

**IMPLICATIONS OF MARKET ACCESS FOR HOUSEHOLD LIVELIHOOD
SECURITY IN TANZANIA: A CASE OF BAGAMOYO DISTRICT**

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE
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ABSTRACT

Participation in markets is crucial for enhancing household incomes and the quality of their lives. Despite this fact, empirical information on the implications of market access and livelihood security is missing especially in Bagamoyo District. Therefore, the research was conducted in Bagamoyo District in December 2011 and January 2012, and the specific objectives were to: determine market access, identify goods and services accessed in markets, explore factors affecting market access, and determine the contribution of marketing of goods and services to households' livelihood security in the study area. The study population was all households living in the district. A sample size of 180 households was selected. Chi-square was used to find which factors were more associated with access to the market than other factors. It was found that availability of market information on prices of goods and services was the factor most associated with market access in the study area. The results from Chi-square test analysis indicated that there was significant association between information on prices of goods and services and access to the market places ($\chi^2 = 42.123$; $p < 0.0001$). The findings on the contributions of market access to household livelihood security was tested using multiple linear regression; the findings were that the coefficient of determination, R^2 was 0.344 which implies that the independent variables were able to explain about 34% of variation in the dependent variable; the other variation was due to natural errors in the model and other variables not entered in the model. Although markets are the engine of all production activities, very few market places exist. This hinders trading activities in the study area. So there is a need to make initiatives to increase access to the market.

DECLARATION

I, JOYCE MUGAMBI, do hereby declare to the Senate of Sokoine University of Agriculture that this dissertation is my original work and that it has neither been submitted nor being concurrently submitted for any degree award in any other institution.

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Date

The Above declaration is confirmed by

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(Supervisor)

Date

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LIST OF ABBREVIATIONS

AMSDP	Agricultural Marketing Systems Development Program
CARE	Cooperative for Assistance and Relief Everywhere
CVM	Community of Volunteers for the World in Partnership
DFID	Department for International Development
EAC	East African Community
EPA	Economic Partnership Agreements
ESA	East and Southern Africa
FAO	Food and Agricultural Organisation
FINCA	Foundation for International Community Assistance
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
IFAD	International Fund for Agricultural Development
NEPAD	The New Partnership for Africa's development
NSGRP	National Strategy for Growth and Reduction of Poverty
SACCOS	Savings and Credit Cooperative Societies
SADC	Southern African Development Community
SNAL	Sokoine National Agriculture Library
SPSS	Statistical Package for Social Sciences
SUCCESS	Sustainable Coastal Communities and Ecosystems
TCMP	Tanzania Coastal Management Partnership
URT	United Republic of Tanzania
VECO	Vredeseilanden Country Office
WTO	World Trade Organization

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background Information

A market is the interaction of demand and supply (buyers and sellers) of particular types of goods or services (Koenig *et al.*, 2008). More formally, a market is an institution or organization that manages the business of goods and services. This means that any relationship between buyers and sellers of a product within a certain period of time has been able to exchange goods and services even if the communication is done via communication devices like telephone, mobile phone or internet is a market (Chartier and Johnson, 2011).

Markets are where household livelihoods depend directly as either producers or workers buying their inputs or selling their products (Taylor, 2010), and where consumers spend their income from the sale of crops or from their non-agricultural activities, to buy their food requirements and other consumption goods (IFAD, 2003). The efficient functioning of markets is seen as the primary force underlining growth and development of the people's livelihood which are from farm and non-farm activities (Ireland *et al.*, 2004). Perhaps the most important point is that development of livelihoods critically depends upon, among other things, demand for the outputs (goods and services) supplied by those livelihoods (Doward *et al.*, 2002).

Livelihoods are diverse and made up of multiple activities to achieve a desired outcome. They are also determined by what assets (resources) are available at the

household level in terms of ownership and access. Depending on household assets, people undertake a diverse array of activities to earn their living. Poor access to markets for both farm and non-farm products poses a serious challenge to the improvement of household livelihood security, especially among the sub-Saharan African countries.

In Tanzania, agriculture provides 82% of households' livelihoods of the population (URT, 2009a), while the remaining 18% comes from non-agricultural produce. There is increasing recognition of the need to develop efficient, integrated and highly responsive markets because rural people in Tanzania, especially the poor, cannot improve their living without accessing markets (Heinemann, 2002). However, access to markets is a multi-faceted problem and a hurdle that smallholders have to overcome (URT, 2009a). Producers are commonly faced with poor infrastructure to reach markets, barriers in penetrating markets due to limited resources, lack of information, few support mechanisms and restrictive policies (URT, 2009b).

The period of 1990s was characterized by reforms in the public sector. The Government of the United Republic of Tanzania (Mainland) undertook the reforms in order to increase efficiency and the capacity of the public sector to deliver quality services. The reforms centered on the following areas: Civil Service Reforms, Local Government Reforms, Financial Sector Reform, Legal Sector Reform, Planning and Budgeting Reform, Parastatal Organizations Reform and Restructuring of the Regional Administration (URT, 2003b and 2007b).

Tanzania adopted economic reforms in the 1980s after experiencing a steady decline in economic growth in the late 1970s that led to a financial crisis in the early 1980s. These economic reforms were: National Economic Survival Programme (NESP) formulated in 1981 to address the economic crisis, Structural Adjustment Programme (SAP) formulated in 1982 and was designed to finance the fiscal deficit largely through domestic borrowing in the absence of external assistance and Economic Reform Programme (ERP) formulated in 1986, which was supported by multilateral institutions, including the World Bank, IMF, and bilateral donors (Muganda, 2004). Fifteen years of structural adjustment programs (SAPs) did not improve the quality of life for Tanzanian citizens (Weissman, 2005).

Moreover in 1999, the government formulated the Development Vision 2025 and in 2005 the National Strategy for Growth and Reduction of Poverty (NSGRP), while in 2003 it formulated Rural Development Policy (2003) and agricultural based programmes including Agricultural Sector Development Programme (ASDP), and District Agricultural Development Programmes (DADPs), primarily as means towards growth and reduction of poverty in order to improve the quality of lives and social well being of the people, enhance good governance and accountability (URT, 1999; 2000; 2003b; 2007b).

The above economic reforms have forced the withdrawal of the state from agricultural commodity markets, and livelihoods have become increasingly commercialized. Rural households are restructuring the ways they manage their economic activities and are transforming their social relations. Access to markets in

most parts of the country is becoming more difficult and, therefore, is becoming of central focus to the government and most of development practitioners in the developing world (VECO Tanzania, 2006).

The government has recognized the above challenges from market and taken some measures to support the development of rural livelihoods. These measures principally focus upon increasing productivity, market access, and the sustainable use of natural resources (URT, 2008). Apart from those efforts, Tanzania still has uncertain market participation, risky and conduct on unfavourable terms. The rewards, costs and risks of doing so are all contexts and vary for different producers and sellers of goods and services (IFAD, 2011).

Market participation is also a challenge in Bagamoyo as Kikula *et al.* (2003) asserts that road infrastructure is still poor, especially to and from villages which constrain marketing of farm produce and forest products. Marketing uncertainties discourage farmers, waste people's efforts and income, and intensify poverty. Also Masaiganah (2010) observes that lacking information on transport and markets, low-skilled personnel and low education standards hinder sustainable development to be reached among women in Bagamoyo District.

1.2 Problem Statement

It has been noted that, with access to market and not one but multiple markets, poor households will find a pathway out of poverty and generate more income, which contributes to their livelihood security (Taylor, 2010). Participation in markets is

crucial for enhancing household incomes and the quality of their lives. Despite this fact, empirical information on the implications of market access and livelihood security is missing, especially concerning Bagamoyo District. This research aimed at finding the linkage between the outcome of accessing to the market and livelihood security.

1.3 Justification of the Study

This study intended to establish the relationship between market access and households' livelihood security in Tanzania. The study is of particular significance as it provides a deeper understanding of the subject, based on empirical evidence. So far little theoretical information about market and livelihood security in Tanzania and elsewhere has been provided, with very little empirical evidence on the subject.

Most of the studies available, for example Masaiganah (2010); Amani (2006); Kikula *et al.* (2003) have focused on problems of market access for agricultural produce rather than its link to livelihood security. As the study looked at how market access contributes to the livelihood security, particularly on three components of food security, asset possession and social networks; it came up with proposed interventions on improvement of livelihood of the households. Moreover, in the studies cited above the researchers used different methods by looking into market problems in general, or linking markets with groups like farmers groups, smallholder farmers, and women, but not specifically into the households' livelihoods.

Also, this study is in line with millennium development goal number 8, which insists on development of a global partnership for development, where market access is one of the aspects in this goal. It is also in line with the Tanzania Development Vision 2025 which defines the course of the country's economic and social goals which include high quality livelihood. The study is also related to the National Strategy for Growth and Reduction of Poverty (NSGRP II) cluster II which focuses on quality of life and social well being.

The study findings led to recommendations to policy makers and planners on some of the consequences, which will be the starter for improving planning. Therefore, in this study the effort was made to link market access to households' livelihood security. The study was specifically focused on the possible outcomes of market access of goods and services at market places for households' livelihood security in Tanzania, particularly in Bagamoyo District.

1.4 Objectives

1.4.1 General objective

The main objective of this study was to examine the implications of market access for households' livelihood security in Tanzania, particularly in Bagamoyo District.

1.4.2 Specific objectives

- (i) To determine market access in the selected study areas.
- (ii) To identify goods and services accessed in market places in the study area.
- (iii) To explore factors affecting market access in the study areas.

- (iv) To determine the contribution of marketing of goods and services to households' livelihood security in the study area.

1.4.3 Research questions

- (i) How many market places exist in the study area?
- (ii) What are the goods and services offered in the markets in the study area?
- (iii) What are the factors affecting market access in the study area?
- (iv) What are the contributions of market activities in households' livelihood in the study areas?

1.5 Limitations Encountered

The issue of record keeping in households was rarely practised and more time was consumed in responding to the issue of household income per month, assets and meals costs. Tolerance and more time in interviewing the respondents helped to resolve the problem.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 General Information on Market Access and Livelihood Security

2.1.1 Information on market access

Before scrutinizing the concept of market access it is better to start with the issue of market. Arthur and Sheffrin (2003) define market as one of many varieties of systems, institutions, procedures, social relations and infrastructures whereby parties engage in exchange. Arthur and Sheffrin (2003) argue that parties may exchange goods and services by barter where most markets rely on sellers offering their goods or services (including labour) in exchange for money from buyers. It can be said that a market is the process by which the prices of goods and services are established. In this work, a market is defined as an actual place and not nominal where buyers and sellers interact directly or via intermediaries through exchange of goods and services by using money. The exchange rules differ depending on the character of the goods traded (example commodities, perishable products, investment goods or services).

Market access refers to the ability of providers of foreign goods and services to sell in a given country. For the purposes of market access negotiations in the World Trade Organization (WTO) context, tradable items are subdivided into four groups namely agricultural goods, textiles and clothing, industrial goods, and services. As different multilaterally agreed rules apply to each group, analytical and monitoring work usually follows the same pattern (Geithner and Nankani, 2002). Market access has traditionally been analyzed from a very narrow international trade perspective. In

the trade policy literature, market access is an umbrella term aimed at including analysis of a number of measures that a country may use to restrict imports. There is a long list of such measures, including tariffs on imported goods, and non-tariff barriers such as technical standards, anti dumping actions, import quotas and import licensing (World Trade Report, 2012).

Tariffs were cut on a selective product-by-product basis through requests and offers made between participants. However, subsequently contracting parties decided to use formulas to cut tariffs across-the-board .Many non-tariff measures are based on a legitimate goal (such as the protection of human health) and can be introduced in a WTO consistent manner (WTO, 2010). Market access is interpreted in the General Agreement on Tariffs and Trade (GATT) to reflect the competitive relationship between imported and domestic products. For example, when a government agrees to reduce its import tariff on a particular product, it alters the competitive relationship between imported and domestic units of the product in favour of imported units, and it thereby provides greater market access to foreign producers (Bagwell and Kraiger, 2001).

By agreeing to lower its tariff, the government is effectively agreeing to engineer an outward shift of its import demand curve that is, all else equal, a greater volume of imports will be demanded at any given price from foreign exporters and as a result, foreign exporters can expect to enjoy an increase in sales into the domestic market and to receive a higher price (Bagwell and Staiger, 2001). Moreover, market access is defined according to three dimensions which are the physical access to markets

(especially distances and costs), structure of the markets (asymmetry of relations between farmers, market intermediaries and consumers) and producers' skills, information and organization (understanding of the market, prices bargaining) (IFAD, 2003).

In this work, market access is defined as the ability of a household to reach actual market place by considering actual distance to the market place, time taken to the market, road type, transport and transportation facilities, market information of demand, supply and price of commodities, rules and regulations, and storage facilities used.

2.1.1.1 Global market access

Over the past half century, WTO and its predecessor GATT have gradually increased market access as a series of outcomes from the various 'Rounds' of trade negotiations. As a consequence of tough negotiations on market access during the Uruguay Round, most countries cut tariffs significantly, and adopted tariff bindings - levels above which tariffs may never rise for almost all imports (Geithner and Nankani, 2002).

Market access negotiations in the WTO encompass trade in goods and services. The market access negotiations, mandated at the time of establishment of the WTO and began in early 2000, cover only agriculture and services. Market access negotiations in goods essentially concern tariff reductions and the elimination or reduction in the incidence of certain non-tariff barriers to imports. Should this be

agreed, then such negotiations on industrial products will be carried out separately from those in agriculture, perhaps under a special committee, although many of the technicalities on market access are similar, as discussed below. While these negotiations will be separate, WTO Members are likely to be mindful of the need to obtain a cross-sectoral balance (Laird, 2001).

More recently, WTO members agreed at the 2001 Doha Ministerial conference that more aggressive negotiations should begin toward the goal of increasing market access in recognition that the main purpose of the original GATT was to ultimately eliminate tariffs on industrial goods. According to Geithner and Nankani (2002), the Doha Development Agenda envisages negotiations on market access in three areas mentioned below:

(a) Import tariffs and other price-based border measures

These are government policies usually targeted at restricting market access in a particular commodity and raising budget revenue. These measures include import duties, tariff quotas, and other border duties, levies, and charges (Sumner, (2003).

(b) Non tariff border measures

These are government policies that may restrict market access through non-price instruments. Such measures include quantitative restrictions (import quotas, direct prohibitions, domestic content requirements, licensing); contingency measures (antidumping, countervailing, and safeguard measures); technical barriers to trade (TBT) (regulations, standards, testing and certification procedures); sanitary and

phytosanitary measures (SPS) (food, animal and plant health and safety) (World Trade Report, 2012).

(c) Domestic policy measures

These are government policies, which may restrict market access if not applied uniformly to domestic and imported goods and services. These are tax, competition, credit, and investment policies; price controls; and fiscal incentives, in particular, trade-distorting export subsidies and domestic support (Sumner, 2003 and World Trade Report, 2012).

Globally, the interpretation of market access as applied in GATT is that when governments expand market access through GATT negotiation they do so as importers, not exporters. That is, in effect, each government agrees to undertake certain obligations (its tariff concessions) which shift out its import demand curve and thereby provides greater market access to foreign exporters in exchange for the market access benefits that its own exporters enjoy when foreign governments similarly undertake obligations which shift out their respective import demand curves. GATT's legal structure is designed to facilitate this kind of exchange among governments (Bagwell and Staiger, 2001).

2.1.1.2 Market access in Africa

The issue of market access is a crucial one for Africa. Ever since the WTO came into force, subsequently, with their increasingly dynamic role in that institution, African countries have placed this matter high on the agenda. The importance of market

access in development probably stands out more visibly in the case of Africa than in much of the rest of the world. This situation is explained by the restricted nature of Africa's markets and the need for the continent to rely on export markets in order to support growth and diversification efforts (Hammouda *et al.*, 2007).

Market access for industrial products is a key factor for African countries. Even though industrial tariffs have decreased sharply for several years, world markets continue to witness high tariffs for some of the sectors, which are sensitive for African countries because they are labour intensive sectors. At the same time, African countries are also adversely affected by high tariffs on industrial goods, which hamper their efforts to diversify their economies (Hammouda *et al.*, 2007).

Alongside the opening up of developed countries' markets, African countries yearn for more protection mechanisms to foster their development in the industrial sphere. Integrating Africa's economies into the globalizing international arena and achieving rapid economic growth will depend upon improved global market conditions for industrial commodities and more attention being given to Africa's concerns. The present study is aimed at assisting African countries to formulate concrete proposals in regard to market access for non-agricultural commodities (Hammouda *et al.*, 2007).

However, in terms of market access, for developing countries especially the LDCs market access has become a chicken and egg issue. On one hand developed countries make market access available to developing countries, especially LDCs, while on the

other hand these countries fail to have production capacities to export into these markets. Accordingly, we will endeavour to identify the most appropriate formulas for African countries those agreed to allow for greater liberalization of developed-country markets while offering ample opportunity for African countries to develop their industries and to diversify (Hammouda *et al.*, 2007).

The issue of market access for industrial commodities is a crucial one for African countries. The main issue relates to average tariffs applied on exports from these countries. The developed countries have reduced by half their tariffs on industrial exports from developed countries while the reduction for products from the developing countries has been only by one-third. Thus, the average weighted rate applied by the developed countries among themselves has been in the region of 3 per cent while that applied on imports from developing countries has been around 5 per cent. These data reveal a sharp decline in industrial tariffs over a period of several years (Sumner, 2003).

This decline has obviously been more marked in the developed countries than in African countries, some of which have continued to protect their industrial sector in an effort to address the productivity divide that separates them from the developed countries (Laird, 2001). It should also be noted, however, that the reduction of tariffs on industrial commodities has benefited developed countries more than developing countries. This escalation poses a major hurdle to diversification in the developing-country economies. In most cases, the brunt of these pressures is borne by wage levels to enable developing-country exporters to break even. Thus, despite the tariff

reductions applied on industrial commodities and preferential treatment extended to them, exports of African countries continue to face major obstacles in accessing developed-country markets. Imbalances in the tariff reductions, the tendency towards escalation, and tariff peaks, all weigh heavily on competitiveness of products from developing countries and so are at the very core of WTO negotiations (Laird, 2001).

A number of challenges face smallholder farmers in market participation. For most African smallholder farmers, markets are difficult to access (Makhura, 2001). Formal market access is difficult for smallholder farmers in rural areas because of a wide range of barriers and constraints. These include lack of assets (example tenure and collateral), market information, appropriate training, limited access to services necessary for crop production and high costs involved in production and marketing (Matungul, 2002 and Makhura, 2001).

Effective market participation is further challenged by a lack of innovative institutions to support farmers (Chema *et al.*, 2002). Most African countries have a poor infrastructure in rural areas and weak institutions, such as credit provision, to support smallholder agricultural development. Market access and transport costs are some obstacles that inhibit the growth of smallholder farmers in developing countries (Matungul, 2002).

Rich countries limit and control poor countries' share of the world market by charging high taxes on imported goods. As a result, many poor countries can only afford to export raw materials, which give far lower returns than finished products.

For example, the rich world buys cheap cotton and cocoa and turns them into expensive clothes and chocolate reaping all of the profit. At the same time, poor countries are threatened with having loans withheld unless they open their markets to rich countries' exports. Trade generates incredible wealth, and links the lives of everyone on the planet. However, millions of people in poor countries are losing out because the rules controlling trade heavily favour the rich nations that set the rules (VECO Tanzania, 2006).

2.1.1.3 Market access in Tanzania

As a member of the WTO, Tanzania has most favoured nation access to market and national treatment commitments scheduled by other WTO members. In the same way, all WTO members have access to Tanzania's own commitments on market access and national treatment scheduled in the tourism sector. In addition, under Article V of the GATT on Economic Integration Agreements, Tanzania would also have access to any regional arrangements that provide enhanced market access beyond what is available to other WTO members. The various integration processes undergoing under the East African Community (EAC) and Southern African Development Community (SADC) would fit under this provision. The EAC is still charting out its path on services integration within the region, while the SADC had its protocol on services (URT, 2006a).

Tanzania is also in the process of negotiating Economic Partnership Agreements (EPA) on services and other issues such as investments, competition, government procurement and others with the European Union through the EAC. The EPA is

supposed to be WTO compatible in order to meet the conditions of Article V of the GATT. Tanzania's participation in regional cooperation is aimed at reducing the trade imbalances with regional partners, achieving harmonization of economic policies, legislation, procedures, facilitating trade through smooth movement of goods and services, as well as promoting diversification of exports and becoming a competitive trading country. Trading through bilateral and regional groupings has several advantages such as proximity, cultural similarity and business environment, all of which substantially reduce operational costs (URT, 2006a).

The Economic Survey (2006) indicates that while Tanzania exports more goods and services to Kenya than in the past, it still has negative terms of trade with Kenya, SADC and the EAC as a whole. When disaggregated, the findings are that Tanzania is a net exporter to some individual countries like Uganda and Democratic Republic of Congo (DRC). Most small scale farmers in remote areas like the southern highlands of Tanzania cannot link to markets. Lack of information and lack of power at the negotiating table leave them open to exploitation by other participants in the market chain. Poor farmers in Tanzania's southern highlands participated in the First Mile Project, an initiative supported by the International Fund for Agricultural Development (IFAD) and the Government of Switzerland. It is implemented in collaboration with the Tanzanian Government's Agricultural Marketing Systems Development Programme (AMSDP), a seven year programme that will increase poor rural people's food security and incomes by improving the structure and performance of the country's crop marketing systems (Lightfoot *et al.*, 2008).

The First Mile Project developed an innovative way to tackle these challenges; it encouraged people in isolated rural communities to use new information and communication technologies (ICTs), including mobile phones, to obtain access to pertinent market information. It also used the Linking Local Learners (LLL) approach, which combines face-to-face action learning with use of an Internet based learning platform. This enabled farmers, traders, processors, and other stakeholders to learn how to build profitable marketing chains from producers to consumers (Lightfoot *et al.*, 2008).

Poor farmers in Tanzania face two main challenges when trying to develop access to markets and thus improve their livelihoods. First, they lack access to relevant information and knowledge and to communication technologies such as mobile phones, the Internet, and e-mail. Second, they need better access to other key people in the market chain, including processors, traders, and consumers. Without this information and knowledge, poor farmers are subject to market fluctuations and receive only low prices for their products. Farmers often respond to low prices by cheating, which further increases inefficiencies along the market chain (Lightfoot *et al.*, 2008).

In Tanzania, nearly all goods are distributed through wholesalers and retailers. Wholesalers import goods from the manufacturers or other wholesalers abroad in bulk, transport the goods to bonded warehouses, and later distribute them to retailers in the local market. Retailers purchase the goods, pay the required duties, and sell in small shops, usually specializing in one type of product. Some wholesalers, usually

operators of supermarket chains and shopping malls, run both wholesale and retail operations.

In the chain of distribution, imports come through ports of entry, are cleared and taken to bonded warehouses, unless customs duties are paid at the time of entry. Major sea ports include Dar es Salaam, Tanga, Mtwara and Zanzibar; major airports include Dar es Salaam International Airport, Kilimanjaro International Airport, and Zanzibar International Airport. In most cases, market forces determine the pricing technique to be adopted. The Tanzanian government has eliminated most price controls; however, the government regulates the price of gasoline, diesel fuel and kerosene through the Energy and Water Utilities Regulatory Authority (EWURA). The 18 percent value-added tax charged in Tanzania must be factored into the price (URT, 2006a).

Although Tanzania has undertaken market reforms in recent years, these reforms are not sufficient to generate greater supply response and competitiveness. Market liberalization may have removed price distortions, reduced marketing margins, and improved market integration, but the agricultural market in Tanzania remain underdeveloped, and most small scale farmers, especially those living away from roads and market places, have not benefited much from the reforms (Amani, 2005).

VECO contributes to family farmers' empowerment to improve their positions in the whole agricultural commodity chains, from production to consumption. In these chains, consumer demand and markets are driving forces. Enhancement of the active

participation of smallholder farmers in the market is therefore central to VECO Tanzania's realization and progress towards the desired economic impact at household level (VECO Tanzania, 2006).

2.1.1.4 Market access in Bagamoyo

Very few literatures touched the area of market in Bagamoyo district especially on off farm produce like tourism and some sort of farm produce. For example Kikula *et al.* (2003) reiterate that roads are very poor from most of the villages to the nearest city of Dar es salaam which hinders smallholder farmers from selling their farm produce.

2.1.2 Information on livelihood security

2.1.2.1 Livelihood, livelihood assets and livelihood security

A livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living: a livelihood is sustainable if it can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation: and which contributes net benefits to other livelihoods at the local and global levels in the long and short terms (Chambers and Conway, 1992).

A range of assets is required to achieve positive livelihood outcomes since no single category of assets can alone meet the varied needs of people. Those assets are both tangible and intangible assets that allow them to meet their needs. Those assets are as follows:

(a) Natural capital

This consists of natural resource stocks from which resource flows useful for livelihoods are derived (e.g. land, water, wildlife, biodiversity, and environmental resources) (CARE, 2002). Natural capital provides communities with the resources they require for their production activities on farm and off farm activities. These resources provide a foundation for formal and informal sector economy.

(b) Financial capital

Comprises cash and other liquid resources (e.g. savings, credit, remittances, pensions, etc) (CARE, (2002); Chambers and Conway, (1991). The households wishing to start a business, whether in the farming or non-farming sector they need access to credit. Without having amount of cash they will be limited to a small number of activities will yield poor returns and hence their livelihood security will be low.

(c) Physical capital

This includes basic infrastructure (e.g. transport, shelter, energy, communications and transportation, production equipment, and other material means) that enable people to maintain and enhance their relative level of wealth (CARE, 2002). Availability of physical infrastructure like roads enables households to travel to market places easily and reduce time taken to the market places, thus accelerates the trading process.

(d) Human capital

Human capital consists of the skills, knowledge, ability to labour and good health, which are important to the pursuit of livelihood strategies (CARE, 2002). For example, provision of training to households increases their ability to manage business activities as well as their income generating activities, hence contribute to increase productivity. It is considered that, the health status of household members has a significant bearing on their participation in income generating activities (Luoga, 2008).

(e) Social capital

This is the quantity and quality of social resources (example networks, membership in groups, social relations, and access to wider institutions in society) upon which people draw in pursuit of livelihoods. The quality of the networks is determined by the level of trust and shared norms that exist among network members. People use these networks to reduce risks, access services, protect themselves from deprivation, and to acquire information to lower transaction costs (CARE, 2002). This social component is extremely important to marketing activities. Group members often feel to improve social status due to their increased wealth and social interactions that group membership confer. There is evidence of the influence of social capital on accessibility of financial services and increasing a person status in the community (Wild *et al.*, 2007).

Livelihoods are made up of strategies which are in a range and combination of activities and choices that people undertake to achieve livelihood outcomes. These

are usually based on-farm and off-farm activities that together provide a variety of procurement strategies for food and cash which depends on what access there is to resources, control of resources and the institutional environment (Houston, 2002). The choices made are also influenced by income status, religion, political or social status. The range of activities differs from household to household and from one community to another. Thus, each household can have several possible sources of entitlement which constitute its livelihood. Entitlements include the rights, privileges and assets that a household has, and its position in the legal, political, and social fabric of society (CARE, 2002).

By livelihood we refer to people's means of living, including the activities they carry out to sustain themselves, the property or assets they hold, and the linkages between their livelihoods and institutional and physical environments. Importantly, livelihood does not just refer to how people gain cash income but the many ways, monetary and non-monetary, they make a living. It can also suggest people's particular lifestyles, their inheritance and their future aspirations (Mwaipopo *et al.*, 2004).

Livelihood security can be defined as the adequate and sustainable access to income and other resources to enable households to meet basic needs. This includes adequate access to food, potable water, health facilities, educational opportunities, housing, and time for community participation and social integration. Household livelihood security is defined as a family's or community's ability to maintain and improve its income, assets and social well-being from year to year and the relief to rehabilitation to development continuum (Frankenberger *et al.*, 2000). A household will be secure

if it will show positive changes in livelihood activities and its outcome in improving standard of living have to be sustainable.

2.1.2.2 Global livelihood security

The integration of livelihoods into an increasingly global economy where the destinies of people living continents apart are no longer separate is called development. New forms of social consciousness emerge from the effects of these globalized resource flows. Conflicts arise more and more over control of resource flows and the way in which these resources are conceived, managed, and sustained. These conflicts, in turn, pose challenges to existing ways of governing at different levels. (Hyden, 1997 and Summer, 2003).

The growing realization that individual livelihoods and the fate of local communities can no longer be viewed in isolation from national or international structures and processes has given rise to new forms of scholarship in which micro and macro considerations are being combined to provide fresh perspectives and insights on issues that previously were studied in isolation from each other. This means that in the same way that we are increasingly interdependent in pursuit of our livelihoods, we are as scholars more and more dependent on each others' theoretical and methodological contributions. Even though many are slow in recognizing it, interdisciplinarity is no longer something to be despised of or discarded (Hyden, 1997).

2.1.2.3 Livelihood security in Africa

The last two decades of the 20th century stand out as a period of momentous change for sub-Saharan African economies. Amidst high levels of material uncertainty and risk, rural populations have become more occupationally flexible, spatially mobile and increasingly dependent on non-agricultural income-generating activities. Households are often pursuing more than one, sometimes several, different non agricultural activities simultaneously or at different points throughout the year. Most of the activities are highly opportunistic in nature, involving quick responses to market demand and supply (Bryceson, 2000).

Countries in SSA vary considerably in terms of livelihood activities. By looking at characteristics of East and Southern Africa (ESA) (Ethiopia, Kenya, Malawi, Mozambique, Tanzania and Uganda), agricultural sectors of the ESA accounted for an estimated 41% of their GDPs. This region differs in some ways from overall average statistics for SSA. It represents countries that have relatively high dependence on agriculture in SSA. Eighty two percent of the population in the ESA region resides in the rural areas (URT, 2009c) and depend on agriculture for their livelihoods.

The contribution of agriculture to east and southern Africa is more than double the average contribution of agriculture in sub-Saharan Africa, and East Asia and Pacific regions, of which their agricultural sectors contribute only 18 and 16 percent respectively. Returns to traditional export commodities have been declining over the years due to a fall in world prices, and as a result, domestic production has declined.

Meanwhile, the High Value Agricultural Products (HAVPs) sub-sector is becoming an important source of income for rural dwellers (farm labourers, small-scale farmers, and traders) in the region. However, there is a need to overcome several new barriers for small-farmers to be integrated in the sub-sector and benefits from the emerging market (Wang *et al.*, 2012).

Nonetheless, people in the region continue to depend on agricultural production for their livelihoods, albeit by producing of agricultural raw materials, or intermediate products with limited value added. Limited added value in the agribusiness chain, in turn, results in low returns to the agricultural sector. This has serious implications for the development of the region, a concern that needs to be addressed. For example, it is clear that the contribution of agriculture to GDP in ESA has remained relatively high, more than double the average for SSA as a whole. The disquieting fact is that the GDP per capita is consistently lower in countries that are much more dependent on agriculture compared to those that are less dependent on it, for example, Ethiopia (51%: \$106), Uganda (49%: \$300), and Tanzania (46%: \$186) have lower GDP per-capita than Kenya (27%, \$342) (Temu and Temu , 2006).

Government intervention was least in domestic HVAPs markets. Traditional local traders managed the whole of domestic fruits, vegetables, fish and spices trade. Such market chains supplied all the produce in daily urban and weekly up-country food produce markets. Non-traditional crops are gaining even greater importance as sources of income, as positive contributors to better rural livelihoods and to the growth of the economy in the region. However, such progress is still slow and

patchy, and research and development is still not adequately geared towards the emerging HVAPs (Temu and Temu, 2006).

2.1.2.4 Livelihood security in Tanzania

Overall, the most prominent livelihood activities within the households were found to be food crop production (90%); livestock production (24%); petty trading (17%); growing non-food crops (14%); and agricultural labour (11%). This is reflected in the dispersion of livelihoods (URT, 2006b). Moreover, about 99% of rural households are involved in self-employed agriculture and around 61% are dependent on livestock for part of their livelihoods. Within the rural Tanzania, livestock contribute about 13% to total household income (Ciamarra *et al.*, 2011).

A more sustainable agriculture will lead to rural livelihood improvements where people can be better off, have more food, be better organized, have access to external services and power structures, and have more choices in their lives. These impacts make it worthwhile for Vredeseilanden (VECO mother organisation) to invest in processes heading towards sustainable agriculture. Vredeseilanden (VECO) wants to contribute to viable livelihoods of organized family farmers in the South and North of the country, choosing family farmers as the starting point in the implementation of its ambition. Income from sustainable agriculture is a key element in livelihood improvement. VECO contributes to family farmers' empowerment to improve their position in whole agricultural commodity chains (VECO Tanzania, 2006).

2.1.2.6 Livelihood security in Bagamoyo

The income generating activities pattern from households living around coastal areas vary between and within villages. In coastal villages of Bagamoyo, activities are divided into five major categories namely: agriculture activities (farming and livestock production), fishing, seaweed-farming, wage employment (wages and salaries from non-agricultural activities) and self-employment activities (for instance, various business, collection of shells, coir rope making, and stone collection) (Sesabo and Tol, 2005).

Households tend to increase their participation in agricultural activities when there are market constraints in other sectors such as fishing and seaweed-farming activities. The same variable is not significant in explaining the decision to participate as well as the level of income from fishing and seaweed-farming activities. It was observed that households residing in Mlingotini village are more likely to reduce their participation in fishing and seaweed activities. This implies that they fish less and have less income emanating from fishing and seaweed-farming.

The reason for this phenomenon was that Mlingotini Village lacks good feeder roads which connect Bagamoyo and Dar-es-Salaam main road, despite being only a few kilometers from this main road. This forces the fishermen to internally sell their fish. A part from that fishmongers/traders of Mlingotini Village have no access to Marine protected areas. This means fishermen in Mlingotini Village usually compete for the same fishing grounds over the years. This increases the risk of overexploitation with adverse consequences of dwindling fish resources (Sesabo and Tol, 2005).

The multiplicative interaction between agriculture and fishing dummy variables was also included to measure separate impact of fishing activity and agricultural activity. The results suggest that households participating in both fishing and agricultural activities are more likely to increase their participation in agriculture compared with their counterparts participating in other combination of economic activities (example agricultural and seaweed-farming) (Sesabo and Tol, 2005).

Some programmes like, the Tanzania Coastal Management Partnership (TCMP) and its Sustainable Coastal Communities and Ecosystems (SUCCESS) Programme, with funding from USAID, have worked in Bagamoyo District since 2000 (Elin *et al.*, 2007). The Tanzania Coastal Management Partnership (TCMP), which is now the Sustainable Coastal Communities and Ecosystems Tanzania (SUCCESS) Programme, began working with FINCA in Bagamoyo in 2004. The thought was to help villagers advance environmentally friendly livelihoods, such as seaweed farming and tour guiding, by providing them with micro-loans. After some initial negotiations with FINCA, two micro-credit groups were established, the Batren tour guide group and the Msichoke seaweed farming group (Elin *et al.*, 2007).

The main conclusion is that the FINCA micro lending programme is not suitable for the livelihood activities promoted by the TCMP and SUCCESS (e.g. seaweed farming and tour guiding). Due to the high interest rates and frequent pay-back instalments, the villagers involved chose to use the loans for small petty businesses instead of natural-resource based enterprises. However, no beneficiary had stopped any of their original resource-dependent livelihoods, such as fishing or farming, to

expand their FINCA enterprises. Instead they add the FINCA enterprise to their current mix of livelihood activities as a diversification strategy (Elin *et al.*, 2007).

2.2 Positive and Negative Linkages between Market Access and Livelihood Security

There is a connection between Market access and livelihood security since adequate and sustainable access to income is the main issue in livelihood security and income can only be obtained through different production activities. These production activities can be both from farm and off farm. The farm and off-farm products have to be sold or bought in order to get income, and here access to the market becomes the engine of the production activities.

2.3 Theoretical Information on Linkages between Market Access and Livelihood Security

The relationship between livelihoods and access to market services is best explained by the theory of sustainable livelihood framework by Carney (1999) and DFID (2001). The livelihoods approach is concerned first and foremost with people from whom the households are made. It seeks to gain an accurate and realistic understanding of people's strengths (assets or capital endowments) and how they endeavour to convert these into positive livelihood outcomes. The approach is founded on a belief that people require a range of livelihood assets to achieve positive livelihood outcomes through several livelihood strategies in which marketing activities and other strategies like production and income activities are of great concern. All these strategies need to have a better access to the market.

2.4 Empirical Literature

Most studies on market access reiterate that there are problems linked to price risk and uncertainty, difficulties of contract enforcement, insufficient numbers of middlemen, cost of putting small dispersed quantities of produce together, inability to meet standards (Dorward *et al.*, 1998; Freeman and Silim, 2001; Kherallah and Kirsten, 2002; IFAD, 2003; IFAD, 2009). Lack of access to markets has also resulted to high input costs, high transaction costs, and low price of output. The linkage between producers and market actors is also weak, thereby raising risks in production and marketing. The latter is largely exacerbated by the limited bargaining power that smallholder pig producers have (Lucila and Lapar, 2006).

Good communication is vital in marketing whereby the use of new information and communication technologies (ICTs), including the mobile phones are spreading rapidly throughout Tanzania, as well as email and the Internet to share local experience and learn from one another (Lightfoot *et al.*, 2008). Minot (2006) saw that in Tanzania rural poverty is associated with remoteness and difficult markets of their agricultural goods. He said that although poverty is somewhat higher in more remote rural areas, no evidence that remote areas are being “left behind” in the sense of gaining less from economic growth than other areas.

Moreover, Charles (2008) observes that markets can only stimulate wealth creation among small holders if the costs of market participation are minimized. Ngonyani (2008) saw access to the market information sources increase farm level productivity and hence eradicate poverty. Also Ashimogo (1995), when studying grain storage

and marketing in Tanzania, saw that a relatively good degree of market integration within Sumbawanga district had some positive implications for food security and possibilities for increases in income security. Ashimogo (1995), on the other hand, studied market integration of the maize market in Sumbawanga district concluding that rural markets are rather well integrated with the town market in Sumbawanga, but the degree of integration depends on the accessibility and distance from the central market, and high transfer costs drive the profits down.

Furthermore, Ashimogo (1995) argues that due to frictions in the market, the fluctuation of the supply between the harvest seasons is not balanced by trade flows from other regions, which leads to wide variation in prices as well as food insecurity as farmers are unable to store their own production. On the whole, there seems to be evidence in favour of the overall benefits of formal market liberalisation in Tanzania, but also a growing literature of case studies demonstrating the prevailing impediments to trade.

2.5 Paucity in Literature

From the above evidence, the researcher found that most of the related previous studies had concentrated on agricultural production and its problems in marketing. Very few studies had concentrated on problems facing market access and others had looked at marketing problems between different groups of people including women and smallholder farmers. However, all these studies did not pinpoint the implications of market access on households' livelihoods. Therefore, there was a need to study the implications of market access to household livelihood security and see to what

extent the marketing activities could improve livelihood security of the people of Bagamoyo District.

2.6 Conceptual framework

For the conceptual framework of this study it is assumed that household livelihood security, which is the dependent variable, is affected by market access of goods and services from both farm and non-farm activities, which are independent variables. For households to have access to the market they have to access the physical infrastructure, market information, market regulations and transaction costs which may sometimes influence or hinder household access to the market. Both availability and utilization of physical, financial, human, natural and social assets influence households' livelihood strategies which are strongly influenced by households' access to the market for their produce. Access to the market may cause changes of households' living standards and make them achieve food security, increase their asset possession, increase their income and have strong social networks.

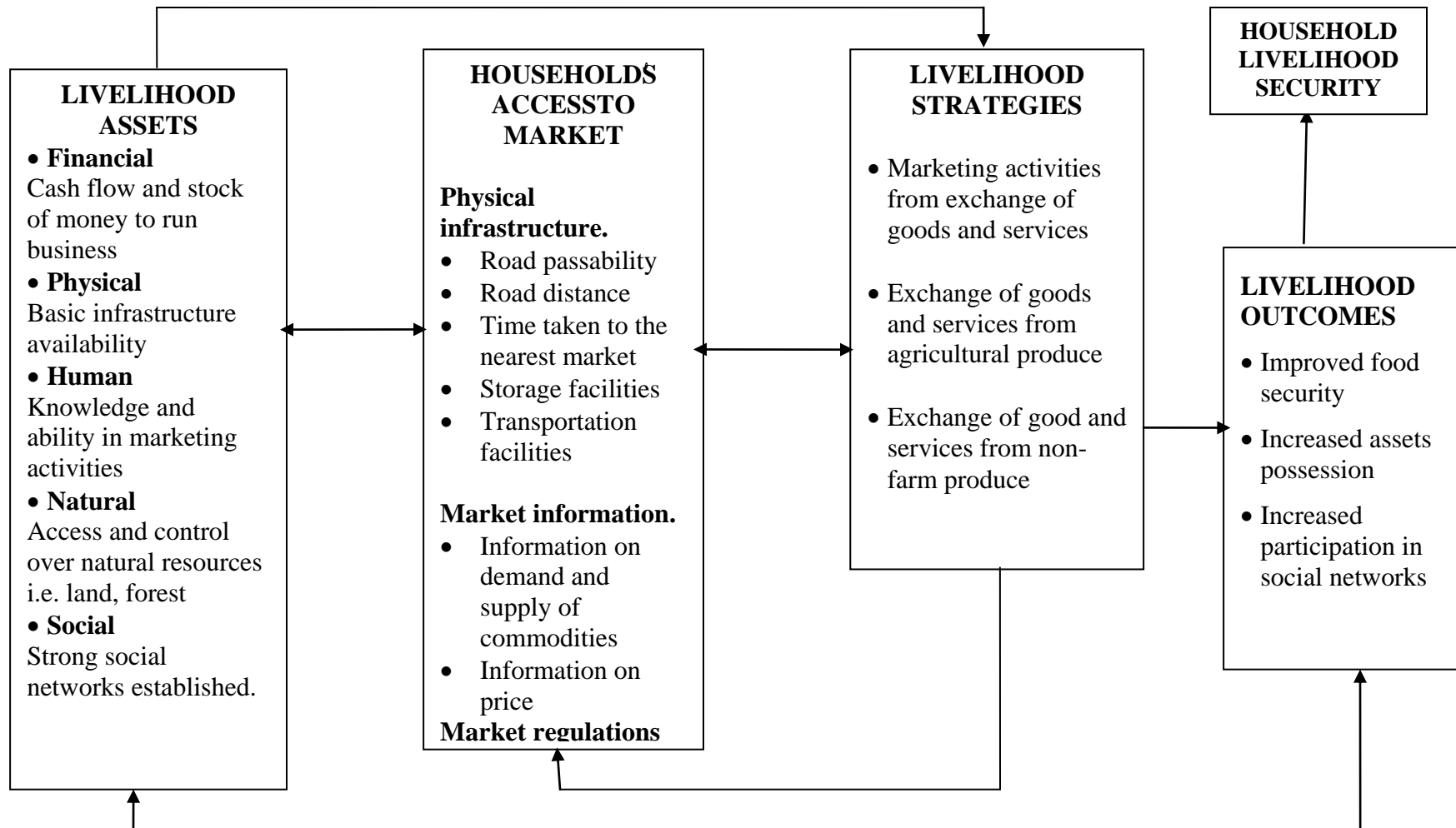


Figure 1: Conceptual framework for the research, adapted from DFID (2001)

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Description of the Study Area

The study was conducted in Bagamoyo District, which is one of the six districts of the Coast Region. The district borders with Morogoro District to the West; Mvomero, Kilindi, and Handeni Districts to the North; Pangani District to the North-East; the Indian Ocean to the East; Kinondoni District to the South - East and Kibaha District to the South. The District has an area of 9 847 square kilometres with a population of 228 967, it has 7 administrative divisions, 22 wards and 97 villages (URT, 2003a).

This study was conducted in 6 villages, selected from 2 wards of Bwilingu and Lugoba. Those villages were Bwilingu, Chahua, Chalinzemzee, Lunga, Saleni and Kinzagu. The main inhabitants of Bagamoyo District are the Kwere, the Doe and the Zigua with few people of other ethnic groups including the Maasai, the Chaga, the Pare and Makonde who have immigrated into the area for the purposes of pastures or trade. Their main livelihood activities were small scale farming, small scale trade, livestock keeping and fishing.

Bagamoyo District was selected for the study for the reason that it is still highly vulnerable to income and other services as URT (2007a) and URT (2009b) have reported. Apart from that, no similar study had been carried out in the district.

3.2 Research Design and Sampling

In this study a cross sectional research design was employed where by data were collected at one point in time. The variables in this study were examined once, and the relationship between and among them were determined (Bryman, 2004). This method also was preferred because it is useful in resource constraints and time limitation (Bailey, 1998).

3.3 Population of the Study and the Sample Size

The targeted population for this study was all households living in Bagamoyo District. The unit of analysis was the household. The sample size was 180 households, which is large enough for meaningful statistical analysis (Bailey, 1998). The sample is presented in Table 1.

Table 1: Distribution of respondents (n=180) involved in the study

Ward	Village	Respondents		Total
		Male	Female	
Bwilingu	Bwilingu	17	13	30
	Chalinzemzee	19	11	30
	Chahua	23	07	30
Lugoba	Lunga	27	03	30
	Saleni	21	09	30
	Kinzagu	12	18	30

3.4 Sampling Procedures

A simple random sampling procedure was employed to select the households in the study area. Two out of seven divisions in the district were randomly selected; then one ward from each division was selected randomly. In each selected ward, 3 villages were randomly selected making a total of 6 villages. The simple random

sampling procedure was also used to select 30 households from each village, which made a total of 180 households.

3.5 Pre-Survey

A pre survey was conducted in Bwilingu Village so as to pre test the questionnaire for the main study and to be familiar with the area of study. Twenty households were visited and necessary modification was done to the questionnaire to check the relevance of the questions and so that the required information for the study could be obtained. Necessary changes were included in the questionnaire before the actual study.

3.6 Data Collection Methods

3.6.1 Primary data

The primary data were gathered by using a structured questionnaire formulated of both closed and open-ended questions and administered through physical visits to respondents' localities. In using the questionnaire, the emphasis was placed on the collection of information related to market access and livelihood of the households by looking at how access to market influences livelihood security of the people in the study area. The questionnaire was divided into five important sections. The first section was designed to demand background information from the respondents including household size, household income generating activities including farm and non-farm production activities. The second section of the questionnaire dealt with the market, goods and services accessed in the study area.

The following section was designed to find out the factors effecting market access in the study area by looking at the physical infrastructure, transportation facilities, storage equipments, market information and rules and regulations available. The last section was aimed at assessing the effects of market access on household livelihood security by looking at asset ownership and their monetary values in Tanzanian shillings, number of meals per day and its cost and household's engagement in formal and informal groups.

Qualitative method was also employed whereby key informant interviews were held using a checklist guide. Key informants were ward executive officers from the two selected wards, village executive officers from the six selected villages and two market chairmen from two market places existing in the study area. The total number of the key informants was ten and knowledgeable people in marketing and livelihoods.

3.6.2 Secondary data

Secondary data were obtained from different reports on trade and markets within the department of agriculture, livestock and cooperatives in Bagamoyo District and Sokoine National Agriculture Library (SNAL).

3.7 Data Analysis

Quantitative data from structured interviews were analyzed by using the Statistical Package for Social Sciences (SPSS). Descriptive statistics such as frequencies, percentages, means and Chi-square were calculated by using this statistical package.

Qualitative data from the key informants were subjected to content analysis. These were for the results meeting the first, the second and the third objectives.

For objective number four, multiple linear regression was employed to find out the extent to which the independent variables affected the dependent variable, which was household livelihood security, and this was considered as a function of market access i.e. $HLS = f(\text{market access}) + \text{scalar}$ called an error term. The model is expressed mathematically as

$$Y_i = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \beta_3 X_{i3} + \dots + \beta_k X_{ik} + u_i$$

Where Y_i = Households livelihood security

β_0 = The constant term.

X_1 = Road passability

X_2 = Road distance

X_3 = Storage facilities

X_4 = Time taken to the market

X_5 = Transportation facilities

X_6 = Information on demand and supply of commodities

X_7 = Information on price

X_8 = Market regulations

X_9 = Transaction costs

U_i = is a scalar called the error term

CHAPTER FOUR

4.0 RESULTS AND DISCUSSION

4.1 Socio-Demographic Characteristics of the Respondents

4.1.1 Age

The findings in Table 2 show that the majority of the household heads (66.1%) were between the age of 36 and 60 years, while 32.8% were youths of 18 to 35 years, and the remaining 1.1% were above 60 years. The mean age of the respondents, which was 40.9 years and the fact that 98.9% of the household heads were between the age of 18 and 60 years old show that almost all the household heads were economically active. This middle age group is mostly responsible for economic activities as argued by Rutasitara (2002) that in Tanzania the economically productive class ranges between the ages of 15 to 64 years.

Table 2: Distribution of the respondents by age (n = 180)

Age of the respondent	Frequency	Percentage
18 – 35	59	32.8
36– 60	119	66.1
Above 60	2	1.1

4.1.2 Marital status

The findings in Table 3 show that the majority of the household heads (72.5 %) were married, followed by single household heads (10.5 %), widowed household heads (5.0 %), divorced household heads (7.8 %), and separated household heads (3.9 %).

Marriage in Coastal areas of Tanzania in areas like Bagamoyo is experienced at early ages. The results show that about 73% of the household heads were married and the

mean age was 40.9. This result is supported by IRIN (2006), that early marriage is experienced especially among women in coastal areas of Tanzania, Bagamoyo District inclusive.

Table 3: Marital status of the respondents (n = 180)

Status	Frequency	Percent
Single	19	10.6
Married	131	72.8
Widowed	9	5.0
Divorced	14	7.8
Separated	7	3.9

4.1.3 Education level

The findings in Table 4 indicate that more than 72.8 % of the respondents had primary education. This implies that the majority of the respondents involved in market activities can read and write, and hence they can put records of purchasing and selling prices and evaluate their business products. About one-eighth (12.2 %) of them had completed secondary school, while 5.6% had secondary and further education. This means that there were relatively very few secondary and college graduates in the selected sample, but worse enough there were 3.3% of household heads who had not attended school. These circumstances might be due to remoteness of some of the study villages and too few secondary schools in the area.

Table 4: Education level of the respondents (n = 180)

Level of education	Frequency	Percent
No education	7	3.9
Primary	131	72.8
Secondary	22	12.2
Post secondary	10	5.6
Adult education	10	5.6

4.1.4 Household size

The household compositions considered in this study were the residential groups whose members lived together in close contact by sharing resources such as accommodation, farmland and foodstuffs. The results in Table 5 show that more than a half of the respondents (51.1%) had a family between 2 and 5 members. Households with family sizes below 2 were 2.2 %, while those with families consisting of 6 to 9 members were 43.9 %. Also, it was found that families with members more than 10 were 2.8 %.

Table 5: Household size of the respondents (n = 180)

Size	Frequency	Percent
Below 2	4	2.2
2 to 5	92	51.1
6 to 9	79	43.9
Above 10	5	2.8

4.1.5 Household main sources of income and income gained

During the study, the respondents were asked to indicate the major income generating activities of their families and the income gained from those activities; the results indicated that the largest proportion of the households (43.9%) depended on farming as their main source of income; small scale business followed being done by 36.7% of the households, then salaried household heads were 15%, while livestock keeping households were 3.3%, and lastly fishing was being done by 1.1 % of the households as shown in Table 6. The findings are in line with those by URT (2006b), which found that small scale business occurs much more frequently in Morogoro and Coast regions (approximately 30% of households) whereby Bagamoyo District is within Coast region.

Table 6: Main source of income of the respondents (n = 180)

Source of income	Frequency	Percent
Salary	27	15.0
Farming	79	43.9
Small scale business	66	36.7
Fishing	2	1.1
Livestock keeping	6	3.3

Moreover, a lot of activities were done by households as part of off farm income earning activities like hair salon, selling of local brew, transportation by motorcycle (*bodaboda*), butcher, selling vegetables, selling cooked food, poultry keeping, animal husbandry, mason works, carpentry, selling charcoal, selling plaiting mats, matching guys, grocery and salaried jobs. Also agricultural produce like maize, sorghum, cassava, sesame seed and cow pea were produced and some were sold. The

result in Table 7 depicts the income gained from the above mentioned activities. However, about two-fifths of the households (41.1%) did not participate in agriculture.

Table 7: Income gained from off farm activities and agricultural produce

Income gained from economic activities	Off-farm		Agriculture	
	n	%	n	%
0 – 100 000	41	22.7	67	37.2
100 001 – 500 000	110	61.1	41	22.7
500 001 – 1 000 000	28	15.5	0	0
>1 000 000	01	0.5	0	0

4.1.6 Land size owned

It was noted that the majority of the households (55%) owned 1 to 5 acres, followed by those who owned 5 to 10 acres (22.2%). Few of them (9.4%) owned 10 and above acres; 8.9% owned below one acre; and 4.4% owned no land, as shown in Table 8. However, it was noted that most of land owned in the study area was not being used effectively; a notable number of the respondents (37.3%) used less or equal to 1 acre. This result implies that the majority of the households surveyed were engaged in subsistence farming rather than large scale farming.

Table 8: Land size owned by the Respondents (n = 180)

Land size	Frequency	Percent
Landless	8	4.4
Below 1 acre	16	8.9
1 to 5 acres	99	55.0
5 to 10 acres	40	22.2
10 and above	17	9.4

4.2 Market Access in the Selected Study Areas

4.2.1 Number of markets in the study area

The results in Table 9 reveal that 60.0% of the respondents said that there was no market place in their villages while 40.0 % were in the villages with the market places. This is comparable with information by URT (2006b) that almost 65% of the communities interviewed in 25 regions of Tanzania said that there was no market place in their villages.

Table 9: Number of market places in the study area (n = 180)

Number of markets	Frequency	Percent
None	120	66.7
One	60	33.3
Two	0	0.0
Total	180	100.0

This result reveals that 120 households got market services from neighbouring villages since there was no market place in their villages.

4.2.2 Distance from respondents' residences to the nearest market places

The findings of the study in Table 10 show that 64.5% of the respondents lived from 0 to 2 kilometres from the market places, the place which can be reached even on foot. Sixty-four (35.6 %) of the respondents lived from 2 to 10 kilometres from the nearest market places, and this made it difficult for them to reach the places, without the use of transportation facilities. The results by URT (2006b) support the findings that 65% of villages in Tanzania have the average distance around 10 kilometres to the nearest market place.

Table 10: Distance from home to the nearest market place (n = 180)

Distance to the market place in kilometres	Frequency	Percent
0 – 0.5	48	26.7
0.5 – 2	68	37.8
2 – 10	37	20.6
> 10	27	15.0

4.2.3 The average time taken to the nearest market place

The results show that half (50%) of the households used 0 to 30 minutes to reach market places; 38.3% used 30 minutes to 2 hours to reach the market places; and the rest 11.7% used 2 to 5 hours to reach the market places as shown in Table 11.

Table 11: The average time taken to the nearest market (n = 180)

Time taken in hours	Frequency	Percent
0 – 0.5	90	50.0
0.5 – 2	69	38.3
2 – 5	21	11.7
Total	180	100.0

4.2.4 Means of transport to and from market places

The results in Table 12 show that more than a half of the respondents which is 57.8% used foot to go to the market places as their main transport and transportation facilities; 35 which is 19.4% used bicycles; 29 which is 16.1% used vehicles; and 16.7% used motorcycles to go to the market places.

Table 12: Means of transport to and from market places (n = 180)

Means of transport/ transportation	Frequency	Percent
Vehicles	29	16.1
Motorcycles	12	6.7
Bicycles	35	19.4
by foot	104	57.8
Total	180	100.0

4.2.5 Accessibility of market places in the study area

Most of the respondents said that market places in their villages were easily accessible by 71%, while 29 % said were not easily accessible. Table 13 asserts the reasons of easiness and difficult access to the market places.

Table 13: Accessibility to the market places of households (n = 180)

Accessibility of market place		Frequency	Percent
Easy access	Yes	128	71.1
	No	52	28.9
Total		180	100.0
Yes easily	Yes have own transport	27	15
	It is too near	44	24.4
	I use foot to go to the market	34	18.9
	I use public transport	23	12.8
Not easily	No feel tired	11	6.1
	Don't have transport	12	6.7
	Use money for fare	16	8.8
	It is some how far.	13	7.2
Total		180	100

4.3 Goods and services accessed in markets in the study area

In Tables 14, 15 and 16 the goods and services accessed in the market places are presented as per respondent opinions. Those goods and services were grouped into

the following three categories: the agricultural goods in Table 13, off-farm goods in Table 14, and services obtained at the market places in Table 15.

4.3.1 Agricultural goods accessed in the market

For agricultural goods the most accessed product was maize at 93.3% while the least accessed was finger millet by 20%. Also varieties of fish, meat, legumes and vegetables were accessible. Also these observations are supported by the argument put forward during key informant interview, where one respondent, who was an adult woman reported:

“Truly the problem is that how to access cash is very difficult, but goods at the market places are so many; if you need grains, vegetables, fruits, legumes and all types of fish are accessible.”

Table 14: Agricultural goods accessed at the market place by households (n = 180)

Agricultural goods	Yes		No	
	Frequency	Percent	Frequency	Percent
Maize	168	93.3	12	6.7
Sorghum	69	38.3	111	61.7
Finger millet	36	20.0	144	80.0
Rice	147	81.7	33	18.3
Paddy	90	50.0	90	50.0
Groundnuts	105	58.3	75	41.7
Beans	147	81.7	33	18.3
Coconuts	111	61.7	69	38.3
Cowpea	45	25.0	135	75.0
Bulrush millet	81	45.0	99	55.0
Onions	171	95.0	9	5.0
Tomatoes	171	95.0	9	5.0
Sardines	147	81.7	33	18.3
Irish potatoes	108	60.0	72	40.0
Vegetable	129	71.7	51	28.3
Oranges	97	53.9	81	45.0
Mangoes	96	53.3	84	46.7
Pineapples	108	60.0	72	40.0
Spices	102	56.7	78	43.4
Cassava	111	61.7	69	38.3
Sweet potatoes	105	58.3	75	41.7
Honey	81	45.0	99	55.0
Fish	120	66.7	60	33.3
Cooking oil	168	93.3	12	6.7

4.3.2 Non-agricultural goods accessed at the market place

The off-farm goods included were seen to be of most importance in all respondents and the leading was salt, which was 100% accessed by the respondents followed by sugar which was accessed by 96.1%. Also, other commodities like metal works, plaiting works and brooms were also of significant importance.

Table 15: Off farm produce at the market place (n = 180)

Off farm produce	Yes		No	
	Frequency	Percent	Frequency	Percent
Salt	180	100.0	0	0
Sugar	173	96.1	03	3.9
Ceramic equipments	87	48.3	93	51.7
Metal works equipment	102	56.7	78	43.3
Plaiting equipment	126	70.0	54	30.0
Soda (<i>magadi</i>)	129	71.7	51	28.3
Brooms	120	66.7	60	33.3
Plaiting carpets (<i>mikeka</i>)	93	51.7	87	48.3
Yeast	93	51.7	85	47.2

4.3.3 Services accessed at market place

Not only goods, but also services were important in enhancing livelihoods. The leading service was butchery by 96.7%, followed by saloon 76.7%, and then transportation by motorcycles (*bodaboda*) by 73.3%. This implies that services help in accessing other goods by taking an example of (*bodaboda*) which facilitates transportation of goods and people too.

Table 16: Services Accessed at the market places

Services available	Yes		No	
	Frequency	Percent	Frequency	Percent
Saloon	138	76.7	42	23.3
Butcher	174	96.7	6	3.3
Tailoring	105	58.3	75	41.7
Carpentry	99	55.0	81	45.0
petrol station	87	48.3	93	51.7
Transportation(<i>bodaboda</i>)	132	73.3	48	26.7
Selling cooked food	108	60.0	72	40.0
clothes and shoes shop	99	56.7	78	43.3
Matching guys	87	48.3	93	51.7

4.4 Factors Affecting Market Access in the Study Areas

4.4.1 Types of road and road passability

4.4.1.1 Types of road from / to the market places

Roads are an integral part of the transport system. A country's road network should be efficient in order to maximize economic and social benefits. They play a significant role in achieving national development and contributing to the overall performance and social functioning of the community. It is acknowledged that roads enhance mobility, taking people out of isolation and therefore help to reduce poverty. The roads in the study area were of tarmac, but others were of fine gravel while others were of moram. The biggest proportion of the households (43.3%) had roads with morum, and 36.7% had tarmac roads, while 20% had roads with fine gravel as seen in Table 17.

Table 17: Road types from home to the nearest market (n= 180)

Type of road	Frequency	Percent
Tarmac	66	36.7
Fine gravels	36	20.0
Moram	78	43.3

The findings revealed that there was no statistically significant association ($p > 0.05$) between road type from the homes of the respondents and the accessibility of the market places. The Chi-square value was 2.532 and the p-value of 0.282, which imply that type of the road to the market place does not hinder the household members to reach market places.

4.4.1.2 Road passability

All the 180 respondents said that the roads from their home towards the nearest market was passable but in most cases in not all the year. The results in the figure 2 reveal that 35% of the respondent's road from their homes to the nearest market places was not passable all the year, while 65% respondents said that the roads from their homes to the nearest market places were passable all the year.

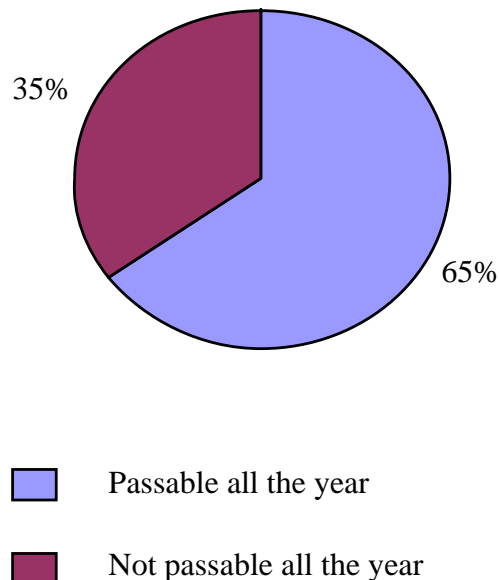


Figure 2: Road passability in the year (n=180)

4.4.2 Means of transport used

Transportation on roads can be roughly grouped into two categories: transportation of goods and transportation of people. The nature of road transportation of goods and people depends much on the degree of development of the local infrastructure. The results in Table 18 show that one-third (33.3%) of the households went on foot to the

market places as their main transport and transportation means; 10% used bicycles; 28.3% used vehicles; 25% used motorcycles; and 3.3% used wheelbarrows.

The results from Chi-square test analysis indicated that there was statistically significant association ($p < 0.05$) between transportation facilities and access to the market places with a Chi-square value of 13.8 and a p-value of 0.03. This implies that the use of transportation facilities increases access to market places within households. That means the household members were able to participate more in marketing activities at the market places regardless of their physical distances so long as they used proper means of transport and transportation.

Table 18: Means of transportation of people, goods and services (n = 180)

Means of transport	Frequency	Percent
By vehicle	51	28.3
By motorcycle	45	25.0
By bicycle	18	10.0
By foot	60	33.3
Wheelbarrow	6	3.3
Total	180	100.0

4.4.3 Storage equipments used

Storage facilities are basically buildings and equipments used in storing goods. These buildings and equipments are generally used by households involved in businesses. These businesses include exporting, importing, manufacturing, wholesaling, transporting, and many other industries that require both large and small storage facilities.

The results in Table 19 reveal that all the respondents used storage equipments either at home or at the market places. About two-fifths (36.7%) of the households had storage problems, 63.3% of the households did not have storage problems. Also, baskets and bags which covered 63% to 68% of storage facilities were the most storage facilities used by the respondents at both places either at home or at the market places. This is supported by URT (2006b) which reports that approximately 20-30% of communities in Rukwa, Mara and Kagera also mentioned storage facilities as a problem.

Table 19: Storage places, facilities used at home and at the market (n = 180)

Households storage facilities		Frequency	Percent
Problems in storage	Yes	66	36.7
	No	114	63.3
	Total	180	100.0
Storage places	Own rooms	135	75.0
	Hired rooms	36	20.0
	Others	9	5.0
	Total	180	100.0
Storage at home	Fridge	18	10
	Baskets and bags	123	68.3
	Tins and buckets	39	21.7
	Total	180	100.0
Storage at market place	Fridge	39	21.7
	Baskets and bags	114	63.3
	Tins and buckets	27	15.0
	Total	180	100.0

The findings revealed that there was no statistically significant association ($p > 0.05$) between facilities used by the respondents and their access to the market places. The Chi-square value was 7.146 and the p-value was 0.128. These values reveal that

storage facilities did not matter in enhancing the household members to reach the market places.

4.4.4 Market information

4.4.4.1 Information on demand and supply of goods and services at market places

The respondents were asked where they got market information on demand and supply of commodities. The results in Table 20 show that about three-fifths (57%) of the respondents got the information from their fellow traders and neighbours, followed by 31.7% who got information when purchasing at the market places. Less than one-tenth (6.7%) got such information from newspapers; 3.3% got it from radios; and 1.7% got it through telephones.

Table 20: Information on demand and supply of goods and services (n = 180)

How do they get information	Frequency	Percent
Newspapers	12	6.7
Radio	6	3.3
Telephone	3	1.7
When purchasing at market place	57	31.7
Fellow traders and neighbours	102	56.7
Total	180	100.0

The results from Chi-square test analysis indicated that there was statistically significant association ($p < 0.05$) between market information of demand and supply of commodities and access to market places with a Chi-square value of 12.846 and a

p-value of 0.012. These values imply that if the information on demand and supply of goods is known then it increases access to the market place within the households. That means the household members were able to participate more in marketing activities at the market places provided that they knew what was demanded within the market.

4.4.4.2 Information on prices of goods and services at a market place

The respondents were asked where they had the market information on prices of goods and services. The results in Table 21 show that about 57% of the respondents got the information from their fellow traders and neighbours, followed by 36.7% who got information by visiting the market places, 1.7% got information from newspapers and 5.0% got it from radio.

Table 21: Information on prices of goods and services (n = 180)

How do they get information	Frequency	Percent
News papers	3	1.7
Radio	9	5.0
Visit market places	66	36.7
Fellow traders and neighbours	102	56.7
Total	180	100.0

The results from Chi-square test analysis indicated that there was statistically significant ($p < 0.01$) positive association between the information on prices of goods and services and access to the market places with a Chi-square value of 42.123 and a p-value of 0.0001. These values imply that if the prices of goods and services are known, this will increase the access to the market place within the

households to sell or to purchase different commodities. That means the household members were able to participate fully in marketing activities at the market places provided that they knew how much would be spent or earned from marketing activities.

4.4.5 Rules and regulations at market places

These are guidelines on how to run daily activities at the market place. The results in Table 22 show that 90% of respondents have been exercised with those rules and regulations. Also 15% of the respondents were hindered their enthusiasm to marketing activities while 55% were facilitated their enthusiasm to trade from these rules and regulations.

Table 22: Rules and regulations found at market place (n = 180)

Rules and regulation at market	Frequency	Percent
Rules and regulations encountered	162	90.0
No Rules and regulations encountered	18	10.0
Taxation on commodities	108	60.0
No Taxation on commodities	72	40.0
Use of middlemen	6	3.3
No use of middlemen	174	96.7
Time for entry and exit	135	0.0
No time for entry and exit	45	25.0
Contributions for cleaning and security guarding	36	20.0
No contributions	144	80.0

The results from Chi-square test analysis indicated that there was statistically significant ($p < 0.01$) positive association between rules and regulations at the

market and access to the market places with a Chi-square value of 28.858 and a p-value of 0.0001. This implies that the fairer the rule and regulations the more people will access the market place. That means the household members were able to participate fully in marketing activities at the market places from fairness of rules and regulations.

4.4.6 Transaction costs

Transaction costs also include the costs resulting from imperfect information, supervision and incentive costs. Smallholder farmers are often located in remote areas; far away from service providers and major consumers of farm products incur high transaction cost (Mthembu, 2008 and Makhura, 2001). The results in Table 23 signify that 93.3% of the respondents incur transaction cost of their participation to marketing activities. Those costs are mobile phones costs, middlemen costs, hiring storage facilities and transportation of goods. The majority of the respondents 68.3% ranked these costs as reasonable as Table 24 assert.

Table 23: Transaction costs (n = 180)

Transaction cost encountered	Frequency	Percent
Transaction cost	168	93.3
No transaction cost	12	6.7
Mobile phones	102	56.7
No mobile phones costs	78	43.3
Middlemen cost	21	11.7
No middlemen cost	159	88.3
Hiring storage facilities	45	25.0
No hiring storage facilities costs	135	75.0
Transportation of goods	141	78.3
No transportation of goods costs	39	21.7

Table 24: Ranking Transaction Costs (n = 180)

Cost rank	Frequency	Percent
High	9	5.0
Low	48	26.7
Reasonable	123	68.3
Total	180	100.0

The results from Chi-square test analysis indicated that there is statistically significant ($p < 0.05$) positive association between transaction costs and access to the market places with a Chi-square value of 10.889 and a p-value of 0.010. This implies that low or reasonable costs will lead to the increase of the access to the market place within the households. That means the household members were able to participate fully in marketing activities at the market places because they were capable of meeting the expenses.

4.5 Effects of Market Access on Households' Livelihood Security

In this research households' livelihood security were measured by taking into consideration three issues, which were values of assets possession within a household, food security by looking at the number of meals and their costs, and number of household members who were engaged in formal and informal groups.

4.5.1 Assets possession within households

Household assets are the components of the household physical capital and can be used to measure livelihood improvement and its sustainability. Therefore, estimating the value of household assets is fundamental in assessing livelihood improvement of respondents and hence livelihood security. The respondents were asked to give the

estimate values of household assets they owned. Among other assets mentioned were houses, transport facilities, news media means, furniture, kitchen facilities and land. About 70.6 percent of households owned houses of different values, however among the houses found 11.1%, 23.8%, 8.8%, 13.8% and 12.7% were of mud walls, mud floor and thatched with grass; mud walls, cement floor and corrugated iron roofing; burnt bricks, cemented floor and corrugated iron roofing; burnt bricks, mud floor and corrugated iron roofing; cement bricks, cement floor and corrugated iron roofing respectively.

The results in Table 25 show that more than a half (55%) owns assets whose values were from 5 to 10 million Tanzanian shillings, while 8.3% owns assets whose values were above 10 million Tanzania shilling and 8.9% owned assets whose values were lower than 5 million Tanzanian shillings. Chianu *et al.* (2006) reported on the same issue that most of households in Kilosa, Njombe and Mvomero owned similar assets as those mentioned by the respondents interviewed in this research in Bagamoyo District.

**Table 25: Distribution of respondents according to the value of assets owned
(n = 180)**

Category of asset value owned by household	Respondents	
	n	%
<=500 000	16	8.9
500 001–2 000 000	19	10.5
2 000 001 – 5 000 000	21	11.7
5 000 001 – 10 000 000	99	55
10 000 001 – 20 000 000	15	8.3
>20 000 000	10	5.6

4.5.2 Food security

Food security is an important factor to be considered when we talk of livelihood security; without food no livelihood and people may die. Food security has three pillars (or components) which are food availability, food accessibility and food utilization. The respondents were asked questions about food utilization including the number of meals they took per day and estimates of costs of meals per day. The results in Table 26 show that 97.2% of the households took 3 meals per day which is contrary to URT (2009c) report that 42.8% in rural areas and 51.1% in Tanzania Mainland take 3 meals per day.

However, meals eaten per day is a rough proxy indicator of food security, unlike dietary energy consumed (DEC), and using the method of meals eaten per day to determine food security tends to over-estimate food security because the quantity of food eaten per day is not considered. For example, Kayunze *et al.* (In Press) used it to determine food security in Rufiji District and found that food insecurity was 17.1%, but based on DEC per adult equivalent they found that food insecurity was 71.2%.

Table 26: Number of meals per households (n = 180)

Number of meals	Frequency	Percent
0	0	0
1	0	0
2	5	2.8
3	175	97.2
Total	180	100.0

Also Table 27 gives costs of meals eaten. These costs range from Tshs 1 000 to Tshs 10 000. The costs depended largely on the household size. Also, the majority of households (80.6%) used 1 000 to 3 000 Tshs per each meal. Also these observations are supported by the argument put forward during key informant interview where one of the respondents said and complained that,

“Prices of food products nowadays are becoming highly expensive; even if you have a small family size without having three to five thousand Tanzanian shillings you will not be able to eat”

Table 27: Costs of meals in Tanzanian shillings in each household (n = 180)

Categories of meals cost	Breakfast		Lunch		Dinner	
	frequency	%	frequency	%	frequency	%
0 – 1 000	15	8.3	6	3.3	2	1.1
1 001–3 000	153	85	114	63.4	145	80.6
3 001–5 000	12	6.7	52	28.9	33	18.3
5 001–10 000	0	0	8	4.4	0	0
Total	180	100	180	100	180	100.0

4.5.3 Engagement in formal and informal groups

4.5.3.1 Formal and informal groups

The formal and informal groups are very important in determining social capital within the household level. The results in Table 28 show that about 52% of the respondents had the membership in either formal or informal or both groups. The groups were VICOBA, SACCOSS, CVM, money chains groups, ethnic groups and entrepreneur groups. This percent is very low compared to its importance in markets and livelihood in general. Results by Mchomvu *et al.* (2002) support that membership in formal and informal groups are low in Tanzania.

Table 28: Formal and Informal groups

Group engaged	Frequency	Percent
Membership	93	51.7
No Membership	87	48.3
SACCOS member	21	11.7
Not SACCOS member	159	88.3
VICOBA	36	20.0
Not SACCOS member	144	80.0
CVM	9	5.0
Not CVM member	171	95.0
Money chains groups member	21	11.7
Not Money chains groups member	159	88.3
Tribe groups member	24	13.3
Not Tribe groups member	156	86.7
Entrepreneurship groups member	15	8.3
Not entrepreneurship groups member	165	91.7

4.5.3.2 Reasons for not joining formal and informal groups

The respondents were asked why most of community members were not members of any group; the reasons they gave are given in Table 29. Some households said that there were no such groups near their residence; others said they always observed not only structural and organizational weaknesses but also a lot of financial quarrels. But worse enough 15.0% dislike joining groups. Also these observations are supported by the argument put forward during key informant interview, where one respondent complained that:

“There is too much bureaucracy in the issues concerning money, so it is better not to join any group and remain with poverty.”

Table 29: Reasons for not joining with formal and informal groups

Reasons		Frequency	Percent
No such groups near our residence	Yes	9	5.0
	No	171	95.0
Too busy with production activities	Yes	18	10.0
	No	162	90.0
No benefits	Yes	18	10.0
	No	162	90.0
Structural and organizational weaknesses	Yes	9	
	No	171	95.0
A lot of financial quarrels	Yes	3	1.7
	No	177	98.3
I dislike	Yes	27	15.0
	No	153	85.0

4.5.4 Livelihood security and market access

The respondents were asked what they thought of their livelihood security status, the results in the Table 30 show that more than two-thirds (67.2%) of the respondents said that their livelihood security had improved while 32.8% said that they had not improved. Also, the respondents were asked about their improvement of livelihood if it was associated with market access, and the results show that about two-thirds (65.0%) of the respondents said that their livelihood improvement was due to accessing market. Moreover, 65.0% benefited from market access, 37% respondents gained income from business activities, 23.3% got remittances from formal or informal groups they had joined, and 15% got exposure from those group members.

Table 30: Livelihood security and market access

Livelihood security and market access	Frequency	Percent
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Improvement in household livelihood	Yes	121	67.2
	No	59	32.8
Livelihood improvement associated with access to the market	Yes	117	65.0
	No	63	35.0

4.5.5 Regression model to explain effect of market access on household livelihood security

As explained in Section 3.7, the dependent variable was livelihood security in terms of monetary value of assets owned in the households where the respondent belonged. The results of regression analysis are presented in Table 31.

Table 31: Regression analysis

Model	Unstandardized Coefficients			Sig.
	B	Std. Error	t	
(Constant)	0.351	0.273	3.034	0.030*
Distance to the nearest market	-0.155	0.060	-2.581	0.011*
The average time taken to the market	0.245	0.075	3.268	0.001***
Transport facilities	0.050	0.045	-1.102	0.272
Type of road (passability)	0.033	0.045	0.742	0.459
Rules and regulation at market	0.337	0.155	2.172	0.031*
Transaction costs	0.351	0.105	3.331	0.001***
Storage facilities	-0.009	0.075	-0.121	0.904
Market information	0.118	0.047	2.489	0.014*

Y ($R^2 = 0.344$)

Dependent Variable: Household livelihood security $p = 0.000$, $df = 17$, $F = 5.086$

* = Statistically significant at the 5% level of significance

*** = Statistically significant at the 0.01 level of significance

The coefficient of determination R^2 was 0.344, which implies that independent variables were able to explain about 34% of variation in the dependent variable. That means only 34% of the variation in the dependent variable was explained by the variables in the equation. The rest 66% was explained by the variables not in the equation and inherent errors in the model. This is a relatively small power for an equation to explain variation. However, it is evident that some of the independent variables had some influence on the household livelihood security.

These independent variables which had some influence on the household livelihood security were distance from home to the nearest market ($p = 0.011$), the average time taken to the market ($p = 0.001$), rules and regulations at market ($p = 0.03$), market information ($p = 0.014$) and transaction costs ($p = 0.001$). The said independent variables had statistically significant impact at ($P < 0.05$) on livelihood security as Table 31 asserts. Other variables such as means of transport to the market, type of roads from home to the nearest market and storage facilities had no statistically significant impact.

CHAPTER FIVE

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Based on the empirical findings from the study, some major conclusions are drawn with regard to the objectives of the study which were to determine market access, identify goods and services accessed at the market places, explore factors affecting market access, and determine the contribution of marketing to livelihood outcomes which imply household's livelihood security. The results showed that within the six villages of the study there were only two market places which were not planned and well structured. This had a tremendous effect on trading activities and lower livelihood security.

A lot of agricultural goods were available at the market place which comprised grains, legumes, vegetables and varieties of fish. Also, off-farm produce like salt, ceramic equipment and metal works equipments were accessible. Butcher and transportation (*bodaboda*) was the leading service available at the market places. Although the markets were not conducted in a well structured manner, these are places where the daily consumption of all types/ classes of households depends for.

Turning to the factors affecting market access in the study area, eight elements were considered namely distance to the nearest market, the average time taken to the market place, transport facilities used, type of road (passability), rules and regulations at market place, transaction costs, storage facilities and market information.

Market information on prices of goods and services had the highest positive effects on accessibility of households to the market place, followed by market information on supply and demand of commodities. Though market information is the important factor affecting market access at the household level the formal means of accessing the market information were rarely used instead of being the most important factor which affect the market access in the study area, and this hinders the degree of accessing to the market and reduce trading activities.

The findings showed that access to the market of goods and services brought positive changes in the livelihood security of households. This was confirmed by households interviewed; 67.2% accepted that their livelihood security had improved and about two-thirds (65.0 %) confirmed that participation to the market activities through trading benefited them from the income earned which raised their livelihood security. This was confirmed by the fact that 100 percent of households owned assets but the asset types and values differed among households and almost all the respondents took 3 meals per day. Only the rate of engagement with formal and informal groups was very low. From these findings, it is concluded that market access enhances better livelihoods of households.

5.2 Recommendations

In order to reach the maximum level of livelihood security by enhancing production and exchange of goods and services for maximum income earning, the following recommendations are made.

5.2.1 Policy level recommendations

- (i) Market places are very few compared to the number of households in the study area. Therefore the Ministry of Trade and Marketing is advised to look into the possibilities of making an integrated plan of building market places with the Ministry of Agriculture, Food and Cooperatives, not only in Bagamoyo District but also in the whole country.

- (ii) Since the market information was the main factor which determined marketing activities at the household level, the Ministry of Trade and Marketing is advised to look for better ways to release the market information on the price of commodities; even if the market forces determine the prices but it is possible to be known in advance.

- (iii) Taking into consideration that, there are very few households whose members had joined the formal and informal groups, and one of the goals from policies of the Ministry of Community Development, Gender and Children is to create more groups through its programme, planners are urged to make more efforts on provision of groups formation education through mass media, and come up with programmes for group formation and its advantages at the household level.

5.2.2 Local government level recommendations

- a) The study recommends that Bagamoyo District council should conduct training sessions on importance of being a member of groups, either formal or informal.

People should be told the advantage and challenges of being group members and its impacts on their livelihoods. They can take those who benefited from groups as a catalyst for change to those who have not yet joined groups.

- b) The District, through its Department of Agriculture, is advised to make sure those scarce resources, like land are fully utilized by households, especially by growing crops which can give better yields to farmers. It should make use of its extension officers in advising the households when to cultivate, use of better seeds and pesticides because about three-thirds of the interviewed households did not participate in agriculture though they owned plots of land.
- c) Through its department of trade, Bagamoyo District is urged to advise the full council to include in the district development plans building a number of market places within the district in order to reduce the distance from households' residences to the nearest market places.

5.2.3 Household level recommendations

- a) The people of Bagamoyo District should be educated that being in groups is a source of various entrepreneurship knowledge and skills. It will ease the process of getting remittances and loans from various financial institutions. Therefore, they should be urged to join formal and informal groups available in their home places.

- b) Charcoal selling and local brew, especially brewing using grains, were among the non-farm sources of income. The people of Bagamoyo should take into consideration that cutting down trees is environment destruction which may lead to a danger of remaining with a desert, while using grains in making local brew will lead to a danger of lacking food which may lead to food insecurity. A household which practices this habit should stop in order to avoid further consequences.

5.2.4 Recommendations for further research

- (a) After provision of groups' formations education among households, an evaluative study should be conducted in Bagamoyo District to compare the level of households' livelihood security before joining the groups and after joining the groups. This will help to see whether there will be an improvement in livelihood security between the two categories of households.

- (b) Since the study concluded that the existence of land occupied by households is not fully utilized for agriculture or any other production activities, there is a need to find out how land is occupied among and within households in Bagamoyo District and why this land is not fully utilized for production purposes in order to maximize agricultural goods at market places.

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APPENDICES

Appendix 1: Operational definitions of key variables

Variables	Operational definition
Independent variable	
Physical infrastructure	
1.Road distance	The average distance from respondent residence to the market place
2. Road passability	Ability of the road to pass any vehicle, trucks and buses only or carts for all period of the year.
3.Transportation facilities	Amenities that are used in transportation of goods and people.
4.Storage facilities	Accessibility to numbers of storage facilities at residence and market place.
Market information availability	
6. Information on demand and supply of commodities	Availability of market information ,if it before reaching the market place ,at market place or others which will allow decision on quantity of goods and services to supply
7. Availability of price information	Accessibility to price of goods and services
8.Market regulations	Mode which guide market conduct
9.Transaction cost	The cost of participating in a market including information by cell phones, transportation of goods ,middlemen and storage costs
Dependent variable	
Households livelihood security	A household will be secured if will have ability to sustain its life through maintaining and improve its income which is seen through assets possession, food security and involvement in formal and informal groups.

**Appendix 2: Household questionnaires for the implications of market
access for households livelihood security**

A. General Information

Ward _____ Village _____ Questionnaire No _____

Date of Interview _____ Name of Respondent _____

B. Household Characteristics

B1. Age of the respondent

B2. Sex 1. Male ()
2. Female

B3. Household head

1. Male
2. Female ()
3. Child headed

B4. Marital Status

1. Single
2. Married
3. Widowed ()
4. Divorced
5. Separated

B5. Education level

1. No education
2. Primary
3. Secondary ()
4. Post secondary
5. Adult education

B6. Household size ()

1. Below 2 2. 2-5
3. 6-9 4. Above 10

C. INCOME GENERATING ACTIVITIES IN THE HOUSEHOLD

C1 .What are the major source of income for your family

1. Salary
- 2.Farming
- 3.Small scale business ()
- 4.Fishing
5. Livestock keeping
- 6.Others specify

C2.If your activity is farming, what is the size of land you own?

1. Landless
2. Below 1 acre
3. 1 – 5 acres ()
4. 5 – 10 acres
5. 10 and above

C3.What types of crops did you cultivate in last cropping season (fill the table below).

Give a conversion of the unit used in metric systems (e.g. 1 bag of maize = 100 kgs).

Crop	Size cultivated	Output (Unit used)	Amount of crops sold	Price per Unit	Amount of crops consumed	Amount of crops stored
Total						

D: Market access in the study area

D1. How many market place exist in your village? ()

1. None 2. One 3. Two 4. More than two.

D2. If none where do you get market services? ()

1. From neighbouring village market places 2. From town centre
3. From weekly market 4. Any where I reach the goods and services.

D3. How far is it from your home to the nearest market place? ()

1. 0-0.5 kms 2. 0.5 -2kms 3. 2 - 10 kms 4. Above 10 kms.

D4. What is the average time taken from your home to the nearest market place? ()

1. 0 to ½ an hour 2. ½ to 2 hrs. 3. 2 – 5 hours 4. Above 5 hrs.

D5. Which means of transport do you commonly used to travel to the market place?()

1. By vehicle (buses)
2. By motorcycles
3. By bicycle
4. By foot
5. Others

D6. Are you able to get to the market easily? 1. Yes 2. No ()

D7. Explain how.....

E. To identify goods and services available in market places in the study area

E1. Have you ever been engaged in marketing activities as a buyer of goods and services? ()

1. Yes
2. No

E2. Have you ever been engaged in marketing activities as a seller of goods and services? ()

1. Yes
2. No

E3. Have you ever been engaged in marketing activities as both a buyer and a seller of goods and services? 1. Yes ()

2. No

E4.If you are a buyer or seller which agricultural products are you accessing in the market?

No	Type of products available	Put a tick if available (√)	No	Type of products available	Put a tick if available (√)
1	Maize		13	Sardines	
2	Sorghum		14	Irish potatoes	
3	Finger millet(ulezi)		15	Vegetables	
4	Rice		16	Oranges	
5	Groundnuts		17	Mangoes	
6	Beans		18	Pineapples	
7	Coconuts		19	Spices	
8	Cow pea(kunde)		20	Cassava	
9	Bullrush millet(uwele)		21	Sweet potatoes	
10	Onions		22	Honey	
11	Tomatoes		23	Fish	
12			24	Cooking oil	

E5. What are the non farms produces accessible in the market?

No	Type of products available	Put a tick if available ()
1.	Salt	
2.	Sugar	
3.	Ceramics equipments	
4.	Metal works equipments	
5.	Plaiting equipments	
6.	Soda(magadi)	
7.	Sweeping brooms	

E6. What types of services are you accessing at the market? Put a tick if the service is available

No	Type of service available	Put a tick if available ()
1.	Saloon	
2	Butcher	
3	Tailoring	
4	Carpentry	
5	Petrol station	
6	Transport and transportation facilities	
7	Selling cooked food(mama ntilie)	
8	Others, list below if any.	

F. Factors affecting market access.

Physical infrastructure

F1. What type of road do you use from your home to the nearest market?

1. Tarmac road
2. Fine gravels road ()
3. Mud road
4. None of the above

F2. Is the road towards the market passable? ()

1. Yes
2. No

F3. If yes, is the road towards the market passable all the year? ()

1. Yes
2. No

F4. If no, in which season is the road towards the market not passable? ()

1. During dry season
2. During winter season
3. During dry and winter season.
4. During rain season

F5. How did you transport your goods to/from the market? ()

1. By vehicle 2. By motorcycles 3. By foot 4. By bicycle 5. Others

F6. Do you experience any problems in storing your agricultural products?

1. Yes

2. No ()

F7. If yes where do you store the products? ()

(1) Own rooms

(2) Hired rooms

3) Others (Specify)

F8. Did you use any storage equipments?

1. Yes ()

2. No

F9. If yes what type of storage equipments are you using at your home?

1. Fridge

2. Baskets and bags ()

3. Tins and buckets

4. Others (specify)

F10. What types of storage equipments are you using at market place?

1. Fridge

2. Baskets and bags

3. Tins and buckets ()

4. Others (specify)

F11. Where did you get information on the demand and supply of goods?

1. News papers

2. Radio

- 3. Telephone
- 4. Visit market places ()
- 5. Fellow traders/ neighbours
- 6. Others (specify)

F12. Where did you get information on the prices of goods and services you produced?

- 1. News papers
- 2. Radio
- 3. Telephone
- 4. Visit market places ()
- 5. Fellow traders/ neighbours
- 6. Others (specify)

F13. Have you encountered any rules or regulations in the market as a seller/buyer of goods and services?

- (1) Yes
- (2) No ()

F14. If yes mention them

- 1.....
- 2.....
- 3.....

F15. Do these regulations hinder your enthusiasm on engaging with marketing activities?

- 1. Yes
- 2. No

F16. If yes, how do they hinder enthusiasm ?

- 1.....
- 2.....
- 3.....

F17. Do these regulations facilitate your enthusiasm on engaging with marketing activities?

- 1. Yes
- 2. No

F18. If Yes, how do they facilitate hindrances?

- 1.....
- 2.....
- 3.....

F19. Are you encountering any costs in enhancing your participation in marketing?

- 1. Yes
- 2. No

F20. If yes mention those costs

- 1.....
- 2.....
- 3.....

F21. How do you rank these costs?

- 1. Low
- 2. High
- 3. Reasonable

G.THE EFFECTS OF MARKET ACCESS ON HOUSEHOLD'S LIVELIHOOD SECURITY IN THE STUDY AREA

G1. How many meals do you take per day in your household?.....

G2. How much do you spend for each type of meal per day? (typical day)

- 1. Breakfast.....
- 2. Lunch.....
- 3. Dinner

G3. Are you or your household members ever engaged in groups whether formal or informal in enhancing marketing activities?

- 1. Yes
- 2. No

G4.If Yes which formal /informal groups? Mention them.

- 1.....
- 2.....
- 3.....

G5. If No why?

- 1.....
- 2.....
- 3.....

G6.Are all needs satisfied by the income earned from marketing activities?

- 1. Yes ()
- 2.No

G7.If the answer is no how do you supplement the income deficit?

.....

.....

G8. Please indicate assets you own in the table below:

Type of asset	Number/unit	Price/value per unit	Total (Tshs)
Vehicle (type)			
Bicycle			
Tailoring machine			
Radio			
Spongy mattress			
Hoe			
Ox-plough			
House (type)			
Hurricane lamp			
Charcoal stove			
Kerosene stove			
Torch			
Panga			
Axe			
Ox-cart			
Sofa seat			
Chair			
Table			
Others (specify)			
TOTAL COST			

G9. Do you think your household livelihood is improving?

- 1. Yes
- 2. No ()

G10. If yes, would you say the improvement is associated with access to the market?

- 1. Yes
- 2. No ()

G11. If yes, Explain how

G12. If No, what are the major constraints facing your household livelihood

- 1.
- 2.

G13. On which issues or areas do you feel you need assistance in marketing activities?

- 1.....
- 2.....

G14. In your opinion, which areas in marketing structure and regulations do you think require improvement?

- 1.....
- 2.....

THANK YOU VERY MUCH FOR YOUR COOPERATION

Appendix 3: Interview for the key informants (Checklist)

G1. Location: WardVillage Position

G2. Age

G3. Sex

G4. Level of education

G5. Agricultural and nonfarm goods and services supplied in the markets.

G6. Rules and regulations for participating in marketing activities.

G7. Accessibility to the market, hindrances and ways to overcome them.

G8. Do you think those rules and regulations hinder or promote people's participation in the market?

(a) Yes

(b) No

How.....

G9. Where is the most customers of this market come from?

G10. How do you view the extent of government interventions on solving problems in market access?

G11. In general, how do you comment on the extent to which market activities have influence in household's livelihood security?

THANK YOU VERY MUCH FOR YOUR COOPERATION