multicollinearity Assessment Measures**

CONSTRUCTS										Collinearity Statistics	
	1	2	3	4	5	6	7	8	9	Tolerance	VIF
1. InfoExchange (INFOEXCH)	1									.901	1.110
2. Satisfaction (SATISF)	.248*	1								.924	1.083
3. Monitoring (MON)	.100	-.252*	1							.762	1.312
4. Dependence (DEP)	.239*	.261**	.104	1						.801	1.249
5. Trust (TRS)	.162	.359**	-.095	.375**	1					.895	1.117
6. Conflict (CONF)	-.039	-.242*	.009	-.062	-.093	1				.924	1.082
7. Work and Pay_Dummy (WorkPAY)	-.017	.381**	-.050	-.113	-.061	.137	1			.877	1.140
8. Kinondoni_Dummy	-.034	.039	-.211*	-.153	.132	-.004	-.137	1		.862	1.160
9. Conflict x Monitor (Mod_ConfMon)	-.169	-.176	-.071	.004	-.045	.297**	.151	.040	1		

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

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

## 7.12 Chapter Summary

This chapter has explained different methods and procedures followed for ensuring data examination and validation. Similarly, this chapter explored different criteria to handle missing values, outliers, normality, linearity, homoscedasticity and multicollinearity problems. Moreover, data factorability was examined in this chapter by performing exploratory factor analysis (EFA). Finally, a confirmatory factor analysis was performed to validate the measurement model.

## CHAPTER EIGHT

### HYPOTHESES TESTS AND EMPIRICAL FINDINGS

#### 8.1 Introduction

The previous chapter has presented the results in details on measurements assessment and data validation used in our study. In this chapter, we analyze our data in more detail, test the hypothesis and present the results. Furthermore, we obtained the outcomes of regression analysis, defining the existing relationship among the variables. More descriptions of multiple regression analysis and hypothesis outcomes are presented below.

#### 8.2 Regression model

Regression modeling is mostly used for statistical analysis and prediction in several applied research problems. The main tool of regression modeling is the ordinary multiple linear least squares (OLS) regression which yield the best quality of data fit estimated by the minimum residual square error achieved by the aggregate of the predictors (Lipovetsky 2013). Ordinary least square regression model has been used in different studies to examine the association between independent and dependent variables (Buvik and Halskau 2006),

Ordinary Least Squares (OLS) were run for testing the hypothesis used in this study, OLS also used for estimation model of our variables in determining the effect of trust, information sharing, dependency on agents' satisfaction. Also, the interaction effect of monitoring and conflict were part of the model in determining their role on agents' satisfaction. The location was used as a control variable, we used two districts which are Ubungo and Kinondoni to access its impact on agent's satisfaction, given the presence of other independent variables. Furthermore, we used "work and pay" and "Tenant" as our dummy variable to determine how this two-reward structure affect Agent's satisfaction as related to other independent variables.

### 8.3 Research model:

$$\text{SATISF} = b_0 + b_1\text{INFOEX} + b_2\text{MON} + b_3\text{DEP} + b_4\text{TRS} + b_5\text{CONF} + b_6\text{WorkPAY} + b_7\text{KNLOC} + b_8\text{MON}*\text{CONF} + \varepsilon \dots\dots\dots\text{eqn 8.}$$

Where:

Dependent variable:

SATISF = Agent's Satisfaction

Independent variables:

INFOEX = Information Exchange

TRS = Trust

DIP = Dependency

MON = Monitoring

CONF = Conflict

WorkPAY = Work and Pay

KNLOC = Kinondoni location

MON\*CONF = Monitoring\*Conflict

$\varepsilon$  = Error term

$b_0$  = Constant;  $b_1, b_2, b_3, b_4, b_5, b_6, b_7$  = Regression coefficients.

## 8.4 Estimation Results

### 8.4.1 Correlation Matrix

Table 8.1 below presents bivariate correlation matrix and descriptive statistics of the constructs of this study. The results show that Information Exchange (INFOEX), Trust (TRS), Dependency (DEP), Monitoring (MON) and Conflict (CONF), the interaction effects, a dummy variable (WorkPAY) are significantly related to Agent's satisfaction (SATISF).

**Table 8.1: Correlation Matrix**

CONSTRUCTS	1	2	3	4	5	6	7	8	9
CONSTRUCTS	1								
1. InfoExchange (INFOEXCH)	1								
2. Satisfaction (SATISF)	.248*	1							
3. Monitoring (MON)	.100	-.252*	1						
4. Dependence(DEP)	.239*	.261**	.104	1					
5. Trust(TRS)	.162	.359**	-.095	.375**	1				
6. Conflict (CONF)	-.039	-.242*	.009	-.062	-.093	1			
7. Work Pay_Dummy(WorkPAY)	-.017	.381**	-.050	-.113	-.061	.137	1		
8. Kinondoni_Dummy(KNLOC)	-.034	.039	-.211*	-.153	.132	-.004	-.137	1	
9. Conflict x Monitor(Mod_ConfMon)	-.169	-.176	-.071	.004	-.045	.297**	.151	.040	1

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

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

### 8.4.2 Regression analysis

Regression analysis is of the most broadly used techniques for analyzing multi-factor data in different areas of research (Montgomery, Peck and Vining 2012), regression analysis has been defined by (Tabachnick and Fidell 2007) as a set of statistical technique that permit one to assess the relationship between one dependent variable and several independent variables for given range of data,

Table 8.2 below present the results of the hierarchical multiple regression analysis which has been used in the analysis. The formulation was as follows (a) Dependent variables: Agent's satisfaction (SATS); (b) Independent variables: Information Exchange (INFOEX), Trust (TRUST), Dependency (DIP) (iii) Control variables: Location; and (iv) Interaction terms:). Monitoring (MON) and Conflict (CONF)

The results below indicated fitness of both model 1 and model 2. Model 1 was found to be statistically significant at  $p < .005$ , ( $t = 7.09$ ,  $p < .005$ ,  $R^2 = 0.477$ ,  $R^2_{Adj} = 0.437$ ,  $F(7,92) = 11.971$ ). Likewise, the assessment of the second model which have interaction effects depicts that, the model is statically significant at  $p < .05$ , ( $t = 7.15$ ,  $p < .05$ ,  $R^2 = 0.501$ ,  $R^2_{Adj} = 0.457$ ,  $F(1,91) = 4.463$ ).

The square of the correlation coefficient also known as the coefficient of multiple determination, R-squared is defined by (Spirer 1998) as the proportion of the variance that has been explained using the explanatory variable. Field (2009) argued that  $R^2$  shows how much variance is explained by the model compared to how much variance there is to explain in the first place. It is the proportion of variance in the outcome variable that is shared by the predictor variable.

In model 1, the Value of  $R^2_{Adj} = 0.437$ , which means that 43% of the variance of Agents' satisfaction can be explained by a model whereby 56.3% can be explained by other factors not included in our studies hence not counted in the model. In model 2, the Value of  $R^2_{Adj} = 0.457$ , which means that 45.7% of the variance of Agents' satisfaction can be explained by a model whereby 54.3% can be explained by other factors not included in our studies hence not counted in the model.  $R^2_{Adj}$  has increased due to addition of interaction effects in our model (i.e. Monitoring\* Conflict).

Furthermore, the inclusion of one interaction term in our model enforced the model's overall explanatory power by 2.4% which justifies the inclusion of both main effects and interaction term in our model. The contribution of interaction term is indicated in the significant  $F$ -change statistic where;  $F(1,91) = 4.463$ ,  $p < 0.05$  (see Appendix 6). This suggests that our estimated model adequately predicts the moderating effects of level of conflict and monitoring on agent's satisfaction.

**Table 8.2: Hierarchical Regression Analysis: Dependent Variable-Agent’s Satisfaction (SATISF)**

Constructs	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t-value	Sig.
(Constant)	3.571	.503		7.099***	.000
InfoExchange	.130	.055	.186	2.376**	.020
Monitoring	-.246	.083	-.233	-2.969***	.004
Dependence	.154	.067	.198	2.305**	.023
Trust	.155	.057	.229	2.717***	.008
Conflict	-.258	.076	-.261	-3.410***	.001
Work and Pay_Dummy(WorkPAY)	.710	.122	.453	5.823***	.000
Kinondoni_Dummy(KNLOC)	.093	.131	.057	.706 <sup>ns</sup>	.482
<b>Model 1 Fit:</b> $R^2=0.477$ , $R^2_{Adj}=0.437$ , $F(7,92)=11.971$ , $p=0.000$ , $n=100$					
(Constant)	3.533	.494		7.150***	.000
InfoExchange	.111	.055	.158	2.023**	.046
Monitoring	-.255	.081	-.241	-3.133***	.002
Dependence	.167	.066	.216	2.544***	.013
Trust	.150	.056	.223	2.691***	.008
Conflict	-.212	.077	-.214	-2.738***	.007
Work and Pay_Dummy(WorkPAY)	.744	.121	.474	6.157***	.000
Kinondoni_Dummy(KNLOC)	.110	.129	.067	.852 <sup>ns</sup>	.396
Mod_ConfMon(MONxCONF)	-.125	.059	-.168	-2.113**	.037
<b>Model 2 Fit:</b> $R^2=0.501$ , $R^2_{Adj}=0.457$ , $F\ Change(1,91)=4.463$ , $R^2\ change=0.024$ , $p=0.037$ , $n=100$					

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

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

<sup>ns</sup> Not Significant

### 8.4.3 Hypothesis Testing

By substituting the results obtained into Eqn 8.1 we get below linear regression equation

$$SATISF = 3.533 + 0.111INFOEX - 0.255MON + 0.167DEP + 0.150TRS - 0.212CONF + 0.744WorkPay + 0.110KNLOC - 0.125MON*CONF + \varepsilon \dots \dots \dots \text{eqn 8.2}$$

The regression model above, describes the relationship between dependent variable Agent Satisfaction (SATSF) and independent variables Information exchange (INFOEX), trust (TRS), dependence (DEP), monitoring (MON), conflict (CONF), one control variable of Location (KNLOC) together with an interaction term monitoring and Conflict (MON X CONF) and one dummy variable (WorkPAY)..

#### Hypothesis 1

The hypothesis depicts a positive relationship between information exchange and agent satisfaction. That is, as the principal and agent share more information on day to day activities, the agent becomes more satisfied both economically and socially. This has proven to be statistically significant at  $p < 0.05$  which gives us the strong evidence both empirically and statistically to support hypothesis H4, with a  $t$  value of 2.203 and  $b = 0.111$ . This means that if information exchange increases by one unit, other variables remain constant; agent's satisfaction will increase by 0.111 units.

#### Hypothesis 2

The hypothesis depicts a positive relationship between trust and agent satisfaction. That is, as the principal become more trustful, the agent becomes more satisfied both economically and socially. This has proven to be statistically significant at  $p < 0.05$  which gives us the strong evidence statistically to support hypothesis H2, with  $t$  value of 2.691 and  $b = 0.15$ , This means that if level of trust increases by one unit, other variables remain constant; agent's satisfaction will increase by 0.15 units

#### Hypothesis 3

The hypothesis depicts a positive relationship between dependence and agent satisfaction. That is, as the level of dependence of agent on principle increases, the agent becomes more satisfied both economically and socially. This has proven to be statistically significant at  $p < 0.05$  which gives us the strong evidence statistically to support hypothesis H3, with  $t$  value of 2.544 and  $b = 0.167$ . This means that if level of dependence increases by one unit, other variables remain constant; agent's satisfaction will increase by 0.167 units



#### Hypothesis 4

The hypothesis depicts a positive relationship between “work and pay” reward structure and agent satisfaction. That is the agent with the “work and pay” reward structure becomes more satisfied both economically and socially than the agent with “tenant” reward structure. This has proven to be statistically significant at  $p < 0.05$  which gives us the strong evidence statistically to support hypothesis H<sub>4</sub>, with t value of 2.544 and  $b = 0.167$

#### Hypothesis 5

Hypothesis depicts the interaction effect of monitoring and conflict (MON\*CONF) on agent’s satisfaction. The hypothesis depicts a negative relationship indicating that the high level of monitoring reduces agent’s satisfaction more, as the level of conflict increases. This has proven to be statistically significant at  $p < 0.05$  which gives us the strong evidence statistically to support hypothesis H<sub>4</sub>, with t value of -2.113 and  $b = -0.125$ .

### 8.4.4 Interpretation of Interaction Effects

Interaction effects are typically assessed by testing the significance of a multiplicative term consisting of the product between two or more predictor variables controlling for associated lower order main effects (Preacher, Curran and Bauer 2006). Introduction of interaction effects in the model increases the possibility of multicollinearity problems by either increasing or decreasing the correlations between the items (Jaccard and Turrisi 2003), therefore to avoid this problem use of mean-centered scales of the two variables entering the interaction term MON\*CONF is suggested (Buvik and Andersen 2015), In this study we used mean-centered values for Monitoring and Conflict to compute the interaction effects of these two variables,

To conduct a detailed assessment of interaction effect, the partial derivative of Monitoring (MON) on Agent’s satisfaction (SATS) in the presence of conflicts (CONF) is calculated (Buvik and Andersen, 2015). The formulation of partial derivative is depicted on equation 8.3 below

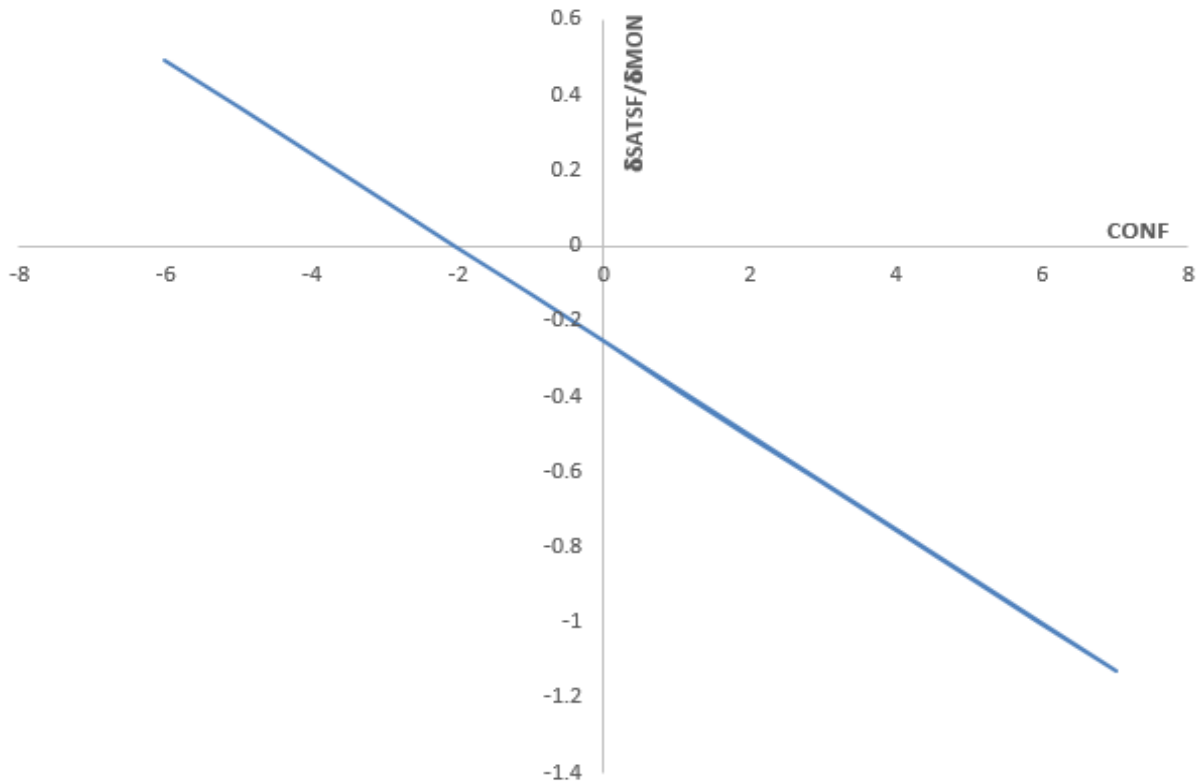
$$\frac{\delta \text{SATS}}{\delta \text{MON}} = b_2 + b_5 \text{CONF} \dots \dots \dots \text{eqn 8.3}$$

By substituting the values of obtained from eqn 8.2 to eqn 8.3 the results are as follows

$$\frac{\delta SATS}{\delta MON} = -0.255 - 0.125CONF \dots \dots \dots \text{eqn 8.4}$$

By examining the above equation further, Conflict is a dichotomy, when the value of Conflict is zero (no conflict at all. When the level of conflict is zero (0) the value of  $\delta SATS/\delta MON$  is -0.255, the results portray the main effect of Monitoring on agent’s satisfaction, when the level of Conflict is high at 1, the value of  $\delta SATS/\delta MON$  is 0.38 -0.255-0.125), the effect of monitoring increases (- 0.255- 0.125). The results depict that in the case of high level of conflict the effect of monitoring on agent’s satisfaction is high comparing to the low level of conflicts. Empirically, H<sub>5</sub> is supported.

**Figure 8.1: Effect of monitoring on Agent satisfaction, given different levels of conflict.**



Source: Authors’ formulation

Moreover, the results obtained from eqn 8.4 were plotted on the graph as depicted in figure 8.1 above. The graph has a negative slope suggesting that monitoring reduces agent’s satisfaction as the level of conflicts increases. Recall the variables MON and CONF are mean centered, this

means that when the value of CONF is equal to its mean level, the effect of agent’s satisfaction is equal to the main effect.

In addition, the interaction effect of monitoring and conflict on agent’s satisfaction was further explored using simple slope analysis. The standardized regression coefficients of monitoring were estimated for different level of conflict (Aiken and West 1991). The values of conflict deviating by +/-1 standard deviation units around the mean values were selected (Buvik 2002, Aiken and West 1991). The results (see table 8.3 and figure 8.2) reveals monitoring reduces agent’s cost with significantly high effect, as the level of conflict rises from *low* to *high* ( $\Delta\beta_2 = -0.4225$ ,  $t(91) = -3.0141$ ,  $P < 0.01$ ). Albeit all the three slopes are negative, the two slopes obtained from medium and high level of conflict were significant at  $p < 0.01$  contrary to low level of conflict.

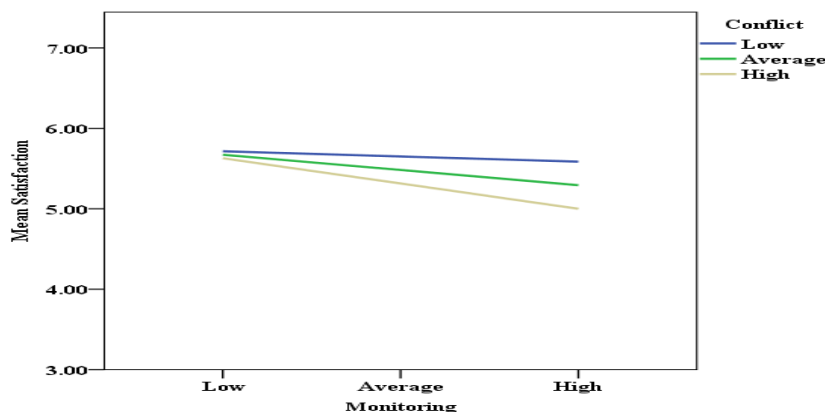
**Table 8.3: Slope analysis with level of conflict (CONF) as moderator**

$\frac{\delta(SATIS)}{\delta(MONIT)} = -0.255 - 0.125CONF$	Level of Conflict		
	Low (-1 $\sigma$ )	Average (Mean)	High (+1 $\sigma$ )
Effect of monitoring (MONIT) predicting agent’s satisfaction (b), (t-values)	-0.0869 $t(91) = -.9067^{ns}$	-0.255 $t(91) = -3.0141^{**}$	-0.4225 $t(91) = -3.0141^{**}$
<i>p</i> -value	.3670	0.0033	0.0019

\*\*Indicates significant at  $p < 0.01$

<sup>ns</sup>Indicates not significant

**Figure 8.2: Association between monitoring and agent’s satisfaction for different level of conflict**



### 8.4.5 Impact of Control Variables

The results of control variable in our model is insignificant, this means that on determining the level Agents' satisfaction (SATS), Location (LOC) does not play any major role at all given the relationship between the tricycle drivers and their respective agents, this finding goes the same as the findings from previous scholars in their studies.

#### Summary of Hypotheses Test

Hypothesis	Coefficient	<i>t</i> -Value	Findings
H1: As the information sharing increase in agent and principal relationship, the more agent is satisfied	0.111	2.023**	Supported
H2: The greater the level of agent's trust in a principal, the greater will be the agent's satisfaction in principal-agent relationship	0.15	2.691***	Supported
H3: There is a positive association between agent's dependence and satisfaction in principal-agent relationship	0.167	2.544***	Supported
H4: Contracts with strong incentives are positively related with agent satisfaction	0.744	6.157***	Supported
H5: As a principal exercise, high monitoring on agent in principal-agent relationship, under high level of conflict the less agent is satisfied	-0.125	-2.113**	Supported

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

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

### 8.5 Chapter Summary

This chapter presented the estimated regression model and the results of a hierarchical regression analysis in explaining the satisfaction of agent. Furthermore, all hypotheses were tested and the results show that all are statistically significant and strongly supported. Next chapter presents summary and discussion of findings, implications, limitations and areas of future research.

## CHAPTER NINE

### SUMMARY AND DISCUSSION OF FINDINGS, IMPLICATIONS, LIMITATIONS AND FUTURE RESEARCH

#### 9.1 Introduction

This is the last chapter of the study, it concludes the discussions raised in previous chapters regarding relevant theories and presented analysis and results. In brief, the chapter presents the summary of the findings and theoretical implications. Finally, managerial implication, limitation of the study and areas for further research are also presented.

#### 9.2 Summary of Findings

This study was guided by the main objective of the research that was to explore the drivers of agent's satisfaction in a principal-agent relationship in the micro-scale transport sector in Tanzania. In addition, the results from this study, aimed at highlighting important issues that can be useful both theoretically and practically for policy and management practices. Furthermore, the study examined how the agency and social exchange theories can be useful in establishing business relationship continuity focusing on agent's satisfaction point of view.

Agency and social exchange theories were used to formulate five hypotheses that used to explore the drivers of agent's satisfaction. The findings of the study from the empirical analysis (see table 9.1), summarizes all five hypotheses (H1, H2, H3, H4, and H5) which found to be statistically significant consistent with previous studies in the agency and social exchange theories. In addition, the findings (see table 8.2), showed the overall goodness-fit of our hierarchical multiple regression model statically significant at  $p < .05$  (two-tailed), ( $t = 7.15$ ,  $R^2 = 0.501$ ,  $R^2_{Adj} = 0.457$ ,  $F(1,91) = 4.463$ ,  $R^2 \text{ change} = 0.024$   $p = 0.037$ ,  $n = 100$ ). Moreover, four hypotheses (H1, H2, H3, H4) focused on the direct effect on the level of satisfaction, and on another hand, the remaining hypothesis (H5) focused on the moderating effect of the level of conflict between monitoring and satisfaction.

The findings of the study found that agent considers information exchanges with a principal as the factor that impacts the level of satisfaction. This was tested in hypothesis (H1) whereby the results showed that information exchange is positively related to agent's satisfaction which is consistent

with agency theory. Similarly, when the driver of the tricycle assumes that the owner is honest, open and keep promises tends to be more satisfied with agency relationship. Therefore, the findings of the empirical test of this study found that there is a positive relationship between trust and agent's satisfaction (H2).

Moreover, (Razzaque and Boon 2003) postulate that dependence as the agent's need to maintain an exchange relationship with the principal to achieve the desired goals. Thus, the agent considers the relationship very important when dependence is high which in turn increases commitment, cooperation hence the level of satisfaction. The findings of this study (H3) supported the aforesaid argument which found that there is a direct positive association between dependence and agent's satisfaction.

Furthermore, according to (Lim and Tang 1999) the agent assumes different risks in tendering his day to day operations, thus requires a reward structure that compensates the risks beared. Bergen, Dutta and Walker (1992) argue that agent is satisfied more with the reward structure of the incentives that are compatible with agent's efforts. The findings of this study (H4) supported the aforesaid argument which found that there is a positive association between reward structure with strong incentives and agent's satisfaction. Finally, the findings of this study (H5) found that as the level of conflict increases, monitoring activities exercised by the principal to the agent reduces agent's satisfaction significantly.

**Table 9.1: Summary of hypotheses and findings**

Hypotheses	Coefficient	<i>t</i> -Value	Findings
H1: As the information sharing increase in agent and principal relationship, the more agent is satisfied	0.111	2.023**	Supported
H2: The greater the level of agent's trust in a principal, the greater will be the agent's satisfaction in principal-agent relationship	0.15	2.691***	Supported
H3: There is a positive association between agent's dependence and satisfaction in principal-agent relationship	0.167	2.544**	Supported
H4: Contracts with strong incentives are positively related with agent satisfaction	0.744	6.157***	Supported
H5: As a principal exercise, high monitoring on agent in principal-agent relationship, under high level of conflict the less agent is satisfied	-0.125	-2.113**	Supported

\*\*Significant at  $p < 0.05$  (two tailed)

\*\*\*Significant at  $p < 0.001$

### 9.3 Theoretical Contributions

Satisfaction is explained in different previous literature as one of the fundamental factor of understanding business relationship among exchange partners (Geyskens, Steenkamp and Kumar 1999), thus it has attracted research interest from various field of studies including, marketing channel relationship (Noor, Perumal and Hussin 2010; Rodriguez, Agudo and Gutierrez 2006; Payan and McFarland 2005) and organization management (Douma and Schreuder 2008). In addition, the concept of satisfaction has received more attention in employment relationship or dyad agency relationship (Crawford, Thompson and Dunipace 2011; Kavak, Sertoglu and Tektas 2016) and exchange relationships (Ramaseshan, Yip and Pae 2006). This recent attention on satisfaction is attributed to its vital importance in enhancing competitive advantage and business continuity between exchange partners (Noor, Perumal and Hussin 2010; Ramaseshan, Yip and Pae 2006). Therefore, this study contributes to an increasing appreciation of the role which satisfaction plays in management decision making.

In addition, in order to add a more theoretical contribution to the previous studies on satisfaction, agency and social exchange theories, this study focused on exploring the drivers/determinants of agent's satisfaction in agency relationship which have received limited research attention in transport industry context. In this study, the overall agent's satisfaction included both economic and social dimensions and the aforesaid theories used to highlight the theoretical research hypothesis. The empirical analysis of the impact of trust, information exchange, dependence, reward structure and the moderating effect of conflict and monitoring on satisfaction are the major theoretical contributions of this research, particularly in the principal-agent relationship in the transport industry context.

Furthermore, this study is one of the very few studies conducted in developing countries (Goaill, Perumal and Noor 2014), especially in African countries' business environment to examine the principal-agent relationship in the context of dyad agency relationship. The existing few empirical studies have been conducted to examine the antecedents of satisfaction in marketing channel relationships and buyer-supplier relationship. Moreover, this study contributes to the expanding research stream on agency relationship currently dominated by western research works by adding the African perspective and Tanzania in particular.

#### *Reward structure and satisfaction*

Agency theory focuses on determining the most efficient contract to govern a particular relationship given the attributes of exchange partners or parties involved (Bergen, Dutta and Walker 1992), thus the theory was used to determine the reward structure that impacts the level of agent's satisfaction. According to (Bergen, Dutta and Walker 1992), most of the studies on the agency relationship define efficiency from principal's perspective, thus this study is one of the very few studies that identify the importance of agency model to define outcomes of the principal-agent relationship from the agent's point of view. Moreover, consistent with agency theory, contract with incentives that are compatible with agent's expectations impacts the level of satisfaction positively. This finding contributes to the previous empirical studies (Douma and Schreuder 2008; Bergen, Dutta and Walker 1992) that were conducted to examine the appropriate reward structure to minimize the two types of agency problems associated with pre-contractual and post-contractual arrangements in a principal-agent relationship.



### *The moderating effect of conflict on monitoring and satisfaction*

According to agency theory, normally a principal attempt to monitor his/her agents' behavior and outcomes because of the information asymmetry that exists between principal-agent relationship to ensure that principals' interests are met (Crosno and Brown 2015). As explained in chapter four, when the principal monitors the agent's actions, misunderstandings or conflicts between exchange partners increase (Gaski 1984; Douma and Schreuder 2008). Thus, monitoring decreases the agent's motivation to perform which impacts the level of satisfaction negatively (Kavak, Sertoglu and Tektas 2016). Drawing on grounds of agency theory conflicts result when one party perceives that another party is engaged in behavior that is preventing or impeding from achieving his/her outcomes (Geyskens, Steenkamp and Kumar 1999). Therefore, the study has extended knowledge of previous research that examined the direct link between conflict and satisfaction (Gaski 1984) and monitoring and satisfaction (Crosno and Brown 2015) which found that as the level of conflict increases, monitoring is negatively associated with agent's satisfaction (see appendix 7). Therefore, this study is one of very few studies that contributes empirical evidence of the moderating effect of conflict between monitoring and agent's satisfaction. This finding is important because it highlights the level of conflict at which the principal can exercise to monitor the agent without affecting business relationship between exchange partners.

### *Information exchange and satisfaction*

Agency theory postulates that when one party in the principal-agent relationship is more informed than the other party, it raises the problem of information asymmetry (Bouckova 2015). Information asymmetry may result in moral hazard (ex post), whereby one of the parties exploits the information asymmetry to his/her own benefit, on another hand it leads to adverse selection (ax ante) which arises from the lack of information thus one party cannot assess the effectiveness of the other party's actions and behavior (Bouckova 2015, Bergen, Dutta and Walker 1992). Information exchange between the exchange partners tends to minimize the agency problems resulting from information asymmetry (Rodriguez, Agudo and Gutierrez 2006). Consistent with previous studies (Bouckova 2015; Crosno and Brown 2015; Rodriguez, Agudo and Gutierrez 2006) and agency theory this study adds the theoretical contribution of the positive impact of information exchange on the level of agent's satisfaction. This research found that information

exchange made by the principal allows the agent to do his/her daily tricycles' business operations more efficiently thus increases the level of satisfaction.

### *Trust, dependence, and satisfaction*

Social Exchange theory, postulates an agent's social satisfaction stems from the evaluation of social outcomes in its interaction with the principal. For example, when the agent possesses trust with the principal, this may result in the agent's positive social satisfaction and the perception of fulfilling interaction (Goaill, Perumal and Noor 2014). Thus, this study provides another theoretical contribution on a positive relationship between trust and satisfaction (Bergen, Dutta and Walker 1992). The study has found the empirical importance of trust in overall agent's satisfaction (social and economic) in agency relationships. According to (Rodriguez, Agudo and Gutierrez 2006), trust plays a key role in the generation of an adequate relational environment to the development of principal-agent interaction.

In addition, the findings of this study strengthen the role of the agent's dependence on the principal in enhancing the relationship between principal and agent to achieve high levels satisfaction that helps to stabilize the exchange relationships (Goaill, Perumal and Noor 2014). According to (Razzaque and Boon 2003) dependence brings about high levels of commitment and cooperation amongst exchange partners which in turn impacts the level of satisfaction positively. Moreover, in contrast to previous study that position indirect link between dependence and satisfaction (Payan and McFarland 2005; Geyskens, Steenkamp and Kumar 1999), this study is one of the few empirical studies (Lewis and Lambert 1991) that provides a broader theoretical perspective concerning a direct link between dependence and satisfaction in the context of agency relationships.

### **9.4 Managerial implications**

This study provides the basis on which stakeholders of transportation sector such as government, vehicle owners (principals), and drivers (agents) can use it to improve the relationship between the agents and principals and make the transport sector more productive as it's vital in improving country's economy. The study provides the acumens on how monitoring, information exchange,

trust, dependence and reward structure can affect agent's satisfaction. Managerial implications are as follows.

Many parties are sharing information on both sides of their supply chains to create a more collaborative environment, increase production (Ali et al. 2017) and reduce uncertainty which leads to the smooth operations in the supply chain (Huang, Hung and Ho 2017). Principals should realize the importance of information sharing on enhancing the relationship between parties. One of the findings of this study is the usefulness of communication on driving the satisfaction of tricycle drivers. Both parties should invest much in sharing information by communicating frequently and timely. Also in the case of any changes parties should keep informed to allow parties to adjust and allow smooth continuity of business without major interruptions.

Trust is a critical factor fostering commitment among supply chain partners. The presence of trust improves measurably the chance of fruitful supply chain performance. A lack of trust among supply chain allies often results in inefficient and ineffective performance (Kwon and Suh 2004). The empirical findings of this study support this and show that trustworthy in the relationship increase satisfaction to agents. Therefore, owners of the vehicles should honor this for the entire period of the agreement by ensuring openness in doing business and fulfill all the promises made.

Monitoring of agents is very important as it allows the principals to have the visibility of agents' action and behavior. However, the finding of our study show that as the level of monitoring increase the less agent is satisfied, also when the level of monitoring is high under high level of conflict which makes the agents more dissatisfied. Therefore, we recommend the principals to come up with well-designed research-based monitoring systems that aim at both increasing agents' satisfaction and promoting achievement of the principals' goals. The most advised tool is the use of well-drafted contracts which stipulates clearly functions of each part and desired outcomes with proper consequences in case targets are not met. And parties should strive to avoid any kind of conflicts as it hinders agent's satisfaction.

Principals should see the possibility of using "Work and Pay" as the best reward structure system comparing to "Tenant". This is supported by findings of this study which show that tricycle drivers with "Work and Pay" type of contracts tend to be more satisfied than their counterpart, hence agent with this type of contract are likely to be more committed and more productive. This will benefit

both parties as this type of reward structure allows agents to own the tricycle at the end of agreed period and provide the return on investment to principals in short period comparing to work and pay agreement.

Findings of this study also are most useful to the government whereby the relevant policymaker institution must ensure that all contracts protecting this relationship, should be in a proper format to be accepted legally and can provide resolution of the various conflicts easily and quickly as it arises. This will allow each side to be judged without favoring any part, given that principals are in a better position than tricycle drivers (agents). Based on this study, it appears that many disputes are resolved in an informal manner, leading to the possibility of one side not to be satisfied by these decisions and there are no good alternatives because nature of the contracts which govern this relationship are missing a lot of important clauses especially conflict resolutions clauses, as conflicts may arise at any time. Therefore, policy maker must see how they can help on this aspect to ensure smooth operation of this business.

### **9.5 Limitation of the Study and Areas for Further Research**

The focus of the study was to see what drives agent's satisfaction in exchange relationship between principal and agent in the transport industry in Tanzania, considering information exchange, monitoring, dependence, conflict, trust, location and reward structure as variables that affect agent's satisfaction. This study was based on transportation industry only, by assessing one industry, it will not be easy for the obtained findings to be applied to other sectors like farming, fishing, banking, mining, manufacturing, and others. The advantage of using one industry is the availability of high degree of internal validity, however, this does not consider the external validity hence make it difficult to apply it to other industry. Therefore in regards to this, further studies can be made by considering other industries.

This study used cross-sectional design due to limited time and resources, whereby the data was collected at one point in time to make inferences about a population. Hence the hypotheses of this study are only valid for a specific point in time of interest. Cross-sectional design, provides a snapshot of outcomes associated with agent's satisfaction at as specific point in time, thus not presenting the causality and there is a possibility of having different results if another time-frame

had been chosen, hence for further research use of longitudinal design may be used to provide better and concrete explanations of causality and provide a chance for follow-up to the findings.

The study used both agency theory and social exchange theory to formulate the questionnaires and data was collected from agents (tricycle drivers) only. To get better results, then further research needs to be conducted by considering gathering the data from the other party (principals- tricycles owner) or gather information from both parties.

This study used 100 as the sample size and was adequate as recommended by various scholars, however, the size was on the minimum threshold and this was due to limit of time when data were being collected. To obtain more accurate and sufficient results, then further research must consider using larger sample size than this.

Finally, this study focused only on one region of Tanzania which is Dar es Salaam and selected only two districts, therefore, scholars who are intending to do the same kind of study should consider all regions of Tanzania where tricycle transport is also in use, this will help to get more clear results. Furthermore, this study based on tricycle drivers only thus, not covering the entire sector fully leaving a lot of actors in the same industry, therefore drivers from other modes of transport should be included in future studies to come up with detailed results on examining the drivers for agent's satisfaction

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## APPENDICES

### Appendix 1a: Standardized scores (z-scores), checking outliers

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Zscore: InfoExchange	100	-2.29348	1.28171	0E-7	1.00000000
Zscore: Satisfaction	100	-3.16423	1.93643	0E-7	1.00000000
Zscore: Monitoring	100	-1.22457	2.81248	0E-7	1.00000000
Zscore: Dependence	100	-3.57129	1.36689	0E-7	1.00000000
Zscore: Conflict	100	-1.19334	3.84450	0E-7	1.00000000
Zscore: Trust	100	-2.90921	1.18220	0E-7	1.00000000
Valid N (listwise)	100				

### Appendix (1b): Normality, Skewness and Kurtosis Assessment (n=100)

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
SATISF3	100	3	7	5.51	1.124	-.200	.241	-.876	.478
SATISF6	100	3	7	5.45	1.019	-.184	.241	-.663	.478
SATISF7	100	3	7	5.41	1.093	-.168	.241	-.655	.478
SATISF8	100	3	7	5.50	1.020	-.087	.241	-.622	.478
SATISF11	100	3	7	5.43	1.018	-.012	.241	-.632	.478
SATISF12	100	3	7	5.53	1.010	-.023	.241	-.821	.478
SATISF13	100	3	7	5.54	1.039	-.026	.241	-.931	.478
INFOEX3	100	3	7	5.62	1.213	-.651	.241	-.508	.478
INFOEX4	100	3	7	5.55	1.234	-.496	.241	-.755	.478
INFOEX5	100	3	7	5.43	1.217	-.400	.241	-.744	.478
INFOEX6	100	3	7	5.62	1.262	-.600	.241	-.755	.478
INFOEX7	100	3	7	5.61	1.278	-.532	.241	-.863	.478
TRS4	100	2	7	5.69	1.237	-.563	.241	-.593	.478
TRS5	100	2	7	5.60	1.295	-.467	.241	-.869	.478
TRS6	100	3	7	5.61	1.286	-.278	.241	-1.362	.478
TRS7	100	2	7	5.61	1.325	-.442	.241	-1.071	.478
DEP1	100	2	7	5.81	1.107	-.935	.241	.797	.478
DEP2	100	2	7	5.52	1.185	-.476	.241	-.560	.478
DEP3	100	2	7	5.38	1.144	-.421	.241	-.445	.478
DEP4	100	2	7	5.72	1.155	-.834	.241	.216	.478
DEP5	100	2	7	5.65	1.201	-.612	.241	-.302	.478
MON1	100	1	4	1.93	.868	.421	.241	-.890	.478
MON3	100	1	4	1.89	.815	.435	.241	-.754	.478
MON4	100	1	4	1.92	.861	.447	.241	-.825	.478
MON5	100	1	4	1.90	.823	.411	.241	-.824	.478
MON6	100	1	4	1.91	.842	.484	.241	-.666	.478
CONF1	100	1	5	1.96	.887	.611	.241	.029	.478
CONF2	100	1	5	1.94	.862	.695	.241	.375	.478
CONF3	100	1	5	1.96	.887	.611	.241	.029	.478
CONF4	100	1	5	1.93	.902	.646	.241	-.050	.478
Valid N (listwise)	100								

**Appendix 2(a): Factor Analysis; KMO measure of sampling adequacy, Bartlett's Test of Sphericity**

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.772
Bartlett's Test of Sphericity	Approx. Chi-Square	2552.873
	df	435
	Sig.	.000

**Appendix 2(b): Factor Analysis; Total Variance Explained**

**Total Variance Explained**

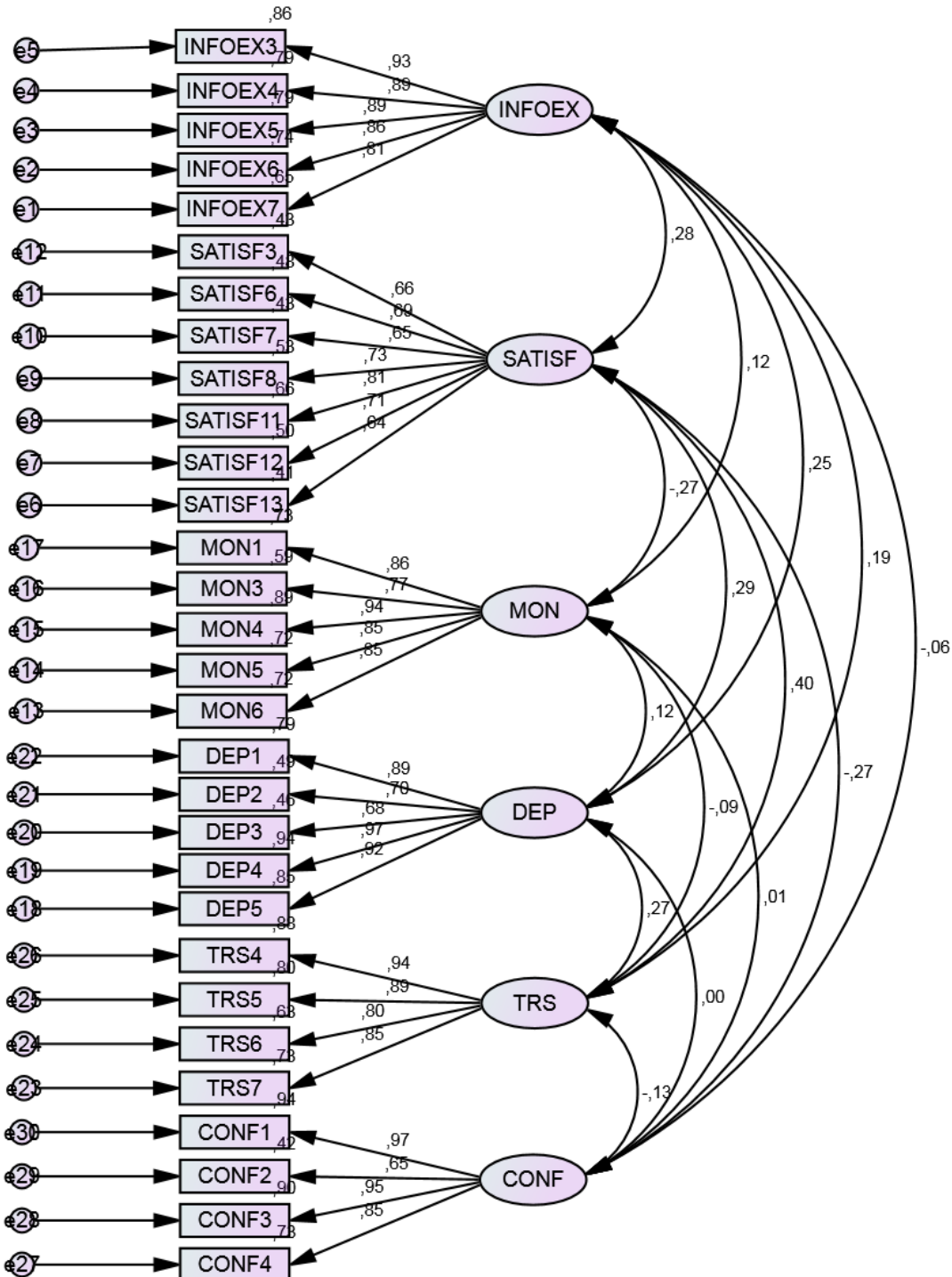
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.174	23.912	23.912	7.174	23.912	23.912	4.175	13.917	13.917
2	4.800	16.001	39.913	4.800	16.001	39.913	4.052	13.506	27.423
3	3.360	11.199	51.112	3.360	11.199	51.112	4.027	13.424	40.847
4	3.250	10.833	61.945	3.250	10.833	61.945	3.803	12.678	53.525
5	2.198	7.327	69.271	2.198	7.327	69.271	3.531	11.769	65.294
6	2.074	6.912	76.184	2.074	6.912	76.184	3.267	10.890	76.184
7	.781	2.603	78.786						
8	.712	2.373	81.159						
9	.617	2.055	83.215						
10	.569	1.895	85.110						
11	.509	1.698	86.808						
12	.477	1.591	88.399						
13	.444	1.480	89.879						
14	.363	1.210	91.089						
15	.344	1.146	92.235						
16	.299	.998	93.233						
17	.269	.898	94.131						
18	.265	.884	95.015						
19	.237	.790	95.806						
20	.199	.664	96.469						
21	.195	.648	97.118						
22	.156	.521	97.639						
23	.143	.478	98.117						
24	.124	.415	98.532						
25	.116	.386	98.918						
26	.089	.298	99.217						
27	.077	.257	99.474						
28	.068	.225	99.699						
29	.052	.172	99.871						
30	.039	.129	100.000						

Extraction Method: Principal Component Analysis.

**Appendix 3: Unstandardized loadings, squared standardized loading and t-values  
Model Fit**

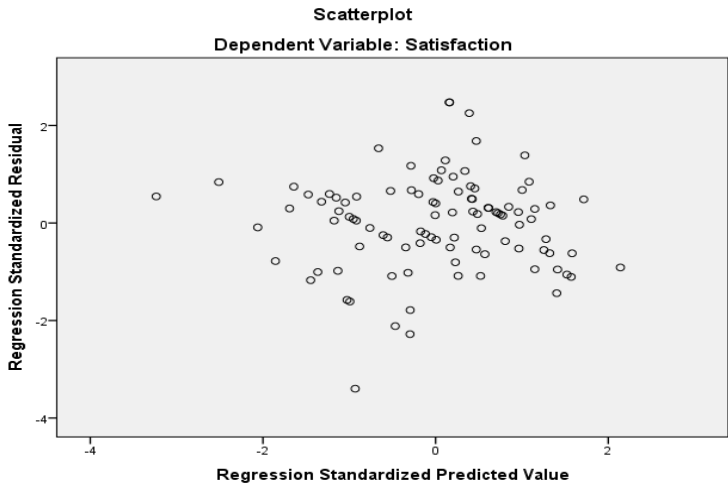
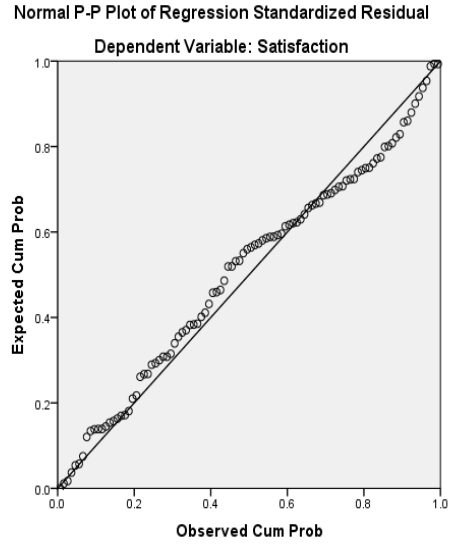
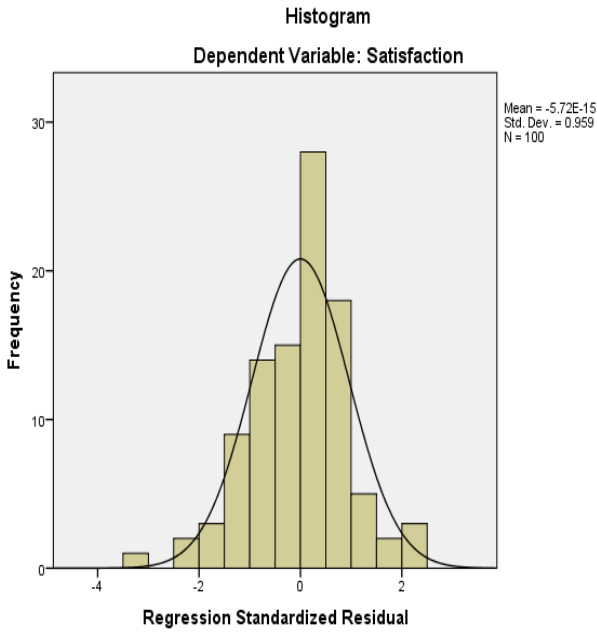
Construct	Items	Unstandardized Loadings	S.E.	t-value	Standardized Loadings	Squared Standardized Loadings
INFOEX	INFOEX7	1,000			,809 <sup>a</sup>	,858
	INFOEX6	1,052	,102	10,351	,862	,794
	INFOEX5	1,044	,097	10,765	,887	,877
	INFOEX4	1,064	,100	10,605	,891	,743
	INFOEX3	1,086	,098	11,136	,926	,654
SATISF	SATISF13	1,000			,642 <sup>a</sup>	,434
	SATISF12	1,071	,180	5,953	,707	,679
	SATISF11	1,236	,194	6,388	,810	,427
	SATISF8	1,112	,186	5,969	,727	,529
	SATISF7	1,070	,192	5,586	,653	,657
	SATISF6	1,057	,181	5,833	,692	,500
	SATISF3	1,110	,200	5,557	,659	,412
MON	MON6	1,000			,848 <sup>a</sup>	,731
	MON5	,978	,090	10,892	,849	,587
	MON4	1,135	,088	12,965	,942	,887
	MON3	,874	,096	9,129	,766	,721
	MON1	1,039	,095	10,981	,855	,720
DEP	DEP5	1,000			,920 <sup>a</sup>	,785
	DEP4	1,013	,054	18,839	,969	,488
	DEP3	,702	,084	8,345	,678	,460
	DEP2	,749	,086	8,745	,698	,938
	DEP1	,888	,062	14,293	,886	,847
TRS	TRS7	1,000			,852 <sup>a</sup>	,726
	TRS6	,907	,093	9,734	,796	,634
	TRS5	1,024	,086	11,949	,893	,797
	TRS4	1,028	,080	12,809	,938	,880
CONF	CONF4	1,000			,853 <sup>a</sup>	,728
	CONF3	1,095	,079	13,832	,950	,902
	CONF2	,730	,098	7,421	,651	,424
	CONF1	1,117	,077	14,485	,969	,939

**Appendix 4: Confirmatory Factor Analysis (CFA) Model Fit (n=100)**



Chi-Square ( $X^2=606.009$ ,  $df =390$ ,  $P=0.000$ ), adjusted Chi-square ( $X^2/df$ ) =1.554, CFI=0.911, IFI=0.913, RMSEA=0.075

# Appendix 5: Linearity Assessment





## Appendix 6: Model Summary

*Model Summary<sup>f</sup>*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change
						F Change	df1	df2	
1	.690 <sup>a</sup>	.477	.437	.58850	.477	11.971	7	92	.000
2	.708 <sup>b</sup>	.501	.457	.57772	.024	4.463	1	91	.037

a. Predictors: (Constant), Kinondoni\_Dummy, Conflict, InfoExchange, Work and Pay\_Dummy, Trust, Monitoring, Dependence

b. Predictors: (Constant), Kinondoni\_Dummy, Conflict, InfoExchange, Work and Pay\_Dummy, Trust, Monitoring, Dependence, Mod\_ConfMon

c. Dependent Variable: Satisfaction

## Appendix 7: Effect of X(MON) on Y(STISF) at values of the moderator (CONF)

CONF	MON	se	t	p	LLCI	ULCI
-.9475	-.0545	.1049	-.5195	.6047	-.2628	.1539
-.7475	-.0967	.0935	-1.0353	.3033	-.2824	.0889
-.5475	-.1390	.0851	-1.6335	.1058	-.3081	.0300
<b>-.4336</b>	<b>-.1631</b>	<b>.0821</b>	<b>-1.9864</b>	<b>.0500</b>	<b>-.3262</b>	<b>.0000</b>
-.3475	-.1813	.0808	-2.2433	.0273	-.3418	-.0208
-.1475	-.2235	.0812	-2.7526	.0071	-.3848	-.0622
.0525	-.2658	.0862	-3.0820	.0027	-.4371	-.0945
.2525	-.3081	.0952	-3.2367	.0017	-.4971	-.1190
.4525	-.3503	.1070	-3.2728	.0015	-.5629	-.1377
.6525	-.3926	.1210	-3.2452	.0016	-.6329	-.1523
.8525	-.4348	.1363	-3.1893	.0020	-.7057	-.1640
1.0525	-.4771	.1527	-3.1241	.0024	-.7804	-.1737
1.2525	-.5194	.1698	-3.0586	.0029	-.8566	-.1821
1.4525	-.5616	.1874	-2.9968	.0035	-.9339	-.1894
1.6525	-.6039	.2054	-2.9401	.0042	-1.0119	-.1959
1.8525	-.6461	.2237	-2.8887	.0048	-1.0904	-.2018
2.0525	-.6884	.2422	-2.8424	.0055	-1.1695	-.2073
2.2525	-.7307	.2609	-2.8008	.0062	-1.2488	-.2125
2.4525	-.7729	.2797	-2.7634	.0069	-1.3285	-.2173
2.6525	-.8152	.2986	-2.7296	.0076	-1.4084	-.2220
2.8525	-.8574	.3177	-2.6990	.0083	-1.4885	-.2264
3.0525	-.8997	.3368	-2.6713	.0090	-1.5687	-.2307

\*\*\*\*\*

**Appendix 8: Questionnaires (English version)**

<b>A1: Please circle the number that represents your views regarding the following statements</b>							
	Strongly disagree				Strongly agree		
1. My relationship with this owner is very attractive with respect to the income I get.	1	2	3	4	5	6	7
2. I am very pleased with my decision to work with this tricycle’s owner since this type of transport service is of high demand	1	2	3	4	5	6	7
3. The reward structure of this owner helps me to get my work done effectively	1	2	3	4	5	6	7
4. This owner provides me with Tricycle service and maintenance support of high quality	1	2	3	4	5	6	7
5. The owner pays all government statutory fees which allows continuity of business without any interruption	1	2	3	4	5	6	7
6. Even if the benefits are not gained on weekly bases, they balance out over time	1	2	3	4	5	6	7
7. I benefit and earn in proportion to the efforts I put in	1	2	3	4	5	6	7

<b>A2: Please circle the number that represents your views regarding the following statements</b>							
	Strongly disagree				Strongly agree		
1. I find real enjoyment in my Job	1	2	3	4	5	6	7
2. I like my job better than the average worker does	1	2	3	4	5	6	7
3. I would not consider taking another job	1	2	3	4	5	6	7
4. I feel very satisfied with my Job	1	2	3	4	5	6	7
5. In general, I like working with this tricycle's owner	1	2	3	4	5	6	7
6. The working relationship with this owner is characterized by feelings of agreement	1	2	3	4	5	6	7
7. The owner expresses criticism sensitively	1	2	3	4	5	6	7

<b>B: Please circle the number that represents your views regarding the following statements</b>							
	Strongly disagree			Strongly agree			
1. I keep the owner informed about changes in day to day operations	1	2	3	4	5	6	7
2. The owner and I always exchange information that may benefit both parties	1	2	3	4	5	6	7
3. This owner and I keep each other informed about events and changes in the market	1	2	3	4	5	6	7
4. The owner informs me immediately if any problem arises	1	2	3	4	5	6	7
5. The owner frequently discusses and informs me about new possibilities for getting more customers	1	2	3	4	5	6	7
6. I inform the owner in advance of changing needs	1	2	3	4	5	6	7
7. I provide any information that might help the owner	1	2	3	4	5	6	7

<b>C: Please circle the number that represents your views regarding the following statements</b>							
	Strongly disagree			Strongly agree			
1. This owner has high degree of integrity	1	2	3	4	5	6	7
2. This owner is perfectly honest	1	2	3	4	5	6	7
3. This owner can be trusted completely	1	2	3	4	5	6	7
4. This owner is truthful	1	2	3	4	5	6	7
5. Promises made by the owner are reliable	1	2	3	4	5	6	7
6. This owner is open in doing business with me	1	2	3	4	5	6	7
7. I believe the information that this owner provides me	1	2	3	4	5	6	7
8. I trust this owner keeps my best interests in mind	1	2	3	4	5	6	7

**D: Please circle the number that represents your views regarding the following statements**

	Strongly disagree					Strongly agree
1. If our relationship ended, I would have difficulty in replacing the income I get from this owner	1	2	3	4	5	6 7
2. I am very dependent on this owner	1	2	3	4	5	6 7
3. This tricycle business is very crucial to my future family plans	1	2	3	4	5	6 7
4. I do not have good alternative to this job	1	2	3	4	5	6 7
5. This owner is important to my businesses	1	2	3	4	5	6 7
6. If our relationship is discontinued, it could be difficult for me to replace this owner	1	2	3	4	5	6 7

**E: Please circle the number that represents your views regarding the following statements**

	Strongly disagree			Strongly agree			
1. The owner visits me regularly at my place of work (parking)	1	2	3	4	5	6	7
2. The owner demands a report of services and maintenance done regularly	1	2	3	4	5	6	7
3. The owner monitors the income I get regularly	1	2	3	4	5	6	7
4. The owner demands a report of number of km covered regularly	1	2	3	4	5	6	7
5. The owner monitors day to day operations	1	2	3	4	5	6	7
6. The owner has hired third party to monitor my day to day operations	1	2	3	4	5	6	7
7. The owner makes regular calls regarding my returns	1	2	3	4	5	6	7

<b>F: Please circle the number that represents your views regarding the following statements</b>							
	Strongly agree				Strongly disagree		
1. There rarely any conflict in the relationship between me and the owner	1	2	3	4	5	6	7
2. I rarely disagree with the owner	1	2	3	4	5	6	7
3. The disagreements I have with the owner are usually quite amicable	1	2	3	4	5	6	7
4. The owner and I rarely argue over important issues	1	2	3	4	5	6	7

G: Please kindly complete the following statements by filling in the blank spaces or ticking where appropriate

1. What type of contract do you have? (a)Tenant\_\_\_\_\_ (b)Work and Pay\_\_\_\_\_
2. What is your business operation location? (a)Ubungo \_\_\_\_\_ (b) Kinondoni\_\_\_\_\_
3. Please indicate your gender: (a) Female\_\_\_\_\_ (b) Male\_\_\_\_\_
4. Tick the appropriate age range that best represent your age  
 Below 25\_\_\_\_\_ Between 26-35\_\_\_\_\_ above 35\_\_\_\_\_
5. How do you settle conflicts that exist?  
 (a) Legal\_\_\_\_\_ (b) Mutual discussion/informal\_\_\_\_\_



## Appendix 8: Questionnaires (Swahili version)

<b>A1: Tafadhali zungushia nambari inayowakilisha maoni yako kuhusu kauli zifuatazo</b>							
	Sikubaliani kabisa			Nakubaliana kabisa			
1. Uhusiano wangu na mmiliki ni wa kuvutia sana kulingana na mapato ninayoyapata.	1	2	3	4	5	6	7
2. Ninaridhika na uamuzi wangu wa kufanya kazi na huyu mmiliki kwa sababu aina hii ya huduma ya usafiri ina uhitaji makubwa	1	2	3	4	5	6	7
3. Muundo wa ujira na huyu mmiliki hunisaidia mimi kufanya kazi yangu kwa ufanisi	1	2	3	4	5	6	7
4. Mmiliki huyu anatoa huduma ya matengenezo ya ubora wa juu	1	2	3	4	5	6	7
5. Mmiliki analipa ada zote za kisheria za serikali ambazo zinasaidia mwendelezo wa biashara bila bughudha yeyote	1	2	3	4	5	6	7
6. Hata kama faida haipatikani kwa kila juma, bali kwa kadri muda unavyozidi faida hupatikana kwa ujumla	1	2	3	4	5	6	7
7. Mimi hufaidika na kulipwa kulingana na juhudi ninazozitweka	1	2	3	4	5	6	7

**A2: Tafadhali zungushia nambari inayowakilisha maoni yako kuhusu kauli zifuatazo**

	Sikubaliani kabisa				Nakubaliana kabisa		
	1	2	3	4	5	6	7
8. Nina furahia kazi yangu	1	2	3	4	5	6	7
9. Ninaipenda kazi yangu zaidi ya mfanyakazi wa kawaida	1	2	3	4	5	6	7
10. Sifikirii kuchukua/kutafuta kazi nyingine	1	2	3	4	5	6	7
11. Najisikia kuridhika sana na kazi yangu	1	2	3	4	5	6	7
12. Kwa ujumla, ninapenda kufanya kazi na huyu mmiliki	1	2	3	4	5	6	7
13. Uhusiano wetu wa kazi na mmiliki unaongozwa na hisia za makubaliano	1	2	3	4	5	6	7
14. Mmiliki hunikosa kwa makini/uangalifu	1	2	3	4	5	6	7

<b>B: Tafadhali zungushia nambari inayowakilisha maoni yako kuhusu kauli zifuatazo</b>							
	Sikubaliani kabisa			Nakubaliana kabisa			
8. Mara zote ninamjulisha mmiliki kuhusu mabadiliko yanayotokea katika shughuli zangu za kila siku	1	2	3	4	5	6	7
9. Mimi na mmiliki tunabadilisha taarifa zinazotunufaisha wote wawili	1	2	3	4	5	6	7
10. Mimi na mmiliki mar azote tunapeana taarifa kuhusu matukio na mabadiliko juu ya biashara	1	2	3	4	5	6	7
11. Mmiliki hunitaarifu kwa wakati kila tatizo linapotekea	1	2	3	4	5	6	7
12. Mmiliki mara nyingi hujadili na kunilinieleza kuhusu uwezekano mpya wa kupata wateja zaidi	1	2	3	4	5	6	7
13. Mimi humjulisha mmiliki mapema ninapotaka kufanya mabadiliko	1	2	3	4	5	6	7
14. Mimi hutoa taarifa yeyote ambayo inaweza kumsaidia mmiliki	1	2	3	4	5	6	7

<b>C: Tafadhali zungushia nambari inayowakilisha maoni yako kuhusu kauli zifuatazo</b>							
	Sikubaliani kabisa			Nakubaliana kabisa			
9. Huyu mmiliki ana uadilifu wa khali ya juu	1	2	3	4	5	6	7
10. Mmiliki huyu ni mwaminifu sana	1	2	3	4	5	6	7
11. Mmiliki huyu anaweza kuaminiwa kabisa	1	2	3	4	5	6	7
12. Mmiliki huyu ni mkweli	1	2	3	4	5	6	7
13. Ahadi zinazotolewa na huyu mmiliki ni za kuaminika	1	2	3	4	5	6	7
14. Mmiliki huyu ni muwazi katika kufanya biashara na mimi	1	2	3	4	5	6	7
15. Ninanaamini taarifa ambazo huyu mmiliki hinipatia/huniambia	1	2	3	4	5	6	7
16. Ninaamini huyu mmiliki mara zote huzingatia maslahi yangu	1	2	3	4	5	6	7

**D: Tafadhali zungushia nambari inayowakilisha maoni yako kuhusu kauli zifuatazo**

	Sikubaliani kabisa				Nakubaliana kabisa		
7. Kama uhusiano wetu ukimalizika, nitapata ugumu wa kurudisha kipato ninachopata kutoka kwa huyu mmiliki	1	2	3	4	5	6	7
8. Ninamtegemea sana huyu mmiliki	1	2	3	4	5	6	7
9. Biashara hii ni mhimu sana katika mipango ya baadae ya familia yangu	1	2	3	4	5	6	7
10. Sina kazi nzuri ambayo ni mbadala wa hii	1	2	3	4	5	6	7
11. Mmiliki huyu ni mhimu sana kwa biashara yangu	1	2	3	4	5	6	7

**E Tafadhali zungushia nambari inayowakilisha maoni yako kuhusu kauli zifuatazo**

	Sikubaliani kabisa				Nakubaliana kabisa		
8. Mmiliki hunitembelea mara kwa mara katika eneo langu la kazi (maegesho)	1	2	3	4	5	6	7
9. Mmiliki hudai taarifa ya mategenezo ninayofanya mara kwa mara	1	2	3	4	5	6	7
10. Mmiliki hufuatilia mapato ninayoyapata mara kwa mara	1	2	3	4	5	6	7
11. Mmiliki hudai taarifa ya umbali niliyotembea mara kwa mara	1	2	3	4	5	6	7
12. Mmiliki hufuatilia shughuli zangu za kila siku	1	2	3	4	5	6	7
13. Mmiliki amemuajiri mtu mwingine kufuatilia shughuli zangu za kila siku	1	2	3	4	5	6	7
14. Mmiliki hupiga simu mara kwa mara kuhusu marejesho	1	2	3	4	5	6	7

<b>F: Tafadhali zungushia nambari inayowakilisha maoni yako kuhusu kauli zifuatazo</b>							
	Nakubaliana kabisa				Sikubaliani kabisa		
5. Kuna migogoro michache katika uhusiano wangu mimi na mmiliki	1	2	3	4	5	6	7
6. Mara chache sana sikubaliani na huyu mmiliki	1	2	3	4	5	6	7
7. Kutokuelewana kwangu na huyu mmiliki mara zote huwa si kwa ugomvi	1	2	3	4	5	6	7
8. Mimi na mmiliki mara chache sana juu ya mambo muhimu.	1	2	3	4	5	6	7

G: Tafadhali kamilisha kauli zifuatazo kwa kujaza nafasi tupu au kwa kuweka alama ya vema (✓) ambapo inafaa

6. Aina gani ya mkataba unao? (a)Kukodi\_\_\_\_\_ (b)Kumiliki\_\_\_\_\_

7. Eneo gani unafanyia biashara? (a)Ubungo \_\_\_\_\_ (b) Kinondoni\_\_\_\_\_

8. Taja jinsi yako: (a) Mke\_\_\_\_\_ (b) Mme\_\_\_\_\_

9. Weka vema (✓) sehemu sahihi ya umri wako

Chni ya 25\_\_\_\_\_ Kati ya 26-35\_\_\_\_\_ Zaidi ya 35\_\_\_\_\_

10. Mnatatua vipi migogoro inayotokea?

(b) Kisheria\_\_\_\_\_ (b) Mazungumzo/njia isiyo rasmi\_\_\_\_\_