RURAL-OUT MIGRATION AS A LIVELIHOOD DIVERSIFICATION STRATEGY TO RURAL HOUSEHOLDS: A STUDY OF MAKETE AND IRINGA RURAL DISTRICTS, TANZANIA

By

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A Thesis Submitted in Fulfillment of the Requirements for the Degree of Doctor of Philosophy of Economics of Mzumbe University

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CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a thesis entitled **Rural-Out Migration as a Livelihood Diversification Strategy to Rural Households: A Study of Makete and Iringa Rural Districts, Tanzania**, in fulfillment of the requirements for award of the degree of Doctor of Philosophy in Economics of Mzumbe University.

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DECLARATION

I, Fred Alfred Rwechungura, declare that this thesis is my own original work and that it has not been while presented to any other university for a similar or any other degree award.

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DEDICATION

To Florian Mberwa, Franklin Mulisa and Faith Muhairwe.
Let this piece of work be an inspiration for higher achievements in your lifetime!

LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
APHRC	African Population and Health Research Centre
BBC	British Broadcasting Cooperation
BCID	Bradford Center for International Development
BRLP	Bihar Rural Livelihoods Project
CAN	Calcium Ammonium Nitrate
CCIS	Center for Comparative Immigration Studies
CDS	Centre for Development Studies
CELADE	El Centro Latinoamericano De Desarrollo
CEPAL	Comision Economica Para America Latina
CIAT	International Center for Tropical Agriculture
CSA	Central Statistical Authority
CUREMIS II	Current and Emerging Issues for Economic Analysis and Policy Research
DAP	Diammonium Phosphate (Double Ammonium Phosphate)
DARE	De-Agrarianization and Rural Employment
DED	District Executive Director
DFID	Department for International Development
DSTY	Duration of Stay
FAO	Food and Agriculture Organisation
FC	Financial Capital
FCND	Food Consumption and Nutrition Division
FNC	Financial Capital
GB	Great Britain
GCIM	Global Commission on International Migration
GDP	Gross Domestic Product
GLM	General Linear Model
GLSS	Ghana Living Standards Survey
GMS	Greater Mekong Sub-region
GR	Green Revolution
HC	Human Capital
HH	Household
HHH	Head of Household
HIV	Human Immunodeficiency Virus
HMC	Human Capital
HOD	Head of Department
IDS	Institute of Development Studies
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IIED	International Institute for Environment and Development
IITA	International Institute of Tropical Agriculture

ILO	International Labour Migration
INDEPTH	International Network for the Demographic Evaluation of Populations and their Health
IOM	International Organisation for Migration
IPR-NCR	Institute for Population Research – National Research Council
IRCO	Iringa Region Commissioner's Office
IRD	Integrated Rural Development
IRDPs	Integrated Rural Development Programmes
IRRI	International Rice Research Institute
IRSEP	Iringa Region Socio-Economic Profile
LFS	Labour Force Survey
LL	Log-likelihood
LR	Logistic Regression
MDC	Makete District Council
MDEDO	Makete District Executive Director's Office
MPTs	Migrations Patterns
NBS	National Bureau of Statistics
NC	Natural Capital
NELM	New Economics of Labour Migration
NESMUWA	Network of Surveys on Migration and Urbanization in West Africa
NGOs	Non-Governmental Organisations
NMGTs	Number of Migrants
NPK	Nitrogen Phosphorus and Potassium
NRI	Natural Resources Institute
NTC	Natural Capital
ODI	Overseas Development Institute
ODI	Overseas Development Institute
OECD	Organisation for Economic Co-operation and Development
OS	Overall Statistics
PASW	Predictive Analytical Software
PC	Physical Capital
PMG	Place of Migration
PSC	Physical Capital
RIDEPs	Regional Integrated Development Programmes
RIMCU	Research Institute for the Mindanao Culture, Xavier University
RMG	Ready Made Garments
RNF	Rural-Non Farm Sector
ROM	Rural-out Migration
SACCOS	Savings and Credit Co-operative Societies
SC	Social Capital
SIDA	Swedish International Development Cooperation Agency
SL	Sustainable Livelihood
SLAM	Sustainable Livelihoods, Access and Mobility
SLAs	Sustainable Rural Approaches

SOC	Social Capital
SPSS	Statistical Package for Social Science
TANROAD	Tanzania Road Authority
TSP	Triple Supper Phosphate
UK	United Kingdom
UN	United Nations
UN DESA	United Nations Department of Economic and Social Affairs
UN ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNDP	United Nations Development Programmes
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNFPA	United Nations Population Fund
UNRISD	United Nations Research Institute for Social Development
UNU-WIDER	United Nations University World Institute for Development Economics Research
UREA	Ammonium Nitrate/Carbamide
URT	United Republic of Tanzania
US	United States
USCB	United States Census Bureau
VEO	Village Executive Officers
WBOED	World Bank Operations Evaluation Department
WCED	World Commission on Environment and Development
WELPMGP	Women's Empowerment and Livelihoods Project in the mid-Gangetic Plain
WEO	Ward Executive Officers

ABSTRACT

This study assessed whether rural-out migration as a livelihood strategy enhanced livelihoods of rural households in Iringa region. The objectives were, to establish how dependent households were on diversified livelihood portfolios, what the determinants for rural-out migration were, and outcomes of rural-out migration and remittances from it to household assets. The study used cross-sectional data involving 272 migrant and non-migrant households.

Findings revealed that out of 272 households, 93(34%) had out-migrants. Additionally, all 272 households were dependent on diversified livelihood portfolios, with agriculture dominating, followed by non-farm activities. However, in ranking these portfolios, migration came eighth out of nine listed activities, suggesting it was not a valued source of livelihood. At household level, the following variables were significant and positively associated with rural-out migration: household size, age of household head, and the marital status of head of household. At societal level, lack of job opportunities such as non-farm self-employment, casual labour, and working in enterprises; and poor or lack of infrastructures and /or utilities such as water dams, irrigation schemes, electricity, and markets/market places accounted for rural-out migration.

On the outcomes of migration to the households' assets, migration did not have any significance to the households; instead it had more detrimental outcomes, including withdrawal of productive human resource from community; family abandonment; erosion of morals; spread of HIV/AIDS; increasing number of vulnerable children; and school drop-out.

The main conclusion from these findings is that unlike what many studies had found (in other countries), out-migration did not have better outcomes to the livelihoods of rural households in the studied districts. The policy implication of these findings is that unless rural livelihood is improved, rural-out migration will continue, as rural dwellers continue searching for 'greener pastures.' As this continues, poverty is perpetuated.

Consequently, not only will this affect urban and other economically vibrant areas where migrants continue flocking to by saturating these destinations' capacity to handle the migrants, but it will also affect poor rural areas negatively by draining their energetic and productive human resource.

On this basis, the need to promote rural livelihood diversification by breaking the cycle of poverty through development of correct policies on human capital, infrastructure and utilities, credit provision, and enabling environments for grassroots initiatives is imperative. Likewise, adopting social protection approach, market-based approach, labour union approach, and rehabilitation approach could be steps in the right direction towards addressing problems associated with rural-out migration.

Key words: Livelihoods, livelihoods diversification and rural-out migration

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CHAPTER ONE

BACKGROUND AND PROBLEM SETTING

1.0 Introduction

Thinking about rural development in poor countries is not a new agenda, and any attempt to describe evolving ideas in rural development over the past century risks oversimplification. However, it is worthy mentioning that a better examination of the evolution of rural livelihood can probably be made best by tracing rural development from its historical perspectives starting with the Green Revolution (GR), followed by Integrated Rural Development (IRD) Approach, and Sustainable Rural Livelihoods Approach (SLAs). While it is superficially logical to characterize rural development with the Green Revolution era (1940s-70s), with the Integrated Rural Development Projects Approach era (1970s-80s), and with the Sustainable Rural Livelihoods Approaches (1990s-20s) as popular rural development ideas, their effects on rural policies did not indeed undergo transitions in such an organized style as these approaches suggest, which makes continued studies on rural development inevitable (Ellis, 2001). Moreover, throughout the literature, there is an uneven understanding about sets of rural development ideas across different disciplines, across centers of learning, across prominent think-tanks, across international agencies and across national governments, which portray that the work of studying rural development is yet to be accomplished. It is argued by Ellis (2001) that there are leads and lags in the transition of new ideas across space and time. Hence, the recent Sustainable Rural Livelihoods Approaches emerged as a ‘lesson learnt’ after a series of limited successes that have been observed in the implementation of various rural development ideas before (Carney, 1998).

Sustainable Livelihood Approaches (SLAs) have been viewed to represent an evolutionary way of thinking about objectives, scope, and priorities of development that would better meet the needs of the poor, both at project and policy level (Department for

International Development [DFID], 2000a). SLAs recognise that rural households and individuals (men, women, children, young, middle-aged, and old) are all differently affected by poverty and have different skills and strengths to overcome it (Chambers &Conway, 1992). Rural people's option to the kinds of livelihood strategies that will provide them with better livelihood outcomes is a result of the different assets they possess, structures and different processes that impact on them, and cultural effects and the vulnerability context under which they operate. It is stated by Ellis (2000) that "Livelihood strategies are composed of activities that generate the means of household survival" (p. 40) and they change as the external environment over which has little control to changes.

The tendency for rural households to venture into multifarious occupations is often remarked, but fewer attempts have been made to link this behaviour in a systematic way to rural poverty reduction policies (Ellis, 2000). In the past it was accepted that many households in rural areas of developing countries (Tanzania inclusive) relied mostly on subsistence agriculture. It was often been postulated that the growth of farm output would create plentiful non-farm income earning opportunities in the rural economy through linkage effects (Ellis, 2003). But this assumption is no longer tenable; for the majority of poor rural households and individuals, farming on its own is unable to provide them a sufficient means of survival (Ellis, 2000).

For this reason, most rural households are found to depend on a diverse portfolio of activities and income sources, which include farm, non-farm, and off-farm as sources of income De Haan, Brock & Coulibaly, 2002; Ellis, 2000. Thus, very few people derive all their income from any one source, hold all their wealth in the form of any single asset, or use their assets in just one activity. In the literature, this is what is referred to as livelihood diversification (Barrett *et al*., 2001). There are empirical evidences from different locations including in Tanzania, which suggest that rural households do really engage in multiple activities and rely on diversified income portfolios (Ellis, 1999). In sub-Saharan Africa for instance, a range of 30-50 per cent reliance on non-farm income

sources is common; but it may attain 80-90 per cent in southern Africa. In south Asia, on average, around 60 per cent of rural household income is derived from non-farm sources. However, this proportion varies widely between, for example, landless households and those with access to land for farming (Ellis, 1999). In sub-Saharan Africa reliance on agriculture has tended to diminish continuously as income level has risen but also as climate changes have had devastating effects on agriculture as most of it is purely rain-fed. This could be translated that in Sub-Saharan Africa, the more diverse the income portfolio is the better-off is the rural household. However, elsewhere, a common pattern is for the very poor and the comparatively well off to have the most diverse livelihoods, while the middle ranges of income display less diversity (Ellis, 2000).

As pointed out by Scoones (1998), the much known broad and basic categories of rural livelihood strategies are agricultural intensification, agricultural extensification, livelihood diversification, and migration (though in some other literatures e.g Ellis, 2003, migration is considered part of livelihood diversification). Largely, these are seen to cover a wide array of options open to rural people. For example, on the hand one may gain more through the processes of agricultural intensification through increasing average inputs of labour or capital (i.e. increased labour and capital investment) on a smallholding, either on cultivated land alone, or on cultivated and grazing land, for the purpose of increasing the value of output per unit area (Tiffen *et al*., 1994). On the other hand, one might gain more through the processes of agricultural extensification implying expanding farming activities (especially cultivation) beyond existing geographic margins with or without increased labour and material input. But also one may gain more of his/her livelihood from livestock rearing, aquaculture, and forestry. All means of gains from agricultural related undertakings can take place on either own account farming (whether on owner-occupied land, or on land accessed through cash or share tenancy) or off-farm (here it refers to wage or exchange of labour on other farms i.e. within agriculture but not on own-account farming) (Ellis, 2000). In addition, one can also gain more by diversifying to a range of non-farm income earning activities; which

refers to non-agricultural income sources such as non-rural wage or salary employment, non-farm rural self-employment, and property income (rents, etc). Lastly, one can also gain more by moving away to, either temporarily or permanently to seek a livelihood elsewhere (Scoones, 1998). More commonly, these strategies are pursued in a particular combination or in sequence (Ellis, 1998).

Economic studies distinguish between several different categories and sub-categories of income sources when referring to diverse income portfolios. Different individuals and households are likely to possess different potential access to different income sources, and, therefore, participation in these sources will have different impacts on poverty and income distribution (Ellis, 2000). The very fundamental categories of rural livelihood (income) diversification are farm[1], off-farm[2] and non-farm[3] income sources (Barrett *et al*., 2001).

From the above description of livelihood strategies, it is evident that rural-out migration is one of the major possible strategies open to rural households to diversify their portfolio of activities. This is asserted by De Haan (2000) that "migration is best understood as one of the strategies adopted by rural individuals, households, or communities to enhance their livelihoods" (p. 7). Through different forms of migration, rural households engage in income diversifying sources by allocating labour for off-farm or non-farm activities occurring locally or in other localities (Waddington & Sabstes-Wheelr, 2003).

[1]Income generated from own account farming (farming for own consumption) whether on owner-occupied land, or on land accessed through cash or share tenancy.
[2]Refers to wage or exchange of labour on other farms (i.e. within agriculture but not on own-account farming).
[3]Refers to non-agricultural income sources, it include non-rural wage or salary employment, non-farm rural self-employment, property income (rents, etc), urban-to-rural remittances arising from migration from within and across national borders and overseas.

1.2 Historical perspectives of rural-out migration in Tanzania

Rural-out migration has existed as a human undertaking for varying reasons and is as old as human history itself, and has continued to exist hitherto. More notably, the first rural-out migration in various parts of Tanzania as in many other parts of Africa is seen as originating from forced labour and creation of labour reserves. Undoubtedly, it started with the penetration of colonial capitalism in the nineteenth century (Mbonile, 1995). Three decades ago studies of migrant labour accentuated how the peasant sector was penetrated by the emergent colonial capitalist sector, and how the two sectors articulated, interacted and the former became dependent on the latter (Legassick, 1974). The dominant capitalist sector ultimately acted to capture peasant enclaves, pump out labour for industrialization, and preserve peasant societies for the benefit of capitalism.

Through the acquisition of male labourers from rural areas, the rural areas were more or less left to women as men migrated for long work contracts on settler estates (Bryceson, 1980). Land was often deficient or alienated to settlers and plantations in order to decrease an independent peasant option. As a result, in the absence of men, women were obliged to increase their labour output for food production or engage in merchant activities in order to make up for the loss of men's labour (Bryceson, 1980). In the first decades of colonialism, women often showed themselves to be very skilful at increased commodity and market production (Legassick, 1974). Schmidt points out that while fearing the loss of control over men's labour if women provided them with economic independence, colonial states (especially where settlers were present) used legislation to restrain women's initiatives. The resulting land shortage, overcrowding and over-use resulted in impoverishment which has rocked these areas to present times. Responding to this situation, women migrated for domestic labour; with a few exceptions they did not enter the wage labour work force like men (Walker, 1990).

Historically, in Tanzanian context, the establishment of labour reserves started with the coming of the Germans who established plantations along the coast and in the north-eastern part of the country (Mbonile, 1996). Besides cash crops, the settlers also

produced food crops, which were consumed locally or exported (Mbonile, 1995). In general, both the plantations and individual settlers required large numbers of workers to cultivate these plantations (Mbonile, 1996). Initially, these plantations did not attract sufficient wage labourers because they paid low wages and most Africans were not used to this form of labour. Therefore, in order to obtain this highly demanded labour, the country was deliberately divided into labour reserves (Lwoga, 1985).

Sometimes workers refused to extend their contracts if plantation conditions were bad, if wage payment was irregular, or if a better deal could be obtained on a neighbouring plantation. Germans were also acutely aware that they were competing with each other to retain labour. Workers disappeared when labour was needed on their own *shambas,* especially at planting and harvest times (Sunseri, 1995). As a way of maintaining the workforce, German employers were required to give the worker part of the wage for days worked at the end of each month, but could withhold part of the monthly wage as security against breach of contract as leverage to tie workers to the plantation until the contract expired (Shivji, 1986). Moreover, settlers received aid from the state in the form of a tax policy which created monetary incentives for Africans to work on plantations. Plantation workers residing on estates paid a monthly tax of 12.5 hellers, which was half the annual tax of three rupees. Workers who remained continuously on the same plantation for longer than six months did not have to pay taxes. The labour forces of plantations would have been much smaller without these tax provisions, since working on such undertakings has never been especially popular with the natives.

When the British replaced the German colonial administration, they inherited and strengthened this economic structure because it was the only way which could ensure a constant labour supply to the plantations. On most occasions during the British era, the creation and maintenance of these labour reserves involved the introduction of several coercive measures such as the introduction of poll tax which was not paid in kind but in cash which was only obtained by working in these plantations. So this forced people especially men to move and work into these plantations to secure cash to cater for their

family and pay poll taxes (Cliffe, 1979; Lwoga, 1985; Sabot, 1979:19). However, even though poll taxes undoubtedly aided settlers in acquiring labour, they did not serve to control workers to the extent which settlers wanted. Africans had means of paying taxes which were often more lucrative than plantation work, such as marketing food and other crops, or earning wages through porterage (Shivji, 1986).

To date, this rural-out migration in Tanzania is highly practiced even in what used to be non labour reserves. For instance, according to the 2003 country profile report it showed that youths migrate from their rural settings to other places in search for land, new pastures, and employment (Southertn African Enterprise Development [SAED], 2007). This has been especially made possible, after Tanzania opened up to the foreign investors. Various areas (rural and/or urban) have had booming economic activities which have attracted many people from the rural and urban areas to make up the dependable labour force to work in these investments. These include mining areas like Mererani, Geita, Biharamulo, Maganzo near Mwadui; the fishing industry for example the Nile Perch fishing in Lake Victoria; commercial plantations such as tea plantations in Iringa and Tanga Regions; and food processing factories (United Republic of Tanzania [URT], 2003) to mention a few.

Given the variation possible in the migration process, all migrants cannot be analyzed with the same theoretical framework (de Haan, 1999). However, although heterogeneous factors make a universal definition impossible, in general, migration is a process in which an individual or a group shifts their residence from one locality to another (Ellis, 2003). A migrant is someone who breaks off activities and associations in one place and reorganizes their daily life in another place (Lipton, 1980). However, it is worthy noting that a move within the same area is considered as mobility and not migration, because the mover can continue his/her day-to-day life (keep the same job or school, shop at the same stores, and socialize with the same people) without significant disruption (Weeks, 1999), that is in this sense the mover does not break off activities and associations in one place and reorganizes their daily life in another place. Moreover, most demographers

argue that migration must involve an essentially *permanent* territorial shift in residence to be distinguished from mobility. Hence, travelers and commuters are excluded from migration studies because they move across boundaries on a temporary basis and because their movement does not generally cause major change in any population (Chant, 1992). For that case, rural-out migration is considered to be the departure of individuals or households, for more than a week or so, from the small, primarily agricultural community in which they live and reside in another locality (Pillai, 2001). The migration can be for a harvest *or* for life; to cities or to villages; for marriage, for work or for study (Weeks, 1999). Forms of migration which are open to the poor rural people and which are considered to be part of livelihood diversification strategies mostly takes place within national borders and sometimes across borders, because of their ease accessibility to the rural poor compared to those which takes place beyond national borders (Ellis, 2003).

1.3 Problem statement

A central question that is being addressed in the literature is the existence of evidence that rural-out migration can enhance sustainable livelihoods of the rural people and thus reduce poverty (Deshingkar & Start, 2003). In the literature it is acknowledged that there may be a two-way relationship between income and migration, resulting in mixed verdicts on the outcomes of migration to sending households (Deshingkar & Start, 2003). For instance, a study by Chakrapani and Vijaya Kumar (1994) in India noted that there was an increase in migrants' incomes compared to before migration. Another research on migration by Haberfeld *et al* (1999b) in Dungarpur found that households that were sending migrants had higher income levels than those not sending migrants. But Kothari's (2002) review of migration studies found that migration can both reduce and perpetuate poverty.

While a lot of scholarly work in the area of rural-out migration has been undertaken in Asian countries (e.g. India, Bangladesh and China) and some African countries (e.g. Egypt, Kenya and South Africa), very scanty by way of serious research has been

undertaken in Tanzania. Even in circumstances where migration has been observed or studied, the outcomes or rather the effect of rural-out migration to the sending households and areas of origin have not been adequately investigated. The few existing studies include, for example, that of Mbonile (1996) entitled "Towards Breaking The Vicious Circle of Labour Migration in Tanzania: A Case of Makete District" that explored a few options which people from former labour reserve areas such as Makete District could use to reduce overdependence on labour migration. The study suggested establishment of small businesses to address the problem. Katalyeba's (2002) study on rural-rural movements in East Africa suggests that there are unattended movements especially by researchers and academicians which could have a significant contribution in population dynamics and of course that could have varying outcomes to sending households. However, with these attempts to study rural-out migrations, the puzzle of "the outcomes of rural-out migration as rural households' livelihoods option to enhance the livelihoods of sending households" has been left unresolved. Thus, the outcomes of rural-out migration as a livelihoods diversification strategy to the livelihoods of rural households in this country have remained unexplored and therefore unclear.

Based on this ambiguity and paucity of evidence towards solving it, this study attempted to fill the research gap by assessing the outcomes of rural-out migration to the sending households in the research areas.

1.4 Research questions

1.4.1 Main research question

The main question that shaped the research process was: what are the outcomes of rural-out migration as a livelihood diversification strategy of rural households in Makete and Iringa Rural Districts in Tanzania?

1.4.2 Specific research questions

More specifically, this study addressed the following research questions:

1. What is the pattern of rural livelihood strategies opted by the households in the study area? Based on this pattern, how do Makete and Iringa rural households value rural-out migration as their livelihood diversification strategy?

2. What are the decisive factors amongst the household characteristics and societal factors active for migration that influence the households to choose to migrate or not to migrate?

3. What outcomes does rural-out migration have on the asset stock of the sending households in Makete and Iringa Rural Districts?

4. What are the social outcomes of rural-out migration to the sending households and communities?

1.5 Study objectives

1.5.1 The main objective of the study

The main objective of this study was to assess the outcomes of rural-out migration as a livelihood diversification strategy to rural households in Makete and Iringa Rural Districts in Tanzania.

1.5.2 Specific objectives

The specific objectives of this study are:

1. To examine the pattern of livelihood strategies amongst the rural households in the study area in order to establish the extent to which rural-out migration is considered an important livelihood diversification strategy.

2. To determine the factors amongst household characteristics and societal factors active for migration that influence households in the study areas to choose to migrate or not to migrate.

3. To determine the outcomes of rural-out migration to the asset stock of the sending households i.e. to determine whether rural-out migration can enhance the asset stock of the sending households.

4. To determine the social outcomes of rural-out migration to sending households and communities at large.

1.6 Research propositions

Based on the above problem setting narration, objectives and research questions, this study examines the following propositions:

1. Rural households in Makete and Iringa Rural Districts do regard rural-out migration as their main livelihood diversification strategy.

2. Migration decisions at household level are influenced by a set of pre-determined factors/ determinants which include household characteristics and societal factors such as available job opportunities, utilities and infrastructure development.

3. Rural-out migration has positive outcomes to the household's asset portfolio/base i.e. rural-out migration can enhance the asset stock of sending households.

4. Rural-out migration has positive social outcomes to the sending households and communities.

1.7 Significance of the study

Rural-out migration is considered the major cause of the accelerating rate of urbanisation amongst developing countries like Tanzania and it is said to contribute between three-fifths to two-thirds of this growth (United Nations [UN], 1993). Moreover, most of urban social problems such as housing, unemployment, transportation, schools, water etc. are associated with the increasing rate of rural-urban migration. Moreover, a great deal of movements takes place between and within rural areas and there have been various negative consequences attributed to these kinds of movements. For example, deforestation due to farming, soil erosion as a result of illegal mining activities, destruction of water sources, interruption of schooling activities (pupils move out of schools to search for better life somewhere else), and many others. Against this background, the migration process must be understood before the nature and causes of various problems which are attributed to rural-out migration can be solved.

From the above outlay it is obvious that rural-out migration seem to be a major problem in most developing countries like Tanzania, and therefore it can be solved through strategic policy formulations which are well informed of the nature of rural-out migration process. Any Tanzanian government intervention that is designed to tackle such rural-out migration related problems must be based on a clear understanding of who moves-out of the rural setting, how they move-out, why they move-out and what are the returns from their migration to the individual migrants and sending households. Thus, Tanzania policy makers may utilize the findings of this research study to design policy intervention which are oriented towards reducing/eliminating problems originating from the ever accelerating rate of rural-out migrations.

1.8 Scope of the study

Most migration definitions tend to be in terms of motives for migration (economic, political, disaster, social, marriage), or use temporal (short or long term, seasonal, temporary) or spatial (from rural to urban, international, how far and how close) criteria.

However, despite their focus, distinctions are often made between those movements which are considered 'voluntary' and those which are 'forced' or 'involuntary' (Kothari, 2002). The main focus of this study was on voluntary or 'free' migration in terms of both space and time rather than forced or 'non-free' migration types which may be due to natural calamity, conflict, or resulting from developmental undertakings. For that case, the study confined itself to all migration types that rural (poor) people/households consider to be their livelihood strategy. The household has the choice of deciding either to migrate or stay put.

1.9 Structure of the thesis

This thesis is organized in seven chapters including this introductory one. Chapter two three aims to pull together into a single discussion a reasonably comprehensive cross-section of the literature that examines aspects of sustainable livelihoods, livelihoods diversification and sustainable livelihood framework. The theoretical picture of how rural-out migration decisions are made and various empirical evidences on how rural-out migration can enhance the livelihoods of rural people and the conceptual framework of the study are presented. . Chapter three covers the methodology part of the study. It covers issues related to study area, the research design of the study, the study population, sample, sample size and sampling techniques, types and sources of data, data collection methods, validity and reliability issues, units of analysis and ethical issues, data analytic strategy and phases of analysis. Chapter four presents the results for the sample and its characteristics also presents the results and discussion of the findings for the patterns of rural livelihoods diversification strategies. Chapter five presents the results and discussion of the findings for the determinants of households' rural-out migration decisions. Specifically it presents the descriptive and statistical determination of the determinants of migration. Chapter six is dedicated for the presentation of the results and discussion of the findings for the outcomes of rural-out migration to the sending households. In this chapter the outcomes of migration to household's assets is determined. Finally, chapter seven provides the conclusions of the study. This chapter also presents policy implication of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Understanding of major concepts

2.1.1 Rural setting

The term rural is used in many contexts without necessarily defining the concept or its spatial implications and presents difficulties in coming up with a generalizable definition. However, many practitioners of rural development work would share Newby's (1986) opinion that ¨there is now a general awareness that what constitutes 'rural' is wholly a matter of convenience and that arid and abstract definitional exercises are of little utility" (p. 209). Various studies point to the diversity of rural areas and stress that 'rural' can mean very different things. According to United Nations [UN] (2003), rural-urban classification of population in internationally published statistics follows the national census definition, which differs from one country to another or from one area to another. National definitions of rural-urban setting are usually based on the criteria that may include variables such as population size in a locality, population density, distance between built-up areas, predominant type of economic activity, legal or administrative boundaries and urban characteristics such as specific services and facilities. Based on these criteria, the Organisation for Economic Co-operation and Development (OECD) for example defines rural area as where population density is not more than 150 inhabitants/km² (European Union [EU], 2006). On the other hand, the International Fund for Agricultural Development (IFAD) (2001) puts it even clearer that there are two main rural characteristics. First, rural people usually live in a farmstead or in groups of houses containing perhaps 5000-10,000 persons, separated by farmland, pasture, trees or scrubland. Second, most rural people spend most of their working time on farms. The national distinctions between rural and urban are arbitrary and varied. The most common definition of the borderline is 5000 persons, as in India; often it is 2500 persons or fewer, as in Mexico, or 10,000 or more, as in Nigeria (Tacoli, 1998). Other

countries, including Brazil and China, do not specify a population size but use various characteristics, from typical metropolitan facilities to legal or political status (UN, 1998). Furthermore, while sociologists define "rural settings" as those areas which are not urban in nature, quantitativists and qualitativists define rural setting differently. Quantitavists such as Whitaker (1982) say the "rural" concept is defined as indicating the population of a county exclusive of any cities or towns with 8,000 or more inhabitants. Whitaker (1982) concludes that one way to define rural is by determining what it is not. Qualitativists like Blakely (1984) say that major features that are used to define rural setting are simple life, smallness, homogeneity, dullness, and community in which people live and reside being primarily agricultural. Blakely's categorization of rural area seems to be in agreement with the criteria put forward by UN (2003) and IFAD (2001). Given this fact, this study adopted the Blakely (1984) definition because it clearly portrays a clearer picture of rural areas in Tanzanian context, as most of them to a greater extent conform to the characteristics mentioned in the definition above.

2.1.2 Rural-out migration

Demographers, anthropologists, sociologists and economists define and interpret migration differently due to the fact that they look at migration from different angles of view. In the literature it is indicated that people move/migrate for different reasons and these differences affect the overall migration process. Migration might be internal or external. According to Ritzer, internal migration refers to the movement of individuals or populations within a social system. More specifically, internal migration is a permanent change in residence from one geographical unit to another within a particular country. For example, internal migration may involve a change in residence from a rural area to a city, from one city to another, from one rural area to another or from one region of a country to another (UN, 2003).

The United Nations Educational, Scientific and Cultural Organization [UNESCO] (2000) defines migration as the crossing of the boundary of a political or administrative unit for a certain minimum period of time. It includes the movement of refugees,

displaced persons, uprooted people as well as economic migrants. Economists such as Ellis (2000, 2003) and Hossain (2001); observes that migration means one or more family members leaves the resident household for varying periods of time, and in so doing is able to make new and different contributions to the family's welfare, although such contribution is not guaranteed by the mere fact of migration. Thus migration is understood as a spatial separation between the location of a resident household or family and one or more livelihood activities engaged in by family member(s), and this is considered to be a central feature of the livelihoods of the majority of households in low income countries (Ellis, 2003).

However, it is worthy noting that migration must involve some form of permanent territorial shift in residence to be distinguished from mobility. As a result, commuters and travellers were excluded from this study simply because they only move across boundaries on a temporary basis and because their movement does not generally cause a major change in any population (Chant, 1992). In this study rural-out migration is defined as the *departure of an individual/individuals or households, for more than a week or so, from the small, primarily agricultural communities in which they live and move to reside in another locality*. Additionally, this study proposes that the forms of migration which are open to rural people and which are considered to be part of livelihood diversification strategies takes place within national borders or can be cross-border (i.e. moving to neighboring countries, the move that does not require strict conditions to be fulfilled). These movements are considered to be part of livelihood diversification strategy because of their easy accessibility to the rural poor compared to those which take place beyond national borders (Ellis, 2003).These types of migrations are for earning a living and are mostly temporal but can also be for life. Migration destinations can be to cities, towns, villages, and neighboring countries. Migrations which were due to marriage and studies were not considered for this study as these opportunities are not equally available to all households in the same localities.

2.2 Livelihood and sustainable livelihood

The concept of a livelihood is widely used in contemporary writings on poverty and rural development, but its meaning can often appear elusive, either due to vagueness or to different definitions being encountered in different sources (Ellis, 2000). Its literal dictionary definition, a livelihood is a 'means to a living' which straightaway makes it more than merely synonymous with income because it directs attention to the way in which a living is obtained, not just the net results in terms of income received or consumption attained. In actual terms, the term livelihood attempts to capture not just what people do in order to make a living, but the resources and means that provide them with the capability to build a satisfactory living, the risk factors that they must consider in managing their resources, and the institutional and policy context that either helps or hinders them in their pursuit of a viable and improved living (Ellis, 2003).

The livelihood concept was first defined by Carney (1998), that "A livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living: a livelihood is sustainable if it can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets both now and in future" (Carney, 1999a: 4)

However the most famous definition comes from the work of Chambers and Conway (1992) and a modified version of this definition has generally been adopted, with minor differences between authors and organisations. The Chambers and Conway (1992) definition of livelihood states that "A livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living: a livelihood is sustainable if it can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation and which contributes net benefits to other livelihoods at the local and global levels and the short and long term" (p. 6).

Modified versions include:

> *A livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living.: a livelihood is sustainable if it can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets while not undermining the natural resource base (Scoones, 1998: 5) or*
>
> *A livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living: a livelihood is sustainable if it can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets both now and in future while not undermining the natural resource base (Farrington et al., 1999: 1).*

Ellis (2000), in his definition of a 'livelihood', has placed more emphasis on access to assets and activities that are influenced by social relations (gender, class, kin, belief systems) and institutions. He has excluded any reference to capabilities or sustainability. He states that "A livelihood comprises the assets (natural, physical, human, financial and social capital), the activities, and the access to these (mediated by institutions and social relations) that together determine the living gained by the individual or household" (p.10).

However, Ellis's (2000) definition fails to convey change over time and adaptation to evolving circumstances of a livelihood. For example Farrington *et al.,* (1999) acknowledge that a fundamental characteristic of rural livelihoods in contemporary developing countries is the ability to adapt in order to survive; that is they keep changing according to the changing circumstances. This means that the construction of a livelihood therefore has to be seen as an ongoing process, in which it cannot be assumed that the elements remain the same from one season or from one year to the next. For instance, assets can be built up, eroded, or instantaneously destroyed (as, for example, in a flood or fire tragedy). Likewise available activities fluctuate seasonally, and across

years, especially in relation to larger economic trends in the national economy and beyond. This implies that access to resources and opportunities may change for individuals or households due to shifting norms and events in the social and institutional context surrounding their livelihoods. To come up with a working definition for this study, the study adopted the modified definitions of Chamber and Conway (1992) and its variants as given above and the Ellis's (2000) definition. Thus, the sustainable livelihood modified definition that was used throughout this study was "*A livelihood comprises the capabilities, assets (stores, resources, claims and access), access and activities required for a means of living: a livelihood is sustainable if it can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities both now and in future while not undermining the natural resource base, and which contributes net benefits to other livelihoods at the local and global levels and the short and long term*"

2.2.1 Determinants of a livelihood strategy

There are numerous initial determinants of livelihood strategy and many livelihoods are largely predetermined by accident of birth. Livelihoods of this sort may be ascriptive; for example in a village in India, children may be born into a caste with an assigned role as potters, shepherds, or washerpeople (Chamber & Conway, 1992). Gender as socially defined is also a pervasive ascriptive determinant of livelihood activities. Moreover, according to Chambers and Conway (1992), not necessarily, a person may be born, socialized and apprenticed into an inherited livelihood-as a cultivator with land or tools, a pastoralist with animals, a forest dweller with trees, a fisherperson with boat and tackle, or a shopkeeper with shop and stock; and each of these may in turn create a new household or households in the same occupation.

However, many livelihoods are also less predetermined. For instance; some people invent livelihoods with degrees of desperation, what they do being largely determined by the social, economic and ecological environment in which they find themselves. A person or household may also choose a livelihood, especially through education and

migration. Those who are better off usually have a wider choice than those who are worse off, and a wider choice is usually generated by economic growth (Ellis, 2000). Livelihood strategies may also be adopted by individuals or rural families as a means of coping strategies, since the livelihoods and survival of human individuals, households, groups and communities are constantly vulnerable to stresses[4] and shocks[5] (Institute of Develoment Studies [IDS], 1989). Therefore any livelihood which is able to avoid, or more usually to withstand and recover from stress and shocks is said to be sustainable (Conway & Barbier 1990).

2.2.2 Rural household livelihoods diversification strategies

A large and disparate literature arising from a variety of disciplines has acknowledged that rural people in sub-Saharan Africa do not normally specialize in agriculture to the total exclusion of other income generating activities as it used to be perceived (Ellis, 2000). Rather, a majority of rural producers have historically diversified their productive activities to encompass a range of other productive areas. Motivations for such diversification are multifarious, linked with a wide range of possible activities, and associated with both positive and negative outcomes. This recognition has led many researchers to represent rural livelihoods as constructed from a portfolio of resources, or activities (Ellis, 1996, 1998).

The literature generally concurs that while such diversification of livelihoods is common; it takes on a different nature in different contexts. In Ellis (1998) livelihood diversification defined as "the process by which rural families construct a diverse portfolio of activities and social support capabilities in order to survive and to improve their standards of living" (p.5). Box 2.1 identifies some of the different nature livelihoods diversification takes in different contexts.

[4] Stresses are pressures which are typically continuous and cumulative, predictable and distressing, such as seasonal shortages, rising populations or declining resources.
[5] Shocks are impacts which are typically sudden, unpredictable, and traumatic, such as fires, floods and epidemic (Conway, 1987).

Box 2.1 Different nature of rural livelihoods diversification in a range of contexts

Rural livelihoods diversification is:

- sometimes a means to enable accumulation for consumption and investment;
- sometimes employed to help spread risk, or to cope with temporary crises;
- sometimes an adaptive response to longer-term declines in income or entitlements, due to serious economic or environmental changes beyond local control;
- inevitably pursued via a range of activities that are by nature specific to the local context (in relation to resources available, culture, natural resources, climate etc.);
- often differentiated (types and degrees of diversification differ according to location, gender, age, class, and culture);
- usually structured by a wide range of motivations, restrictions and opportunities;
- often closely bound to and concurrent with the development and implementation of other livelihood strategies, especially agricultural intensification and migration;
- tempered in form and extent by wealth disparities and differential access to entitlements.

Adapted from Barrett *et al.,* (2001:14)

Livelihood strategies are activities that rural people engage themselves to earn a living (Ellis, 1998). In this regard, this study adopted this type of a definition throughout as the working definition.

2.2.3 Determinants of rural livelihood diversification

The diversity of rural livelihoods in especially low income developing countries is receiving increased attention in discussions about rural poverty reduction. This section explores the reasons for households to adopt multiple livelihood strategies. The distinction is made between diversification out of necessity and diversification by choice. Six determinants of diversification are considered in the light of that distinction, and these are seasonality, risk, labour markets, credit markets, asset strategies, and coping strategies. The section concludes by highlighting that under the precarious conditions that characterize rural households survival in many low income countries, diversification has positive attributes for livelihood security that outweigh negative connotations it may possess. The section also highlights that policies should facilitate rather than inhibit diversity. Like diversified economies, diverse rural livelihoods are less vulnerable than undiversified ones.

Diversification out of necessity versus diversification by choice

The reasons that rural individuals and households pursue diversification as a livelihood strategy are often divided into two overarching considerations, which are necessity or choice. This is sometimes posed as being a contrast between survival and choice (Danes, 1996) or between survival and accumulation (Hart, 1994). It corresponds in the migration literature to push versus pull reasons to migrate (e.g., Bigsten, 1996).

Necessity refers to involuntary and desperation reasons for diversifying. Examples might be the dispossession of a tenant family from its access to land, fragmentation of farm holdings on inheritance, environmental deterioration leading to declining crop yields, natural or civil disasters such as drought, floods or civil war resulting in dislocation and abandonment of previous assets, or loss of the ability to continue to undertake strenuous agricultural activities due to accident or ill health (Ellis, 2000).

Choice, in contrast, refers to voluntary and proactive reasons for diversifying. For example, seeking out seasonal wage earning opportunities, travelling to find work in remote locations, educating children to improve their prospects of obtaining non-farm jobs, saving money to invest in non-farm businesses such as trading, utilizing money obtained off the farm to buy fertilizers or capital equipment for the farm enterprise (Ellis, 2000).

In the literature, there is an implication, in part; with respect to this dichotomy that diversification for desperation reasons is a bad thing. It results in household members undertaking casual and low productivity activities with poor prospects. Put another way, “it is a last resort rather than an attractive alternative livelihood” (Ghosh & Bharadwaj, 1992: 154). It may also lead to households adopting a more vulnerable livelihood system than they possessed previously (Davies, 1996). Another less obviously stated implication is that poverty policies should focus exclusively on diversification borne of necessity, since the ability to choose between alternatives already puts the household in an enviable position that is above the margins of survival.

The division of the determinants of diversification into these two main types is descriptively attractive, but misleading concerning the range of experience it seeks to assign to one process or another. Choice, or the lack of it, does not obey a definable breakpoint between two mutually exclusive states. There are many instances where individual choice may be socially circumscribed at standards of living well above the survival minimum, as occurs, for example, for women in some cultural settings. More generally, diversification obeys a continuum of causes, motivations and constraints that vary across individuals and households at a particular point in time and for the same individuals or households at different points in time.

One possible starting point for examining livelihood diversification is a farm household model (Ellis, 1993; Singh *et al.*, 1986). The limitations of this approach with respect to the social relations of the household are well-known and does not need to be rehearsed here (Folbre, 1986; Hart, 1995). Its strengths are its predictive capabilities, especially concerning the interactions between household decisions and trends in the larger economy. Utilisation of this predictive capability does not preclude nor inhibit the modification or elaboration of its findings in the light of social and institutional factors.

The household economic model predicts diversification as a function of on-farm returns to labour time compared to off-farm earning opportunities. With a given asset base, i.e. land plus farm infrastructure and equipment, and a given total amount of labour time, the household makes comparisons between the return to using more of that time on the farm or deploying it in non-farm wage or other income-generating activities. Factors that increase the return to time spent on farm activities would tend to reduce the motivation to diversify. Two such important factors are an increase in the prices of farm outputs or a rise in farm productivity, obtained, for example, by cultivating a higher yielding crop variety. Conversely, a rise in off-farm or non-farm wage rates, or greater opportunities to undertake remunerative non-farm self-employment would increase the motive to diversify.

In this section, the determinants of livelihood diversification are divided between a number of key considerations, which are not mutually exclusive as determinants of diversification; they constitute distinct but overlapping forces and processes leading to diversification. They are seasonality; risk; labour markets; credit markets; asset strategies; and coping behaviour.

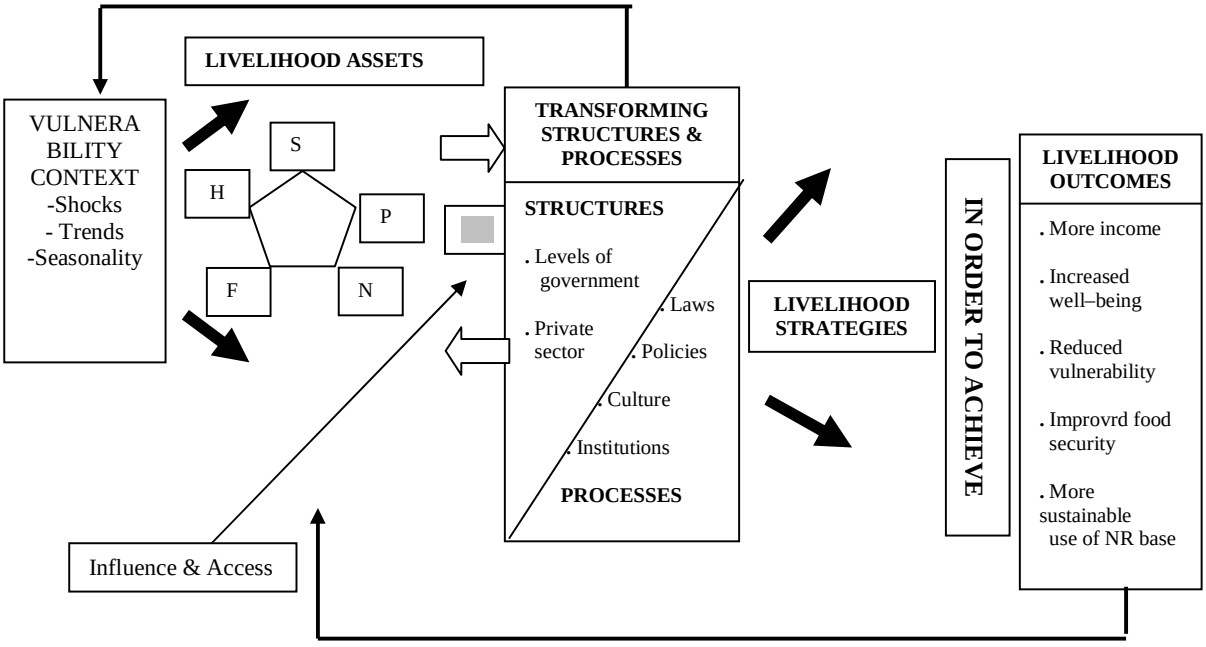
2.2.4 Sustainable livelihoods frameworks

Sustainable livelihoods (SL) frameworks are defined as tools for advancing our understanding of livelihoods, particularly the complex and socially embedded nature of the poor people's lives. They are illustrative tools that attempt to capture the interaction between livelihood assets, vulnerability and transforming structures (such as policies and institutions).They are also perceived as useful analytical structures that help practitioners and theorists to understand the reality of the poor and the complexity of rural life (Farrington *et al.,* 1999; Singh & Gilman, 1999,). The SL frameworks focus analysis on the assets and vulnerabilities that bear on poor peoples' abilities to attain and sustain their livelihoods. They emphasize understanding of the vulnerability context, the organizational and institutional environment within which poor people, drawing upon various assets, implement their livelihood strategies. Various SL frameworks have been developed and they tend to classify assets in different ways, but they seem to agree that assets (also known as stocks of capital) which are owned, controlled, claimed and/or in some other means accessed by rural households and individuals are the building blocks up on which they able to undertake production, engage in labour markets and participate in mutual exchanges with other households. For example the SL frameworks documented by Scoones (1998:4) and Carney (1998:5) identify and define five types of assets: human capital, social capital, natural capital, physical capital, and financial capital. SL frameworks have been developed in order to set out these factors in the sustainable livelihoods system and to represent the relationships between these factors.

Various literatures on sustainable livelihoods have been directing their focus towards the application of the SL framework in diverse geographical and sectoral settings (Allison,

et al., 2002; Baumann, 2000; Ellis & Mdoe, 2003; Hobley & Shields, 2000; Hussein, 2002; Turton, 2000). Various SL frameworks have been developed, for example the NGO CARE-International uses a livelihoods framework based around the concept of household livelihood security and uses the household as the main unit of analysis (Frankenberger *et al.*, 1999). Oxfam, a United Kingdom (UK) based international organisation uses the concept of sustainable livelihoods (Bradford Center for International Development [BCID], 2001) other published frameworks are the IDS framework (famously known as DFID framework) developed by Carney (1998) and Ellis (2000). Also Unied Nations Development Program [UNDP] has documented the sustainable livelihoods approach but, has no framework (Carney, 1999b). Figure 2.1a presents a sketch of a livelihood framework that is used by DFID.

Figure 2.1 (a): Sustainable livelihood framework



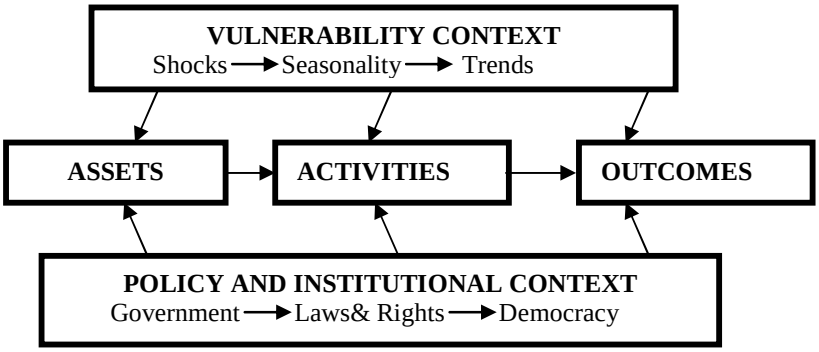
Source : Carney (1998:5)

Key:

H-Human capital; F-Financial capital; N-Natural capital; P-Physical capital; S-Social capital

All these frameworks recognize the existence of five (make use of asset pentagon) types of capital assets i.e human, social, natural, physical, and financial (e.g. see Scoones (1998:4) and Carney (2002:5), which are owned, controlled, claimed and/or in some other means accessed by rural households and individuals. These assets are recognised to be the building blocks upon which rural households and individuals are able to undertake production, engage in labour markets and participate in mutual exchanges with other households.

Figure 2.1(b): A simplified basic livelihood framework



Source: Ellis (2003:3)

Figure 2.1b presents a simplified version of the sustainable livelihoods framework used by DFID. Figures 2.1a and 2.1b shows how, in different contexts, sustainable livelihoods are achieved through access to a range of livelihood resources. In the livelihoods approach, resources are referred to as 'assets' or 'capitals' and are traditionally categorized between four and five different asset types owned or accessed by household, these may include but not limited to human capital which is considered to be the most important of all and is about people who are both the object and subject of development intervention (it refers to skills, education, health etc); natural (land, water, trees etc.); financial/economic (money, savings, loan access); physical (produced investment goods); and social capitals (networks and associations). These capital assets are

combined in the pursuit of different livelihood strategies (agricultural intensification or extensification, livelihood diversification and migration).

Central to the framework is the analysis of the range of formal and informal organizational and institutional factors (here termed as transforming structures and processes) that influence sustainable livelihood outcomes. The frameworks highlights the importance of these structures which in this context are the organisations (both private and/or public), that set and implements policy and legislation, delivers services, carry on trade and perform other functions that affect households livelihoods. Processes, such as policies, laws, institutions, cultural norms and beliefs, and power relations that determine the ways in which structures and individuals-operate and interact are also highlighted in the framework. The presence of these transforming structures might be suggesting that in pursuing their livelihoods strategies, poor people are sometimes assisted and sometimes hindered by the structures and process that surround them (Ellis, 2000). In this manner, the frameworks has been very versatile useful tools in planning and managing poverty elimination interventions, because they offer a way of thinking about livelihoods that helps order complexity and makes clear factors that affects livelihoods.

The overall message which these frameworks try to put across is that even the poorest rural individuals and households; they still have assets or resources up on which they depend, that even though they may be lacking money (financial assets), they can still make use of other types of assets in order to survive (Murkherjee *et al*, 2002). The implication here is that any attempt to make livelihoods more secure and sustainable has to build up on an understanding of the assets that people already have and how they are used. Failure to do this can lead to policies, which, often involuntarily, undermine the basis of people's livelihoods, or make them more vulnerable.

2.3 Theoretical underpinnings

2.3.1 An overview

Considering that a migrant can be a slave, refugee, a job-seeker, or one with some other reason for moving, no single theory can provide a comprehensive explanation for the migration process. Nevertheless, it remains a crucial task of those involved in migration studies to explain why people migrate. Theories of migration are important because they can help us understand better population movements within their wider social, political, and economic contexts. For example, if out-migration from the Third World nations is shown to be a result of economic problems caused by the global economy, then such migration could be managed with better international economic agreements instead of enacting restrictive immigration legislations.

There is a vast body of literature on migration, with interpretations from different disciplinary perspectives. As a result, this study picked a couple of theories which have tried to explain the concept of human migration. These theories are briefly reviewed in this section with their limitations and refinements highlighted. Finally the anchor or adopted theory for the study was determined.

2.3.2 The neo-classical migration theory (the neo-classical equilibrium perspective)

2.3.2.1 The pull-push theory

The first scholarly contribution to migration consisted of two articles by the nineteenth century geographer Ravenstein (1885, 1889), in which he formulated his “laws of migration”. He saw migration as an inseparable part of development, and he asserted that the major cause of migration was economic. Migration patterns were further assumed to be influenced by factors such as distance and population densities (Skeldon 1997:19). In this perspective people are expected to move from low income to high income areas (Lewis, 1954), and from densely to sparsely populated areas, that is, the general notion that migration movements tend towards a certain spatial-economic

equilibrium, has remained alive in the work of many demographers, geographers, and economists ever since (Castles & Miller 2003:22).

In Ravenstein's theory the relation between distance and volume of migration was central. He concluded that a "push-pull" process governed migration; that is, unfavorable conditions in one place (oppressive laws, heavy taxation, poor economic conditions, less job opportunities etc.) "Push" people out of their geographical locations while favorable conditions in an external location "pull" or attract them out. Ravenstein's laws stated that the primary cause for migration was better external economic opportunities; the volume of migration decreases as distance increases; migration occurs in stages instead of one long move; population movements are bilateral; and migration differentials (e.g., gender, social class, age) influence a person's mobility (De Haan, 2000). As found in the first paper (Ravenstain, 1885) and extended or amended in the second (Ravenstain, 1889), Ravenstein's laws are summarized in his own words in box 2.2

Box 2.2: The summary of Ravenstein's laws of migration

1.*Migration and distance*

(a) "The great body of our migrants only proceed a short distance" and "migrants enumerated in a certain center of absorption will ... grow less (as distance from the center increases)" (1885,pp. :198-99)

(b) "Migrants proceeding long distances generally go by preference to one of the great centers of commerce and industry" (1885, p. 199).

2. *Migration by stages*

(a) "There takes place consequently a universal shifting or displacement of the population, which produces 'currents of migration,' setting in the direction of the great centers of commerce and industry which absorb the migrants" (1885, p. 198).

(b) "The inhabitants of the country immediately surrounding a town of rapid growth flock into it; the gaps thus left in the rural population are filled up by migrants from more remote districts, until the attractive force of one of our rapidly growing cities makes its influence felt, step by step, to the most remote corner of the country" (1885, p. 199).

(c) "The process of dispersion is the inverse of that of absorption, and exhibits similar features" (1885, p. 199).

3. Stream and counter-stream.

Each main current of migration produces a compensating counter-current" (1885, p. 199). In modern terminology, stream and counterstream have been substituted for Ravenstein's current and counter-current.

4. Urban-rural differences in propensity to migrate
The natives of towns are less migratory than those of the rural parts of the country" (1885, p. 199).

5. Predominance of females among short-distance migrants.-"Females appear to pre-dominate among short-journey migrants" (1889, p. 288).

6. Technology and migration
Does migration increase? I believe so! . .. Wherever I was able to make a comparison I found that an increase in the means of locomotion and a development of manufactures and commerce have led to an increase of migration" (1889, p. 288).

7. Dominance of the economic motive
Bad or oppressive laws, heavy taxation, an unattractive climate, uncongenial social surroundings, and even compulsion (slave trade, transportation), all have produced and are still producing currents of migration, but none of these currents can compare in volume with that which arises from the desire inherent in most men to 'better' themselves in material respects" (1889, p. 286).

Source: Everett S. Lee (1866)

The major strength of this theory is acknowledged by de Haas (2007) that most researchers who have applied the push-pull framework have assumed that various environmental, demographic, and economic factors determine migration decisions. Two main forces (push and pull) are typically distinguished to create the pushes and pulls: (1) rural population growth causing a Malthusian pressure on natural and agricultural resources, and pushing people out of marginal rural areas, and (2) economic conditions (higher wages) luring people into cities and industrialized countries (Skeldon 1997:20; King & Schneider, 1991:62-3; Schwartz & Notini 1994). At first sight, the push-pull model seems attractive, as it is apparently able to incorporate all the factors that play a role in migration decision-making. Because of its apparent ability to integrate other theoretical insights, it has been frequently suggested that a general view of labour migration could best be achieved using a push-pull framework (Bauer & Zimmermann 1998; Schoorl *et al.*, 2006).

Limitations of the theory

Since Ravenstein's theory bears some elements of the neoclassical economic theory, it has fallen to the same trap that most dominant neoclassical economic theorists (e.g. the Harris-Todaro Model in Harris & Todaro, 1970) have found themselves in. This setback is based on the grounds that the theory has remained silent on the risky nature of

migration and the remittances that a migrant sends back home. The theory also does not explain how migration decision is reached and who decides on migration; basically the entire migration decision process is not captured by this theory. It does not also explain the threshold between pull and push factors.

Moreover, push-pull models tend to ignore the heterogeneity and internal stratification of societies, while general contextual factors habitually defined as either push or pull factors are likely to work out in a differentiated way on the individual level, and might subsequently encourage some people to leave and others to stay (De Haan, 1999). Another fundamental weakness of this model is that push and pull factors are generally mirrored in each other (de Haas, 2008). For example, the argument that migrants are lured to big cities or to foreign countries because of the high wage 'pull', is implicitly or explicitly made in relation to an apparent low wage 'push' at the sending end. It then becomes arbitrary and open to subjective judgment to establish whether the push or the pull is dominant. In fact, the differences in the relative scarcity of labour can be aptly expressed in one single variable, that is, wage differentials.

Furthermore, besides wage differentials, factors such as population pressure, demographic pressure, or environmental degradation have commonly been postulated as "root causes" of migration (King & Schneider 1991; Schwartz *et al.*, 1994; Zachariah *et al* 2001). For example, Farrag (1997:319), stated for sub-Saharan Africa that;

> *in addition to landlessness per se, out-migration dynamics were clearly influenced by small farm size, marginal ecological conditions that render cash cropping unviable, depleted soil fertility caused by population pressure on limited land and low levels of farm income.*

Nevertheless, apart from the fact that population or migration pressure are relative, difficult-to- grasp and often weakly defined concepts, such factors alone cannot explain why people move and also fail to see migration as a social *process* (de Haas, 2008). People do not typically move from places because they expect to find a 'better environment' or 'less population pressure', but because they expect to be able to make a more satisfying living elsewhere (Zachariah *et al.*, 2001). In fact, many migrants tend to

move from areas (mainly rural areas) with relatively low population densities and relatively little environmental degradation to environmentally degraded areas (mainly urban) with high population densities. People tend to be increasingly concentrated in crowded places-cities, towns, and prosperous agricultural areas-that however, in spite of their crowdedness generally offer better social and economic opportunities in terms of individual freedom, safety, education, health care, paid labour, entrepreneurial activities and amusement (Bebbington, 1999). This further illustrates the limitations and potential triviality of "push-pull" explanations.

2.3.2.2 The Harris-Todaro income differential theory

Several other important theories have been developed which try to treat different patterns of migration on their own terms, but these too are variants of the push-pull theory. First and probably the most cited, and traditionally much of the economic literature on migration has followed, is the *neoclassical migration economic theory*, (Sjaastad 1962; Todaro 1980) focusing on wage differentials.

It is argued that although the issue of migration has not attracted substantial attention within mainstream economic theory itself (Bauer & Zimmermann, 1998:95; Lee 1966:48; Passaris, 1989:7), economic explanations have nonetheless dominated popular and scholarly thinking on migration. The neoclassical theory proponents believed that at the macro-level, neo-classical economic theory explains migration by geographical differences in the supply and demand for labour it suggests that areas with surplus labour supply (and low demand) will have low wages while those with scarce labour supply and high demand will have high wages. The resulting differentials in wages cause labour (workers) to move from low-wage, labour-surplus regions (mostly rural areas) to high-wage, labour scarce regions (mostly urban areas) (Sjaastad 1962; Todaro, 1980). In this case migration would cause labour to become less scarce at the destination and scarcer at the sending end, and on the other end, capital is expected to move in the opposite direction (de Haas, 2008). In a perfectly neo-classical world, this process of "factor price equalization" (the Heckscher-Ohlin model) will eventually result in

growing convergence between wages at the sending and receiving end (Harris & Todaro, 1970; Lewis, 1954; Ranis & Fei, 1961; Schiff, 1994; Todaro &Maruszko, 1987). In the long run, this process would remove the incentives for migrating (de Haas, 2008).

At the micro-level, neo-classical migration theory views migrants as individual, rational actors, who decide to move on the basis of a cost-benefit calculation. This means each potential risk-neutral migrant decides whether or not to move, typically from rural to urban areas, on the basis of the expected income maximization objective arising from wage differentials between origin and destination areas (Harris-Todaro, 1970). Assuming free choice and full access to information, they are expected to go where they can be the most productive, that is, are able to earn the highest wages. This capacity obviously depends on the specific skills a person possesses and the specific structure of labour markets (de Haas, 2008).

Todaro (1969) and Harris and Todaro (1970) elaborated the basic two-sector model of rural to-urban labour migration. This influential "Harris-Todaro model" has remained the basis of neo-classical migration theory since then. The original model was developed in order to explain the apparently contradictory phenomenon of continuing rural-to-urban migration in developing countries despite rising unemployment in cities. The model was born out of discontent with vague and "amorphous explanations such as the "bright lights" of the city acting as a magnet to lure peasants into urban areas" (Harris & Todaro, 1970:126). Harris and Todaro argued that in order to understand this phenomenon, it is necessary to modify and extend the simple wage differential approach by looking "not only at prevailing income differentials as such but rather at the rural-urban "expected" income differential, i.e., the income differential adjusted for the probability of finding an urban job" (Todaro, 1969:138).

The expected income in the destination area not only depends on the actual (or average) earnings at the destination, but also on the probability of employment. The assumption is that as long as rural-urban income differences remain high enough to outweigh the risk

of becoming unemployed, the "lure of relatively higher permanent incomes will continue to attract a steady stream of rural migrants" (Todaro, 1969:147). Later, the Harris-Todaro model was refined to make it more realistic (Bauer & Zimmermann, 1998:97). Modifications pertained to the inclusion of other factors than unemployment that influence the expected income gains that can be achieved through migration. The potential gains in the form of higher wages should be balanced with factors such as the opportunity costs of migration, the costs of travel, (temporary) unemployment while moving and installation at the destination, and the psychological costs of migration. In fact, the factors such as costs and risks associated with migration explain why it is generally suggested that not the poorest who migrate and why social networks are so crucial in lowering the material and psychological thresholds to migration.

Limitations of the theory

Despite of its seminal contribution in explaining migration, neoclassical theory encountered a number of criticisms. The first and foremost set back of this theory is that it is directing its focus on two sectors of the economy i.e. rural-urban migration. In literatures, though scant evidences do exist, migration can still take the form of rural-rural (Katalyeba, 2002), urban-rural, and urban-urban. This important fact is ignored or rather forgotten by neoclassical economists. The central argument of neoclassical theorists of factor price equalization assumes that economic forces tend towards equilibrium and also it largely ignores the existence of market imperfections and other structural constraints on development. This is hardly realistic, particularly in the context of many developing countries. Place utility and other micro-theories assume that migrants have perfect knowledge of the costs and benefits of migration (McDowell & de Haan, 1997:9) and that people move across isotropic spaces. This principle of expected income maximization objective and wage differentials between origin and destination areas cannot explain these types of migrations.

Despite its contribution to understanding people outflows, this approach has failed to account for the risky nature of migration and there are empirical evidence showing that

people movement does not equilibrate expected incomes across regions (Rosenzweig, 1988). Indeed, the main limitation of Harris-Todaro model is that it does not include any other influences, besides expected income, that shape potential migrants' decision and also potential impacts on source economies. Most importantly, in most developing countries, factor markets (capital, insurance) are typically far from perfect, making access to financial services and capital difficult or even impossible for marginalized groups (de Haas, 2008). This makes actual migration patterns difficult to explain within a neo-classical framework that mainly focuses on expected income (Sjaastad, 1962; Todaro, 1980). Moreover, migration does not take place in a social, cultural, political, and institutional void. Neo-classical migration theory is also not able to deal with constraining factors such as government restrictions on migration (de Haas, 2008).

In addition, neo-classical theory of migration generally failed to explain why some people in a certain area or region migrate and others do not (Massey *et al.*, 1993; Reniers, 1999:680), and why people tend to migrate between particular places in a spatially clustered, concentrated, typically non-random fashion. It can therefore be useful to look at some of the spatial models developed by mainly geographers and demographers.

Finally the theory, fails to explain temporary migration and the substantial flow of remittances and other unquantifiable benefits from migrants to people at the origin (Mendola, 2006; Taylor & Martin, 2001). These issues overlooked by the neoclassical theorists for example in the Harris-Todaro model are the most pervasive features of out-migration phenomena, especially from rural areas. These weaknesses observed in the neo-classical theory of migration necessitated the introduction of a new framework of analysis called the "New Economics of Labour Migration (NELM)". The NELM addresses the issues previously overlooked by former theorists and other important factors which underlie the decision to migrate, and the possible effects of migration on both migrant origin and destination. The section that follows presents a detailed account of NELM perspectives.

2.3.3 The New Economics of Labour Migration (NELM)

Neoclassical economics theorists believed that migration is rooted in economic theory (Todaro, 1976) focusing on the rational behaviour of individuals. But, later on, these economic theories were broadened to accommodate transaction costs, imperfect information, as well as missing or incomplete rural capital and insurance markets. The perspective that migration is not only driven by labour market imperfections is a trademark of the more recent theory of migration, the *New Economics of Labour Migration (NELM)* (Deshingkar & Start, 2003). These 'new' economics of labour migration recognise the household as the unit of decision-making according to the incentives and constraints it faces. It is the economic position of households at community level (their 'relative deprivation') that influences the household behaviour with respect to migration. The New Economics of Labour Migration (NELM) framework of analysis addresses the multiplicity of factors, which underlie the decision to migrate, and the possible effects of migration on both migrant origin and destination economies (Taylor, 1991).

The NELM approach conceives migration as a household strategy whereby migrants and resident household members act collectively not only to maximize income, but also to minimize risks (such as financial risks), diversify income earnings and loosen financial constraints through remittances (de Haan *et al*., 2002; Rogaly *et al*., 2002). The decision that a member of the household should migrate is based on the calculation of the costs of migration (e.g. foregone family agricultural labour, travel expenses, helping the migrant during periods of unemployment) and benefits of migration (e.g. regular remittances, investment in local income generation, anticipated assistance during times of particular hardship). Thus, anticipated remittances are part of the migration decision, part of an implicit contract between the migrant and the remaining family (Stark & Lucas, 1988). Migration and remittances from it have both positive and negative effects on the welfare of rural households and communities, depending on the type of household/community (Mendola, 2006). The impacts also change with time: in the beginning, migration may deprive the household and rural economy of labour but in the longer term, remittances

may be invested back into improving productivity and creating assets and household incomes. It follows that according to the NELM approach, migration impacts are conceived in terms of risk management, income diversification and alleviation of liquidity constraints at household level. However, some macro-economic studies of the determinants of remittance behaviour distinguish between remittances 'required' by NELM household relationships and 'desired remittances' resulting from the migrants' decisions to move money to their areas of origin, based on their portfolio of savings, assets and investments and relative rates of return (Elbadawi & Rocha, 1992; Glystos, 2001).

NELM provides the only systematic and detailed attempt to theorize remittance behaviour, guiding the bulk of empirical research on remittances in stable settings, which is mainly done by economists. The concept of remittances as part of an integrated, transnational household economic strategy permeates contemporary understandings of migration and remitting (Lindley, 2008). However, the approach suffers certain limitations.

First, while NELM differs from neoclassical theory in its focus on the diversification rather than maximization of income, it shares the basic premise of rational choice (Aragno, 2000). The central assumption of microeconomic theory as applied in this field-that individuals act to maximize income allowing for risk-has been much criticized by other social scientists arguing that economic action is embedded in social relations (Blggart & Castanias, 2001; Granovetter, 1985; Sahlins 2004; Swedberg, 2007). Even the micro-economic literature reviewed above hints at eminently social aspects of remittance motivations such as sociability, status, and power. The notion of migration and remitting as 'strategies', carries the connotation of trying to reach predefined goals through rational and planned action, which sits uneasily beside the sometimes highly constrained circumstances in which migration occurs-and not only in conflict settings. In many situations there is a more unsettled relationship between migration and remitting than that envisaged by NELM: some people do not migrate to remit but do (such as

students, and as we shall see, refugees), and others migrate with the expectation of sending money home but for various reasons do not do so.

Second, while placing the household rather than the individual or social structures as the key unit of analysis, NELM offers a rather functionalist understanding of it, neglecting affective and power relations. There is a risk of reifying the household and sidelining analysis of individualistic strategies and the role of extra-household family and community relations (Lianos 1997; de Haas, 2005). The remittance process is also viewed primarily from perspective of the area of origin, with little attention paid to the migrants' perspective (Lindley, 2007). Indeed, migrants are largely seen as satellites of the original household, with remittances demonstrating that their principal affiliation and commitment is towards that unit (a notion that best fits contexts of labour migration): ceasing to remit implies their detachment from that household (Arnold *et al.*, 1985). However, recent research into migrants' transnationalism (see below) contradicts the notion of linear detachment from the country of origin and assimilation into the host country.

Finally, NELM has been criticized for its limited applicability-relying on a body research evidence focusing mainly on temporary migration from rural Mexican villages: 'Its versatility vis-à-vis other, less established migration contexts-especially those that involved considerable degrees of societal disorganization, not to speak of life-threatening circumstances-looks uncertain at best.' (Aragno, 2000: 288). Sana and Massey's (2005) comparison of remittance behaviour among Mexicans and Dominicans in the United States (US) demonstrates this. They find that a NELM-based model of household diversification and investment explains migration and remittances in patriarchal rural communities in Mexico, where the traditional pattern of migration involves temporary male migrants working in the US, remitting to wives and children for subsistence and investments in local livelihoods, with a view to eventual return. By contrast, they find that in the Dominican Republic, where the political and economic situation is much poorer, 'migration (is) a more dramatic, less carefully planned move,

with the purpose of ensuring family subsistence in the absence of viable opportunities in the home country' (Sana & Massey, 2005: 512). In the Dominican case, more migrants become permanent US residents, remittances are sent to a greater variety of relatives (i.e. are not just configured around a strong 'origin household'), and continue even after the migrant settles permanently in US.

Besides the desire for individual income gain or the attempt to self-insure against household income uncertainty, there are other conditions that influence the decision to migrate and, above all, that shape the decision to perpetuate migration across time and space (Lesthaeghe & Kaa, 1986; Kaa, 2004). The *Network Theory of Migration* highlights the role of social relationships in fostering migration phenomena (Boyd, 1989). Interpersonal ties, such as kinship, friendship and shared community origin, between migrants, former migrants and non migration in origin and destination areas, are likely to increase the likelihood to migrate (at individual and household level). This is so because this form of social capital lowers the costs and risks of movement and increases the expected net-returns to migration (Todaro, 2006).These issues of social capital embedded in migration are not captured by former theorists of migration, including the famous Harris-Todaro Model of migration (Mendola, 2006). Furthermore, migration is conceived as a dynamic and cumulative phenomenon in that when it occurs, socio-economic contexts at origin are altered in the way they lead to further migration (Deshingkar & Start, 2003). In this sense, the commonly observed effect of social networks raise the likelihood of the next wave of potential migrants electing to move, enhancing geographic concentration of migrant's origins (Todaro, 2006). Ultimately, according to the cumulative causation theory, the self-perpetuating nature of migration may overcome the economic motivations (suggested by the *neoclassical economic theory* of migration) that originated it, reducing the number of control variables for migration policy concerns (Deshingkar & Start, 2003; Pellegrino, 2003).

From the above analysis one can see that there is no any single theory that can appropriately explain why people migrate. This could be due to the fact that people

move for various reasons which eventually affect the overall migration process and therefore, the development of a single migration theory. As stated earlier, although a single comprehensive theory is unattainable, we are still charged with the crucial task of explaining why people migrate especially in a certain context and how migration as a livelihood strategy is beneficial to rural people or sending households. The theory that was adopted for this study was the one that stood higher chances in helping us understand and explain the population movements within their wider social and economic context i.e. in the context of sustainable rural livelihoods. For that case, the perspectives of the New Economics of Labour Migration (NELM) theory seem to better fit into the context of this study, in the sense that it views migration decisions to be taking place within the larger domain of the household rather than the individuals. The theory also highlights the notion of migration and remittance and the possible effects of remittances to the households at the places of origin. If remittances are invested back can contribute to the improvement of the household asset portfolio and therefore enhance the household's ability to sustain its livelihoods.

2.4 The migration process

2.4.1 An overview

In literatures the discussions on migration and globalization often tend to involve international migration; so much so, that the term migration has become synonymous with international migration. Yet, in many countries internal migration**,** i.e. that which occurs inside the borders of a country, is actually far more important both in terms of the numbers of people involved and the resulting flow of remittances. This is especially true of countries with marked regional inequalities, but is not limited to the developing world.

It should be remembered that as hinted previously, this study is mainly focused on voluntary migration for earning a living outside the place of origin. It does not include displacement caused by development projects, conflict and civil unrest, movement due to schooling and marriage. Nor does it attempt to provide a comprehensive view on

trafficking in human beings, which has become a subject in its own right. However, the divisions between migration for work and other kinds of migration are not watertight, and several forms of migration for work are akin to trafficking in human beings, especially in migration involving vulnerable and often marginalized groups, such as women, children and ethnic minorities. Some aspects of migration that overlap with trafficking might therefore be touched upon.

However, it is better to acknowledge that any discussion on internal migration patterns and trends is severely hampered by the paucity of data (Kothari, 2002). Even where national data on demographics, occupations and incomes exist, short-term movements for work are not captured adequately (Ivan, 2008). This creates an enormous gap in understanding migration and partly explains the lack of interest and political commitment to address it. For this reason, many of the important trends discussed below are highlighted through case studies (often undeservedly relegated to the category of anecdotal evidence) rather than large-scale surveys.

2.4.2 Broad patterns of internal migration

2.4.2.1 Internal, and circular and seasonal migration

In the literature, it is well acknowledged that internal migratory flows are diverse and complex in terms of their patterns which include; their direction (rural-rural, rural-urban, urban-urban and urban-rural); their composition (men only, women only, entire families, children only, and ethnic minorities) as well as their duration (seasonal, circular and permanent). Many of these exist side by side, and it is not uncommon to find in a single village several different kinds of migration streams that have evolved separately according to historical patterns of employment, social networks between source and destination areas, and the demand for specific skills (Deshingkar & Natali, 2008).

For example in Bangladesh, migration is an integral part of the livelihood strategies of poor people (Deshingka, 2005). In a three-year study on the livelihoods of the extremely poor in 16 villages by Proshika-one of the largest NGOs in Bangladesh, funded by the

U.K. Department for International Development (DFID) - found that 110 of the 294 respondents had migrated. While 51 respondents said that they had benefited in some way, others spoke of theft, difficulties for those left behind and tough living conditions at the destination (Khan & Seeley, 2005). On the whole, migration to urban areas has been rising for some time, first to the urban informal sector and, more recently, to garment manufacturing units. Also in a study of internal migration in Bangladesh (Afsar, 2003), based on the analysis of data sets generated by the United Nations, the International Labour Organization (ILO) and the Bangladesh Bureau of Statistics, showed that all types of migration had increased significantly. Rural-urban migration was found to account for nearly two-thirds of out-migration from rural areas, while rural-to-rural migration accounted for ten per cent of out-migration from rural areas, compared with 24% migrating abroad. The latest estimates by the Coalition for the Urban Poor of migration into the capital of Dhaka indicate a 6.3% annual increase in migration. Dhaka is the most common destination because it offers greater work opportunities. Most people look for work in the garment industry, rickshaw transport and the domestic sector.

Furthermore, circular migration and commuting from rural to urban areas in Indonesia has been documented since the 1970s (Hugo, 2003). While Indonesia had relatively low levels of inequality due to more equal access to land and education, differentials have increased in the 1990s and appear to be driving internal migration to some extent. Also, the Viet Nam Living Standards Surveys show a rapid increase in seasonal migration over the course of the 1990s (de Brauw & Harigaya, 2004). According to Anh (2005), spontaneous inter-provincial migration occurred in three major directions during the 1990s: north to north, south to south, and north to south, while migration from the south to the north was not significant. This reflects the pull effect of the south-eastern areas and central highlands of Viet Nam in terms of economic development and natural endowments. A migration survey was carried out by the government of Viet Nam in 2004 in eleven major migrant-receiving cities and provinces covering 5,000 migrant households and an equal number of non-migrant households. The survey showed that

nearly 63 per cent of the migrants had moved for work and to improve their living conditions and would go back home after the work was over (Deshingkar *et al*., 2006b).

Temporary and circular movements for work in the transitional economies of Asia, present a good example of internal migration. There is persuasive evidence from several locations across Asia that population mobility has increased at an unprecedented rate in the last two decades. Internal regional inequalities and uneven development that characterize many Asian countries today (Balisacan & Ducanes, 2005; Kanbur & Venables, 2005) are important drivers of rural-out migration. Foreign direct investment and export-oriented industries have benefited some regions more than others and attract cheap labour from underdeveloped rural areas. The service and construction sectors are also magnets for workers (Balisacan & Ducanes, 2005).

Among the transitional economies, in 2005, China had the fastest growing economy in the world and also the highest level of economic inequality in East Asia (Balisacan & Ducanes, 2005). Such internal regional differences have been acknowledged to be an important cause of migration, especially since the mid-1990s (Song, 2004). The number of internal migrants has increased dramatically over the past two decades from about 26 million in 1988 to 126 million in 2004, a majority of whom are circular rural-urban migrants who retain strong links with their rural family.

2.4.3 Cross-border migration

Even though this study is designed to deal with internal migration, this sub-section presents a slight departure from tradition internal migration to also cover some types of cross-border migration, even though these are theoretically international movements. Deshingkar and Natali (2008) observed that the issue of cross-border migration needs to be viewed together with internal migration, especially for countries that are separated by porous borders and populated by people who are historically very similar in language and culture.

The inclusion of these types of migration is also important because people living at the borders with neighbouring countries may find it much easier to crossover between neighbouring countries for earning a living than they may do for the rest of the world (Ellis, 2003). Mostly, the borders (of neighbour countries) in question are often highly porous, and the journeys undertaken are not very different from those within the country of origin (Deshingkar, 2005). Also, in some cases it can be difficult to establish when, in fact, a traveller crosses international borders. Finally, borders often cut through the habitations of ethnic groups where their free movements across the region predates the drawing of colonial frontiers or the emergence of independent nation states and the creation of international borders and concomitant regulations governing immigration (Deshingkar, 2005). For instance, in the case of West Africa, as Adepoju (1998) notes, seasonal and short-term migrant workers regard their movements as simply an extension across national boundaries of internal movements and of rural-rural migration.

Ratha and Shaw (2007) assert, on the basis of datasets constructed by the University of Sussex, that almost 80 per cent of South-South migration takes place across the land borders of adjacent countries and appears to occur between countries with relatively small differences in income. However, official statistics cannot capture the vast numbers of undocumented cross-border migrants. An analysis of examples of cross-border migration in Africa and Southeast Asia will serve to illustrate the similarities with internal migration and the rationale for considering both types of movements within the same framework.

In Southeast Asia, Thailand has emerged as the major destination for migrants in the entire Greater Mekong Sub-region (GMS). As Thailand's own population has aged and the economy has grown, the demand for foreign labour has increased, especially for low-skilled labour. Thailand currently hosts an estimated 2.5 million migrants from Cambodia, Laos and Myanmar (Maltoni, 2006) with nearly 90 per cent in an irregular status (World Bank, 2005). Thousands of border crossers from Myanmar flow into the Thai border town of Mae Sot every year. Most of them are looking for economic

opportunities and are not eligible for refugee status. An estimated 50 per cent of Mae Sot's 80,000 migrant workers from Myanmar do not have proper work permits, which leaves them open to abuse from unscrupulous bosses, most of whom run garment factories (British Broadcasting Cooperation [BBC] News, 26 February 2007). Many others, especially women, commute on a daily basis from Cambodia to Thailand for petty trade, domestic work or agriculture, as the two countries share a very long and porous border. Men tend to migrate farther afield and for longer durations (Godfrey *et al*., 2001; Ramachandran, 2005).).

2.4.4 Who participates in migration?

In literature, there is no consensus on exactly who migrates. It is rather accepted that population mobility, temporary or permanent, rural-urban or rural-rural, is a routine part of life in agricultural contexts. For instance, Ellis (2000) observed that adverse circumstances combine with inadequate social support and livelihood security to make the poor highly vulnerable to food insecurity and other adverse effects from risk, shocks and stress. Therefore, the poor are most likely to require livelihood diversification strategies such as migration. However, he acknowledges that the poor are a diverse group, with differential access to resources and institutions, and therefore have different capacities to undertake livelihood strategies such as migration.

It is conceived that moving from one place to another has economic and social costs (Kothari, 2002; Todaro, 2006) and requires a certain level of human, physical, social and economic capital, thus the option of moving is not available to all amongst the poor. For this case, they contend that migrants are not a random sample of the overall population but they have some kind of capital ownership and accessibility different from people staying put (deciding not to move). This suggests that for someone to migrate he or she must have one form of capital assets or another no matter how meager it is (Skeldon, 2002a). For example, the economic theory focuses on migration as an individual rational choice (Todaro, 2006). In this theory, labour migration is modeled in the context of inter-sectoral i.e. two sector (rural-urban) wage-income inequality. That migration

decisions are made by rational self-interested individuals looking for higher paid work in urban areas and that migration occurs if the economic benefits in terms of expected wages at urban destination-accounting for risk of initial spell of unemployment-exceed economic costs of moving and of foregone wages at rural origin (Todaro,2006). In this context rationality implies that individuals who are innovative, the better-off, the better educated, skilled, and with labour market experience have a comparative advantage in job search at destination labour markets, and therefore are more likely to migrate (Skeldon, 2002b). Thus, migration is seen as a selective, rather than random process, and whilst migrants 'self select' in this way, the same logic of rationality implies that non-migrants (or the worse-off) do not move because their comparative advantage lies in staying (Tunali, 2000).

Furthermore, according to the Human Capital Migration Theory, migrants' self-selection is driven by factors such as the education level, skills, age, risk taking capacity, capacity to face new situations, entrepreneurship, and ethnicity (Kothari, 2002). This is so because these individual characteristics increase the discounted income (or expected-income) differential between migration and non-migration status, thereby increasing the propensity to move out (Taylor & Martin, 2001). Moreover, financial and opportunity costs of migration can be substantial. Difficulties in financing initial costs may present an effective barrier to movement, so that the extent of mobility may remain limited even in the face of significant potential gains (Lucas, 2005a). This leads to the widely accepted argument of the 'migration hump', according to which at low levels of development there is little migration, but as development (with income and wealth) rises, so too does migration (Faini & Venturini, 1993). At a micro level, this entails that the poorest people in rural areas often lack the resources to migrate, and those who migrate are members of better off households, in terms of land ownership, assets, productivity and social networks (Skeldon, 2002a). However, findings from a research conducted by De Haan, Brock and Coulibaly (discussed in De Haan *et al.*, 2002) in two villages of Mali, in West Africa revealed contrasting pictures on who migrates between the better-off and less better-off households. The study found that in the village of

Dalonguebougou migration was common to households that ranked in the middle group of better-off. The less well-off households had fewer migrants. The livelihood strategies of better-off households, by contrast, meant that migration was one of a range of options in which labour could be invested. On the other hand, in the second village of Zarodougou, even though migration was related to improved livelihoods at the time of research, the first migration for example had not been a better-off household. A respondent, whose household became one of the better off in the village, was the first to migrate out of the village. He left with the help of his cousins, but his migration later on contributed to building up the household's position (a better one) to what it was at the time of research.

It is not surprising to find that historically migration was dominated by single men (de Haan, 2000), but things are changing and feminization of migration is now occurring (Mendola, 2006). "Autonomous female migration" is a phenomenon used to explain the situation in which women are migrating independently and not just as accompanying spouses (International Organisation for Migration [IOM], 2005). This form of migration has increased and become more socially acceptable in South Asia (Siddiqui, 2003). There is some evidence suggesting that there has been a feminisation of migration also in South America as well as in Africa (CELADE/CEPAL 2000; IOM 2005; Adepoju 2005 cited in Lucas 2005b). The 1999 Labour Force Survey in Ethiopia showed that roughly 55% of all migrants were women. Davis and Winters (2001) tackle the migration-and gender issue explicitly testing a number of hypotheses to explain female international migration decision from Mexico with respect to male. Typically, the role of networks, asset ownership and rural development appear to have uneven effects on the migration behaviour of men and women, and they also differ in case of internal or international moving (see Katz in CUREMIS II, 2003). Empirical evidence, although still scanty, validate the importance of including gender differences when studying internal and international migration (Katz in CUREMIS II, 2003).

The increased feminization of migration is believed to have been driven by two main factors. On the one hand, the improved access of females to education and training opportunities has enhanced their employability in the organized labour market, locally and across national boundaries (Adepoju, 2006), but, on the other hand, women have also been obliged to seek additional income-generating activities to support the family due to the loss of male employment following structural adjustment policies. But also those who are not married (could be divorcees, single mothers, widows etc) and who cannot take up professional jobs due to their levels of education and the skills they posses, tend to migrate in search of better livelihoods so as to take care of the families they head or oversee (Deshingkar & Natali, 2008). Adepoju (2006) notes, for example, that the traditional pattern of migration in sub-Saharan Africa-male-dominated, long-term and long-distance-is rapidly changing as more women migrate. Women in West Africa work mainly in the informal sector, which is less affected by economic recessions compared to the wage sector, where most male migrants work. As the formal job market becomes tighter many families are relying on women to earn money. Bah *et al*., (2003) draw on research in six case studies in Mali, Nigeria and Tanzania and point out that the great increase in female migration in Africa in recent years is linked to employment opportunities as domestic workers in urban centres or in new international tourist resorts. They also highlight that due to increasing income potential amongst women from migration, women's migration is increasingly acceptable socially in as much as it contributes to their family's household income through remittances (Acharya, 2003; Anh, 2005; Bryceson *et al.*, 2003; Posel, 2004).

Additionally, age factor is arguably another important variable to be considered when studying migration and especially on who migrates, but often ignored or rather forgotten (Beyrer, 2004, quoted in Kiell & Sanogo, 2002; Skeldon, 2002a). Interestingly, in some studies the age factor has revealed interesting findings. For instance, demographic characteristics of rural labour migrants in Bangladesh as discussed in Hossain (2001) shows that migrants generally are relatively young. In his study, out of 1176 migrants that were studied, distribution shown that the majority of them were very young at the

age of their first time migration. Most migrants were of ages between 20 and 24 years (29.5 %), followed by those having age between 15 and 19 years (21.6%). The proportion of migrants remarkably decreased with increased age group. Only 9% people migrated at their age of 35 years and above and about 13% migrated before reaching the age of 15 years. The average age at the time of first migration was 22 years. However, female mobility decreases more rapidly with age. Furthermore, the in-depth surveys on migration between 1996 and 2001 in Ethiopia found that female migrants outnumbered male migrants in five sites and were equal at the other two. The same study also found that female migrants were on average younger than male migrants whereby those aged between 15 and 35 years have the highest propensity to migrate (Anarfi *et al*., 2007; Black *et al.,* 2004; Deshingkar & Natali, 2008) than other categories. According to Deshngkar and Start (2003), for women, marital status is more important than for men in determining rates of migration.

This detailed analysis on who migrates leaves many questions unanswered. For example, if migration is a self-selective process, how does it serve as a livelihood strategy for the rural poorest of the poor, what happens to the less/non-educated segment of the rural population, what about the disabled, the elderly, women with many dependants and children and if is a selective process, what is the overall impact (in terms of asset accumulation or impoverishment) of migration on the sending households and communities? Seeking answers to these questions and other literature hidden migration related concerns forms the foundation of this research study.

2.5 Remittances and outcomes (impacts) of migration

2.5.1 Remittances

The topic of remittances[6] in recent years has become more popular in international migration studies compared to internal migration, may be due to the fact that

[6] Remittances are transfers of funds by migrants-"remitters"-who are living and working away from home typically to their families who are still living in their home rural areas (Enrique & Ro, 2007:20).

international migration is attracting more attention due to both the rate and volume of remittances that have increased exponentially and its links to development in developing countries (Enrique & Ro, 2007). However, there are some literatures which explore the issue of remittances in internal migration as well. For example, Deshingkar and Natali, (2008) observed that remittances are an important additional or even principal economic resource for poor rural households worldwide, helping them to smooth income flows and to invest in assets and human capital. Yet, internal remittance flows are seriously under-reported, especially flows through informal channels. Although generalizations are risky, there is some evidence to support the view that internal circular migrants often bring back more money than the remittances sent home by permanent migrants. For example, Van der Geest's study in Ghana (2003) found that seasonal migrant earnings amounted to about 7% of total household income and 14% of the total cash income (while remittances from permanent migrants abroad accounted for 3% and 5%, respectively). Other contributions included food, clothes and payment of school fees. Rural-urban migrants usually send money, and rural-rural migrants are more likely to send food. As a cash earner, seasonal labour migration was more important than livestock production and the sale of food crops.

It is acknowledged that remittances from internal migration are difficult to estimate due to the importance of in-kind transfer. In addition to the standard problems of measurement, it is also difficult to separate the contribution of internal migration from other sources of household income, since a sending household often has different types of sources of income. Despite of the difficulty in measuring internal remittances, some researchers have tried to estimate it. For instance, in Bangladesh, the Coalition for the Urban Poor (CUP) estimates that migrants in Dhaka remit up to 60% of their income to relatives. For the receiving households, remittances provide up to 80% of the household budget (Deshingkar & Natali, 2008). A recent study in the poor Indian state of Bihar, from where very large numbers of migrants leave to work in small industries all over India, also found very high levels of remittances among circular migrants. These migrants, who are away for eight to nine months in a year leave mainly to earn and send

money back home, and migration is part of the life-cycle planning of extended families. When the sons reach an age where they can begin to migrate, the fathers stay at home to look after the family farm (Deshingkar *et al.*, 2006a).

Furthermore, following some estimates, it is argued that rural-urban remittances range around 12-15% of the rural income for Asia and Africa. Among a random sample of older Matlab residents (50+) in 1996, Kuhn estimated that the net transfer from sons living in urban or overseas destination accounted for 18% of the total income for all households and 27% for migrant sending households (Kuhn, 2000). Estimates from destination suggest that temporary migrants send around 40% of their urban incomes to rural households, which increases to 64% for married migrants but declines to 27% in the case of unmarried ones (Afsar, 2000a). Given that a married temporary migrant had left his spouse and children at the place of origin, this variation in size of remittances is understandable. However, the opposite holds in the case of garment factory workers as the younger, never married and recent migrant among them send more remittances than older, ever-married and long-term migrants (Afsar, 2001a). The intensity of social ties and the types of responsibilities that migrants bear at origin and destination influence migrants' remittance behaviour. Table 2.1 presents evidences (from Bangladeshi) on how the magnitude of remittances can be affected by migration status and age. For example, sons who lived in the city with their conjugal families contributed less than their siblings who lived alone in the city (Frankenberg & Kuhn, 2001).

Table 2.1: Average remittances and migrants (remitters) by migration status and age

	Average remittances (Tk.)		Remitters (%)		Remittances as % of income*		Migrants by sex (Total No.)	
Migrants	Male	Female	Male	Female	Male	Female	Male	Female
Long- term migrant	1033.3	600.0	51.4	33.4	34.1	25.8	35	37
Recent migrant	625.0	457.1	36.8	20.0	39.3	39.6	38	35
All	874.2	535.0	43.8	26.4	38.5	29.6	73	72
10-19	462.5	525.0	12.9	12.5	38.6	45.4	31	32
20-29	880.0	507.1	73.5	40.0	31.4	24.7	34	35
30-39	1250.0	750.0	50.0	40.0	29.3	21.1	8	5
Others								
Long- term migrant	1450.0	214.0	83.3	50.0	29.9	11.0	12	14
Recent migrant	1200.0	–	40.0	–	–	–	5	–
All migrant	1411. 1	214	70.6	50.0	34.6	11.00	17	14
20-29	1450.0	250.0	42.8	25.0	32.10	8.30	14	12
30-39	1357	167.0	50.0	40.0	46.5	13.2	12	10
All age group***	1411.1	214.0	46.2	31.8	34.6	11.0	26	22

* Income here refers to average monthly wage and monthly overtime

*** There were 12 migrants/respondents who belonged to 10-19 and 40+ age groups but as they did not remit in the past year, were not represented in this table.

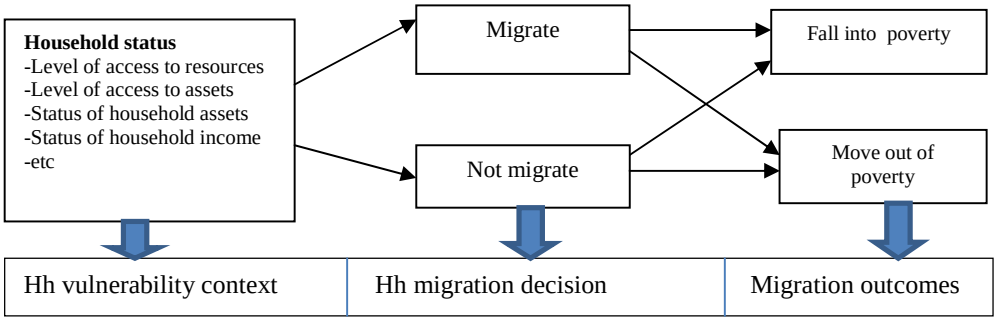
<<Tk (Taka)-Bangladeshi currency

Source: Afsar (2001a:14)

2.5.2 Impacts of remittances at the household level

The lives of the poor are variously shaped by the particular sets of vulnerabilities that they experience and the repertoire of decisions, choices and options that they can pursue are similarly diverse. Migration is a central livelihood strategy for many poor households which, in common with other livelihood strategies, is 'facilitated or constrained by relations within and between the institutions of household, community, state and market' (Moore, 2001). However, the impacts/outcomes/consequences of internal migration and remittances from it remain unclear. For instance, Afsar (2003) points out that migration provide material benefits and/or detriments for migrants and their families as Figure 2.2 portrays. Essentially the figure shows that the household's vulnerability context is the main reason for a household to choose either to migrate or not, and the outcomes of its decisions are either increased vulnerability context and fall into poverty or reduced vulnerability and move out of poverty. The outcomes of migration are influenced by a range of factors including gender, space, time, migration context and the strength of social capital among migrants.

Figure 2.2: Household vulnerability context, migration decision, and outcomes of migration



Source: Researcher's construct

Even though it is difficult to prepare cost-benefit analysis from existing studies on internal migration as they seldom provide data on costs (Skeldon, 1997), still earlier analyses questioned the significance of remittances in the household budget as well as their impact on poverty reduction (Lipton, 1980). Many scholars still maintain that migration is mainly a distress phenomenon that perpetuates poverty ((Breman, 1985 & 1996; Blessing, (2005) on Ethiopia and Reddy (1990) on India). However, they rarely examine the counter-factual proposition, i.e. what these people (migrants) would have done in the absence of the opportunity to migrate, and what their life prospects would have been in their villages.

Recent case studies show that even small migration earnings can contribute to household well-being (see for example, Deshingkar & Start (2003) on Andhra Pradesh and Madhya Pradesh; Deshingkar *et al.*, (2006) on Bihar; Haberfeld *et al.*, (1999) on Rajasthan and Dayal and Karan (2003) on Jharkhand). For instance, in Bangladesh, like in many other developing countries, migrants' households in rural areas use remittances predominantly (from internal migration) for consumption (Afsar, 2003). Existing evidence suggests that consumption expenditure alone constituted between 80% and 90% of the remittances. Advancing further the significance of remittances to the livelihoods of rural households, Afsar (2000b) notes that in a country like Bangladesh, where half of rural households live below the poverty line, priorities on consumption expenditure can be viewed as

consonant with ‘basic needs’ approach to development; without this the situation of families of migrants would have been worse off. Looking beyond the horizon, it is also argued that increased consumption expenditure by migrant households can trigger investment by other households or firms to meet this demand, which may create income multipliers in migrant-source economies (Taylor, 1999). Existing estimates from panel data on rural households in Bangladesh, (Hossain *et al.,* 2002) suggest that remittances contributed 12.8% to the household income and that a 10% increase in income would lead to 6.5% increase in the demand for food items. These include mainly vegetables, fruits, fisheries and livestock, indicating stronger potential for the expansion of market for rural processing, storage, trade and transportation activities.

They also estimated that trade and business enterprises accounted for 22% of the rural non-farm (RNF) employment and nearly 43% of the income generated from the RNF sector between 1987 and 2000. Nearly three-fifths of these enterprises were agriculture related. The remainder were involved in the construction materials, transport, garment, grocery, suggesting the spread of employment and income generating opportunities, a probable multiplier effect of remittances that needs to be confirmed through further research. From the existing data, one can say only that savings and funding from friends and relatives constituted around four-fifths of the initial capital invested in those enterprises. It is suggested that future research must address how much of the savings are generated from the remittances. However, existing estimates (Hossain *et al.,* 2003) also suggest that income gains from business are the most unequally distributed source of income, followed by services and non-rice agriculture, benefiting the higher income groups more than others.

Afsar (2003) reveals that at household level remittances can be used for other uses such as house repairs, including extensions, building and expand business in construction materials but also gives rural families protection from natural calamities. In addition, it yields production and storage benefits. Apart from physical materials, remittances can be invested in creating household’s human capital in the form of educational and health

investments. For example, it is argued by Afsar (2003) that in Bangladesh, around 40% of temporary migrants' families also used remittances to educate children and treat sick members. Existing studies (Afsar, 2001b) revealed that remitters among the RMG (Ready-Made Garments) workers, predominantly sent money directly for family maintenance and education of siblings. School enrolment rates among members of migrants' families in rural areas is greater compared with age cohorts of non-migrant families (Rahman *et al.,* 1996). Productive use of remittances to purchase irrigation equipment, to establish shops and other businesses also show up in the survey data and case studies (Kuhn, 2000).

2.5.3 Impacts on the source economy

The development and poverty reduction impact of remittances remains disputed, but there is ample evidence to support the argument that remittances can lead to overall economic development.

On the one hand, remittances have often been seen as "disequalizing" because receivers are typically better off than their fellow villagers (Deshingkar & Natali, 2008). It is known that migrants usually come from poor regions, although not necessarily the poorest regions, and that they are often poor but not the poorest of the poor since the poorest lack even the most basic resources (e.g. labour, information, social networks) needed to migrate (de Haan, 2005). Moreover, there is evidence that the degree of inequality in remittances-receiving villages will depend on the actual use of remittances. An empirical study by Barham and Boucher (1998) in Nicaragua adopts a "counter-factual approach" (i.e. the observed income distribution is compared to a counter-factual scenario without migration and remittances) to determine the impact of remittances on inequality. The study highlights that conclusions depend on the way remittances are treated in the analysis: when they are used as a substitute for home earnings, they tend to increase income inequality in the receiving community, while, when treated as an exogenous factor, they decrease inequality.

Principally, internal migration is often considered a source of intra-village inequality because better-off villages and villagers learn first, and are able to avail new job opportunities whereas the extreme poor groups are generally excluded from such opportunities (Skeldon, 1997). However, this negative picture should not be generalised because empirical research also suggests that various groups have benefited in different ways, depending on types of opportunities. Moreover migration allows the migrants and their families to improve their family's resource base and human capital (Afsar, 2003). By drawing on the Bangladeshi context, the difficulties associated with separating incomes from other sources and internal remittances and their impacts for the same households have been discussed earlier. There are evidences which suggest that the impact of remittances at areas of origin indicates its positive contribution in poverty alleviation, generating greater and diversified employment opportunities through multiplier effects, and strengthening both material and human capital (Deshingkar & Natali, 2008). At the place of destination however, existing evidence suggests growing inequality between the rich and the poor. In a longitudinal study on migration conducted in Dhaka city in Bangladesh, Hossain *et al.*, (1999) indicated worsening of income distribution between slum and non-slum residents. Slum dwellers, who were predominantly migrants from rural areas, earned around one-third of the income of non-slum households in 1991; this declined to one-fifth in 1998. The bottom 40% saw their income drop from 17% of the income of non-slum households to 11% while the top 10% increased from 27% to 42%. The gini concentration ratio, a measure of income inequality, was estimated at 0.53, a staggering increase from 0.39 in 1991.

However, not only urban inequality is limited to income distribution but also leads to stunted development of human capital of poorer communities. In Bangladesh context for example, although the enrolment rate of their age cohorts in slum and squatter settlements in Dhaka city rose from 41% to 58% between 1991 and 1998, more than 40% of the children remained out of school. Little wonder, then, that Hossain *et al.*, (1999) found that nearly one-third of children in the 10-15 years age group from slums and squatters were in the labour force; the incidence of child labour remained almost

unchanged between 1991 and 1998. In their research, Hossain *et al.,* (1999) found that participation in higher education was almost negligible for young adult slum dwellers as Table 2.2 shows.

Based on educational achievements, it is argued that "for low-income households the mobility from low to high-income occupations through human capital formation is limited" (Hossain *et al.,* 1999:14). Thus, although the urban population have been ahead of the rural population on both poverty and social development indicators generally, the urban poor in general and migrants in particular find it difficult to sustain economic gains in the long run, due to intra-urban inequality in income and delivery of social services.

Table 2.2: Enrolment rate for household members by age group and slum-non-slum residency of sample households in 1991 and 1998

Area	Age group	Enrolment rate (1998)			Enrolment rate (1991)		
		Male	Female	Total	Male	Female	Total
Slum	6-10	66.7	67.2	66.8	48.9	53.7	51.4
	11-16	44.0	43.5	43.8	29.8	35.0	32.5
	17-24	3.0	1.7	2.4	5.1	3.9	5.2
Non-slum	6-10	92.3	97.9	95.3	94.4	91.1	92.7
	11-16	97.1	90.7	93.8	93.0	90.9	92.0
	17-24	64.7	59.1	61.5	65.9	52.6	59.7

Source: Hossain *et al.*, (1999: 14)

While on the one hand the study have looked at inequality effects of migration and remittances of source communities, on the other hand some benefits on the source economies have been highlighted by some researchers. For example on the basis of research in Bangladesh, Afsar (2003) reveals that remittances help to expand business in agricultural products and construction materials. Remittances also help to generate savings, the major source of capital in the absence of institutional credit on easy terms. She believes that migration and remittances have invigorated the land tenancy market in rural areas: the proportion of tenant farmers increased from 42% to 57% between 1988 and 2000, and the land under tenancy cultivation rose to 33%, which was 11% more than in 1988. Studies conducted in Thailand by Guest (1998) show that remittances are an important supplement to household income and have a multiplier effect on the economy,

with many major items of expenditure, such as construction materials and labour, procured locally. Anh (2003) draws similar conclusions based on data from Bangladesh, China, Viet Nam and the Philippines. Cai Fang (2001) writes that migration contributed 16% annually to the growth in China's GDP in recent years (Cai Fang, 2001, quoted in De Wind & Holdaway, 2005). Similarly, the ILO study on internal migration in Indonesia (2004) concludes that migration to urban areas can be associated with macroeconomic growth.

2.5.4 Costs of migration

Even though it has been previously explained that it is difficult to prepare cost-benefit analyses from existing studies on internal migration as they seldom provide data on costs (Skeldon, 1997), still some researchers have managed to estimate the costs that may be incurred by migrants. For instance, Kuhn's qualitative study (2000) provides some insights. He points out that while travel costs and opportunity costs of internal migration depend on the distance between the origin and destination and types of job, it ultimately also depends on the strength of migrants' social capital at destination and origin. He asserts that active support and cooperation from social contacts at destination minimise the costs of moving. Afsar (2000a), found that three in five permanent migrants, irrespective of whether they were slum or non-slum dwelling, and one in two temporary migrants received wide ranging assistance, which included free or rented accommodation, help in looking for jobs, financial help, and so on.

Furthermore, the difficulties of preparing cost-benefit analyses of migration arises from the nature of study methodologies employed as well. For instance, not only existing studies on migration fail to provide data on migration costs, but also they usually do not cover both the migrants' places of origin and destination, which is necessary to prepare cost-benefit analyses (Afsar, 2003). In most migration studies, remittances are used to explain the benefits of migration to sending households, however, this measure is contested by some researchers. For example, according to Hugo (1991) "remittances do not represent the total economic losses or benefits in areas of origin since such elements

as transmission of skills, status and experience, flow of ideas, loss of economic and political leaders and social disruption can influence development in the area of origin" (p. 45). In addition, second and third round multiplier effects are often neglected in the impact of internal migration literature in the country.

2.6 Study conceptual model

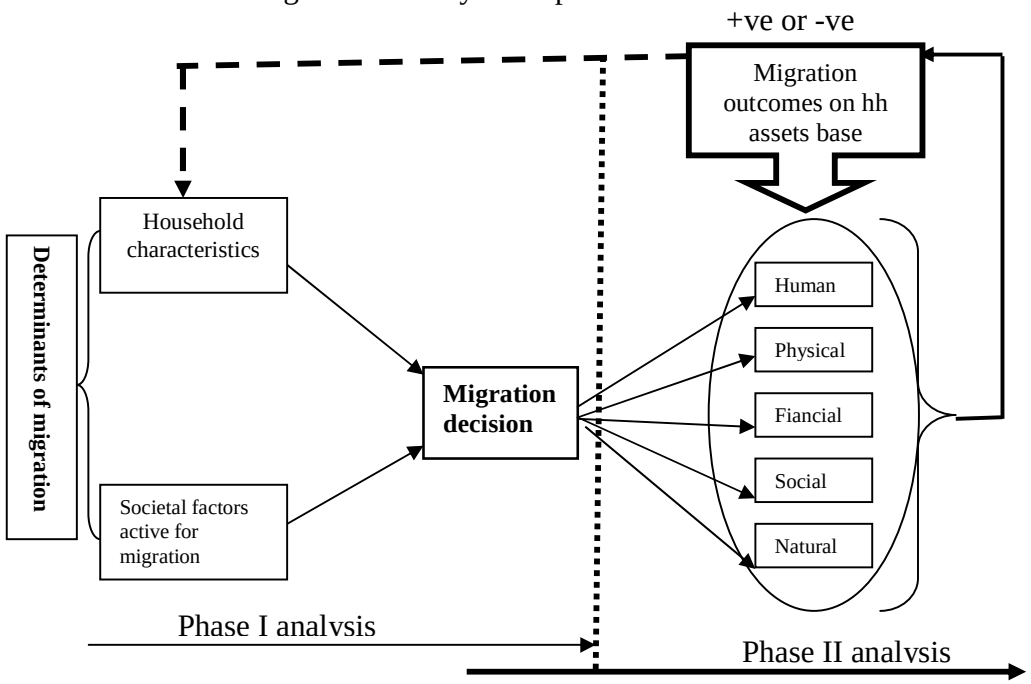
This study proposed to use the basic concepts of the SL framework (ref. section 2.2.4) as the main building block of this study which are integrated with the perspectives of the *"New" Economics of Labour Migration (NELM)* approaches/theory (ref. section 3.1.2) which is the anchor theory of this study to explain the relationships amongst the various variables to be studied. On the one hand, as stated earlier the NELM approach/theory recognises the household as the unit of rural-out migration decision-making according to the incentives and constraints it faces (Deshingkar & Start, 2003). The New Economics of Labour Migration (NELM) framework of analysis addresses the multiplicity of factors which underlie the decision to migrate and the possible effects of migration on migrant origin households/areas (Taylor, 1991). On the other hand, from the livelihood framework context, sustainable livelihoods are achieved through access to a range of livelihood resources which are referred to as 'assets' or 'capitals'. Moreover, the things that people do by using the asset base owned or accessed in pursuit of a living are referred to in the livelihood framework as livelihood 'activities or strategies'(Ellis, 2000; Chambers & Conway, 1992; Scoones, 1998).

In this study, migration as a livelihood diversification strategy opted by rural households was considered to be one of the activities rural households in Makete and Iringa Rural Districts of Njombe and Iringa Region undertake in order to enhance their living. It is proposed that rural-out migration opens up access to a category of activities that are to varying extents remote from the resident household. According to Ellis (2003), people's livelihood efforts conducted in order to improve their living result in outcomes: higher or lower material welfare (human capital), reduced or raised vulnerability to food insecurity (physical capital), improving or degrading environmental resources (natural

capital), and so on. Equally important, this context applies to rural-out migration (the subject under study) undertaken by rural households, it may as well result into improved or worsened livelihoods of sending households.

These two approaches/frameworks i.e the sustainable livelihoods framework and NELM framework of analysis have been adapted for this study due to the fact that the main aim of the study was to assess the outcomes of rural-out migration as a livelihood diversification strategy to the rural sending households. Since in NELM context the decision to migrate is done by the household and the fact that migration as a livelihood strategy may have positive or negative outcomes to the livelihoods (asset capital) of sending households, the relationships amongst the two key concepts in the study necessitated the adoption of the two approaches. Thus, based on the relationships of the variables established in these two approaches, the study conceptual model as displayed in Figure 2.3 was developed.

Figure 2.3: Study conceptual model



From the conceptual model in Figure 2.3, it can be seen that there are two stages/phases of analysis (Phase I and Phase II). For the first phase of analysis, the investigation focuses on the relationship between household characteristics, and societal factors active for migration, and migration decision. The main concern was on how household characteristics, and societal factors active for migration influenced migration decisions at household level. In this stage migration decision was the dependent variable (construct) to household characteristics and societal factors active for migration (the independent variable constructs). The investigation was on the household characteristics that might push the households' decisions to migration and societal factors active for migration was studied to be able to describe the societal factors that "push" people out of their rural setting to destination areas. The second stage of analysis was involving the establishment of the existing relationship between migration and the five household assets. The main concern here was to determine the outcomes of rural-out migration i.e. if positive (migration improves household asset base) or if negative (migration worsen the household asset base) onto the five capital assets. In this phase, migration was the independent variable while the five household assets present the dependent variable constructs.

The assumption in these analyses was that the outcomes of rural-out migration to sending households varies and changes with time. In the beginning, migration may deprive the household and rural economy of labour which may result into negative outcomes in the short run, but in the longer term, if remittances may be invested back may improve productivity, create assets and improve household incomes, thus sustaining rural livelihoods.

2.7 Variables for phase I analysis

2.7.1 Dependent variables

As explained earlier and as portrayed in Figure 2.3 (i.e. the study conceptual model), there were two phases of analysis. Phase I was analyzed statistically and thus the relationship between dependent and independent variables were determined. The

dependent variable for phase I analysis was the households' rural-out migration decisions, that is whether the household chose to migrate or otherwise, it was categorical and dichotomous. Those households whose members chose to migrate were assigned 1 value, and those that chose not to migrate (non-migrant households) were assigned 0 value.

2.7.2 Independent variables

Independent variables for Phase I analysis were also identified. Independent variables were divided into two groups which involved household characteristics and societal factors active for migration.

Household characteristics

The analysis of household characteristics comprised six variable attributes, which involved the size of household (number of household members), ages of head of households, education level of heads of households, marital status of heads of households, sex of heads of households and occupation of the household. Table 2.3 provides further information.

Societal factors active for migration

Societal factors active for migration were divided into two categories which included availability of jobs and the utilities provision and infrastructure development at origin. For this case, the analysis on societal factors active for migration comprised two stages. The first stage of the analysis of availability of jobs at origin comprised nine variable attributes which included; off-farm activities, livestock keeping, employment in public/private sectors, non-farm (self-employed), casual labouring, enterprise related jobs, factory jobs, working in development projects and driving related jobs. The second stage of analysis of utilities and/or infrastructure development at origin comprised eleven variable attributes which also included, quality rural roads, water dams, irrigation schemes, internet café, rural telecenters, rural library, piped water, market places, community centers, animal dips and electricity.

These variable attributes both for, household characteristics and societal factors active for migration were mixed between categorical and non-categorical variables. The information for the attributes identified, how they were defined and measured under each variable category is presented in Table 2.3.

Table 2.3: Variables, definitions and levels of measurement

Variable	Definition	Measurement
Household characteristics		
Number of household members	Household size and its composition (Number of household members in a household)	Scale measured
Ages of head of households	Age of head of household in years	Scale measured
Education of heads of households	The highest educational level obtained by the head of household	Ordinal measured
Marital status of heads of Households	Whether the head of household was married or single, where married = 1or single = 2	Nominal measured
Sex of heads of households	Whether the hhh is male/female headed (patriarchy/matriarchy hh), where male =1, or female = 2	Nominal measured
Main occupation of the household	The main source of households' income	Nominal measured
Land available for agriculture	The size of agricultural land owned by the hh in acres	Scale measured
For societal factors		
Available jobs	Kinds of jobs (farm, non-farm) available in the rural areas	Nominal measured
Utilities and/or Infrastructure development	Types of infrastructures or utilities available at origin, e.g roads, electricity, market places, etc.	Nominal measured

2.7.3 Premises for the variables

The following were the premises upon which the identification of various variables for different analyses/objectives was based:

i). Household size

The number of household members might have so many impacts on households decision to migrate or to stay. Households with a higher number of members are more likely to send out more (or some) of its members unlike the ones with few numbers. For example, households with husband, wife and a couple of children, are more likely to

send out children while parents remain back to take care of the remaining household's property. But for households with only husband and wife, they are less likely to send out more migrants because they are very much constrained by the number of people to send out.

ii). Age of the head of household

Age of household head might have so many impacts on household deciding to migrate. In migration studies, the age of the head of household is considered to be an important factor when it comes to migration decisions and especially if a migrant is the head him/her-self. It is believed that age of the head of household can make a difference when it comes to migration decisions and also it affect the number of household members as well as the number of migrants per household. Households whose heads are young are more likely to have no migrants while those with mature and aged heads of households are more likely to have migrants and especially when migrants are the children of the head of household. Logically, this sound correct since at early ages couples may still have children who are in school and not ready to migrate, but as the couple matures and aging takes place, the chances of their children completing their studies and start migrating increases.

iii). Sex of heads of household

The sex of the head of household might have significant impacts on households' decision to migrate. Female headed households are less likely to send out migrants (if a migrant is the head) compared to their counterpart. In the literature, it is argued that migration in Sub-Saharan African countries, migration is restricted to women. Also potential migrants are more likely to stay if the head of household is a female, simply they may decide to stay and look after the head and provide necessary support than migrating away from home.

iv). Marital status of head of household

Marital status of heads of households was another variable considered important to be analysed for household characteristics. Marital status of head of household might have so many impacts especially when a migrant is the head of household. In the literature it is widely acknowledged that married people are less likely to migrate compared to single. The psychological effects of separation between married couples are important factors that deter married couples from migration.

v). Education level of heads of households

In migration studies the level of education attained by the head of households stands for the education level of the household when it comes to defining household characteristics. The education level of head of household indicates the kinds of job opportunities that may be available for the head of households to engage into and thus the earning that the head of households may earn for the household's survival. In principle heads of households who have attained higher education levels are most likely to engage in well-paying jobs compared to those with low levels of education attainment. This simply means that if the earnings as the result of education levels are low, there are possibilities that other household members may be forced to migrate out in order to maximise the earnings in order to loosen households' financial constraint for the households.

vi). Available jobs

Availability of jobs at the place of origin plays an important part in migration decisions. Throughout the literature, it is acknowledged that mostly, people migrate due to economic reasons which means, difficult means of earning income for households' survival forces people to move elsewhere searching for better life. For that case, it is believed that if jobs that could ensure the earning of income for rural people were available in rural areas, the rate of out migration would have declined. The available job attributes that were taken into consideration included vehicles related, working in factories, working in development projects, working in enterprises, casual laboring,

employment in public/private sector, non-farm self-employment, off-farm wage and livestock keeping.

vii). *Land issues*

Due to the importance of land in people's day to day lives, it might have so many impacts to migration decisions to households. Land was regarded an important factor in determining out migration because the main economic activity of residents in these areas of study was farming, and for someone to do the farming, they needed to have access to land. If land resources become scarce in one area, residents in that area tend to look for other means of survival. For this reason, it was deemed important to investigate if land availability had any bearing on household's migration decisions.

viii). Infrastructure development and utilities provision

Infrastructure development and/or utilities provision is another societal factor that features most in the literature and which might have major impact on rural-out migration. The level or the unavailability of certain infrastructures and/or utilities may lead to people moving out of their rural setting especially if those particular infrastructures and/or utilities are linked with income generating opportunities. For example, the absence of electricity which might be used for establishing small industries which in turn may lead to employment creation or the absence of water which might be used for irrigation farming especially growing green vegetables which are mostly traded in urban areas, may limit rural people's opportunities for making a living or for expanding their income earning sphere. As a result they may opt to leave their rural areas in search of opportunities of which if certain infrastructures or utilities were available in their places of origin, these opportunities would be available and thus no or less rural-our migration would be evident because people would be engaging themselves with various income generating activities as a result of developed or availability of certain infrastructures or utilities. The various attributes of infrastructure development and/utilities considered was rural roads, water dams, irrigation schemes, internet café,

rural telecenters, rural library, piped water, market places, community centers, animal dips and electricity.

2.8 Phase II analysis

Phase II was analyzed qualitatively and thus did not require such categorization of variables as for phase I analysis. In Phase II only the association between household asset portfolio which included social capital, financial or economic capital, physical capital, natural capital and human capital and migration and remittances from it was established. In livelihood studies, the livelihood strategies opted by households and individuals tend to have differing outcomes to the household that put these assets into use. In this phase the purpose was to establish whether migration and remittances from it had positive or negative outcomes to the households' asset portfolio. Essentially, how remittances from migration were used to build the asset portfolio of the household was of major concern.

Since this study was aimed at assessing the outcomes of rural-out migration (being one of the household livelihoods strategies) to the sustainability of rural livelihoods, it was assumed that migration and remittances from it may have varying outcomes to different types of households assets. The outcomes of migration to households assets impact would be assessed in terms of how migration had enhanced or built or improved the households' asset stock owned, accessed and/or claimed by households.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

The chapter covers various issues mainly are an introduction, the description of the study areas, description of the research/study design, description of the units of analysis, aspects of population, sample and sampling procedures, types of data and data collection procedures and sources, validity and reliability of data, ethical issues, data analytic strategy and phases of data analysis.

3.2 Description of the study areas

The study was conducted in Makete and Iringa Rural Districts of Njoluma and Iringa regions. The basis for choosing Makete and Iringa rural as the study areas was purposive because the researcher was certain that the area would provide the best information to achieve the objectives of the study. The chosen areas were typical rural areas in Tanzania where rural-out migration has been practiced by the residents for centuries (as evidenced in chapter one). In short, rural-out migration in Njoluma and Iringa Regions dates back during the penetration of colonial capitalism in the ninetieth century (Mbonile, 1995). During the colonial era, Makete and Iringa Rural districts of were earmarked as labour reserve areas by the Germans who established plantations along the coast and in the northern part of the country. It was these plantations which required high labour for cultivation and therefore labour was to be obtained from various parts of the country to provide labour in these plantations, Makete and Iringa districts were among earmarked labour reserve areas. It was from this time when rural-out migration officially begun to be practiced in these areas, and until to date the residents of these areas are still migrating out of their villages for various reasons.

Moreover, the two regions have benefited with the presence of various activities (at large scales) especially in the agricultural and industry sectors where the natives are supplying their labour in the form of salaried employees. These activities include large

tea plantations, exotic tree plantations (Sao Hill Forest Plantation), Dabaga farms and food processing factories which are found in the region. For the reasons, the people of Iringa Rural and Makete districts were most likely to be moving (out-migrating) from their home villages to work in these investments though others could still move out to Iringa town and other neighboring towns or even to further towns such as Dar es Salaam, Mbeya, Dodoma and so on. The following sections describes of individual districts of study.

3.2.1 Makete District

Makete district is located at the southern end of Njoluma region, about 112 kms from the Regional Headquarters. It lies adjacent to the Northern shores of Lake Nyasa, separated by a steep escarpment, stretches slowly into the lower and flatter lands of Njombe Region (formerly Njombe District) on the Eastern side. Moreover, the district lies between latitudes $08^0$45' and $09^0$40' South of Equator and longitude $33^0$85' and $34^0$30' East of Greenwich. The district is bordered by Njoluma District in the East, Mbarali district (Mbeya Region) in the north, Ludewa and Lake Nyasa on the south, while Rungwe district is located on the Western side of the district. The District covers a total surface area of 5,800 sq. km. of which most of it is mountainous with steep hills, ridges, valleys and escarpments (Makete District Council [MDC], 2008). The arable land available for agricultural production is 4,195 sq.kms. Out of the arable land (4,195 sq. kms) in the district, only 371 sq. km. is actually cultivated annually, living 3,824 sq. kms. lying idle due to the fact that either the soil is infertile or is used for grazing or is edges and river beds or belongs to investors (e.g. Ibaga farm and Kitulo Game Reserve) (MDC, 2008).

Administratively, Makete District is divided into 6 divisions and 17 wards (as they are indicated in annex 2) with a total of 97 registered villages. Ikuwo division covers about 21 % of total land area of the district, followed by Ukwama and Lupalilo divisions which cover 20 % each, Matamba division covers 18 %, Magoma division covers 11 % and Bulongwa division has the smallest land area in the district covering only 9 %

(MDC, 2008). The District Executive Director (DED) is the chief executive of the council, who is assisted by various heads of departments (HOD) at district level, Ward Executive Officers (WEO) at Ward level and Village Executive Officers (VEO) at village levels.

The District has two main ethnic groups namely: Kinga and Wanji, of which about 98 % are Christians. The Wanji occupy the northern part of the district, while the Kinga occupy most part of the district. Moreover, within the Kinga, there are sub-ethnic groups called Mahanji and Magoma. In addition, the district is also occupied by small groups of Nyakyusa and Sangu in Mfumbi and Kigulu Wards (Makete District Executive Director's Office [MDEDO], 2007).

The population of Makete district, contrary to other districts of Iringa region (where it formerly belonged) has experienced an insignificant growth. The district average rates of intercensal population growth for the period of 1978 – 1988 and 1988 – 2002 showed a drastic decrease from 1.2 % to 0.2 %, respectively, the reasons being assumed to be deaths and out-migration. According to the 2002 Population and Housing Census the district recorded a total of 105,775 inhabitants compared to 102,312 inhabitants counted in 1988 Population Census marking, a slight increase of 3,463 inhabitants only (3.4 %). However, the projections for 2007 indicate that the district has a total population of 114,777 (MDC, 2008).

Comparing with other districts of Iringa region (where it belonged, data for Njoluma Region are not available yet), Makete district is the smallest rural district in terms of land area and according to the 1988 census results it was the second least populous district after Ludewa. However, a different trend was observed in the 2002 Population and Housing Census, such that the district became the least populous in the region contributing only 7.1 % (105,775 total numbers of inhabitants) of the regional population followed by Iringa Urban district which contributed 7.1 % with a total of 106,371 inhabitants. Between 1988 and 2002 the district had a relatively lowest growth

rate of 0.2 % compared to the regional growth rate of 1.6 % and national average of 2.4 %. Makete district, with an average population density of 33 persons per sq. km. is considered as moderate densely populated district compared with other rural districts of Iringa region. The population density of Makete district being slightly above the regional average of 29 persons per sq. km; it ranked third densely populated rural district in the region. Among other reasons, the population density of Makete district is mainly affected by its relative small land area rather than by the number of residents. Moreover, the decline in population growth has also influenced the population density of the district to remain almost the same as it was in 1988 (32 persons per sq. kms.).

A similar trend of population variability was observed at the division level as well. According to the 1988 population census, Bulongwa had a population density of 30.1 persons per sq. km. and was considered the most densely populated division in the district, followed by Lupalilo (one of the research area) which had 21.4 persons per sq. km. while Matamba (another research area) was considered the least densely populated division with 13.5 persons per sq. km. However, the 2002 population and housing census shown surprising results, it was shown that Matamba was indicated the most densely populated division with 24.5 persons per sq. km, Bulongwa was indicated the second populated while Lupalilo was the third with 23 persons per sq. km and Ukwama was the least populated with only 9 (nine) persons per sq. km. This population variability within the district could be suggesting the presence of some internal processes taking place including internal or external migration, deaths and births. These results also show that some divisions were favoured by internal migrants than others due to various reasons. For example, while Ukwama Division which has the largest land area of about 1,187.7 sq. km, had the lowest population density of 9 persons per sq. km in 2002 compared to that of 17.3 persons per sq. km in 1988, Matamba which has the third largest land area of 1,038.9 sq. km had population density of 24.5 persons per sq. km in 2002 compared to 13.8 persons per sq. km in 1988 and Bulongwa which has the smallest land area of about 518.2 sq. km, had the second highest population density of 24.2 persons per sq. km in 2002 compared to that of 30.1 persons per sq. km in 1988.

These results indicated that within these two census periods some divisions suffered reduction in their population size while others suffered the increase. For instance, while Bulongwa lost 24.4 % of its population, followed by Matamba which lost 23.5 % and Ukwama which lost 5.1 %, Lupalilo and Magoma Divisions experienced population increase. It was asserted by district officials that internal migration was the major factor for this population variability than other natural causes such as deaths and births. Some of the factors contributing to these internal movements were mentioned to include search for availability of arable land, economic infrastructure and improved social services (MDC, 2008).

Due to geographical area and population size, Makete district has the second smallest number of households in the region (formerly belonged). In the year 2002, the district had a total number of 105,775 inhabitants and a total of 27,762 households, equivalent to 8 % of 346,815 households in the region. Given the population size and number of households, in 2002 the district had the smallest average household size of 3.7 in the region compared to that in 1988 which was 4.6. This shows that there was a general decline in the district average household size which could be contributed by deaths and out-migration among other things (MDC, 2007).

Moreover, a larger segement of the population about 92 % of the district workforce is employed in substance agriculture. HIV/AIDS pandemic among others has in recent years become the highest cause of death and has shown negative impact to morbidity and mortality such that the orphaned and widowed rates recorded were the highest in the region accounting for 4.6 % and 6.2 %, respectively. The health status of Makete people is also observed in other proxy heath indictors such as Infant Mortality (82 per 1000 infants), Children under five years mortality (136 per 1000 U5 children), HIV/AIDS prevalence rate (0.7 %), Doctor/population (11,800 people per doctor) and Hospital bed/population (245 patients per bed).

Roads were the main mode of transportation of goods and people within and outside the district of Makete. Therefore, road transport was considered one of the key sub-sectors responsible for the sustainable development and poverty reduction in the district. Compared to other districts in the region, Makete district has a total road network of 785 kms. The Tanzania Road Authority (TANROAD) maintains about 233 kms. The road network in the districts that are maintained by the central government and are classified as Trunk and Regional roads, while those that are maintained by the district council are called district and feeder roads; the rest of road networks are called village roads and are mostly maintained by villagers. Since the district is located at the periphery in the north-western side of the region together with its topography and weather condition, these might have contributed to making the road network condition to remain in poorer condition with higher degrees of roughness, potholing and erosion.

Furthermore, according to the 2002 population and housing census report, the information on literacy for individuals aged five years and above for Makete district was the lowest compared with other districts in the region, accounting for 69 %. However, literacy rate among male heads of household was higher (60 %) than that of females (55 %). With regard to education status, National Sample Census of Agriculture 2002/03 revealed that the number of heads of households with primary education was the highest in the district 53 %, followed by those without education 43 % and those with secondary education were 3 %. Whereas only 0.2 % had post-secondary education while those with adult education was only 0.8 %. The report also showed that radios were the main asset owned by most households in Makete district (52 %), followed by iron (23.4 %) and bicycles (16.0 %) (National Sample Census of Agriculture, 2002/03). However, an insignificant proportion of households (3.4 %) owned wheelbarrows, 1.2 % owned vehicles, 1.2 % mobile phone and televisions/videos.

3.2.2 Iringa Rural District

Iringa Rural District is located at the extreme northern end of Iringa region. The district is situated in such a way that it surrounds the Regional Head quarters where Iringa

Urban District is found. The district lies between latitudes 6^0 55^1 and 10^0 30^1 south of the Equator and between longitudes 33^0 45^1 and 36^0 55^1 east of Greenwich. The district is bordered with Iringa Urban and Kilolo districts in the East, Mufindi District in the south, Mbarali District (Mbeya Region) in the West and South West and Morogoro Region in the North. The district covers the surface area of about 20,576 sq. kms which is equivalent to 35% of the total regional surface area compared to that of Makete District which covers 4,128 sq km equivalent to 7% of the regional surface area (Iringa Region Socio-economic Profile [IRSEP], 2007).

Administratively, Iringa Rural district is divided into 6 divisions, 20 Wards and 119 registered Villages. According to the 2002 population and housing census, the district had a total of 245,623 residents, a total of 56,682 households and an average household size was 4.3 (National Bureau of Statistics [NBS], 2003). The District Executive Director (DED) is the chief executive of the council, who is assisted by various heads of departments (HOD) at district level, Ward Executive Officers (WEO) at Ward level and Village Executive Officers (VEO) at village level.

The dominant indigenous ethnic people mostly found in the district are the Hehe who account for over 80%, the remaining 20% is mainly composed of the Bena who are mostly migrants from Njombe District and the Kinga who are migrants from Makete and the very small proportion of the Pangwa, Kisi and Manda who are migrants from Ludewa District (IRSEP, 2007). The population of Iringa Rural District has experienced gradual growth over time. The 1967 national population census which was the first of the comprehensive census, a total of 226,124 inhabitants were recorded, this was followed by the 1978 census where a total of 290,497 were recorded, likewise in the 1988 population census a total of 362,137 was also recorded and in the 2002 (the most recent) a total of 245,623 in habitants were recorded. The last census records showed a decline in the population, but in actual sense this was not the case. The figure was arrived at after Kilolo area was separated as an independent district which recorded a total of 203, 982 inhabitants. The two districts made a total of 449,605 inhabitants.

Despite the overall district population increase, the District average growth rate fell from 2.3 % in 1967/78 to 2.2 % for 1978/88 and further down to 1.6 % for 1988/2002. These results revealed that the mean average annual population growth rates for Iringa Rural District have been on a steady decline like that of the region (the same trend of population growth rate was reflected in other district as well) since the 1967/78 inter-censal period. For the 2002/2012 period, the population growth rate for the district is projected to reach 1.1 %, thus suggesting further decline (IRSEP, 2007).

Moreover, with increasing district population, the population density has also been on steadily increasing from 1967 to the projected 2012. For example in 1967 when the population was 226,124 its population density was 8 persons per sq. km and this has been on the increase until the projected 14 persons per sq. km in 2012. This increase in population density indicates that in the future there will be a higher demand of land for agricultural activities, since the land resources remains fixed while the number of persons per sq. km keeps on rising. During the study visit it was found out that currently land for agriculture is not a problem, at least every person has got accessibility to land. However, it was also found that with the immigrants from other areas and youths graduating to maturity, there were indications that in the near future land availability for agriculture and other purposes will be a major concern for the rural people.

To a greater extent, the district is endowed with favorable climate for farming activities. Climatically, the district is divided into three climatic zones, the highlands zone, the midlands zone and the lowlands. The highlands zone lies at an altitude of 1,600 - 2,700 metres above sea level and it covers the eastern fringe of the district. In this zone, the temperatures are normally below 15^0C during winter seasons with rainfall ranging between 1,000 to 1,600 mm per annum, falling in a single season from November through May. The dry and cold season occurs after the rain season and it lasts from June to September. This is the time when farming activities are put on hold waiting for the following farming season. It is this period which render most Iringa rural residents idle

and thus those who are mobile opt for temporary or seasonal out migration for seeking a living elsewhere away from their villages.

The midlands zone lies at an altitude of 1,200m to 1,600m above sea level and covers the central part of Districts but it also extends to Mufindi, parts of Njombe, Ludewa and Makete districts. In this zone, temperatures range from 15^0C to 20^0C, with average rainfall of between 600 and 1,000 mm per annum. The lowlands zone has an altitude of 900 meters to1, 200m above sea level and it covers the low lying northern part of the Iringa Rural district along the Ruaha River. Temperatures vary between 20^0C to 25^0C with low rainfall ranging between 500 and 600 mm per annum. This is the driest area in the district, the two wards (Kihorogota and Nzihi) that were sampled for study are found in this zone. During field work (in the month of August), it was really dry, even cattle keepers in the area were migrating to other areas for search of water to their animals. The major concern of the residents that we had an opportunity to talk to was water problems in the area. There was no water dam, few had access to tap water (which was available at least once in a week) or natural springs. Residents reported to be getting water from the valleys were they used to dig down in the sand and sometimes from the stagnant water that had settled in the previous rain season. Whether this lack of water could lead to households' migration decisions will be revealed in chapter five on results and discussion.

The district's total land area is estimated to be around 1,989,750 ha, of which the total arable land is estimated to be 480,000 hectares (24.12%). The remaining land is utilized for forest reserve (140,429 ha), forest plantation areas (5, 671 ha), wildlife reserve area (1, 153, 667 ha, 58%), tsetse fly infestation area (50,848 ha) and others (159,135 ha). However, by 1997/ 98 to 2004/05, the total average area under cultivation was only 161,488 ha or 33.6% of the total arable land was cultivated, which means the remaining 66.4% of arable land was untouched. The largest proportion of the district's cultivated area is owned by peasant farmers who cultivate an average area of 1.4 hectares per household (IRCO, 2006). These figures indicates that in the district there are still a large

arable land resource that is lying idle and which requires development in order to realize its production potential through crop production either by improved peasant farming or commercial/mechanized farming. In other words these figures about land availability in the district indicate that to a large extent land could not be a major factor for people to migrate out of their rural areas.

Like in many rural areas of developing countries like Tanzania, agriculture is the main source of income for the districts' residents and natural soils still support growth of various crops. Although soils have potential to support a variety of crops, many areas in the district have infertile soils especially in high rainfall zones. The soils in these zones require application of fertilizers, otherwise crop yields become poor. Agricultural inputs are brought into the region and sold to farmers by a diverse group of individual stockists and private crop marketing companies dealing with tobacco, tea and coffee purchases. Due to high demand of fertilizers, it has been a routine that the demand has always exceeded the supply. For instance for the period 1997/98 to 2002/03 the total yearly average supply was estimated to be 5,381 tones and for the period 2004/2005 the amount supplied increased to 5,726 tones. It is however, acknowledged that the amount of fertilizers supplied in all periods did not suffice the needs of farmers as many could miss completely or were able to get part of what they wanted (the actual amount need was not established).

Moreover, another factor which makes many farmers not use fertilizers despite their need to do so are the high prices set by stockists and large farmers who sell them to small scale farmers. To many small scale farmers (peasants) the prices are very high such that they cannot afford to buy them. But more seriously, the late availability of fertilizers to farmers makes it even worse as the timely availability of particular types of fertilizers is very crucial for their use. For example during the research, farmers suggested that it could be better for fertilizers to be sold in their localities and made it available in all seasons so that they can use them whenever they want to do so, especially for fertilizers which have to be applied at the time of planting. Types of

fertilizers that are mostly used by farmers in the district includes TSP/DAP applied at planting time for crops such as maize, round potatoes and horticulture crops (tomatoes, cabbage and onions), CAN/UREA fertilizer applied as top dressing for crops such as maize, paddy, tobacco and horticultural crops and NPK fertilizer which is applied at planting time for tobacco and tea crops. These results have shown that land is available in plenty but continually losing its fertility and thus declining production potential. But also, fertilizers are supplied in less amount compared to requirements, prices are unaffordable to many and poor timing of fertilizer availability. All these agriculture related problems can lead most households (being dependent on agriculture) to becoming unable to produce enough for their home consumption as well as for cash income which eventually could lead to opting rural-out migration as an alternative livelihoods strategy.

Furthermore, it was found that by the year 2005 there was some industrial activity going on in the district especially small-scale industries and some medium scale enterprises. These small and medium scale enterprises were all involved with the processing of agricultural and forest products whose raw materials are available locally. In total there were 415 of which 10 were for carpentry, 390 were for milling businesses, and 7 were for oil processing, no any tailoring enterprise was found in the district. In light of this it was found that since most of the enterprises were small and medium sized, they mostly employ family members in order to minimize running costs, for that case they have limited capacity in absorbing huge unemployed human resource. Thus their contribution in reducing idle labour especially when farming seasons are over is very minimal such that rural out migration remain the main available livelihoods strategy to most households.

As described in previous sections, the district's main economic activities are agricultural and some industrial related activities. Road transport in the district is one of the key sub-sectors responsible for the district's sustainable development and poverty reduction. The sub-sector potentially stimulates and facilitates delivery of agricultural inputs into the

districts and delivery of district's products to markets. By the year 2005, road network in terms of road classification the majority was composed of trunk roads which covered 169 kms, roads maintained by the district covered 369.8kms and roads maintained by the region covered 178 kms. By year 2005 out of the total road network of 1075.6 km that covers the entire district, there were only 70 km (7%) of tarmac road, 428 kms (40%) of gravel road and 577.6 km (53%) of earth road. These figures indicate that most of the road network was either gravel or earth road which means that the larger part of the district is impassable throughout a year.

In short, this section has briefly described the basic features of the study areas that may have direct or indirect impact to households' migration decisions. However, to ascertain whether the factors described in this section can actually lead to household migration decisions will be revealed later.

3.3 The research design

The design for this study was cross-sectional aiming to survey a cross-section of households in Makete and Iringa Rural Districts of Iringa region in order to investigate the outcomes of rural-out migration on the livelihoods of the sending households. This research design was considered the most appropriate because the study was aiming at obtaining an overall picture of rural-out migration outcomes to the households from a cross-section of the study population as it stood (as it was) at the time of the study (Babbie, 1989). According to Kumar (2005), a study design is discussed based on three different perspectives or criteria, which include the number of contacts with the study population, the reference period of the study and the nature of investigation.

The advantage of this design over the others was that it was simple to apply in the sense that it only involved deciding what a study wanted to find out, identifying the study population, selection of the sample and contacting the respondents to find out the required information. Drawing on this advantage, this study design involved only one contact (involved one visit) with the study population, simply because the study at hand

was intending to investigate the outcomes of rural out-migration to the livelihoods of the sending household at the time of investigation and not the change that has happened or that will happen in future. Taking into account the number of contacts with the study population, the design was the most advantageous over others (e.g. longitudinal designs) with regard to the questions of budget constraint and PhD study timeline. More importantly, cross-sectional studies are essentially analytical studies of which this was part of it (Babbie, 1989). However, the main limitation to this research design is its inability to measure changes in a phenomenon over time, which was not the aim of this study anyway.

3.4 Unit of study/analysis

The unit of enquiry for this study was households of two categories i.e. migrant and non-migrant households. Unit of study is simply the unit for example individual, household, corporation, or whatever about which information is required in a research project and that becomes the main referent point in the analysis (Dictionary of Sociology, 1998). It is argued by some researchers (e.g. Trochim, 2006) that one of the most important ideas in a research project is the unit of enquiry/unit of analysis**.** The unit of analysis is the major entity that we analyze in our study (Churchill and Iacobucci, 2005; Craig and Douglas, 2000; McGrath, 1996;;; and Trochim, 2006).

This study adopted a modified household definition as put forward by Agesa and Kim (2001:12) and Hossain (2001:8), that a household is "*a dwelling unit where a group of persons usually live together in the same home or compound (commonly referred to as the "extended" African family) and takes food from common kitchen and are bound by ties of kinship in that they are answerable to the same household head.*" This definition includes those who live outside the village but claim the household to be their own. Persons of this category work outside the villages and often send remittances. Such persons are called migrants or the migrated members of the household and such households are known as migrant household (Hossain, 2001). This households' definition fits exactly to Tanzanian context but it has also included household members

living outside the household who claims to belong to that household. Without incorporating household members living outside it would be difficult to associate migrants with sending (migrant) households. For that case this definition was adopted as the working definition for this study because it properly links migrants and sending (migrant) households which could be suggesting the remitting behavour of migrants.

3.5 Target population, sample, and sampling procedures

For this study, the targeted population included all households (being our study units) in Iringa Rural and Makete Districts of Iringa region. The study units were all surveyed households which included two categories, households with migrant and those without migrants. This means that the study sample was drawn from this study population of households.

According to the 2002 Population and Housing Census, Iringa Rural District had a total number of 56,682 households which were found in 20 wards which in total made up the district. Additionally, on average each administrative ward had a total of 2,834 households. For Makete district, the 2002 Population and Housing Census revealed that the district had a total of 27,672 households which were found in the total number of 17 wards, and on average each ward had a total of 1,628 households.

From these statistical data it was extremely unlikely that this study would have enough time and financial resources to survey all households found in the area. For this reason it was paramount to select a few or the segment of the study population which would be subjected to the investigation which constituted a subset of the population, thus a sample to this study. As stated earlier on, according to the 2002 Population and Housing Census, Iringa Rural District had a total of 56,682 households, out of which it was anticipated that a sample of 216 would be selected for investigation. Since there was a sampling frame of 20 wards in Iringa Rural District, two Wards were randomly selected for investigation. A simple random sampling technique known as fishbowl draw sampling technique (Kumar, 2005) was employed to select these two wards. It followed that since

the population of wards was small, the approach was to number each ward using separate slips of paper for each ward, all the slips were put into a box, and then picked them out one by one without looking and replacement until the number of slips selected equaled the number of wards to be investigated i.e. two wards. Moreover, based on the same 2002 housing and population census it was estimated that each ward in Iringa Rural had a maximum of six villages. For that case 100% of the total villages (i.e. six villages) for each ward were selected for the investigation and this resulted in a total number of 12 villages from the two wards which were selected for this study. Furthermore, according to the same 2002 housing and population census in Iringa Rural District each village had approximately 360 households, out of which 5 % (equal to 18 households per village) was to be systematically (partial-randomly) selected for investigation. The systematic sampling procedure/technique relied on a village register were households were listed in no particular order and thus households were selected at regular intervals through that register list. The procedure involved determining the random start household which was the 10^{th} household in a list and then proceeded with the selection of every 10^{th} household onwards until the required number of households was achieved.

However, it is important to hint out that in the actual survey only 187 households were surveyed in Iringa Rural District. The reason for not achieving the required sample size in this district was that at the beginning of data collection in Nzihi Ward (25^{th} August 2009) a fire tragedy occurred which burnt some student hostels of Idodi Secondary School (in the neighbouring ward) in Iringa Rural District and claimed the life of 12 girls (students). Most of the fire victims originated from Ismani electoral constituency and Nzihi Ward. Due to the mourning and burial activities which were going on in the area, it was unavoidable to skip some of the houses that were earmarked for a survey. All earmarked 12 villages were surveyed except that the number of households varied from village to village. However, in order to compensate the skipped households in some villages and the fact that in some villages not all earmarked/anticipated households were available for interviews, the missed households were compensated by interviewing

more households in the next villages to be surveyed which led to not abiding to the pre-determined sample size of 18 households per village. To some villages the number of interviewed households was above while to some it was below that pre-determined sample size per village. In villages where more households than expected were surveyed, additional households were chosen arbitrarily with the help of village leaders without following the systematic sampling rules. Choosing other villages (the replacements) to be surveyed after the exercise had started was not a viable option due to the difficulties in the logistics involved from the district to village level. However, this approach did not affect or compromise the credibility of the findings of this study since the information obtained from the arbitrary selected households was the same as the ones that could be obtained from the missed households, as there were no significant variations amongst the surveyed households that could substantially influence the findings.

Furthermore, based on the 2002 Population and Housing Census, Makete District had a total of 27,672 households out of which 90 households were earmarked for investigation. For Makete, we had a sampling frame of 17 wards out of which two (2) were randomly selected for investigation. The same (Fishbowl draw) sampling technique that was employed for Iringa Rural District was also applied for Makete to obtain the two wards. By taking into account the same 2002 Population and housing Census it was estimated that each Ward in Makete District had a maximum of seven villages. For that case in order to achieve the sample size (90 households) for Makete District, six villages from each ward were randomly selected for investigation resulting to a total number of 12 villages from the two wards being picked. Based on the 2002 Housing and Population Census in Makete District, each village had approximately 150 households out of which 5 % (equal to 7.5 or approximately 7 households per village) were randomly selected for investigation. This made a total of 84 households that would be sampled for investigation.

In total for the two districts the study had anticipated to investigate a sample size of 300 (three hundred) households but due to some inevitable circumstances a total of 272 households (91% achievement) instead was actually investigated. The missed 28 households could not affect the results as well as the credibility of the findings, since there were no significant variations amongst the villages in the same Ward of the same district which could make significant change of the results. According to Comrey and Lee (1992), 91% sample size achievement is considered to be statistically adequate for a survey study.

3.6 Types of data, their sources, and collection procedures

In order to be able to answer the research questions and thus achieve the objective of the study, it was paramount to gather information around the research problem/question at hand. Data used in this study were mainly primary data, though in the social research this could be complemented by other data types which are secondary and tertiary (Blaikie, 2004). Primary data were generated or collected directly from the field by visiting and interviewing the selected households; the information obtained was the first-hand information. The interview schedule was the major means or instrument of data collection from respondents since the interviewing processes involved face to face contact between interviewees and interviewer. These primary data were obtained from the structured interviews with heads of households or their representatives and also from semi-structured interviews with village officials.

The main advantage of using interview schedule was to enable all interviewees to be given exactly the same context of questioning, which in turn would reduce response variations from different respondents on similar questions. In order to achieve this, interviewers were reading out questions exactly and in the same order as they were printed on the schedule. Questions were very specific and very often they offered the interviewees with fixed range of answers (closed ended question) and very seldom some few questions offered the same interviewees with flexible range of answers (open ended questions). However, interviewees were given flexibility in answering questions as well

as in seeking clarification when the question asked was not well understood by a respondent. In order to obtain valid information about the sampled household, one respondent from each household were interviewed. Heads of households were the most preferred to respond to our questions due to their positions of having more and appropriate information about the household than anybody else, but in circumstances were the head was not available or was not able to be interviewed, any available member who was ready and able to offer the required information was interviewed.

3.7 Validity and reliability of data

3.7.1 Issues of internal validity

Validity is a key issue of concern in research design or research study. It is defined as 'the degree to which the researcher has measured what he has set out to measure' (Smith 2010:106). While according to Kerlinger (1973: 457) 'the commonest definition of validity is epitomised by the question: Are we measuring what we think we are measuring, according to Robson (2002: 93), validity is concerned with whether the findings are 'really' about what they appear to be about. Moreover, Babbie (1990: 133) on the one hand writes that 'validity refers to the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration', Bryman (2001: 72) on the other hand writes that validity refers to the issue of whether an indicator (or set of indicators) that is devised to gauge a concept really measures that concept. From these definitions and explanations one could see that validity is all about whether the research investigation provided trustworthy answers to the research question for which it was undertaken and whether it provides these answers using appropriate methods and procedures.

Some of the major sources of validity threats that could have applied in this study related to instrument soundness and construct soundness (Kumar, 2005). Instrument threats emerges from the instrument not measuring what it was designed to measure while construct threats emerges from the way questions are constructed, leading to biased

responses or leading to vaguely responses from respondents (Aday, 1996). One of the causes for this problem is for the researcher not having a clear theory or hypothesis to guide questions construction (Aday, 1996). Two methods were used to minimize threats that could emerge from instrument and construct validity. Instrument validity was mainly established through logic. Implied here is that each question was justified in relation to the objectives of the study it was intended to achieve. Furthermore, to minimize biasness or vagueness arising from poor constructed questions, pre-testing of the research schedule was done to ensure the questions were capturing the information required. Also during interviews, interviewers were paraphrasing questions to allow respondents understand better what were required of him/her, but also respondents themselves were allowed to paraphrase questions in order to suit their level of understanding without compromising the quality if information sought.

3.7.2 Issues of external validity

While internal validity (as explained previously) refers to the approximate truth of propositions, inferences, or conclusions, the *external* validity refers to the approximate truth of conclusions that involve generalizations. More specifically, external validity is the degree to which the conclusions in a particular study would hold for other persons in other places and at other times (Kumar, 2005). Campbell and Stanley (1966:) proposed the commonly accepted definition of external validity that *"External validity asks the question of generalizability: To what populations, settings, treatment variables and measurement variables can this effect be generalized?"* [p. 154]. It is argued that the main criteria of external validity is the process of generalization, and whether results obtained from a small sample group, can be extended to make predictions about the entire population (Experiment Resources, 2008).

A threat to external validity of any study is an explanation of how one might be wrong in making a generalization. In this context, the three major threats to external validity and the three ways one could be wrong includes people, places or times. Generalizability of the findings of this study to other areas beyond Makete and Iringa Rural Districts was

considered an important aspect of this study. The findings of this study having come from only some parts of two districts in Tanzania could pose a danger of not being generalizable to other districts and/or in other countries. While they can be generalizable to the two studied districts, they might not be so to other district in Tanzania due to the fact that the determinants of mifration may differ between districts and regions. However, as far as rural-out migration in Tanzania is concern, the problem of generalization is likely to be very minimal because the conditions that apply in these two districts are more likely to apply to other districts within the country. Another way that was used to reduce the threats of generalizability was the use of random and systematic (partial sampling) sampling techniques in household (sample) selection and the assurance that majority (91%) of sampled households/respondents participated in the study, which suggest that participant households dropout rates were kept low (9%).

3.7.3 Reliability of data

The word reliable means that something is dependable and that it will give the same outcome every time. In research reliability refers to the consistency of measurements, or the degree to which a research instrument measures the same way each time it is used under the same condition with the same subjects (Shuttleworth, 2009). In short, it is the repeatability of the measurement. A measure is considered reliable if a person's score on the same test given twice is similar. Threats that were facing the reliability of data in this study were mainly the respondents' ability to recall durations of stay of migrants, remittances from migrants and costs of various assets they possessed as well as the genuineness of their responses and others of the like. For this reason, one way to address the problem of recall period was to limit the information that was sought to the past two years but respondents were given flexibility to recall even longer periods than that. Another way was to visit the respondents in their households whereby they were able to consult some household members in case they had forgotten anything, but also to make the interview environment more natural to the interviewees. This helped some interviewees to consult some documents in order to recall certain information and also to

enable the interviewers to physically see some of the things that were reported by the respondents.

Regarding the genuineness of the information provided, it is possible that interviewees at times may want to impress the interviewer by providing answers that may seem to be appealing to the interviewer/researcher or just want to finish and go. To minimize such problems, first of all target households were informed a day in advance so that they could plan for the interview. Mostly heads of households were the most preferred respondents because of their position in the households, but in cases were heads of households absent or unable to be interviewed somebody else were selected for the interview. Additionally, interviewers were asked to give interviewees enough flexibility that would involve some breaks in between the interview sessions when the interviewee would request for it or when interviewers would sense the need. In this regard, interviewers were asked to treat the interview sessions as informal as possible to allow the high degree of interaction between the interviewee and interviewers. This was aiming at providing enough room for the interviewees to recall some of the things they had forgotten or seek consultations form other household members.

Moreover, interviewers were insisted to be respectful and patient without showing any signs of being in hurry or that the respondent was taking too much time to respond to a simple question. More importantly on the issue of truthfulness, the information provided by households were compared with the general ones provided by key informants (mainly village leaders), and mostly they looked similar. This provided some assurance that the information collected from households was close to the reality of the situation being addressed.

3.8 Ethical issues

According to the American Heritage Dictionary of the English Language, Fourth Edition (2000:201) “ethical means being in accordance with the accepted principles of conduct that are considered correct and that govern the conduct of a given profession or group”.

Most professions working with people such as British Psychological Society (2000), British Sociological Association (n.d.), British Association of Social Workers (1996), and American Psychological Association (1992), to mention a few have established overall codes of ethics for conducting research in their fields. In the social sciences a number of ethical considerations that describe the system of ethical protections have been created to try to protect or to strike a balance between the researcher's right to know against the participants' right to privacy, dignity and self-determination (Robson, 2002). These ethical considerations includes the principle of voluntary participation, seeking informed consent, the possibility of causing harm to participants, and maintaining participants confidentiality and anonymity (Blaikie, 2004; Bryman, 2001; Kumar, 2005).

Before the data collection phase begun Mzumbe University provided an introduction letter to the researcher introducing him to the authorities where the research were planned to be conducted that the research was purely an academic study and was for the benefit of contributing to the existing body of knowledge in Tanzania and elsewhere. On arriving at the head quarters of the districts which were selected for investigation, the researcher introduced himself to the district authorities by providing the introduction letter from Mzumbe University. From the District head quarters, the researcher was provided with an introduction letter to the local leaders of the administrative Wards were the research would take place. From the head quarters of the administrative Wards, the researcher was provided with another introduction letter to the village leadership stating exactly the essence of the research and the duration the researcher had anticipated to spend in their villages. This was aimed at providing relevant authorities from the district level to village levels, of the research to be taking place in their area but more importantly to enable the research team obtain needed assistance from village authorities such as locating sampled households and initial introduction of interviewers to respondents that would build rapport between the two parties.

According to Bryman (2001), it is considered unethical to collect information without the knowledge of participants (or subjects), and their expressed willingness and informed consent. In regard to this study, respondents from participating households were made adequately aware of the type of information sought from them, why the information was being sought, what purpose it would be put to, how they were expected to participate in the study, and how it would directly or indirectly affect them. The consent was sought verbally and without pressure of any kind. To make sure happened, interviewers did not start straight away (forgot seeking consent) with interviewing, all interview schedules were printed on the cover page with a statement of seeking interviewees consent (see Appendix ii) and all interviewers were instructed or required to go through it prior interviews. It clearly stated that interviewees had the right not to respond to any question they felt not comfortable with.

Some of the information (such as marital status, incomes, age and possession of certain types of assets) sought had some elements of posing an ethical dilemma in the sense that they were regarded (by the researcher) as sensitive or confidential to some people and thus a kind of invading their privacy. However, it was crucial to seek such information as not asking for such information it would have been impossible to pursue this study and be able to contribute to the body of knowledge. In order to reduce the threat posed by asking sensitive information, respondents were clearly and frankly told of the type of information they were going to be asked, and sufficient time was given to them to decide if they wanted to participate without any major inducement or otherwise.

Another threat that was anticipated was the possibility of the research causing 'harm' to participants in anyway. Harm in the social sciences involves such things as physical harm, loss of self-esteem, stress, discomfort, anxiety, harassment, invasion of privacy, or demeaning or dehumanising procedures and inducing subjects to perform reprehensible acts (Bailey 1978: 384; Diener & Crandall, 1978: 19). Deliberate measures were taken to ensure the possibility of causing harm to respondents was reduced to a greater extent. One way of reducing the risk was to seek respondents' consent for every question

thought to bear the risks of harming respondents but also interviewer were encouraged to treat the interview exercise as informal as possible (in a way of normal talks) so as to reduce the risk of anxiety amongst respondents and this helped to reduce the barrier between interviewer and interviewees.

Sharing information about a respondent with others for purposes other than research is considered highly unethical (Bell, 2008). In order to guarantee the participants confidentiality, all respondents were assured that the information they provide would not be made available to anyone who was not directly involved in the study and also that they would remain anonymous throughout the study. Moreover, the on the cover page of every interview schedule was printed with a statement on maintaining respondents' confidentiality and anonymity which was read before the interviews commenced. The promise of confidentiality made respondents confident and cooperative during the interviews.

While some researchers provide incentives to participants for their participation in a study, feeling this to be quite proper as participants are giving their valuable time for the interviews, others think that the offering of inducements is unethical. However, according to Kumar (2005), most participants do not participate in a study because of incentives, but because they realize the importance of the study. Therefore, giving small gifts as token of appreciation after having obtained the information required is not unethical. From the outset of this research study, it was planned not to give respondents promises of any gifts in any form as a compensation for their participation in research. For every households surveyed, village leaders had made it clear during the introduction that this research was purely for academic purposes and that no money or gift would be given. This aimed at avoid motivating respondents from impressing the researcher by providing false information which could lead to inaccurate findings. The final ethical issue related to this research was the researchers' biasness. As Kumar (2005) observes, bias is a deliberate attempt to hide what one has found in the study or highlight something disproportionately to its true existence. During this research, the researcher

sought to be as objective as possible and to maintain a high level of professional integrity as a basis for future research.

3.9 Data analytic strategy

3.9.1 Overall basis for data analysis

The process of data analysis mainly involved a series of steps such as, entering data into a computer analysis software (often known as data entry), check for errors or data quality (known as data cleaning), and carry out descriptive data analysis to capture qualitative aspects of the research variables and the use of inferential statistics to generalize the results from the sample to the wider study population. In the course of data analysis, the main question that guided the analysis process was whether there exist association or correlation between the research variables and if yes, of what degree.

The overall bases for analysing data for this study were the research questions and the propositions that were put forward in sections 1.6 and 1.7 of chapter one. The triangulation approach to data analysis methods which included descriptive, quantitative/statistical and qualitative methods were employed. These analyses were guided by the two overall assumptions, firstly that the household's decision to migrate was a function of household characteristics and societal factors active for migration, and secondly that the status of household asset base was a function of the outcomes of rural-out migration to households. The general approach for analysing data was based on the research questions and the model of the study layout/requirements. For that case data were analysed based on the requirement of a particular research questions which ultimately led to achieving specific objectives of the study. The qualitative data analysis was based on information from the qualitative data and sometimes from quantitative data from both households' respondents (open-ended questions) and from community/village key informants (leaders). The qualitative analysis involved searching for types, classes, sequences, processes, patterns, or wholes from the collected data. The aim of this process was to assemble or reconstruct the data in a meaningful or comprehensible way so as to make a complete story out of it. Hence, in analyzing these

data, emerging themes and sub-themes was developed in relation to the main variable(s) addressed. Furthermore, quantitative data were also analysed solely based on quantitative data/responses from a survey of 272 households.

3.9.2 Descriptive analysis

Based on the background information presented in the previous section, objective number one was achieved by answering research questions one and two. The essence was to determine the pattern of rural household's sources of income/livelihood and based on this pattern be able to too determine how important do Makete and Iringa Rural people value rural-out migration as their livelihood option or strategy. The information collected from surveyed households was analysed purely descriptively whereby a list of various sources of income was prepared and respondents were required to rank them accordingly. The results from these rankings gave a clear picture of which among the listed sources of income was ranked their main source and which one was the least and thus the pattern of their income/livelihoods strategy was determined. But also, from these ranking results, the value that rural people attached to rural-out migration as their source of income and thus as their livelihood diversification strategy was determined.

3.10 Phases of data analysis

3.10.1 Phase 1 analysis

i) The variables involved and the mode of analysis

The second objective was achieved by answering research question number three. The essence was to determine if (the variables) household characteristics (which were family size; education of the household; gender of the household head, agricultural land owned by the household and the number of household members adult person(s)); and societal factors active for migration (perception of jobs availability and perception of utilities and infrastructural development) could really determine if the household would choose to migration or not. The central guiding question that was being answered here was

"Which of the selected determinants of migration predict the households' migration decisions or households' migration decision behaviour?

In stage one analysis, there were two independent variables (constructs) which included household characteristics and societal factors active for migration converging to a single (dichotomous) dependent variable which basically involved only households' migration decisions. In this phase of analysis, the structure of the relationship among the variables depicted the convergent one i.e. it was a convergent structure amongst the variables. Each independent variable (construct) had an independent impact or effect on the dependent variable (construct) which was households' migration decisions (i.e. whether the household chooses to migrate or otherwise). Since the relationship involved multiple and mixed independent and a single categorical dependent variable, multivariate data analysis method logistic regression was deemed appropriate to analyze this sort of relationships among the variables. The reason for choosing logistic regression analysis was that in such a convergent structure, several independent variables (the dimensions of each determinant of migration decision) were predicting a single (dichotomous, categorical) dependent variable, in this case households' migration decision i.e. several (mixed) independent variables and a single dichotomous (categorical) dependent variable.

Based on the choice of employing logistic regression analysis for phase one analysis, the estimation procedure employed a logit model where the binary (categorical or non-metric) dependent variable *Y* took the value 1 if the household chose to migrate and the value 0 if the household chose otherwise. The phase I model for analysis was specified as follows:

$$P(Y) = \frac{1}{1 + e^{-(b_0 + b_1 x_{1i} + b_2 x_{2i} + \cdots b_n x_{ni})}}$$

P(Y) = Probability of Y occurring (household choosing to migrate or otherwise),
b_1 = a coefficient (or weight) attached to that predictor
b_n = regression coefficient of the corresponding variable X_n
e = the base of natural logarithms
b_0 = a constant;
X1 = a predictor variable

More specifically, the vector X consisted of explanatory variables/independent variables (as listed above) thought to proxy the determinants of migration, while vector b_1, $b_2 \ldots b_n$ consisted of the estimated regression coefficients, and the vector b_0 consisted of the constant.

The simple expressions of the models of analysis for phase I was as follows:

Objective Two (a): Migration decisions (Migrate/Not migrate) = f (hh characteristics: family size, education of the hh, gender of the head hh, land owned by the hh, and occupation of the hh).

Objective Two (b): Migration decisions (Migrate/Not migrate) = f (Perception of societal factors: jobs available in the area, land available for agriculture and utilities and/or infrastructure development,

ii) Rationale for choosing the model (Logistic regression analysis) for analysis

As stated previously, in a situation like this where the outcome variable (i.e. households' migration decisions) is non-metric or is categorical and dichotomous while the predictor variables are mixed i.e. both metric and non-metric, logistic regression was deemed the most appropriate multivariate data analysis technique to handle their relationship. The reason for choosing logistic regression analysis instead of others was based on the fact that logistic regression bears many similarities with simple or multiple regression, however the main difference is that while normal regression predicts the value of an outcome variable (Y) from a predictor variable or many predictor variables (Xs), logistic regression predicts the probability of an outcome (Y) occurring given known values of predictor variables (Xs). Despite the similarities between linear regression and logistic regression, there was a good reason why linear regression could not be applied directly to a situation like this in which the outcome variable was categorical or non-metric.

By having categorical outcome variable, it meant that the main assumption of linear regression which says that for a model to be accurate there must be a linear relationship

between variables was already violated (Berry, 1993). It is suggested by Fields (2009) that one way of getting away with this problem is to transform the data using the logarithmic transformation. In other words, in this analysis, this transformation was a way of expressing a non-linear relationship among the variables in a linear way. Based on this principle, in essence, by employing logistic models, multiple regression equations (models) were expressed in logarithmic terms called logit, and thus the problem of violating the assumption of linearity was overcame. But also while linear regression uses the measure of R^2 which is the Pearson Correlation between the observed values of the outcome and the values predicted by the regression model to assess how well the model fits the data, logistic regression uses the log-likelihood (-2LL) measure which compares the observed and predicted values to assess the fit of the model. Based on log-likelihood statistic it follows that large values of the log-likelihood statistic indicates poorly fitting statistical models because larger values of the log-likelihood statistic indicate more unexplained observations. One use of this log-likelihood measure was to compare the state of a logistic regression model against a baseline model (state) i.e. when only the constant is included in the model.

iii) The analytical procedure

In order to perform the analysis so as to achieve the intended objective, Predictive Analytical Software (PASW) version 18 formerly known as SPSS was employed to aid a method of logistic regression analysis known as forward stepwise (the Forward: LR Method). By employing the forward stepwise method, the conclusion on which variables were the good predictors of households' migration decisions was reached after a couple of steps. The first step begun with a model that included only a constant and then added a single predictor variable to the following successive steps based on a specific criterion. In order to continue adding variables into the model after the baseline model, a criterion which was the value of the score statistic and the level of significance had to be fulfilled. All variables which had the highest values of score statistic and that were highly significant at $p < .05$ (the cut-off point for significance level) were considered to have met the criterion and thus were selected for inclusion into the model stepwise. This

means that all variables, whose significance levels (probability level) were greater than .05, were assumed to be insignificant and therefore were not considered for subsequent analysis.

As explained previously, by employing logistic regression analysis (forward stepwise method), it means that a forward stepwise method was requested and so the initial model was derived using the constant in the regression equation. In this regard (i.e. in the first step), the analysis produced an-iteration history (in tabular form) for the baseline model which was telling us about the model when only the constant was included (i.e. all predictor variables were omitted). This table represented the fit of the most basic model to the data. Essentially, this iteration history indicated the value of the Log Likelihood (-2LL) of this baseline model which was very large and therefore indicated the poor fitting of the model (because only the constant was involved). To determine if the inclusion/addition of other predictor variables on the successive steps the model was better predicting the outcome variable, this -2LL was expected to decrease continuously at each step a predictor variable was added into the model (see Table 5.9).

Moreover, the step one analysis (when only a constant is added into the model) produced another output (also in tabular form) called the classification table which showed a contingency table for the model in this basic state. When including only the constant, the computer based the model on assigning all participating (surveyed) households to a single category of the outcome variable (in this case all participating households were assigned to a “NO” response to migration).

The analytical software did not do this arbitrarily, because it was crucial to try to maximize how well the model predicted the observed data. The software predicted that every household belonged to the category (of outcome) in which most observed cases fell. As such, it was better to predict that all households did not choose to migrate because this resulted in a greater number of correct predictions. This classification table showed that there were 179 households which chose not to migrate (non-migrant

households) while there were only 93 households which chose to migrate (migrant households). By assigning all participating households to a 'NO' response to migration, it means it had predicted that all household had no migrants or had chosen not to migrate (which was not a correct prediction), which resulted in 0% classification accuracy for households which chose to migrate, and 100% classification accuracy for those households observed not to choose to migrate. It ended this classification table by providing the overall accuracy that the model correctly classified participating households. When other variables were added into the model, the same output (the classification table) was produced but at this time did not assign all participating households to one category, instead they were correctly classified (as migrant and non-migrant households) accordingly (refer Table 5.1). This value was measured in %ages, and in order to determine if the newer model (after adding a new predictor variable) was improving at predicting the outcome variable, this value was expected to continually increase at each step (stepwise).

Furthermore, the analysis produced another output in tabular form to present a summary of model variables in the equation (when only the constant was included i.e. no variable included yet). This table output presented a number of statistics whose values would tell us if the inclusion/addition of a particular predictor variable at a particular step would make any significant contribution to the predictive power of the model. These important statistics included the *b*-values, the Wald statistic (which had the Chi-Square distribution), the significance (probability) level, and the odds ratio (Exp(B). If the b-value was positive with a significant Wald statistic value at $p < .05$ and Exp (B) greater than 1 (one), this would mean the addition of the new predictor variable into the new model was potentially making a significant contribution to its predictive power (See Table 5.1). Therefore we would conclude that the new added variable was a good predictor of households' migration decisions.

Furthermore, the analysis produced another output (in tabular form) labeled score statistics for predictor variables not in the model both when only a constant was added

into the model (baseline model) as well as when any other variables (predictor) was added into the model. This output was produced when analysing each construct variable which included household characteristics, available job opportunities including land and societal factors active for migration. Essentially presented in this output were the manifest (constituent) variables for each construct variable mentioned above and they were presented alongside their score statistic values and their significance levels (See Table 5.8). This output also presented an overall statistics (also known as residual Chi-Square statistic for all the variables not in the model). It was in this output were the criterions (mentioned previously) for adding more variables into the model or not was observed. If this (residual chi-square) was significant at $p < .05$, this was telling us that the coefficients of the predictor variables not in the model were significantly different from zero. In other words it was telling us that the addition of one or more of these predictor variables (variables not in the baseline model) to the model would significantly affect its predictive power. On the other hand if the overall statistic was insignificant at $p > .05$ (i.e. residual chi-square significance level had been greater than .05) this would mean that none of the predictors/variables (variables not in the baseline model or in the subsequent models) were significantly different from zero and it would have meant that forcing all of the variables excluded from the baseline model into the model would not have made any significant contribution to its predictive power and therefore we would have concluded that none of them were a good predictor to migration decisions and thus our analysis would have ended here. However, for this study in all three analyses (i.e. for household characteristics, available job opportunities and societal factors active for migration), the overall statistic value was shown to be significant, thus telling us that for all the three analyses there were variables to be added into the models that would affect its predictive power. At this stage the variables that had shown to be significant were identified and were added into the model (stepwise) to test their predictive power to the model (Table 5.8).

In summary, the logistic regression analysis stepwise forward method (Forward: LR method), begun with a model in which only a constant was included. The most critical

output to decide on the presence of variables to be added into the model in the following consecutive steps was the summary of variables not in the model. The decision criteria regarding which variables were to be added into the model were the values of score statistics and significance levels for the values not in the model (baseline model). For all variables with higher values of score statistics which were significant at $p < .05$, were selected to be included into the model. The criterions used to decide whether the addition of a new predictor variable was improving the predictive power of the newer model included the continually declining value of log likelihood (-2LL), the continually increasing classification %age of the participating households, the b-value, the Wald statistics and its significance level as well as the value of the odds ratio (Exp(B). The procedure explained in this section was repeated every time a list of the factors constituting a determinant factor of rural-out migration i.e. attributes of household characteristics, available job opportunities and utilities and/or infrastructures was subjected to the analysis.

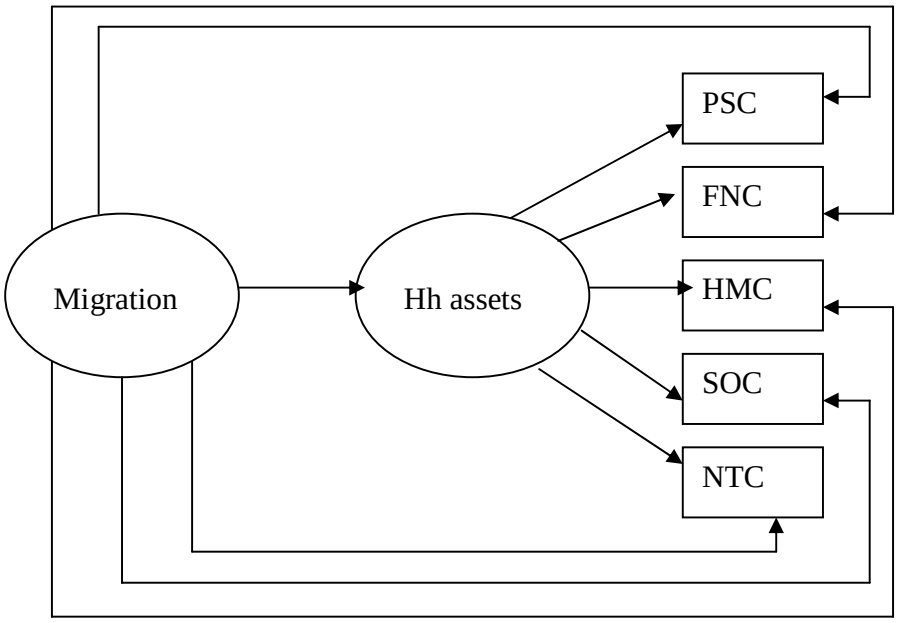
3.10.2 Phase II analysis

Objective number three which was about assessing the outcomes of rural-out migration on the asset stock of the sending households i.e. to establish if rural-out migration has any potentiality in enhancing the asset stock of the sending households. Objective four which also was about determining the social outcomes of rural-out migration to sending households and the sending communities at large, was achieved by answering research question number four which sought to know the social outcomes of rural-out migration to the sending households and communities?

However, it is hereby acknowledged that due to some difficulties in measuring some of the household assets based on their nature, it was deemed appropriate to qualitatively analyze the data for this stage. Basically this stage focused on whether migrants had remitted anything back home (in cash or in-kind). If they had sent any cash back home, how was that cash used by the household to build its asset portfolio, and if they had sent any non-quantifiable materials how did they contribute to build the asset portfolio of the

household in question. The relationship between migration as a livelihood strategy and household asset portifolio is depicted in the following Figure 3.1 which has been extracted from the study conceptual model.

Figure 3.1: Model for phase II analysis



Source section 2.6 (Study conceptual model)

Key:

Hh-household; PSC-Physical capital (asset); FNC-Financial capital (asset); HMC-Human capital (asset); SOC-Social capital (asset) and NTC-Natural capital (asset)

CHAPTER FOUR

RESULTS AND DISCUSSIONS ON THE PATTERNS OF RURAL LIVELIHOODS DIVERSIFICATION STRATEGIES

4.1 Introduction

This chapter presents the results of the study on the patterns of rural livelihoods diversification strategies and discusses them in line with the study objective number one which was about to examine the pattern of livelihoods strategies amongst the rural people in the study area in order to establish the extent to which rural-out migration is considered an important income sourceof households. It first starts with a description of the sample. This is followed by an examination of the pattern of livelihoods strategies amongst the rural people in the study area and the extent to which the households considered rural-out migration was an important livelihoods/income diversification source for them.

4.2 The sample and its characteristics

i). Sex distribution

Table 4.1 shows that 217 (80%) were headed by males while 55 (20%) by females. The age range of heads of households varied from 10-20 years to over fifty years. The largest (33%) group of heads of households was in the ages ranging 31-40 years. Amongst these 272 heads of households, 209 (77%) were married while 63 (23%) were single (never married, divorced and widows/widowers). The majority i.e. 239 (87%) of the heads of households had primary education, while only 15 (6%) had secondary education or above and 18 (7%) had never attended school i.e. they had no formal education. In addition, of the 272 surveyed households, 217 (80%) of respondents were the heads of households while the remaining 55 (20%) other members representing the heads of households. For example, in this category of representatives, 33 (60%) were wives of the heads of households and 22 (40%) were sons or daughters of heads of households.

The data for this study having come from such a varied sample, this provided some assurance that the information given was reasonably accurate.

Table 4.1: Summary of households' characteristics

Characteristics	Attributes	Frequency n = 272	Percentage 100%
Sex of heads of households	Male	217	80
	Female	55	20
Ages of heads of households (yrs)	10-20	2	1
	21-30	40	15
	31-40	90	32
	41-50	72	27
	≥50	68	25
Marital status of household head	Married	209	77
	Single/divorced/ widow/er	63	23
Education levels of household head	Never attended school	18	7
	Primary school	239	87
	Secondary school	14	5
	Others	1	1
Representation status of respondents	Heads of households	217	80
	Representatives of heads of hh	55	20

(ii) Information on migrations/migrants

Information on migrants per household was obtained based on the responses given with regard to whether the household had a migrant or not. The results revealed that 93(38%) households out of the total 272 surveyed had migrants i.e. they were migrant households, while 179(78%) of them did not have migrants i.e. they were non-migrant households.

a) Distribution of migrants per household

Table 4.2 shows that households with 1-2 migrants were the largest group, 68(73%), followed by households with 3-4 migrants, 22(23%), and then households with five and

above migrants were 4 (4%). In total there were 93 migrant households with a total of 187 migrants.

Table 4.2: Number of migrants per household

No. of migrants	No. of households (n=93)	Total no. migrants (n=187)	Percent of households (100%)
1	41	41	44
2	27	54	29
3	16	48	17
4	6	24	6
5	4	20	4

b) Distribution of migrants' sex, ages, and marital status

Table 4.3 shows that out of the total 187 migrants, 107 (57%) were males while 80 (43%) were females. Ages of these migrants varied, ranging from a minimum of 12 years (one migrant) to a maximum of 64 years (one migrant). The largest group of migrants was in the age range of 21 to 30 years, while the smallest group was in the age range of 10-20 years which had only two migrants. The modal year for migrants were 28 were a total of 15 migrants had migrated at this age. In total, 137(73%) migrants were single while 50(27%) migrants were married.

Table 4.3: Summary information for migrants

Characteristics	Attributes	Frequency (n=187)	Percentage (100%)
Sex	Male	107	57
	Female	80	43
Ages of migrants	10-20yrs	37	20
	21-30yrs	90	48
	31-40yrs	42	22
	41-50yrs	16	9
	>50yrs	2	1
Marital status	Single/divorced/ widow/er	137	73
	Married	50	27
Education level	Never schooled	8	4
	Primary school	146	78
	Secondary school	28	15
	Others	5	3
Physical capability	Able bodied/ minor physical impairment	186	99
	Major physical impairment	1	1

Occupations at origin	Students	34	18
	Farming/livestock	31	17
	Off-farm (agricultural)	33	18
	Non-farm wage (non-agricultural)	51	27
	Non-farm (self-employment)	38	20
Reasons for migration	Economic	153	82
	Other reasons	34	18

c). Migrants' education levels, physical capability and migration reasons

Table 4.3 shows that migrants with primary education were the largest group with 146(78%) followed by those with secondary education and above 32(17%), and those who had never attended school were 9(5%). In addition, of all 187 migrants, 186(99%) were able bodied or with minor physical impairment that could not prevent them from engaging into any activity and only one (1%) had a major physical impairment needing assistance to move on his wheel chair. Lastly, of 134 migrants who migrated due to economic reasons, 98 (59%) of them were males while 55 (41%) were females. That is, within male migrants, 87% had migrated for economic reasons while within female migrants 74% had migrated for economic reasons.

4.3 Patterns of rural livelihoods strategies

The objective of examining the patterns of livelihoods strategies amongst the rural people in the study area was to establish the extent to which rural-out migration was considered an important income source to the surveyed households. The analysis was guided by two general research questions "what is the pattern of rural livelihoods strategies opted by households in the study area?" and "how important do Makete and Iringa Rural people value rural-out migration in their livelihoods diversification strategy?" The main proposition for this analysis was that rural-out migration plays an important role as a major livelihoods diversification strategy amongst the households in the study areas, which would be verified by many households opting it, with a higher number of households sending out migrants implying they attached a higher value to it as a livelihood strategy and vice versa.

Essentially, the patterns of rural livelihood were examined from two perspectives: firstly, the relative position that a source of livelihoods or income was ranked determined its importance as a source of livelihood/income to that household. Generally, the one that was ranked higher by the majority of households was interpreted as the main source of income/livelihoods and the one that ranked low to the first one was interpreted as a secondary source and so on. Secondly, this ranking was done to see how diverse rural livelihoods are. That is, this ranking explained the extent to which rural households depended on a diversified portfolio of activities for their survival (how they practiced livelihood diversification).

The determination of patterns of livelihoods diversification strategies (i.e. which strategy was regarded the first and which one was the second important and so on) was not guided by any theoretical bearing; rather it was just a characterisation of household activities. However, there are various theories which suggest that the behaviour of rural households to depend on a multifarious activities is a response for coping with both poverty and income variability (Ellis, 2000). For example, in the literature it is acknowledged that in Sub-Saharan Africa rural households often use these rural livelihoods diversification strategies to smoothen income variability and consumption (see, e.g., Carter, 1997; Fafchamps, 1992; Reardon *et al*., 1992;; Udry, 1995;). Diversification of income[7] sources has been put forward as one of the strategies households employ to minimize household income variability and to ensure a minimum level of income (Alderman & Paxson, 1992). Reardon *et al.,* (1992) observed that in the failure or near absence of consumption and crop insurance markets, and given the shortcomings of an ineffectual "social net", households must turn to income diversification. As a risk strategy, income diversification is usually taken to imply a trade-off between a higher total income involving greater probability of income failure, and a lower total income involving smaller probability of income failure. In other words, risk-averse households are willing to accept lower income for greater security (Ellis, 2000). Empirical

[7] Income diversification refers to the allocation of production assets among different income-generating activities, whether on- or off-farm and non-farm.

studies by Carter (1997); Fafchamps (1992); Reardon *et al*., (1992); and Udry (1995) from some countries have supported the hypothesis that income diversification is linked to lowering risk. For that case, it is acknowledged that for the majority of poor rural households and individuals, farming on its own, is unable to provide a sufficient means of survival and for this reason most of them are found to depend on a diverse portfolio of activities and income sources (Ellis, 2000). This indicates that diversification of livelihoods strategies[8] and income sources is a norm for rural households such that very few of them, if any, collect all their income from only one source, hold all their wealth in the form of any single asset, or use their assets in just one activity (Barrret *et al.*, 2001).

The results from this analysis are presented in Table 4.4. The nine sources of income/livelihoods considered most important practiced in the study areas were listed and respondents were required to rank them according to their importance to the households. As stated previously, the income source that ranked number one by the majority of respondents was inferred as the most important and the ones that ranked lower were inferred to be secondary.

Table 4.4: Households' sources of income and how they were ranked

Main source of income	Households' ranking this source as number one (n = 272)	Percentage (100%)
Agriculture	175	64
Petty business	29	11
Livestock keeping	25	9
Poultry keeping	14	5
Casual labour	13	5
Wage & salaries	8	3
Rural enterprises	4	1
Remittance from migration	2	1
Forest products	2	1

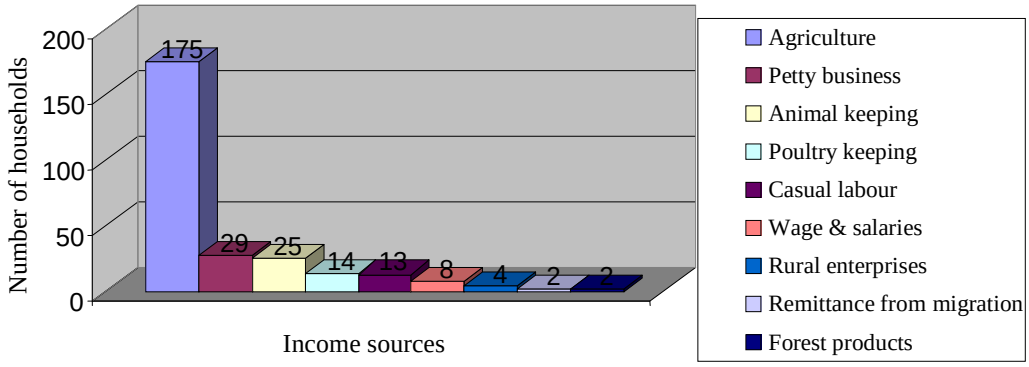
The results in Table 4 .4 show that out of the 272 surveyed households, all of which responded to the question, rural-out migration and remittances from migration ranked as 8th (the last but one) source of income/livelihood. This meant that out of 272 households, only two (2) households (1%) reported migration and remittances from it to be their major source of

[8] Rural livelihoods strategies mean a composition of activities that generate the means of rural household survival.

income/livelihoods. Figure 4.1 presents the pattern of livelihoods strategies undertaken by Makete and Iringa Rural people.

According to the responses obtained from migrant households, these results seem to contradict with what was expected of migration. As explained in Section 4.2, 84(90%) migrant households out of 93 allowed their members to migrate expecting them to be economically supportive to the remaining household. This means that households' expectations of sending out migrants were that remittances from them would be a viable option for minimizing household income variability and ensure a minimum level of income and thus reduce the households' income constraints.

Figure 4.1: Patterns of livelihood strategies (sources of income)



But Table 4.4 shows that most households (64%) ranked agricultural activities as the main activities that provided most of their consumption and cash income, followed by petty business (11%), livestock (10%), and so on. These results have revealed that migration is not a major source of livelihoods strategies that is valued by the people in the study areas.

Whether the low ranking of rural-out migration suggests that it lacks potential for enhancing/improving households asset base/stock, thus leading to its impoverishment, and whether these results suggest that rural-out migration could not play an important role in minimizing household income variability and constraint, and thus not valued as

an important source of households' livelihoods strategies or households' income diversifying strategy, will be found out later when presenting and discussing results on outcomes of migration to households' assets. However, very surprisingly, despite the low ranking of migration as a source of livelihoods diversification, people in the two research areas are still migrating especially for economic reasons. The results revealed that a large proportion of migrants of about 153 (82%) had migrated to various destinations due to economic reasons while only 34 (18%) had migrated due to other reasons.

As for the second question regarding how important Makete and Iringa Rural people valued rural-out migration in their livelihoods diversification strategy, the results have shown that the livelihoods of the surveyed households were diverse, implying that households were reliant on a diverse portfolio of activities, which included farm, off-farm, non-farm and migration. Table4.5 presents the results of the selected first twenty cases/households (as an example) indicating how the households were dependent on a diversified portfolio of activities. From the table, it was shown that no any single household depended on a single source of livelihood or income. Still out of this livelihood diversification, Iringa Rural and Makete people seem to be valuing agricultural activities and non-farm self-employment more than other sources because they are the ones that provide them with most of their earnings. These findings were very much congruent with the empirical evidences presented previously on the livelihoods diversification behaviour of rural households in Sub-Saharan Africa.

Table 4.5: How selected household ranked their livelihoods portfolio

Hh/ cases	Agricultural	Animal keeping	Poultry keeping	Casual labour	Forest products	Petty business	Rural enterprises	Wages & salaries	Remittances
1	2	.	3	.	.	1	.	.	.
2	1	.	.	.	.	.	.	.	.
3	1	.	2	.	.	.	.	.	.
4	1	2	3	.	.	.	.	.	.
5	2	1	4	.	.	3	.	.	.
6	1	2	3	.	.	.	.	.	.
7	3	2	.	.	.	.	1	.	4
8	.	.	2	.	.	1	.	.	.
9	1	2	3	.	.	.	.	.	.
10	2	1	3	.	.	4	.	.	.
11	1	.	3	2	.	.	.	.	.
12	2	1	4	3	.	.	.	.	.
13	1	.	2	.	.	.	.	.	.
14	1	2	.	.	.	.	.	.	.
15	1	.	3	.	.	2	.	.	.
16	1	.	.	.	.	2	.	.	.
17	2	3	.	.	.	1	.	.	.
18	3	2	4	5	.	1	.	.	.
19	.	1	.	.	.	.	.	.	.
20	2	.	.	.	.	.	.	.	.

Interestingly also, these results concur with what was reported in the 2007 Makete and Iringa Rural Districts profiles that agriculture continued to be the main source of livelihood for the residents of the two districts. From these districts' profiles, the agricultural sector in Makete employs about 92% of the district workforce while in Iringa Rural District the sector employs about 90% of the district's workforce. The two districts mainly produce maize, paddy, wheat, sweet potatoes, round potatoes and beans as food crops while coffee and pyrethrum (which are produced in small quantities) are cash crops. For example, during 1997/98 and 2004/05, maize production accounted for about 53 % of total volume of major food crops harvested in Iringa Rural District followed by round potatoes (27%) (Iringa Region Commissioner's Office [IRCO], 2006). In Iringa Rural District, maize is also regarded as a cash crop since production surpasses consumption. The agricultural sector in the two districts contributes over 75% to the regions' economies and as stated previously it employs a larger proportion of the total working population in the two districts.

It was found that in both districts, crop production levels are still very low mainly due to the employment of inferior agricultural implements, the usage of traditional agricultural methods, pest problems, soil exhaustion and increasingly soil infertility. Unlike in Iringa Rural District where farmers are dependent on industrial fertilizers, the use of this farm inputs is not common in Makete despite most of its soil being volcanic. People still believe that the usage of industrial fertilizers would quicken the process of their soil becoming more infertile and thus force them to rely on fertilizers of which only few can afford (MDC, 2007). However the researcher assumes that proper education on the usage of industrial fertilizers should be given to the residents since application of industrial fertilizers would be appropriate in order to improve crop yields both for home consumption and for cash earning.

Other challenges facing households regarding gaining maximally from agriculture even if the sector has continued to be the main source of livelihoods for Makete and Iringa Rural households include, unreliable market outlets especially for maize, a poor transport network in the districts for the haulage of agricultural produce, low prices offered to farmers for their produce particularly maize, and difficulties in accessing credit facilities for agricultural inputs by peasant farmers (IRCO, 2006).

CHAPTER FIVE

RESULTS AND DISCUSSION FOR THE DETERMINANTS OF RURAL-OUT MIGRATION

5.1 Introduction

This chapter presents and discusses the main determinants of households' rural-out migration decisions. The chapter represent phase I of the analysis as portrayed in the study conceptual model.

5.2 Determinants of rural-out migration

Throughout the literature, it is acknowledged that there are multifarious factors that may determine whether a household would choose to send-out migrants or not. These are divided in two categories: household characteristics and societal factors. Based on the literature that has been consulted so far, most studies have listed factors that may determine rural-out migration, but none of them to the best of my knowledge has gone to the extent of statistically testing the significance of these variables in determining migration decisions, which is the core of this study.

In this study, under household characteristics, five attributes were identified which included household size, age of the head of household, marital status of the head of household, sex of the head of household, and education level of the head of household. Societal factors active for migration were divided into two sub-categories: job availability in the sending areas (including land) and infrastructural development. As for societal factors, the sub-category of job availability had a total of nine attributes, which included off-farm activities, livestock keeping, employment in the public/private sector, non-farm (self-employment), casual labour, work in enterprises, work in factories, work in development projects, and vehicle (driving) related works. Under utilities and/or infrastructures, eleven attributes were identified which included rural roads, water dams, irrigation schemes, internet café, rural telecenters, rural library, piped water, market places, community centers, animal dips, and electricity. In order to arrive to the

conclusion of which factors were the determinants of households' rural-out migration decisions, two steps of analysis were involved: descriptive analysis of the predictive power of determinants of migration using cross-tabulation analysis and statistical analysis, which used logistic regression.

5.2.1 Descriptive predictive power of migration

This section aims at providing an overall picture of the determinants of rural-out migration decisions simply through descriptive analysis. To achieve this aim, cross-tabulation was conducted to establish the predictive relationship between the (attributes of) determinants of rural-out migration and households' rural-out migration decisions. The presentation that follows begins with determining the predictive power of attributes of households' characteristics over migration decisions, followed by determination of the predictive power of attributes of societal factors active for migration over households' migration decisions.

5.2.1.1 Predictive power of migration for households' characteristics

The hypothesis guiding this analysis on household characteristics was that households' rural-out migration decisions were dependent on household characteristics i.e. there was a positive association between households' migration decisions and household characteristics.

Cross-tabulation analysis between households' migration decisions and the first two household attributes (i.e. size of households/number of household members and age of head of household) was performed. Because of having many variables under this construct, the results of the rest of the variables under household characteristics are not presented in tabular form to avoid congesting the findings with a lot of tables. Table 5.1 presents the results of cross-tabulation analysis for all variables whereby the Chi-Square values alongside their corresponding probability levels (for each variable) were used to determine the significance between the two variables to show their predictive power to households' migration decisions.

i) Household size and households' migration decisions

Table 5.1 shows that as the number of household members was increasing, the number of households sending out migrants was also increasing. For example, when the household size was between one and two household members, only four households sent out migrants, but when the household size increased to between three and four household members, the number of households that had sent out migrants increased to nine and when the number of household members was between five and above, the total number of households that had sent out migrants increased to eighty (80).

Table 5.1: Household size and households' migration choice

		Migrated households	Not migrated households	Total
Household size	1-2	4(4%)	10(5%)	14(6%)
	3-4	9(10%)	71(40%)	80(29%)
	≥5	80(86%)	98(55%)	178(65%)
Total		93(100%)	179(100%)	272(100%)
χ^2				28
P				.000

At the same time, households without migrants slightly seemed to increase at a decreasing rate (which can be translated as decreasing) with household size. At larger family sizes of five and above household members, migrant households had increased to 86% while non-migrant households had increased (at a decreasing rate) to 55%. That is as the household size increased, the number of households choosing to migrate also increased while the number of households choosing not to migrate decreased. This trend indicated the presence of a positive association between the household size and households' migration decisions, which showed that the variable household size had a predictive power to households' migration decisions. This relationship is also suggested by the Chi-Square value and the level of significance. This implied that households with larger sizes (higher number of household members) had more family labour such that they could easily dispense with the 'additional' or 'surplus' labour in the form or migration.

To verify this finding further, an analysis seeking to find out if there was a relationship between the household size and the number of migrants per household was performed. The results in Table 5.2 showed that even though the relationship between the two variables showed to be positive in the sense that as household size was increasing also the number of migrants per household was increasing, this relationship was not as strong as one would expect (Table 5.2).

Table 5.2: Household size and number of migrants

		Number of migrants			
		1-2	3-4	≥5	Total
Household size	1-2	4(100%)	0	0	4(100%)
	3-4	9(100%)	0	0	9(100%)
	≥5	57(71%)	20(25%)	3(4%)	80(100%)
Total		70(75%)	20(22%)	3(3%)	93(100%)
χ^2					5
P					.30

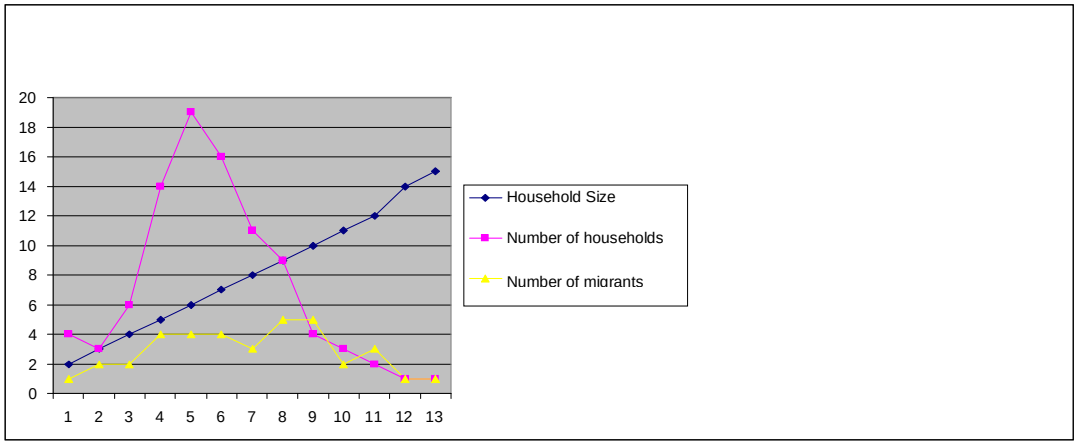
From these results one would expect a household of five or more household members to have more migrants than the rest. But, this was actually not the case. For example, the results in Table 5.2 revealed that out of 80 households which had between five and above household members, only 3(4%) of them had five or more migrants, 20(25%) had between 3-4 migrants, and 57(71%) households had between one and two migrants i.e. households with between one and two migrants were more than those with larger family size. In more simple terms, household size was not a key factor for the number of migrants per households. The Chi-Square value and its associated level of significance prove that the relationship between the two variables was insignificant.

Furthermore, this insignificant relationship between the two variables could also be verified by the information provided in Table 5.3 and Figure 5.1 which basically presents summary information about the household size (i.e. total number of household members) per household, the total number of (migrant) households, and the highest number of migrants for that particular type of household.

Table 5.3: Household size, number of households and number of migrants

Household Size	Number of households	Highest number of migrants
2	4	1
3	3	2
4	6	2
5	14	4
6	19	4
7	16	4
8	11	3
9	9	5
10	4	5
11	3	2
12	2	3
14	1	1
15	1	1

Figure 5.2: Relationship between household size, households and migrants



From Figure 5.1, one sees that while the household size was increasing, the number of migrants per household increased to a level of 5 migrants for 13 households which had between 9 and 10 household members, after which the number of migrants fell regardless of the increasing size of households. This further confirms the above findings (that the number of migrants was not related to household size).

ii). Age of head of household and household's migration decisions

The association between age of head of household and migration decisions was also sought. This analysis was guided by the proposition that households' migration

decisions largely depend on the ages of heads of households in question. The essence was to determine the percentage/proportions of households which chose to migrate or otherwise as the age of head of household changed (increased). Table 5.4 presents the results for cross-tabulation analysis of age of head of household and household's migration decisions.

Table 5.4: Relationship between age of heads of household and households' migration decisions

		Household's migration decisions		Total
		Migrate	Not migrate	
Age of head of household (yrs)	10-30	9(10%)	33(18%)	42(15%)
	31-50	46(50%)	16(65%)	162(60%)
	51-70	32(34%)	24(14%)	56(21%)
	71-90	6(6%)	6(3%)	12(4%)
Total		93(100%)	179(100%)	272(100%)
χ^2				20
P				.000

Results in Table 5.4 show a slight positive relationship between ages of heads of households and households' migration decisions. This is verified by the increasing percentages (proportions) of households which chose to migrate compared to those that chose not to migrate as the ages of heads of households increased to certain extent. However, at advanced ages of heads of households, the number of households choosing to migrate or otherwise seems to be indifferent. These findings was somehow not in support of the proposition made previously that the age of heads of household plays a greater role in households' migration decisions. Because one would expect that households whose heads had advanced age would send out migrants more than the rest, however this was found not the case.

Furthermore, the relationship of the age of head of household and household size was established through cross-tabulation analysis. The aim was to find out if age of head of household had any account on size of household or number of household members. The results are presented in Table 5.5a which shows that households whose heads were within the age group of 31-50 years were the ones with the highest number of

households members i.e. a total of 40 households with five and above household members, followed by the age group of 51-70 years with 30 households with five and above household members. The most interesting finding was that at both extreme ages of heads of households i.e. at early ages (10-30years) and later ages of heads of household (71-90) years there were few household members.

Table 5.5a: Relationship between age of heads of households and household size

		Household size			Total
		1-2(n=4)	3-4(n=9)	≥5(n=80)	(N=93)
Age of heads of households	10-30	2	2	5	9
	31-50	2	4	40	46
	51-70	0	2	30	32
	71-90	0	1	5	6

Finally in this aspect, the relationship between age of heads of households and number of migrants per household was established. The essence was to find out if the age of the head of household was a contributing factor to the number of migrants that a household can send out. The relationship established was not different from the one established between age of household members and household size. In this aspect it was also found that to some extent there is a relationship between the two variables though weak and insignificant as Table 8.5b shows.

Table 5.5b: Relationship between age of head of households and number of migrants

		Number of migrants			Total
		1-2(n=70)	3-4(n=20)	≥5(n=3)	(N=93)
Age of heads of households	10-30	7(78%)	2(22%)	0(0%)	9(100%)
	31-50	37(80%)	9(20%)	0(0%)	46(100%)
	51-70	21(66%)	9(28%)	2(6%)	32(100%)
	71-90	5(83%)	0(0%)	1(17%)	6(100%)

That is, from the table, the results shown that as the age of heads of households advances so the number of migrants per household increased up to the age of 31-51years which is the peak, thereafter it starts to drop. However, the most surprising finding was that no any household whose heads had age of between 10-30 and 31-50 years had between five and above migrants, but the same number of migrants were found for households whose

heads had age ranging between 51-70 and 71-90 years. The reasons for this trend were not established and therefore this could suggest further studies on this aspect.

The same analytical procedure was performed for the remaining household characteristics variables. These included sex of heads of households, whose results showed that male headed households (26%) were more likely to send out migrants compared to female headed ones (8%) though these results were insignificant (χ^2 = 1, p=.*50*). Education showed that households with low levels of schooling (i.e. no formal education, primary education and adult education) who formed a greater part of the sample (97% of 93 migrant households), were in the first place by 96% likely to have bigger families of more than 5 members per household compared to those with higher levels of schooling (i.e. secondary and above). But data indicated that they were also more likely to send out migrants ((χ^2 = 10, p =. 05). As for marital status, married heads of households were the majority (77%), and 83% of them had larger families of more than 5 members per household compared to unmarried households. These results on migration decisions indicate that there are greater chances for the married to send out more migrants than the unmarried ones (χ^2 =23, p =.008).

5.2.1.2 Descriptive predictive power of societal factors for migration

The hypothesis guiding this analysis was that households' migration decisions was dependent on societal factors active for migration (i.e. the availability of job opportunities and utilities or infrastructure development such as water dams, electricity , and the like were in a position to influence household's migration decisions.on

The results on these variables were based on households' responses to general questions including for example whether the household perceived if the absence of a particular job opportunity could lead to people/household members to migrate out of their rural setting; whether lack of infrastructure or utilities could have been the cause, and so on. However, it is important to remember that previously, it was found that the majority of migrants were allowed by their household to move out. This suggests that the responses

given by households on questions related to job availability, utilities and/or infrastructure and so on were based on what affected both the migrants and their household members. This means that households' responses on the effects of availability of job opportunities, utilities and/or infrastructure development, and the like over migration decisions were a reflection of what would be the migrants' responses since migration was a household decision based on the constraints it faced. Therefore using households' responses for analysing available job opportunities and infrastructural development provides valid results as actual determinants of rural-out migration decisions.

i). Availability of job opportunities and households' migration decisions

Initially, a frequency distribution table indicating how households responded to the question 'whether the unavailability of a certain type of job opportunity contributes or does not contribute to rural-out migration' was prepared and the results are presented in Table 5.6.

Table 5.6: Households' responses on the availability of job opportunities and households' migration decisions

Availability of job opportunities	Contribute to migration		Does not contribute to migration		I do not know	
	Migrant hh	Non migrant hh	Migrant hh	Non migrant hh	Migrant hh	Non migrant hh
Vehicles related	5(2%)	17(6%)	76(28%)	174 (64%)	0	0
Factories	82(30%)	121(44%)	10(4%)	56(21%)	1(0.4%)	2(1%)
Development projects	91(33%)	67(25%)	0	108(40%)	2(1%)	4(2%)
Enterprises	90(33%)	26(10%)	2(1%)	152(56%)	1(0.4%)	1(0.4%)
Casual labour	93(34%)	96(35%)	0	79(29%)	0	4(2%)
Employment in public/private sector	86(31%)	15(6%)	5(2%)	158(58%)	2(1%)	6(2%)
Non-farm self-employment	82(30%)	139(51%)	10(4%)	34(13%)	1(0.4%)	6(2%)
Off-farm wage	93(34%)	166(61%)	0	10(4%)	0	3(1%)
Livestock keeping	14(5%)	2(1%)	79(29%)	174(64%)	0	3(1%)
		N = 272				

Table 5.6 reveals that all (272) surveyed households responded to this question, a response of 100%. The results showed that for all job opportunities, households had

mixed responses from the context that for each job opportunity, the responses were that to some households its absence or its limited availability contributed to rural-out migration while to others, it did not i.e. it had no impact to households' migration decisions, with a small proportion of households saying they were neutral. More importantly, the results in Table 5.6 revealed that between 88% and 100% migrant households responded that the absence of all other jobs categories (with the exception of livestock keeping and vehicles driving related jobs) contribute to rural-out migration. In short, from the experience of migrant households, these data suggest that the absence of job opportunities at origin contribute to rural-out migration decisions.

A sample of cross-tabulation results for the first two attributes/variables i.e. non-farm self-employment and casual labouring are presented in Tables 5.7 and 5.8, respectively.

Table 5.7: Non-farm self-employment and households' migration decisions

	Does the absence of non-farm self-employment contribute to migration?			Total
	Yes	No	Don't know	
Hh with migrants	90(97%)	2(2%)	1(1%)	93(100%)
Hh with no migrants	131(73%)	42(24%)	6(3%)	179(100%)
Total	221(81%)	44(16%)	7(3%)	272(100%)
χ^2				23
p				<.01

Results in Table 5.7 show that out of 272 households, 221(81%) responded that the absence of non-farm self-employment contribute to migration while 44(16%) households said that it does not contribute, while 7(3%) did not know. However, an interesting finding was that majority of non-migrant households (73%) perceived that the absence of non-farm self-employment had a negative bearing on households' migration decisions (i.e. the absence of non-farm self-employment does lead to more migration). This makes a total of 221(81%) out of the 272 surveyed households which responded that the absence of non-self-employment lead to rural-out migration. Also, a total of 42(24%) non-migrant households responded that the absence of non-farm self-employment does not lead to households choosing to migrate.

Table 5.8 presents the results on the relationship between households' perception of the absence of casual labour as a job opportunity and households' migration decisions.

Table 5.8: Casual labour and households' migration decisions

	Does the absence of casual labour contribute to migration?			
	Yes	No	Don't know	Total
Migrant hhs	92(99%)	0(0%)	1(1%)	93(100%)
Non migrant hhs	147(82%)	29(16%)	3(2%)	179(100%)
Total	239(88%)	29(11%)	4(1%)	272(100%)
χ^2				18
p				<.01

Results in Table 5.8 show that out of 272 households, 239(88%) of them responded that the absence of casual labour contributeed to rural-out migration while 29(11%) said it does not contribute, with the remaining 4(1%) said did not know whether it could contribute or not. Again for this aspect, these results were suggesting the presence of an inverse relationship between unavailability of casual labour as a job opportunity and the households' migration decision. That is, the lesser casual labour is available in the society the higher the rate of rural-out migration decisions and vice versa.

The same analytical procedure was performed for the remaining variables under available job opportunities which included vehicle-driving jobs, working in factories, working in development projects, working in enterprises, employment in public and/or private sector, off-farm wage and livestock keeping (for wages). The final results for the availability of job opportunities showed that out of nine attributes, only three, which were non-farm (self-employed), casual laboring, and enterprise related jobs indicated to have significant predictive power over households' migration decisions i.e. their absence does lead to rural-out migration decisions ($\chi^2 = 11$, $p < .01$).

ii). Utilities and/or infrastructure development and households' migration decisions

For utilities and/or infrastructure development, eleven variables were identified and subjected to cross-tabulation analysis and Chi-Square test. In the first place, surveyed households were asked if they knew some of the facilities such as internet café, rural telecenters, rural library and community centers and if they were present in their

localities. A good proportion (85%) of them responded to know them and their importance in communication and information sharing and the remaining 25% appeared not to be aware of them, though they were quick to understand what these were and what role they play in people's lives. A number of these facilities were found to be present in some areas in varying proportions. For example, most people in Makete District seemed to know internet café because they are available in Makete town which is the district head quarter and one internet café was found at Matamba Ward head quarter (centre). In Iringa Rural District, they were found to be present at Nzihi Center and Ismani Centre. Other infrastructures/utilities that were identified included availability of quality rural roads, availability of water dams, availability of irrigation schemes, availability of piped water, availability of market places, availability of animal dips and availability of electricity. Under this strand of determinants of rural-out migration, the hypothesis was that households' migration decisions were dependent of utilities and/or infrastructure development in the area. A sample of cross-tabulation results for the first two variables i.e. irrigation schemes and electricity are presented in Tables 5.9 and 5.10 respectively.

Table 5.9: Irrigation schemes and households' migration decisions

	Does the absence of irrigation scheme contribute to migration?			
	Yes	No	Don't know	Total
Migrant hhs	87(94%)	5(5%)	1(1%)	93(100%)
Non-migrant hhs	130(73%)	48(26%)	1(1%)	179(100%)
Total	217(79%)	53(20%)	2(1%)	272(100%)
χ^2				18
p				.000

From Table 5.9, the results show that out of 272 households, 217(79%) responded that the absence of irrigation schemes contribute to migration while 53(20%) of them said it does not, with the remaining 2(1%) being neutral. These results were suggesting the presence of an inverse relationship between the non-availability of irrigation schemes and the households' migration decision. That is, the absence of irrigation schemes was perceived as the contributing factor to migration due to its importance to rural people's life. The main reason given was that presence of irrigation schemes/facilities enables irrigation farming opportunities especially during the dry seasons; if this was

implemented at a larger scale could absorb the idle labour force during these seasons and could lead to reduced out-migration. A more detailed discussion on this is presented in the discussion of results section.

Likewise, Table 5.10 presents the results for cross-tabulation results between households' perception of the absence of electricity and households' migration decisions.

Table 5.10: Electricity and households' migration decisions

	Does the absence of electricity labour contribute to migration?			
	Yes	No	Don't know	Total
Migrant hhs	93(100%)	0(0%)	0(0%)	93(100%)
Non migrant hhs	156(87%)	22(12%)	1(1%)	179(100%)
Total	249(92%)	22(7%)	1(1%)	272(100%)
χ^2				17
p				.000

Results in Table 5.10 show that out of 272 households, 249(92%) responded that the absence of electricity contribute to migration while 22(7%) households responded that the absence of electricity does not contribute to migration and the remaining 1(1%) household did not know whether it could contribute or not. Similar to the previous variable (i.e. irrigation scheme), these results were suggesting the presence of an inverse relationship between households' perception on the presence of electricity and their migration decisions. These results were suggesting that the absence of electricity was a contributing factor to households to choosing to migrate. In other words, the availability of electricity in rural areas might have slowed down the rate of people migrating out of their rural areas due to its effects on other economic activities. This is discussed in detail in the next section of results discussion.

The same analytical procedure was performed for the remaining variables under infrastructural development which included quality rural roads, availability of water dams, availability of internet café, availability of rural telecenters, availability of rural library, availability of piped water, availability of markets (market places), availability of community centers, and availability of animal dips. The final results for utilities and/or infrastructure development revealed that out of eleven attributes, only four came out significant and appeared to have predictive power to households' migration decisions. These included (with their Chi-Square values and probability

levels) irrigation schemes (χ^2 = 18, p <.01), electricity (χ^2 = 17, p <.01), markets (χ^2 = 15, p <.01) and water dams (χ^2 = 10, p <.01)

From cross-tabulation analysis and the use of Chi-square values and with their probability levels, three attributes from household characteristics, three attributes from available job opportunities and four attributes from infrastructural development were identified as having more predictive power on household migration decisions (as demonstrated above) than the rest. The overall summary of the results for all variables under each category of proposed determinants for rural-out migration that was tested for predictive power over households' migration decisions are presented in Table 5.11.

Table 5.11: Summary results for predictive power of various factors over households' migration decisions

Household characteristics	Chi-Square (χ^2) value	P value (significance level)
Number of household members	48	.000
Sex/gender	.50	.50
Marital status of household heads	6	.33
Age of heads of household	20	.000
Education of household heads	10	.04
Job opportunities	Chi-Square (χ^2) value	P value (significance level)
Off -farm activities	2.704	.26
Livestock keeping	.690	.71
Employment in public /private sector	1.863	.39
Non-farm (self-employed)	23	.000
Casual laboring	18.40	.000
Enterprise related	10.80	.005
Factory related	3.13	..203
Development project related	3.192	.203
Vehicle related	.666	.72
Utilities and Infrastructures	Chi-Square (χ^2) value	P value (significance level)
Quality rural roads	.350	.839
Water dams	10.144	.006
Irrigation schemes	18.02	.000
Internet café	.81	.70
Rural telecenters	3.240	.198
Rural library	1.55	.46
Piped water	.92	.34
Market places	14.691	.001
Community centers	3.203	.202
Animal dips	2.0	.454
Electricity	16.833	.000
N	=	272

By using the frequency distributions, Chi-Square values, and probability/significance levels as the main decision criteria, all factors/variables with higher Chi-square values

and whose significance levels were less than .05, the cut-off point for the level of significance, were descriptively identified to be significant determinants of rural-out migration. These results suggest that while some factors descriptively showed to be strong determinants of households' migration decisions, some showed to be weak or not at all determinants of households' rural-out migration decisions (as demonstrated by the above analyses).

However, in order to confirm which factors amongst the constituents of household characteristics and societal factors active for migration (those listed and descriptively analysed previously), further testing was conducted to verify beyond doubts on the validity of the above results by employing a more robust analytical techniques of quantitative or statistical analysis which involved the use of a multivariate analysis technique called logistic regression analysis.

5.2.2 Statistical determination of rural-out migration

This section presents results on statistical determination of the determinants of rural-out migration. The analysis involved both migrant and non-migrant households which made a sample of 272 surveyed households. Section 3.9 in chapter three presented the analytical procedure/methodology for carrying out logistic regression analysis. All variables or factors listed under each category of the determinants of rural-out migration (i.e. household characteristics, availability of job opportunities and utilities and/or infrastructure development) in the previous section regardless of which ones had shown to have predictive power over households' migration decisions were involved in this analysis. The essence was to find out if the variables determined descriptively to have predictive power over households' migration decisions in the first test would be the same as the ones determined by logistic regression or otherwise.

In the first step of logistic regression analysis in all variable categories (i.e. household characteristics, availability of job opportunities and infrastructures and utilities) we begun with a model that included only a constant, followed by the addition of a single

predictor variable to each of the following three to four successive steps based on the two specific criteria (score statistic and significance level as detailed in Table 5.12).

Table 5.12 in the first place presents the results of logistic regression analysis or summary information for variables not in the equation/baseline model when only a constant was added into the model for household characteristics, for available job opportunities, and for utilities and infrastructure development. Based on the decision criteria explained in section 3.9.1, higher values of the Overall Statistics (OS) and lower values of significance levels (i.e. p <.01) for household characteristics (OS = 53, p =.000); for available job opportunities (OS = 63, p = .000); and for utilities and infrastructure development (OS = 68, p = .000) indicated that in each category of these determinants of migration there were some variable which if added into the model could have potentially made significant contribution to its predictive power over households' migration decisions. Likewise, based on the same criteria all variables (under households characteristics, available job opportunities and utilities and/or infrastructures) with higher values of score statistic (SS) (labeled score in Table 5.12) and corresponding lower values (less than .01 i.e. p <.01) of significance levels (labeled sig. in Table 5.12) were the ones that showed to have higher predictive power to households' migration decisions over others. Table 5.12 presents more information.

Table 5.12: Variables not in the baseline models

Household characteristics			Score	df	Sig.
Step 0	Variables	Age of household head	15	1	.000
		Sex of head of household	.50	1	.485
		Marital status of head of household	13	5	.003
		Education level of head of household	10	4	.451
		Number of household members	27	1	.000
	Overall statistics		**53**	**12**	**.000**
Available job opportunities			Score	df	Sig.
Step 0	Variables	Land availability	1	1	.244
		Working off-farm	3	2	.249
		Livestock related jobs	1	2	.650
		Formal employment	2	2	.394
		Fishing related	1	2	.690
		Self-employment	22	2	.000
		Working in enterprises	10	2	.006
		Vehicle related	1	2	.724

		Working in factories	5	2	.101
		Working in development projects	3	2	.197
		Casual labour	19	2	.000
	Overall statistics		**63**	**21**	**.000**
Utilities and infrastructure development			Score	df	Sig.
Step 0	Variables	Rural roads	.40	2	.839
		Water dams	10	2	.006
		Irrigation schemes	18	2	.000
		Internet cafe	1	2	.669
		Rural telecenters	3	2	.198
		Rural library	2	2	.462
		Piped water	1	1	.337
		Market places	15	2	.001
		Community centers	3	2	.202
		Animal dips	2	2	.454
		Electricity	17	2	.000
	Overall statistics		**68**	**21**	**.000**

Based on the above mentioned criteria, it was found that for household characteristics, there were three variables: number of household members (SS = χ^2 = 15, p = .000), ages of heads of households (χ^2 = 15, p = 000) and marital status of heads of households (χ^2 = 13, p = .003) that indicated could make significant contribution to the predictive power of the model. Factors which indicated that they could make significant contribution to the predictive power of the model over households' migration decisions for available job opportunities were non-farm self-employment (χ^2 = 22, p = .000), casual labour (χ^2 = 19, p = .000) and working in enterprises (χ^2 = 10, p = .006). For utilities and infrastructure development, they were irrigation schemes (χ^2 = 18, p = .000), electricity (χ^2 = 17, p = .000), market places (markets) (χ^2 = 15, p = .001) and water dams (χ^2 = 10, p = .006).

These variables were added into the stepwise model to test their significance to the prediction of the outcome variable i.e. households choosing to migrate or otherwise. The results for this analysis are presented in Table 5.13. By employing the forward stepwise method, the conclusion was reached that three variables for household characteristics (i.e. number of household members/household size, ages of heads of households, and marital status of heads of households); three variables for available job opportunities (i.e. non-farm self-employment, casual labour and working in enterprises); and four variables for utilities and infrastructure development (i.e. irrigation schemes, market

places, electricity and water dams) were identified to be the only good predictors of households' rural-out migration decisions.

Table 5.13: Summary results of logistic regression analysis on the good predictors of rural-out migration

Household characteristics		-2LL	Classification %age	b	Wald	df	Sig.	Exp(*B*)
Step 0[a]	Constant	349	66	-.655	26	1	.000	1.520
Step 1[b]	No. of members	322	68	.290	24	1	.000	1.337
Step 2[c]	Ages of heads of hh	313	70	.032	9	1	.003	1.032
Step 3[d]	Marital status of hhh	301	72	.016	11	5	.050	1.015
Available job opportunities		-2LL	Classification % age	b	Wald	df	Sig	Exp(*B*)
Step 0[a]	Only a constant	347.	63	-.638	25	1	.000	1.00
Step 1[b]	Self-employment	323	65	1.43	15	2	.001	4.2
Step 2[c]	Casual labour	307	67	1.00	19	2	.000	3.0
Step 3[d]	Enterprises	294	68	20	7	2	.025	4.00
Infrastructures and utilities		-2LL	Classification %age	b	Wald	df	Sig.	Exp(*B*)
Step 0[a]	Constant	349	65.6	-1	26	1	.000	1.520
Step 1[b]	Irrigation schemes	328	65.8	.402	18	2	.001	1.669
Step 2[c]	Market places	308	65.8	19	14	2	.001	2
Step 3[d]	Electricity	294	66.2	19	10	2	.008	3
Step 4[e]	Water dams	280	73.5	1	11	2	.003	1.76

The conclusion that these variables (in Table 5.13) were the only good predictors of households' migration decisions was based on several criteria which included the log likelihood ratio (-2LL), the classification percentage, the variable coefficient (*b*), the Wald Statistic (which has a Chi-Square (χ^2) distribution) and its significance level (*p* value), and the exponential Exp (*B*) as presented in Table 5.13.

5.2.3 Criteria for good predictors/determinants of rural-out migration

In order to conclude that the variables presented in Table 5.13 were good predictors of households' rural-out migration decisions, a number of decision criteria were used (as described previously). The log likelihood (-2LL) values were the first criterion to indicate whether the variable was better fitting the model. For example, in step 0 when only a constant was added into the model (baseline model) the -2LL values for the three categories of determinants of migration were very large: 349 for household characteristics, 347 for available job opportunities, and 349 for utilities and

infrastructure development. These higher values of -2LL indicated that the model was poor in predicting the outcome variable (the larger the values of -2LL, the poor the model prediction and vice versa).

However, after the stepwise addition of variables from household characteristics, availability of job opportunities and utilities and infrastructure development (ref. Table 5.13) into the model, the -2LL values changed by decreasing progressively. For example, for household characteristics it changed from 322, to 313 and to 301 when the variables such as number of household members, ages of heads of household and marital status were added into the model respectively. For available job opportunities, the -2LL values declined from 323 to 307 and to 294 when self-employment, casual labour and working in enterprises was added into the model. For utilities and infrastructure development, the -2LL values declined from 328, to 308, to 294 and to 280, when the variables irrigation schemes, markets, electricity and water dams were added into the model respectively. This sustained decline in the log likelihood ratio (-2LL) value was suggesting that at each step when a variable was added into the model, the newer model was getting better and better at predicting the outcome variable i.e. the household's migration decision, and therefore indicating that these variables were good predictors of rural-out migration with regard to this criterion.

The second criterion was the classification percentage of the participating/surveyed households (ref. Table 5.13 column labeled classification percentage). This classification percentage value indicated how well (accurately) the model predicted group membership or more specifically, how well participating/surveyed households were assigned to the two categories of the outcome variable i.e. those households choosing to migrate or otherwise. Contrary to the -2LL value criterion which declined progressively every time the variable was added into the model, the classification percentage value increased continuously. For instance, for household characteristics the classification percentage (%age) value rose from 66% (when only a constant was involved) to 68%, to 70% and to 72% when the variables number of household members, ages of heads of household and

marital status of heads of households were added into the model respectively. For available job opportunities this value rose from 63% (when only a constant was involved), to 65%, to 67% and to 68% when the variables non-farm self-employment, casual labouring and working in enterprises was added into the model, and for utilities/ infrastructure development this value increased from 66.5% (when only a constant was involved), to 65.8%, to 65.8%, to 66.2% and to 73.5% when the variables constant, irrigation schemes, markets, electricity and water dams were added into the model respectively. This sustained increase in the classification percentage value indicated that at each step when a new variable was added into the model, the overall accuracy of the newer model at predicting the outcome variable was getting better or rather improving than it was in the previous step. In other words, the more predictor variables we added into the model (stepwise), the more accurately our model was at predicting the outcome variable and vice versa. This suggests that the variables added into the model were good predictors of household's rural-out migration decisions (the outcome variable).

The third criterion was the use of estimates for the coefficients (*b*-value) of the predictor variables included in the model at each step. The *b*-value was the values we needed to replace in the regression model/equation to establish the probability that a case (household) fell into a certain category i.e. chose to migrate or otherwise. The values of *b* (labeled *b* in Table 5.13) simply represented a change in the outcome variable resulting from a unit change in the predictor variable. In this case it represented the change in the logit (probability) of the household to choose to migrate associated with a one-unit change in the predictor variables. The positive values of *b* (ref. Table 5.13) for all variables in the case of household characteristics, available job opportunities and utilities and infrastructure development were indicating that these *b* coefficient values were significantly different from zero. This meant that at each step when a predictor variable was added into the model, the probability that the household would choose to migrate increased. In other words, a change in any of the predictor variables was associated with the change in household's rural-out migration decisions (i.e. whether to migrate or otherwise). Therefore, this criterion further confirmed that variables added into the

model (those listed in Table 5.13) made a significant contribution to its predictive power over household's migration decision and thus they were the good predictors of rural-out migration.

Furthermore, other important criteria used in this analysis to decide about good predictors of the outcome variables were the Wald statistic (labeled Wald) and its level of significance (labeled Sig.) in Table 5.13. The Wald statistic had a Chi-Square distribution and was telling us whether the *b* coefficient for the predictor variables was significantly different from zero. Statistically (as already hinted above), if the coefficient is significantly different from zero i.e. it has a positive value, it is assumed that the predictor has a significant contribution to the model on the prediction of the outcome variable. As explained previously, all variables had positive values of *b* and Wald statistic values which were highly significant at $p < .01$ (only two had $p < .05$), suggesting that the variables had potentially made a significant contribution to the predictive power of the model to household's migration decision. These criteria further confirmed that the above listed variables (Table 5.13) were good predictors of household's rural-out migration.

The last criterion to be considered was the value of the odds ratio *((Exp(B).* Statistically, if the odds ratio of a particular predictor variable is greater than 1 (one), it this indicates that a change in that variable increases the odds (the probability) of the outcome variable to occur. Table 5.13, (column labeled *(Exp(B))*, shows that all predictor variables (for household characteristics, available job opportunities and utilities and infrastructure development) had odds ratio *((Exp(B)* values of greater than 1. These results imply that the addition of predictor variables to the model at each step increased the probability of the model to predict that the household would choose to migrate. For example as the age of heads of households increased, so did the odds (the probability) of the household to choose to migrate.

Interestingly, it can be seen that these results were not much different from the ones obtained by descriptive analysis (by using frequency distributions and cross-tabulation analysis ref. section 5.2.1.). However, there was a slight deviation whereby, descriptive analysis had suggested that marital status of head of household had no predictive power to household's migration decisions and that education level of heads of households had strong predictive power. As a matter of fact, by using various criteria, logistic regression analysis showed that marital status of heads of households could potentially make significant contribution to the predictive power of the model to household's migration decisions while education level of heads of households could not. Since logistic regression is a multivariate data analysis technique and more powerful and was deemed the most appropriate in handling such depend-independent variable relationship than cross-tabulation, can be concluded that the results of the latter analysis verified the former ones and therefore marital status of heads of households was accepted as a good predictor of migration.

These analysis results could be summarised in a simple formula as follows:

Rural-out migration decisions	=	f	(Household characteristics + societal factors active for migration)
ROMD	=	f	(Hh characteristics **,** availability of job opportunities, utilities and infrastructure development)
ROMD	=	f	(No. of Hh members, ages of Hhh, marital status of Hhh) **+** (self-employment, casual labouring, working in enterprises) **+** (irrigation schemes, market places, electricity, water dams))
Key			ROMD=Rural-out migration decisions; Hh=Household; Hhh=Household head

In conclusion, the results of these analyses revealed that out of all five identified variables which constituted household characteristics (i.e. number of household members, age of household head, marital status of household heads, education and gender of household heads), only three variables were found to be important in predicting households' rural-out migration decisions. These variables were number of household members, age of the head of household and marital status of head of household. For available job opportunities, out of ten variables (ref. Table 5.12), only

three variables: non-farm self-employment, casual labouring and working in enterprises were found to be good predictors, while for utilities and infrastructure development out of eleven variables (ref. Table 5.12), only four variables which were irrigation schemes, market places, electricity and water dams that were found to be good predictors of household's rural-out migration decisions. This means that these ten variables in total were the ones found to be the most important in the study area for determining households' migration choice.

5.3 Interpretation of the findings

The results in sub-section 5.2.1 have shown that among household characteristics, three variables: number of household members, ages of heads of households and their marital status, were good predictors of households' migration decisions. For available job opportunities three attributes non-farm self-employment, casual labouring and working in enterprises were found to be good predictors of households' migration decisions, and irrigation schemes, market places, electricity and water dams were variables found to be good predictors of households' migration decisions for infrastructure development construct. These results are discussed in this section as follows.

i). Number of household members

The results show that households with a higher number of members had greater chances of sending out more migrants as compared the ones with few numbers. This is logical because, for example, households with husband, wife and a couple of children, are more likely to send out children while parents remain back to take care of the remaining household's property. But for households with only husband and wife, they are less likely to migrate because they are very much constrained by the number of people to send out, this more or less follows the "surplus labour theory"[9] (i.e. households with larger sizes that is many household members can dispense some of its members for searching a livelihood elsewhere). On the other hand however, it was found that it is not

[9] An economy is said to have surplus labour or disguised unemployment if it is possible to remove a part of its employed labour force without causing a fall in aggregate output (Basu, 1987)

always the case that households with higher number of household members to have higher number of migrants. For example, it was found that a household with nine members had five migrants while the one with eleven household members had only one migrant.

These findings suggest that there are other factors to consider such as ages and sex of household members when it comes to migration decisions at household level. This means that households with higher number of household members most of whom are within school ages is likely to have less migrants while households with relatively lower number of household members who have completed primary school or as old as above school age are more likely to have more migrants compared to the former case. Nevertheless, these results have shown that households with higher numbers of members enjoy comparative advantage of sending more migrants compared to the ones with fewer members. More importantly, this study found that household size is more relevant when it comes to the number of migrants to send out per household rather than whether a household should choose to send out migrants or not.

Throughout the literature, it is conceived that household size is a crucial factor for households' migration decision. For example, de Haan, (2005); Kothari, (2002); Mendola, (2006) argue that households with larger families are more likely to send out (more) migrants compared to those with fewer household members. The results of this study with regard to households' migration decisions taking into considerations the household size or the number of household members seem to concur with these arguments.

ii). Age of the head of household

The results on the determinants of households' rural out-migration decisions presented in Table 5.11 show that age of the head of household was a significant factor for determining households' migration decisions. These results were telling us that age of the head of household can make a difference when it comes to migration decisions since

it affects the number of household members as well as the number of migrants per household. Households whose heads are relatively younger mostly within the age range of 20 to 30 years were most likely to have fewer members and thus less number of migrants compared to households whose heads are above those age ranges.

It was very interesting to find that at both extreme ends of age of head of households (i.e. at very young age and at very old age), there was fewer migrants per household. On the one end these results were suggesting that as the age of head of household increases so the probabilities of having more migrants increase. On the other end however, the situation is better explained by the information obtained from surveyed households which revealed that at both extreme ends of age of head of households, households have fewer dependants in terms of children of household heads i.e. at lower age, head of households are still young to have higher number of children. Likewise, at latter ages children are grown up and already established their own families (away from their parents) which leads to these households whose heads are very old to have few household members. Logically, this seemed sounding, since at early ages couples are having children who are still in school and not ready to migrate, but as the couples mature and aging takes place, the chances of their children to mature and start migrating increases and thus the young the head of household so the fewer the migrants and vice versa. Likewise, the results revealed that as the ages of heads of households advance above sixty (60) years the number of migrants per households decline. For example, for households whose heads had 61 years to 86 years had migrants ranging from one to three (1-3).

Findings from this study have verified that households whose heads were younger or very old were most likely to have less dependants (fewer number of household members or if very old most of their children have established their own households) and therefore more likely to have less people to send out. But also at one extreme ages of head of households, great care is required to look after them, for example at very old age, heads of households can hardly provide themselves with daily requirements, for that

case they need someone to look after them. That is when those who had migrated comes back to take care of their elderly parents and this could lead to having less number of migrants from households whose heads are very old.

iii). Marital status of heads of households

Results in Table 4.3 on the summary information for migrants have shown that 73% of migrants were single while 27% were married. These proportions between married and single migrants indicated that there were more single migrants (which included never married, divorced and widows) than married migrants. Surprisingly, there were no migrant married women. It was found that marital status of migrants is more important especially when a migrant involved is him/herself the head of the household. But the results in Table 5.13 which presented the summary results of logistic regression analysis on the good predictors of rural-out migration, it was revealed that it is much easier for single heads of households to migrate than married heads of households. The main reason for this was that married men have more family responsibility compared to singles and also the psychic of separation for married couples is very high compared to non-married migrants, thus resulting to more married men deciding to stay rather than move out.

Moreover, during the field study it was learnt that men are the principal bread "earners" in most households in the study areas. Since women are customarily not suppliers of their households, when they become heads of households and are required to become "bread earners" for the entire household, most of these women heads (which are mainly divorcees, never married and widows) find it difficult to provide the daily supplies to their families which result into worsening of economic situations in their households. In the effort to curb harsh economic conditions in their households they decide to send out some household members expecting them to be supportive to the household. It was also found that indirectly, sending out some members of the household is a way of reducing household dependants so that the meager resources available might be used to carter for

the remaining household. In this way the marital status of heads of households plays major roles when it comes to rural-out migration decisions.

Furthermore, during the field study in some areas it was revealed that most single mothers heads of households had decided to migrate themselves leaving behind their dependants especially children with their grandparents or other relatives. Since to large extent poor economic conditions at household and society level was the main cause for sending out migrants (ref. Table 4.3 of section 4.2 sub section *ii*,), equally important single mothers out-migration was triggered by hard economic situation in their households and since they were the only main bread earners, they could not meet the requirements of their families, thus they were forced to migrate. Their expectations at migration were that they would be economically supportive to the remaining household members/dependants. It is most certain that if these women were married, their husbands would be the ones to bear the responsibilities of providing the requirements for the households (like many other households in the research areas) but since they were not, they had to bear the responsibility themselves which led them to choosing to migrate out. This is another crucial way how marital status of heads of households especially for women could determine migration decisions.

From the findings of this study, it was very obvious that migration was male dominated (married and not married) and these findings seem to be congruent with de Haan's (2000) observation that historically migration was dominated by men but things are changing and feminization of migration is now occurring. As seen previously however, the results have shown that all women migrants were either singles, divorcees; single mothers and widow, and none of them were married at the time of migration. This also shows how migration decisions can be determined by marital status of migrants heads of households and therefore seem to be in agreement with what IOM (2005) found out in what they called "autonomous female migration" that women were migrating independently and not just as accompanying spouses. In this study it was found out that women were migrating independently not because they were allowed by their spouses to

do so but because they were not in marriage. In Makete and Iringa Rural Districts, it is socially/culturally unacceptable for a married woman to migrate away from home while leaving a husband home that is why in this study no any married woman had migrated. As suggested by Adepoju (2005); CELADE/CEPAL (2000); IOM (2005)that there is some evidence suggesting the presence of feminisation of migration in Africa, this study is another evidence to show that feminization of migration is taking place in Africa particularly in Tanzania. It is however, acknowledged by Lucas (2005b) that Africa still has the lowest proportion of female migrants (and especially married women) of any major region in the world.

*vi). A**vailable job opportunities and infrastructure development*

As explained previously, a total of eleven infrastructures were identified (refer Table 5.12) but it was only four infrastructures which were found to make a significant contribution (i.e. they were good predictors of outcome variable) when added into the model. These are irrigation schemes; market places; electricity and water dams (refer Table 5.13)

The World Bank (2001) asserts that electricity is one of the important infrastructures that can induce industrial growth in otherwise lagging low-income rural economies. However, the National Sample Census of Agriculture 2002/03 showed that only 0.4% of households in the research areas (i.e. Makete and Iringa Rural Districts) had access to electricity. Information from the field revealed that due to lack of electricity as the main source of energy in research areas for instance, wick lamp was found the most common source of lighting energy in Makete district, with 46% of total households using this source of energy, followed by hurricane lamp (43%) and paraffin lamp (5%), other sources such as solar, gas or biogas and firewood were used by very few (2%) households in the district. Also, as was reported in the 1997 Makete District Socio-Economic Profile (MDSEP, 1997) and supported by the field data, firewood had remained the most prevalent source of energy for cooking and was depended upon by 98% of households in the district, followed by charcoal and bottled gas (one percent

each) and only an insignificant number of households used crop residues as a source of energy for cooking. Information from the field revealed that none of surveyed households declared to use modern and/or environmental friendly sources of energy for cooking such as electricity, solar energy, biogas and livestock dung. No doubt these findings suggest that deforestation and depletion of natural vegetation for collection of firewood and charcoal has greatly contributed to the destruction of the nature and ecology of the district(s). The low rate of households accessing electricity was a signal to the kinds of economic activities that households may be engaged in for their livelihoods.

The results of the analysis presented previously clearly revealed the responses of surveyed households that electricity in their areas (rural electrification) is a significant contributory factor to rural-out migration. The main reason for this was the fact that rural electrification provides a primary stimulus for rural development through industrial growth. It was found that once there is industrial growth in rural areas, rural-out migration can be reduced to a greater extent as this can increase the availability of job opportunities locally which most of migrants go to look for elsewhere/in other areas (mainly in urban settings). For example, in Makete District and some areas of Iringa Rural District, timber harvesting and processing was found to be done manually by traditional means of pit-sawing. With electricity, employment of power machinery for timber harvesting and processing can be a viable alternative, and this can increase job availability and also can raise productivity and improve working conditions. World Bank (2001) asserts that rural electrification brings with it expectations for progress and a better future. In this way, the availability of electricity in the areas of study was deemed/perceived an important contributory factor to migration. Moreover, people's perception was also that availability of electricity in their (rural) areas could profoundly improve their village life. As explained previously, most households in the research areas were dependent on fuel wood and other traditional means as their sources of energy. In this case it was found that with electricity, for instance electric lighting would expand the productive and social hours in the day; by using electricity major channels of

communication and information dissemination may be available to many and in turn various channels of communication such as radios and television may provide accessible and affordable entertainment and education on various issues. Furthermore, it was found that electricity in the research areas could have a crucial role to play in the spread of irrigated farming through the use of electrical water pumps, which in turn can improve agricultural growth, improve production, improve consumption and ultimately raise household income through selling of agricultural produce. This brief discussion shows how and why electricity was perceived by surveyed households as important factor for households' rural-out migration decisions.

During field work (in the month of August, 2009), most parts of the research areas were very dry, even cattle keepers in the areas were migrating to other areas for search of water and pastures for their livestock. The major concern of the residents interviewed was water problems in the area. There was no water dam, in Kihorogota and Nzihi Wards of Iringa Rural District, few households had access to tap water (which was available at least once in a week or after several weeks or months), as a result most of households in this area were dependent on natural springs which were also drying out. The majority of the residents reported to be getting water from the valleys where they used to dig down in the sand and sometimes from stagnant water that had settled in the previous rain season. Respondents and key informants (village leaders and other influential people in the area such as teachers) especially in Kihorogota Ward reported that during the dry season they never eat vegetables, since they can't grow them due to lack of water. They reported that using tap water for growing vegetables or any other activity apart from 'home consumption' was a punishable offence according to the relevant local government bylaws. These findings confirmed what the analysis revealed that lack of water both for irrigated farming (irrigation schemes) or dam water (for various uses) in these wards especially during dry seasons where basically there are no major farming activities which leads to most of the rural labour force being idle was a good reason for out-migration. This explains why it was perceived by the surveyed households that lack of irrigation scheme and water dams was major contributory factors

for migration. Most of the surveyed households and key informants suggested that if irrigation water and/or water dams was available, it could have been used by the idle manpower during non-farming seasons to grow vegetables and other water consuming related activities such as brick making which could help to improve household income. In this way, the availability of water in the research areas could play a significant role in reducing rural-out migration since a number of income earning opportunities could be generated locally.

Lack of markets or common and formalized market places to market and sell rural households' agricultural produce was found to be another important factor that contributed significantly to rural-out migration from the research areas. This finding was mainly based on the information obtained from surveyed households and key informants that markets are important for agricultural growth and sustainable development. They revealed that lack of markets, or poor access to those markets that exist, not only affects farmers or small holder producers locally in rural areas, but it is also a drain on the potential of the entire country. They suggested that creating local and national markets and improved access to them, would allow specialization and diversification into new agricultural products that would make profits for rural households, decrease household poverty and increase consumption and eventually reduce hunger.

These findings suggest that access to markets for farm products, inputs and other goods and services would allow scope for specialization and division of labour. For instance, the small stock keepers may then produce a marketable surplus of animals or poultry, meat, milk or eggs for sale to others, who produce food crops and other goods or services that may be bought by the livestock producers. The scope for specialization in production as a result of markets, may allow increase in productive efficiency and general growth of incomes. It is argued by the World Bank (2001) that by specializing in particular activities, people gain experience and become more efficient: "practice makes perfect". Furthermore, if food can be bought, self-sufficiency is no longer necessary, so some individuals can specialize in non-agricultural activities. Even for the very poorest,

landless individuals, the labour market may provide opportunities for gainful employment in agriculture or in other non-agricultural activities. Non-agricultural activities may include house building, bicycle repairs, crafts such as weaving, dress-making, food processing, firewood and charcoal selling, food retailing and local brewing and distilling which is the most common business in the research areas. Since these activities are highly labour intensive, it means that labour is the main input. As they expand, local opportunities for local employment grow rapidly. The rural non-farm sector may produce improved housing which is a major expenditure of prospering farmers, local furniture, local garments, and a host of rural services. This also creates market for goods and services produced locally and improve money circulation within the local economies.

Furthermore, the importance of these non-agricultural activities in contributing to rural employment and incomes (on average of about 40%) is emphasized in the literature on rural livelihoods (e.g Ellis, 2000). Ellis observed that the demand for the goods and services from the rural non-farm sector is said to be *elastic with respect to income*. This means that as farmers' incomes rise, their expenditures on products of rural non-farm sector increase more than proportionately. Thus, as agriculture grows, the rural non-farm sector grows even faster than agriculture and increases in its importance to the rural economy, and thus rural markets expands and become sustainable. Ultimately, this can lead to reduced rural-out migration since income earning opportunities are available locally such that people are not forced to move elsewhere to look for them. Basically, these might be the major reasons for surveyed households to perceive that lack of job opportunities and developed infrastructures (as identified in Table 5.13) could significantly contribute to rural-out migrations. That is why the results in Table 5.6 on the households' responses on the availability of job opportunities and households' migration decisions showed clearly that majority (81%) of surveyed households strongly responded that the absence of non-farm self-employment contributes to higher rates of rural-out migrations. The interesting finding was that majority of non-migrant households (73%) also responded that the absence of non-farm self-employment had a

positive bearing on households' migration decisions. This makes a total of 221(81%) stated previously out of 272 surveyed households which responded that the absence of non-self-employment lead to rural-out migration.

However, a small proportion (24%) of surveyed households, especially non-migrant households responded that the absence of non-farm self-employment does not lead to households choosing to migrate. One of the reasons for this response could be the fact that since they had no experience of sending out migrants, they were exactly not aware whether the absence of off-farm self-employment does really lead people to move out of their rural areas. But the main reason for such response could be based on the fact that to these households, non-farm employment was not a problem i.e. maybe they were engaged in one form of off-farm self-employment or another, and therefore could not perceive the availability of non-farm self-employment as one of the contributing factors to rural-out migration decisions. Generally, the results presented in Table 5.7 proposed the presence of an inverse relationship between the availability of a job opportunity (in this case non-farm self-employment) and the households' migration decision. This also suggests an inverse relationship between the two variables, thus the overall impact of this relationship to the society is negative since the absence of non-farm self-employment will lead to more people leaving the rural areas of their residence to elsewhere and this may lead to reduced rural labor.

5.4 Testing for multicollinearity

Existence of multicollinearity could not be ruled out among the variables involved in the analysis. If not checked, multicollinearity can cause the decomposion of the effect of some variables that are correlated with others difficult such that those with the main effect may become insignificant. Multicollinearity exists when there is a strong correlation between two or more predictor variables in a regression model. The same way as multicollinearity can affect the parameters of ordinary regression model, logistic regression is just as prone to the biasing effect of the collinearity and it was essential to test for it following a logistic regression analysis exercise. To check the existence of this

problem, the variables identified (by logistic regression) to be good predictors of rural-out migration were tested. Two collinearity diagnostics were employed which involved the variance inflation factor (VIF) and the tolerance statistic which is basically the reciprocal of VIF (1/VIF). The results of the test are presented in table 5.14.

Table 5.14: Collinearity diagnostic results of the good predictors of rural-out migration

		Collinearity statistics	
		Tolerance	VIF
Household characteristics	No. of members	.561	1.783
	Ages of heads of hh	.575	1.740
	Marital status of hhh	.614	1.630
Available job opportunities	Self-employment	.324	3.086
	Casual labour	.721	1.387
	Enterprises	.841	1.189
Infrastructures	Irrigation schemes	.448	2.234
	Market places	.910	1.099
	Electricity	.531	1.883
	Water dams	.623	1.605

Since the main chosen criteria for assessing collinearity was the tolerance statistic values and the VIF values, then it follows that according to the suggestion put forward by Menard (1995) a tolerance value less than 0.1 almost certainly indicates a serious collinearity problem. Likewise, Myers (1990) also suggests that a VIF value greater than 10 is a cause for concern. From Table 8.14 the results shows that the tolerance values of all predictor variables involved in the test are above 0.1 and those of VIF are below 10. It seems from these results (values) that there is no an issue of collinearity between the predictor variables. These results show that the results obtained previously in section 5.2.2 (presented in table 5.13) are reliable ones.

CHAPTER SIX

RESULTS AND DISCUSSION FOR THE OUTCOMES OF RURAL OUT-MIGRATION TO HOUSEHOLD ASSETS

6.1 An overview

The purpose of this study was to assess the outcomes of rural out-migration as a livelihoods diversification strategy to the sending households. In achieving this aim, the study adopted the asset pentagon (livelihoods) approach (DFID, 1999a) which recognise five capital assets that a household owns or has access to; and the New Economics of Labour Migration (NELM) approaches/theories (Deshingkar & Start, 2003) which recognise the household as the unit of decision-making according to the incentives and constraints it faces. By using the asset pentagon approach, the study was looking at whether rural out-migration could enhance the livelihoods of the sending households by contributing to the development of the various assets (capitals) that households own or have access to. In livelihood approaches, livelihood strategies (such as rural-out migration) are undertaken in order to achieve livelihood outcomes which include increased income, improved well-being, reduced vulnerability, improved food security, and more sustainable use of natural resource base (Ellis, 2000). In this study the five assets owned or accessed by the households included human capital which was considered to be the most important of all and was about people who are both the object and subject of any strategy undertaken, (it referred to skills, education, health and so on); natural capital which (which referred to land, water, trees and so on); financial/economic capital (which included money, savings, loan access, claims and so on); physical capital (which included production investment goods and so on); and social capital (which referred to networks and associations and so on).

The asset status of the households and how this is changing over different time periods is critical to the household's enhancement of its livelihoods. It is generally conceived that the higher the level and the more diverse the assets owned by the household are, the

greater its capacity to manage risk and cope with shocks i.e. the less vulnerable it is, and therefore the more sustained its livelihood is (Ellis, 2003). The earnings obtained from migrating, and the remittances sent back by migrants to their families are critical to maintaining or raising the level of other assets: savings, land, equipment, livestock, education of children, and so on. Rural-out migration not only helps migrants to send home remittances but also it widens their social networks and consequently increases their social capital. Also, throughout the literature it is acknowledged that in order to move out of poverty, poor rural households have to increase the assets they own or have access to, so that they can deploy productively in order to generate higher incomes. Moreover, numerous studies, for instance, Ellis (1998) have observed that by using the asset approach, moving out of poverty is a cumulative process, often achieved in tiny increments. Assets are traded up in sequence, for example, chickens/or poultry to goats, to cattle, to land; or, cash from non-farm income to farm inputs to higher farm income to land or to livestock (Ellis & Mdoe, 2003). It is also well established that a critical constraint slowing down or preventing such 'virtuous spirals' is the inability to borrow or to generate cash (often discussed under the concept of credit market failures). This study proposes the connection here that earnings or remittances from rural-out migration therefore can play a crucial role in initiating and sustaining such asset cumulative processes.

6.2 Migration attributes

This study considered rural-out migration as the household's survival strategy as well as accumulation strategy. In this respect the study aimed at assessing the outcomes that rural-out migration might have to sending households through the actual contribution of migrants for creating or improving household assets such as widening their social networks, to supporting agricultural activities and opening up new non-farm employment opportunities. It was anticipated that income from remittances sent back home by migrants would enable households to invest in farm and non-farm activities and entrepreneurial endeavours which may in turn create employment opportunities for other

villagers. Other ways that migrants were anticipated to contribute to households and the development of their place of origin was through collective donations of time, business networks, investments and the transfer of skills, culture, knowledge and experience.

However, this study recognised the fact that migrants were not expected to contribute or remit uniformly to their remaining households. It was assumed that migrants' contribution could be affected by factors (migration attributes) such as migrants' places of migration or destinations, duration of stay, and occupations at destinations. Information on these attributes of migration was collected and the results are presented in Table 6.1a. The results and discussion for the contribution of migration to various household assets are presented thereafter.

Table 6.1a: Migration attributes

Variable	Attribute	No. of migrants (n = 187)	%age (100%)
Destinations	Urban areas	140	75
	Rural areas	47	25
Duration of stay	1-4 weeks	9	5
	1-6 months	16	9
	7-12 months	10	5
	> 1 yr	152	81
Reasons for migration	Economic	168	90
	Other reasons	19	10

Results in Table 6.1a show that 140 (75%) out of the total 187 migrants had migrated to urban areas (to cities, municipals and towns) while only 40 (21%) had migrated to rural areas. Furthermore, the results (figures not shown in Table 6.1a) shown that out of 140 urban migrants, 86 (61%) were male and 61 (39%) were females, while out of 47 rural migrants, 27 (57%) were males and the remaining 13(43%) females. Of these migrants, most of them (81%) had stayed for more than one year while only 19% had stayed for a period of between 1-12 months. Having more migrants moving to urban areas as compared to rural areas signified the potentiality of urban areas in attracting rural population probably due to vibrant economic activities found there which acts as pull factors to them. This is supported by the results from Table 6.1a which show that a large

proportion of migrants (90%) of the 187 had migrated from their destinations due to economic reasons while only 10% had migrated due to other reasons. None of the migrants had crossed borders to neighbouring countries for search of better livelihoods. The main point drawn here is that urban migration is dominant over rural one due to reasons mentioned previously and thus economic reasons were the major motive for most households to send out migrants.

Migrants were engaged in different occupations both at origin and destination. The essence was mainly to find out what were migrants' occupations at destinations which would suggest migrants' earnings at destination. Table 6.1b provides more information.

Table 6.1b: Migrants' occupations

Nature of occupation	Number of migrants at origin (N=187)	Number of migrants at destination (N=187)
Students	34(18%)	15(8%)
Farming/livestock (wage)	31(17%)	13(7%)
Off-farm (agricultural)	33(18%)	12(6%)
Non-farm wage (non-agricultural)	51(27%)	65(35%)
Non-farm (self-employment)	38(20%)	82(44%)

Table 6.1b shows that at origin, migrants were engaged in various occupations such as farming/livestock keeping (17%), off-farm (agricultural related) (18%), non-farm wage (non-agricultural) (27%) and non-farm (self-employment) (20%) and 34% were students. At destinations however, migrants were engaged into the same kinds of jobs but at varying proportions compared to the origin. From the same Table 6.1b, it is obvious that the number of migrants per occupation category at destination decreased compared to origin with the exception of two (non-farm wage, non-agricultural and self-employment). For instance, the number of migrants engaged in non-farm wage (non-agricultural related activities) increased from 27% at origin to 35% at destination, while non-farm (self-employment) increased more than twice from 20% at origin to 44% at destination. These results tell us that migrants had shifted from the occupations they were engaged in at the origin to the two types of occupations which were non-farm wage (non-agricultural) and non-farm (self-employment) at destination. Whether this occupational shift had an impact on their earnings or whether it made them different

from what they originally were or whether it enabled them to remit at home as expected will be revealed when presenting the results on the outcomes of migration to household assets.

Furthermore, the results on the analysis of migrant occupations at destination presented in Table 6.1b previously, was also telling us that the two sectors at destination were attracting more migrants than others. According to the responses obtained from the surveyed households and key informants was that these kinds of occupations were the easiest to get compared to professional ones which required high levels of education attainments. From Table 6.1a it shows that migrants were engaged in low paying jobs which could be suggesting their low educational achievement i.e. low levels of education (low human capital) such that it was an entry barrier to professional and better paying jobs. In simple terms the results shows that migrants were switching from agricultural related activities at origin to non-agricultural activities at destination. According to sending households and key informants, the kinds of occupation migrants are engaged in at destinations are mainly low paying jobs such as selling hand held items "machingas", working in shops (shop keepers), house helpers (maids), bar maids, conductors in commuter buses, feeding animals, planting crops (for wages), weeding, harvesting especially for those who migrated to rural areas where large farming agricultural activities takes place such as Usangu rice farms, and so on. None of the migrants were engaged in public/private sector employment both at origin and destination.

Another interesting finding was that the number of those who left home for schooling was found to be 34(18%), but it was only 15(8%) who were in school at the time of field work. It was later found that the other 10% had quitted school for work. In this way migration had contributed to school dropout and therefore depletion of households' human capital. Generally, since there were no major changes in the occupations migrants were engaged in at origin and destination, migration could certainly not add

value in terms of occupational advancement, suggesting low or no earnings that could be obtained from them.

In order to get insights on how rural-out migration contributed to build up various assets owned or accessed by the households, firstly households were asked if they owned or had access to a certain type of asset. Secondly, households were asked if migrant(s) had contributed anything to the creation or maintenance or development of that particular asset at least within the past one year. For that case, the following section focuses on these issues and forms the core of the study.

6.3 Migration contribution to households' assets

a). Human capital

Human capital attributes addressed were mainly skills and knowledge, health status of the household and educational investments or achievements. In order to get insights of the outcomes of rural-out migration to these human capital attributes, a series of questions were asked on each of them. All of those attributes/variables were included because of their importance in the pursuit of livelihood strategies or because of their necessity for people to make a reasonable living. The main assumption guiding the analysis was that if half or more of the migrants had contributed (i.e. if half or more of the sending households said migration had contributed) something in building or maintaining particular capital assets of the sending households, then migration would be regarded as having shown potential for enhancing livelihoods of the households concerned; otherwise not. Then the subsequent question to this effect would be how much was contributed. The following section presents the contribution of migration to various attributes of households' human capital based on this framework.

i). Migration contribution to skills

In order to know whether migration had contributed to household skills development or not, respondents were asked to respond to a question as to whether migrants had sent back home any money which could be invested into certain skills development. Also

they were asked if there were any skills acquired by migrants due to migration that could be used to enhance the livelihoods of the remaining household. As mentioned in earlier sections, out of 272 surveyed households, only 93 household were found to have migrants, so the households of interest for this section were the 93 migrant households whose total number of migrants amounted to 187 and not the total (272) surveyed households. When responding to the question "has the household benefited/gained in anyways in the form of skills brought back by a migrant member", a total of 13(14%) out of 93 total migrant households responded to have gained some skills while a total of 80(86%) households responded not to have gained. The composition of the kinds of skills gained is presented in Table 6.2a as follows.

Table 6.2a: Type of skills gained by migrants

Type of skills gained	No. of households benefited (N=13)	Percentage (%)
Carpentry	7	54
Driving	4	30
Cookery	1	8
Animal keeping	1	8

From Table 6.2a, one could see that in terms of skills gained from migration, it was only a small proportion of them (less than $1/4^{th}$) that had benefited from migration. Since the number of beneficiary households was far below half the total number of migrant households, this means our assumption was not met and this means migration could not potentially contribute to building a household's human capital. It was further revealed that migrants had acquired these skills as a result of the occupations they were engaged in at destinations (i.e. in the industry that had absorbed them). Moreover, the information obtained from the households showed that the skills acquired were completely new since, at origin, the migrants concerned were farmers and had no any other skills. In this case, at an individual level, migration had slightly contributed to building human capital; but not at household level. In a way, this had shown a direct relationship between the nature of occupation at destination and skills that might be acquired by migrants.

ii). Contribution to health status of the household

When respondents were asked whether for the past one year there was any household member (at home) who had suffered any illness or injury which required to spend money for treatment, out of 93 migrant households, 59 (63%) responded to have had members that needed assistance in getting treated for some illness while 34 households (37%) responded not to have any suffered members. The incidents of household members falling sick varied from one household to another and for the purpose of the study only the first two incidents were considered. But also the kind of sickness differed from one household to another and within the household, and this had the implication for the amount of money required for treatment and therefore the amount to be contributed by a migrant member(s). The (most common) types of sickness included high and low blood pressure, coughing, delivery, eye problems, fever, fire burn, flu, hand injury, HIV/AIDS, insanity, lame, leg injury, leukemia, malaria, stomach operation, pneumonia, respiratory tract problems, running stomach, skin diseases, stomach problems, tuberculosis, asthma, headache, heart problems, and wounds.

To get insights of how migration had contributed to the betterment of the household health status, the 59 households whose members had fallen sick were asked if there were an incidence where they had contacted a migrant member to help with the treatment expenses of the suffering household member. Out of 59 migrant households with suffered household members only 15(25%) responded to have sought and received assistance from their migrant members while 44(75%) households responded to have sought but not received any assistance. These results showed that it was only a quarter (25%) of total households with suffered members that had received assistance from migrants while three quarters (75%) sought for assistance but could not be assisted. This number of households benefited from migration again falls far below the assumption made earlier (i.e. below halfway of total migrant households that sought assistance from migrants). Once again, this shows how migration did not potentially contribute to building up the health status of sending households. Since there were several incidences household members had fallen sick, respondents from these households were further

asked how often migrants were approached for help. Out of 15 households which responded to have received help from migrants, ten (10) of them responded to have contacted and received assistance from migrants every time a household member fell sick while five (5) responded to have received assistance from migrants once in a while when a member of household fell sick.

Furthermore, 44(75%) households which had responded not to have received any assistance from migrants were further asked what the reasons for their migrant member(s) failing to assist with the treatment expenses of the sick members were. All 44 households responded to this question and it was found that 26(59%) households reported to have informed the migrant(s) but they failed to assist on the grounds that they were willing to assist but they had no money, 12(27%) households responded to have informed migrant members who simply promised to assist but they did not , and 6(14%) households responded to have informed the migrant but never received any assistance and did not know what might have been the reasons for them not to assist.

iii). Contribution to education support

With respect to assets in rural areas in particular, some of the positive ways that earnings and remittances from migration could strengthen livelihoods was by investing in education which could result in better prospects for the next generation (Francis & Hoddinott, 1993; Hoddinott, 1994). By investing in education, rural people and their generations could be enabled to explore various opportunities given that they could acquire certain levels of education beyond primary level. Because of low levels of education attained by most rural people, migrants from these areas found themselves securing very low paying jobs, e.g. feeding animals, selling hand-held items in urban areas (machingas), and getting employed as house-helpers (maids), as bar maids, and others of the like, given that they could not afford to compete for better paying jobs that required a bit of professionalism.

For that case, this study found that it was important to assess how migration had contributed to education investment in households that had sent out migrants or in households where migrants had originated. In getting insights of migrants' contribution to education investments, various areas which migrants could have contributed to were first identified, which included school uniforms and other clothing, school and tuition fees, pocket money, books and other materials, boarding charges, transport charges, school building and maintenance charges, examination fees, and other costs (if any). Information on migrant's contribution to education status of sending households were collected and analysed whose results showed that all 93 migrant households responded to have had requested assistance from migrants to support them on various education requirements but it was only 20(22%) households that reported to have benefited from them. Again according to the assumption made earlier, the total number of households benefiting from migrants' contribution was far below half (less than ¼) of the total sending households. These results on the whole suggested that migration had little or no potential of contributing to building up this capital asset.

For instance, out of 93 migrant households, 28(30%) of them responded to have had requirements for uniforms and other clothing. On the contrary it was only 10(11%) households that reported to have received migrants' contribution for uniforms and other needs. The amount required for this category was between Tshs. 8,000/= and Tshs. 100,000/= while migrant contribution ranged from Tshs. 1,000/= to Tshs. 100,000/=. For the household that needed the total amount of Tshs. 2,500/= for uniforms and other clothing, migrant's contribution was Tshs. 1,000/= of the total requirement. This meant that migrants' contribution was 40 %. For the household whose migrant contribution was Tshs. 100,000/=total requirement for this category was Tshs. 100,000/=. This meant that migrants' contribution was 100 %.

In terms of migration contributing to provision of school and tuition fees it was found that 23(25%) households out of 93 migrant households responded to have had requirements for school and tuition fees. However, it was only 9(10%) households

which responded to have benefited from migrants' contribution. The contribution from migrants ranged between Tshs. 6,000/= out of the required amount of Tshs. 12,000/= to Tshs. 60,000/= out of the required Tshs. 110,000/=. In this case the contribution from migrants was about 50-55%. These two cases showed that migrant contribution was more than half the total amount required. These data showed that even though the number of contributing migrants was very small, the amounts they contributed were substantial in meeting households' needs in this aspect.

Likewise, in terms of migration contributing to the provision of pocket money it was found that only nine (9) i.e. 50% of the households had benefited from migrant contributions out of 18 households which responded to have requirements in this category. The lowest contribution was Tshs. 60,000/ for a household that required Tshs. 100,000/=, in this case the contribution was 60%, while the highest contribution was Tshs. 140,000/= for a household that required Tshs. 180,000/=, in this case the contribution was 78%. But also, six (6) households responded to have received migrant's contribution for books and other materials out of 16 households which responded to have had requirements for these items. For this case the contribution ranged from the lowest of Tshs. 8,000/= (44%) for a household which required a total amount of Tshs. 18,000/= to the highest of Tshs. 100,000/= for a household which required a total of Tshs. 100,000/=, in this case the contribution was 100 %.

For the rest attributes/categories of this capital asset, the following were the results; For boarding charges only one (14%) household had benefited out of seven which reported to have had requirements and the contribution was 50% (i.e. Tshs. 40,000/= out of the total required Tshs. 80,000/=); for transport charges only one (5%) household had benefited out of 20 which reported to have had requirements and the contribution was 100% (i.e. Tshs. 84,000/= out of the same required); for school building and maintenance, only three (23%) households out of thirteen had benefited whereby the contribution was 100% (Tshs. 10,000/= out of the same required); and lastly for

examination charges only two (20%) households out of ten had benefited whereby the contribution was 100% (Tshs. 10,000/= out of the same required).

These particular results showed that various households of the total 20 households (22%) which responded to have benefited from migrant's contribution for educational support, benefited in various aspects. Generally, the results indicated that the contribution from migrant (s) to be very minimal and insignificant and thus migration lacked potential for enhancing the livelihoods of the household. To individual beneficiary households however, migrant's contribution in supporting education investment or achievement at origin was significant. This is attested by the Chi-Square statistic whose value was 30.20 and highly significant at $p < .05$, these results suggested that to those households which had benefited from migrants, rural-out migration had potentially made significant contribution to sustain household's livelihoods through supporting various aspects of education.

Lastly, it was important to find out if the various attributes of migration had any bearing on how migrants had contributed (migrants remitting behaviour). In order to achieve this aim, the relationship between whether a migrant(s) had contributed to households' education investment i.e. households' human asset or capital (representative of other household assets) and each type of migration attribute was established through cross-tabulation analysis. Table 6.2b of presents more information.

Without taking into account of how much was contributed by a migrant, it was revealed that to some extent migration attributes had a bearing on how migrants had contributed. For example, out of 20 households which responded to have received education support from migrants, 12 (60%) of them had migrants in urban areas while the rest had migrants in rural areas. In this case, the place of migration or destination area mattered, in the sense that urban migrants are more likely to remit than rural ones probably due to the fact that in urban areas there are better paying opportunities than in rural areas. Likewise, out of the same 20 households which received education support, 16 (80%) of

them had migrants who had stayed out for a period of more than a year while only 4(20%) had stayed a period less than that. This also was suggesting that duration of stay (at destination) was an important factor for migrant remitting behaviour i.e. the more a migrant stays, the more the possibility of remitting.

Table 6.2b: Migrants' contribution (remittance behaviour) and migration attributes

Variable	Attribute	Benefited Hhs (n=20)	Non-benefited Hhs	Total (n=93)
Destinations	Urban	12(60%)	63(86%)	75(81%)
	Rural	8(40%)	10(14%)	18(19%)
Duration of stay	1-4 weeks	2(10%)	7(10%)	9(9%)
	1-6 months	2(10%)	6(8%)	8(9%)
	7-12 months	0(0%)	3(4%)	3(3%)
	> 1 yr	16(80%)	57(78%)	73(79%)
Education	Never schooled	1(5%)	4(6%)	5(5%)
	Primary	17(85%)	62(85%)	79(85%)
	Secondary	1(5%)	5(7%)	6(7%)
	Others	1(5%)	2(3%)	3(3%)
Sex	Male	13(65%)	48(66%)	61(66%)
	Female	7(35%)	25(34%)	32(34%)
Occupations at destinations	Students	0(0%)	2(3%)	2(2%)
	Farming/livestock (wage)	1(5%)	7(9%)	8(9%)
	Off-farm (agricultural)	2(10%)	3(4%)	5(5%)
	Non-farm wage (non-agricultural)	8(40%)	32(44%)	40(43%)
	Non-farm (self-employment)	9(45%)	29(40%)	38(41%)

Sex of migrants was another important attribute to consider when evaluating migrants' remitting behaviour. The results revealed that out of the same 20 household that benefited from educational support, 13(65%) received some support from male migrants while the rest (35%) received it from female migrants. This aspect also was telling us that sex of migrants had an effect on migrant remitting behaviour that male migrants are more likely to remit something compared to the females. The reasons for female migrant failing to remit as expected were given by surveyed migrant households to be due to the nature of jobs they took-up at destination. It was found that they were engaged in very low paying jobs such as house maids and bar/local beer club maids. It was learnt that in

these kinds of jobs most of them were not paid by their masters and those few who got paid, their income was too little to the extent of not affording their homeward fare if they needed to do so.

But one of the interesting finding was that out of the 20 households that benefited from educational support, 17(85%) had migrants engaged in non-agricultural activities (those engaged in wage or self-employed) while only 15% had migrants employed in the agricultural sector. These results suggested that the nature of occupation at destination was a major factor for migrants to remit. The results also reflected what could be the reasons for migrants to switch between occupations (at origin and destination) as observed previously. Thus migrants engaged in non-agricultural occupations were more likely to remit than those in the agricultural sector. This could also be an explanation of why more migrants were moving to urban areas than in rural areas. Most interestingly was to find that none of the migrant households responded to have received contribution from student migrants. This was due to the fact that these students were supported by their families for their studies and being in school they were not earning anything to send home. For that case, one would be doubtful if a student was found to remit in order to support his/her family in any aspect. This also further confirmed that the nature of occupation at destination highly determined the migrants' remitting behaviour.

The last important aspect was to find out if education of migrants mattered in migrants' remitting behaviour. Out of the 20 households which benefited from educational support, 17(85%) had migrants who had primary education, 1(5%) had secondary education, 1(5%) had never schooled and 1(5%) other levels of education. This was mainly due to the fact that majority (78%) of all migrants had primary education. For that case it is not surprising to find the remitters are almost all primary education holders. In more specific terms, education of migrants was more of a constant than a variable.

b). Financial capital (assets)

In this study, economic or financial assets of households were defined to include attributes such as cash, savings facilities (types and number of savings facilities accessible to households e.g. bank accounts), and credit facilities (number and credit facilities accessible to household) and claims (number and quantities of claims that either institutions or individual owe the household). In order to get insights of the outcomes of migration on various attributes of household assets, migrant households were asked to respond to questions as to whether they had access to the above mentioned facilities and if a migrant member had in anyway helped the household to get access to the facilities. For example, households were asked if there were any members who were operating bank accounts and if a migrant member had helped to open and/or run the account.

The results showed that out of 93 migrant households which responded to this question, it was only 6(7%) households which had bank accounts, three (3) households from each district. But due to the importance of this information about how rural people accessed financial services, it was of interest to know from which wards and villages these households were coming from. It was found that the three households in Makete district, two of them were from Lupalilo ward in Ilevelo and Ugabwa villages. These villages are located not very far (around 25-30kms) from Makete district head quarters where the National Micro Finance Bank had its branch. The last household from Makete District was from Matamba ward in Ndapo village, a village located very far from the district head quarter (=>100 kms one way). The remaining three households were from Iringa Rural district, two were from Ismani Tarafani village of Kihorogota ward while the last one was from Nzihi village of Nzihi ward. This distribution of households assessing bank services basically were suggesting that modern financial services in the study areas and possibly many other rural areas in the country were missing or rather inaccessible by the poor rural households for the reasons explained hereunder.

From the field, it was found that the slow rate of using banks was caused mainly by the long distances between where the banks were located (mainly in towns) and the rural areas. This could be translated into higher transport costs which if included to other costs involved to opening and running bank accounts, lead to rural people using other unsafe traditional ways of keeping the little money they have. But also it was learnt that rural people had less cash to deposit in banks, since in economic terms any banked money is idle money, therefore these rural people had no idle money to keep in the banks. When responding to the question whether migrant member(s) had contributed to the opening and running of the bank accounts, out of the six (6) households with bank accounts, only one (1) household responded to have received some money once from a migrant member to maintain or run the account. This household was from Makete district, Lupalilo ward in Ilevelo village and the amount received was Tanzanian Shillings 50,000/=. Finally, when responding to the question as to why migrants were not sending money for them to open and maintain bank accounts, most of them responded that migrants had no money to send back home. However one respondent from Matamba ward responded by posing a question that if migrants could not send back home money for taking care of the remaining families, how could they send money to save/keep in the bank account?

The immediate conclusion from these findings was that migrants were not getting sufficient money to keep themselves at destination let alone something to send back home. This suggested that if migrants were earning enough such that they were able to send substantial amounts of money to their homes, there would be possibilities for rural households to use formal financial institutions like banks to keep their money where it could gradually grow through earning interest.

Furthermore, the study wanted to know the formal alternative ways that people of Makete and Iringa Rural district could be saving their money. In that regard, respondents were asked to respond to a question as to whether there was any household member who was a member of any Savings and Credit Co-Operative Societies (SACCOS). Throughout the literature, it is acknowledged that savings and credit

organisations are the most efficient rural financial institutions for poverty alleviation. It is in these organisations where poor rural people are provided with small loans (microcredit) to help them engage in productive activities or grow their tiny business. It is also through these organisations rural poor who have less access to formal financial institutions like banks build the habit of savings by making some small savings which in turn help them to loosen their financial constraints in the future.

Responding to the above question, the results showed that only two (2) respondents responded to have had members in these organisations while the remaining 91 responded not having any member in the organisations. When these findings were linked to the ones about having bank accounts, the picture was obvious that these people solely depended on unsafe traditional ways of keeping their money. However, it was learnt that this slow rate of people joining SACCOS was due to the fact that throughout the entire 26 villages surveyed, it was only one SACCOS which was found operating unsatisfactorily in Matamba Ward in Ngoje Village in Makete District. This SACCOS was under Lutheran church but very few (only two) people interviewed had joined it due to lots of controversies in the way it was managed. The rest of the villagers did not have joined any credit organizations since there were none to join to. In fact in Nzihi Ward (Iringa Rural) people said they were no longer interested in joining SACCOS as they could recall losing their money on two incidences to the former two organisations which collected money from them as entry fees but later the officials disappeared with their money. In this way they lost trust to these kinds of organisations. For that case it was found that migration could not help their households to join and maintain their membership in these organisations due to the fact that there were no organisations to join while at the same time migrants were not sending money back home.

Finally, it was concluded that if there were SACCOS to join and migrants were earning something to send back to their families, it could be very possible that the number of those households with members in these organisations would have increased and this would have increased the possibility of migration contributing to building financial

assets through credit and savings organisations. For that case, if the environment was favourable there would have been some great potential for migration to positively contribute to the building of household financial asset through contributing to joining and maintaining their membership. Having membership into fully operational SACCOS could eventually loosen the financial constraints facing most rural households.

Moreover, in an attempt to get insights of the claims (one of households' financial asset) of the household, respondents were requested to respond to a question as to whether there were any institutions or individuals that owed any money to the respective household. It was found that eight (8) households out of 93 migrant households responded to have owed institutions and individuals. The amount of money owed to these households ranged from Tanzanian Shillings (Tshs) 1200/= to Tshs. 175,000/=. However, it was further found that migrant member(s) had contributed nothing to the money that institutions and individuals owed to the eight (8) households. These results suggested that migration did not contribute anyhow to the claims that households owed various institutions and individuals and thus unable to contribute to household's livelihoods.

Additionally, the study wanted to get an idea if Makete and Iringa Rural people had saved their money in non-productive assets such as gold and jewelry (another form of households' financial asset) and if migrants had contributed for the possession of these items. The results were not much surprising as none of the 93 migrant households that responded to this question had received any contribution from a migrant member. The main reason we could draw out of this was that these items are very expensive for rural households to afford and probably less valued like in urban areas but also migrant members mostly those in urban areas could not send them back to their families in form of gifts. Thus, the study concludes that migrants had not contributed in building the financial asset of households by enabling them possess any wealth in savings in non-productive assets such as gold and jewelry which in time of need could be transformed into cash to meet various the households' needs.

c). Natural capital

The main natural capital attributes that were addressed at household level were basically the natural resource stocks from which resource flows and services useful for livelihoods are derived. These included land, wildlife (e.g. wild animals, beekeeping and fish farming), and environmental resources (e.g. types and quantity of trees planted, soil erosion control measures etc).

In order to get insights of how migration was able to build the natural asset stock of the household, respondents were first asked to respond to a question as to whether the household from where respondent came owned land or not. In order to capture the contribution of migration to the land owned by the household, respondents who responded to own land were asked what was the means of acquiring that land, in this case three options were given where respondents were required to choose from, these included inherited, purchase/bought, through village distribution and hiring. If it was acquired by purchasing, then that is where we wanted to know if the migrant member(s) had contributed to that acquisition. Secondly, respondents were asked if throughout the entire land owned by the household there was any area that required to be improved in order to raise its productive potential. And if it was found that there were some areas which required to be improved, respondents were asked if they required inputs which need money or other material for their acquisition and if migrant members had contributed any how to achieving this objective. Lastly, respondents were requested to respond to another type of questions in order to get the insight of how migration had contributed towards the ownership of any wild animals kept by the household. In this case respondents were asked if their households were keeping wild animals and if migrant member(s) had contributed to acquiring and keeping them.

Responding to a question as to whether the household owned land, it was found that all 93 migrant households owned land of course though at varying levels ranging from 1 acre to 26 acres, while on average households owned around three (3) acres per household. None of the households reported to have sent out migrants due to lack of land for farming activities, in other words land was not a contributing factor for rural-out migration. Amongst them, 55 reported to have purchased whole or part of the land they

owned and had contacted migrants for assistance for the purchase while the remaining 38 households had inherited it from their parents. However, out of 55 households that had purchased land, only six (11%) households reported to have received assistance from migrant member(s) to purchase the land in question, and the amount contributed by migrants varied from Tshs. 5,000/= to Tshs. 150,000/=. These results depicted that rural-out migration could not potentially make any significant contribution to land owned by households. In more specific words, there was no potentiality for rural out migration to build the household's natural resource base through land ownership.

Moreover, 43 households (46%) out of 93 migrant households responded to have had land portions which required improvement in order to raise its production potential. The kinds of land improvement needed were mainly soil erosion control measures which included mulching, construction of terraces and planting of trees. Out of 43 households which required land improvement, ten (10) households mulched their areas of which only one household (10%) was assisted by a migrant member who contributed Tshs. 20,000/= (10%) out of Tshs. 200,000/= which was required. Also, 12 households responded to have constructed terraces in the process of improving land for raising its production potential, but it was only one (8%) household which received assistance from a migrant member who contributed Tshs. 10,000/= out of the total Tshs. 20,000/=. Lastly, only four (4) households which had planted trees as a way of controlling soil erosion and none of them had received any assistance from their migrant member(s). These results showed us that rural-out migration did not potentially make any significant contribution to land improvement in order to raise its production potential. This meant that there were no potential for rural-out migration to build the household's natural resource base through land improvement practices/measures. None of the surveyed migrant household was found to keep wild animals anyway.

Generally, all households which had sought assistance from migrants for either acquiring or improving land status when responding to the question as what could be the reasons for migrants not to contribute, nine (9) households responded to have contacted

migrants, but they responded back not having money to send back home while the remaining 34 responded to have contacted migrants for assistance but there were no response and due to lack of funds they failed to do the required land improvement. As a result they continued suffering from the consequences of soil erosion.

d). Social capital

In this section, the main aim was to examine how migration was able to contribute to build social capital (asset) for the households of origins. In this study social capital resources were defined as networks which included networks that individual people establish with others, membership in groups, social relations, and access to wider institutions in society, upon which households (households members) draw in pursuit of livelihoods (Carney, 1998). In this study social capital was measured by how household members had secured and maintained their membership into various groups and organisations. It is believed that by having membership into different groups and organisations, household members meet/interact with other people, they exchange ideas, they learn new things from other members, they strengthen their social interaction through which the households get included in the society at large and so forth. People use these networks to reduce risks, to access services, to protect themselves from deprivation, and to acquire information at lower transaction costs (Ellis, 2003). Thus, through networks of this nature, households may get to enhance their livelihoods at different levels. For that case, anything that is done aiming at improving a household's inclusiveness in the society at large, was assumed to be building its social capital and thus improving its asset stock (Carney, 1998). In this regard migration was examined to find out if it had contributed any how to enabling household members join and maintain their membership into various groups and organisations from which they could draw social resources.

In order to get the insights of how migration had contributed to building the social capital by enabling household members join and maintain their membership in various social groups, a series of questions were asked so as to tap the information required.

Identified groups and institutions that household members could join and enhance their social capital included village councils, committees under village councils, political parties, religious related groups, social welfare groups, self-help groups, merry-go-round and family related associations. This list however, was by no means an exhaustive but just a representative of the social groups that households can join. In this regard, respondents responded to questions like whether there were members in the household who had membership into any of the groups and organisations mentioned above, and if it was found to have members who had membership to the above mentioned associations, they were then asked if migrant members had contributed anything for them to join. Furthermore, they were asked what the main motive was or reason for them to join into such groups and organisations with the aim of knowing what kind of benefits the households got from being members of social groups.

Table 6.3 presents the results on the responses to the above questions with regard to the number of households which had membership in various organisations, number of households which had received contribution from migrants for their members to join into relevant groups and organisations, and with regard to the motive or reasons for joining into particular group or organisation. From Table 6.3, the results on the membership of households into various groups and organisations were not very much different from those of other capital assets discussed before. While it was obvious that households had joined into various groups and organisations, the contribution from migration to build this particular capital assets was very minimal or rather insignificant, such that only two (2) out of 93 migrant households which had joined various groups and organisations had received assistance from migrant members for joining/maintaining their membership. While social welfare (community based groups), wo/men related self-help groups, political parties and religious related groups were the most groups which attracted many surveyed migrant household to join to, the rest of the groups did not attract much attention to these households.

The possible reason for these former groups to attract higher attention was probably due to the fact that they are most famous groups/organisations/institutions in rural areas and the benefits that members draw from these groups include helping one another in time of difficulties e.g sickness, funeral, burial services, etc. which are not different from those found in other groups which attracted lower attention. Also the benefits that households draw from various groups were found to be similar amongst many groups

Table 6.3: Membership of households into various groups and organisations

Organization/group	No. of hh joined	Migrant contribution	Motives for joining
Social welfare	93	1(5,000 out of 10,000/=)	Social gains-93
Women/Men	56	0	Social gains-56; personal gains-12
Political parties	46	0	Social gains-42, economic gains-1& personal gains-3
Religious	32	1(10,000 out of 25,000/=)	Social gains-27; personal gains-3 & Economic gains-2
Village council	13	0	Appointment(i.e. no clear motive)
Family related	6	0	Social gains-6(family adhesiveness)
Merry-go-round	5	0	Social & economic gains-6
Committee under village council	4	0	Social gains-4
SACCOS	2	0	Social and economic gains

However, the very fundamental finding from Table 6.3 was that migration did not contribute substantially to improve households' capacity to access social resources. For example, while 32 of them had joined religious related groups, it was only one (3%) household which reported to have received migrant contribution as subscription fee of about Tshs. 10,000/= out of Tshs. 35,000/= and one (1%) out of 93 migrant households that had benefited from migrant contribution of Tshs. 2,000/= out of Tshs. 3,000/= required for annual membership fee for social welfare group.

Moreover, another finding was that the majority of respondents especially in groups and organisations which had attracted higher attention of many households, responded to have joined these groups mainly for social gains as their main motive or reason. The main explanation for this could probably be that by being a member in a particular group especially those which had a social orientation, one gained in so many ways. For

example, if a member of the household fell sick, members of the group contributed some money for the treatment of the sick person. Equally when a group member lost one of the household members, the group members bore the responsibility of providing food for the affected household and catered for the funeral services. So they viewed being out of social groups (non-member) as being solitary or being isolated from the rest of the world, with no hope. None of the surveyed migrant households were found to have no membership in any organisation. For that case, being a member into an organisation was very vital to these households and this was telling us that building and strengthening social capital through membership into groups and organisation played a key role in improving the livelihoods of the relevant households.

In totality, these results were suggesting that rural-out migration had not potentially made any significant contribution to households joining into wider institutions. Consequently, there were no potentialities for rural out migration to build the household's social resource/capital base through households joining and maintaining their membership into various wider institutions.

e). Physical capital

Physical capital attributes which were addressed under this construct (variable) were basic household infrastructures which included transport facilities, shelter, energy, communication facilities, water systems and production equipment, and other means that enabled people or households to pursue their livelihoods. This list was by no means exhaustive of all assets that would form physical assets; rather it was a representation of the major items that would form this type of asset to be found in any rural household. In order to get an insight of the contribution of migration to this household asset, all of the above mentioned household infrastructures were assessed one after another and the contribution from migration to the creation and/or maintenance of the asset was identified and assessed. To some infrastructures the contribution of migration was magnificent but to some it was very insignificant. But the main objective was not to calculate how much migration had contributed to building this capital asset; instead it

was to assess the outcomes of migration to building the capital asset in terms of how many households had benefited from migrants' contribution against those that did not benefit.

i. Contribution to transportation

In order to get insights of the contribution of migration to the provision and maintenance of transport services to the household, a list of transport facilities were identified and respondents were required to respond as to whether they were present in their household and whether migrant(s) had contributed to their acquisition and maintenance. Transportation facilities included bicycles, tricycles, motorcycles, cars/vehicles, donkey carts, tractor and trailer and wheel barrows owned by the household concerned. The results revealed that none of 93 migrant households were found to own tricycles, cars/vehicles, motorcycles, and tractor and trailers. Since these transport facilities are the ones used in other areas for transporting people, goods and harvests from the farms and for other transport needs, their absence in the study areas portrays the extent of transportation problems in the research areas and possibly this could also apply to other rural areas of developing countries and Tanzania inclusive.

For example, in one of the villages surveyed by the name Ukenza (in Lupalilo Ward) when the villagers want to rush the sick to the hospital (about 15 kms from the village) they use local methods of carrying the sick on the shoulders, respondents claimed that because of this situation many patients especially pregnant/expecting mothers have lost their lives due to delaying getting to hospital. The major transport facility which was found in most households was bicycles. A total of 31 (33%) households out of 93 migrant households were found to own bicycles and one household (1%) was found to own a donkey cart all of which were acquired by purchasing. However, none of these households had received contribution from migrant member(s) for acquiring these facilities. The only explanation for migrants not contributing to acquisition of transport facilities was that when migrants were approached for assistance some would say they had no money to send back home while others would just keep quiet and others would

promise to assist but never assisted. This might be suggesting that either the earnings migrants got at destination was not enough to sustain themselves and send back home for keeping the remaining household i.e. for purchasing transport facilities, or if they were getting enough earnings to remain with some savings, then there were no willingness to remit home. However, this is the area where this study would propose further research to study migrants remitting behaviour. More importantly this study found that most migrants were self-employed or employed in very low paying jobs and which were very much informal such as street vending of goods, feeding animals for food and little pay by the end of the month and others of the like, these kinds of engagements at destination did not enable migrants to remit anything back home. This could initially possibly explain the reason for poor remitting behaviour amongst migrants. These results shown that migration had not potentially made any significant contribution to household's transportation services and therefore suggesting that there were no potentialities for rural out migration to build this component of household's physical capital asset.

ii. Contribution to shelter

Another attribute of physical capital was shelter which basically meant buildings or houses where household members find their shelter. On this aspect, the main concern was on how migration had contributed to building houses (if the members were living in own built houses), purchasing houses (if members were living in purchased houses), renting houses (if members were living in rented houses), but also if migration had contributed to the repair and maintenance of houses built, purchased and/or rented. The results shown that out 93 migrant households, 85 households (91%) reported to live in own built houses, six (7%) households reported to live in inherited houses from their parents while two (2%) households reported to live in purchased or bought houses. None of the households were found to live in rented houses.

Moreover, the results showed that out of 85 households which were living in own built households, only seven (8%) households had received contribution from migrants to

build their houses. The minimum amount contributed by migrants was Tshs 20,000/= (8%) for a household which required a total of Tshs. 250,000/= while the maximum amount contributed by migrant was Tshs. 1,500,000/= (60%) for a household which required a total of Tshs. 2,500,000 /= for building a living house. None of the households reported to have received assistance from migrant(s) for maintenance and repairs of their houses. These results were telling us that migration had not potentially made any significant contribution to household's shelter provision and therefore there were no potential for rural-out migration to build this component of household's physical capital.

iii. Contribution to energy supply

Another attribute of physical capital that was addressed in this section was energy supply. It was assumed that energy in its various forms could play greater role in enhancing the livelihoods of rural households. Under this attribute various forms of sources of energy were identified and included electricity, solar energy, biogas, cooking gas, fuel wood, charcoal and kerosene.

The results showed that all 93 migrant households reported to use fuel wood as their main source of energy. Like in most rural areas of Tanzania, fuel wood in the areas of study was locally available mostly free (by just collecting from the wood lots surrounding the villages) or very cheaply where it was difficult to get them free. Households used firewoods mainly for cooking and for heating up during winter seasons. So their cheap and easy availability has enhanced the survival of many rural households. Also, out of 93 migrant households, 17 (18%) households reported to use charcoal as their source of energy and these were households which were closely located to the head quarters of the four Wards. This was due to the fact that these areas were semi-urbanised and therefore instead of fire wood which was not easily available in these areas, they used charcoal as their sources of cooking energy since it was the most traded in these localities than fire woods. Moreover, it was also found that 85 (91%) households out of 93 migrant households were found to use kerosene as their source of

energy supply. Kerosene was used for two purposes, for some it was used for supplementing charcoal for cooking while for the majority surveyed households it was used entirely for lighting (providing light) the homes at nights.

More importantly, it was only seven (8%) households out of 85 households which reported to use kerosene that had received assistance from migrants to facilitate the availability of kerosene for home consumption. The minimum amount contributed was Tshs. 10,000/= to the household which required the total amount of Tshs. 15,000/= in this case migrant contribution was 67% while the maximum amount contributed was Tshs. 30,000/= to the household which required a total of Tshs. 60,000/= which in this case the migrant's contribution was 50%. There were no migrant contribution for the availability of fuel wood and charcoal. The results also showed that none of migrant households were found to use electricity, solar energy, biogas and cooking gas as their source of energy. These results were actually telling us that migration had failed to potentially make any significant contribution to provision of energy to households. This meant that migration had no potential for enhancing rural livelihoods by building this component of physical capital through providing energy to households.

iv. Contribution to water provision/supply

Another attribute of physical capital that was addressed under this household capital asset was water resources. Essentially, the main concern was on how migration had contributed to the availability of water to the household. In order to achieve this aim, a number of water sources were listed of which respondents were required to provide information if they own or had accessibility to them, and whether migrant members had contributed to their acquisition or accessibility. The water sources included water piped into plot or dwelling, public water tap, tube wells/borehole with pumps, protected dug wells, protected springs, unprotected dug well/springs, river/ponds/streams, rain water, water tanks/vendors and bottled water. Responding to the question "Does this household use/own/have access to one of the above mentioned water sources?" The results showed that all 93 migrant households responded to be using at least one of the water resources

mentioned above. Specifically, 50 (54%) households responded to be using public tap water which was accessible by paying user fees; 23 (25%) households responded to be using water piped into household plots or dwelling; 7 (8%) households were using water from protected dug wells; 3 (3%) households were using water from rivers, ponds and streams; 2 (2%) households were using unprotected dug wells/springs and 1(1%) household was using stored/harvested rain water.

No household responded to be using the remaining four sources of water. However, interestingly the results revealed that only two (2%) of all 93 migrant households (i.e. 9% of all tape water users) had received contribution from migrant member(s) in order to access public tap water i.e. for paying user fee. These results showed that most surveyed households were accessing tap water. The minimum migrant contribution was Tshs. 2,000/= (40%) for a household which required a total of Tshs. 5,000/= for paying user fee and maximum migrant contribution was Tshs. 100,000/= (100%) which was the whole amount required by the household to get the tap water into the plot/dwelling. These results again were suggesting that rural-out migration did not make any significant contribution to the building up of this component of physical capital of the household through water resource provision. This meant that rural-out migration had not shown any potential for enhancing the livelihoods of rural households through building up this particular attribute of physical asset or capital.

v. Contribution to communication facilities

Communication services or facilities were also addressed under this household capital asset. Mainly the facilities assessed under this attribute were equipment for information sharing and communication, which included radios, television sets, mobile phones and fixed/landline phones. Respondents were required to respond to a question as to whether they owned these facilities and if migrants had contributed to their acquisition and maintenance. Out of 93 migrant households, 91 (98%) of them responded to own at least one of the communication and information sharing equipment listed above. More specifically, 59 (65%) households responded to own mobile phones while 31 (34%)

households reported to own radios and one (1) household (1%) reported to own television set. No single household reported to own fixed phone lines.

The results revealed that two (3%) out of 59 households which reported to own radios reported to have had received assistance or contribution from migrant members for their acquisition. Migrant contribution was Tshs. 12, 000/= per migrant and all of them had contributed 100%. (i.e. the total cost for the radios was Tshs. 12,000/= per radio). Also, three (10%) households out of 31 which reported to own mobile phones had received contribution from migrant members for their acquisition. The contribution from migrants was as follows; Tshs. 20,000/= out of the total cost of Tshs. 40,000/=; Tshs. 80,000/= out of total cost of Tshs. 85,000 and the last household had received 100% contribution from migrant of about Tshs. 85,000/=. These results were telling us that as a whole the contribution of rural-out migration was very marginal such that it was insignificant to the acquisition and maintenance of the communication facilities and thus had no potential to promote rural-livelihoods for rural households. However, for those households which received migrant's assistance, it was obvious that this contribution was significant at individual household level as revealed by the results above.

However, it was important to find out that the high number of rural people owning and using mobile phones was a sign of reduced digital divide between rural and urban populations. These rural people reported to be using their mobile phones for communication with relatives, friends and with business partners for instance for getting prices of various agricultural products in urban areas so that they could be able to set reasonable prices for their produce in rural areas. More importantly, this study was made easy because all initial communication with village authorities was done through mobile communications from the Ward headquarters. Due to long distances between villages and their physical/geographical locations and the difficulty in transport from one village to another, mobile phones have become the major means of communication in these areas. Rough estimates showed that the rate of using mobile phones in these areas was even higher than in most parts of urban areas. For that case facilitating these rural

households to acquire and manage the usage of mobile phones through migrant's contributions not only would have enabled communication to become easier but also would have improved rural household's livelihoods and thus showing some potential for accelerating changes in rural areas in all aspects of life.

v. Contribution to production facilities/equipment/inputs

The last attribute to be assessed under this construct (physical capital/assets) was production facilities which included production equipment and agricultural inputs. The essence was to assess the contribution of migration to assets which were used to create cash directly or indirectly by creating items which could be later converted into cash for the household. For example, shops create cash directly by selling items to customers while power saws are used to produce timbers which later are sold to create cash for households. Production facilities included hand hoes, oxen ploughs, power saws, sewing machines, shop/kiosk, pit saw blades, spraying machines, milling machines, fishing equipment, fertilizer distributors, planter & harvesting machines, incubators, power tillers, animal feeding & milking machines, hand milling & coffee pulping machines, fertilizers, improved seeds, herbicides and pesticides.

In order to get insights of the contribution of migrants to the ownership of particular production assets, respondents were subjected to a couple of questions. For production equipment respondents were required to answer whether the household owns a certain asset and whether the migrant member(s) had contributed to their acquisition. But for agricultural inputs, households were required to answer if in the past two seasons they had used certain agricultural input and whether migrant member(s) had contributed to their acquisition. The results showed that all 93 migrant households responded to own hand hoes, and there were between one to seven hoes per households. This asset was the one owned by all migrant households because most of them were peasant farming households whose main farming implement was hand hoes and also possibly due to its low purchase price per hoe of between Tshs. 3,000/= to Tshs. 6,000/= relative to other farming implements.

However, the results revealed that only six (6%) households out of all 93 migrant households reported to have received contributions from migrants for hoes acquisition. The contribution varied from Tshs. 2,000/= (57%) for a household which required Tshs. 3,500/= to Tshs. 10,000/= (100%) for a household which required a total of Tshs. 10,000/= to purchase a hoe(s). Moreover, four (14%) out of 29 households reported to have received migrant contributions for purchasing fertilizers, while two (8%) out of 24 households reported to have received migrant contributions for purchasing improved seeds. The rest equipment and inputs were reported to be used by households but no any contribution from migrant members was obtained for their acquisition. These included oxen ploughs (7 households), power saws (4 households), sewing machines (3 households), shop/kiosk (2 households), pit saw blades (2 households), spraying machines (1 household), herbicides (3 households) and pesticides (2 households). Other production equipment (especially machines) was not owned by any household, probably due to the nature of farming systems which were mainly traditional and small scale and thus did/does not require high mechanisation and also the cost of purchasing or hiring them was not affordable to most rural households. These results were showing that rural-out migration had not made any significant contribution to the acquisition and/or access to production assets/facilities for the households. Therefore, this meant that there were no potential for rural-out migration to enhance the livelihoods of the rural households by contributing to build up this component of capital asset of rural households.

With respect to asset creation, accumulation and maintenance in rural households and rural areas in totality, this study has found migration to have contradicting outcomes with other existing empirical researches which have shown migration to have diverse positive ways of enhancing households' asset portfolio and thus livelihoods enhancement. Some of the various positive ways that earnings and remittances from migration can strengthen livelihoods have been found to include; investment in land, or land improvements, including reclaiming previously degraded land (Tiffen *et al*, 1994 provided 'The Machakos, Kenya Case Study' as one of the better-known examples of this); purchase of cash inputs to agriculture (hired labour, disease control etc), resulting

in better cultivation practices and higher yields (Carter, 1997); investment in agricultural implements or machines (water pumps, ploughs etc); investment in education, resulting in better prospects for the next generation (Francis & Hoddinott, 1993; Hoddinott, 1994); and investment in assets permitting local non-farm income to be generated (bicycle taxi, motorbike, milling machine, kiosk etc.(Ellis, 2003))

6.4 Voices of respondents about the outcomes of rural-out migration (Social outcomes of rural-out migration

In general, results on the outcomes of rural-out migration to rural household assets showed to be very marginal revealing that none of the households had their asset stock growing as a result of rural-out migration. Initially the assumption was that if half the total number of migrant households had benefited out of migration this would mean migration would have contributed significantly to build up a particular household asset. But if it would be less than half the total number of migrant households that had benefited out of migration, this would mean insignificant contribution and this would mean migration had no potential to enhance the livelihoods of rural households. On this basis, these results meant that to the majority of migrant households, the expectations of sending out migrants that they would be supportive to the remaining of the household at origin were not met. Therefore, rural-out migration as a rural-livelihood diversification strategy has shown no signs of having any potential for enhancing or sustaining rural household's livelihoods. And thus, at the moment rural-out migration is not a viable or reliable rural livelihood diversification strategy. More importantly the results showed that migration attributes as listed in Table 6.1 had no impact on the way migrants contributed in building various household assets.

In general, no any single household which responded that its life had changed to any better due to remittances from migration. Mostly, migration was associated with the deteriorating social and economic conditions of most migrant households. This is verified by migrant households when responding to a question "how migrant households were comparing their economic conditions before and after migration (sending out a

migrant)", the results revealed that 25(27%) households responded to have gotten better off; 11(12%) households responded to have remained about the same; and 57(61%) households responded to have worsened off. However, none of the gotten better off households could associate their situation (improvement) with the contributions from migrants; instead all 25(100%) households could associate their improved situation with the household being able to undertake various economic activities such as animal husbandry, farming, small business and so forth. which lifted up their income level. These results were in a way confirming what was found in section 4.3 of this report in which migration ranked the 8th out of nine household livelihood strategies, meaning that as a livelihood strategy it was less depended up on by households for their survival. Also, of the 68 households which responded that their economic situation had worsened off or remained about the same, 19(28%) of them associated their situation with the declining households' incomes caused by continued poor crop harvests, prolonged drought, poor prices for their agricultural produce as well as the absence of other economic opportunities; 4(6%) of them said their earnings and what migrants were sending home were not enough for the household to improve economically; and 45(66%) responded that their situation was contributed to by the declining household income, migrants not being helpful as they were expected, poor harvest due to prolonged drought and pests, poor prices for their agricultural produce, as well as lack of viable economic activities. This analysis was further confirming how migration did not contribute substantially to improve the livelihoods of the sending households at large and therefore shown not to be a viable livelihood option at least for the time being.

Voices of the surveyed migrant households as well as those of non-migrants and key informants clearly associated rural-out migration with devastating outcomes both at household and community or society level at large. Migration was associated with withdrawal of human resource (especially the youths) from households and villages which led to reduced production both at household and society level. For instance, in the village of Ugabwa in Makete, key informants revealed how severely the village was affected by youths' out migration, as the following excerpts demonstrate.

In this village out-migration is highly practiced, mainly undertaken by the youths such that if you would want to formulate two football teams for the youths of secondary school entrant age (14-18yrs), you would not find them because all of them have migrated out to seek for a living elsewhere.

Such concerns were also raised in all other villages and were the basis of blames about out migration as a source of reduced production at household level, resulting in further retardation of development at society level as the following excerpts illustrate.

Migration is not good as it drains youth labour out of our households which remain suffering due to lack of productive human resource, at village level. All activities which require volunteering are thus hampered" (Ugabwa, Makete).

Rural out migration reduces productive human resource at household and village level which should have been the main support of development activities" (Ukenza, Makete).

Rural out migration is not encouraged because it drains resourceful and productive human resource from the villages and migrant households suffer reduced farming labour" (Lupalilo, Makete).

Non migrant households are better off than migrant ones because migrant households lack labour force for productive activities which mainly help many households to fight hunger and poverty" (Kipela, Iringa Rural).

Migration is not supported because it drains all productive human capital and if not checked only elders will remain in the villages. The main contributing factor for out migration is the missing job opportunities in our rural areas" (Usagatikwa, Makete).

Development activities at village level are in jeopardy as many youths who are vibrant at doing these jobs do migrate away, such that the remaining people who are old cannot do the jobs like youths" (Nzihi, Iringa Rural).

By having many migrants in the village it means not only production and economic position of respective households are in danger, but also development activities at village level such as construction of schools, dispensaries, rural roads etc are hampered" (Uhominyi, Iringa Rural).

Moreover, migration was associated with high rates of school dropouts especially in primary schools. Also the health sector has been seriously affected as a result of out

migration. The following excerpt from key informants in Kihorogota Ward, Nyamihuu Village, Isupilo Hamlet (Iringa Rural) demonstrates.

> *In this village rural out migration has proved to have negative effects due to the fact that in 2002 the village primary school had a total of 320 pupils but now (i.e. during the interview in August, 2009) the school has a total of 117 pupils. Most pupils have followed their parents who migrated permanently elsewhere to seek a living. Other pupils are quitting school after their parents migrate and the remaining pupils/families lack support to make them continue with studies. The same applies to village dispensary, our village dispensary that was built by the government to meet our health needs, is now suffering the lack of patients because a large proportion of the population has migrated. This is a kind of resource wastage for development projects like these which end up being redundant. There are possibilities for government to reduce its assistance to projects initiated in rural areas such as rural water and health projects as the larger population segments which are the main target (of these projects) migrate to other places.*

Furthermore, it was learnt that rural-out migration was highly associated with family abandonment and the spread of the killer disease HIV/AIDS in the area. Citing some of the negative effects of migration, most interviewed households and key informants revealed that married migrants abandoned their families and migrants were the ones who brought the disease in the area and caused the sending households to suffer the loss of their beloved ones, as the following excerpts demonstrate.

> *Worst of out-migration is that married men abandon their families which remain behind suffering from their absence. Also, most migrants come back home suffering from diseases especially HIV/AIDS, which depletes the household resources in treating the patient. But also they spread the disease to the rest of the population. There is a saying which says "they went on foot they came back carried on bicycles". Meaning that migrants are migrating out of the villages, they go walking on their own feet, but they come back home carried on bicycles while suffering from HIV/AIDS" i.e. they cannot walk on their own. (Kidamali Village, Nzihi Ward (Iringa Rural)).*

> *Rural out migration is not encouraged because apart from draining resourceful and productive people from the villages and households, most migrants come back affected by the killer disease, HIV/AIDS. Worse enough is that when migrants' wives stay long after their husbands have migrated, they start going out with men in search of means of taking care of the kids and the remaining families. This results in some of them to get infected with HIV, which in turn they spread it to their young babies and to their husbands when they came back. So,*

migration is seen as the major cause of the spread of the virus". (Ismani Village, Kihorogota Ward, Iringa Rural).

Migrant married men leave their families suffering. What they earn does not allow them to remit back home, basically nothing it is almost nothing that is obtained from out-migration. School pupils lack basic requirements as a result of which they dropout. After the husbands have migrated and their households are faced with harsh economic conditions, women (who remain the only bread earners) live miserable life, and in order to survive they are forced to go out with men for some token to take care of their families. Very unfortunately, in the process they catch the virus which becomes devastating to the entire household". (Matamba Village, Stendi Hamlet (Makete District)).

The VEO of Ismani Tarafani village, Iringa Rural bitterly expressed his discontent about rural-out migration that if the government would like to enact a law to prohibit rural-out migration, he would support the law a hundred percent. He said migration has caused his leadership to bear the burden of looking after orphans whose parents were migrants and died of HIV/AIDS as soon as they returned home and those who died at destination. The following excerpt demonstrates in details.

…I would support the law because most migrants come back home suffering and when they die they leave orphans, while others (especially men) when they migrate they abandon their families which it becomes a burden to the village authority. Currently under my leadership (village authority), we are taking care of 190 orphans some of whom have lost one parent but others both. Some parents died at destination but others died after they had come back home suffering. One of the many cases in this village is when a lady migrated to Mwakaleli in Mbeya. She came back home with 3 kids whose fathers were not known. She and her kids stayed with her parents (the kid's grandparents) but she had already contracted the disease. She is now sick in bed and has added a burden to the already impoverished household which is now getting poorer than before she migrated. We have many of these categories in our village! (A VEO-Ismani Tarafani).

In general, these excerpts clearly demonstrate how migration instead of becoming a livelihood diversification strategy it has become a "*livelihood devastation*" strategy. In simpler words, rural-out migration had more detrimental effects to society and sending households compared to the benefits accrued from it. However, it should be remembered that previously it was found that most migrant households had allowed their household

members to migrate mainly due to economic reasons, expecting that they would be supportive to the remaining household, the expectations that have never been realized.

This study was further interested in finding out why if migration had such devastating outcomes to society and sending households, the households kept sending out some of their members i.e. why has migration continued to be practiced? The following excerpts present some of the interesting responses from households and key informants with regard to the above question.

> *…as parents, we let children and/or other household members to migrate or move out because staying at home will frustrate them as they have nothing to do here" (Ugabwa Village, Makete).*

> *"…as a household, we allowed our household member to migrate because we did not have gainful economic activities that would occupy our children. So by letting them stay in the village or home doing nothing could be a source of social disorder in the village". (Mikong'wi Village, Iringa Rural).*

From these responses, this study found that migration in the study areas was undertaken not because it was the best next household livelihood strategy as it was shown previously in literature (e.g. Deshingkar & Natali, 2008; Deshingkar *et al.*, 2006a; Ellis, 2000, 2003; Enrique & Ro, 2007;), it was rather chosen or undertaken on the basis of "*the lesser of two evils principle*". In this case, surveyed households were faced with a very serious choice in their hands; they had to choose between two evils when trying to do good. Their choice was based on the two bad choices available to them i.e. staying idle in the village or migrating out. In their situation they saw that migrating wasn't as bad as staying idle. As a result the lesser evil i.e. migrating-out was chosen instead of staying in the villages the evil that was seen to be of greater threat to households and the society at large.

CHAPTER SEVEN

SUMMARY, CONCLUSION AND POLICY IMPLICATIONS

7.1 Overview

This final chapter is presented in five sections. Section one presents the summary of the major findings as linked to the study objectives, research questions and propositions; section two presents the relevance of the findings, and section three presents the conclusions of the study. Section four presents the policy implications of the study, section five presents the major limitations of the study as well as suggests areas for future research.

7.2 Summary of major findings

7.2.1 The sample and its characteristics

The sample and its characteristics were presented in chapter six of this thesis. It was found that 80% of the total surveyed 272 households were male headed while only 20% were female headed. Age of these heads of households ranged from 13years to above fifty years of age. However, the largest group of heads of household (33%) was found to fall within the age group of 31 – 40 years of age. Most (77%) heads of households were married while the remaining 23% were single (i.e. never married, divorced and widows/widowers). Moreover, data on heads of households' education attainment showed that the majority of them (87%) had primary education, 6% had attained secondary education or above and the remaining proportion of 7% had never attained any formal education. It was also found that of the total 272 surveyed households, 80% of respondents were heads of households whereas the remaining 20% of respondents comprised of other household members who represented the heads of households (i.e. they included wives, sons and daughters).

Data on migrants were obtained from migrant households (i.e. households with migrants), and it was found that out of the total 272 surveyed households, 179(78%) did not have migrants i.e. they were non-migrant households while 93(38%) had migrants

i.e. they were migrant households which in total had 187 migrants. Migrants were found to be unevenly distributed amongst migrant households such that 41 (44%) households had one migrant each; 27 (29%) households had 2 migrants each which made a total of 54 migrants from this category, and this was found to be the household category with highest number of migrants; 16 (17%) households had 3 migrants each; 6 (6%) households had 4 migrants each and lastly 4 (4%) households had 5 migrants each. Most (57%) migrants were males while 43% were females, whose age ranged from a minimum of 12 years of age to a maximum of 64 years of age, with the modal age of 28 years of age (with a total of 15 migrants had migrated at this age). The data further shown that 137(73%) were single migrants while 50(27%) were married migrants.

Furthermore, it was found that migrant's educational attainment was not different from that of households they had originated. It was found that most (146(78%)) migrants had attained primary education, this was the largest group followed by those with secondary education and above 32(17%), and those who had never attained any formal education were 9(5%). With regard to physical capability, it was found that 186(99%) migrants were able bodied or with minor physical impairment that could not prevent them from engaging into any activity and only one (1%) had a major physical impairment needing assistance to move on his wheel chair. It was very much interesting to find that even though rural people are said to be mostly farmers, at origin migrants were found to engage themselves into various occupations such as farming 31(17%), off-farm agricultural 33(18%), non-farm wage/non-agricultural 51 (27%), non-farm/self-employment 38(20%) and 34 (18%) were students before migrating.

7.2.2 Rural-out migration is regarded as an important livelihood diversification strategy by the people in Makete and Iringa Rural Districts of Iringa Region

The determination of the pattern of rural livelihoods diversification strategies amongst the rural people in the study area in order to establish the extent to which rural-out migration was considered an important livelihood diversification strategy/income sources to the households was accomplished in chapter 4, section 4.3. Even though

several studies have shown rural people to be reliant on diversified portfolio of activities (e.g. Ellis, 1998, 2000, 2003; Webb *et al.*, 2001), none of them have attempted to analyze how these people prioritise these activities by establishing the pattern in which they are undertaken. Moreover, apart from acknowledging that rural-out migration is one of the livelihood diversification strategies, none of the studies even in other countries have paid attention to establish the extent how dependent rural households are to migration in relation to other livelihood strategies they undertake. This study therefore presented an empirical analysis of the pattern of the livelihoods strategies and established the extent migration is considered an important livelihood diversification strategy.

The study found that the people in study areas are much reliant on a diversified portfolio of activities, in this aspect it concurs with other studies (e.g. Ellis, 2000; Webb *et al.*, 2001). However, the study in particular found that even in the same environment (locality) rural households do prioritize livelihood strategies differently i.e. a strategy valued by one household to be number one, does not necessarily mean should be valued by the next household in the same way. This study found out that of the nine livelihood strategies (refer section 4.3), various households in the research areas ranked them differently according to the way they regarded them important to their household. It was found that farming activities was ranked number one livelihood strategy by the most (175(64%) out of 272) households; followed by petty business (non-farming activities) 29 (11%) households and so on up to rank number eight (8) in which rural-out migration was ranked by 2(1%) households as their number one household livelihood strategy. These findings were actually telling us that even though migration was undertaken by some surveyed households, as a matter of fact it was not regarded as their important source of livelihoods i.e. its contribution as a source of income to households was not very much valued by the people in the study areas. In more specific terms this study found that households by ranking migration the last but one livelihoods diversification strategy, they were actually telling us that they could live without, unlike for strategies like farming or non-farming activities.

7.2.3 Households' rural-out migration decisions are determined by a particular set of internal and external factors (called determinants of migration)

The determination of the decisive factors for households' rural-out migration was dealt with in section 5.2.2 of chapter five. Initially the study found that lives of the poor rural households are variously shaped by the particular sets of vulnerabilities that they experience and the range of decisions, choices and options that they can pursue are similarly diverse. This section was driven by the need to understand why some amongst the rural poor households choose to migrate while others choose not to. Impliedly, we were examining the reasons why some households do not migrate (choose not to migrate) in an environment characterized by migration. Thus, in this regard it was found that there are specific social and economic characteristics which allow some households to participate in migration but at the same time prevent others from participating in migration. In total they form what we have called the ways in which "the household environment" shapes the decision to migrate. In this case we explored and highlighted how these internal and external household environment shape decisions about migration. More specifically, we argue that migration as livelihood diversification strategy for many poor households, like any other livelihood strategies, is facilitated or constrained by relations within and between the institutions of household and community (Moore, 2001, p. 6). This study branded these internal and external household environment which shape decisions about migration as determinants of migration which we divided into household factors/characteristics and societal factors. Societal factors were further divide into available job opportunities and utilities/infrastructure related factors.

In the first place we applied descriptive analysis to determine the predictive power of various attributes of each factor (internal and external to household) responsible for shaping households' migration decisions. To achieve this aim, cross-tabulation analysis was conducted to establish the predictive relationship between the (attributes of) determinants of rural-out migration and households' migration decisions. In this case by using the frequency distributions, Chi-Square values, and probability/significance levels as the main decision criteria, all factors/variables with higher values of Chi-square and

whose significance levels were less than .05, the cut-off point for the level of significance, were descriptively identified to be significant determinants of rural-out migration. As a result it was found that for household characteristics three factors were identified which included household size/number of household members ((χ^2 =48; p= .000), age of head of household (χ^2 = 20; p = .000) and education of head of household (χ^2 = 10; p = .04), for available job opportunities three attributes were indentified these are non-farm (self-employed) (χ^2 = 23; p = .000), casual labouring (χ^2 = 18.4; p = .000) and working in enterprises (χ^2 = 11; p = .005) and for infrastructure development irrigation schemes (χ^2 = 18.02; p = .000), electricity (χ^2 = 17; p = .000), market/market places (χ^2 = 15; p = .005) as well as water dams (χ^2 = 10; p=.006) were identified.

Secondly, in order to confirm which among the attributes of internal and external factors of migration were the actual determinants or decisive factors for households' migration decisions a more robust analytical techniques of quantitative or statistical analysis was performed which involved the multivariate analysis technique called logistic regression analysis. Based on various criteria (such as log likelihood ratio (-2LL), classification percentage, the b-coefficient, the Wald statistic, level of significance/probability level and the odds ratio (Exp(B)) for good predictors of rural-out migration, in the end it was found that three attributes for household characteristics, three attributes for available job opportunities and four attributes for utilities and infrastructure development were identified to be the most significant/good predictors/determinants of migration. In particular household size, age of head of household and marital status of head of household were indentified from amongst the households characteristics attributes, for available job opportunities non-farm (self-employment), casual labouring and working in enterprises were identified and for infrastructure development significant attributes included irrigation schemes, market/market places, electricity and water dams. It was later found that the significant/good predictors of migration determined by logistic regression analysis were the same as those determined descriptively, thus showing the reliability of the findings.

7.2.4 Rural-out migration has no potential to enhance or improve the livelihoods of the rural people or has no potential to improve rural households' asset portfolio/base

The analysis of the outcomes of rural-out migration to sending households was accomplished in section 6.3 of chapter 6. At first the study analysed the various attributes of migration, it was found that most migrants 79% (147/187) had destined to urban areas whereas only 21% were found to have destined to rural areas. In this case it was found out that by having more migrants moving to urban areas as compared to rural areas signified the dominance of urban areas in attracting more rural population may be due to vibrant economic activities found there which acts as pull factors to them. With regard to reasons of migration, it was found that a large proportion of migrants (90%) of the total 187 had migrated from their sending areas due to economic reasons while only 10% had migrated for other than economic reasons. None of the migrants had crossed borders to neighbouring countries for search of better livelihoods i.e. cross-border migration was not practiced.

Moreover, the study found out that most migrants (81%) had stayed for more than one year while only 19% had stayed for a period of between 1-12 months. The findings revealed that at destinations migrants were engaged into the same kinds of occupations like those at the origin however at varying proportions. For instance it was found that the number of migrants engaged in non-farm wage (non-agricultural related activities) increased from 27% at origin to 35% at destination, while non-farm (self-employment) increased more than twice from 20% at origin to 44% at destination; farming activities 17% at origin and 7% at destination; off-farm wage 27% at origin and 35% at destination and so on. None of the migrants were found to be engaged in public/private sector employment both at origin and destination.

Secondly, the study used descriptive analysis to assess the contribution of migration to building the five household capital assets which included human capital, social capital, physical capital, financial/economic capital and natural capital. In this case the study

assessed how much was contributed by migrants to create, maintain and/or develop a particular household capital asset. In this analysis it was assumed that if half of the total migrants had contributed to build certain asset, it was regarded that migration had shown potential to contribute to that asset otherwise not. In the end it was surprising to found that migration had not significantly contributed to build/create, maintain and/or develop any capital asset. It was found that the main reason for migrants not meeting the expectations of sending households of being economically supportive to the remaining household, was that migrants were not able to remit back home. It was found that most migrants are engaged in low or poor paying jobs at destination where they are paid very poor or not paid at all. These render migrants unable to sustain themselves at destination leave alone remitting back home. Even though migration has been practiced by many households in the research areas, it has never made any significant contribution to enhancing the livelihoods of sending households.

On the contrary, rural-out migration was found to be associated with devastating outcomes to sending households and society at large. It was found that migration was associated with family abandonment especially for married migrants, reduction of households' productive power, school drop-out since the remaining school pupils lack necessary requirements such as school fees, uniforms etc, spread of diseases especially HIV/AIDS since it was reported that migrants are the ones who come with the diseases which they spread to the rest of the society (it is even more dangerous for married migrants). It was also found that migration was associated with the huge burden of orphans and children living in harsh conditions which are looked after by the remaining households and community leadership. On the whole, rural-out migration was found to have caused more harm (had more devastating effects) to sending households and community than the benefits that was thought of it.

7.3 Conclusions

The conclusions in this section are based on the objectives of the study and on the analysis of the variables conceptualized in the framework. The study concludes that

households in the research areas were very much reliant on a diversified household portfolio of activities. This fact was reached after realizing that none of the surveyed households were found to collect all their income from any one source, hold all their wealth in the form of any single asset, or use their assets in just one activity. However, these livelihoods diversification never came like an accident instead it was learnt that multiple motives prompted households and individuals to diversify their activities/income sources. Households diversified into various activities (strategies) mainly as a result of diminishing or time-varying returns to labor or land and from market failures (e.g., for credit) amongst many others (i.e. individual factors of production faced diminishing returns in most productive activities). It is believed that in cases where returns to productive assets vary across time (e.g., land, labor or livestock across dry and wet seasons) or among individuals within a household or households within a community, individuals, or households will exhibit diverse assets, activities and incomes even if there is complete Ricardian specialization[10] according to comparative advantage (Webb *et al.*, 2001).

In economic terms, these households rationally allocated assets across activities (livelihood strategies) to equalize marginal returns in the face of quasi-fixed complementary assets (e.g., land) or mobility barriers to expansion of existing (farm or nonfarm) enterprises. For these poor rural households, this typically meant highly diversified portfolios with low marginal returns, or desperation-led diversification as put forward by Barrett *et al*., (2001). However, these households did not diversify haphazardly, instead they followed a particular pattern according to which activity was giving them better returns amongst the many (for the purpose of this study nine livelihoods strategies were identified). From the portfolio analysis view point, the results shown that the share of agriculture accounted for about 64%, non-farm self employment

[10] The concept of the comparative advantage is that if a country has the ability to produce a particular good or service at a lower opportunity cost than another country, they will fully specialize in producing that good, as opposed to producing a broad array of goods. In Ricardian trade theory; this country will then trade with a different country that specializes in the production of another good or service. In this model, trade is mutually beneficial for all partners (Giovann, 1985).

(petty business) for 11% and so on to migration which accounted for about 1% in decreasing order. Further observation of the data revealed that farming activities (agricultural and animal husbandry) are survival mechanisms pursued mainly by all surveyed households but not viewed as an opportunity that farmers engage in as a choice because in the rural area the main household livelihood strategy is agriculture. Non-farm activities such as petty business which seem to be a way to accumulate wealth and reduce poverty was found to be mainly a choice of few households due to entry constraints associated with it that most households could not afford to break.

Interestingly however, in this pattern of households' livelihoods activities, rural-out migration ranked very low indicating that it was neither serving as survival, accumulation nor coping strategy/mechanism of the households, thus they could live without. The main conclusion drawn in this section is that the poor rural households and individuals tend to concentrate on livelihood strategies (farm, off-farm and non-farm) with low entry constraints for instance small scale farming (hand hoe based), gathering, charcoal making, fire wood collection, farm wage, petty business (selling local brew or kiosk), rural-out migration and so on with the main aim to satisfy own demand for diversity in consumption. This conclusion prompts researchers to the understanding of the challenges which prevent the rural poor from engaging in more remunerative livelihood activities e.g. better paying rural-out migration.

This study also concludes that rural-out migration traditionally have been seen as a mechanism for enhancing the security of livelihoods for rural households i.e. households choose to migrate because they perceive that there are better livelihood options elsewhere and they either want or need to diversify or change their livelihood base. In this case migration plays a significant, if not central, role in livelihood strategies of the poor and thus migration generally take places in response to the circumstances, actual as well as potential and perceived, with which people are faced both in their households and home communities. Rural-out migration was by no means a predictable or homogeneous form of action and thus occurred in response to a wide

range of factors which affected households differently and to which they did not necessarily respond in identical ways.

The results revealed that motivation was an important characteristic of migration, a decision which is dominated by 'push' factors on the one hand and which is primarily shaped by 'pull' factors on the other hand. While much of the migration literature suggested that migration is 'development-induced' (McDowell & de Haan, 1997) and reflects uneven development, it was clear that there are different levels of motivation which shape the decision to migrate which are internal and external to the household. Whilst many migration motivational factors were identified as being the presence of uneven development and the increase in inequalities between regions, and within them, most rural-out migration were found to be unidirectional that is movement was from deprived rural (study) areas to those which were perceived to offer greater economic opportunities. As a result of this we had more economic migration and more specifically on labour migration and employment than other forms of migration (i.e. harsh household economic conditions were the main push factor to migration).

However, even though household poverty (household economic status) and unemployment (available job opportunities) greatly 'pushed' people to migrate, such economic conditions were insufficient for explaining why particular households chose to migrate rather than others. It was found that moving from one place to another had economic and social costs and required a certain level of human, physical, social and economic capital, thus the option to migrate was not available to all rural households. In this case, the filtering effect of so-called 'obstacles' to migration meant that the characteristics of those households which chose to migrate were specific or selective in terms of, for example, household size, age of head of households, marital status of head of households. But also other factors external to households were into play, these mainly involved societal factors (economic factors) which were divided into available job opportunities and infrastructure development. However, while household characteristics were directly affecting households' migration decisions, societal factors had indirect

effects. The households' perception about the importance of a particular societal factor (available job opportunity and infrastructure development) in enhancing its livelihoods was a key in deciding whether its absence or limited supply could lead to its decision to migrate or otherwise.

The overall conclusion is that mostly economic migration is mainly motivated by "push factors" on the one hand (sending area) and "pull factors" on the other hand (receiving area). However, in an environment that is highly characterized by migration (such as in the study areas) there are great possibilities of finding some individuals, groups or entire households deciding or forced to stay or are left behind or not choosing to migrate despite of the need to do so. This means that not only the pull and push factors that are sufficient to explain households' migration decisions. In this case household characteristics which are proposed by this study to be the most important determinants of migration are also into play. As stated previously, this resulted into filtering effect of the 'obstacles' to migration which means that the characteristics of those households which migrated were specific or selective in terms of, for example, household size, age of head of household, sex of head of household and education. For that case many households do not move not only because of systemic and structural reasons but also because of individual household that reflected their experiences of exclusion or adverse incorporation. Thus migration decisions of migrant and non-migrant households alike are deeply embedded in specific economic and social-relational contexts surrounding them.

Finally, this study concludes that migration, defined as a spatial separation between the location of a resident household or family, and one or more livelihood activities engaged in by family members, is a central feature of the livelihoods of the majority of households in low income countries. The findings of this study shown that migration of household members to take advantage of differing seasonal patterns of farm production elsewhere (rural-rural migration) and of non-farm jobs in the off-season (rural-urban

migration) are routine responses of households in the research areas to the seasonality problem.

The study also concludes that despite some of the surveyed households in the study areas do send out some of its members elsewhere for earning additional income, none of the household was found to have benefited significantly from migration and remittances from it. None of the five household assets (human, physical, financial, natural and social) studied were found to have been created, improved and/or maintained as a result of the contributions from migration. It was found that even though households have continued practicing migration expecting that it would be economically helpful to the sending households, this expectation has never been realised. Contrary to migrant households' expectations, rural-out migration was found to have more detrimental outcomes to sending households as well as communities. Migration was found to be associated with the spread of HIV/AIDS as result of family abandonment by married migrants, school drop-outs, under utilization of government funded development projects, and reduced household/community productive human resource, erosion of morals especially amongst the youths, increasing number of orphans and children living in harsh conditions and many others.

Even though there are evidences that migration can contribute positively to the livelihoods of sending households elsewhere, in Iringa Rural and Makete Districts, rural-out migration did not seem to be of any good to these households. People reported that the reasons why they keep sending out household members while knowing that it won't work for better, was due to the fact that during non-farm seasons most human resource in the areas finds itself lying idle with less opportunities to engage them, as a result they decide to let them go. They think and believe that by having a vast majority of idle youths in the areas may render them vulnerable to bad social behaviour such as theft, use of drugs, prostitution and so on. As a result they decide to let them try their luck elsewhere though they know success history is not in their favour. For that case, households in these areas choose to migrate not because it is the next best alternative for

their livelihoods it was rather chosen or undertaken on the basis of "*the lesser of two evils principle*". In this case, surveyed households had two bad choices available to them i.e. staying idle in the village or migrating out. In their situation they saw that migrating wasn't as bad as staying idle. As a result the lesser evil i.e. migrating-out was chosen instead of staying in the villages the evil that was seen to be of greater threat to households and the society at large. For this case, this study strongly concludes that rural-out migration currently does not seem to offer any potential as a households' livelihood diversification strategy, instead it offer more as a households' "livelihoods devastation" strategy.

7.4 Contribution to knowledge

This study was based on the debate existing in the literature (as explained previously) with regard to the outcomes of migration to sending households and areas. While some studies on migration such as Carter (1997); Francis & Hoddinott (1993) and Hoddinott (1994); Tiffen *et al*., (1994);, have shown how migration and remittances from it have more benefits to sending households and communities i.e. can help to reduce vulnerability and poverty for rural people, others such as Deshingkar and Start (2003) and Kothari (2002) have attempted to display how migration may have more detrimental outcomes than benefits. This study augment to this debate by arguing that rural-out migration in the study areas was found to have more detrimental outcomes than benefits.

However, the study goes a step further by arguing that the outcomes of migration are context specific. Thus, if people migrates to formalized sectors whose payment systems are known and regulated, migrants are likely to a reasonable income and be to remit back home and contribute to building up households assets. But in an environment characterized with insecure jobs were migrants do not know what exactly they will be engaged in at destination, they end up taking jobs whose payment systems are determined by sloppy employers whose interests are maximum profit making at the expense of poor job seekers (mainly rural-out migrants). In such circumstance

employees (mainly migrants) are poorly such that it becomes a nightmere for them to remit back home, as a result migration is definitely most likely to end up having more detrimental outcomes than benefit as found out in this study.

Moreover, the study contributes to knowledge by showing how diverse portfolio of activities was to the people in the study areas. Even though the study concurs with other researchers such as Ellis (1998, 2000, 2003) and Webb *et al.*, (2001), that people in rural areas are found to be reliant on diversified portfolio of activities, this study distinguished itself by establishing the pattern in which these activities are undertaken. This study therefore presented an empirical analysis of the pattern of the livelihoods strategies and established the extent to which each strategy was considered an important livelihood diversification strategy to the household. In this case, the livelihood strategy that was giving the household more returns was highly prioritized than the subsequent ones and therefore valued as the most important over others.

Furthermore, the study contributes to knowledge by highlighting the limitations of the study. The study observes that if some other researchers would want to conduct a study of this nature by adopting the same modological approach, they should be caucious of some of the issues or limitations to this study that are presented hereunder.

First, the study used cross-sectional primary data. The cross-sectional study design was ideal because the research period was only one month and the study areas were visited only once for data collection. Within the given research period, it was possible to study the prevalence of rural-out migration and its effects to the remaining/sending rural households. It was an overall picture of rural-out migration that was sought and its outcomes to remaining households as it was at the time of the study. Among the key variables which were being observed were the outcomes of rural-out migration mostly resulting from remittances and other social consequences of rural-out migration. The results lead to interesting insights, but part of these would require a substantially longer periods of observations to determine pattern of change (in the households' asset stock) in

relation to time. In order to achieve this aim it would be appropriate to use longitudinal study design.

Secondly, the study was limitated by the methodology for measuring the duration/time migrants had stayed at destination, how much remittances was sent home by migrants and how these were used. The study purely used recall survey methods for obtaining these important informations which may give room for either overestimation or underestimation of the above mentioned attributes. This is because most households did not keep records of when migrants had left their homes, how much was sent back and how many times and how the remittances were spent. In order to avoid such problems, the study proposes that reseaches of this nature should employ data collection methods which will allow researchers to visit the study population more than once and thus collect recorded information on the items listed previous. In this way, one may minimise the problem of reporting incorrect information resulting from recall survey methods which are prone to overestimation or underestimation of migration information.

Thirdly, the study was limited by having multifarious variables to analyse especially with regard to the outcomes of migration to the households' assets. Five capital assets were identified which had a number of sub-variables some of which were measurable while others were not amenable to measurements. Studying the outcomes of migration on one or two particular types of household assets could be more appropriate as this could easen the following up of the contribution of migrants to varios household assets, instead of studying all five household assets at once which may be prone to oversimplification of the analysis.

More important also, the study contributes to knowledge by highlighting areas for further research in this field of rural-out migration and the outcomes from it. Even though literatures have shown that labour migration, especially from rural areas is a pervasive feature of economic development, yet there is much more to learn about individual and household migration behaviour, and its potential outcomes on people and

communities left behind. Knowledge gaps are due in first place to the lack of appropriate data to understanding the multi-facet migration patterns. Large scale (longitudinal) socio-economic surveys need to be structured so that they can capture different forms of migration phenomena, including temporary and seasonal rural out-flows. There is also the need for better data on remittances and their use, family chain and networks, migration histories, return migration and lifecycle data.

This study also contributes to knowledge by suggesting that there is the need to distinguish between different typologies of migration, systematically studying internal migration along with international migrations and migrant returns. Migrants from rural areas have been often considered as employed in off-farm activities, without disentangling specific features of migrant and non-migrant labourers. Moreover, the element of return of migrants is a key socio-economic effect on those who remain at home. Mapping out various types of movement, and studying them in a simultaneous framework, can improve our understanding of the potential virtuous or adverse impacts of migration on rural development in local communities.

Furthermore, the study suggest that identifying the conditions which stimulate the productive use of (temporary and permanent) remittances is an area for further research. Keeping in mind that migration does not always mean economic abandoning, examples of productive investments of (temporary and permanent) remittances in rural areas should be studied to understand where and how this has occurred. Key components in such studies should focus on (i) the nature of substitution or complementarity among productive inputs; (ii) changes in the technology involved; (iii) government policies, which may be vital in linking migration to productive investments (and ultimately development).

Lastly, the study contributes to knowledge by suggesting that that the impact of rural out-migration on source areas depends on how integrated are to local labour markets, local production markets and national. This implies that mass departure of agricultural

labourers from one region may induce movement to or from neighbouring areas. Moreover, adjustments in agricultural production patterns induced by migration may depend on the degree of openness of the local economy to national trade. The information derived from further studies on these cross-market effects can be used to identify appropriate complementary interventions.

7.5 Policy implications

7.5.1 Policy priorities focusing on livelihood diversification strategies

This study has shown that in the past it has often been assumed that farm output growth would create plentiful non-farm income earning opportunities in the rural economy via linkage effects. It has however been shown that this assumption is no longer tenable; for many poor rural families, farming on its own is unable to provide a sufficient means of survival, and the yield gains from technology are displaying signs of levelling off, particularly in those regions where they were most dramatic in the past. The tendency for rural households to engage in multiple occupations is often remarked, but few attempts have been made to link this behaviour in a systematic way to rural poverty reduction policies.

A diverse portfolio of activities contributes to the sustainability of a rural livelihood because it improves its long-run resilience in the face of adverse trends or sudden shocks. In this respect, individual and family livelihoods display similarities to larger social and economic groupings up to the level of the economy at large. In general, increased diversity promotes greater flexibility because it allows more possibilities for substitution between opportunities that are in decline and those that are expanding. The causes of the adoption by rural families of diversified income portfolios are better understood than their policy implications. Considerations of risk spreading, consumption smoothing, labour allocation smoothing (migration), credit market failures, and coping with shocks can contribute to the adoption, and adaptation over time, of diverse rural livelihoods. However, livelihood diversity results in complex interactions with poverty, income distribution, farm productivity, environmental conservation and gender relations

among the many that are not straightforward, and are sometimes contradictory between alternative pieces of case study evidence, as this study has demonstrated. In this case genuine rural poverty reduction policies need to be better informed on the nature of these interactions. For example, this study found that rural-out migrants diversify through migration in less advantageous labour markets than they would be expected, i.e. in casual, part-time and unskilled work. These findings are related to the asset status of the poor (e.g. low human capital) and barriers to entry resulting from low assets (need for skills, ability to navigate bureaucratic hurdles, etc.). It is possible that facilitating the poor to gain better access to opportunities (or to create their own opportunities) may turn out to be substantially more cost effective for poverty reduction than attempting, artificially, to support particular sectors or sub-sectors of rural economic activity.

This study has clearly demonstrated that all surveyed households were highly dependent on a diversified livelihood portfolio of activities which was not occurring by accident as already demonstrated above instead they aim for achieving the positive outcomes of diversification which include seasonality, risk reduction, asset improvement, employment effects, credit and asset effects. Thus, the removal of constraints to, and expansion of opportunities for, diversification are therefore desirable policy objectives because they might give individuals and households more options to improve livelihood security and to raise their own living standards. Such policy objectives should focus on increasing the role of the state in particular economic sub-sectors, nor on manipulating prices and costs in order to achieve specified outcomes. Rather, it should focus on improving the institutional context of private decision-making by, for example, reducing risk, increasing mobility, minimising barriers to entry (e.g. licensing regulations for small business), and ensuring fairness and transparency in the conduct of public agencies. More importantly they should focus on facilitating the poor to improve their assets (human, physical, financial, natural and social), and to make use of those assets to best effect.

In order to achieve those aims, an appropriate mix of policies which might be highly context-specific are highlighted, but to a greater extent some general principles are likely to hold:

i). Human capital policies

From the education levels of migrants and the earnings they get as a result of their education levels has been revealed to be the most contributing factor for them not being supportive to their households. The significance of education, both formal academic education and workplace skills, for improving livelihood prospects is established by a great number of studies, and poverty is closely associated with low levels of education and lack of skills. There is little doubt that rural formal education is under stress in the study areas as in many parts of the country as well as in other countries. The demand made on educational systems by rising populations is one important factor, the cost of updating educational materials another. Parental contributions to the upkeep of schools are increasing, with inevitable implications for differential access that excludes those unable to meet such contributions. This makes important that if we want to raise the education level in rural areas and consequently prospects from it, more sustainable innovative approaches to educational delivery at village level should be a priority in the future.

ii). Infrastructure development policies

The results also revealed that infrastructure development was another important factor for households to choose to migrate. Infrastructural facilities have a potentially important impact on rural poverty reduction by contributing to the integration of national economies, improving the working of markets, speeding the flow of information, and increasing the mobility of people, resources and outputs. As with education, future infrastructural provision will require innovative approaches to provision and maintenance. Reliance on central government and ad hoc project finance from donors cannot be depended upon to keep existing infrastructure in good repair or to make heavy investment in new infrastructure. Decentralisation may, arguably help to bring the

prioritisation and the financing of rural infrastructure closer to rural communities themselves. Privatisation of infrastructural suppliers like electricity and water both for home consumption and irrigation may help to reach remote rural areas more than under government monopolies.

iii). Credit provision policies

Access to credit by many households in research areas for setting up small business aiming at improving household incomes was a major setback for households to diversify in more lucrative livelihood options. Credit provision is already, deservedly, a priority area of micro-policy in the rural sector of this country. However, more emphasis should be on the methodologies of how the majority rural poor can easily and fairly access these credits. More viable and working lending methodologies such as small-scale group lending schemes aiming at enabling individuals and households to widen their income earning options might be the best option. In the research areas it was found that there are no many different models and experiments in micro-credit provision from which to adapt and to choose appropriate elements for local solutions. Credit policy should not only, however, be about micro-credit schemes, many of which depend heavily for their sustainability on the continued involvement of NGOs. There is a need for state intervention to facilitate the spread of rural financial institutions that are self-sustaining on the basis of savings and loans organised according to conventional banking criteria and strictly responsible to the laws of the country. In the research areas some NGOs attempted to provide credit but ended up frustrating clients and they just varnished courts free. This requires more effort from central governments to put in place the appropriate regulatory and guarantee provisions that would encourage the formation of such institutions and ensure confidence in them in the long term.

iv). Enabling environments for grassroots initiative

The study revealed that no any single small-scale enterprise was found existing in the total 24 surveyed villages. Lack of employment in enterprise regardless of their size was regarded by many households as the contributing factor for out-migration. Even after

nearly two decades of market liberalisation, it is a mistake to assume that an environment that facilitates the establishment of small-scale enterprises especially in rural areas is now in place. The local level policy context often remains inimical to self-employment and start-up business. Local enterprises such as carpentry, food processing and so forth, often arises 'outside' the regulations, i.e. as an unrecognised informal sector activity, and depends on paying off local officials to allow continued operation. Any business wishing to register formally therefore faces widespread reluctance to dismantle regulations, or speed up the processing of applications. It is in this sense that reform (in terms of efficiency, effectiveness, transparency and fairness of state operations), although proceeding at different speeds in different countries, is still in its early stages. One of the biggest challenges is to secure the switch from antipathy to supportiveness in the relations between public administration at local levels and private, non-farm, productive activity in rural areas. There are also problems emerging from lack of capital for starting up businesses, this problem is linked with the credit issues discussed previously. Other non-financial problems that impinge on the establishment of small-scale enterprises in rural areas include business knowhow among the already in business or business aspirants. All these issues require state intervention to support the rural people.

v). Targeting and safety nets

The study revealed that migration has had more devastating effects to sending households and communities than benefits, such that these households and social groups can easily survive through government intervention by means of targeting and safety nets provision. The purpose of targeting is to provide safety-net support for those vulnerable households and rural social groups that are most vulnerable to 'shocks' especially those resulting from migration that could lead to insufficient food or destitution. These shocks at household level may include deaths of migrant members mainly as a result of HIV/AIDS, female migrants returning back home with pregnancies and children that add burden to already impoverished households and so on. Indicator targeting might work by identifying vulnerable households and social groups (such as

impoverished households, landless, old, disabled, etc.) thought most likely to require support. Self-targeting may work by providing wages or food in return for work at levels that can enable the poor and vulnerable households and social groups to survive, but that are not so high as to be interesting for the better-off. In effect, self-targeting approaches may provide a diversification option for those needing to diversify to survive.

This study acknowledges that these five policy areas targeting sending areas - education, infrastructure, micro-credit, enabling environments and safety nets - are of course not by any means the only policy themes worth pursuing in relation to promoting sustainable rural livelihoods diversification. Some combination of them is worthwhile featuring in any current government list of micro-policy priorities that aim at promoting and sustaining rural livelihoods diversification.

7.5.2 Policy priorities focusing on migrants' sending and destination areas

This study has presented evidences to support the argument that for many poor rural people around the world migration is a way of life, and has been for centuries. It is very likely that migration, especially circular migration, will continue either until the gap between different regions narrows down or until conditions in the sending area become so similar to destinations such that populations have no need to move out altogether. It was shown that in many Asian countries for example, migration is an integral part of the livelihood strategies of poor people. That migration can benefit poor people, poor communities and developing countries. Migration can help individuals and their families to increase their income, learn new skills, improve their social status, build up assets and improve their quality of life. For communities emigration can relieve labour-market and political pressures; result in money being sent home (commonly known as remittances); increase trade and financial investment from destinations; lead to positive destination activity such as remittances; promote social and political change and lead to the eventual return by successful migrants to invest in their areas of origin. The reason as to why do people choose to migrate is simply to take advantage of jobs elsewhere, to use their

skills better, or more importantly because there are few opportunities to earn a living where they are/live.

While we saw that migration in Asian countries has contributed substantially to the welfare of sending households and communities, this was not the case in the study areas of Makete and Iringa Rural District. Instead of migration bringing with benefits as they narrated above, it bring suffering, sorrow, frustration and despair to sending households and communities at large. However, it is well documented in Asian countries such as China, India, Indonesia, Bangladesh etc, migrants move to work into high labour intensive production and services such as labour-intensive manufacturing, construction and urban services which are attracting large numbers of migrant workers from under-developed regions. It was also learnt that these are formal or quasi-formal sectors of the economy which have formal legal, rules and procedure for recruitment, employees' protection and reward/remuneration. While it is not possible to say that all migrants from Makete and Iringa Rural Districts had moved to informal employment with no legal employing framework, we can certainly say that all surveyed households had their migrants in these sectors.

The main reason for migrants failing to remit back home as expected was reported to be poor payments they receive for the work they do at destination which are mainly poor paying ones such as house helpers, bar maids, animal feeders, selling shops etc. From these jobs, what they earn is very insufficient for their up keep leave alone remitting back home. It was also found that some of them are not paid for various reasons. In general we can conclude that the working environment for migrants is very unfavourable. This study proposes some policy priorities which if implemented migration might become a viable household livelihoods diversification strategy. These may include (but not limited to), a large number of migrant support initiatives which can be broadly classified into five categories:

(i) The social protection approach

This model might aim at providing a range of subsidized support services. It may aim reducing poverty and vulnerability by promoting efficient labour markets, limiting risk exposure and enhancing the capacity of migrants to protect themselves against hazards and the interruption or loss of income. First and foremost, the government need to recognise that migration is a livelihood strategy for the rural people. Under this approach the government may introduce the system of registering all potential migrants in their areas of origin and issue them with special identity cards through local government bodies; may create job information centers in their areas of origin, creating awareness on rights on issuing identity cards to potential migrants, may assist with negotiating wages with prospective employers, means of communicating back to local authority should need arise and may help in accessing government programmes (such as education and training). The rationale of having the social protection model/approach in place is that poor migrants cannot fend for themselves in a job market that is dominated by labour market intermediaries and employers who are stronger, better informed and connected than they are. Migrants are in favour of government support to reduce their vulnerability, but are unlikely to be in a position to pay for such services on a full-cost recovery basis immediately. The services provided may enable them to access better jobs, reasonable payments (in accordance with the government regulations) and reduce the level of uncertainty and harassment that they face in the job market.

(ii) The market-based approach

This model may work with existing labour market patterns and offers services on a cost recovery basis. This initiative may provide skills enhancement and certification programmes, advice and information on jobs, and help workers to link up with government schemes on insurance and workers trade union or help to establish unions for workers in non-formal employment. Under this model, the initiative implementers may work within the existing industry and labour market structures, i.e. recognizing that capital and labour are highly mobile and that capital/industry relocate where cheap labour is available. They may also recognize that a majority of for example casual

industrial workers are not listed on the employment registers of industries and are recruited by intermediaries (locally known as “dalali”) who are not accountable to anyone under the existing law. In this case the relevant government section may take on responsibility for the welfare of workers, even though by law it would be the responsibility of the industry and employers.

(iii) The labour union approach

This might be well known as rights-based approach for better implementation of labour laws and the regulation of labour flows. Proponents of rights-based approach believe that unionizing migrant workers goes a long way towards realizing their rights, strengthening their bargaining power in the market and preventing exploitation. The government may initiate the establishment of union for migrant workers who work in various fields with the main objectives of regulating the supply of labour as an oversupply of labour lowers the bargaining power of migrants. But the union can also be the safe spots for migrant workers in their working places in case they are abused or exploited in any way.

(iv) The rehabilitation approach

In the research areas some form of migration seemed to be mounting to a form of human trafficking where migrants (especially young boys and girls) were lured by the traffickers (people/relatives who come to villages to pick them) with false promises that they will be well paid at destination and often left money (given to them by traffickers) to their parents on the ground that their children will repay the “traffickers” once they start getting their pay. It was learnt that very unfortunately they end up repaying through punishing work schedules, abuses and harassments etc. Their movement is restricted at the work site, and wages are well below the legal minimum. In addition, women and children are also exploited in various ways, and living conditions are appalling. In such situations the government together with migrants’ trade unions and other human rights activists with the help of police force should conduct raids on various work sites to release and rehabilitate bonded migrant workers.

(v) Providing migrant-friendly financial services

Poor migrants carry remittance money themselves and at great risk. Most of them live in poor and unsecure accommodations which threaten the small amount of money they earn. Carrying money everywhere they go and especially in their work places where most of them are employed in manual jobs, the possibility of losing their money is very high. Recognizing this threat facing migrants may prompt state/semi-state owned banks or even some private banks to see the need for designing special financial services/products targeting migrants as special customers with special needs. These banks may not only be helpful for keeping migrants' money but also for helping them to send money back home.

The study concludes by proposing to the policy makers to see the need of recognizing the importance of migration for poverty reduction and development. Policy should aim to ease the hardship of migrants and facilitate a flexible labour force in the short term in order to distribute the benefits of growth as evenly as possible. But there is a need to build human capabilities over the long term so that people who currently have to depend on such livelihood strategies can diversify into more remunerative options.

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LIST OF APPENDICES

I: Summary of key variables in the model

Constructs	Variable	Indicator	What measures
Household characteristics	Family size	No. of adult males No. of adult females No. of children No. of dependants	Size and composition of hh
	Education of hh	The highest educational level obtained by the member of the hh (mainly hhh or)	Educational status of hh
	Occupation of the hh	The main source of Income of the HH	Main source of living
	Sex of the hhh	Sex type of the hhh	Whether the hhh is Male/female headed (Patriarchy/matriarchy hh)
	Land owned by the hh	Amount of agricultural Land Owned by household	Landholding ownership
Migrant characteristics	Education of a migrant	Education level attained by a migrant	Human capital level of migrant
	Occupation at origin	Pre-migration occupations	Employment opportunities available
	Age of migrant	Age at first migration	Which age groups of a population are involved in migration
	Sex	Gender composition of migration	Gender involvement in migration
	Marital status	unmarried, divorced, married or widowed	Own family responsibility
	Physical capability	Able bodied person	Ability of selling labour
Societal factors active for migration	Land available for Agriculture	The size of agricultural land owned by the hh	Land scarcity
	Available jobs/pre-migration occupations	Kinds of jobs(on farm, non-farm) available in the rural areas	Available employment opportunities at origin
	Infrastructure development	Types of infrastructures available at origin	The contribution of infrastructures to migration
Migration attributes	Migration patterns	The various migration styles chosen by rural households	The nature of migration or households migration behaviors
	Place of migration	Where do people migrates to	The attractiveness of a destination area to various migrants
	Occupation at destination	Quality and quantity of engagements at destination	The availability of jobs at destination

	Duration of stay or migration duration	Period migrated	The nature of migration adopted by the household
	Number of migrants	Total number of migrated individuals in a household	Number of migrants involved in migration per household
Human capital	Household education	Educational investments done	Contribution to educational achievements of the hh
	Skills	Type of skills acquired resulting from migration	The kinds of skills necessary for the hh to make a livelihood
	Knowledge gain	The types of knowledge that household members have gained as a result of a migrant member	How the hh became aware of the various issues surrounding them
	Hh Health status	Investments made for the good health of the hh members	The contribution to the betterment of the hh health position.
Physical capital	Transport facilities	No. and type(s) of transport facilities purchased	Possibility of movements of people between places offering different income-earning opportunities
	Building(s)	No. and type(s) of investments made in the provision of shelter	Conversion of non productive physical assets to productive one.
	Energy	Type(s) of investments made in the provision of energy for the hh	Possibility of diversifying rural activities especially from farm to non-farm
	Communication facilities	No. and type(s) of investments made in the provision of communication services to the hh	Transferability of information between rural centers and remote settlements
	Water supplies	No. and types of investments made for the provision of water to the hh	Labour time saved for search of water and
	Production equipment/agricultural implements	No. and type(s) of production equipment or agricultural implements purchased	Investment in assets permitting local farm and non-farm income to be generated.
	Agricultural cash inputs	Type(s) of agricultural cash inputs purchased	Better cultivation practices and higher yields
Financial capital	Cash		Stocks of money to which the hh has access

	Credit facilities	No. and type(s) of credit facilities the hh has access to	Stocks of money to which the hh has access
	Savings	No. and type(s) of savings the hh owns or has access to	Stocks of money to which the hh has access
	Claims	No. and quantities of claims the owing to the hh	Stocks of money to which the hh has access
Natural capital	Land	No. acres/hectares purchased	Amount of land purchased
	Wildlife keeping	No. and type(s) of wild animals kept	Biological resources that are used by hh to generate means of survival
	Environmental resources	No. and types of trees planted	Biological resources that are used by hh to generate means of survival
		Type(s) of soil erosion control measures done	Investment in land or land improvements for improved soil productivity potentials
Social capital	Networks	Kinds of networks established	Spatially diverse potential means of support when past favors are reclaimed.
	Membership in groups	No. and type(s) of membership the hh has joined	Inclusiveness of hh in society at large
	Social relations	Kinds of social relations established	Community and wider social claims

II: Survey questionnaire

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QUESTIONNAIRE FOR ASSESSING THE POTENTIAL OF RURAL-OUT MIGRATION AS A LIVELIHOOD DIVERSIFICATION STRATEGY TO RURAL PEOPLE: THE CASE OF IRINGA, TANZANIA

August 2009

INTRODUCTORY REMARKS TO THE HOUSEHOLD TO BE INTERVIEWED

CONVEY THE FOLLOWING INFORMATION TO THE RESPONDENT
This research has selected at random several hundred households in the district to ask them questions about rural-out migration, its benefits and/or disadvantages. The responses provided by the households will help the research to draw valid conclusions with regard to the contribution of rural-out migration.

Your household was randomly selected as one of those to which the research questions will be asked from a list of all of the households in this area.I therefore, would like to ask you some questions as a responsible member of this household. These questions will take some time to complete and therefore I would appreciate your patience. I want to assure you that the information you provide will be treated with high confidentiality by the researcher and that under no circumstance will the information be used for any purpose other than meeting the objectives of this study.

Before I start, do you have any questions or is there anything which I have said on which you would like any further clarification? Otherwise, may I proceed with interviewing you?

PART ONE: BASIC HOUSEHOLD INFORMATION

a). Identification of Household

1. District	
2. Ward	
3. Village	
4. Street/Hamlet	
5. Household Identification Number	
6. Age of Head of Household	
7. Gender of HHH	Code: 1=Male; 2=Female
8. Marital Status of HHH	Code: 1: married; 2. widow; 3. widower; 4. divorced, 5. Separated; 6. Never married.
9. Education Level of HHH	Code: 1= primary; 2=secondary; 3=adult education; 4=college education; 5=Vocational; 6=university education
10. Name of the Respondent	
11. Sex of the Respondent	Code: 1=Male; 2= Female
12. Age of Respondent	
13. Relation of the respondent to the Household Head	Code: 1= the same (The HHH); 2= wife; 3= husband; 4=Son/daughter; 5= other specify

b). Size and Composition of Household

i). Total number of household members……

ii). Current members living in the household

Ser. No	Sex *1=Male, 2=Female*	Age	Education	Marital Status *1=Single, 2=Married, 3=Widow, 4=Widower, 5=Separated, 6=Divorced*	Occupation	Relation to HHH *1=Wife, 2=Child, 3=Grand Child, 4=Brother, 5=Sister, 6=Hired Labour, 7=Daughter in-law, 8=Son in Law*
1						
2						
3						
4						
5						
6						
7						

Code:

Rel. to HHH:

Education: 1=adult education, 2=university education, 3= in university education, 4=college education, 5=in college education, 6=vocational training, 7=in vocational training, 8=finished secondary school, 9=in secondary school, 10=primary school, 11=in primary school, 12=never attended school

Occupation 1=Student, 2=Farming/livestock keeping, 3=Off-farm wage (Agriculture), 4=Non-farm Wage (Non-Agriculture), 5=Off farm Self-employed, 6=No any occupation, 7=Others Specify

iii). a). Did any member of the household live outside home during the last year for more than a month?1=YES, 2=NO, if yes go to table below, (**if No go to section d**):

No	Sex M=1 F=2	Age	Marital status *(code a) 1=Single, 2=Married, 3=Widow, 4=Widower, 5=Separated, 6=Divorced*	Rel. to head of HH (*code b) 1=Wife, 2=Child, 3=Grand Child, 4=Brother, 5=Sister, 6=Hired Labour, 7=Daughter in-law, 8=Son in Law*	Education *(code c)*	Physical Capability *(code d) 1=able bodied, 2=minor physical impairment, 3=major physical impairment, 4=major physical impairment needs assistance, 5=others*	Destination *(code e) 1=City, 2=Municipal, 3=Town Council, 4=Semi Urban, 5=Rural, 6=Neighbouring Country, 7=others*	Occupation *At home (Code f) 1=Student, 2=Farming/livestock keeping, 3=Off-farm wage (Agriculture), 4=Non-farm Wage (Non-Agriculture), 5=Off farm Self-employed, 6=No any occupation, 7=Others Specify*	Period Outside home *(Code g) 1=1-4 Weeks, 2=1-6 Months, 3=6-12 Months, 4=Years;*	Purpose *(Code h) 1=to seek a living, 2=others Specify*	*Occupation at Destination (code i)* 1=Student, 2=Farming/livestock keeping, 3=Off-farm wage (Agriculture), 4=Non-farm Wage (Non-Agriculture), 5=Off farm Self-employed, 6=No any occupation, 7=Others Specify	
1											*Primary*	*Secondary*
2												
3												
4												
5												

Code C: *1=adult education, 2=university education, 3= in university education, 4=college education, 5=in college education, 6=vocational training, 7=in vocational training, 8=finished secondary school, 9=in secondary school, 10=primary school, 11=in primary school, 12=never attended school*

iii b). (1). Has any member who lived outside the house to seek a living come back? 1=Yes, 2=No; (for whatever response go to b.4 below)

(2) if yes how frequent…….(*1=Every month, 2=twice a year, 3=Once in year, 4=Once in two years, 5=once in three years and above*)

(3) if never came back, what is the expected return date…….

(4). For whatever response in (1) above give reasons……

iii c). How did this/these household member (s) leave? 1= allowed, 2= not allowed (if **not allowed got to qn. iii (n)**, otherwise proceed below).

iii d). If allowed, was there any consensus among the household members to let him/her/them to leave? 1=Yes, 2=No.

iii e). If no consensus was reached, please explain what happened for him/her/them to leave?.....

iii f). If there were Consensus for him/her/them to leave, how was it reached? Did the household members hold any meeting to discuss whether to grant him/her/them permission or not……

iii g). What was the household's expectations (in return) for letting this/these household members to leave and seek a living elsewhere?.....

iii h). 1). Did this/these household member(s) have information of the possibility of getting an opportunity to enable him/her/them earn a living at destination 1=Yes, 2=No.

2). If yes, how did they get this information? …….

iii I).(1). Were there any costs involved for him/her/them to be able to reach at the destination? 1=Yes, 2=No.

I (2). If Yes how much was required (in Tshs)……

I (3). How was this amount raised/obtained……

iii j). Why did the household decide to allow this person seek a living elsewhere and not somebody else?.....

iii k). (1). Were there any contractual agreement between the household and the migrant member about the returns earned from his/her engagement at destination? 1=YES; 2=NO.

(2). If yes, what was the kind of agreements?.....

iii l). (1). According to your opinion, do you think the agreements are honoured by the migrant? 1=YES; 2=NO.

(2). If NO, what do you think are the reasons for not honouring the agreements?.....

iii m). If this person left without the consent of the household members, what is the stand of the household with regard to him/her?.....

c). Household income sources

In this section we would like to ask you some questions about your household's sources of income. The purpose is that we would like to understand how important income diversification is to your household.

i). Use the following table to collect the relevant information regarding income received from the following sources. Please rank them in order of importance. *(rank: the first (1) to be the most important source and so on)*

No	Source Type/type of activities	Rank	Amount Per Month (Tshs)	Amount per Year (Tshs)
1	Selling Agricultural Products/Farming			
2	Selling Livestock (Domestic Animals)			
3	Selling Poultry (Domestic Birds)			
4	Casual labour in the community			
5	Casual labour involving seasonal migration			
6	Selling of forest products			
7	Petty businesses			
8	Rural enterprises			
9	Beekeeping			
10	Fishing			
11	Wages and Salaried Employment			
12	Remittances			
13	Gifts			
14	savings			
15	interest			
16	pension			
17	rental of property			
18	Other specify:			

Enumerator: First pose the open question, **then** give the categories if the respondent does not answer!

d). Landholding ownership (Land tenure system)

In this section we would like to ask you some questions about land availability in this area that might be used for agriculture or for other purposes.

(i). First I would request you to tell us the availability of land for agriculture or for other purposes in this area. *1=Easily Available; 2=Available with difficulties, 3=Not available at all.*

ii). How is land distributed/acquired amongst the residents? *1=Inherited, 2=Sold by owners, 3=Distributed by Village authorities, 4=Others Specify……...*

iii). (1). To what extent those systems of land acquisition allow equal distribution of land among the residents? *1=to a large extent, 2=moderately, 3=Not at all.*

(2). If No, what are the reasons for not having equal accessibility to the land!.....

iv). (1). Do you (this household) own land in this area (or some where else)? 1=YES or 2=NO.

(2). If No, how do you survive? If Yes go to (v) and (vi) below

……

v). 1). To what extent is the land owned by the household enough to cater for the needs of this household? *1=to a very large extent, 2=moderately, 3=Not all.*

2). If it is not enough what do you do to compensate for the deficit?.....

vi). For the land that you own, what cost was involved for its acquisition, putting it into use, for which uses and what was/is the source of funds for acquisition and putting into use? Use the table below to collect relevant information.

No.	Land use	Amount	Total Cost	Cont. from a Migrant	Contribution from other Sources
1	Total land owned				
2	Acres rented in				
3	Acres rented out				
4	acres farmed in the past year				
5	acres not farmed in the past year				
6	Acres for gardening				
7	acres with planted (exotic) trees				
8	acres with woodlot				
9	acres for grazing animals				
10	acres with other crops (specify)				

Vii (a). For the entire land that you own or have access to, are there places which require land improvement practices in order to raise its production potential? 1=YES, 2=NO.

Vii (b). If yes, use the table below to collect relevant information:

No	Type of Improvement	Est. Total Cost (Tshs)	Migrant Contribution	Contribution From Other sources
1	Soil Erosion Control			
2	Mulching			
3	Terraces			
4	Planting Trees			
5	Others			

PART TWO: HOUSEHOLD ECONOMIC POSITION (Assets owned by the household)

In this section we would like to ask you some questions about your household's economic position. The purpose is that we would like to understand which factors contribute to shaping the economic position of your household. Which of the following listed items does your household own or has access to?

No.	Asset/items owned	No.of items owned	How asset acquired *(Code a)*	EST. Total value	Cont. from migrant(s)	Cont. from other sources	Asset/Item used for (Code b)
	Livestock						
1	cattle						
2	goats						
3	sheep						
4	dogs						
5	chickens						

6	pigs						
7	donkyes						
8	turkyes						
9	ducks						
10	rabbits						
11	Beehives						
12	Wild animal 1						
13	Wild animal 2						
14	Wild animal 3						
15	Wild animal 4						
	Transport Facilities						
16	biycles owned						
17	Tricycles						
18	cars owned						
19	motorcycles						
20	donkey carts						
21	Wheel barrow						
22	tractors owned						
23	Trailer for tractors						
	Production Assets						
24	Shop(s)						
25	Oxen ploughs						
26	milling machines						
27	Sewing Machine						
28	Hoes						
29	Spraying machine						
30	Fishing net and other equipment						
31	Fertilizer distributor						
32	Harvesting and threshing machine						
33	Incubator						
34	Power Tiller(s)						
35	Animal Feeding machine						
36	Milking machine						
37	Hand milling machine						
38	Coffee pulping machine						
39	Power saw(s)						
40	Pit saw blades						
	BUILDINGS						
41	Houses Built						
42	House (Purchased)						
43	House Repair and Maintenance						
44	House Rent						
	Other Assets						
45	Electric/gas stove						
46	Iron (Charcoal or electric)						
47	Refrigerator or deep freezer(s)						
48	Lanterns						
49	Cooking pots, Cups, other kitchen utensils						
50	Computer						
51	Mosquito net						
52	Water pumping set						

53	House(s)						
54	Solar panels						
55	Tables						
56	Beds						
57	Cupboards & Wardrobes						
58	Bookcases						
59	Sofa/couches						
60	Radios owned						
61	Television sets						
62	Mobile phones						
63	Wrist watches						
64	Clock(s)						
65	Other Specify						

Code a: 1=Purchased; 2=Trapped; 3=Inherited; 4=Rented; 5=given as gift; 6=Others……

Code b: 1=Domestic, 2=Business, 3=Personal, 4=Others Specify…….

PART THREE: CONTRIBUTION OF MIGRATION TO HOUSEHOLD GOODS AND SERVICES

i). Contribution in Education

1. i). Has this household received any educational support from a member(s) who left to seek a living elsewhere? 1=Yes, 2=No.
   ii). If Yes , use the following table to collect information on this question:

No	Type of Support	No. of beneficiaries	Total amount Required	Amount of support from a migrant	From Other Sources
1	Tuition fees				
2	Books &other materials				
3	Uniform including Other clothing				
4	Boarding fees				
5	Transport costs				
6	School building or maintenance				
7	Extra tuition fees				
8	Examination fees				
9	Pocket Money & Shopping				
10	Other Expenses				

2. a). Has the household gained in anyways from the skills and knowledge brought back by a migrant member? 1=YES and 2=NO.

b). If YES, what are the kinds of skills and knowledge gained by the household so far? (e.g. carpentry, cookery, driving, farming, animal keeping, etc)…….
…….

ii). Contribution in Health

3. a). For the entire period the household member has been away, is there any household member (at home) who suffered any illness or injury? 1=YES; 2=NO.

b). Has there been an incidence whereby a migrant member sent money to help "you" (this household) with health care expenses when one of your household member fell sick? 1=Yes, 2=No. (If No. go to 3d).

c). i). If yes, how often this has been happening? *1=every time a family member falls sick, 2=Once in a while, 3=Other specify*

c). ii). If yes, use this table to collect the relevant information:

Sickness Incidences	Nature of suffering	How much required	How much from a migrant(s)	How much from other sources

d). If No in 3b above, what might be the reasons? *1= We have not been informing him/her, 2=We inform him/her but fails to respond due to lack of money, 3=Simply s/he does not respond.*

iii). Water Supplies

4). For this household to access various sources of water mentioned below, how much costs was involved, and what were the sources of funds to meet the costs involved? Use the following table to collect the relevant information:

No	Type of Water Facility	Number	Total Cost	Contribution from a migrant	Contribution from other sources	Facility Used for 1=Domestic; 2=Business, 3=Both
1	Piped into Dwelling					
2	Piped into Plot/Yard					
3	Public Tap					
4	Tube well/Borehole With Pump					
5	Protected Dug Well					
6	Protected Spring					
7	Unprotected Dug Well/Springs					
8	River/Ponds/Streams					
9	Rain Water Collection					
10	Water Tank(s)/Vendor(s)					
11	Bottled Water					
12	Others Specify					

iv). Energy Supply

5). What is the main source of energy for this household, how much cost is/was involved and what were the main sources of funds? Use the table to collect responses accordingly.

	Type	Rank in ascending order	Total Cost	Contribution from a migrant	Contribution from other sources	Used for 1=Domestic; 2=Business 3=Both
1	**ELECTRICITY**					
	Electricity (Installations)					
	Electricity (Monthly Bills)					
	Electricity Maintenance(charges)					
2	**SOLAR ENERGY**					
	Solar Power (Installation)					
	Solar Power (Maintenance)					
3	**BIOGASS**					

	Biogas (installation)					
	Biogas (Maintenance)					
4	**Cooking Gas**					
5	**Fuel Wood**					
6	**Charcoal**					
7	**Kerosene**					
	Animal dung					
8	**Others Specify**					

v). Agricultural Inputs

6). What are the quantities and values/cost of agricultural inputs you use in crop production/agricultural activities, at least over the past 12 months? *(This refers to agricultural cash expenditures; also refer to assets owned by household).*

No	Type	Number/ Amount	1=Purchased 2=Hired	Total Cost	from a migrant	from other sources	Remarks
1	Seeds						
2	Herbicides						
3	Fertilizers						
4	Manure (Animal & Poultry Dung)						
5	Pesticides						
6	Labour						
7	Others Specify						

PART FOUR: JOB OPPORTUNITIES AVAILABLE IN THE AREA

In this section we would like to request you to tell us the kinds of job opportunities available in this area. These are the kind of activities from which people in this area earn their income (that is people work there and get paid).

1. Which of the following listed items are available in the area and your household members engage in to earn a living?

No	Type of opportunities	Availability *1=Abundant, 2=Average, 3=Very little, 4=Not at all*
1	Off-farm wage (farm related work, but not working on own farm)	
2	livestock keeping (for payment)	
3	Employment in private or public sector	
4	fishing related activities	
5	Off-farm self-employment (Running a shop, sewing clothes etc)	
6	Available enterprises (e.g timber related, milling, etc)	
7	Driving vehicles and tractors	
8	Available factories	
9	Working in Dev. Projects in the area	
10	Casual laboring	
11	Other Specify	
12	Other Specify	

PART FIVE: UTILITIES AND INFRASTRUCTURE DEVELOPMENT

1). Madam/Sir, I would request you to tell us about the roads status that connects this district and neighbouring ones.

Type of Infrastructure	Roads connecting Village to Village	Roads Connecting Ward to Ward	Roads Connecting District to Districts	Roads Connecting District to Region	Bridges
Code	Code a 1=Present, 2=absent, 3=Passable/a year, 4=Impassable a year	Code a 1=Present, 2=absent, 3=Passable/a year, 4=Impassable a year	Code a 1=Present, 2=absent, 3=Passable/a year, 4=Impassable a year	Code a 1=Present, 2=absent, 3=Passable/a year, 4=Impassable a year	Code b 1=Present, 2=Good, 3=fairly good, 4=Poor, 5=Worse:
Responsible Body	Code c 1=Central Government, 2=Regional, 3=District 4=Local Government, 5=Others Specify	Code c 1=Central Government, 2=Regional, 3=District and 4=Local Government, 5=Others Specify	Code c 1=Central Government, 2=Regional, 3=District and 4=Local Government, 5=Others Specify	Code c 1=Central Government, 2=Regional, 3=District and 4=Local Government, 5=Others Specify	Code c 1=Central Government, 2=Regional, 3=District and 4=Local Government, 5=Others Specify

2). If no roads or roads are not passable through out a year or bridges are not fit for human use, what do you do when you want to move from one area to another at times when they are not passable?.....

3). which of the following infrastructure whose absence in your areas could contribute to people leaving the rural areas?

No	Type of infrastructure	1=Yes/Could contribute or 2=No/Could not contribute
1	Water Dams *(for irrigation, domestic use, for animals etc*).	
2	Irrigation schemes	
3	Internet Café	
4	Rural Telecenters	
5	Rural Library(s)	
6	Water Pipes (operational/non-operational)	
7	Market places	
8	Community Centers (*for conferences, celebrations, get together etc*)	
9	Animal Dips	
10	Electricity	
11	Other please specify	

PART SIX: HOUSEHOLD FINANCIAL, NATURAL AND SOCIAL CAPITAL INFORMATION

In above responses, we have seen how much has been the contribution from a migrant in terms of cash money. Now we would request you to tell us of the following few things:

1). a) Does the household (any member of the household) operate current or savings account? 1=YES, 2=NO.

(b). If Yes, for the household (member) to open and maintain the bank account was there any contribution from a migrant? 1=Yes, 2=No.

c). If yes, please explain how the migrant contributed/contributes to opening and running the bank account……...

2. a). Over the past 12 months, did household give out any gifts (in cash or in-kind, include Ceremonial Expenditures) to any individuals/institutions? 1=YES; 2=NO

2. b). If yes, use the table below to collect the relevant information:

No	Amount	Type of gift *1=Cash; 2=In-Kind*	Total Value	Contribution from migrant(s)	Contribution from other sources
1					
2					
3					

3a). Are there individuals in the household who are/were members of any self-help group? 1=YES; 2=NO.

b). If YES, how did they finance their membership? use the table below to collect the following information:

No	Type a group	No. of HH Members	Total amount required *(Code a)*	Cont. from Migrant member	Cont. from Other sources
1	Women's/Men's Group				
2	Merry-Go-Round				
3	Youth-Related				
4	Religious-Related				
5	Family-Related				
6	Social Welfare Groups				

4a). Are there individuals or institutions that owe this household any money? 1=YES; NO=2.

b). If yes, how much do they owe this household (alternatively, how much does the household have in outstanding debt)? Use this table to collect relevant information

No	Institutions/Individuals	Total amount Indebted	Contribution from Migrant(s)	Contribution from Other sources
1				
2				
3				
4				

5a). Is the household having any wealth in savings in non-productive assets such as gold and jewellery? 1=YES, 2=NO.
5b). If YES in 9a above, how much does the household have in savings (Alternatively if you decide to sell these items today, how much would you sell them)? Tshs…….

PART SEVEN: HOUSEHOLD AND WIDER INSTITUTIONS

1. Is there any member (members) of your household who has membership in any organization? 1=YES; 2=NO. **If NO go to qn. 2b below**, otherwise continue as follows:

2. a). If YES, please provide as with the following information;

Organization (Code as appropriate)	No. of HH members	Position held (Code a)	Motive for joining (Code b)	Perception on usefulness (Code c)	Impact on household (Code d)	Amount required for (Code e)	Code (f)	Code (g)
1=The Village Council								
2=Committee Under The Village Council								
3=Political Parties								
4=Civil Society Organization								
5=Farmers Cooperative Organization								
6=Saving And Credits Organization								
7=Religious Groups								
8=Social Welfare Groups								
9=Others (Specify)								

Code a: 1=Member; 2=Leader;
Code b: 1=Economic gains, 2=Social gains, 3=Personal gains, 4=Requirement by the village government, 5=Others (Specify);
Code c: 1=Very useful; 2= Useful; 3=Not Useful; 4= I do not know;
Code d: 1=Impact on access to resources, 2=Impact on Livelihood, 3=Impact on knowledge and skills sharing/transfer, 4=Impact on information flow, 5=Impact on Network Creation, 6=Others (specify);
Code e: 1=Entrance/joining fee, 2=Annual subscription fee, 3=Others (Specify)
Code f: Contribution from migrants
Code g: Contribution from other sources

2b). What are the reason for not joining into any organisation……

3. When you compare the status of your household before and after a member left to seek for a living elsewhere, would you say your household is;

1=Better off 2=About the Same 3=Worse off

4. If your household has remained about the same or has worsened off, could you please tell us, what might be the contributing factors to that situation?.....

5. a). If improved/ gotten better off, would you associate this improvement with assistance received from a migrant member? 1=YES; 2=NO

b). If YES, how…….

6. What are your opinions about rural-out migration? Do you support the idea of (promoting) rural-out migration or not? 1=Support; 2=Not Support; 3=Neutral (If supports, go to qn. 9 below).

7a). If the government want to enact a law which will prohibit people from leaving their rural areas to seek a living elsewhere, would you support the law or not? 1=YES; 2=NO.

7b). For either response, give reasons……...

8a). Apart from all the good things your household is gaining from migration (a migrant member(s)) are there any bad (disadvantages) things associated with migration? 1=YES; 2=NO.

8b).If Yes, what are these disadvantages of having a member(s) leaving to seek a living elsewhere?

1.
2.
3.

8c). There are incidences where people leave their homes to seek a living elsewhere while healthy but they come back home suffering from any type of illness. Has this household ever experienced incidences? 1=Yes, 2=No.

8d). If Yes, how many times you have faced such incidences?.....

8e). In such incidences how much cost did the household incur for treating the victim(s)/sufferer(s)/ the sick person(s)?.....

9). What are your comments regarding people leaving their rural areas to seek a living elsewhere? ……..…….

Thank the respondent for his/her precious time to respond to our questions. Remind him/her that *the information s/he provided will be treated with high confidentiality by the research team and that under no circumstance will the information be used for any other purpose than meeting the objectives of this study.*

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