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# Rural Non-Farm Activities and Poverty Alleviation in Tanzania

A Case Study of Two Villages in Chamwino and Bahi Districts of Dodoma Region

I. B. Katega and C. S. Lifuliro



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By I. B. Katega and C. S. Lifuliro

Research Report 14/7



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# List of Abbreviations

<b>BDG</b>	Business Development Gateway
<b>CAP</b>	Coop Africa Programme
<b>DFID</b>	Department For International Development (UK)
<b>FAO</b>	Food and Agriculture Organization (of the United Nations)
<b>ILO</b>	International Labour Organization
<b>NBS</b>	National Bureau of Statistics
<b>NGO</b>	Non-governmental organization
<b>NMB</b>	National Microfinance Bank
<b>PRIDE</b>	Promotion of Rural Initiative and Development Enterprises Limited
<b>RAWG</b>	Research and Analysis Group (within Ministry of Finance)
<b>SEDA</b>	Small Enterprises Development Agency
<b>SIDO</b>	Small Industries Development Organization
<b>SMEs</b>	Small and medium sized enterprises
<b>SPSS</b>	Statistical Package for Social Sciences
<b>Tshs</b>	Tanzanian Shillings
<b>URT</b>	United Republic of Tanzania



## Abstract

The study assessed the role of rural non-farm activities on poverty alleviation in Tanzania. Specifically, it examined the factors affecting the performance of rural non-farm activities, the mechanisms through which rural non-farm and farm activities are interlinked, and the ways through which rural non-farm activities contribute to poverty alleviation. A cross-sectional field survey was administered to 341 households in two villages in Dodoma Region, and interviews were conducted with key local informants. The main findings of the study were as follows: (i) the principal factors affecting the performance of non-farm activities included inadequate capital, lack of business education, poor business premises, inefficient transport to and from markets, and women's household gender roles; (ii) rural farm and non-farm activities are interlinked because in most households farm activities provided the capital for starting and running non-farm activities, and non-farm activities provided the income to purchase farm inputs; and (iii) rural non-farm activities contributed a significant share of total income in participating households and enabled these households to purchase food and consumer goods, pay for medicine and health care, pay for the education of children, as well as invest in farm inputs to enhance the productivity of agricultural activities such as crop farming and livestock keeping. The study concludes that rural non-farm activities play an important role in alleviating both income and non-income poverty. Therefore, efforts should be made to promote this sector so as to realize its full potential in rural development in Tanzania.



# Introduction and Background

In most African countries, agriculture remains the main employer of the majority of the labour force. However, in Sub-Saharan Africa, rural households that rely solely on agriculture for their livelihoods are very few (Ellis, 2007; Reardon et al., 2006). Bryceson (2002) observed that between 60 and 80 per cent of rural household income in Sub-Saharan Africa is derived from non-farm sources. In Tanzania, available data show that farming remains the most important livelihood activity among rural households; however, the non-farm sector is crucial for income generation and poverty alleviation in general. The proportion of rural households that derive income from a combination of agriculture and other sources is about 65 per cent, and the trend is towards increasing employment in non-farm activities in rural areas (World Bank, 2007; URT, 2005). According to the 2002/03 Agricultural Sample Census, 41 per cent of surveyed households had one member engaged in non-farm income-generating activities, 21 per cent had two members, and 9 per cent had more than two members (NBS, 2005). The Integrated Labour Force Survey (ILFS) of 2006 indicated that about 12 per cent of rural households were employed in non-agricultural activities (URT, 2007).

The seasonality of most agricultural activities and the low capacity of farm activities to provide a sustainable livelihood for a growing number of poor people in Tanzania's rural areas has resulted in the growth of non-farm activities (URT, 2004; Mung'ong'o, 2000). According to the *Poverty and Human Development Report 2007*, poverty in Tanzania is anchored in the widespread reliance of households on subsistence agriculture, which is characterized by small-scale cultivation, use of hand tools and reliance upon traditional rain-fed cropping methods and animal husbandry (RAWG, 2007). Also, the poor financial status of small-scale farmers is a major constraint on agricultural production in Tanzania (NBS, 2005). World Bank (2007) observed that non-farm activities had become livelihood diversification activities for all economic groups in rural areas. Baker (1995) in his study in Biharamulo District observed that whilst agriculture was a vital element in village economies, the majority (83 per cent) of households depended upon a variety of income-generating activities as a survival and accumulation strategy.

In Tanzania, non-farm activities are of great importance to rural households in both economic and social terms. Income earned from non-farm activities is used to finance agricultural expansion through the purchase of farming tools such as hoes and ox-ploughs, inputs like fertilizers and pesticides, and hiring agricultural labour. Also, income earned from non-farm activities is used to pay school fees, health services, bride prices and food purchases (Mung'ong'o, 2000; Jambiya, 1998; Madulu, 1998; Mwamfupe, 1998;). Moreover, according to Ellis (1998), in developing countries, income from rural non-farm activities enabled poor households to overcome credit and risk constraints on agricultural innovation. Furthermore, FAO (1998) observed that rural non-farm income has the potential to prevent rapid or excessive urbanization by providing youth employment in rural areas, and to prevent natural resource degradation from over-exploitation.

Despite the importance of non-farm economic activities to rural households in both social and economic terms, they lack policy, financial and promotional support from the government. According to the World Bank (2007), due to the diversity of non-farm activities which range across many sectors from farm input supply to agro-processing, manufacturing, transport, construction, wholesaling, retail commerce and personal services—no single line ministry holds clear responsibility for rural non-farm sector activities. It also noted that non-farm economic activities have no specific regional or local government authority responsible for promoting them in particular localities, because the supply chains for any activity may traverse broad geographical space—from rural areas

to market towns to regional or export centres. As a result, the rural non-farm sector in Tanzania has received limited government, donor and NGO support. Administratively, no single agency assumes responsibility for the welfare and growth of the rural non-farm sector.

The situation observed above has led to a tendency among most decision makers and development practitioners interested in rural development to neglect the rural non-farm sector. As a result, rural non-farm economic activities are not achieving their full potential to provide benefits to participating households.

To date, most studies on non-farm activities in Tanzania (Rutasitara, 2002; Madulu, 1998; Mwamfupe, 1998; Tovo, 1991) have focused on explaining the types of activities and the expenditure patterns of income realized from the activities. The studies have not attempted to make a thorough analysis on the contribution of these activities to the well-being of participating households. Therefore, this study aims to document the importance of rural non-farm economic activities in the development process of rural areas by testing empirically the contribution of these activities to poverty alleviation in participating households. In turn, the evidence from the study can be used by decision makers and development practitioners to inform policies and programmes that support and promote these activities.

# 2

## Statement and Significance of the Research Problem

The trend in the performance of agriculture—the traditional major employer of the rural population and the backbone of rural economies in Tanzania—indicates that the sector is under-performing (URT, 2009; NBS, 2007; URT, 2005). As a result, most rural households engage in non-farm activities to hedge against both income and non-income poverty (NBS, 2009). Evidence shows that rural non-farm activities have the potential to provide employment for a large number of young people who would otherwise migrate to cities in search of work. These activities have the capacity to create immediate short-term employment opportunities which can be more easily tapped by young people (World Bank, 2007). However, to date, non-farm activities in rural areas have been small scale in nature and face constraints that limit their growth. As such, efforts are required to turn them into viable sources of livelihoods (NBS, 2005; Rutasitara, 2002).

Because of the limited research undertaken on the contribution of rural non-farm activities on poverty alleviation, and the resulting lack of empirical data and information on the role of the rural non-farm sector, the government and other development practitioners have tended to neglect the contribution of these activities to the overall development process in rural areas (World Bank, 2007; FAO, 2002). This situation, in turn, has resulted in lack of clear policy on the promotion of rural non-farm activities and suffocation of these activities by stagnating their growth despite their great potential for alleviating poverty in rural areas. This neglect may also undermine the linkages of these activities to under-performing agricultural activities. These linkages, which include providing households with income for purchasing agricultural inputs, have enormous potential to boost production in the agricultural sector.

Therefore, the present study investigates the extent to which rural non-farm activities contribute to alleviating poverty in participating households and explores the means by which the performance of these activities can be enhanced.



# Research Objectives and Hypotheses

## 3.1 Research Objectives

The general objective of this study is to examine the role of rural non-farm activities in poverty alleviation in Tanzania.

The specific objectives of this study are to:

- (i) Examine the factors affecting the performance of rural non-farm activities.
- (ii) Examine the mechanism through which rural non-farm and farm activities are interlinked.
- (iii) Determine the ways through which rural non-farm activities contribute to poverty alleviation.

## 3.2 Research Hypotheses

The study was designed to test the following hypotheses on rural non-farm activities:

- (i) There is a relationship between the socio-economic characteristics of participating households and the performance of non-farm activities.
- (ii) There is a relationship between the performance of non-farm and farm activities.
- (iii) Non-farm activities contribute to reducing poverty in participating households.

# Theoretical Background and Literature Review

## 4.1 Rural Non-Farm Economic Activities and Rural Economies

The rural labour force is growing rapidly in most developing countries, but employment opportunities are not keeping pace (Reardon et al., 2006; FAO, 2002; Gordon & Craig, 2001). According to Lanjouw and Sharrif (2002) and Islam (1997), as land available for expansion of agriculture becomes increasingly scarce, non-farm employment must expand if deepening rural poverty is to be avoided. The non-farm sector has great potential for increasing rural employment, contributing to economic growth, improving income distribution and alleviating poverty (Mduma & Wobsit, 2004). Therefore, it is critical to determine how such activities can be promoted, given the importance of non-farm income as a mechanism whereby rural households can sustain and improve their livelihoods, and as possible paths out of poverty (FAO, 2002; Marsland et al., 2000).

However, in most developing countries, agriculture has been the largest employer of populations living in rural areas. This undeniable fact with respect to rural economies and livelihoods has led to the neglect of non-farm activities which play a significant role in the socio-economic development of rural communities (Gordon & Craig, 2001). According to the World Bank (2007), the traditional perception of rural households in developing countries has focused almost exclusively on farming. Policy debate still tends to equate rural incomes with farm income. This perception has led to the tendency of most development practitioners and decision makers interested in rural development to neglect the rural non-farm sector.

Despite this tendency, there is mounting evidence that rural non-farm activities offer employment to a significant share of rural households, and income derived from rural non-farm activities is an important resource for farm and other rural households, including the landless poor as well as rural town residents (Gordon & Craig, 2001; Newman & Canagarajah, 1999). According to Islam (1997), the share of the non-farm sector in rural employment in developing countries varies from 20 to 50 per cent. Reardon (1997) notes that the typical rural household in Africa has more than one member employed in a non-farm enterprise, and the average share of rural non-farm income as a proportion of total rural income is about 42 per cent. Moreover, Reardon et al. (2006) note that the rural non-farm sector accounts for roughly 25 per cent of full-time rural employment and between 32 and 40 per cent of rural income across the developing world.

## 4.2 Rural Non-Farm Economic Activities and Poverty

The traditional livelihood diversification strategies of rural households that have exclusively engaged in farming activities have been broadly classified as survival-led or opportunity-led (Jann et al., 2007). Survival-led diversification strategies are likely to reduce poverty as they involve poor rural households with low asset endowment that are forced to diversify to ensure their survival, mainly because they lack sufficient agricultural assets to sustain subsistence (Reardon & Taylor, 1996). On the other hand, opportunity-led diversification strategies involve richer rural households with higher asset endowments that choose to diversify their livelihoods to maximize returns on their assets. Such activities exhibit entry barriers that the poor are not able to overcome; hence, these strategies are likely to increase income inequality in rural areas (Ferreira & Lanjouw, 2001).

In Tanzania, about 77 per cent of the population live in rural areas (NBS, 2006). Therefore, changes in the national poverty head count are almost exclusively determined by the performance of the rural economy (World Bank, 2007). Simulations suggest that rural growth has a strong effect on overall poverty (Demombynes & Hoogeveen, 2004). According to the national Household Budget Survey (HBS) of 2007, poverty has persistently remained highest in rural areas, where 37.6 per cent of the population fall below the basic needs poverty line as compared with 16.4 per cent in Dar es Salaam and 24.1 per cent in other urban areas (NBS, 2009).

Non-farm enterprises are essential for a significant proportion of Tanzania's rural population (World Bank, 2007). According to NBS (2009), rural income appears to be increasingly dependent on non-farm activities. Data from that survey show that the proportion of household income derived from non-farm self-employment increased from 17.8 per cent in 2000/01 to 27.3 per cent in 2007. The same survey indicates a decline in the proportion of household income from agricultural sources in rural areas, from 60 per cent in 2000/01 to 50 per cent in 2007. This process is referred to as de-agrarianization by prominent scholars in the field of rural development (Bryceson, 1999).

Empirical evidence shows that rural non-farm enterprises positively affect household welfare in Tanzania (World Bank, 2007). An analysis of changes in rural consumption suggests that shifts from agricultural to non-agricultural activities have been an important contributor to poverty reduction (World Bank, 2006). Likewise, Ellis et al. (2003) in their study on livelihoods and poverty in rural Tanzania observed that non-farm activities offer an important route out of poverty.

Reasons for participating in non-farm activity in Tanzania vary. Rutasitara (2002) in his study in three administrative regions in Tanzania (Ruvuma, Dodoma and Mwanza) found that 40 per cent of surveyed households participated in or started new non-farm activities between 1992 and 1998. Of these households, 42.9 per cent participated because they considered the non-farm activity to be more profitable, 35.7 per cent said they wanted to occupy themselves during the slack season, and 7.1 per cent engaged in non-farm activities because farm income was declining. Among those who did not participate in non-farm activity, 79.7 per cent cited lack of initial capital and equipment as the main constraint, while the remaining respondents reported that returns from their activities were dwindling or that the market for their products was stagnant.

Agriculture is no longer the only dependable economic activity in rural areas of Tanzania. This situation can be attributed to several factors. First, the importance of agricultural activities as the main provider of cash income has declined, due in part to a rise in the costs of production, which have, in turn, resulted in reduced productivity of agricultural crops (World Bank, 2007; Tacoli, 2002). Second, with the increase in population, land has become scarce and its continuous use without replenishment has contributed to a decline in soil fertility (URT, 2004; Rutasitara, 2002). Third, the integration of the local agricultural-based economy into the world economy has resulted in poor performance of the agricultural sector, as in most cases cooperatives and private crop buyers have failed to pay peasants appropriate prices and promptly (Liwenga, 2005; Mung'ong'o, 2000; Madulu, 1998; Mwamfupe, 1998) since prices of most cash crops are determined by the world market.

### **4.3 Linkages Between Farm and Rural Non-Farm Economic Activities**

The concept of farm/non-farm linkages is most commonly used to describe the relation between the farm and non-farm sectors (FAO, 1998). These sectors can be linked directly via production linkages, in which case the linkages occur either 'upstream' or 'downstream'. When growth in the farm sector induces the non-farm sector to increase its activities by investing in productivity or additional capacity for supplying inputs and services to the former, the linkage is upstream. It is downstream (and is often referred to as a value-added activity) in cases where the non-farm sector is induced to invest in capacity to supply agro-processing and distribution services, using farm products as inputs.

Indirect expenditure linkages, on the other hand, occur when incomes generated in one of the two sectors are spent on the output of the other. Finally, there may be investment linkages between the two sectors, in which case profits generated in one are invested in the other.

Expenditure linkages exist between rural non-farm and farm activities whereby income generated from farm activities is spent on the output of non-farm enterprises and vice versa. Where there are constraints on access to credit, investment linkages between rural non-farm activities and the farm sector may also be very important. In such circumstances, non-farm income may be crucial for a farm household's capacity to make farm capital investments and purchase modern inputs, or savings generated by farm activities may be the basis of investments in non-farm activities (Gordon & Craig, 2001).

According to the World Bank (2007), a virtuous cycle of development can arise through the interaction of farm and non-farm activities. Agricultural and non-farm activities are linked in several ways through consumption (demand for final products), production (backward and forward supply of inputs among businesses), finances (remittances and savings channelled through urban institutions) and labour market links.

In Tanzania, agriculture has major growth links to the non-farm sector, but almost entirely through consumption. According to the World Bank (2000) and Tiffin and Irz (2006), estimated expenditure multipliers range from two to three, that is, Tshs 1,000 (US\$ 0.77) of new household income from crop sales in a remote area can lead to a further Tshs 2,000 in additional local employment in the production of goods and services.

### **4.4 Determinants of Participation and Performance of Rural Non-Farm Economic Activities**

Decisions made by rural households concerning the form and extent of their involvement in rural non-farm activities generally depend on two main factors: i) the incentives offered, such as the relative profitability and relative risk levels in farm and rural non-farm activities; and ii) second, the household's capacity to undertake such activities (Reardon et al., 2006; Gordon & Craig, 2001; FAO, 1998).

According to the World Bank (2007), one of the important determinants of the performance of rural non-farm activities is the investment climate. For example, the investment climate includes factors that are incentives or disincentives for starting and running a business, such as financial services, infrastructure, governance, regulations, taxes, labour and conflict resolution (Dollar et al., 2005; World Bank, 2004).

Households are motivated to undertake rural non-farm activities by either “pull” or “push” factors. The FAO (1998) and Reardon et al. (2006) find that “pull” factors include better returns in the non-farm sector relative to the farm sector. In contrast, “push” factors include:

- (i) an inadequate farm output resulting either from temporary events (e.g., a drought) or longer-term problems (e.g., land constraints);
- (ii) an absence of or incomplete crop insurance and consumption credit markets to use as ex-post measures for harvest shortfalls;
- (iii) the risks of farming, which induce households to manage income and consumption uncertainties by diversifying and undertaking activities with returns that have a low or negative correlation with those of farming; and
- (iv) an absence or failure of farm input markets or input credit markets, compelling households to pay for farm inputs with their own cash resources.

## **4.5 Conceptual Framework for Analysing Rural Non-Farm Economic Activities and Poverty Alleviation**

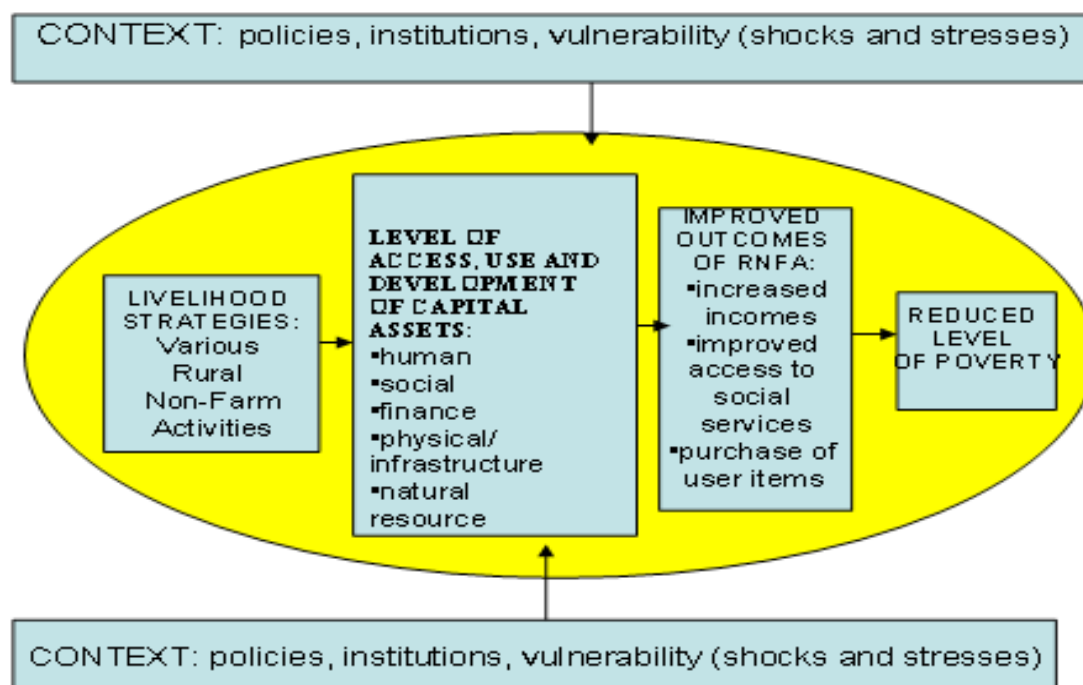
Rural households participate in non-farm activities as a strategy to increase their income by diversifying their livelihoods (Mung'ong'o, 2000). According to the Sustainable Livelihood Framework (DFID, 1999; Carney, 1998), the sustainability of livelihood diversification strategies of rural households depends on access to and the use and development of different types of assets. These are considered to be stocks of different types of ‘capital assets’ that can be used directly or indirectly to generate livelihoods. They include human, social, financial, physical and natural capital.

The success of a livelihood strategy also depends on the political and institutional contexts within which it operates as well as vulnerability to shocks and stresses. According to Scoones (1998), a livelihood is sustainable when it can utilize opportunities created by existing policies and institutions, and cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, while not undermining the natural resource base (See Figure 1).

### **4.5.1 Human Capital**

Human capital is a vital determinant of the outcomes of a livelihood strategy. Human capital includes the skills, knowledge, ability to labour and good health to pursue different livelihood strategies (Reardon et al., 2006). Education is a key source of human capital, offering a potentially important route into higher-return, non-farm opportunities. Less-educated households rely instead on low-paying farm wage employment or very low-productivity non-farm pursuits (Lanjouw & Shariff, 2002; Hossain, 2004). In her study on women receiving small business training in Tanzania, Tovo (1991) observed that extension services were particularly helpful, as evident in the success rate achieved by those who had received training.

**Figure 1: Conceptual Framework for Rural Non-Farm Activities (RNFA) and Poverty Alleviation**



Source: Based on DFID (1999) and Carney (1998).

#### 4.5.2 Social Capital

Social capital comprises a variety of social resources—for example, networks, group membership relationships of trust, and access to wider institutions of society upon which people draw in pursuit of livelihoods (DFID, 1999). These resources have a greater role to play as determinants of participation in and performance of rural non-farm activities. According to Gordon and Craig (2001), ample anecdotal evidence exists of the influence of social capital on access to different types of employment. Tovo (1991) found that the women she interviewed in her study in Tanzania had made important contacts through their involvement in training or extension services. These contacts helped them to obtain scarce inputs for their businesses and to find customers. Reardon (1997) observed that larger families and those with multiple conjugal units supply more labour to the rural non-farm sector, as sufficient family members remain in the home or on the farm to meet labour needs for subsistence.

Elsewhere, studies in Asia and Latin America have shown that social linkages can be critical to reducing transaction costs and risks for rural non-farm activity (Reardon et al., 2006). Zhang and Li (2003) in China and Winters et al. (2002) in Mexico found that social capital, such as membership in organizations and “connections”, had important effects on rural non-farm participation.

### **4.5.3 Financial Capital**

Financial capital encompasses the financial resources—for example, savings, supplies of credit, or regular remittances or pensions—which are available to people and which provide them with different livelihood options (Gordon & Craig, 2001; Carney, 1998; DFID, 1999; Scoones, 1998).

Access to financial capital or credit, whether in the farm or non-farm sectors, is one of the principal problems facing individuals or households in rural areas wishing to start a business. Gordon and Craig (2001) observed that without start-up funds or with little cash available for investment, households are limited to a small number of activities which yield poor returns, partly because of the proliferation of similar low-entry-barrier enterprises.

Bagachwa and Stewart (1992) in their four-country study in Africa found that 30 to 80 per cent of rural industries complained of poor access to credit. According to FAO (1998), incentives to participate in rural non-farm activities differ according to households' wealth. Poorer households are less able to tolerate or cope with negative shocks to their income and are thus more averse to this type of risk.

### **4.5.4 Physical Capital**

Physical capital includes the basic hard and soft infrastructure—for example, transport, shelter, water, energy and communications—and the production equipment and means which enable people to pursue their livelihoods (Reardon, et al. 2006; DFID, 1999; Carney, 1998).

Proximity to towns and access to infrastructure such as roads, electricity and water are crucial capacity determinants of rural non-farm employment and income levels (Hossain, 2004; Lanjouw and Shariff, 2002; Barrett, et al., 2001; Reardon, et al., 2001). According to Reardon et al. (2006), in places where infrastructure is good, transport costs are low, so effective output prices of non-farm products are higher. Also, roads can make it cheaper to ship the raw product to a town or city for processing. Reardon et al. (2001) found that educated landless workers living in the densely populated rural zones of the Pacific Region of Nicaragua, well served by roads and near major cities and ports, were the top earners of rural non-farm incomes in Nicaragua. In contrast, those in the hinterland were constrained to small-scale manufactures, stagnant local markets and low returns to labour.

Energy is an equally critical component of infrastructure. According to Gordon and Craig (2001), electricity helps to create increased rural non-farm opportunities in several ways by:

- (i) enabling the development of enterprise;
- (ii) reducing the costs of, for example, diesel-powered, small-scale milling to a viable level;
- (iii) providing lighting, thereby increasing the hours that can be spent in rural non-farm activities; and
- (iv) releasing labour from time-consuming and low productivity chores such as the manual pounding of grain.

Gordon and Craig (2001) also observed that telecommunications improvement reduces transaction costs by improving information flow. They noted that, other things being equal, this should contribute to the development of rural enterprise, particularly relative to the poor telecommunications access that has been the norm for many rural communities.

#### 4.5.5 **Natural Resource Capital**

Natural resource capital includes assets such as land, water, wildlife, biodiversity and environmental resources (Reardon et al. 2006; Gordon and Craig, 2001; DFID, 1999).

According to the World Bank (2007) and FAO (1998), the agro-climatic characteristics of a particular area, which may be favourable or unfavourable and more or less variable, influence farm households' risk motive for income diversification into non-farm activities. Households in areas with high-risk agriculture would be more "pushed" to diversify into rural non-farm activities. A larger share of non-farm activity would be undertaken merely to cope (ex post) with shocks to farm income (such as drought), although one would also expect income diversification in "normal" years (e.g., non-drought years) so as to accumulate resources (wealth) with which to overcome negative shocks. By contrast, households in areas where agriculture is less risky might participate in rural non-farm activities mainly for the higher returns or to alleviate cash and credit constraints (FAO, 1998).

The influence of landholdings on participation in and earnings from rural non-farm activity is complex. First, in places where credit markets function, land can be used as collateral to increase access to credit, which, in turn, can be used to invest in physical capital needed for more remunerative non-farm work. Second, landholding (in contrast to landlessness) can be the key to enter organizations and groups and thus access social capital which aids in rural non-farm activity. Third, land can be the determinant of farm investment, access to working capital and income, and most non-farm activity investments are based on self-generated liquidity (Reardon et al., 2006).

However, the definition of assets under the livelihood approach has been criticized as being simplistic, especially when it comes to the question of land to rural households. According to Giddens (1979) in Bebbington (1999: 2022):

*"A person's assets, such as land, are not merely means with which he or she makes a living: they also give meaning to that person's world. Assets are not simply resources that people use in building livelihoods: they are assets that give them the capability to be and to act. Assets should not be understood only as 'things' that allow survival, adaptation and poverty alleviation. They are also the basis of an agent's power to act and to reproduce, challenge or change the rules that govern the control, use and transformation of resources."*

#### 4.6 **Current National Policies of Relevance to Rural Non-Farm Activities**

A number of national policies provide the context within which rural non-farm activities operate. They include:

- The *National Micro Finance Policy* (URT, 2000), which recognizes the contribution of small and micro enterprises in reducing the income poverty of households in rural and urban areas. This policy outlines the importance of providing financial services to small and micro enterprises in rural as well as urban areas so as to promote their performance.

- The *Small and Medium Enterprise (SMEs) Development Policy* launched in 2003 is one of the major policies on rural and urban small enterprises in Tanzania (URT, 2003b). The policy defines SMEs as micro, small and medium enterprises and covers non-farm economic activities across different sectors including manufacturing, mining, commerce and services. According to the policy, SMEs are very important to household economies and to the country's economy as a whole. It estimates that about a third of Tanzania's GDP originates from the SME sector. SMEs also tend to be labour-intensive. They create employment at relatively low levels of investment per job created and absorb the majority of new entrants into the labour market, mostly in the informal sector. The policy outlines a number of strategies that can help to promote these enterprises.
- The *National Employment Policy* recognizes that the private sector (which includes SMEs) is the major source of employment in Tanzania, and outlines strategies that will contribute to the creation of an enabling environment for the sector's development (URT, 2008). The policy highlights that the proportion of rural households that derive income from more than three sources is increasing. However, the policy further notes that employment in non-farm activities in rural areas is growing at a very slow pace and without coordination and support. As such, non-farm earnings need support from both the agricultural sector and other dynamic rural sectors such as forestry, wildlife, fisheries and tourism in order to increase opportunities for earning incomes in rural areas from environment friendly non-farm activities.

## Methodology

### 5.1 Study Locations

This study was carried out in Mvumi Mission and Bahi Sokoni villages which are located in Chamwino and Bahi Districts, respectively. These districts formerly constituted Dodoma Rural District before it was split to form the new districts in 2005. The two districts are located in Dodoma Region. According to information from the village offices, Mvumi Mission village has a population of 12,421 residents and Bahi Sokoni village has a population of 11,197 residents.

The districts are predominantly semi-arid in nature, experiencing low and erratic rainfall. The rainy season typically begins in mid-November and runs through mid-April. Rainfall ranges between 500 mm to 650 mm per annum. Soil in the districts is generally characterized by shallow depth, moderate organic matter content, salinity in some parts, and poor permeability, which leads to higher surface run-off. All of these physical and climatic factors combine to affect crop farming which is the major economic activity in the districts. The districts are dominated by a rural economy which is based on subsistence rain-fed agriculture (URT, 2003).

The selection of Dodoma Region as the study area was based on two facts. First, Dodoma region is characterized by low agricultural production levels; thus, rural non-farm activities are important economic activities for participating households. Second, the region is one of the areas with high poverty levels in Tanzania (NBS, 2006a).

### 5.2 Data Types and Sources

The major research method used in the study is a cross-sectional field survey which was supplemented by key informant interviews and an extensive literature review. The data collected may be classified under the following four categories:

- (i) Household socio-economic characteristics. These data allowed for the analysis of non-income poverty within the survey population, and were collected from both households that were involved in non-farm activities and those that were not. The data included demographic variables (sex, age, marital status, education and migration of respondents), housing data, ownership of productive resources such as land and working tools, and ownership of livestock.
- (ii) Household income. This dataset included household earnings from economic activities, which, in turn, included earnings from self-employment and wage employment in a one-year reference period. Income earned from farm and non-farm activities and other sources were separated. This set of data allowed for the analysis of income poverty among households participating and those not participating in non-farm economic activities.
- (iii) Household expenditure. Data were collected on items on which household income earned from the different sources was used. This assisted further analysis on the contribution of non-farm activities to household poverty alleviation.
- (iv) Factors determining whether household members participate in farm and non-farm activities, and the performance of these activities. These data included the skills, knowledge and initial

capital required for engaging in particular economic activities. Information was gathered on the type of economic activities undertaken and ability of households to access financial and product markets.

### 5.3 Sample Size and Sampling Procedure

#### 5.3.1 Sample Size

The sampling unit in this study was the household, and the main target population were households participating in non-farm economic activities. The sample size was determined relative to the number of households participating and not participating in non-farm activities in each of the two study locations. The study aimed to have as large and as representative a sample from the two villages, within the time and resources available to the researchers.

A total of 341 households were interviewed: 175 households in Mvumi Mission village and 166 households in Bahi Sokoni village. The number of households interviewed in each village represented about 6 per cent of the total number of households. The reliability of information obtained from the household interviews was also cross-checked with information sourced from key informants.

#### 5.3.2 Sampling Procedure

A purposive sampling method was used to select the two study locations, Mvumi Mission and Bahi Sokoni. The criteria employed included the presence of a significant number of non-farm activities as well as the geographic location of the villages. Discussions with District Council officials indicated that these villages had a significant number of non-farm activities compared with other villages in the districts. In addition, Bahi Sokoni village is located along the main road while Mvumi Mission is located far from the main road. In this way, the study sought to capture the influence of accessibility and transportation to and from the markets on the levels of participation in non-farm activity and performance of non-farm activities in the two villages.

A systematic random sampling procedure based on sub-villages (*vitongoji*) was then used to select the households to be interviewed. Guided by the sub-village leaders (who knew the physical boundaries of their sub-villages), every fourth house was visited until the required sample size was obtained. The households selected included those that were participating and those not participating in non-farm activities.

Purposive sampling method was used to select key informants in the study area. These included community leaders at regional, district, ward and village levels. Also, representatives of micro finance institutions based in Dodoma were interviewed, including FINCA Tanzania, the Small Enterprises Development Agency (SEDA), the Promotion of Rural Initiative and Development Enterprises Limited (PRIDE Tanzania) and the Small Industries Development Organization (SIDO).

### 5.4 Data Collection Methods

Data collection involved three major methods: a document review, interviews and discussions with key informants (See Plate 1). Household interviews were administered using a semi-structured

questionnaire, while interviews with key informants were conducted using an unstructured, open-ended checklist.

A document review was used to collect secondary data. The documents read included books, journals, manuscripts, and research and official reports. The survey was carried out in October, 2010.



**Plate 1: Researchers in discussion with key informants in the study area**

Source: Photo by the author, 25 October 2010

## 5.5 Data Analysis

Data compilation and processing started immediately after field work. Data processing involved editing, coding, classifying and entering data by using the Statistical Package for Social Sciences (SPSS). Quantitative and qualitative data were generated and presented via frequencies, and descriptive and multi-response statistics in SPSS.



# Findings

## 6.1 Socio-Economic Characteristics of the Study Population

### 6.1.1 Demographic Characteristics

The demographic characteristics of the survey population are important variables in the analysis of non-farm activities. For example, factors such as the age-sex composition of the household, size of the household and the amount of labour available influence the choice and scope of household activity and can lead to a greater range of activities engaged in by the household (Winters et al., 2009).

Table 1 shows that the survey population for Mvumi Mission village was 935 (481 males and 454 females) and Bahi Sokoni village was 872 (396 males and 476 females). This makes a total survey population of 1,807 individuals, of which 877 were males and 930 were females. Data further show that people in younger age groups dominate the population in the study villages with higher concentrations in the age cohorts of 10–14 years, 15–19 years and 20–24 years. This can be attributed in part to the higher fertility levels in rural areas of Tanzania but are mainly due to the fact that these younger age groups are not affected by out migration.

**Table 1: Distribution of Study Population by Age and Sex**

Age (years)	Village						Total		
	Mvumi Mission			Bahi Sokoni					
	Male (n=481)	Female (n=454)	Total (n=935)	Male (n=396)	Female (n=476)	Total (n=872)	Male (n=877)	Female (n=930)	Total (n=1807)
	%	%	%	%	%	%	%	%	%
0–4	5.1	3.7	4.4	4.9	3.2	4.0	5.0	3.8	4.2
5–9	6.8	7.4	7.1	8.8	6.7	7.8	7.8	7.1	7.4
10–14	12.4	10.6	11.5	16.2	21.0	18.6	14.3	15.5	15.1
15–19	14.7	12.5	13.6	12.1	14.2	13.1	14.1	13.4	13.7
20–24	10.1	10.1	10.1	12.8	11.9	12.4	14.8	11.0	12.9
25–29	6.0	10.5	8.3	10.0	8.8	10.8	8.0	9.6	8.8
30–34	8.5	9.2	8.9	6.1	5.2	5.7	8.1	7.2	7.6
35–39	6.1	6.6	6.4	5.5	5.7	5.6	7.5	6.2	6.9
40–44	6.0	8.4	7.2	6.8	5.4	6.1	6.4	6.9	6.6
45–49	6.6	5.7	6.1	5.1	4.4	6.4	5.8	5.1	5.5
50–54	5.4	5.7	5.5	2.1	2.5	2.3	3.7	4.1	3.9
55–59	4.9	3.9	4.4	3.0	3.3	3.1	3.9	3.6	3.8
60–64	3.1	2.2	2.6	1.9	2.3	2.1	2.5	2.2	2.3
65+	4.3	3.5	3.3	4.7	5.2	4.9	4.5	4.4	4.4

Source: Field survey, October 2010

Generally, the analysis of the age-sex composition of the households surveyed shows that the distribution of population by age and sex is similar to that found in several developing countries that have a broad-based population pyramid and high fertility levels in rural areas (NBS, 2006).

### 6.1.2 Household Size

The term “household” is generally used to refer to a social group of people who live, work, and eat together (Siegel & Swanson, 2004; Shryock & Siegel, 1976). For the purpose of this study, the term “household size” has been used to refer to the number of persons who usually reside in the household and share household expenses (‘common’ kitchen) (Kamuzora, 2002). This definition typically includes parents, children and any other individuals who cooperate in the daily economic and social life of the household.

Information in Table 2 shows that approximately half of the households surveyed (52.8 per cent) had 5–6 members, around one-quarter of households with 3–4 members (23.5 per cent), and 15.8 per cent of households had 7–8 members. The average household size of the survey population was 5.2 persons per household, which is marginally higher than the national rural average of 4.9 persons per household (NBS, 2006).

Analysis of household size was considered important in this study as it is a vital factor in determining the characteristics of the labour supply for economic activities, as well as the production patterns and consumption levels within the household, and the pressure on land and other productive resources owned by the household (Winters et al., 2009; Mwisomba & Kiilu, 2002). The current analysis found that household size significantly influenced the household income realized from non-farm activities.

**Table 2: Household Size by Village**

Household size (number of persons)	Village		Total (n=341)
	Mvumi Mission (n=175)	Bahi Sokoni (n=166)	
	% of households	% of households	% of households
1–2	3.4	6.0	4.7
3–4	18.9	28.3	23.5
5–6	59.4	45.8	52.8
7–8	14.3	17.5	15.8
9+	4.0	2.4	3.2

Source: Field survey, October 2010

### 6.1.3 Education Levels

Educational attainment is an important characteristic of a person as it determines his/her level of understanding and interaction with the surrounding environment (URT, 2003a). Also, education is the most important tool for developing human skills and knowledge, and for liberating people

from poverty (URT, 1999). As indicated in the conceptual framework of this study—which is based on the Sustainable Livelihood Analysis Framework (DFID, 1999 and Carney, 1998)—analysis of respondents’ education level is particularly important when studying non-farm activities. Education helps to increase the skills required for particular activities and can set in train processes that increase confidence, establish useful networks or contribute to productive investment.

This study found that 85 per cent of the survey population aged 15 years and above had attained primary education, 2.6 per cent had non-formal education and 12.3 per cent had attained post-primary education (See Table 3). The non-formal education category includes all respondents who did not have a chance of passing through formal education. These data have direct relevance to this study as the education level of household heads was found to be one of the factors influencing the performance of non-farm activities at the household level.

**Table 3: Education Level of Study Population (15 Years and Above) by Village**

Education Level	Village		Total (n=1,326)
	Mvumi Mission (n=720)	Bahi Sokoni (n=606)	
	% of households	% of households	% of households
Non-formal	10.7	14.1	12.3
Primary education	86.4	83.5	85.0
Post primary education	2.9	2.4	2.6

Source: Field survey, October 2010.

#### 6.1.4 Land Ownership

The major asset of households in the study villages is land. Table 4 shows the acreage of land owned by households participating in non-farm activities in the study area. The study found that most of the households that participated in non-farm activities owned land of between 1–2 acres (33.8 per cent) and 3–4 acres (31.6 per cent). According to NBS (2003), the major limitation on land holdings and production levels in Dodoma Region is the use of the hand-hoe for cultivation. By gender, the most common size of land holding among female-headed households who participated in non-farm activities was 3–4 acres (41.0 per cent), while the most common size of land holding among male-headed households was 1–2 acres (37.5 per cent).

**Table 4: Size of Land Owned by Households Participating in Non-Farm Activities by Village and Sex of Household Head**

Land size (acres)	Village						Total		
	Mvumi Mission			Bahi Sokoni					
	Male (n=103)	Female (n=31)	Total (n=134)	Male (n=73)	Female (n=30)	Total (n=103)	Male (n=176)	Female (n=61)	Total (n=237)
	%	%	%	%	%	%	%	%	%
1–2	36.9	22.6	33.6	38.4	23.3	34.0	37.5	23.0	33.8
3–4	22.3	38.7	26.1	37.0	43.3	38.8	28.4	41.0	31.6
5–6	24.3	19.4	23.1	15.1	16.7	15.5	20.5	18.0	19.8
7–8	10.7	9.7	10.4	5.5	13.3	7.8	8.5	11.5	9.3
9+	5.8	9.7	6.7	4.1	.3	3.9	5.1	6.6	5.5
Total	76.9	23.1	100	70.9	29.1	100	74.3	25.7	100

Source: Field survey, October 2010.

In both villages, the system used for acquiring and owning land was customary land tenure. Under this system, inheritance was the major means of land acquisition and ownership (74 per cent), although some households acquired land by buying, renting, clearing of no man's land, or other means such as borrowing from relatives or neighbours (Table 5).

**Table 5: Methods of Land Acquisition in Households Participating in Non-Farm Activities by Village**

Land acquisition method	Village		Total (n=237)
	Mvumi Mission (n=134)	Bahi Sokoni (n=103)	
	% of households	% of households	% of households
Inheritance	78.1	69.3	73.7
Purchasing	23.6	18.7	21.3
Renting	5.2	13.3	9.3
Land clearing	14.8	7.2	11.0
Others	3.1	4.3	3.7

N.B. Totals exceed 100 per cent due to multiple responses.

Source: Field survey, October 2010.

The traditional system of land ownership observed in the study villages hampers the possibility of modernizing farming practices that could raise the productivity levels of rural households. Under this system, land owners have no legally recognized right of occupancy; hence, their land cannot be used as collateral to access credit from financial institutions.

### 6.1.5 Economic Activities of the Survey Population

Households in the study villages performed a variety of economic activities including crop farming, livestock keeping, bee-keeping, non-farm and other activities. Table 6 shows that the majority of households were engaged in agricultural activities like crop farming (96.5 per cent) and livestock keeping (17.6 per cent). It also shows that non-farm activities were practised by seven out of every ten households (69.5 per cent). Only 1.2 per cent of respondents indicated that their households practised bee-keeping. Other economic activities, which included labouring and fishing, were practised by only 0.9 per cent of households.

**Table 6: Major Economic Activities in Surveyed Households by Village**

Major economic activity	Village		Total (n=341)
	Mvumi Mission (n=175)	Bahi Sokoni (n=166)	
	% of households	% of households	% of households
Crop farming	99.4	93.4	96.5
Non-farm activity	76.0	62.7	69.5
Livestock keeping	19.4	15.7	17.6
Bee-keeping	1.7	0.6	1.2
Others	1.1	0.6	0.9

N.B. Totals exceed 100 per cent due to multiple responses.

Source: Field survey, October 2010.

The study of economic activities performed by the study population is crucial for examining non-farm economic activities. This is because different economic activities performed by rural households interact and support each other in terms of inputs or sources of capital (Reardon et al. 2006; Lanjouw et al. 2002).

In both villages, farming was predominantly small-scale, rain-fed subsistence farming of food and cash crops. Food crops grown included maize, millet, sorghum and paddy (rice). Crops cultivated for generating income included simsim (sesame), groundnuts, sunflowers and grapes. Other food crops grown included cassava, potatoes and legumes. The majority of households used traditional farming technology. The hand-hoe was used by most households (77.8 per cent) as their main tool for land cultivation. Table 7 shows that a few households used other tools in land cultivation including ox-plough (14.8 per cent) and tractor (7.4 per cent). The findings are more or less similar with the findings by NBS (2006a) which observed that about 66 per cent of planted land in Dodoma Region was cultivated using the hand-hoe, 24 per cent by ox-plough and 10 per cent by tractor.

**Table 7: Main Types of Tools Used for Land Cultivation by Household**

Tools	Village		Total (n=341)
	Mvumi Mission (n=175)	Bahi Sokoni (n=166)	
	% of households	% of households	% of households
Hand-hoe	75.3	80.2	77.8
Ox-plough	16.4	13.3	14.8
Tractor	8.3	6.5	7.4

Source: Field survey, October 2010.

Livestock keeping was another economic activity practised by a significant number of households (17.6 per cent). Types of livestock kept included cattle, goats, sheep, donkeys and a small number of poultry (chicken and ducks). The method of livestock keeping used by households in the study villages was agro-pastoralism, that is, free grazing combined with crop cultivation. Donkeys were mainly used for transportation of farm harvests and water.

The discussions with households keeping livestock revealed that livestock have both social and economic importance. Not only were they sources of income, security, insurance and prestige, but animals were also used for paying the bride price.

Non-farm activities were the second most common type of economic activity engaged in by households in the study villages. Section 6.2 discusses the characteristics of these activities in greater detail.

## 6.2 Characteristics of Non-Farm Economic Activities

### 6.2.1 Types of Non-Farm Activities

As shown in Table 6 above, 69.5 per cent (or 237 households) in the two villages engaged in a variety of non-farm activities. The non-farm activities carried out can be grouped into three main categories—production, trade and services. Table 8 presents data on the distribution of households by the three main types of non-farm activities.

Production-related activities were practised by one-quarter of participating households (21.5 per cent). These activities included welding, carpentry, masonry, local brewing, weaving, knitting and pottery. Analysis of the data by gender shows that in Mvumi Mission village only 11.5 per cent of female-headed households participated in production-type activities compared with 23.9 per cent of male-headed households. The situation is different in Bahi Sokoni village where 31 per cent of female-headed households participated in production activities compared with only 19.7 per cent of male-headed households.

**Table 8: Main Types of Non-Farm Activity by Village and Sex of Household Head**

Category of Non-Farm Activity	Village						Total (n=237)		
	Mvumi Mission			Bahi Sokoni			Male (n=153)	Female (n=84)	Total (n=237)
	Male (n= 92)	Female (n=42)	Total (n=134)	Male (n=61)	Female (n=42)	Total (n=103)			
	%	%	%	%	%	%			
Production	23.9	11.5	17.7	19.7	31.0	25.3	21.8	21.2	21.5
Trade (commercial exchange)	34.9	40.5	37.7	50.8	52.3	51.6	42.9	46.4	44.7
Service	41.2	48.0	44.6	29.5	16.7	23.1	35.3	32.4	33.8

Source: Field survey, October 2010.

Trade-related activities were practised by half (44.7 per cent) of the households involved in non-farm activities. These activities included selling of various consumer items at the village market place, food vending, selling of second-hand clothes, butchery, sale of stationery, operation of a retail shop or medical store, charcoal selling, and sale of maize and rice. Analysis of the data by gender shows that 40.5 per cent of female-headed households in Mvumi Mission participated in trade activities compared with 34.9 per cent of male-headed households. In Bahi Sokoni village, the analysis shows that trade activities were practised by 52.3 per cent of female-headed households while 50.8 per cent of male-headed households participated in these activities.

Service activities were engaged in by 33.8 per cent of households practicing rural non-farm activities. Activities under this category included tailoring, operation of bar or tea room/kiosk, bicycle repair, garage (vehicle and motor cycle repair), milling, guest house, hair dressing /cutting salon, grocery, shoe repair and driving. Analysis of data by gender revealed that activities in the services category were practised almost equally by both male and female-headed households.

Appendices 1 and 2 provide detailed data on the distribution of non-farm activities by sex for each village. Plates 2 through 5 show some of non-farm activities in the study villages.



**Plate 2: Carpentry in Mvumi Mission village**  
Source: Photo by the author, 25 October 2010



**Plate 3: A tailor in Bahi Sokoni village**  
Source: Photo by the author, 2 October 2010



**Plate 4: Maize trading in Bahi Sokoni village**  
Source: Photo by the author, 2 October 2010



**Plate 5: Tea room in Mvumi Mission village**  
Source: Photo by the author, 25 October 2010

Discussion with respondents revealed that the main factors affecting the decision to engage in specific non-farm activities included the availability of customers, raw materials and transportation services to and from markets. Respondents also reported that the availability of some consumer items they sold depended on the season of the year. For example, the availability of fruits, such as mangoes, grapes and oranges, varied by season.

Moreover, the number of customers for particular types of services such as guest houses, restaurants, and food vending also varied seasonally. For example, in Bahi Sokoni, the period from November to April is the peak season for customers. During this season, farmers from neighbouring urban centres, including Dodoma and Manyoni, who own farms in the ‘Bahi rice fields’, as well as labourers from neighbouring villages, come and camp in the village to cultivate their land and carry out other activities associated with paddy farming. It is during this season when most non-farm activities become more dynamic and profitable due to the increased number of customers.

### 6.2.2 Factors Influencing Household Participation in Non-Farm Activities

The participation of rural households in non-farm activities is caused by many factors. According to Ellis (2007), rural households may decide to participate in non-farm activities in response to economic hardship or in response to emerging economic opportunities. In the current study, 89.5 per cent of households decided to engage in non-farm activities to supplement the low income earned from farming activities (see Table 9). Other reported factors included land inadequacy (40 per cent), efforts to minimize risk of crop failure due to unreliable rainfall (31.3 per cent), and increased opportunities (9.8 per cent) due to population growth in Bahi and Mvumi trading centres that has resulted in demand for non-farm products and services.

**Table 9: Factors that Caused Households to Participate in Non-Farm Activities by Village**

Factors for Participation in Non-Farm Activities	Village		Total
	Mvumi Mission (n=134)	Bahi Sokoni (n=103)	
	% of households	% of households	% of households
Low income from farming activities	95.8	83.2	89.5
Land inadequacy	33.3	47.1	40.2
Minimize risk of crop failure due to unreliable rainfall	34.2	28.4	31.3
Increased opportunities	6.4	13.3	9.8
Other factors	3.3	2.4	2.9

N.B. Totals exceed 100 per cent due to multiple responses

Source: Field survey, October 2010

Discussions with households that did not engage in non-farm activities revealed that the main factors for not participating included lack of initial capital, limited number of family members to serve in farm and non-farm activities, inability to access financial credit and aversion to risks involved in investing in non-farm activities. Moreover, the interviews with key informants revealed that some non-farm activities such as welding, carpentry, tailoring and masonry required specific skills that were not possessed by different individuals or households.

**6.2.3 Duration of Operation of Non-Farm Activities**

Analysis of the length of time that non-farm activities have been in operation provides information on the history of non-farm activities and their potential for growth and sustainability in particular locations (Brycesson, 2002; Mwamfupe, 1998).

This study found that the majority of non-farm activities in the area had been in existence for between five and twelve years. The data in Table 10 further show that about 30.8 per cent of non-farm activities were relatively new; i.e., they had been in operation for 4 years or less. However, variations were observed between the two villages. For example, 37.9 per cent of non-farm activities in Bahi Sokoni village were more recently established (4 years or less) compared with 25.4 per cent in Mvumi Mission in the same category.

**Table 10: Duration of Operation of Main Non-Farm Activity**

Years of Existence	Village		Total (n=237)
	Mvumi Mission (n=134)	Bahi Sokoni (n=103)	
	% of households	% of households	% of households
≤4	25.4	37.9	30.8
5–8	22.4	20.4	21.5
9–12	31.3	29.1	30.4
13–16	7.5	5.8	6.8
17–20	7.5	1.9	5.1
21+	6.0	4.9	5.5

Source: Field survey, October 2010.

Discussion with respondents in the study area revealed that several factors had contributed to the observed variations in length of time of non-farm activities. These factors include: i) natural population growth which has increased pressure on land, the most important productive resource in the villages; and ii) the increased number of customers which has increased the demand for goods and services produced by non-farm activities.

The population of Bahi Sokoni village, in particular, has increased rapidly in recent years due to the construction of a tarmac road that runs from Dar es Salaam to Mwanza and other towns around Lake Victoria and neighbouring countries such as Burundi, Rwanda and the Democratic Republic of Congo (DRC). As a result, Bahi Sokoni village centre, which is located on this main road, has become a stopover for most long-distance safari trucks and buses.

In Mvumi Mission, respondents indicated that the emergence of institutions such as Mvumi Secondary School and the expansion of Mvumi Hospital and Mvumi Nursing School had contributed remarkably to the recent growth in population. Another factor cited for the growth of the non-farm

sector in recent years is the improvement of the road between Dodoma town and Mvumi Trading Centre, which has reduced transportation costs to and from the village.

#### 6.2.4 Sources of Capital for Non-Farm Activities

Rural households participating in non-farm activities obtain initial capital from a variety of sources (World Bank, 2007). This study found that sources of capital for starting a non-farm activity in the study villages were heterogeneous. Table 11 shows that most households (80.8 per cent) obtained start-up capital from savings from crop sales, and borrowing from relatives and friends (21.9 per cent). Other sources included loans from financial institutions (4.0 per cent) and remittances from relatives living in urban areas (4.9 per cent), loans from local money lenders (7.4 per cent), and from other sources such as selling livestock and bee products. Respondents remarked that after establishing the non-farm activity, the funds for running the business came from the various economic activities the owner engaged in at the time.

**Table 11: Source of Capital for Establishing Non-Farm Activities**

Source of Capital	Village		Total (n=137)
	Mvumi Mission (n=134)	Bahi Sokoni (n=103)	
	% of households	% of households	% of households
Savings from crop sales	75.3	86.4	80.8
Borrowed from relatives/friends	31.3	12.65	21.9
Loan from micro finance institution	2.2	5.8	4.0
Remittances from relatives	6.0	3.9	4.9
Loan from local money lenders	9.0	5.8	7.4
Others	5.2	5.8	5.5

Source: Field survey, October 2010

The discussion with respondents in the study area revealed that getting capital for starting non-farm enterprises was the factor that most often limited households from participating in non-farm activities. This was caused mainly by the fact that most households did not have sufficient funds from their traditional occupations in agriculture and livestock keeping. This situation was exacerbated by households' limited access to credit from financial institutions.

Currently, only three micro finance institutions operate in the study villages: the Small Enterprise Development Agency (SEDA), FINCA Tanzania and CARE Tanzania. These institutions are based in Dodoma town, but they are relatively new to the region. To date, their operations have benefited only a few individuals, mostly women, who have formed economic groups through which they can access loans for individual members. These groups act as guarantors for loans to members. The group is liable in the event that one member fails to repay a loan.

Also, one Savings and Credit Cooperative Society (SACCOS) operated in each village—MKULIMA in Mvumi Mission and MSHIKAMANO in Bahi Sokoni. In general these two SACCOS were not performing well. A discussion with the manager of MKULIMA SACCOS<sup>1</sup> revealed that her organization was not performing well due to its low capital, meaning that SACCOS was unable to provide credit to all members who were in need.

A discussion with one of the beneficiaries of the services of CARE (Tanzania) in Bahi Sokoni village revealed that loan recipients who were serious about their businesses were successful in their lives and in alleviating poverty.

*"I am a member of ZINDUKA women's group in the village. My group received a loan from CARE (Tanzania). The group members obtained training from CARE (Tanzania) on how to run a business profitably and repay credit. I borrowed a total of Tshs 60,000 which I invested in the business of running a food vending kiosk. After one year of operation, I managed to get a profit and raise my capital which enabled me to use part of my profit to start building a house up to this time. I am about to put a roof of corrugated iron sheets on this house. Also, the business is continuing well and the income from it is enabling me to buy inputs to farm, hire a tractor and pay labourers."*

SIDO is the only state-owned institution promoting micro enterprise in the study area. The organization was established in 1973 as a parastatal organization under the Ministry of Trade, Industry and Marketing. Its objective was to develop the small industry sector in Tanzania. It was expected to fulfil a very wide range of functions, from policy formulation to direct support to industries, to hands-on investment in the establishment of SMEs in both rural and urban areas. The organization has managed to open one branch in each region of the country. In 2002, SIDO's role as the Government's instrument for small-scale industries was redefined to respond to the political and economic changes. SIDO's role was scaled down and redefined to be an organization for creating and sustaining the indigenous entrepreneurial base by promoting and supporting the development of SMEs via business development services and specific financial services (URT, 2005a).

According to the discussion with SIDO officials, a recent activity accomplished in the study area was the training of ten millet farmers from Bahi District on entrepreneurship and on the use of a millet threshing machine. The training was done in November 2010 in collaboration with Bahi District Council which purchased the machine.

The discussion also revealed that SIDO, in collaboration with the International Labour Organization (ILO) through the Coop Africa Programme (CAP), had trained a total of 30 bee keepers from Bahi District on quality production of honey and beeswax.

Moreover, SIDO is currently operating the JUHUDI Loan Scheme in Dodoma Region in collaboration with the National Microfinance Bank (NMB), Business Development Gateway (BDG) and Enablis Tanzania. Through this programme, eligible SIDO borrowers who require larger loans than SIDO can provide are recommended for such loans to NMB. The scheme extends working and investment loans to SMEs ranging from Tshs 5 million to 500 million at an interest rate of 15 per cent per annum

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<sup>1</sup>Ms. Mariam Dickson, personal communication, 2nd October, 2010

for loan periods of up to 36 months. Despite these achievements, the discussion revealed that the number of loan seekers, especially from urban areas, exceeds the capacity of SIDO.

The discussion with village leaders on the activities of micro finance institutions in the study locations revealed that they appreciate the efforts being done by these institutions to alleviate poverty. However, they remarked that the number of beneficiaries is still very small compared to the number of people who would like to access their services. They pointed out that it would be helpful if the institutions reduced the conditions for obtaining credit and extended training on business skills to all interested individuals instead of concentrating only on a few groups which are already their customers. If these changes were made, more villagers would likely access services provided by these institutions.

On the services provided by SIDO, village leaders remarked that it would be beneficial if SIDO decentralized its services to lower levels, such as district headquarters or even at ward and village levels, so that it can be nearer to the needy in rural areas instead of remaining only at regional headquarters. They also cited that it would be better if SIDO softened loan conditions so that poor peasants could afford to access the loans it provides. They cited one condition which requires individual loan applicants to have two guarantors and collateral to the tune of 125 per cent of the value the loan as not affordable to the majority of rural citizens.

On the services provided by private money lenders, village leaders acknowledged their existence but remarked that it is difficult to know their operations precisely, as they operate in secret. The amount of interest they charge and the collateral needed is always confidential between the local money lender and the loan recipient. However, the discussion with respondents who obtained loans from private money lenders revealed that the system is very exploitative. The interest charged is very high and the collateral needed by money lenders is always in terms of land or cattle.

For example, when the client of a private local money lender borrows, say Tshs 100,000, he/she may be required to pay Tshs 10,000 per month until the period of the loan expires. At loan maturity, say six months, the borrower is required to pay in cash the same amount of money borrowed, that is, Tshs 100,000. As such the borrower ends up paying a total of Tshs 60,000 in interest over the period of six months. These remarks show that this system is not the one to bank on as a viable or sustainable strategy for promoting non-farm activities in the study villages.

### **6.2.5 Labour and Education in Non-Farm Activities**

Family size and structure affect the ability of a household to supply labour to the non-farm sector because, in larger households, enough family members are able to remain in the home or on the farm to meet labour needs for subsistence (Reardon, 1997).

The study found that both adults and children members of households were used in non-farm activities. Table 12 shows that most households (95.8 per cent) used adult members for non-farm activities, 30.7 per cent involved children's labour, and only 4.5 per cent of households used hired labour.

**Table 12: Type of Household Labour Used for Non-Farm Activities**

Type of Labour Used	Village		Total responses (n=237)
	Mvumi Mission (n=134)	Bahi Sokoni (n=103)	
	% of households	% of households	% of households
Household adults	92.5	99.0	95.8
Household children	36.2	25.2	30.7
Hired Labour	4.0	4.9	4.5

Source: Field survey, October 2010

Discussion with respondents revealed that children were involved in non-farm activities mostly during weekends and in the evenings on week days after returning from school. It also revealed that hired labour was used seasonally, usually during the peak periods for business operations.

Education level was a key factor in participation rates and performance in rural non-farm activities at the household level (Gordon & Craig, 2001). According to Ibekwe et al. (2010), the education level of the household head significantly positively influences the performance of rural non-farm activities. This study found that most heads of households (88.5 per cent) participating in non-farm activities in the study villages had attained primary school education (Table 13). Few heads of household (7.2 per cent) had attained secondary education, and 4.3 per cent had non-formal education. Discussions with respondents revealed that most non-farm activities were small in nature and did not need higher education in most cases.

**Table 13: Education Level of Heads of Households Participating in Non-Farm Activities**

Education Level	Village		Total (n=237)
	Mvumi Mission (n=134)	Bahi Sokoni (n=103)	
	% of households	% of households	% of households
Non-formal education	3.7	4.9	4.3
Primary education	89.6	87.3	88.5
Secondary school education	6.7	7.8	7.2

Source: Field survey, October 2010

However, in-depth discussion with non-farm operators, especially in the production sector such as hand crafts, welding, carpentry and masonry, and some service activities such as hair salons, indicated that they keenly desired specialized training so that they could acquire the skills to master their businesses and increase their efficiency and productivity. This discussion tallies with the observation by Carney (1998) that education is a key factor that determines the quality and productivity of human resources participating in rural non-farm activities.

### 6.2.6 Constraints on Performance of Non-Farm Activities

A variety of factors affect the operations and growth of rural non-farm activities. According to the World Bank (2007), the most important factors that constrain rural entrepreneurs are lack of capital and basic infrastructure. This study found that lack of capital for running non-farm activities once started was the most common constraint affecting the performance of these activities. This was mentioned by 54.2 per cent of respondents (see Table 14). Lack of relevant business skills ranked second, reported by 18.3 per cent of respondents. Other constraining factors cited included women's household gender roles (5.2 per cent), poor business premises (11.8 per cent), inefficient transport to and from markets (3.9 per cent) and others factors such as inadequate labour and customers, and incidence of illness among business operators.

**Table 14: Factors Affecting the Performance of Non-Farm Activities by Sex of Household Head**

Factor affecting performance	Mvumi Mission			Bahi Sokoni			Total		
	Male (n=167)	Female (n=63)	Total (n=230)	Male (n=103)	Female (n=68)	Total (n=171)	Male (n=270)	Female (n=131)	Total (n=401)
	%	%	%	%	%	%	%	%	%
Inadequate capital	50.3	58.7	52.6	54.4	55.9	55.0	51.9	57.3	53.6
Lack of business education	18.0	17.5	17.8	17.5	20.6	18.7	17.8	19.1	18.2
Unreliable Transport	5.4	3.2	4.8	5.8	1.5	4.1	5.6	2.3	4.5
Gender roles of women in household	9.6	3.2	7.8	7.8	10.3	8.8	8.9	6.9	8.2
Poor business premises	6.0	3.2	5.2	5.8	2.9	4.7	5.9	3.1	5.0
Others	10.8	14.)	11.7	8.7	8.8	8.8	10.0	11.5	10.5

Source: Field survey, October 2010

That the lack of capital was cited by respondents as the most common constraint in running non-farm activities is not surprising, as the high rates of income poverty in rural areas of Tanzania are very well documented (NBS, 2009). This problem can be attributed to low productivity in agriculture compounded by the lack of reliable financial services in the study villages.

Lack of business skills can be attributed to the lack of institutions that provide training in the villages. A discussion with the District Planning Officers in the two study districts revealed that this task is supposed to be accomplished by the community development departments within the district authorities, but no funds had ever been allocated for this kind of activity.

The problem of poor premises, which was cited by 5 per cent of respondents, was clearly observed during fieldwork. For example, the market places in both villages and the premises of most non-farm activities were unhygienic and of a temporary nature.

Women’s gender roles within the household were mainly mentioned by the women participating in non-farm activities. They remarked that household obligations such as cooking, looking after children, especially when they are ill, and fetching water, affected their levels of concentration on non-farm activities.

### 6.3 Contribution of Non-Farm Activities to Poverty Alleviation

#### 6.3.1 Income Obtained from Rural Non-Farm Activities

Various studies in Sub-Saharan Africa concur that a substantial part of rural household income is generated from non-farm activities (Ellis & Freeman, 2004; Ellis, 2000; Reardon, 1997).

The study collected information on household income by asking respondents to estimate the amount of income earned from non-farm and other activities in the previous year. Despite the poor records of earnings by the surveyed households, Table 15 shows the estimated annual earnings from non-farm activities. It demonstrates that a considerable number of households earned income between Tshs 100,001–200,000 (37.6 per cent) and Tshs 200,001–300,000 (20 per cent) from non-farm activities. The calculated average income is Tshs 139,454. These levels of earnings in the study villages are slightly higher than the average annual rural household income from rural non-farm enterprises of about Tshs 145,431 reported elsewhere in Tanzania (World Bank, 2007).

**Table 15: Annual Household Income from Non-Farm Activities**

Annual Earnings (Tshs)	Village		Total (n=237)
	Mvumi Mission (n=134)	Bahi Sokoni (n=103)	
	% of households	% of households	% of households
≤100,000	21.6	9.7	16.5
100,001–200,000	36.6	38.8	37.6
200,001–300,000	23.1	17.5	20.7
300,001–400,000	11.9	23.3	16.9
400,001–500,000	1.5	2.9	2.1
500,001–600,000	1.5	3.9	2.5
600,001+	3.7	3.9	3.8

Source: Field survey, October 2010

The study attempted to estimate the contribution of income earned from non-farm activities to total household annual earnings. Table 16 shows that for 57 per cent of the households surveyed, the per centage share of income earned from non-farm activities in total household earnings ranged from 41 to 60 per cent.

**Table 16: Share of Earnings from Non-Farm Activities in Total Household Earnings**

Share of earnings	Village		Total (n=237)
	Mvumi Mission (n=134)	Bahi Sokoni (n=103)	
	% of households	% of households	% of households
11–20%	0.7	0.0	.4
21–30%	6.7	2.9	5.1
31–40%	23.1	15.5	19.8
41–50%	26.1	43.7	33.8
51–60%	23.9	23.3	23.6
61–70%	9.7	5.8	8.0
71–80%	3.7	7.8	5.5
81–90%	6.0	1.0	3.8

Source: Field survey, October 2010

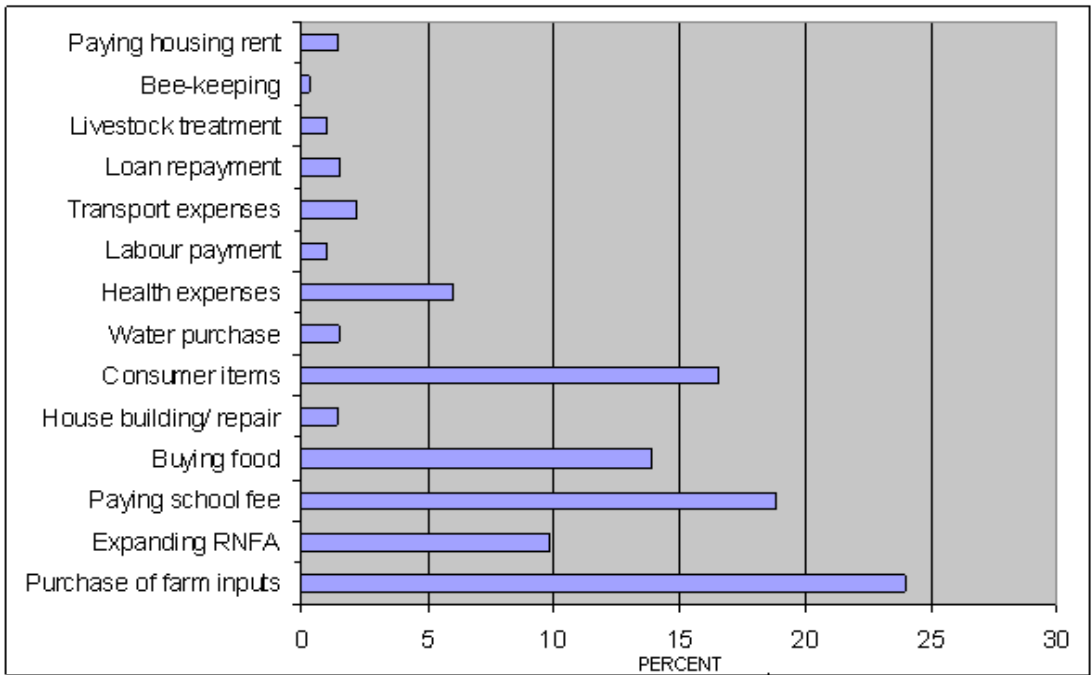
The observed share of income from non-farm activities to household income compares well to that observed in other Sub-Saharan Africa countries which is estimated to range from 30 to 60 per cent (FAO, 1998; Islam, 1997).

### **6.3.2 Use of Income from Rural Non-Farm Activities**

Diversification of livelihoods into non-farm activities not only provides rural dwellers with greater security, but also potentially opens up non-farm pathways to improving standards of living (Gordon & Craig, 2001; Ellis, 1998; FAO, 1998).

This study found that income obtained from non-farm activities was used in a variety of ways by participating households. Figure 2 shows that households used a large proportion of non-farm income on purchasing farming inputs (24 per cent), paying children's school fees, buying food items (13.9 per cent), purchasing other consumer items such as clothes, sugar and soap (16.6 per cent) and expanding non-farm activity (9.9 per cent). Other uses included house building and/or repair, paying for health services, paying for water, hiring labour, loan repayment, livestock medicines and vaccines, bee-keeping and paying for housing/accommodation.

**Figure 2: Use of Income from Rural Non-Farm Activities**



Source: Field survey, October 2010

The analysis indicates that rural non-farm activities play a sizable role in alleviating income and non-income poverty of participating households by contributing a significant share to household income and enabling these households to purchase food and consumer goods, pay for medicine and health care, pay for the education of children, as well as invest in farm inputs to enhance the productivity of agricultural activities such crop farming and livestock keeping. This observation is consistent with other studies on Sub-Saharan Africa non-farm activities which similarly found that earnings from non-farm activities alter the options open to households by providing cash resources that can be flexibly deployed. Earnings can also contribute to lessening household vulnerability by ameliorating risk and reducing the adverse consumption effects of seasonality (Ellis, 2007; Liwenga, 2003; FAO, 1998).



# Conclusion and Policy Implications

## 7.1 Conclusion

The main objective of this study was to examine the role of rural non-farm activities in poverty alleviation. The study established that various factors led households to participate in non-farm activities, including low income from farming activities, lack of land, and the need to minimize risk of crop failure due to unreliable rainfall. The study also found that a number of factors affected the performance of non-farm activities, including inadequate capital, lack of business education, poor business premises, inefficient transport to and from markets, and women's gender roles. These observations confirm the first hypothesis for this study which presupposed that there was a relationship between socio-economic characteristics of participating households and the performance of non-farm activities.

The study also established that rural non-farm and farm activities are interlinked. First, most participating households obtained capital for starting and running non-farm activities from selling crops, livestock and bee products. Second, most households invested income obtained from non-farm activities in farm activities, including crop farming and livestock keeping. The findings confirmed the second hypothesis that there was relationship between the performance of non-farm and farm activities.

In addition, the study established that rural non-farm activities contributed to alleviating poverty of participating households in two ways. First, non-farm activities earned a significant share of total household income, and secondly, the income earned from these activities was used by participating households in a variety of ways, including purchasing farm inputs, accessing social services such as health and education, and re-investing in further non-farm activities. These findings confirm the study's third hypothesis that non-farm activities contributed to reducing poverty in participating households.

## 7.2 Policy Implications

Evidence from the study can usefully inform future policies and programmes for promoting rural non-farm activities and accelerating poverty alleviation in Tanzania. The following three recommendations emerged from the study.

- 1) Education and training is vitally needed to build confidence as well as individuals' technical and business skills to enhance the performance of non-farm activities. Establishing participatory discussion groups for households engaged in similar non-farm activities could constitute the platform for providing training and sharing experiences among group members.
- 2) Greater collaboration between the government and the private sector is required for promoting innovation and improvement of rural micro credit schemes so as to increase rural citizens' participation in non-farm activities and enhance their performance. To achieve this goal, more emphasis should be placed on promoting savings and credit schemes. This recommendation flows directly from the study's finding that most households participating in non-farm activities obtained their start-up capital from their own savings.

- 3) At the same time, farm activities also need to be promoted. Farm production and income are the base for the household food supply and often provide the source of capital for starting and running non-farm activities. Efforts to improve farm productivity should include the provision of farm input subsidy packages and improved extension services.

### **7.3 Areas for Further Research**

This study suggests two areas for future research. First, the study observed that despite their importance in poverty alleviation, rural non-farm activities do not have any particular ministry or national institution responsible for their development, growth and promotion. In part, this has been caused by the persistent belief among policy and decision makers that the only appropriate and viable economic activity for rural areas is agriculture, despite the fact that all national indicators show that productivity levels in traditional farming activities are declining while employment levels in rural non-farm activities are on the rise. As such there is a need to conduct research on the mechanism through which rural non-farm activities can be streamlined in national policies and development plans, and institutionalized in government administration structures, the private sector and public-private partnerships, so that they are able to gain appropriate support and unleash their potential for poverty alleviation.

Second, the study observed that rural citizens engaged in the non-farm sector are frequently unable to access the financial capital for starting and running viable businesses. This forces households to rely on very limited savings from farm activities or other unreliable sources including remittances and private money lenders. As such there is a need for research to identify effective mechanisms through which potential or existing operators of non-farm activities can access financial services to start businesses and/or expand their production levels, thereby further contributing to poverty alleviation.

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# Appendices

**Appendix 1: Main Type of Non-Farm Activity by Sex of Owner in Mvumi Mission Village**

Type of Non-Farm Activity	Sex of Owner		Total (n=134)
	Male (n=92)	Female (n=42)	
Selling raw food items and fruits (genge)	2 (2.2%)	3 (7.1%)	5 (3.7%)
Food vendor	0 (0.0%)	5 (11.9%)	5 (3.7%)
Tailoring	4 (4.3%)	3 (7.1%)	7 (5.2%)
Welding	7 (7.6%)	0 (0.0%)	7 (5.2%)
Butcher	4 (4.3%)	0 (0.0%)	4 (3.0%)
Bicycle repair	8 (8.7%)	0 (0.0%)	8 (6.0%)
Vehicle mechanic	2 (2.2%)	0 (0.0%)	2 (1.5%)
Milling machine	2 (2.2%)	1 (2.4%)	3 (2.2%)
Hair dressing salon	0 (0.0%)	4 (9.5%)	4 (3.0%)
Hair cutting salon	6 (6.5%)	0 (0.0%)	6 (4.5%)
Grocery	3 (3.3%)	3 (7.1%)	6 (4.5%)
Stationery	1 (1.1%)	1 (2.4%)	2 (1.5%)
Carpentry	6 (6.5%)	0 (0.0%)	6 (4.5%)
Retail shop	17 (18.5%)	6 (14.3%)	23 (17.2%)
Local brewing	0 (0.0%)	2 (4.8%)	2 (1.5%)
Masonry	4 (4.3%)	0 (0.0%)	4 (3.0%)
Maize selling	1 (1.1%)	0 (0.0%)	1 (0.7%)
Driver	1 (1.1%)	0 (0.0%)	1 (0.7%)
Weaving	1 (1.1%)	5 (11.9%)	6 (4.5%)
Tea room	0 (0.0%)	3 (7.1%)	3 (2.2%)
Shoe repair	4 (4.3%)	0 (0.0%)	4 (3.0%)
Fish selling	1 (1.1%)	0 (0.0%)	1 (0.7%)
Local breads (mandazi) selling	0 (0.0%)	2 (4.8%)	2 (1.5%)
Boda boda (motorcycle transport)	3 (3.3%)	0 (0.0%)	3 (2.2%)
House painter	0 (0.0%)	2 (4.8%)	2 (1.5%)
Sunflower oil milling	2 (2.2%)	0 (0.0%)	2 (1.5%)
Selling second-hand clothes	3 (3.3%)	0 (0.0%)	3 (2.2%)
Plumbing	2 (2.2%)	0 (0.0%)	2 (1.5%)
Electrical technician	1 (1.1%)	0 (0.0%)	1 (0.7%)
Onion selling	1 (1.1%)	0 (0.0%)	1 (0.7%)
Telephone repair	1 (1.1%)	0 (0.0%)	1 (0.7%)
Video shooter	2 (2.2%)	0 (0.0%)	2 (1.5%)
Radio repair	1 (1.1%)	0 (0.0%)	1 (0.7%)
Chicken seller	1 (1.1%)	0 (0.0%)	1 (0.7%)
Bar	1 (1.1%)	0 (0.0%)	1 (0.7%)
Salt making	0 (0.0%)	1 (2.4%)	1 (0.7%)
Pharmacy store	0 (0.0%)	1 (2.4%)	1 (0.7%)
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Source: Field Survey, October 2010.

**Appendix 2: Main Type of Non-Farm Activity by Sex of Owner in Bahi Sokoni Village**

Type of Activity	Sex of Activity Owner		Total (n=103)
	Male (n=61)	Female (n=42)	
Selling raw food items and fruits (genge)	17 (27.9%)	9 (21.4%)	26 (25.2%)
Food vendor	2 (3.3%)	9 (21.4%)	11 (10.7%)
Tailoring	5 (8.2%)	3 (7.1%)	8 (7.8%)
Welding	2 (3.3%)	0 (.0%)	2 (1.9%)
Butchery	3 (4.9%)	0 (.0%)	3 (2.9%)
Bicycle repair	3 (4.9%)	1 (2.4%)	4 (3.9%)
Vehicle mechanic	1 (1.6%)	0 (.0%)	1 (1.0%)
Milling machine	2 (3.3%)	1 (2.4%)	3 (2.9%)
Guest house	1 (1.6%)	0 (.0%)	1 (1.0%)
Hair dressing saloon	0 (.0%)	1 (2.4%)	1 (1.0%)
Hair cutting saloon	1 (1.6%)	0 (.0%)	1 (1.0%)
Grocery	0 (0.0%)	1 (2.4%)	1 (1.0%)
Carpentry	6 (9.8%)	0 (.0%)	6 (5.8%)
Retail shop	6 (9.8%)	4 (9.5%)	10 (9.7%)
Local brewing	0 (.0%)	7 (16.7%)	7 (6.8%)
Masonry	2 (3.3%)	0 (.0%)	2 (1.9%)
Maize selling	2 (3.3%)	0 (.0%)	2 (1.9%)
Driver	3 (4.9%)	0 (.0%)	3 (2.9%)
Weaving	0 (.0%)	5 (11.9%)	5 (4.9%)
Tea room	0 (.0%)	1 (2.4%)	1 (1.0%)
Shoe repair	1 (1.6%)	0 (.0%)	1 (1.0%)
Telephone repair	1 (1.6%)	0 (.0%)	1 (1.0%)
Video shooter	1 (1.6%)	0 (.0%)	1 (1.0%)
Radio repair	1 (1.6%)	0 (.0%)	1 (1.0%)
Chicken seller	1 (1.6%)	0 (.0%)	1 (1.0%)
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Source: Field survey, October 2010.

**Appendix 3: Per centage Distribution of Total Annual Earnings of Households Participating in Non-Farm Activities**

Earnings (Tshs)	Village		Total
	Mvumi Mission	Bahi Sokoni	
≤100,000	5.9	5.9	5.9
100,001–200,000	23.9	6.8	16.4
200,001–300,000	9.9	23.3	11.8
300,001–400,000	32.1	17.5	25.8
400,001–500,000	14.1	13.6	13.9
500,001–600,000	14.2	20.4	16.9
600,001+	6.7	12.6	9.3
Total (per cent)	100.0	100.0	100.0
<b>Total</b>	<b>134</b>	<b>103</b>	<b>237</b>

Source: Field survey, October 2010.

# Household Survey Questionnaire

## PART I

### SOCIO-DEMOGRAPHIC CHARACTERISTICS OF STUDY POPULATION

1. Name of the village: \_\_\_\_\_
2. Age, gender, education and marital status of household members

H/hold members	Age	Gender		Education Level		Marital Status**	Remarks: child/ dependant and if still in school
		Male	Female	Level*	No. of years in school		
Head of H/hold: 1							
Others: 2							
3							
4							
5							
6							
7							
8							
9							
10							

**KEY:**

**\*Education Level:**

(i) Informal education, (ii) Primary education, (iii) Secondary education, (iv) Training after primary education, (v) Training after secondary education, (vi) Higher education (university and other equivalent education).

**\*\*Marital Status**

- (i) Married
- (ii) Never married
- (iii) Living together
- (iv) Separated
- (v) Divorced
- (vi) Widowed

3. Is there any person/s who is/are the member/s of your household who is/are living in town?
- (a) Yes/No \_\_\_\_\_
- (b) If yes, specify the town migrated to, sex and year of migration.

No.	Sex Male/Female	Year of migration	Town migrated to	Remarks
<b>Total</b>				

4. Does your household get any assistance/help from the mentioned urban migrants?  
 Yes/No \_\_\_\_\_  
 If yes, specify the following (in the past 12 months)

Type of assistance received		Total (Tshs)	Remarks
<b>Cash</b>			
<b>Goods/in kind</b>			
Item	Value (in Tshs)		
<b>Total</b>			

5. How did you use/spend assistance in cash (remittances) received from urban migrants (You may tick more than one item)?
- (i) Buying food
  - (ii) Paying school fees
  - (iii) Paying for treatment /buying medicine
  - (iv) Starting non-farm activity/business
  - (v) Expanding non-farm activity/business
  - (vi) House building/repair
  - (vii) Purchasing farm implements/inputs
  - (viii) Expanding farm size
  - (ix) Paying labourers
  - (x) Buying/renting new farm
  - (xi) Buying livestock
  - (xii) Other (please specify) \_\_\_\_\_
6. Is there any member of your household who is a member of any social or economic group in the village or outside the village? Yes/No
- (i) If yes, where is it located? (a) in the village, (b) in another village, (c) in town (specify).....

(ii) What is/are the major activity/activities of the group?  
 .....  
 .....  
 .....

(iii) How does your household benefit from the group?  
 .....  
 .....

## PART II

### ECONOMIC ACTIVITIES OF STUDY POPULATION

7. What is the major economic activity in your household?
  - (i) Crop farming
  - (ii) Livestock keeping
  - (iii) Non-farm activity
  - (iv) Bee-keeping
  - (v) Other (please specify)\_\_\_\_\_
  
8. Apart from the major economic activity mentioned above, what other economic activities is your household (members) engaged in? (you can mention more than one activity)
  - (i) Non-farm activity
  - (ii) Crop farming
  - (iii) Livestock keeping
  - (iv) Bee-keeping
  - (v) Other (please specify) \_\_\_\_\_

#### A. NON-FARM ACTIVITIES

9. Is your household (members) engaged in any non-farm activity? Yes/No
  - (i) If yes, what factors caused your household to engage in non-farm activity:
    - (a) Land inadequacy
    - (b) Low income from agricultural activities
    - (c) Minimize risk of poor agricultural performance
    - (d) Increased customers
    - (e) Other
  
  - (ii) If no, mention constraints that make you and your household members from engaging in any non-farm activities:
    - (a) Finance (specify).....
    - (b) Education and skills required (specify).....
    - (c) Age of household members (specify).....
    - (d) Afraid to risk or diversify from current activities (specify).....

- (e) Gender roles/relations (specify).....
  - (f) Premises to carry out activity (specify).....
  - (g) Other (please specify).....
- (iii) If participating, what type of non-farm activity (includes labouring) does your household engage in? Specify year you started each activity and type of household members involved.

Type of Activity	Year the activity started	Household members involved			Remarks
		M	F	Children (if involved)	

10. When does your household (members) engage in non-farm activity?
- (a) Throughout the entire year
  - (b) During off-farming season
  - (c) After farming activities (in the evening)
  - (d) Other (please specify).....
11. How do you perceive the non-farm activity in which your household engages in?
- (a) As primary activity
  - (b) As secondary to primary activity/activities (specify it/them)
    - (i) Agriculture
    - (ii) Livestock keeping
    - (iii) Bee-keeping
    - (iv) Other (Please specify).....
12. If you work/labour in non-farm activity sector as a wage earner, in which category are you?
- (a) Casual labourer/worker (specify activity).....
  - (b) Regular salaried employee/worker (specify activity).....
  - (c) Other(pleasespecify).....
  - (d) How much do you earn per month in your labouring non-farm activity?
 

Tshs.....
13. What factors which affect the performance/productivity of non-farm activity your household is engaged in? (Please also specify how?)
- (a) Finance .....
  - (b) Education and skills required .....
  - (c) Health.....
  - (d) Age of household members .....

- (e) Afraid to risk or diversity from current activities.....
  - (f) Age of household members.....
  - (h) Transportation – roads and transportation services.....
  - (i) Gender roles/relations .....
  - (j) Premises to carry out activity.....
  - (k) Other (specify).....
14. In the non-farm activity you engage in, have you (or any of your household members) had any training/education? Yes/No
- (1) If yes,
- (a) Which type of training?
- (i) Management of money
  - (ii) Cooperatives
  - (iii) Handcraft (specify).....
  - (iv) Carpentry
  - (v) Masonry
  - (vi) Business management/entrepreneurship
  - (vii) Project planning
  - (viii) Other (please specify).....
- (b) Who offered this training (specify the training/s offered)?
- (i) Central Government (specify dept & training).....
  - (ii) Local Government (specify dept & training).....
  - (iii) NGO (specify name & training).....
  - (iv) FBO (specify name & training).....
  - (v) Others (specify name and training).....
  - (vi) Don't know (specify training) .....
- (2) If no, why? (mention the reason/s that prevented you from attaining such training).....
15. Where is/are your non-farm activities located?
- (i) Home-based activity (specify activity).....
  - (ii) Away from home (specify activity, location e.g. at village centre, in another village, etc).....
16. (a) Are the activities engaged in by your household (members) formal (with license/registered) or informal (without license/unregistered)?
- (b) Who own/s the activities in terms of gender?

S/N	Activity	Type of activity: formal/informal	Ownership (male/female)

17. Who influenced your household to engage in non-farm activity?
  - (a) Friends and relatives participating in the non-farm sector before
  - (b) Friends and relatives who migrated to the area with non-farm activity opportunities
  - (c) Friends made during training course attended
  - (d) Other, please specify .....
  
18. To your understanding, was your household decision to participate in non-farm activities influenced by poor condition of your household or to respond to the emerging opportunities in the non-farm sector (such as markets)? Explain briefly.....  
.....
  
19. Is there any factor/s that make/necessitate women in the household to engage in non-farm activities?
  - (a) Loss of assets (e.g. land after husband's death) explain).....  
.....
  - (b) Husband's migration out of village to urban areas
  - (c) Poor earnings of husband
  - (d) Being head of household and therefore increased responsibility
  - (e) Inadequate land owned by the household
  - (f) Membership of economic/social groups
  - (g) Other (please specify) .....
  
20. Are there any factors affecting women participation in non-farm activities?
  - (a) Gender roles/relations (children rearing, cooking, etc.)
  - (b) Husband not allowing
  - (c) Lack of power to owner of land
  - (d) Lack of power to access financial credits
  - (e) Lack of power to own products/outputs
  - (f) Lack of power to own productive assets, e.g. land etc.
  - (g) Lack of power to own and control economic activity in the household
  - (h) Religious norms
  - (i) Others (specify) .....
  
21.
  - (a) Does your household know traders in the non-farm activities. Yes/No
  - (b) If yes, how many are living in the village? .....
  - (c) How many are living outside the village?.....
  
22.
  - (a) Do you have friends/relatives you know who can offer some help in carrying out non-farm activities? Yes/No.
  - (b) If yes, how many are living in the village? .....  
How many living outside the village?.....
  
23.
  - (a) Do you have non-farm activity input suppliers that you know? Yes/No
  - (b) If yes, how many are living in the village? .....  
How many living outside the village?.....

24. (a) Do you personally know any of the clients of the products you produce? Yes/No  
 (b) If yes, how many are living in the village? .....  
 How many living outside the village?.....
25. What are the physical resources which affect your non-farm activity (if any)? (Rank them in order of seriousness to your activities by labelling 1, 2, 3, 4 and specify how?).  
 (a) Roads.....  
 (b) Electricity.....  
 (c) Telecommunications.....  
 (d) Others (please specify) .....
26. (a) What amount of capital did you start your non-farm activity with?  
 (b) What is the total value of your non-farm activity capital now ?

S/No	Activity	Start-up capital (Tshs)	Current capital/value (Tshs)

27. Where did you get capital (funds) for starting your non-farm activity?  
 (a) Own saving  
 (b) Borrowed from relatives/friends  
 (c) Borrowed (credit/loaned) from financial institution/s (specify).....  
 (d) Remittance from family members who have migrated to town  
 (e) Loan from local money lenders  
 (f) Other (please specify) .....
28. What difficulties (if any) you experienced in getting start-up funds/capital? (Specify how?).  
 (i) Access to private money lender.....  
 (ii) Access to any rural based financial service.....  
 (iii) Access to any urban based financial service.....  
 (iv) Other (specify).....
- 29 (a) Have you ever attempted to get credit from any source so that you start or improve your non-farm activity/business? Yes/No  
 (b) If yes, from which institution/source and for what purpose? Specify if you faced any problems/barriers of borrowing from any of the mentioned sources.

No.	Institution/ source	Location within the village/ town	Purpose of borrowing	Succeeded/ Not succeeded	Any problems/ barriers faced
1.	Bank (specify)				
2.	SACCOS (specify)				
3.	Local Group (specify)				
4.	Private money lenders (specify)				
5.	Friends/relatives (specify)				
6.	Others (please specify)				

30. If you obtained loan or borrowed funds for starting or expanding your non-farm activity/ business, which kind of collateral did you use?
- (i) None
  - (ii) Land (specify).....
  - (iii) Other assets (specify) .....
  - (iv) Business group members (specify).....
  - (v) Others (specify) .....
31. (a) In your opinion, what could be done to improve the situation as regards to financial capital for boosting households participation in the non-farm activities in rural areas?  
.....
- (b) What other measures do you suggest/think that could increase participation of your household in non-farm activities in your village? .....  
.....
32. (a) Do you have any desire to expand your non-farm activity ? Yes/No
- (b) If yes, are you facing any constraints? (Please specify how?)
- (i) Limited funds.....
  - (ii) Availability of electricity.....
  - (iii) Availability of clean water.....
  - (iv) Poor roads to and from markets.....
  - (v) Poor transportation services to and from markets.....
  - (vi) Leadership (specify level).....
  - (vii) Long process involved in acquiring business license/registration.....
  - (viii) Access to land/land policy.....
  - (ix) Other (specify).....

33. What category/sector is/are your non-farm activities in?
- (a) Industry/manufacturing (specify the type/products).....
  - (b) Services e.g. hotel, saloon, etc. (specify type).....
  - (c) Trade (specify type and commodity).....
  - (d) Other (Please specify) .....
34. What type of raw materials do you use in your non-farm activity/activities?

S.No	Activity	Raw materials used

35. Where do you get raw materials for your non-farm activity/business?

S.No	Activity	Place where raw material is obtained (e.g. within the village, in other villages, in town, other (specify)	Approximate distance to the source of raw materials in kms

36. (a) Do you employ labourers in your non-farm activity/business/es? No/Yes
- (b) If yes, how many    Males.....                      Females.....                      Total .....
- (c) How many household members engaged in your non-farm activity/business/es?
- Males .....                      Females .....                      Total .....
37. On average, how much do you pay each labourer per month? Tshs. ....
38. How your non-farm activity owned?
- (a) Self owned
  - (b) Group/Jointly owned (specify with whom) .....
  - (c) Others. Please specify .....
39. What kind of transport do you use in your business?
- (a) Own bicycle
  - (b) Own ox or donkey
  - (c) Own cart
  - (d) Motorcycle
  - (e) Public transport

- (f) Hired vehicle
- (g) Own vehicle
- (h) Other (please specify).....

40. What kind of communication do you use in your non-farm activity?
- (a) Telephone
  - (b) Other, please specify .....

41. In the non-activity engaged by your household, how much do you produce per month?

S.No.	Activity	Unit of production e.g. kgs	Amount produced per month
Total			

42. In the non-farm activity engaged by your household, how much do you earn per month/year?

S.No.	Activity	Earnings per month (Tshs)	Earnings per year (Tshs)
Total			

43. Where do you sell (markets) products of your non-farm activity?

S.No	Non-farm activity product	Market place [within the village, in other villages, in town, other (specify)]	Approx. distance to the market place
1.			
2.			
3.			
4.			
5.			

44. On which items/activities do you spend the income earned from non-farm activities (include expenditure on farm (crop farming, livestock farming or bee-keeping, if any)

S.No	Items/activities on which income earned from non-activities was spent (in rank order of magnitude)
1.	
2.	
3.	
4.	
5.	
6.	

## B. FARM ACTIVITIES

### (I) CROP FARMING

45. If you are practicing crop farming, which crops are you farming?
- (a) Sunflower
  - (b) Simsim
  - (c) Sweet potatoes
  - (d) Maize
  - (e) Millet
  - (f) Sorghum
  - (g) Cassava
  - (h) Cow peas
  - (i) Vegetables
  - (j) Other crops (specify) \_\_\_\_\_
46. How much arable land does your household own? (acres) \_\_\_\_\_
47. How did you acquire land you own?
- (a) Inheritance
  - (b) Purchasing
  - (c) Renting
  - (d) Bush clearing
  - (e) Other (specify) \_\_\_\_\_
48. Does that amount of land satisfy your household needs?
- (a) Yes
  - (b) No (Explain why) \_\_\_\_\_
49. Which agricultural implements do you use in farming?
- (a) Hand-hoe
  - (b) Ox-plough
  - (c) Tractor
  - (d) Others (specify) \_\_\_\_\_

50. Which categories of labour does your household employ in agricultural production?
- Family labour (adults only)
  - Family labour (including children)
  - Hired labour
  - Working partners
  - Other (specify)\_\_\_\_\_
51. For each of the mentioned crops that you cultivate, how much land was cultivated in the last farming season/year? (Specify if you practise mixed cropping)

<b>Crop</b>	<b>Hectares/acres Cultivated</b>	<b>If you practise mixed crop farming, specify with crops</b>
(i) Sunflower		
(ii) Simsim		
(iii) Sweet potatoes		
(iv) Maize		
(v) Millet		
(vi) Sorghum		
(vii) Cassava		
(viii) Cow peas		
(ix) Vegetables		
(x) Other crops (specify)		

52. What amount of crops did you harvest last year for each crop?

<b>Crop</b>	<b>Kgs Harvested</b>	<b>Remarks</b>
(i) Sunflower		
(ii) Simsim		
(iii) Sweet potatoes		
(iv) Maize		
(v) Millet		
(vi) Sorghum		
(vii) Cassava		
(viii) Cow peas		
(ix) Vegetables		
(x) Other crops (specify)		

53. Was the last year a good, average or bad year in terms of weather (rainfall)? \_\_\_\_\_
54. If not an average one how much could you have harvested in an average weather/rainfall year for each crop?

<b>Crop</b>	<b>Kgs</b>	<b>Remarks</b>
(i) Sunflower		
(ii) Simsim		
(iii) Sweet potatoes		
(iv) Maize		
(v) Millet		
(vi) Sorghum		
(vii) Cassava		
(viii) Cow peas		
(ix) Vegetables		
(x) Other crops (specify)		

55. What was the selling price for each crop per 100Kg sack or other unit as applicable?

<b>Crop</b>	<b>Unit</b>	<b>Price per unit</b>	<b>Remarks</b>
(i) Sunflower			
(ii) Simsim			
(iii) Sweet potatoes			
(iv) Maize			
(v) Millet			
(vi) Sorghum			
(vii) Cassava			
(viii) Cow peas			
(ix) Vegetables			
(x) Other crops (specify)			

56. What problems do you face in practicing crop farming?

- (a) Availability of improved seeds
- (b) Inadequate funds for purchasing improved seeds
- (c) Inadequate funds for purchasing improved farming tools
- (d) Inadequate funds for purchasing inputs (herbicides/pesticides)
- (e) Inadequate skills in modern farming
- (f) Low prices for produces
- (g) Availability of shops selling farm inputs
- (h) Lack of reliable transport to markets
- (i) Poor roads to and from market
- (j) Infertile land
- (k) Vermin (please specify)\_\_\_\_\_
- (l) Other (please specify)\_\_\_\_\_

57. (a) Have you ever attempted to get credit from any source so that you could improve your crop farming activity? Yes/No

- (b) If yes, from which source and for what purpose? Specify if you faced any problems/barriers of borrowing from any of the mentioned sources.

No.	Source	Location within the village/town	Purpose of borrowing	Succeeded/ Not succeeded	Any problems/ barriers faced
1	Bank (specify)				
2	SACCOS (specify)				
3	Local Group (specify)				
4	Private money lenders (specify)				
5	Friends/relatives (specify)				
6	Other (please specify) (specify)				

58. What measures do suggest/think that could improve crop farming practice in your household?  
 .....

### C. LIVESTOCK KEEPING

59. If your household keeps livestock, how many of the following livestock are kept by your household?
- (a) Cattle \_\_\_\_\_
  - (b) Goats \_\_\_\_\_
  - (c) Sheep \_\_\_\_\_
  - (d) Donkey \_\_\_\_\_
  - (e) Poultry \_\_\_\_\_
  - (f) Other (specify) \_\_\_\_\_
60. Who is responsible for care and/or grazing of the mentioned livestock?
- (a) Family labour (adults only)
  - (b) Working partners
  - (c) Family labour (including children)
  - (d) Hired labour
  - (e) Other (specify) \_\_\_\_\_
61. If your household keeps livestock (including poultry), how many have you sold or slaughtered for sale in the past 12 months?  
 How much have you received from each type?

No.	Type of livestock	Number sold/ slaughtered and sold	Selling price/ income earned from each (Tshs)	Total Amount Received (Tshs)	Remarks
1					
2					
3					
4					
5					
	<b>Total</b>				

62. Did your household sell any products from livestock (including poultry) in the past 12 months? How much did you receive from each type of product?

No.	Type of livestock Product sold	Amount received	Remarks
1			
2			
3			
4			
5			
	<b>Total</b>		

63. (a) Have you ever attempted to get credit from any source so that you improve your livestock keeping activity? Yes/No
- (b) If yes, from which source and for what purpose? Specify if you faced any problems/ barriers of borrowing from any of the mentioned sources.

No.	Source	Location: within the village/town	Purpose of borrowing	Succeeded/ Not succeeded	Any problems/ barriers faced
1	Bank (specify)				
2	SACCOS (specify)				
3	Local group (specify)				
4	Private money lenders(specify)				
5	Friends/relatives (specify)				
6	Others (please specify)				

64. What measures do you suggest/think that could improve livestock keeping in your household?  
 .....

**D: OTHER FARM ECONOMIC ACTIVITIES (BEE KEEPING, FISHING, ETC)**

65. What other economic activities carried out by your household?
- (a) Bee-keeping
  - (b) Fishing
  - (c) Other (Please specify)
66. Who is responsible for attending the mentioned economic activity?
- (f) Family labour (adults only)
  - (g) Working partners
  - (h) Family labour (including children)
  - (i) Hired labour
  - (j) Other (specify)\_\_\_\_\_
67. How much do you earn annually from the activity mentioned above (Qn.64)?

No.	Type of activity	Unit used to sell the product	Number units sold per year	Selling price/ income earned per unit (Tshs)	Total Amount Received (Tshs)	Remarks
1						
2						
3						
	<b>Total</b>					

68. (a) Have you ever attempted to get credit from any source so that you improve production in the above mentioned activity? Yes/No
- (b) If yes, from which source and for what purpose? Specify if you faced any problems/ barriers of borrowing from any of the mentioned sources.

No.	Source	Location in the village/ other village/ town	Purpose of borrowing	Succeeded/ Not succeeded	Any problems/ barriers faced
1	Bank (specify)				
2	SACCOS (specify)				
3	Local Group (specify)				
4	Private money lenders (specify)				
5	Friends/relatives (specify)				
6	Other (please specify)				

69. What measures do you suggest/think that could improve the activity mentioned above in your household? .....
70. On which items/activities do you use income from farm (crop farming, livestock bee-keeping, etc) activities? (include expenditure on starting or improving non-farm activity if any).

S.No.	Items/activities on which income was spent
1.	
2.	
3.	
4.	
5.	

PART III

MATERIAL WELL-BEING OF HOUSEHOLD

71. What assets does your household possess? (give approximate the value)

S.No.	Asset	Approximate value (Tshs)
1.	Bicycle	
2.	Motorcycle	
3.	Furniture	
4.	Farming plough	
	Other: please specify	

72. The quality of the main house of the household. The interviewer should physically observe and record the following:

Part of the building	Foundation (Stone/cement bricks/ mud-bricks/mud)	Wall (Stone/cement bricks/ mud-bricks/ mud, mud and poles, others)	Roof (C.I. Sheets, poles, thatch, others)	Remarks
Materials used in construction of the house				

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