ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

COLLEGE OF DEVELOPMENT STUDIES

INSTITUTE OF RURAL DEVELOPMENT

A CASE STUDY OF NON-FARM RURAL LIVELIHOOD DIVERSIFICATION IN LUME *WOREDA*, OROMIYA REGINONAL STATE

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT OF THE DEGREE OF MASTER OF ARTS IN DEVELOPMENT STUDIES

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Title

A Case Study of Non – Farm Rural Livelihood Diversification in Lume Woreda, Oromiya Regional State.

BY

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DEVELOPMENT STUDIES

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ABSTRACT

The objective of this thesis was to examine, on a case study basis, dominant patterns of non-farm rural diversification and identify and analyze the key constraints and opportunities as well as the determinants and principal motivations behind non-farm diversification.

A blend of qualitative and quantitative methods was used where structured household questionnaire survey, qualitative investigation and participatory assessment was combined with a review of previous researches on the subject at local and developing countries level.

Generally, the study showed that rural households in the study *Kebeles* have diversified incomes, engage in diversified activities, and non-farm livelihood diversification is important.

The results indicated that diversification into low-entry-barrier, low-return activities predominate. Diversification into high value, high return activities are virtually absent. Micro-enterprise based diversification, while generally limited, is dominated by petty-trade and household-level small-scale activities. Manufacturing comprises a negligible part of all non-farm activities.

Lack of access to sufficient fixed and working capital is a major constraint to undertake high-return non-farm activities. Poor infrastructure, especially lack of electricity, is also found to constrain diversification. Diversification among the 'farm-rich' was found to be very uncommon. The greatest extent of diversification was amongst the 'poor' and 'medium' inhabitants. Although tenural security is hardly a problem, diversification in the study sites is to a great extent associated with negative circumstances related to landlessness, especially among the youth.

The results also indicated that diversification is significantly influenced by household head education and age. Other household characteristics, though positively or negatively associated with diversification, are not found to significantly influence diversification. This study has also confirmed the empirical findings of many other studies that an increase in income diversification leads to a rise in total income.

The impact of proximity to urban center on diversification is found to be negative. Institutional ownership of the non-farm economy lacks while proclamations and regulations on land use and investment gloss over non-farm activities. Diversification among the poor is enhanced by access to natural resources as evidenced by significant participation of unemployed and landless persons in river sand and stone quarrying as well as pottery in the study sites.

CHAPTER 1

INTRODUCTON

1.1 BACKGROUND AND STATEMENT OF THE PROBLEM

1.1.1 BACKGROUND

Many researchers in the field of rural development tend to agree that the number of poor people in rural areas of Ethiopia exceeds the capacity of agriculture to provide sustainable livelihood opportunities. Even with a decline of fertility rates, and a slowing down of population growth, this situation is believed not to change significantly. Whilst there is a potential for out-migration, urban centers cannot be assumed to be capable of providing adequate livelihood opportunities for all those unable to make a living in agriculture. This indicates a potentially important role for rural non-farm activities in reducing poverty in rural areas.

It has become increasingly difficult to expand agricultural employment in Ethiopia. Because of rapid population growth, the average farm size has declined to less than one hectare (Mulat, 2001:20). Sub-economic holdings, landlessness, soil degradation, low level of technology utilization and increasingly unreliable and erratic rainfall have resulted in widespread poverty and vulnerability. Even if farms are not physically sub-divided, intergenerational land sharing occurs that reduces the effective land area for individual households.

Four possible and overlapping pathways are frequently suggested by policy makers and analysts, both national and international: Intensification of smallholder agriculture, commercialization of agriculture, 'depopulation' (resettlement), and livelihood diversification.

With regard to the first and second, i.e., intensification of smallholder agriculture and commercialization, the average farm size is considered by many to be too small to allow sustainable intensification and commercialization.

Concern has also been raised about the viability of the third option, i.e., resettlement strategy, on the grounds that it is an evasion of real problems and marred by bad implementation records in this country in the past.

Only diversification into non-farm activities, fostered by farm-led economic growth thus seems to make sense. Hence, over the past decades, farm household diversification into supplementary activities has slowly crept on the agendas for research on and development of rural livelihoods. Several studies conclude that involvement in supplementary activities is positively related to farm productivity and contributes to poverty alleviation.

"Support to non-agricultural activities is also seen as a way of deflecting from land tenure quagmires"(Bryceson,1999:47).In this connection, Mulat (1997:3) observes:

> *Although agriculture is unlikely to absorb all the new entrants into the labor market without declining land holdings and corresponding declines in per capita incomes, reduced access to land and declining farm size would not necessarily translate into underemployment and poverty if non-farm activities could provide alternative employment opportunities.*

Gordon and Craig (2001:7) also observe "rural non- farm activities may:

- *Absorb surplus labor in rural areas,*
- *Help farm-based households spread risks,*
- *Offer more remunerative activities to supplement or replace agricultural income,*
- *Offer income potential during the agricultural off-season*
- *Provide a means to cope or survive when farming fails.*

Farm households, as their income grows, increase their expenditure share on non-food items, thereby accelerating demand for non-farm goods and services such as housing, clothing, schooling, health, etc. To meet this growing demand, rural households increasingly diversify into rural non-farm goods and services.

Increasingly, productive modern agriculture also requires inputs and services, such as seeds, fertilizer, credit, pumps, processing facilities, which in turn create a growing demand for non-farm firms that can provide these services.

1.1.2 STATEMENT OF THE PROBLEM

In Ethiopia, policy makers, by tradition, were favoring agriculture as means of rural economic development for a long time. This excluded rural non-farm activities from much attention, thereby ignoring an important source of livelihood. During the reign of Derg, diversification has been actively discouraged in Ethiopia. People were banned from having more than one occupation. "Farmers were not allowed to engage in off-farm activities, hire of labor was restricted" (Tassew, 2002:5). This resulted in a repression of non-farm rural activities.

The reported level of rural non-farm participation across Ethiopia varies largely. The typical variation lies between 10-35 per cent, though some authors find participation up to 80 percent.

The present Ethiopian government is also criticized by some quarters for following rural development policies that neglect the role of rural non-farm activities and their link with agriculture. Tassew (2002:1), for instance, argues that "this might be because the role of the rural non-farm sector is the least understood component of the rural economy, and its role in the broad development process is not well known. This knowledge gap has been reflected in the policies of developing countries like Ethiopia where there is no development policy that identifies and includes the rural non-farm economy. Agricultural ministries have instead focused on farming, and industry ministries have focused on manufacturing"

The same author further notes that "it has been and still is unclear which government organization is responsible for the promotion of non-farm activities in rural areas. The links between farm and non-farm activities are not fully recognized (Tassew, 2002:7). A bolder assertion is made by Ellis (2004:13) that "Ethiopia follows policies that trap people in Agriculture".

A scrutiny of the Agricultural Development-led Strategy (ADLI) of the Ethiopian government, however, reveals that Ethiopian policy makers do in fact recognize the reciprocal linkages between agriculture and other sectors. Although small-holder agriculture is at the centre of ADLI, the growth strategy pursued under PASDEP is proposed to be driven by agricultural diversification and commercialization with a strong export focus. PASDEP also envisages strengthening of rural-urban linkages, involving integrating markets, opening up the flows of labor, and access to income-earning opportunities between towns and surrounding areas.

The Rural Development Policy and Strategy Paper of the Ethiopian Government (2001) also explicitly recognizes the importance of non-agricultural income diversification in rural areas and has devoted considerable space to elaborating the link between the farm and non-farm sectors. The document in fact states that "we can consider our rural development activities have achieved their goal only when agriculture ceases to be the mainstay of the Ethiopian economy".

Hence, in light of the above, although there are legitimate grounds for doubting their impact to date, and the seriousness with which they are pursued, it would not be a fair criticism to claim that "Ethiopia follows a rural development policy that traps people in agriculture"(Ellis,2004:13).

Policy aside, however, non-farm activities are accorded little importance in rural community related discussions in Ethiopia. Moreover, although more and more NGOs, have become directly involved in farming communities, they are providing farmers with a variety of services mainly focused on agricultural development, reforestation, soil and water conservation and rural water supply, and credit for income generating activities.

The emphasis on rural non-farm activities, with some exceptions, is minimal. The conventional sector-based approach employed to analyze the Ethiopian economy, categorizing it as agriculture, industry, etc., has also made its own contribution to the relative neglect of the rural non-farm economy.

As Ellis and Tassew (2005: xvii) observed, "Ethiopia exhibits relatively few non-farm opportunities compared to other low income countries with similar or somewhat higher per capita incomes". They too, however, note that progress has been made in *on-farm* diversification, especially vegetable production and improved water management.

The relative absence of rural non-farm enterprises is also a feature of the Ethiopian rural economy confirmed in the Participatory Poverty Assessment (PPA) authored by Ellis and Tassew (2005: x):

> *Few households engage in non-farm activities and there seem to be various reasons why this is so, including lack of encouragement by district and kebele administrations, fear of sanctions such as loss of entitlement to land (even though such fear is not grounded in public policy), social sanction on mobility, especially for women, and low cash in circulation in rural areas." The report further notes that "it is probable that household livelihood portfolios in rural Ethiopia are amongst the least diversified in Sub-Saharan Africa, and this means that little non-farm growth is occurring in small towns (Woreda centers), and , by extension, little also occurring across the range of urban settlements up to regional level.*

Future poverty reduction strategy thus requires a rebalancing of priorities so that promotion of agriculture is placed in a broader context of facilitating the transition from farm to non-farm occupations in Ethiopia.

People have to be encouraged and assisted to move out of the agriculture sector at a faster rate, and allowed to combine farm and non-farm occupations without real or imagined fears about losing their land rights.

For this to be possible, there is a need for an in-depth understanding of the context (socio-cultural, economic, agronomic) in which non-farm rural livelihood options are pursued currently ,and in which new options can be developed.

1.1.3 THE RESEARCH QUESTIONS

An attempt is made to address the following research questions on a case study basis:

- What is the empirical evidence concerning the extent and nature of non-farm diversification?
- What are the major policy, social, cultural and economic problems and constraints for the development of non-farm activities?
- What kinds of policies and institutional support are necessary to alleviate constraints to non-farm diversification?
- What are the patterns, determinants and motives of rural households' participation in non-farm activities?
- What types of linkage exist between farm and non-farm activities?
- What is the urban-rural linkage in diversification and the role of rural towns?
- What are the characteristics of households that diversify?

1.2 RESEARCH OBJECTIVE

1.2.1 OVERALL OBECTIVE OF THE STUDY

The overall objective of this research is to undertake an intensive case study on rural non-farm diversification of communities in Lume Woreda, located in East Shoa Zone, Oromiya Region.

1.2.2 SPECIFIC OBJECTIVES

The specific objectives are:

1. To identify and analyze the key constraints and opportunities for non-farm rural diversification in the case study Woreda, and thereby explore the role of local and

national-level policies and institutions in facilitating or blocking rural non-farm diversification.

2. To examine the dominant patterns of non-farm diversification in the study area, including the principal motivations and socio-economic variables determining non-farm diversification patterns.
3. To examine the farm-non-farm and urban-rural linkages in the study area and the implications for non-farm diversification strategies of households and individuals.
4. To examine the spectrum of outcomes (positive and negative) arising as a result of rural non-farm diversification.

1.3 SIGNIFICANCE OF THE STUDY

The rural non-farm sector in Ethiopia is not an adequately researched component of the rural economy, and knowledge about its role in the broader development process is relatively little. This study aims to contribute to the understanding of rural non-farm diversification and the dynamics of the rural non-farm economy in providing employment and income diversification opportunities.

Results of this study are hoped to contribute to understanding better the forces that drive change in the rural non-farm economy as well as the opportunities and constraints.

Better understanding of the above is in turn expected to contribute to the design and implementation of policies and instruments for the development of rural non-farm livelihoods for the rural poor.

1.4 LIMITATIONS OF THE STUDY

The unit of analysis, like in many studies, is the household, which imposes certain limitations. The household is not a homogeneous block; rather, it is internally complex with different members (men, women, and children) having different roles and autonomy of control over resources including those crucial for diversification. The fact that a disaggregated approach to the family was not adopted is thus one important limitation.

The study is also limited by the fact that it is mainly cross-sectional, except some questions in the survey which require respondents to recall the changes in certain variables over a specified period of time.

Although the technique of triangulation was applied to the extent possible, the fact that the survey questions are predetermined in such a way that variables can be easily quantified and manipulated arithmetically and statistically, also sets a limit to the capture of the complexity of particular situations.

Finally, like all case studies, no claims can be made about the statistical representative ness of sample findings with respect to populations in the entire *Woreda* or for the country as a whole.

1.5 STRUCTURE OF THE THESIS

The remainder of the study is divided in to 8 chapters. Chapter 2 describes the methodology, including how the study Kebeles were selected and the field work data collection methods. Chapter 3 reviews previous research on non-farm rural Livelihood diversification in Ethiopia as well as other developing countries.

Chapter 4 provides basic description of the Woreda and the study kebeles including demographic and social characteristics of the study population. It also describes and analyzes the farm economy in the case study area, including land, cropping pattern, out put, yield, livestock, and constraints to agricultural production.

Chapter 5 examines activities of the non-farm economy and diversification patterns. This chapter also covers sectoral composition of employment, and motives for non-farm diversification

Chapter 6 analyzes income structure of the sample households on the basis of the information gathered through the household survey. It also examines the relative importance of various income sources and the purpose and use of income derived from non-farm activities.

Chapter 7 continues to examine the determinants of non-farm diversification in the case study context. Linear and Logistic regression models are fitted into the data collected to examine the influence of household and community level factors in the study area on diversification.

Chapter 8 describes and analyzes the constraints to non-farm diversification that emerged from the quantitative and qualitative assessment.

Chapter 9 summarizes the results obtained from the various components of the study, draws conclusion about processes of diversification, and identifies some implications for policy and research

CHAPTER 2

METHODOLOGY

2.1 THE STUDY POPULATION AND SITE SELECTION

The study population was drawn from Lume Woreda, (East Shoa Zone, Oromiya Region). The rationale for the choice of Lume for the study is based on the following factors:

- Presence of non-farm activities to be studied;
- Logistical feasibility;
- Existence of representative or typical rural livelihood patterns so that findings have policy relevance on a broad scale; and
- Previous acquaintance of the researcher with the locality and the Woreda's Agricultural Office staff.

Lume is a Woreda with some kebeles exhibiting thriving non-farm activities and other kebeles where the predominant occupation of the population is farming. All these factors make Lume an ideal location for researching non-farm rural diversification.

The population of Lume is estimated at 117,000.The agro-ecology is predominantly midland ('woyenadega') and the major land use is cultivated land. The farming system is sedentary mixed farming. The main sources of farm livelihood are annual crops (teff, wheat, maize, and barley), fruit and vegetables, and livestock raising (cattle, sheep, and goat). Inhabitants of the woreda are also engaged in various non-farm activities besides their farming occupation. These include waged labor, trade, pottery, sale of local liquors, and quarrying of stones, gravel and river sand. Fishery is also practiced on Lake Tute which is found in the woreda.

Having made a choice of Woreda to conduct the research, the next stage has been kebele selection. Two kebeles or study sites were chosen purposively on the following criteria:

- The two study sites (kebeles) should differ, to the extent possible, from each other in terms of intensity/concentration of non-farm activities for comparative purposes. One site may have villages with marginal non-farm rural activity, so crop and livestock production should be significant in terms of family income and labor allocation. The other site may have villages with important or relatively high concentration of non-farm rural activities. Given the low level of development of rural non-farm activities, especially enterprise-based ones, in the woreda, the anticipated level of differentiation was not, however, observed.
- Logistics of access.

The actual site selection was undertaken during the initial qualitative survey where meetings with Woreda representatives in relevant sectors, especially the Agriculture Office and key individuals were held. These meetings had also served for courtesy and informing of intentions as well as facilitation of access. Advices obtained at these meetings were incorporated into the approach and methods. The Kebeles chosen accordingly are named Shera Dibandiba and Tede Dildima. The field work was conducted from February 1, 2008 to March 2, 2008.

2.2 METHODS

Since the rural non-farm economy is multi-dimensional and heterogeneous, it is likely to pose challenges for the researcher unless a judicious mix of qualitative and quantitative techniques are applied. A single approach will not provide all the answers to the research questions. Therefore, a blend of qualitative and quantitative methods was used complementarily in the research. The two methods were combined throughout the study in a mixed-methods approach or triangulation. "The 'mixed research approach' draws on pragmatism, the philosophy that advances the view that 'what works' is a good research method" (Degefa, 2006:12)

Hence, the field work data collection methods of this study had incorporated a mix of structured household questionnaire survey, qualitative investigation and participatory assessment.

2.3 SELECTION OF HOUSEHOLDS AND THE FIELD WORK

The survey enumerators were initially planned to be chosen from the Woreda or nearby towns; but this idea was dropped later when it was found that enumerators capable of grasping the concepts embodied in the questionnaire and properly administer the questions were hard to come by in the Woreda.

Four enumerators from Addis Ababa were thus deployed. In their selection due care was taken to ensure that they are experienced enough in administering survey questionnaires among rural households under trying circumstances. Their command of the English language was also important as the questionnaire was not to be translated into the local language.

Prior to their field deployment, the four enumerators were given training on the questionnaire. Each question was explained to them with adequate clarity, and they were given ample opportunity to make comments, to raise questions and also make any suggestion they might think useful to improve the questionnaire. As they had extensive experience in surveys, the training session was a smooth exercise. On the basis of the discussion, a few modifications were made on the coding of certain responses. One day was also spent in each Kebele to test the questionnaire and necessary modifications were made on the basis of the findings.

A person to supervise the enumerators' day-to-day work was recruited from the Woreda Agricultural Office, and oriented about the research objective and the questionnaire beforehand. He signed off on the front page of the questionnaire when completely satisfied with the quality of the data on the form. In a few cases return visit was made to the household to try to sort problems with the replies. The supervisor's role in facilitating contacts with various offices and institutions was also very crucial for the success of the field work. Although official support letter to interview households was obtained from

the Woreda administration, the supervisor's personal relationship with kebele chairmen and other staff had helped a lot in establishing trust and warm rapport from the very outset

The selection of households for the household questionnaire survey was undertaken through an RRA exercise. Very complex or lengthy participatory techniques were not, however, utilized. The methods were deployed in this research context for information gathering purposes only. Therefore, they were more RRA than PRA. Knowledgeable people of the kebeles were invited to a meeting and the objective of the research was explained to them. After a thorough discussion was conducted, criteria for segregating inhabitants of the kebeles by wealth groups were established. Then after, using the kebele roster, households were stratified into three wealth groups - poor, medium and rich - from which I later made a random selection of 100 households from each kebele (30% rich, 30% medium, 40% poor). In both kebeles, those who participated in the setting of wealth criteria and stratifying households were uncomfortable about labeling a person "poor". They in fact insisted that the outcome of the exercise be recorded using a neutral label (such as "A", "B", "C").

The wealth ranking, apart from enabling to gain perceptions about poverty and wealth itself, is mainly aimed to ensure that the sample of 200 households represents the full range of livelihood circumstances found in the study sites. Three types of households were thus considered:

Type 1: members occupied full time in agriculture,

Type 2: members occupied part-time in agriculture and part-time in non-farm activities;

Type 3: members occupied full-time in non-farm activities.

Spare households were included in the initial sample in case selected households were unavailable or unwilling to participate. In addition, a sub-set drawn from the 200 households, totaling 15 households were selected from the two sites to be focus or key informant households as part of the qualitative fieldwork. They were purposively selected

to be representative of key variables affecting the communities, including such things as landholding, financial capital, household head (male headed, female headed) age, gender, and social status.

After the sample selection was completed, the next step was to recruit a person who will facilitate the enumerators' access to the homestead of each sampled household head. The guide's duty includes informing the respondent households one day ahead about the survey and its objective so that their consent and availability could be insured and the enumerators could execute their scheduled day to day work without interruption. The lesson drawn from Tede Dildima kebele served us well when we moved to Shera Dibandiba to be more careful when recruiting a facilitator.

Sections of the questionnaire dealing with income were, as expected, the most challenging to elicit truthful and reasonably accurate response. Income and operating cost questions were framed on monthly basis, to be aggregated later to arrive at annual figures. For some households this approach didn't pose much difficulty. Included in this group are, for instance, households engaged in commercial poultry, grain milling, and pottery who are used to calculating their expenses and revenues on monthly basis. For the majority of households, however, calculating income and expenses is found to be easier and more accurate when done on weekly basis. Local liquor ('tela', 'araki' etc.), dung cake and firewood sellers, for instance, fall in this group. After the problem was identified, the enumerators were instructed to administer income and expense related questions flexibly (on weekly or monthly basis) after probing the respondent's situation.

Respondents had also recall difficulties, especially in relation to fertilizer prices, since the purchase for application in 2007 had necessarily to be made in 2006 and while the research is taking place in 2008.

In Shera Dibandiba Kebele enumerators had faced language problem when attempting to communicate with certain households who do not speak Amharic. Therefore, we were compelled to replace 13 households out of the 100 by equivalent households. Market

days are also found to pose difficulty to access respondents. At Tede Kebele, the funeral of a well known and respected person had given rise to the same situation.

Overall, the enumerators worked hard and well, and the supervisor discharged his duty commendably, and the quality of the data is good.

Apart from the household survey, I had personally conducted focus group and individual interviews with various inhabitants of the kebele. The biggest challenge in conducting group discussions is the show up rate. Even after the meeting's objective is well explained and the most convenient day, time, and place is set in consultation with them, a certain proportion are bound to fail to come. The safeguard strategy is to always invite more people (20-25% more, for instance) as reserve. The focus group discussion with selected households in Tede was aborted in this way the first day when only 4 out of the 10 invited showed up. Another meeting had thus to be arranged; and, fortunately, the 4 who showed up volunteered to steer the absentees, which resulted in real success.

Key informants were also selected outside the households included in the survey sample. A cordial and trustful relationship was established with these individuals and information gathered through individual interviews held at the premises of their homesteads with prior appointments.

The cooperation from all of them was highly satisfactory despite the relatively large number of questions they were required to answer. Their selection was facilitated by kebele staff and the supervisor. As it turned out, they were in fact very good choices.

Case history narratives and stories were also compiled from selected individuals engaged in representative non-farm activities. Specific understanding of determinants and constraints were investigated through discussions with these individuals. The individuals I interviewed included selected household heads with relatively significant non-farm activities as well as youth engaged in sand and stone quarrying, women working on modern flower farms in the nearby Koka Woreda (by daily commuting to and from the greenhouse sites), and poor women subsisting by selling local liquor, street-side fruit and vegetable sales, and engaging in daily labor at construction sites. All of them were very

candid and forthcoming in answering questions. The care I took was to arrange the interviews at a day and time most convenient to them; thus no problem was encountered.

Management committee members as well as ordinary members of cooperatives of sand and stone quarrying, pottery and "laketch" stove makers were also interviewed without problem. Officials and functionaries of the Woreda, Development Agents (DAs), and members of a wide range of other relevant institutions operating in the Woreda were also key informants. The Woreda Agriculture Office, in particular, was the source of much information; and data obtained from and discussions held with the Office's various experts were very valuable. NGOs are found to be not generally active in the Kebeles except one NGO named Busa-Gonofa involved in micro-finance.

The data /information gathered from these different sources had met my expectation. While the cooperation from officials as well as experts is very satisfactory when once engaged, securing an appointment and getting the appointed time respected is a real challenge. Many of the Woreda sector-offices' staff leave for field work early in the morning during most weekdays. Monday and Friday are the days when they are likely to be in office, and I had to use these days to the maximum, budgeting my time judiciously. Frequent and ad hoc meetings of staff and officials are the other spoilers of arranged interviews.

Focus groups were formed around particular activities or issues: gender, youth, small-scale enterprises development, and microfinance. Many useful insights relevant for the study were gathered from these discussions.

The researcher also conducted less formal personal observation of different non-farm activities. These include pottery making, river sand, gravel and stone quarrying and street-side fruit and vegetable sales.

As the working language in the Region is Afaan Oromo, and I am not a speaker of the language, I had at times encountered problems of reading and understanding data / records provided to me on the spot. In such circumstances, I had to ask my interviewee to

translate it to me (if it is manageable) or do the translation later by another person. Overall, the field work was successful; and, I believe, had achieved its objectives.

2.4 DATA PROCESSING AND ANALYSIS

After the fieldwork was completed, the data on the survey forms was transferred to computer first using the Excel Software (which is very handy and useful to make calculations, and summarize, aggregate, organize and manipulate the data in various ways). It was then transferred (exported) to SPSS easily for further statistical and econometric analysis. The analysis was conducted using the following statistical procedures:

- Frequency distributions
- Cross tabulations
- Regression analysis(linear and logistic)

Although there are different forms of regression, since the variables for which data was gathered in this study are both continuous (e.g. Age) and categorical (e.g. Yes, No), both the Linear and the Logistic Regression models are deemed to be appropriate to capture key relationships.

In addition to primary sources, data and information were also generated from secondary sources, mainly from documents and archives of the Woreda's pertinent Offices and Departments. Relevant proclamations and regulations of the Oromiya Region on land use and investment were also reviewed.

2.4.1 MODEL SPECIFICATIONS

MODEL - A

Model A is a linear regression model containing an admixture of quantitative and qualitative variables. Such models are called Analysis - of - Covariance (ANCOVA) models and are specified as:

$Y_i = \alpha_1 + \alpha_2 D_{2i} + \alpha_3 D_{3i} + \text{-----} + \alpha_k D_{ki} + \beta_1 X_{1i} + \beta_2 X_{2i} + \text{------} \beta_k X_{ki} + u_i$

Where: Y_i = The dependent variable

D_i = Dummy independent variable

$\alpha_2 \ldots\ldots\ldots \alpha_k$ are the slope coefficients of the dummy variables

$B_1, \beta_2 \text{-------} \beta_k$ are the slope coefficients of the continuous variables

α_1 = the constant term or intercept

X_i = Quantitative (continuous) independent variable

u_i = Error term

MODEL – B

Model B is a logistic model estimated to analyze the probability of diversification into non-farm activities. The logistic distribution function is specified as:

$$p_i = \frac{1}{1 + e^{-zi}}$$

Where: P_i is the probability of diversifying into non-farm activity for the i^{th} respondent and it ranges from 0 -1.

e^{-zi} : stands for the irrational number *e* raised to the power of Z_i

Z_i : is a function of N-explanatory variables and expressed as:

$Z_i = \beta_1 + \beta_2 X_{2i} + \text{------} \beta_n X_{ni}$

β_1 is the intercept

β_2 ------β_n are the parameters

The parameters indicate how the log-odds in favor of diversification change as the independent variable changes. The unobservable stimulus index Z_i assumes any value and is actually a linear function of factors influencing the decision to diversify. As Z_i ranges from $-\infty$ to $+\infty$, P_i ranges between 0 and 1; and P_i is non-linearly related to the explanatory variables. In order to simplify the expression, we need to rewrite the equation in the form of odds-ratio. Accordingly, if P_i is the probability of diversification, then 1- P_i is the probability of not diversifying.

The odds-ratio is written as:

$$\frac{P_i}{1-p_i} = \frac{1+e^{zi}}{1-e^{-zi}} = e^{zi}$$

$\frac{P_i}{1-p_i}$ **i**s thus simply the odds ratio in favor of diversification

CHAPTER 3

PREVIOUS RESEARCH ON NON-FARM RURAL LIVELIHOOD DIVERSIFICATION

3.1 THE CONCEPTUAL FRAMEWORK

"Rural livelihoods analysis is believed to have been born with the birth of peasant studies in the 1960s, given the dominance of peasant modes of production in many newly-independent African countries" (Start and Johnson, 2004:14). Though 'peasant studies' has fallen out of fashion, the concepts and theories are still central to an understanding of rural livelihoods. Ellis (1998, 2000) has elaborated a framework which describes the context within which rural non-farm livelihood activities are undertaken. In this framework, different livelihood activities of rural households are enabled by access to assets, in the context of institutions and social relations, modified by trends and chocks, with effects on livelihood security and environmental sustainability. An attempt is made to structure this study around the above concepts of livelihood and diversity.

> *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 (Ellis, 2000:10). Diversity refers to the existence, at a point in time, of many different income sources, thus also typically requiring diverse social relations to underpin them. Diversification, on the other hand, interprets the creation of diversity as an ongoing social and economic process, reflecting factors of both pressure and opportunity that cause families to adopt increasingly intricate and diverse livelihood strategies (Ellis, 2000:14)*

The framework is set out in Figure 1, and is deliberately without arrows, implying multiple feedback and interdependency. The livelihood approach

regards the asset status of households as fundamental to understanding the options open to them, including diversification into non-farm activities. The asset position of a household has a significant effect on household participation in non-farm activities. Resources are referred to as 'assets' or 'capitals' which are categorized as natural capital, physical capital, human capital, financial capital, and social capital.

The things people do in pursuit of a living are referred in this framework as livelihood 'activities'. In the context of this study, activities are actions taken by the household to produce income, such as engagements in non-farm self-employment, waged-employment, and a mix of farm and non-farm engagements.

The decision on the set of activities a household will engage itself in, and the intensity of those activities, is conditioned by the mediating processes and the context in which the household operates. Social relations, institutions, and organizations are critical mediating factors for livelihoods. Trends and shocks constitute the context influencing household decisions through natural and non-natural forces (floods, draught, population growth, technological change, macro-policy, etc.)

The asset position of households, mediated by social relations, institutions and organizations result in the adoption of livelihood strategies, which are composed of activities that generate the means of household survival. Livelihood outcomes are the achievements or outputs on livelihood strategies. For the purpose of this thesis they are what the study population is seeking to achieve through diversification into non-farm activities.

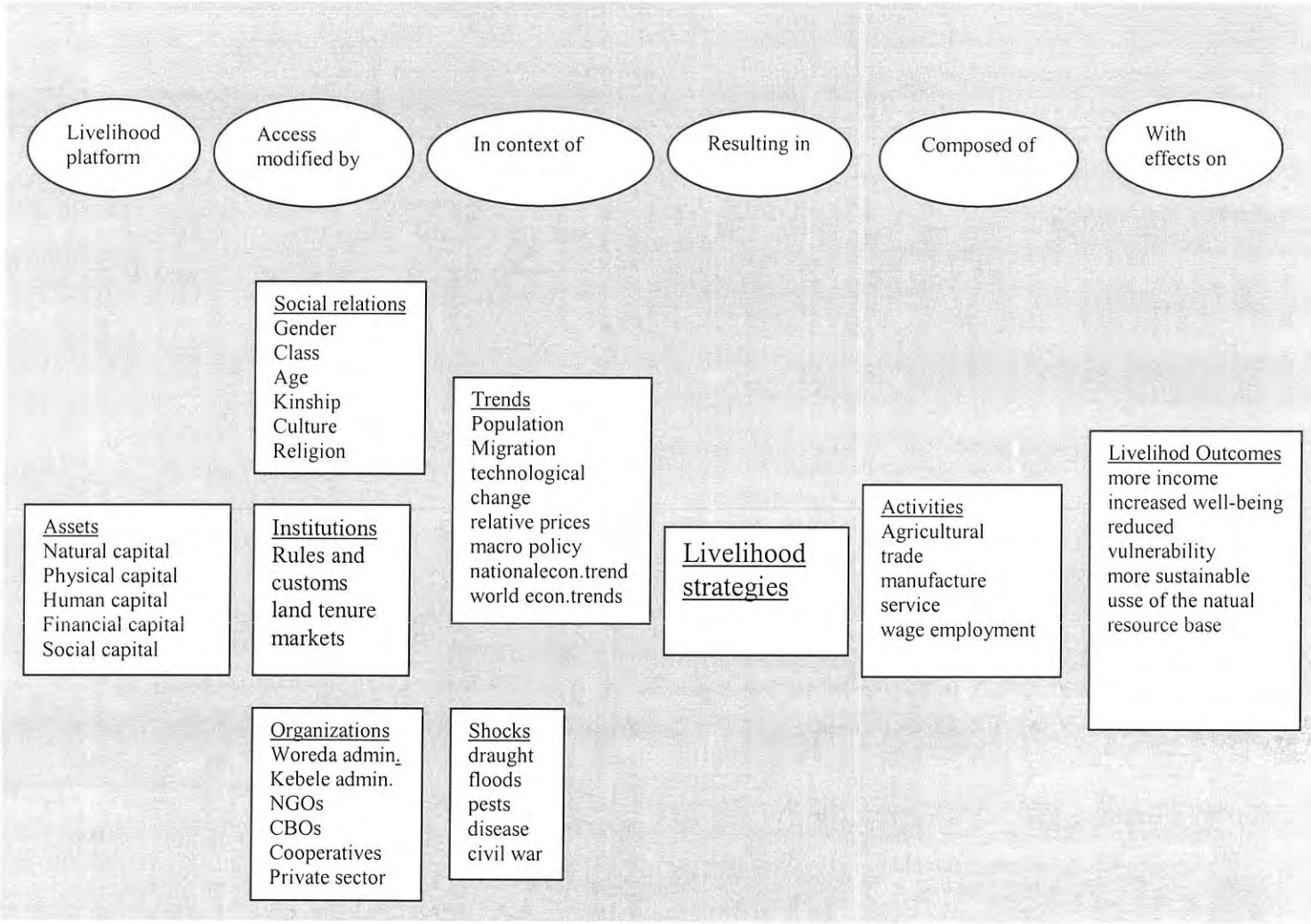

Figure 1: A framework for non-farm rural livelihood diversification

Source: Adapted from Ellis (2000:30)

3.2 DEFINITIONS OF DIVERSIFICATION AND RURAL NON-FARM ACTIVITIES

Various definitions of diversification are offered in the literature. "Diversification can either refer to an increasing multiplicity of activities (regardless of the sector), or it can refer to a shift away from traditional rural sectors such as agriculture to non-traditional activities in either rural or urban space- i.e. sectoral change"(Start and Jonson,2004) Another definition refers to "expansion in the importance of non-crop or non-farm

income and increase in the number of sources of income"(Minot et al,2006:25). Crole-Rees (2002:43) defines diversification as the share of non-crop income in total income. Before embarking on a study of non-farm rural activities, it is also necessary to specify what is meant by both 'rural' and "non-farm". Gordon and Craig (2001:4) observe that:

> *The term 'rural' is subject to a large amount of debate, hanging on three particular aspects: whether rural towns are rural or urban, at what size does rural settlement become urban, and the treatment of migration and commuting between rural areas and towns. There is no firm rule that resolves these issues, and the only practical solution is for the researchers to make sure what they have adopted is clearly stated.*

In Ethiopia an official definition of 'rural' is difficult to come by. Whatever is not 'urban' can by default be considered 'rural' for all practical purposes. The Central Statistical Agency (CSA)'s definition of 'urban' is most commonly used, and is thus adopted in this study to differentiate urban and rural areas. CSA defines 'urban' "as a locality with 2000 or more inhabitants." But it qualifies this definition in the following manner: urban center includes the following regardless of the number of inhabitants:

- Regional Capitals,
- Zone Capitals
- Woreda Capitals,
- Localities with urban dwellers associations,
- Municipal Towns, and
- All localities having a population of 1000 or more persons, and whose inhabitants are primarily engaged in non-agricultural activities.

With regard to what constitutes 'non-farm' too, different researchers and investigators follow different conventions. Bryceson(1999:12), for instance, observes that "non-farm activity is a term that many equate with non-agricultural activities (e.g. Ellis, 1997); but in the Deagrarianisation and Rural Employment (DARE) survey it encompasses

agricultural waged labor on farms not belonging to the individual producer or his/ her household, in other words, off-farm work."

Haggblade, et al, (2007:19) observe that the "rural non-farm economy" includes all rural economic activity outside agriculture. "It can take place at home or in factories or be performed by itinerant traders. It includes small-and large-scale activities of widely varying technological sophistication".

Non-farm activities are hence associated with those secondary and tertiary sector production processes that use raw physical intermediate inputs (such as wheat, milk, iron, wood) and process them into manufactured goods (such as wheat flour, cheese, knives, furniture) or use financial or manufactured capital and labor to produce services (e.g. transport, commerce, banking). "Sectoral assignments depend only on the nature of the product and the types of factors used in the production process. Neither location (at or away from home) nor employment (self-employed or hired for salary or wage) matter."(Barrett et al, 2000:11) In this study, however, we follow Ellis (2000), and label activities not directly related to agricultural production as *non-farm* activities, including waged and self-employment. Activities conducted off the own land but still in agriculture are *off-farm.* Activities of the non-farm economy are usually categorized into three major sectors: trade, manufacturing and service. An additional category is formal employment in the public service (teachers, health workers, development agents etc.)

Typical non-farm activities include:

- Charcoal production
- Quarrying and production of building materials
- Furniture making, carpentry, painting
- Pottery, mats, baskets
- Repair of shoes, vehicles, tools
- Leather work, textiles and clothing
- Transport
- Wholesale and retail trading

- Barberry, photography
- Cooked food sale, coffee and tea shops, bars
- Grain milling, dairy processing, slaughtering and butchery
- Formal employment: teachers, health workers etc.

The literature also highlights two critically important characteristics of the rural non-farm economy - its heterogeneity and measurement difficulty. The rural non-farm economy includes a highly heterogeneous collection of trading, agro-processing manufacturing, commercial, and service activities.

> *The composition of non-farm activity differs considerably as a function of widely variable natural resources, labour supply, location, history and institutional factors. Measurement difficulty arises mainly from seasonal, part-time, and small-scale nature of production and the fact that producers do not normally keep written records. Many surveys thus use employment as a proxy for non farm activity levels" (Haggblade et al, 2007:13).*

3.3 MOTIVES AND DETERMINANTS OF DIVERSIFICATION

The literature offers different diversification typologies: distress 'push' versus demand 'pull', income-driven versus activity-driven, occasional versus strategic diversification, to mention a few.

Livelihood diversification is pursued for a mixture of motivations and these vary according to context: from a desire to accumulate in order to invest, to a need to spread risk or maintain incomes, to a requirement to adapt to survive in eroding circumstances, or some combination of these (Hussein and Nelson,1999:22).

Two fundamental causes of diversification are also frequently mentioned in the literature (Ellis, 1998, 2000); namely seasonality and risk. Diversification is thus assumed to play a role in overcoming the consumption smoothing problem created by the seasonality of agricultural output patterns. For rural households, risks are particularly related to natural shocks (floods, drought etc.). All households, whether rural or urban, are prone to the

personal shocks of chronic illness, accidents and death. Risks are thus reduced by diversifying livelihoods.

Determinants of livelihood diversification fall into two broad categories: "push" versus "pull" factors. The "coping" literature examines how farmers in low-potential and risky environments-those subject to drought, flooding, or environmental degradation – often adapt by deploying household resources to a range of farm and non-farm activities " a growing landlessness also pushes households into non-farm activity by default . Many farm households in medium to high-potential environments are also "pooled" by opportunities for diversification into attractive non-farm activities. "Wealthy households, when asked why they diversify, mention profit maximization" (Bryceson, 1997:26).

Infrastructural development is generally believed to have impact on rural non-farm activity. Roads, telecommunications, credit and electricity all contribute to increased non-farm activity. Renkow, in Haggblade, et al, (2007:197), observes:

> *In the specific case of the rural non farm economy, infrastructure is a double-edged sword. On the one hand, adequate roads, communication facilities, and other public goods are necessary fixed inputs into production; and, hence, would be expected to facilitate the development and expansion of rural industries. On the other hand, connecting rural places to urban places, via infrastructure expansion and improvement, may well lead to inadvertent "crowding out" of more remote rural firms and industries by virtue of lowering the cost of distance and their competitiveness with urban firms.*

Like infrastructure, new technology is also perceived as a two-edged sword though it drives change in the rural non-farm economy. Haggblade et al., (2007:322) observe that:

> *New technology has stimulated rapid change in rural non-farm activity across a broad range of developing country settings. In some cases, it opens vast new vistas and powers rapid rural non farm growth. In other instances, the new technology and quality standards brandished by*

expansionist large enterprises may enable them to out compete legions of smaller, outmoded rural non-farm firms al.

3.4 NON-FARM DIVERSIFICATION AND POVERTY REDUCTION

The income-diversification literature converges on an estimate of roughly 40 percent of African rural household income on average being derived from non-farm sources (Bryceson, 1999:17). Because non-farm activities are monetized to a much larger extent than is agricultural production, non-farm earnings constitute an even larger share of cash income (Haggblade,et al.,1988:5). Even if the impact of non-farm earnings on relative income equality is uncertain or negative, access to non-farm earnings nonetheless improves the absolute income levels of the poor.

"The non-farm sector offers potential to absorb a growing rural labor force, slow rural - urban migration, contribute to national income growth, and promote a more equitable distribution of income" (Lanjouw and Lanjouw,1997:21). Given low capital requirements and the small scale nature of many rural non-farm enterprises, poor households dominate many of them. "For these reasons, policy makers are increasingly forced to view the rural non-farm economy as a potentially important contributor to foster local economic growth and alleviate the rural-urban income gap and rural poverty" (Davis and Bezemer, 2004:11). There is thus a growing consensus that poverty declines as the share of income from non-agricultural sources rises. The problems of agriculture and large scale industries in African countries reinforce this view.

Ellis (2004) makes the point that occupational diversity needs to be distinguished from the income proportions to which it gives rise.

The better off and the poor may exhibit similar degrees of diversity (as measured, for example, by count frequencies of the different occupations in which they are engaged) yet the better off tend to diversity in the form of non-farm business activities (trade transport, shop keeping, brick making etc).While the poor tend to diversify in the form of casual work, especially on other farms. Diversification by the poor therefore tends to leave them

still highly reliant on agriculture, while that by the better off reduces such dependence (Ellis, 2004:9)

Four welfare enhancing roles of the rural non-farm sector are commonly highlighted in the literature;

- during the slack season, farm households find a second employment and income source;
- the non-farm sector increases the incomes of marginal producers, and by this decreases inequality and poverty;
- in a rural setting, where many farm households have a hard time even achieving the subsistence level by means of agriculture, non-farm activities serve also the purpose of generating cash income;
- various linkages between the non-farm sector and the agricultural sector are being generated that might enhance also agricultural production and / or productivity and hence rural development (Tegegne,2000; Gordon and Craig,2001; Start and Johnson, 2004).

The contribution of the rural non-farm economy to poverty reduction is not, however, a clear-cut matter. Lanjouw, in Haggblade et al., (2007:55), observes:

In countries like China, rural poverty has been declining alongside a growing non-farm sector. But this does not necessarily mean that the non-farm sector was responsible for lifting the poor above the poverty line. The direction of causality could be in the opposite direction.

The poor commonly remain confined to the low-return segment of the rural economy. Policy makers are thus advised not to presume that an expanding rural non-farm economy will necessarily translate into declining poverty, "However, while these activities do not lift the poor out of poverty, they play a critical role in protecting the poor from further declines in income"

3.5 LINKAGE BETWEEN AGRICULTURE AND NON-FARM ACTIVITIES

The rural non-farm economy passes through several distinct stages of development. Hagg -blade,et al, (2007:389) had laid down two key distinctions:

a) The early stage in rural development, when communication and transport costs are high, outside influences are weak, and the rural non farm economy is protected from urban competition. Growth at this stage is driven primarily by economic forces internal to the rural sector. Among these, agriculture is typically the most important.
b) The later stage, where rural infrastructure improves and rural economies are opened up to outside influences. Urban manufactures penetrate the rural economy, as do modern inputs, technologies and marketing methods. During this phase the rural non-farm economy faces increased competition and pressure to change.

Although agriculture remains the backbone of most rural economies like that of Ethiopia, the notion of rural economies as purely agricultural is nowadays considered simplistic and obsolete. Several studies have in the past pointed to the importance of non-agricultural employment for rural households in Sub-Saharan Africa (Bryceson, 1993; Hussien and Nelson, 1999; Davis, 2004). The view that African farmers are strictly self-sufficient, subsistence-based producers has long been discarded.

The prevailing conception vis-à-vis agriculture and the non-farm economy is that agricultural development is critically important for creating an environment in which the non-farm sector can prosper, and that rural non-farm activities have close links with the agricultural sector. Agriculture stands out as the most obvious activity with the potential to increase rural incomes because of the number of people directly involved and its production linkage. "The rural non-farm economy is more active when and where the local farm economy is prosperous" (Davis, 2004:15).

As the largest employer in rural areas, the largest income generator and the largest source of raw materials, agriculture clearly plays a predominant early role, influencing the size and structure of the rural non-farm economy. In many settings, agriculture plays a

predominant role governing the scale, structure, and evolution of rural non-farm activity (Haggblade, et al., 2005). A sound and less risky agricultural base provides a strong foundation on which other activities can develop (Gordon and Craig, 2001:35).

Many writers, however, point out that the enthusiasm for agriculture as a motor for poverty reduction in low-income agrarian economies needs to be treated with some caution. They express doubt that the current promotion of agricultural growth solution to rural poverty in Africa will have the desirable consequences that are predicted for it. The agriculture-led growth position, they maintain, is flawed.

Frank Ellis, for instance, observes:

> *Post-liberalization enthusiasm for utilizing agriculture as the main vehicle for poverty reduction needs a reality check by reference to several facets of farm-based livelihoods in SSA that counteract the potentially beneficial effects of rising yields, if such can be secured (Ellis, 2005 :8).*

On another occasion he notes:

> *This is not to say that there is no poverty reduction mileage to be gained through judicious support to agriculture. However, the nature of that support would be better oriented to policy levers that have generally beneficial effects on all types of economic activity in rural areas, and on rural-urban mobility, rather than being focused narrowly on agriculture alone (Ellis , 2004: iii).*

Two contrasting positions thus seem to define the debate on the role of agriculture in development of the rural economy in low income countries: the agriculture 'optimist' and the agriculture 'skeptic'. The agriculture optimist tends to see livelihood diversification as emerging from agricultural success: agriculture as the driver of non-farm opportunities in rural areas. Rural livelihoods and welfare, in this view, have agriculture as their bedrock.

The opposing view taken is that of the "agriculture skeptic" who would tend to be dubious about most, if not all, of those propositions. The agriculture skeptic is more likely to see diversification as responding to the failure of agriculture. "The rural non-farm economy cannot be expected in most cases to drive the rural economy" (Davis, 2004:23). Poverty and vulnerability are associated more with undue reliance on farming than the converse. "Those farms achieving yield growth do so do to cash resources generated from non-farm and urban activities, rather than being the origin of growth in such activities as proposed in the agriculture-led growth models" (Bahigwa, Mdoe and Ellis, 2005:1). Future poverty reduction strategies thus need to be oriented more to increasing people's mobility out of agriculture than to relying on unwarranted optimism about the beneficial outcomes of agricultural yield growth. "It is mobility that is possibly a more powerful factor in rapid economic change than the primacy of agriculture touted by the agriculture-led growth school" (Ellis, 2005:16).

Nevertheless, it is worth emphasizing that from a poverty reduction policy point of view, neither of these positions should be taken as absolute. A more balanced view of rural-urban interaction is required. Agriculture is the foundation of agrarian societies and its development is a premise for the development of other occupations.

The rural non-farm economy alone cannot act as a driver for the rural economy, independently of agriculture or other primary activities However, certain non-farm activities are not only reactive to rising production and income in primary sectors but can also facilitate, or even initiate, growth in these primary activities. "Seeking to raise yields and outputs in small farm agriculture has a valid place in contemporary poverty reduction strategies in Africa. However, it will make a contribution only. It cannot single-handedly provide the motor of poverty eradication in SSA. Accelerated rural-urban transition will be required as well. "Linkages work both ways" (Davis, 2004:23).

The typologies of linkages fall into four main categories:

a) Production linkages that include forward linkages from agriculture to non-farm processors of agricultural raw materials as well as backward linkages to input suppliers of farm equipment, pumps , fuel , fertilizer, and repair services;
b) Consumption linkages include spending by farm families on locally produced consumer goods and services;
c) Factor market linkages which include links between labor demand and rising rural wage rates. Cash surpluses from agricultural sales also frequently finance non-farm investments, while reciprocal reverse flows from rural non-farm activities finance the purchase of agricultural inputs;
d) Productivity linkage – low food prices for instance may increase the productivity of poor manual laborers.

Doubters about the power of agricultural growth linkages, however, make three principal observations:

- First, they note that forces other than agriculture may strongly influence the growth of the rural non-farm economy.
- Second, they note that agricultural income growth may stimulate demand from urban rather than rural products.
- Third, the doubters suggest that investment linkage emanating from agricultural growth may result in a transfer of savings and investment out of the rural region.

Available empirical research also suggests that firm sizes tend to be smaller the further they are located into the rural hinterland, and that more than 95 percent of rural non farm enterprises employ five people or fewer. The cost of distance tends to limit the size of the potential customer base in remote areas. "Large-scale, relatively capital intensive firms in developing countries tend to locate in more highly populated areas where greater opportunities exist to exploit pecuniary external economies. In contrast, rural firms tend

to be less capital intensive the greater the distance from sources of financial and physical capital (Rondinelli, 1988)

3.6 NON-FARM LIVELIHOOD DIVERSIFICATION IN THE CONTEXT OF DEAGRARIANIZATION AND DEPEASANTIZATION

Barring the debate on the relative importance of agricultural intensification/extensification and non-farm diversification, what is clearly evident is that the extent and relevance of non-agricultural rural employment is growing universally. Bryceson named this process *deagrarianization*.

Deagrarianization is a concept explaining the nature of the relationship between agriculture and non-agricultural activities in rural areas. The concept presumes that there is a shift of people and resources from agricultural production to non-agricultural production as an option for independent livelihood in rural areas. This shift is induced by, for instance, the fruitlessness of agricultural vocation due to population pressure on land, ecological failure and the changing socio-economic structure of the society. "According to this argument, an active process of 'deagrarianization' is occurring whereby farming becomes a part-time , residual, or fall-back activity and livelihoods become increasingly oriented to non-farm and non-rural activities"(Ellis,2004:5) In Sub-Saharan Africa's context, deagrarianisation is considered to be part of the broader process of depeasantisation.

Bryceson (1999) suggest that the process of de-agrarianisation ought to be understood as part of a wider process of rural transformation, one that began in the 19th century industrial revolution, accelerated in the 20th century and has been characterized by enormous geographical unevenness. Nowadays, less than half of the world's population lives in rural areas. We are witnessing today a process in the developing world that has already been completed in the west.

That a process of depeasantisation is also underway in Sub-Saharan Africa is not a point to be debated. Sub-Saharan Africa is becoming less rural in character, and associated

with this process of deagrarianization is a declining reliance by many rural households on income from farming.

While peasants' agricultural commodity production as a percentage of GDP has been declining rapidly over the past decades, the depeasantisation process, however, is uneven, diverse and location specific. That it is far from complete is indicated by strong persistence of peasant subsistence farming. Ethiopia is one of those countries where depeasantisation has least progressed, 85 per cent of its population being peasant subsistence farmers.

Bryceson also argues that in Sub-Saharan Africa the shrinkage of the agricultural sector is relative to growth in the service sector rather than industry. The service sector rather than the industrial sector is the key sector of expansion. "Many of the assumptions regarding the presence or potential of rural industrialization in Sub-Saharan Africa are presumptuous" (Bryceson, 1999:33). Davis (2004:33), in the same vein argues that "much of rural non-farm activity arises in trading and the processing of agricultural and other primary products; rural manufacturing tends to comprise only a small part of the rural non-farm economy". Much of the literature thus points not to manufacturing, but rather to commerce and services as key growth sectors over the course of Africa's rural structural transformation.

The key role of rural towns and their infrastructure in the development of non-farm enterprises is also highlighted. Available evidence also indicates dramatically higher proportion of non-farm activity in rural towns than in dispersed rural settlements (Haggblade, 2006)

3.7 RESEARCH ON RURAL LIVELIHOOD DIVERSIFICATION IN ETHIOPIA

Rural structural transformation involving diversification out of agriculture is also increasingly becoming both research and policy issue in Ethiopia. As elaborated by PASDEP, the rural development strategy of the country will be broadened beyond the initial focus on agricultural intensification, with recognition of the need to stimulate income diversification and rural-urban linkages. Overall, the PASDEP continues to

advocate ADLI strategy, but adopts a more balanced approach. This is done by emphasizing the importance of private initiative of rural households, income diversification and commercialization of agriculture.

There is a growing literature dealing with rural non-farm livelihood diversification in Ethiopia. Some of these are regional (Demissie and Workineh 2004, Tassew 2000, Carswell 2002, Mulat 1997). Others focus on drought periods (Dercon and Krishnan 1996, Block and Webb 2001, Fredu et al 2006). The one by Adugna (2006), however, covers different regions and cropping systems of the country except pastoralist areas.

The authors agree that the performance of the agricultural sector in Ethiopia is weak and that restrictive policies, drought, environmental degradation and population pressure are among the major bottlenecks in the development of agriculture.

On the basis of a study carried out in three sites in southern Ethiopia, Carswell (2002) concludes that lack of credit and lack of labour are the two key barriers to entry for diversification activities. The key policy challenge identified in the study is how to find effective ways of articulating formal credit delivery and informal systems. Other key institutions identified include markets and institutions around labour and natural resource tenures. The institution of caste, the traditional authority which it implies, kinship and social network are also deemed to have a critical role in livelihood strategies of people in the study area.

Demissie and Workneh (2004) have used data obtained from the "Fifth Round Ethiopian Household Survey" to examine factors involved in rural household choice of livelihood diversification strategy in southern Ethiopia. Their findings indicate that asset endowment of households has a significant effect on household's choice of livelihood diversification strategy. The pattern of livelihood diversification that emerged from their study shows that livestock has an important role in diversification of livelihood into non-crop activities. Labour is also an important resource that has positive impact on diversification. Size of cultivated land, cash crop production and access to extension

service are found not to encourage diversification. They are rather important factors in enhancing crop farming.

An important conclusion of this study is that "households use small part of their off-farm income and remittance for investment in farm and off-farm activities, and that they use the largest portion of the income for maintaining consumption."

Mulat's (1997) study is part of the Deagrarianisation and Rural Employment (DARE) programme and thus attempts to investigate the extent of de-agrarianisation in North Shoa (Debre Berhan, Ankober and Gera Medir). The study postulates five categories of factors to influence decision regarding participation in non-farm activities: personal attributes, farm income, farm attributes, food balance (defined as grain sales less grain purchase) and access to urban markets. The conclusion that emerged from this study is that "participation in non-farm employment is largely dictated by the need to meet subsistence food requirements". The regression analysis carried out indicates that the tendency to engage in non-farm employment declines if the food balance position of a family is favorable.

Tegegne's (2000) study was carried out in Kacha Bira and Damot Gale Woredas of southern Ethiopia in an attempt to investigate the influence of non-farm activity on the production decision of farmers, and to identify the factors influencing non-farm activity. The study found that in the study sites the farm sector is characterized by shortage of land, low yield of crops, shortage of draught animals and lack of grazing land. The inference made is that the farm sector is not adequate to support the high density of population in the study sites. Farmers in the study sites, therefore, have shown higher involvement in non-farm activities and income from non-farm sources play a major role in their livelihood. The main non-farm activities are trade and handicraft. Those participating in non-farm activities are found to be relatively younger and more educated. Family size was not found to be a significant variable, while villages near urban centers tend to have more number of households earning non-farm income and engaging in trade activities.

Tassew's (2000) study focuses on Northern Ethiopia, particularly Tigray. The study, on the basis of farm household survey data collected from Tigray, shows that off farm income can be complementary to farm income if farm households are constrained in their borrowing. It also shows that farm households with more diversified sources of income have a higher agricultural productivity. One of the key findings of the study is that expenditure on farm input is dependent not only on agricultural production, but also on off-farm income because of capital market imperfections (borrowing constraints). Farmers involved in better paying off-farm activities such as masonry, carpentry and trading are in a better position to hire farm labour. In the study area a substantial proportion of farm households (81%) have diversified their income into off-farm activities.

Fredu et al (2006), using data from 385 rural households in Northern Ethiopia, found out that diversification intensifies income inequality. A rise in income from non-farm income and livestock, according to their study, increases income inequality. They also found that social capital is an important factor determining non-farm income but not so for crop income.

Dercon and Krishnan (1996), using data on rural households from Ethiopia and Tanzania, suggest that constraints on entering activities is one of the main explanations for diversifying income sources. Certain activities have very low entry constraints but others hare high entry constraints in the form of special skills or capital needs. They found that having access to substantial livestock income results in significantly higher income and consumption outcomes in both countries, while off-farm activities with low-entry constraints seem not to contribute to a higher mean consumption and assets. Furthermore, they found that a higher income earning capacity due to more male labour and a larger farm size allows households to take up high return activity.

Adugna (2000), using survey data from six regions and fifteen survey sites, shows that participation in off-farm activities is mainly driven by demographic factors, whereas land and other asset ownership as well as crop production and income affect intensity of off -

farm activities. The study also concludes that it is only during slack harvest season that off-farm and on-farm activities complement each other.

Block and Webb (2001) carried out a survey of 300 households from drought-prone sites during harvest seasons of 1989 and 1994. They found that wealthier households tend to have more diversified income streams. They also found that personal perceptions of risk factors guided subsequent diversification decisions.

One can conclude from the above works on Ethiopia that diversification decision is driven by differing factors and variables and its effects also vary.

CHAPTER 4

BACKGROUND ON THE STUDY POPULATION AND THE FARM ECONOMY

4.1 LUME WOREDA AND THE STUDY KEBELES

Lume Woreda is found in East Shoa Zone of Oromiya Region bordering Gimbichu Woreda in the north, Dugda Bora Woreda in the south, Adaa Chukala Woreda in the east and Adama Woreda in the west. The total area of the Woreda is 75,220 square kilometers. The altitude varies between 1,500 and 2,300 meters above sea level. The Woreda has 30% of its land in the *Dega* zone, 45% in the *Weina dega* zone and 25% in the *kola* zone. The Woreda recieves an average rainfall of 850 mm, varying between the lowest 500 mm and a maximum of 1,200 mm. The average temperature in the Woreda is 15°centigrade, varying between 10° and 20°centigrades.

The topography is plain (60%), mountain (33%) and gorge (7%). The soil type is vertisol (49%), rendinas and phacozems (37%), and cambisoils and luvisoils (14 %)

Lume Woreda has 35 kebeles with a total population of 117,099. The rural population is estimated at 75849, of which 38759 are males and 37090 are females. The urban population of the Woreda is 19633 males and 21587 females, totaling 41,250. Mojo is the capital of the Woreda. The major land use of the Woreda is intensively cultivated land (Table1) Degraded land and water body is also significant.

Table 1: Land use / Cover in Lume Woreda

Land use type	Area (hectare)	Percentage
Intensively cultivated land	51830.41	68.9
Degraded land	6740.21	8.96
Rural settlement	3490.47	4.64
Plantation forest	2462.38	3.27
Dense shrub land	802.41	1.07
Urban	1504.51	2.0
Open grass land	361.08	0.48
Small holder irrigated farm	1424.27	1.89
Water body	6604.8	8.78
Total	**74220.54**	**100**

Source: Lume Woreda, Agriculture Office, February 2008.

The study sites selected for the research are two kebeles i.e. Tede Dildima and Shera Dibandiba kebeles.

4.1.1 TEDE DILDIMA

Tede kebele is located at a distance of 5 kilometers from Mojo town. The old and abandoned road to Adama crosses the kebele. The total population is 2,532, of which 1,385 are male and 1,147 female. The total area of the kebele is 2,020 hectares. The major land use of the kebele is farming / cultivated land, while area demarcated for forest protection is also significant (Table 2).

Table 2: Land use / Cover in Tede kebele

Land use	Area (hectare)	Percentage
Cultivated land	996	49.3
Open grass land	101	5
Area demarcated for plantation forest	645	31.9
Household domicile	42.75	2.1
Other	235.25	11.6
Total	2020	100

Source: Tede Kebele Administration office, February 2008.

Major crops grown in the kebele are teff and wheat. Peas, maize, barley, lentil, beans, haricot-beans, chick-pea and pig-pea are also grown. The cultivated area under different crop types is shown in Table 3.

Table 3: Crop types and area cultivated in Tede kebele

Crop type	Area(hectare)	Percentage
Teff	647.4	65
Wheat	234.06	23.5
pea	29.88	3
Maize	14.94	1.5
Barley	19.92	2
Beans	14.98	1.5
Haricot bean	24.90	2.5
Lentil	9.90	1
Total	996	100

Source: Tede Kebele Administration office

As shown in Table 3, farmers in the kebele only grow food grains, largely wheat and teff. The cultivation of perennial or cash crops is quite limited. Livestock production also constitutes part of the mixed farming system, providing draft power, producing meat and

milk and serving as source of cash income. The major livestock in Tede kebele are oxen, cow, donkey, sheep and goat.

The kebele's natural resources, apart from agricultural land, are river sand and quarry stone, which are providing income source for significant number of the kebele's population. Clay soil is also available and is used as raw material by women for pottery production.

As regards basic service infrastructure, the kebele has one primary school (grade1-8), one health post, one motorized bore-hole for water supply and one Farmer Training Center (FTC). On the other hand, electricity and land-line telephone are not available. Wireless and mobile telephone service is available.

4.1.2 SHERA DIBANDIBA

Shera kebele is located at a distance of 5.5 kilometers from Mojo Town. The total population is 2933, of which 1435 are male and 1398 female. The total area of the kebele is 1490 hectares. Like Tede, the major land use of Shera kebele is cultivated land, while newly developed plantation forest is also significant (Table 4).

Table 4: Land Use/ Cover in Shera kebele

Land use	Area (hectare)	Percentage
Cultivated land	1265	84.9
Household domicile	121	8.1
Plantation forest	72	4.8
Land allocated for services (schools, church etc)	12	0.8
Seed station	7	0.47
Barren land	13	8.7
Total	1490	100

Source: Shera Kebele Administration office

The major crops grown in Shera are similar to Tede: teff and wheat. Pea, maize, barley, beans, haricot beans and lentil are also grown. The cultivated area under different crop types is shown in Table 5.

Table 5: Crop Types and Area Cultivated in Shera kebele

Crop type	Area(hectare)	Percentage (%)
Teff	824	65.1
Wheat	230	18.2
Pea	18	1.4
Maize	28	2.2
Barley	40	3.2
Beans	25	2.0
Haricot bean	33	2.6
Chick pea	26	2.0
lentil	16	1.3
Pig pea	25	2.0
Total	**126**	**100**

Source: Shera Kebele Administration Office

The major food grains and livestock in Shera are similar to that of Tede kebele. Teff and wheat constitute the largest share of cultivated crops, 65.1 and 18.2 percent, respectively.

Similarly to Tede, Shera kebele is endowed with substantial resources of river sand and stone that provide income generation opportunities for significant numbers of the inhabitants. Unlike Tede kebele, however, clay soil doesn't exist.

As regards basic service infrastructure, Shera kebele has one primary school (grade 1-8), one kindergarten school, one health post, a motorized bore hole for water supply, and a farmer training center (FTC). A major difference from Tede as far as infrastructure is concerned is that Shera has electricity service which covers about 70% of households. Wireless and mobile telephone services also exist.

4.2 DEMOGRAPHIC AND SOCIAL CHARACTERISTICS OF THE STUDY POPULATION.

Various demographic and social attributes of the 200 sample households from the two kebeles were collected. In order to see variations between samples, the data is summarized by kebeles. The sex, age, literacy, level of education and family size of the sample households are presented in Table 6.

The majority of the household heads in both kebeles are males. In Shera only 17 households out of the total of 100 are female-headed while in Tede 18 households are female-headed out of the sampled 100 households. The mean age for the whole sample is 45.28 years while for Shera and Tede it is 45.4 and 45.1 years respectively. The modal age when both kebeles are considered together is 50. The maximum age is 78 and the minimum 21.

The mean family size for the whole sample population is 5.81. The mean family size in Shera is 5.83 while in Tede it is 5.78.

Regarding literacy, 62 % of the study populations (58 % in Shera and 66 % % in Tede) can read and write in Afaan Oromo. The corresponding figure for arithmetic literacy (numeracy) is 56 % (53% in Shera and 59 % in Tede.)

Household heads with education up to 3rd grade number 67 out of the 200 (37 in Shera and 31 in Tede). Nine percent of the total sampled household heads have attained education up to 6th grade, and only 2 percent have attained 12th grade.

Table 6: Sex, Age and Education of Household Heads

	Sex		Age				Formal Education (years)				Afaan Oromo Literate	Amharic Literate	Arithmetic Literate
	Male	Female	15-29	30-49	50-64	65+	None	1-6	7-9	10-12			
Shera Dibandiba	17	83	18	34	40	8	22	63	10	6	21	58	53
% of total	8.5	41.5	9	17	20	4	11	31.5	5	3	10.5	29	26.5
Tede Dildima	15	85	7	58	22	13	20	56	16	7	19	66	59
% of total	7.5	42.5	3.5	29	11	6.5	10	28	8	3.5	8.5	29	29.5
Total	**32**	**168**	**25**	**92**	**62**	**21**	**42**	**119**	**26**	**13**	**40**	**124**	**112**

Source: Own survey

Table 7: Distribution of Households by Dependency Ratio

Kebele	Dependency Ratio					
	0.0 - .499	0.5 - 0.999	1-1.499	1.5 -1.999	2 - 2.999	3 +
Shera Dibandiba	34	29	19	8	7	3
% of total	17	14.5	9.5	4	3.5	1.5
Tede Dildima	20	23	38	11	6	2
% of total	**10**	**11.5**	**16.5**	**10.5**	**3**	**1**
Total	**54**	**52**	**57**	**19**	**13**	**5**

Source: own survey

Forty percent of the samples of households are poor while 32.5 percent are medium and 27.5 percent rich. This wealth stratification is in line with the methodology adopted which laid down that a pre-determined proportion of households will be selected from three wealth groups on the basis of an RRA wealth- ranking exercise.

A family is considered poor in the community if it exhibits the following characteristics:

- Landless
- Lacks oxen and seed
- Members earn their living by casual labour or hired on other peoples farm

Sellers of local drinks are also considered poor.

A family having land and oxen and who tills its own or contracted land is considered to belong to the medium wealth group. A rich person is one who possesses significant assets other than land, is involved in trading and/or participates in other non-farm activities. Such people are also expected to have significant savings in bank and provide to their children the means to decent education.

All households in both Kebeles own their own dwelling and the mean number of rooms is 2.29. The wall material of 99 percent of dwellings is wood and mud. Seventy nine percent of houses in Shera and 82 percent in Tede have corrugated iron sheet roof material. The rest have thatch and grass roof (Table 8).

There is a glaring contrast between the two kebeles with regard to source of light. In Tede there is no electricity and therefore the predominant source of light is kerosene. In Shera, however, 41 out of the 100 sample households use electricity as a source of light. Despite the availability of electricity about 30 percent of households in Shera are using kerosene as their main source of light while the remaining 29% use firewood and other sources.

Table 8: HOUSING CONDITION

Kebele	Wall material			Roof material	
	Wood & mud	Wood & grass	Cement & stone	Corrugated Iron sheet	Thatch &grass
Shera Dibandiba	99	1	-	79	21
% of total	**50**	**0.5**	**-**	**49**	**54**
Tede Dildima	99	-	1	82	18
% of total	**50**	**-**	**0.5**	**51**	**46**
Total	**198**	**1**	**1**	**161**	**39**

Source: Own Survey

Collected firewood is the main source of cooking fuel in both kebeles (27 percent of households in Shera and 25 percent in Tede). Plant and animal residue come second (22 percent in Shera and 21 percent in Tede)

The main source of income in both kebeles is agriculture followed by river sand and stone quarrying as well as formal and informal trade. Sixty seven of the 100 households in Shera earn their living from agriculture. The corresponding figure in Tede is 81. All in all, 74 percent of the study households have responded that agriculture is their primary source of income. Those whose primary source of income is trade constitute 15.5 percent of the sample. Public sector employees are nine in number (4.5%). The rest (6%) are private sector employees, casual laborers and pensioners.

Forty four percent of the total households have no secondary source of income, while 27.5 percent have responded to derive their secondary source of income from trade and 9 percent from agriculture. The remainders, i.e. 19.5 percent derive their secondary source of income from public and private sector employment, casual labor, rent and gifts and donations received from relatives.

4.3 THE FARM ECONOMY IN THE STUDY SITES

4.3.1 LAND

The mean land holding in the study sample is 2.37 hectares. The minimum and maximum are 0.4 and 4.75 hectares respectively. Because people rent out their land partially, or in very rare cases entirely, landholding can differ from land cultivated. The mean cultivated land is 2.93 hectares, with a maximum of 19.5 hectares. The size distribution of land ownership is shown in Table 9.

Table 9: DISTRIBUTION OF LAND OWNERSHIP

Land size in hectare	Land "owned"*		Land total**		Land cultivated***	
	Shera	Tede	Shera	Tede	Shera	Tede
Landless	32	18	29	17	24	10
0.001-0.299	1	1	-	1	1	1
0.3-0.499	5	4	4	3	2	5
0.5-0.999	6	10	8	11	6	6
1-1.499	5	6	3	6	8	5
1.5-1.999	9	7	8	7	9	5
2-2.499	29	8	34	6	20	7
2.5-2.999	5	7	6	8	9	10
3-3.499	3	15	3	15	9	15
3.5-3.999	1	7	1	7	1	9
4.-4.999	4	9	4	9	5	14
5-5.999	-	3	-	3	-	6
6+	-	5	-	7	6	7
Total	**100**	**100**	**100**	**100**	**100**	**100**

Source: Own survey

* Land "owned" means land for which official certification of "ownership' is conferred by the authorities and is currently being cultivated by the household.

**Land "total" include the above and also currently rented out and sharecropped.

The mean number of plots for the study sites is 4.39 (4.57 in Shera and 4.23 in Tede). Nine percent of households responded that they have one plot, 26 percent 2 to 4 plots, and 23 percent 5 plots. Twenty percent of households have 6 to 10 plots. (Table10). Land fragmentation thus seems to be acute in the study sites.

Table 10: Household Distribution by Number of Plot of Land

			Number of Plots											Total
			0	1	2	3	4	5	6	7	8	9	10	
Kebele	Shera	Count	27	11	4	8	5	22	7	11	4		1	100
		% of Total	13.5%	6%	2.0%	4.0%	2.5%	11%	4%	5.5%	2%		.5%	50.0%
	Tede	Count	13	7	13	9	15	24	10	5	3	1		100
		% of Total	6.5%	4%	6.5%	4.5%	7.5%	12%	5%	2.5%	2%	.5%		50.0%
Total		Count	40	18	17	17	20	46	17	16	7	1	1	200
		% of Total	20.0%	9%	8.5%	8.5%	10%	23%	9%	8.0%	4%	.5%	.5%	100%

Source: Own survey

Farming households were also asked about the fertility of their land. Fifty eight percent of households have rated their first plots as fertile, 30.6 percent semi-fertile and 11.3 percent infertile.

Apart from good fertility, most plots are also found in plain topography as the area is not hilly, steep or gorge. Like most parts of the country, owner cultivator is the predominant type of land tenure in the study area. All households cultivate their own holding while 9 households (4.5 percent) rely solely on rented or sharecropped land as source of agricultural income. Seventy six households out of the total 200 cultivate land rented from others in addition to their own holding. Forty of these are from Shera and 36 from Tede. The mean expenditure on hired farm labour in Shera is 3525.6 birr and in Tede 2160 birr. The mean expenditure on hired farm labour for the whole sampled households

is 2874 birr. Only 6 households have entered a share cropping arrangement in addition to their holding. Twenty households have rented out part of their holding while 2 have share cropped it.

4.3.2 CROPPING PATTERN, OUTPUT AND YLEID

The main types of crops grown in the study area are teff and wheat. Other cereals grown are barley, maize, chick pea, pig pea, haricot beans and beans; but these are limited in their coverage.

The mean annual teff output of sampled households in Shera and Tede kebeles is 21.6 and 13.8 quintals respectively, while the corresponding figures for wheat output are 6.64 and 4.6 quintals. The mean output of teff and wheat in the whole study sample is calculated to be 17.43 and 5.49 quintals respectively. The average yield of teff in Shera and Tede is 7.76 and 4.96 quintals per hectare. The average yield of teff for the entire sample households is 6.2 quintals per hectare.

The average yield of wheat in Shera is 2.57 quintals per hectare while in Tede the average yield of wheat calculated is 1.64 quintals per hectare. The mean yield of wheat in the study sample is calculated to be 2.03 quintals per hectare

4.3.3 CONSTRAINTS TO AGRICULTURAL PRODUCTION

Asked about primary and secondary constraints to agricultural production, 50 percent of households in Shera and 47 percent in Tede have responded that high price of inputs is the primary constraint (Table11). Scarcity of land is considered a primary constraint by 44 percent of respondents in Shera and 30 percent of respondents in Tede. High price of inputs is considered the second most important constraint by 31 percent in Shera and 18 percent in Tede, while 26 percent in Shera and 18 percent in Tede ranked land scarcity as the second major constraint.

Declining soil fertility is considered a primary constraint by 16 percent of respondents in Tede while the corresponding response in Shera is only 4 percent. About 16 percent of

the total respondents, however, consider that decrease in soil fertility is the second most important constraint for agricultural production.

While there is a heightened perception that input prices are high, input supply however, doesn't figure high in the respondents' rating of constraints as only 0.5 per cent of the total surveyed households have responded that shortage of inputs is a primary constraint.

Shortage of rainfall, draft power and labour are also not considered primary constraints by the majority of respondents.

TABLE 11: Constraints to Agricultural Production

			Primary Constraint To Agricultural Production							Total
			Scarcity of land	Declining soil fertility	Shortage of labour	Shortage of rainfall	Shortage of oxen	Shortage of inputs	High price of inputs	
Kebele	Shera	Count	44	4		1	1		50	100
		% of Total	22.0%	2.0%		.5%	.5%		25.0%	50.0%
	Tede	Count	30	16	3	2	1	1	47	100
		% of Total	15.0%	8.0%	1.5%	1.0%	.5%	.5%	23.5%	50.0%
Total		Count	74	20	3	3	2	1	97	200
		% of Total	37.0%	10.0%	1.5%	1.5%	1.0%	.5%	48.5%	100%

SOURCE: OWN SURVEY

4.3.4 CROP SALE AND PURCHASE

All farming families in the study population bring their crop to market. They meet their various cash obligations (taxes, purchase of consumer goods, debt repayment etc.) through crop sales. Farming households also buy crops from the market. They usually purchase those items they themselves don't produce. A teff producing farmer may, for instance, purchase wheat or lentil using the proceeds from the sell of teff. Most farmers in

the study population have purchased one or more types of crops in the year. In Shera 20 households have reported to have purchased crops, and the mean expenditure calculated is 1017.4 birr. In Tede 32 households have bought crops from the market and their mean expenditure is 645.3 birr.

Twenty eight of the hundred households interviewed in Shera have sold grain. The mean sales value is 6430.5 birr. In Tede 22 households have sold grain in the year and the mean sales value was 3184 birr. The mean grain purchase for the total sample of 200 house holds is calculated to be 830.4 birr and the mean grain sold on the market is 4799.2 birr.

Food balance, defined as food grain sold less food grain purchased, could be positive, negative or zero for particular households though it may be positive when a kebele or the whole sample is considered. Twenty nine households in Shera kebele and 25 households in Tede have negative food balance, which means that they are net buyers of grains. The mean food balance for the whole study sample, however, is 3968.7 birr while for Shera and Tede kebeles it is 5412.9 birr and 2538.9 birr respectively.

4.3.5 LIVESTOCK

Farmers in the study sites own different types of livestock. Cattle (including oxen, cows, bulls, heifer and calves) poultry, sheep, goats and donkey are owned by most farm households. The average number of oxen owned is 3.48. The corresponding figure for cows, sheep, and goats is 1.5, 2.98 and 1.62 respectively. Donkeys are widely used as pack animals and farming households, on average, own 2.1 donkeys.

Animals are fed on communal grazing land, which is reported to be diminishing fast, and crop residues are an important source of feed. Major livestock diseases in the area are sheep pox, pasteryuelosis, anthrax, blackleg, PPR, respiratory diseases, lumpy skin disease (LSD) and internal parasites.

4.3.6 USE OF DRAUGHT ANIMALS

Like in many parts of the country, draught animals are the sources of power for plowing in both kebeles. Land preparation is carried out with wooden plough and a pair of oxen. Seeds are also covered by plowing with a pair of oxen. The oxen are used for threshing as well.

About twenty six percent of farmers own a pair of oxen. About 14 percent own only one ox. About 45 percent of farmers own 3 to 5 oxen. Those who own more than 5 oxen are 13.5 percent. Shortage of draught animals, hence, seems to be not a problem for most farm households. Those who own one ox only overcome shortages by pairing with neighbors, friends or relatives.

4.3.7 USE OF INPUTS

The use of commercial fertilizers is very widespread in the study kebeles. All farm households in the sample apply Urea and Dap fertilizers. The mean Urea purchase in 2007 is 142 kilograms while the mean Dap purchase is 260.8 kilograms. The mean total purchase is 402.8 kilograms. One hundred thirty nine farmers have reported having used herbicides. No farmer has reported to have used fungicide. The mean herbicide purchase in the year was 60.4 birr, and the mean insecticide purchase 34.75 birr. Eighty seven farm households have also reported to have purchased veterinary medicine, the mean purchase being 21.8 birr.

4.3.8 LABOUR

All agricultural operations, ranging from cultivation of the land to weeding and harvesting involve heavy manual work. While plowing is done by men because it is believed to demand heavy muscular exertion, in weeding and harvesting both men and women participate. Transportation is also another activity which requires manpower as harvest is transported from the field and output to the market with human as well as animal power.

In both Shera and Tede kebeles, there is labor shortage during harvest time. Of the various agricultural activities, harvesting and threshing are the ones reported by households and key informants to require maximum manpower within a short period of time. Migrant labour is thus widely employed in the harvest season. Migrants come from wide geographic locations. As reported by the inhabitants, most migrant laborers originate form the Amhara Region (Gondar, Gojam, Wollo, North Shoa). Some also originate from Oromiya woredas in North Shoa (e.g Selale). After the harvest season is over, the majority return to their home land while very few remain to work in the area permanently as farm laborers.

The wage for harvesting 1 "kert" of land varies between 80 birr and 100 birr (1'kert'is equivalent to a quarter of a hectare). The peak harvest months where in-migration is maximum are October and November.

Sixty five households in Shera and 81 households in Tede have used hired labour during the year. The mean household expenditure on hired labor in Shera was1095 birr, ranging from 50 birr to 8000 birr. The corresponding figure in Tede is 879 birr, ranging from 80 birr to 5200 birr. The mean expenditure on hired labour for the whole sampled households is 979.2 birr.

4.3.9 HOUSEHOLDS' PERCEPION ABOUT FARMING AND DIVERSIFICAION

The study has attempted to assess households' attitude to farming and non-farm diversification by asking them questions framed for this purpose. When asked "do you believe you will be food secure and self-sufficient if you do farming alone?" 89 household heads in Shera and 72 in Tede have responded "no", which means 80.5 percent of the total interviewed households don't consider farming alone to be a secure source of livelihood (Table12).

However, when the question "do you think you can survive without farming" was posed, the response from 81.5 percent (79 percent in Shera and 84 percent in Tede) was also "no". When also asked whether they consider farming as essential for their survival, 93 percent (91 percent from Shera and 95 percent from Tede) have responded "yes".

In the words of one elderly participant in the group discussion conducted in Shera Kebele,

> *The mainstay of life for the majority of community members is farming. Recently, however, more and more people are engaging in daily labour. I estimate 75 percent of the people in the kebele earn their living from farming, 20 percent from daily labour, and 5 percent from petty trade.*

Another participant remarked:

> *Had it not been for land constraint, farming is the most preferred occupation in this kebele. Any one who farms diligently can subsist very well. Crop farming, vegetable farming and cattle fattening are the most viable occupations. Trade is also an option next to farming.*

Still another participant said:

> *Farming is enough for us. Our problem is the soaring price of fertilizer. If God gives us good weather, we will face no other problem.*

A somewhat different opinion was forwarded by an elderly participant:

> *In former times farming was enough for livelihood. Now, however, the land's productivity has declined. Grazing land is vanishing since it is being farmed. We feed our cattle with purchased forage. It is increasingly difficult to subsist by farming alone. Yet, most people still pursue farming only.*

Household heads were also asked what they would like to do most in the next five years. Twenty five percent responded that they would prefer to do farming only. Fifty three percent, however, said that they would like to do both farming and non-farming activities. Eighteen percent responded that they would prefer to do non-farm business only. Only 4 percent expressed that they have other preferences such as migration.

TABLE 12: Household heads' Plan for the Next Five Years

			Household Heads' Livelihood Vision in The Coming 5 Years				
			Remain in farm only	Do both farming and non-farming business	Do only non-farm business	Other	Total
Kebele	Shera	Count	25	48	23	4	100
		% of Total	12.5%	24.0%	11.5%	2.0%	50.0%
	Tede	Count	25	58	13	4	100
		% of Total	12.5%	29.0%	6.5%	2.0%	50.0%
Total		Count	50	106	36	8	200
		% of Total	25.0%	53.0%	18.0%	4.0%	100.0%

Source: Own survey

When asked "if you had a big amount of money today, how would you invest it? "Forty-one percent responded that their first choice of investment would be buying livestock and a slightly less percentage (40.5 percent) responded that their first choice of investment would be in trade or business. About 9 percent responded that they would primarily invest on renting or contracting land and about 3 percent said they would like to keep the cash in bank (Table 13).

TABLE 13: Investment Preference of Households

			Household Heads' Most Preferred Investment if Offered a Large Amount of Money					
			Buy livestock	Buy/rent land	Start trade/business	Keep the cash in bank	Other	Total
Kebele	Shera	Count	34	12	45	3	6	100
		% of Total	17.0%	6.0%	22.5%	1.5%	3.0%	50.0%
	Tede	Count	48	7	36	4	5	100
		% of Total	24.0%	3.5%	18.0%	2.0%	2.5%	50.0%
Total		Count	82	19	81	7	11	200
		% of Total	41.0%	9.5%	40.5%	3.5%	5.5%	100%

Source: Own survey

The response to the same question regarding their second preferred area of investment showed that 37 percent would like to start trade/ business, 30 percent buy livestock 18 percent buy / rent land and 9.5 percent keep the cash in bank

When household heads were asked whether their income from farming has increased, remained the same or decreased in the last 3 years, 99 of them (58 in Shera and 41 in Tede) responded that it has increased (Table 14). On the other hand, 75 of them (30 from Shera and 45 from Tede) reported it has decreased. Those who responded that no change has occurred are 26 household heads (12 from Shera and 14 from Tede).

TABLE 14: Household Heads' Perception about Agricultural Income Trend

			Agricultural Income Trend In The Last Three Years			
			Increased	Same	Decreased	Total
Kebele	Shera	Count	58	12	30	100
		% of Total	29.0%	6.0%	15.0%	50.0%
	Tede	Count	41	14	45	100
		% of Total	20.5%	7.0%	22.5%	50.0%
Total		Count	99	26	75	200
		% of Total	49.5%	13.0%	37.5%	100.0%

Source: Own survey

Chapter 5

ACTIVITIES OF THE NON-FARM ECONOMY AND DIVERSIFICATON PATTERNS IN THE STUDY SITES

5.1 PARTICIPATION RATE

From the total 200 surveyed households, 98 (49 percent) have reported that they pursue non-farm activities to boost their income (Table 15). Forty two of these (21 percent) are from Shera kebele and 55 (27 .5 percent) from Tede kebele.

Sixty eight households (32 in Shera and 36 in Tede) are engaged in only one non-farm activity, while 29 (all of them living in Tede) are engaged in two activities. Only one person living in Tede has reported to be engaged in three activities. From this result one can infer that non-farm diversification is more pronounced in Tede than in Shera, though the former kebele lacks electricity.

The simplest measure of diversity is the average number of income sources or productive activities that households have. Accordingly, considering farming as one source of income, households in Shera and Tede have an average of 2.3 sources of income.

TABLE 15: Non-farm Activity Participation of Households

			Households' Participation In Non-farm Activities			
			One activity	Two activities	Three activities	Total
KEBELE	Shera	Count	32	11		43
		% of Total	32.7%	11.2%		43.9%
	Tede	Count	36	18	1	55
		% of Total	36.7%	18.4%	1.0%	56.1%
Total		Count	68	29	1	98
		% of Total	69.4%	29.6%	1.0%	100.0%

Source: Own survey

5.2 SUB-SECTORAL COMPOSITION AND EMPLOYMENT

Non-farm micro-enterprise activities in both kebeles are primarily of service nature as well as handicraft activities catering to the local market and neighboring woredas. There are, however, a few grain traders who serve a wider market, including Addis Ababa and Djibouti. The following is a list of activities by number of households as obtained from the two Kebele Offices:

TABLE 16: OVERALL (KEBELE-WIDE) NON-FARM ACTIVITES

No.	Activity	Number of households	
		Shera Dibandiba	Tede Dildima
1	Local drink sale	39	30
2	Small hotel (eateries)	5	2
3	Small shop (suk)	13	5
4	Injera sale	2	2
5	Pottery	-	49
6	'Laketch' stove makers	-	10
7	River sand & stone quarrying	75	203
8	Fruit & vegetable trade	-	9
9	Grain mill	4	2
10	Grain trade	10	2
11	Transport	-	1
12	Carpentry	7	2
13	Wood work	-	1
14	Tailoring	-	2
15	Masonry	-	2
16	Black smith	-	1
17	Horse drawn cart ('gari')	7	-
18	Water well digging	3	-
19	Public sector employee	35	38
20	Private sector employee	21	-
21	Daily /casual labour	275	15
22	Hollow Block	1	-
23	Mud Block	2	2
	Total	**499**	**378**

Source: Shera and Tede kebele Administration Offices

5.2.1 TRADE

Non-farm activities in both Kebeles are predominantly of service nature catering to the local market. Among trade activities, only small shops ('suks') and fruit and grain trade are observed. In Shera kebele there are 10 grain traders who serve a wider market, including Addis Ababa and Djibouti. Grain traders in Tede, who are only 2 in number, however, sell the grain they collected from surplus producing local farmers only to bigger grain merchants in Mojo Town.

Fruit trade is confined to Tede and sales are made along the highway from Addis to Adama. Nine households are engaged in this activity. The fruits are exclusively of two types: water melon and pumpkin. The main source is the nearby Koka kebele, but the traders sometimes also travel as far as Wonji town to buy and bring the same items for sale. Being an agricultural product, the trade in water melon and pumpkin is by nature seasonal. The peak trading season is from December to February.

There are also 5 small shops ('suks') owners in Tede and 13 in Shera. They buy various consumer items such as sugar, coffee, cigarette and soft-drinks from Mojo town and sell them to the local community. Here are some reflections of a female non-farm participant:

CASE 1

Bizunesh Mengistu,who lives in Tede kebele, is engaged in sale of water melon and pumpkin on the side of he main highway from Addis Ababa that crosses Mojo town. She started this business when she became divorced from her husband 5 years ago, shouldering all the responsibility to raise 3 children. The peak season for this trade is from December to February. She buys the fruits mainly from the nearby Koka kebele but travels on occasions to as far as a place called Bate Bora in Wonji for the same purpose using private transport services ("Isuzu cars"). From a load full of one 'Isuzu' she makes a net profit of about 500 birr.
Bizunesh said the price with which she purchases water melon and pumpkin from the producers is increasing from time to time rendering her sales price expensive. As a consequence, demand is declining and her revenue going down. Bizunesh owns a decent house on the street side close to the place where she makes her sale. Had electric supply been available in the kebele, Bizunesh believes her household location close to the highway is opportune for many types of businesses including car repair and spare-parts sale. In her view, the location of Tede Kebele in close proximity to Mojo town, however, is also a handicap in the sense that the social character of the inhabitants is a hybrid of urban and rural which particularly makes it difficult to organize them for community development related activities.

5.2.2 Sale of local Drinks and Small Eateries.

Thirty households in Tede and 39 in Shera, partially or totally earn their living from this activity. Only women and female-headed households are involved without exception in this business. Widows and divorcees are usually pushed or pulled to such activities when their livelihood situation deteriorates following the death of a spouse or unfair property division when marriages fail. For some it is a respectable façade for the prostitution which they undertake side by side as a supplementary or main source of income.

5 .2.3 Traditional crafts

The common traditional crafts in Ethiopia include weaving, pottery, tannery and blacksmithing. In the study area, however, except pottery, craft activities are nearly extinct. In Tede kebele 49 households derive income from pottery. Forty six of these are organized under a cooperative. They produce only one type of product - Ethiopian 'mitad', which they mostly sell to merchants in Adama. The availability of clay soil suitable for making pottery products seems to have made possible this activity in Tede kebele.

One blacksmith is also giving service to inhabitants of Tede kebele by making /sharpening various tools and utensils (knives, ploughs etc.). He is too busy and overstretched during plowing seasons. Other than those described above, no traditional craft activities exist in both kebeles. My informants' explanation about this is competition from the nearby Mojo town which rendered their service redundant and unprofitable. My informants have also recounted that in the distant past the few crafts folk that used to operate here came from far off places like Selale in North-Shoa. When the market for their service dwindled, those who didn't die from old age, moved to remote and relatively inaccessible woredas where their service is still in demand.

5.2.4 Manufacturing

Manufacturing is conspicuous in the study area by its virtual absence. Only one hollow block production site exists in Shera. In Tede 10 women who produce 'laketch' stove

organized under cooperative, and one person who makes furniture for the kebele inhabitants on demand, are operating.

5.2.5 Service and Repairs

Grain milling service is provided by 2 grain mills in Tede and 4 in Shera. The remaining service activities observed are masonry, tailoring, carpentry, local transport with horse-drawn carts ("gari") and water-well digging. The total numbers of people engaged in these activities are 14 in Shera and 7 in Tede.

5.2.6 Wage and salary Employment

Wage and salary employment is categorized first as public sector employment and private sector employment. Public sector employees in the study area are mainly teachers, health workers, development agents (DAs) and staff of the kebele administration. Their number in Shera is 35 and in Tede 38. Regular private sector employees in Shera number 21; but in Tede no private sector regular employment exists.

Apart from the above categories of employment, which have a regular nature, poor farmer in the area have also access to casual employment opportunities as daily labourers on construction works, quarries and farms (plowing, threshing ,etc.). Their number is considerably higher in Shera (275) than Tede (15). Daily wage rate in Shera ranges from 12 -15 birr for unskilled casual labour. The corresponding rate in Tede is 10 - 12 birr.

5.2.7 Mining and Quarrying

Measured by the number of people engaged, this is the most significant non-farm activity in both kebeles. A total of 278 households (75 in Shera and 203 in Tede) participate in quarrying river sand and stone. The area is rich in river sand, stone and pebbles which are resources having high demand for construction use. According to information provided by the respective kebele offices, the area covered by these resources is estimated to be 16 hectares in Shera and 24 hectares in Tede.

The year 2004 was a watershed as for as rules and regulations for accessing the two resources are concerned. Before that time, only private entrepreneurs who were issued license by the Ministry of Mines and Energy for a designated area could exploit the resource, paying tax and royalty in return. This practice was stopped in the said year following a policy decision by the Oromiya Region to allow exploitation of the resource only to landless and unemployed dwellers of kebeles bordering the river.

All landless or unemployed members of kebeles who apply to access the resource are eligible under the condition that they organize themselves under cooperatives. However, non-cooperativized dwellers, landless or not, are free to work as daily laborers, though they can not enjoy the benefits derived from sale of sand and stones. The condition for membership is certification by the kebele where the applicant resides that the person has no other means of income (is landless or has no other means of employment). There are two primary mining cooperatives in Tede. The bigger one, named Bikila Boru, was established in 2004 and has 182 members. The smaller one, named Ijano Boru was founded in 2007 and has 20 members. In Shera there is one cooperative with 80 members; not yet given a formal name but referred by the members as "Wolda Chirecha". Most of the members of these cooperatives (about 80 %) are youth less than 35 years old.

Sand is harvested in two types of operations;

1. From dry river bed during dry seasons only. In this operation the labour effort required is less demanding. The trucks that transport away the sand are driven right to the river bank to be loaded. The price of this type of sand is 35 birr per meter cube.
2. In the second type of operation, the sand is harvested from somewhat gorgy banks of the river. It is washed and made to dry after being accumulated at a convenient place and then transported to the top by donkeys. This activity requires more labour but is more remunerative as the sand is cleaner and devoid of impurities. The operation can take place throughout the year, though activities are more

intensive in the rainy seasons (June to September). The price of sand harvested in this second way is currently sold 50 birr per meter cube.

According to the chairman of Bikila Boru cooperative, as per the by-law of the cooperative, out of the total revenue from the sale of sand, 50 percent is distributed as a salary for the members while the balance is allocated in the following manner:

Royalty and sales tax – 11 %

Capital reserve - 20 %

Saving of individual members – 10 %

Recurrent expenditures- 9%

Bikila Boru cooperative has a capital reserve of 309, 000 birr in bank. The savings of the members total 93,000 birr. Out of the total 182 members, female are only 3. The cooperative has also been donated 110 hectare land lying on hilly and unused parts of the kebele, and is developing horticulture. The biggest fixed asset of Bikila Boru is a crusher it bought at a cost of 140,000 birr recently. With this new asset it has become possible to crush stone without human labour.

Many of those I talked to claim that their livelihood has significantly improved since they became members of the cooperative.

Bikila Boru cooperative is a member of Sulula Boset Minining Cooperatives Union. Established in May 2005, the union encompasses 307 cooperatives in three Zones of Oromiya region: East Shoa, Arsi and West Arsi. With 29611 members, the Union has currently a capital of 8387 167 birr. Fixed assets of Sulula Boset union include:

- 7 Dump-trucks
- 8 crushers
- 7 Hollow block machines
- 1 mixer
- 1 Sawing machine

The council of ministers Regulation No. 106/ 2004 provides for the implementation of cooperative societies proclamation No 147 / 1998, in which establishment of unions is included. According to the proclamation, primary cooperative societies having similar objective may establish a union. Furthermore, unions having similar objective at federal level may establish a federation.

Presently any cooperative established in the country is expected to conform to the legislation issued as proclamation No 147 / 9998 (amended as proclamation No. 402/ 2004) which lays down the rules and conditions for organizing and managing cooperative societies. Among the objectives set are:

- to achieve a better result by coordinating knowledge, wealth and labour of members,
- to improve the living standards of member by reducing production and service costs by providing input or service at a minimum cost or by finding a better price to their products or services,
- to expand the mechanism by which technical knowledge could be put in to practice,
- to develop and promote savings and credit services, and
- to minimize and reduce the individual impact of risks and uncertainties .

Cooperative societies may, according to their nature, be established at different levels from primary up to the federal level. A primary society shall be established by persons who live or work within a given area. The number of members in a primary society to be established shall not be less than ten. A society may engage in either production or service rendering activities or both.

5.3 EMPLOYMENT STATUS OF THE SAMPLED HOUSEHOLDS AND CHARACTERISTICS OF THE NON-FARM ACTIVITIES

5.3.1 EMPLOYMENT STATUS

In previous sections of this chapter the employment situation with respect to the whole inhabitants of the two study kebeles was analyzed. The following sections of the chapter, however, deal only with the data collected on the sampled households.

When asked what the employment status of members of the household is in the primary job they do, twenty two from both kebeles (11 percent) have responded that they are self-employed on household non-farm business alone. A larger number, i.e. 47 (23.5 percent), have reported that they are engaged in both farming on household farm and self-employed on non-farm business (Table 17).

Wage and salary employed (both farm and non-farm) are 15 in number (7.5 percent). Those who reported casual / daily labour as a primary employment are only 2. The largest number of respondents from both kebele i.e. 106 (53 percent) have reported that they do only farming on household farm. Those who reported to be not engaged in any productive work are 7 household heads from Shera and 1 household head from Tede. These are old and retired people who are dependent on other household members.

TABLE 17: Employment Status of Households

			Household Head Primary Employment							
			Not engaged in any productive work	Farm wage/ salary employee	Non - farm wage/salary employee	Casual/ daily laborer	Only farming on household farm	Both farming on household farm & self-employed on n.f busine	Only self-employed on HH non-farm business	Total
Kebele	Shera	Count	7	12	1	2	52	15	11	100
		% of Total	3.5%	6.0%	.5%	1.0%	26.0%	7.5%	5.5%	50.0%
	Tede	Count	1	1	1		54	32	11	100
		% of Total	.5%	.5%	.5%		27.0%	16.0%	5.5%	50.0%
Total		Count	8	13	2	2	106	47	22	200
		% of Total	4.0%	6.5%	1.0%	1.0%	53.0%	23.5%	11.0%	100%

Source: Own survey

5.3.2 SIZE OF NON-FARM ACTIVITIES

All the non-farm activities the study households are engaged in are small in size. Employment is the yardstick used to measure size, and 49, or half of the non-farm activities out of the total of 98, employ just one person. In other words, one-person activities constitute half of the non-farm activities. Twenty four enterprises (12.1 percent) have two workers, i.e. one more person other than the owner. Three person enterprises are nine in number (4.5 percent). The maximum number of employees was observed in one enterprise which has 11 workers.

5.3.3 LOCATION AND BASE OF OPERATION

Most non-farm activities of the surveyed households are located in the same kebele where the owners reside. Seventy five out of the 98 non-farm activities are located in the same communities of the respective kebeles. Eight (1 in Shera and 7 in Tede) are located in a different community within the same kebele. Five enterprises are located in a different Woreda but within the same zone, while 4 are located in a different woreda but within the same zone, while 4 are located in a different zone.

The primary base of operation of 41 enterprises (16 in Shera and 25 in Tede) is inside or very close to residence or home, which means that about 42 percent of enterprises are home or residence-based. About 10 percent are based in traditional market. Road-side and mobile activities constitute about 6 and 10 percent respectively.

5.3.4 SALES OUTLET

The sales outlet for about 50 percent of enterprises is the local community. A local market doesn't exist in both kebeles; therefore, none have reported to use a local market center as an outlet for the sale of their products or services. About 15 % market their products in Mojo, the woreda capital.

CASE 2

Girma Melka, aged 33, has completed 9th grade education and is engaged in river sand and stone quarrying as member of a cooperative in Shera Dibandiba. He had been engaged in this work since 3 years ago, and is paid 800 birr per month by the cooperative. In addition, he earns an average of 225 birr per month by loading sand on trucks. The work goes on for 7 months in a year (October to April).

Girma had rented 3.5 kert (0.875 hectare) of land and claims to earn a net income of about 25,000 birr annually from farming. He possesses 3 oxen, 1 cow and 1 donkey. Girma's ambition is to be involved in grain trade. If the kebele provides him land, he is also ready to engage in horticulture (he claims there is ample unutilized wasteland suitable for this purpose in the kebele).

Girma believes there are opportunities to start businesses like small-scale hotels and butcheries, but the kebele should avail adequate and suitable land, and government should provide credit for start-up capital in order to turn these possibilities into reality.

5.3.5 OWNERSHIP

Fifty one percent of enterprises in both kebeles are owned by household heads. The proportion of enterprises owned by the household heads is greater in Tede, i.e. 34.7 percent of the total, while in Shera the corresponding percentage is 16.3 percent. Spouses own about nine percent of the total enterprises. The remainders are owned by other members or a combination of household heads, spouses and other members.

5.3.6 SOURCE OF START-UP CAPITAL

About 45 percent of households in both kebeles (53.5 per cent in Shera and 40 percent in Tede) have reported that crop sale was the primary source of start-up capital to establish their businesses (Table18). Livestock sale has been the source of capital for 7.2 percent of businesses. The same percentages of households have reported non-farm self-employment income to be their source of start-up capital. About six percent have reported they have used micro-finance to start their business. Families or friends living in the community have provided the means to start business for about 12 percent of respondents. Only one person reported that he borrowed money from private lenders to source up capital; and two other people have benefited from cooperatives for the same purpose.

TABLE 18: DIVERSIFYING HOUSEHOLDS' SOURCE OF CAPITAL

			Primary Source of Start-up Capital To Establish Non-farm Business									
			Crop sale	Live stock sale	Non-farm income	Wage	Microfinance	Cooperative	Family/friends	Userer	Other	Total
KEBELE	Shera	Count	23	4	3	1	2		4		6	43
		% of Total	24%	4.1%	3.1%	1.0%	2.1%		4.1%		6.2%	44.3%
	Tede	Count	21	3	4		4	2	8	1	11	54
		% of Total	22%	3.1%	4.1%		4.1%	2%	8.2%	1.0%	11%	55.7%
Total		Count	44	7	7	1	6	2	12	1	17	97
		% of Total	45%	7.2%	7.2%	1.0%	6.2%	2%	12.4%	1.0%	18%	100%

Source: Own Survey

5.3.7 LICENSE

Out of the total 129 activities, 55 (about forty three percent) have license. Forty three of these are in Tede kebele while 12 are located in Shera.

5.3.8 SEASONALITY

Fifty of the 129 businesses in both kebeles are reported to be seasonal. The number of seasonal enterprises is greater in Tede where 39 out of the 98 activities (19.8 percent) are seasonal. River sand and stone quarrying activities are reported to be mostly seasonal.

5.4 MOTIVES FOR STARTING NON-FARM MICRO-ENTERPRIZES

Multiple motives prompt households and individuals to diversity incomes and activities. Diversification is driven by several factors and the surveyed households were asked to identity their motives for starting micro-businesses so as to diversify beyond farming.

About 37 percent (10 percent from Shera and 26.5 percent) from Tede have responded that small size of land holding is the main motive that prompted them to diversify. Another 20 percent (8 percent from Shera and 12 percent from Tede) have reported that lack of access to agricultural land is the primary factor that motivated them to diversify (see table 19). Market opportunity is identified as a source of motivation to diversify by 7 percent (2 percent from Shera and 5 percent from Tede) of micro enterprise owning households. Those who reported social and economic independence as a main motive are 20.4 percent in total, 7 percent from Shera and 13 percent from Tede. For about 8 percent of respondents, the aim of obtaining income to support agricultural work was the overriding motive for diversification. Two percent of respondents (all from Tede) were motivated to diversify by the support they received from cooperatives.

When asked about the second important motive that prompted them to diversify, about 27 percent (11 percent from Shera and 16 percent from Tede) have responded that they have no motive other than the primary motive they identified. About forty-four percent (15 percent from Shera and 29 percent from Tede), however, have reported that social and economic independence is the second most important motive that spurred their diversification effort. For 6.1 percent of households in both kebeles, obtaining income to support agricultural work is the second important motive. The same percentages of

households (6 percent) have reported small size of land holding and low / declining agricultural income as their second motive for diversification. Those who reported market opportunity as their second motivating factor are only 4.1 percent. Access to agricultural land is seen as a second motivator of diversification by a mere 2 percent of households.

TABLE 19: Households' Motive to Diversify into Non-farm Activities

			Most Important Motive For Starting Non-farm Activity								
			Small size of land holding	No access to agricultural land	Obtain income to support agricultural work	Market oppurtunity	Support from cooperative	Advice from relatives / friends	Social & economic independence	Other	Total
KEBELE	Shera	Count	11	10	5	4		1	9	3	43
		% of Total	11.2%	10.2%	5.1%	4.1%		1.0%	9.2%	3.1%	43.9%
	Tede	Count	25	10	3	3	2		11	1	55
		% of Total	25.5%	10.2%	3.1%	3.1%	2.0%		11.2%	1.0%	56.1%
Total		Count	36	20	8	7	2	1	20	4	98
		% of Total	36.7%	20.4%	8.2%	7.1%	2.0%	1.0%	20.4%	4.1%	100%

Source: Own Survey

CHAPTER 6

INCOME STRUCTURE AND DIVERSIFICATION

6.1 OVERALL INCOME

Total income is calculated from the information gathered through the household survey as the sum of net revenues from the following sources: crop production, livestock and livestock products, wage and salary, non-farm business activity and other income. Aggregation of all revenues minus costs, including consumption from own production and agricultural taxes, defines the household net income. The period of observation of income is the 2007 production calendar. Fixed costs, such as depreciation of equipment, are not included due to lack of data and the general low level of physical capital used for these activities.

Total net annual household income calculated in this way ranges from the lowest 1634 birr to the highest 311,589 birr. The mean annual net income of the 200 households is 17,101 birr. The mean income of households of Shera Kebele is 19,791 while that of Tede is 14,411 birr. Table 20 shows the distribution of total income in the two Kebeles.

Table 20: OVERALL INCOME DISTRIBUTION

Income class(birr)	Number of households	
	Shera Dibandiba	Tede Dildima
1-499	-	-
500-999	-	-
1000-4999	10	16
5000-9999	24	24
10000-19999	41	37
20,000-49,999	19	22
50,000-99,999	4	1
100,000^{+}	2	-
Total	100	100

Source: Own Survey

As shown in Table 20, no household in both Kebeles earns less than 1,000 birr annually. Most households (41 % in Shera and 37% in Tede) fall in the income range of 10,000-19,999 birr. Those who earned income in excess of 100,000 birr are only two households of Shera Kebele. The same percentages of households, i.e. 24 percent, have received an annual income in the range of 5000 – 9999 birr in both Kebeles.

6.2 CROP INCOME

As mentioned earlier, households in the Kebeles grow various crops including teff, wheat, lentil, barley, bean, chick pea, pig pea, and haricot bean. Net income from each crop is calculated as the value of production minus the cost of production. Crop variable costs are seeds, commercial fertilizers, insecticides, and herbicides as well as hired labour. The use of fungicides is not reported by any household, and therefore is not considered.

Crop residues, by-products of crop production output that might be used for animal feed, for example, are not taken into account. The mean market price is used to value crop output and input. Price data is extracted from the questionnaire section dealing with purchase and sale of crops and cross-checked with data collected in a separate market survey. Prices are not differentiated by Kebeles as significant variations are not observed. The mean annual crop income in Shera and Tede is 8108 and 4492.3 birr respectively. It ranges from -416 birr (since net income is calculated as revenue minus cost it could be negative) to 59708 birr in Shera, and from -311 birr to 20322 birr in Tede. The mean annual crop income for the whole study sample is 6419 birr.

6.3 LIVESTOCK AND LIVESTOCK PRODUCTS INCOME

An attempt was made to identify net livestock income for animals possessed by the households. Evaluating the contribution of livestock income to the household, however, raises some issues of measurement and imputation. First, the output produced by an adult animal includes not just milk but also (sometimes) calves and rental services (in the form of bullock plowing). Second, livestock farming involves both changes in stocks (in the

form of animal purchases and sales) and changes due to herd growth (in the form of animal reproduction and maturation).

Since animal purchases are generally considered investments, animal sales can be viewed as disinvestments. In this study, however, neither investments nor disinvestments are viewed as components of income; rather, both are considered to be decisions on how income is spent. Changes in herd growth (from animal reproduction and maturation) are viewed as income. If an animal was born during the survey year, it was assigned a value of half the average Kebele sale price for that type of adult livestock. If the animal was sold, its value was the sale price. If that animal was not sold in the year following birth, its value was imputed to the full Kebele sale price for that type of adult livestock.

In determining income from milk, milk products, and eggs, imputed value had to be calculated for home consumption using average Kebele sales prices for milk, butter, cottage cheese and eggs, respectively. Determining the value of bullock plowing required calculating imputed values for plowing services used on farm and then adding these values to those recorded for the sale of plowing services.

On the input side, the following livestock inputs were identified: own and purchased fodder, feed, hired labor and veterinary medicinal costs. Imputed labor values are not assigned for household labor because of the difficulty of accurately calculating wage rates for those household members directly involved in livestock care, namely women and children.

Out of the total 200 households, 18 have reported to earn no income from livestock and livestock products. Thirteen have reported negative income. The mean income of the whole sampled households derived from livestock and livestock products is 4556 birr. In Shera Kebele 12 households have reported to earn no income from livestock and 4 households' livestock income was calculated to be negative. The mean livestock income in Shera is 5073.6 birr. In Tede, 6 households have reported to earn no income from livestock, and 9 households' income was calculated to be negative. The mean livestock in -come in Tede is 4071 birr.

6.4 INCOME FROM WAGE AND SALARY EMPLOYMENT.

Wage and salary income includes all activities undertaken by persons in which income received is in the form of a wage or salary paid out by an employer. Wage and salary employment is a source of income for a total of 81 households (50 in Shera and 31 in Tede) in the sample. One or more members of the household could derive income from this source, and the household head may not necessarily be employed in this way. Households who exclusively earn their income from wage and salary employment are not found in the sample.

The mean income from wage and salary for the whole sample is 3674 birr. The maximum is 17200 birr and the minimum 144 birr. In Shera, the mean income from this source is 3831 birr while in Tede it is 3422 birr. The maximum reported in Shera is 13320 birr and in Tede 17200 birr.

CASE 3

Abonesh Wodajo, aged 38, is literate but had no formal schooling. She was widowed 12 years ago. She has 5 children, with the eldest 19 years old. Three of her male children tend cattle, hired by neighboring farmers. Her daughter works in Debre Zeit town as housemaid. Her oldest son is engaged in 'gari' transport. She sales local drink ('tela' and 'araki') and also dried animal dung ('kubet'). Local drink sale earns her a net income of 40 birr per month. Animal dung sale earns her 16 birr per week. In addition, Abonesh works as daily laborer in a hollow cement block production site which was recently established in Shera kebele. She transports finished hollow block manually and with hand-drawn cart within the site. When daily labour employment is available on a continuous basis, she sales 'tela' only on Sundays.

Abonesh recounted that she used to be a member of a micro-finance group in the kebele for a one year period of time. She received a loan of 1000 birr which helped to improve her "tela" business. After one year, Abonesh was expelled from the group. She alleges that she was expelled unfairly, the other members maliciously branding her as being too risky and likely to default.

6.5 ENTERPRIZE / BUSINESS INCOME

A total of 98 households from both Kebeles (49 percent) derive income from non-farm business activities. The mean income households derived from this source for the whole sample is 9135.7 birr.

In Shera 43 households have involved themselves in non-farm business activities deriving an average income of 10566 birr, while in Tede 55 households have non-farm businesses which earned them an average income of 8017.4 birr. The maximum non-farm income earned by a household in Shera is 100320 birr and the minimum 92 birr. The corresponding figure in Tede is 58374 and 360 birr respectively.

6.6 OTHER INCOME

Other income in this study includes income derived from rent of land, rent of oxen, house rent, pension, remittance, sale of crop by-products and other miscellaneous sources. Food for work is not included as no such program exists in both Kebeles.

Thirteen households in Shera and 7 in Tede have reported to rent out their land. The mean income the thirteen households received from this source is 2396 birr. The maximum and minimum are 10800 birr and 700 birr respectively. Those seven households in Tede who rented out their land have received an average income of 1528 birr, the maximum and minimum being 3300 and 600 birr respectively.

Renting of oxen is reported by two households in Shera and one household in Tede. The maximum amount received from this source is 350 birr and the minimum 200 birr.

House renting is extremely rare; only 3 households, all of them from Shera reporting to have this source of income. One of these has reported to have received 4800 birr while the other two have received 120 and 240 birr only.

Twenty seven households in Shera and 40 households in Tede have reported that they have received income from the sale of crop by-products. The mean income from this source is 1248 birr in Shera and 990 birr in Tede.

Sixteen households in Shera and 11 households in Tede have also reported that they have received income in the form of remittance from relatives. The average amount received by those residing in Tede is 2455 birr, the maximum and the minimum being 20,000 birr

and 45 birr respectively. The average amount received by the in Tede is 610 birr, with a maximum of 3000 birr and a minimum of 80 birr.

Two household heads, 1 in Shera and 1 in Tede, have also reported to be pensioners. One of them, a former employee of Ethio-Djibouti Railway, receives 9000 birr annually, and the other, a former civil servant, 3420 birr annually.

Table 21: Distribution of Household Net Income – Shera Dibandiba

(Birr)

	Crop income	Livestock & Livestock products Income	Wage & salary Income	Other Income	Non-farm Income	Total Income
Negative Income	3	4	-	-	-	-
No Income	24	12	50	29	57	-
1-99	-	3	-	1	-	-
100-499	2	9	2	11	1	-
50-999	4	14	2	4	4	-
100-4999	24	32	34	39	18	10
500-9999	27	21	10	10	12	24
1000-19,999	10	4	2	4	4	41
20000-49999	5	-	-	2	1	19
50,000-999,00	1	-	-	-	2	4
>100,000	-	1	-	-	1	2
Mean income	6122.2	4464.7	1915.6	2745	4543	19791
Total Households	100	100	100	100	100	100

Source: Own Survey

Table 22: Distribution of Household Net Income – Tede Dildima

(Birr)

	Crop Income	Livestock & Livestock products	Wage & salary Income	Other Income	Non - farm Business income	Total Income
Negative Income	4	9	-	-	-	-
No Income	9	6	69	40	45	-
1-99	3	1	-	4	-	-
100-499	7	7	5	16	1	-
500-999	8	8	1	13	3	-
1000-4999	38	36	20	23	27	16
5000-9999	22	26	3	3	10	24
10000-19999	8	7	2	1	10	37
20000-49999	1	-	-	-	3	22
50,000-99,999	-	-	-	-	1	1
>100,000	-	-	-	-	-	-
Mean Income	4088.3	3827.3	1061	1025	4454	14411
Total Households	100	100	100	100	100	100

Source: Own Survey

6.7 INCOME STRUCTURE

The income diversification literature roughly agrees that 40 percent of African rural household income on average is derived from non-farm sources (Bryceson, 1999). Scrutiny of Table 23 reveals that those households in the whole sample who derive more than 40 percent of their income from non-farm sources are 52 (26 percent). Those who earn more than 90 percent of their income form non-farm sources are 14 (7 percent).

On the other hand, those who earn more than 40 percent of their income from farming (crop and Livestock) are 122 (61 percent). Those who derive more than 90 percent of their income from farming number 41 (20.5 percent).Sixteen households (8 percent) earn more than 40 percent of their income from wage and salary while only one household earns more than 90 percent of its income from this source.

On average, for all households of the sample, crop production represents 32 percent of total household income, while livestock production's share in total income is about 23 percent on average. Farm income (derived from both crop and livestock production), on average, represents 55 percent of total income for all households. Non-farm business activities contribute for 24.5 percent of total income on average. Wage and salary and other income sources contribute for 13 percent and 7.5 percent of total income on average.

Table 23: Percentage Distribution of Income Sources

	Crop income	Livestock income	Total farm income	Wage & salary income	Other income	Total non-enterprise income	Non-farm income
Negative	7	12	4	-	-	4	-
None	33	19	13	119	69	1	102
0.1 – 10 %	26	45	19	22	56	9	10
10.1 – 20 %	17	31	13	17	32	7	8
20.1 -30 %	20	23	16	12	11	11	16
30.1 -40 %	17	25	13	14	11	8	12
40.1 -50 %	19	29	8	11	14	5	7
50.1 -60 %	33	6	14	2	3	7	5
60.1 -70 %	11	5	23	2	-	12	8
70.1 -80 %	7	4	15	-	1	16	11
80.1 -90 %	8	1	21	-	1	8	7
90.1 – 100 %	2	-	41	1	2	112	14
Total	**200**	**200**	**200**	**200**	**200**	**200**	**200**

Source: Own Survey

The share of income coming from non-farm activities often correlates with total income (Minot et al., 2006:5).A strong positive correlation between the proportion of household income obtained from non-farm sources and overall household income per capita has also been observed in many studies (Barrett et al,2001; Ellis,2004)

Table 24 presents the correlation coefficients between the various income sources and total income. Livestock income has the highest significant correlation coefficient with total income, followed by non-farm income and crop income, in that order. Wage and salary income has the lowest coefficient.

Table 24: Simple Correlation between Income Sources and Total Income.

Income source	Correlation coefficient with total income
- Livestock & Livestock products	0.888**
- Non-farm activities	0.828**
- Crop	0.738**
- Wage & salary	0.159*
- Other sources	0.291**

*significant at 0.05 level, **significant at 0.01 level.

Source: Own calculation based on own survey

6.8 PURPOSE AND USE OF INCOME

The study households were also asked for what purpose they use the income they acquired from non-farm activities. Out of the 98 households who are participants in non- farm activity, 20 in Shera and 47 in Tede answered that the primary use is for consumption and essential household expenses. These constitute 68.4 percent of the total. About twenty one percent (9.2 percent in Shera and 12.2 percent in Tede), reported that they would invest it to expand non-farm business activity. A minority of households (about 1 %) indicated their primary purpose is to invest on farm or purchase farm inputs.

TABLE 25: Households' Application of Non-farm Income

			Primary Use of Income From Non-farm Activities					
			Reinvest on farm	Expand non-farm business /activity	Purchase farm inputs	For consumption & essential expenses	Other purposes	Total
KEBELE	Shera	Count	2	12	1	28		43
		% of Total	2.0%	12.2%	1.0%	28.6%		43.9%
	Tede	Count	6	9		39	1	55
		% of Total	6.1%	9.2%		39.8%	1.0%	56.1%
Total		Count	8	21	1	67	1	98
		% of Total	8.2%	21.4%	1.0%	68.4%	1.0%	100%

Source: Own Survey

CHAPTER 7

DETERMINANTS OF NON-FARM RURAL LIVELIHOOD DIVERSIFICATION

There is a general agreement in the literature that the driving forces of diversification operate at different levels i.e. macro, meso and micro levels (Davis, 2004; Warren, 2002; Haggblade, 2006).

Determinants of diversification at macro level include trade policies, exchange rate, fiscal and monetary policies, market and infrastructures policies and research and extension policies. Trade policy, for instance "directly affects diversification through inputs availability and prices, and production opportunities for export and for domestic consumption as well as through availability and price of goods for consumption" (Crole – Rees, 2002:19).

Determinants of diversification at the meso level include environment (regional or local agro-ecology, topography, soil quality, rainfall etc) population, infrastructure and markets. More densely populated areas, for instance "may induce land pressure, which is most often the case, and hence, force household members to seek income outside the crop sector to secure food" (Crole-Rees, 2002:20).

Davis (2004:10) treats the meso level factors under the rubric "wider factors determining rural non-farm employment opportunities" and identifies five such factors that affect the viability of the rural non- farm economy: a) agricultural development b) natural resource endowments c) economic infrastructure d) level of public services e) rural town development, and f) business environment.

Diversification choices are also firmly rooted in the microeconomic logic of farming households (Warren, 2002:5). The elements usually considered include the household asset basis (such as land, livestock, savings, education, labor) and household characteristics (such as age, gender, dependency ratio). Some of the above elements

(age and education, for instance) are dimensions of human capital as well. Apart from the above micro-level determinants, which are fairly measurable and quantifiable, some authors also propose less tangible and quantifiable factors like personal vision (Gordon and Craig 2001:20). Those determinant factors that usually fall under social capital or social networks are of similar nature as the latter.

Diversification decisions of rural households, as we have seen above, are determined by different factors operating at different levels. The analysis that follows, however, examines only the influence of the micro level (household and community level) factors in the study area on diversification using two types of regression models: linear regression and binary logistic regression. The following relationship is therefore investigated using these models:

Non-farm income / diversification = f (Wealth, farm income, marketable surplus, share of food in total consumption, household characteristics, distance to market)

7.1 DESCRIPTION OF VARIABLES

Dependent variables

(1) Non-farm income:	non-farm net income derived from micro-enterprise, trade, crafts, wage and salary
(2) Participation in non-farm activities:	Dummy variable (o = non-participating, 1= participating)

Independent variables

1. Wealth :	- Total land holding of the household - Livestock in TLU
2. Farm income ;	- Net household income from crops, livestock and livestock products.

3. Marketable surplus: - Net crop sales (food balance)
4. Share of food: - Share of food consumption in total household consumption
5. Distance to the nearest market: - first measured in minutes of walk and then converted to kilometers
6. Household characteristics: - Age of the household head, in years
- Education of the household head, dummy variable (0= illiterate) (1= other wise)
- Sex of Household head, dummy Variable (o = female, 1= male)
- Total number of members of the household (family size)
- Dependency ratio (number of non-active members divided by the number of active members)

7.2 HYPOTHESIS AND EXPECTED SIGN ON DETERMINANTS

The analysis is carried out with 11 explanatory variables (regressers) which are expected to reflect the income diversification forces operating at household and community level. A number of hypotheses are proposed to be checked against results of the model:

Wealth

Wealth of a household is proxied in this analysis by landholding, measured in hectare and livestock, measured in Tropical Livestock Unit (TLU). Land holding or farm size is hypothesized to have a negative coefficient thereby having a negative impact on income diversification. The other proxy of wealth, i.e. livestock, is expected to have positive influence on income diversification.

Marketable surplus

Marketable surplus, defined as net sales of food grains is hypothesized to be negatively associated with non-farm income.

Share of food in Total Consumption

The food consumption share in total household expenditure is expected to have a negative sign.

Net-farm-cash Income

Farm income can be a source of investment for non-farm activities, especially in situations where credit markets are constrained and liquidity problems are prevalent. Farm cash income, which is the sum of crop and livestock income, is the hypothesized to have a positive influence on diversification.

Age and Education

The age and education of the household head are expected to increase general experience and human capital valuable to non-farm activities and to favor information access and knowledge. Both are hence expected to positively influence income diversification. However, as household heads get older "they are expected to be less active and hence rely more on farm than on non-farm income" (Mulat, 1997:33). The age of the household is therefore expected to negatively influence non-farm livelihood diversification

Sex

The sex dummy for the household head is meant to proxy gender division of activities and is expected to have a negative coefficient.

Family Size

Family size is measured by the number of members of the household, and is hypothesized to have a positive coefficient. Larger families imply greater availability of labour, some of which could be diverted to non-farm occupation. Larger family size also increases the pressure to diversify in order to meet the subsistence needs of the family.

Dependency Ratio

Dependency ratio, defined as the number of non-active members divided by the active members of a household, is expected to have a negative sign.

Distance to Market

Greater physical access to market improves non-farm earnings opportunities. Therefore, longer distance to the nearest market is expected to negatively impact diversification due to high transaction and transport costs as well as lack of market information.

Results of the two models are provided separately in Tables 26 and 27.

Table 26: Linear Regression Model Results (Model A)

Determinant variables	**Coefficient**	**Standard error**	**t-statistic**	**Significance level for t- statistics**
Farm income	0.465	0.067	6.97	0.000*
Household Head Education	0.905	283.4	3.193	0.002*
Livestock in TLU	-862	271.4	-3.176	0.002*
Food Balance (net grain sales)	0.09	0.090	1.006	0.316
Sex of household Head	-1191	2158.7	-0.552	0.582
Age of Household Head	-61	74.9	-0.810	0.419
Land Holding	-315	585.1	-0.538	0.591
Family size	419	434.8	0.964	0.336
Dependency Ratio	-735	972.5	-0.756	0.451
Share of food in Total consumption	-10549	9828.3	-1.073	0.285
Distance to market (kms)	298	384.8	0.774	0.440
Constant	13840	8726.1	1.586	0.114

Dependent variable is net non-farm income earned

N = 200

$R^2 = 0.392$

Adjusted $R^2 = 0.357$

F ratio = 11.039

*significant at 1% level of significance

Table 27: Logistic Regression Model Results (Model B)

Determinant Variables	Coefficient	Standard error	Wald statistics	Significance level for Wald statistics	EXP(B) (odds ratio)
Farm Income	0.000	0.000	0.743	0.389	1.000
Household Head education	0.824	0.428	3.718	0.054**	2.280
Livestock in TLU	-0.088	0.059	2.200	0.138	0.916
Food Balance (net grain sales)	0.000	0.000	0.178	0.673	1.00
Sex of household head	0.272	0.445	0.373	0.541	1.312
Age of Household Head	-0.036	0.015	5.678	0.017*	0.964
Land Holding	-0.258	0.133	3.758	0.053**	0.773
Family Size	0.068	0.089	0.592	0.442	1.071
Dependency Ratio	-0.150	0.200	0.561	0.454	0.861
Share of Food in total consumption	-2.085	2.163	0.929	0.335	0.124
Distance to market	-0.042	0.082	0.253	0.615	0.959
Constant	3.871	1.853	4.365	0.037	47.980

N= 200

% correct prediction = 72 %

Model chi-square = 35.7

Cox & Snell $R^2 = 0.163$

Nagelkerke $R^2 = 0.218$

- 2 log likelihood = 241.5

**Significant at 10 % level of significance

*Significant at 5 % level of significance

7.3 ESTIMATION RESULTS AND DISCUSSION

7.3.1 HOUSEHOLD WEALTH /ASSET

A) Land Holding

The coefficient of land holding is as expected negative in both models. Farm size was hypothesized to reduce the likelihood of diversification. Various studies on the relationship between farm size and off-farm income have also reported an inverse relationship (Mulat, 1997, Demissie and Workineh, 2004). Both theory and empirical evidence, however, are ambiguous concerning the relation of land holding or non-land wealth to income source diversification behavior. Delgado (2005) observes that both land and non-land assets have an empirically and theoretically ambiguous effect on the household's desire and capacity to diversify. "On the one hand, theory predicts that as the wealth of the household increases (in land and non-farm activities) the less risk-averse will be the household, and hence the more willing to undertake investments with uncertain return (such as new non-farm activities. On the other hand, households with less land or non-land assets would be more risk averse and hence more sensitive to the need to diversify"(Delgado,2005).

In the study area a generalized land shortage is not in evidence. The average farm size of a household in the study population is, as mentioned earlier, 2.3 hectares, which is considerably higher than the national average of about 0.75 hectares. However, very acute land constraint is being experienced by the youth. Young people who were interviewed for this study have invariably reported their inability to access enough land to take up farming as their main occupation. An increasing number of male offspring are not receiving any inheritance. Wealthier farmers, however, are reported to contract or rent-in land for their teenage sons in order to overcome the problem.

Reamarks made by one young person during group discussion in Tede Kebele encapsulates well the frustration of the youth regarding access to land:

We were born in this kebele. But we have no land now, and have no chance of having land in the future as well. Land was redistributed during the 'Derg' times, but we were kids then. We were hoping that there would be a second redistribution during the present 'Ehadeg' (EPRDF) era. It has become clear now that such hope is futile. The only option for us is to buy (rent) one or two 'Kert' of land and engage in farming. But we don't have the money to do that.

The response of adult and richer farmers regarding viability of agricultural activities is not thus found to tally with that of the poorer inhabitants and the youth. The former tend to see farming as a satisfactory vocation and little merit in diversification out of farming. The latter, on the other hand, favor non-farm engagements whatever the nature of the activities. In both study kebeles, the poor and the youth who are restricted in land access have become participants in sand and stone quarrying in large numbers. Sand and stone quarrying is, in fact, the second most important economic activity and means of livelihood, next to farming, in the area. Paradoxically, many of those participating in the above activities invest their savings in renting land ("contrat" in local parlance) thereby turning into part-time farmers, which indicates that the scope for diversification into non-farm business activities is either restricted or untapped.

Although land shortage is felt by teenagers and young unmarried adults, land to be rented or contracted seems to be plentifully available for those who can afford it. The current mean contract price of 1 "kert"of land for one year varies between 500-1200 birr depending upon fertility and suitability to particular crop types. Poorer peasant farmers are increasingly renting land to richer farmers and other groups (the youth, government employees etc.) and turning to wage labour. This development is viewed negatively by key informants of this study. Those who rented their land and proleterianized themselves are considered as lazy individuals who want to escape from the rigors of farm work or short-sighted money squanderers lured by one-time gain .

Whatever the underlying motive and driving forces, the renting (contracting) of land is very widespread in the study area, and the contention that the formation of a landless agrarian class is underway cannot be discounted, at least in this case study. Whether those same forces have engendered a significant process of land consolidation (a corollary to the process described above under normal circumstances) is, however, not investigated in this study, apart from noting that there were some individuals in the study sample with exceptionally larger holding size.

B) LIVESTOCK

Apart from serving as accumulation of wealth and social prestige, livestock holding generate income through sale of animals and animal products (milk, butter etc.) and provide transport service. Livestock endowment seems, therefore an important asset for enhancing diversification It "is expected to have a positive effect on livelihood diversification through different channels: reducing risk aversion attitude of households, relieving liquidity constraints and generating income through sale of its products and services" Demisse et al. (2004:277). Livestock can also be used as collateral for loans to start non-farm enterprises.

The coefficient of livestock has, however, unexpectedly come out negative in both models. In model A in addition to being negative, the coefficient is also significant. The explanation may lie in the fact that oxen constitute a significant proportion of the cattle possessed by the households which encourages more farm work than non-farm activities. More importantly, it should be noted that in rural areas livestock possession (together with landholding) is usually highly correlated with the wealth status of the household. That both landholding and livestock came out negative in both models thus confirms the observation of key informants of this study that better-off inhabitants of the kebeles are least interested in non-farm diversification.

7.3.2 GENDER

The sex dummy for the household head is meant to proxy gender-based differentiation of participation in non-farm rural livelihood activities and earnings of

non-farm income. As hypothesized the sex coefficient has come out negative in both models.

Demissie et al. (2004:277) observe "that for social and cultural reasons, there is gender differentiation of activities in rural communities in Ethiopia. For example, women are not engaged in farming and blacksmithing. It is thus assumed that gender influence the household choice of livelihood strategy." This observation is found correct for the study population as well; which is not surprising given the entrenchedness of traditional hierarchical order within Ethiopian rural society in general.

Among the study population, the predominant non-farm activity practiced by women is the sale of local drinks and pottery. These activities are the exclusive domains of women, as no male household heads are involved. Women also engage in sale of low-priced prepared food along with brewing local drinks.

Those who are engaged in pottery, i.e. making the traditional 'mitad' for 'injera' baking number 49, and all of them are women as the tradition dictates. The stigma attached to crafts of this sort, however, has waned to the point of extinction, as reported by those interviewed. In the group discussion conducted in Tede Kebele, a participant underlined this point saying:

> *Our fathers and fore-fathers used to despise and cast them out. We, on the contrary, entreat them to teach us their art.*

As is to be expected, agricultural activities like plowing are entirely off-limit for women in the study area. As a result, when women become widowed or divorced, they are unable to be independent farmers. If they acquire land following the death of a spouse or marriage break-up, the only option they have is to contract it out or sharecrop out it and turn to non-farm activities of the type described above.

It is also worthy of note that diversification by women is wealth differentiated. Wives of wealthier farmers rarely undertake diversification activities which require much

labour or travel and are therefore considered lowly. Poor women also engage themselves in daily or casual labour on construction sites and other farms. Some of those interviewed for this study have reported that they combine local drink (tela and araki) sales with daily labour to earn their livelihood, allocating their time optimally between the two activities.

7.3.3 EDUCATION

As expected, the education coefficient has turned out to be positive in both models. Age and education are commonly taken as proxies for human capital and management skills. Therefore, it is natural to expect that at least one of them is positively related to income and activity diversity.

Skilled and educated people are believed to be more pone to engage in non-farm activity because of their access to information and opportunities. Gordon and Craig (2001) state that there are several processes that reinforce the effect of education on incomes:

- *education increases skill levels, which are required for some rural non-farm activities, or contribute to increased productivity;*
- *education can set in train processes that increase confidence, establish useful network or contribute to productive investment;*
- *non-educated family members may benefit from advice given by more educated relatives.*

Educational opportunities, especially primary education, are fast expanding in rural Ethiopia; and, as pointed out earlier, both kebeles have benefited from this process. Some vocational training was also provided in wood work and metal work for a number of unemployed youth, of which a few have made a living out of it. A farmer training center (FTC) also exists in each kebele which is being run by 3 development agents (DAs).

Informants of the study have, however, intimated that there is little opportunity to motivate the well educated ones to stay in the kebeles and adopt non-farm livelihood strategies. They rather tend to seek government jobs or migrate to urban areas in pursuit of better opportunities. Those who stay behind (mostly junior secondary and secondary school graduates who have not made it to higher institutions) engage in sand and stone quarrying, and farming on family plots for the most part.

7.3.4 FAMILY SIZE

Family size was hypothesized to have a positive influence on non-farm income and diversification. The coefficient has come out positive, confirming this. Family size is usually considered as an indicator of labor availability (Tegegne, 2000, and Demssie et al. 2004) and households with abundant labour supply are believed more likely to engage in livelihood diversification or have a higher participation in non-agricultural activities. Labour-rich households feel less constraint to send some of their members to non-farm activity.

The size of a household may also set a limit to the number of household members able to survive from agriculture alone. Some members would thus be forced by the economic circumstances of the family into non-farm activities to supplement income. Thus, as household size increases, intra- household specialization can also increase.

7.3.5 DEPENDENCY RATIO

Dependency ratio was expected to have a negative association with non-farm income and diversification. The results that emerged from both models have confirmed this. Dependency ratio refers to the household structure in terms of age composition and is believed to affect income diversification opportunities of the household. "The burden of non-active members is expected to reduce intra-household specialization opportunities and increase the inducement for risk averse households to allocate more factors to food production" (Crole-Rees, 2000:72).

The numbers of the active persons and the non- active members is thus believed to have a direct impact on the management, resource allocation and specialization possibilities of the household.

7.3.6 AGE OF HOUSEHOLD HEAD

As hypothesized, the age coefficient has turned out to be negative in both models. The usual reason offered in the literature by those who postulate a positive association between age and diversification is that older farmers are generally richer in experience and accumulated capital which makes non-farm activities attractive and feasible for them. On the other hand, as Abdulai and Delgado (1999) found, "the probability of participation in non-farm activities increases up to a certain age (up to 33 for men and 30 for women), and is thereafter inversely related to age". Older farmers could be less prone to take risks than younger ones; they could also be less active, all of which are possible factors that may discourage them from engaging in non-farm activities.

In the study area, as mentioned earlier, the predominant non-farm activity is sand and stone quarrying, and most of those participating in these activities are the landless youth. Some of the employment opportunities like daily labour and wage employment also do not require capital, experience or skills which are associated with age.

7.3.7 NET FARM CASH INCOME

Diversification is expected to be greater among better farm income earning households because farm cash earnings are thought to ease financial constraints in starting non-farm activities. In situations where lack of liquidity and lack of access to credit are critical barriers to entry, income derived from crop and livestock can hence support diversification strategies of households.

The variable farm cash income is as expected positive and significant in model A, whereas in model B the coefficient is zero, implying that no relationship exists between the independent and dependent variables.

7.3.8 SHARE OF FOOD IN TOTAL HOUSEHOLD CONSUMPTION

As expected, the food consumption share in total household expenditure has come out negative in both models. As economic theory predicts, households with a larger share of food in total expenditure have a lower total income than those with a lower share. Engel's law states that as household income rises, the share allocated to food declines. "At the national level, this trend is manifested as the process of structural transformation, in which the contribution of the nonagricultural sector to gross domestic product (GDP) tends to increase as per capita GDP rises" (Minot et al ,2006:9). The corollary at household level is that the decline in the share of food in the total household budget is linked to growth of non-farm income.

In the study sample the mean share of food in total household consumption is found to be 80.5 percent (81 percent in Shera and 80 percent in Tede).

7.3.9 MARKETABLE SURPLUS

Cereal net sales or food balance was hypothesized to be negatively associated with non-farm diversification. Contrary to expectation, the outcome in model A is a positive coefficient while Model B yielded a zero coefficient, indicating that no relationship exists between the two variables. Mulat (1997:36) observes that "as far as non-farm participation is concerned, farmers who are net sellers of grain are less interested than net buyers. This is consistent with the view that interest in participating in non-farm activities declines once the food requirements of the family is satisfied". In northern Shoa, Mulat (1997) thus found a negative relationship between food balance (net grain sales) and non-farm participation.

This is not the case, however, in this study. In the afore mentioned study net-buyers or market dependent families are reported to account for 65.3 percent of the total respondents, which shows a high rate of market dependency and conversely, low level of food self-sufficiency. In the study sample, however, net buyers represent 28.5 percent of all households (32 percent in Shera and 25 percent in Tede.) which is an indication of considerably lower market dependency.

Nonetheless, the hypothesis that interest in non-farm activities declines once food self-sufficiency is achieved is not validated by this case study as the variable has a positive, though not significant sign.

7.3.10 DISIANCE TO MARKET

Entry into the non-farm sector depends on market access simply because people must be able to sell their processed products, handicraft or labour. Greater physical access to market is thus believed to improve non-farm earnings opportunities. One of the determinants factors of market access is distance to markets and hypothesized to be negatively associated with non-farm income and diversification of activities as shorter distances reduce transport costs and improve access to potential demand. It should, however, be noted that in both study kebeles a local market place doesn't exist. Inhabitants of the villages commonly travel to Mojo town to sell their outputs and buy necessities. Distance to market in the study context thus means the distance data first collected in minutes and converted to kilometers from each household's homestead to Mojo town.

The variable distance to market however, has come out positive in model A, contrary to expectation, and negative in model B, as expected. The coefficient is, moreover, insignificant in both models. One explanation might lie in the fact that most non-farm activities may not rely directly on market access, and may rely more on local demand directly at the household location, as for example sale of local drinks or at the production site, like sand and stone quarrying.

7.4 PERORMANCE OF THE MODELS AND EVALUATION OF THE OVERALL RESULTS

Goodness of fit and error statistics given indicate that the explanatory and statistical performance of the models are of average level. The overall goodness of fit of the linear regression model as measured by the coefficient of determination, R^2 is 0.392. The adjusted R^2, which takes into account how many variables were used in the equation and slightly lowers the estimate of the variance examined, is 0.357. The R^2

value obtained from the linear regression model means that only about 39 percent of the variation in non-farm income is explained by the variation in the independent variables specified in the empirical model construction. This is an average R^2, but a "high R^2 is not evidence in favor of the model or a low R^2 is not evidence against it" (Gujarati , 1995:211).

Roughly speaking, a high value of R^2 is associated with a good fit of the regression line and a low value of R^2 with a poor fit .A low value of R^2 can, however, occur for several reasons. "In cross-section studies, unlike time- series studies, a lower R^2 may occur even if the model is a satisfactory one, because of the large variation across individual units of observation which is inherently present in the data" (Pindyck et al.,1981:64).

The F statistic which tests the significance of the R^2 statistic or, in other words, the null hypothesis that all regression coefficients are zero, is 11.01 and significant at 1 % level of significance. It implies that the independent variables are related to the dependent variables.

The analysis, however, has resulted in only 3 regression coefficients that are statistically significant (farm income, household head education and livestock). In the case of two variables (distance to market and livestock holding) the signs of the coefficients obtained are also contrary to a priori expectations.

When we turn to the logistic model estimation, "R^2-like" measures of goodness of fit are generated and shown under Table 27. These measures (Cox and Snell, Nagelkerke) are not goodness of fit per se, but attempt to measure strength of association. The Nagelkerke R^2 (most-reported of R^2 estimates in logistic regression) is 0.218. It shows that about 22 percent of the variation in the outcome variable (participation in non-farm activities) is explained by this logistic model.

The overall accuracy of this model to predict non-farm participation is 72 % (generated by SPSS as "classification table"). The default cut-off probability is 0.5, and for this model, it seems that this cuff-off gives good results.

The Wald estimates which give the importance of the contribution of each variable in the model and also their significance level is provided in Table 27. Household head education and land holding are significant at 10 % level of significance. Age of household head is significant at 5 % level of significance.

The coefficient of farm income is zero in this model, indicating that no relationship exists between this variable and non-farm participation. The signs of coefficients of livestock holding and sex of household head are also contrary to expectation.

On the whole, the realisticness of the models we fitted depends on incorporation of all the relevant variables, and no claim is made that this is achieved in the study. As pointed out earlier, non-farm income and participation in non-farm activities are determined by a wide and complex range of factors operating at different levels. What we have attempted to fit into the models is mainly characteristics intrinsic to households and their members. The only community level factor incorporated is distance to the nearest market. The wider factors which constrain households from entering the non-farm sector will, therefore, be treated in the next chapter.

The models, however, have demonstrated that household head education and age have positives and significant influence on diversification. Land holding of the family is negatively associated with diversification at a significant level. The result with respect to farm income is ambiguous. In the linear model, farm income is positively associated with non-farm income at a significant level, whereas in the logistic model no association is found between farm income and diversification.

7.5 DIVERSIFICATION EFFECT ON PERCAPITA NET TOTAL INCOME

The linear regression model is used to analyze the effect of share of income diversification on total income. The dependent variable is net total household income percapita, while the independent variables are the income diversification index (net non-farm income divided by net total income) and all the other variables used in the previous regressions.

As shown in Table 28, the share of non-farm income (diversification index) has a positive and significant effect on total income. Household head education, food balance percapita and landholding percapita have a significant and positive impact on total net income percapita. Dependency ratio is negatively associated with total income at a significant level. Share of food consumption and family size have negative impact on total net income but not at a significant level. Distance to market and livestock possession are positively associated with total income, but at an insignificant level.

Table 28: Linear Regression Model Results (Model C)

Determinant variables	Coefficient	Standard error	t-statistic	Significance level for t- statistics
Diversity Index	4320.57	912.4	4.735	0.0001*
Household Head Education	269.5	87.6	3.078	0.002*
Livestock in TLU percapita	695.81	477.63	1.457	0.147
Food Balance (net grain sales) percapita	0.931	0.175	5.319	0.0001*
Sex of household Head	735.2	676.3	1.087	0.278
Age of Household Head	0.998	23.89	0.042	0.967
Land Holding percapita	2777.95	1042.45	2.665	0.008*
Family size	-84.08	125.3	-.671	0.503
Dependency Ratio	-576	298	-1.929	0.055**
Share of food in Total consumption	-2828.4	3026.2	-.935	0.351
Distance to market (kms)	17.77	118.8	0.150	0.881
Constant	648.89	2892.48	0.224	0.823

Dependent variable is percapita net total income.

N = 200

$R^2 = 0.403$

Adjusted $R^2 = 0.368$

F ratio = 11.55

*significant at 1% level of significance

**significant at 10 % level of significance

CHAPTER 8

CONSTRAINTS TO NON-FARM RURAL LIVELIHOOD DIVERSIFICATION

Given the fact that rural non-farm activities are heterogeneous by their very nature, the constraints also have varying characteristics. It is worth emphasizing from the outset that major differences exist between the constraints for self-employment (through engagement in micro enterprises, for example) and wage-employment. Differences in the nature of the engagement are at the bottom of their differentiation. Self-employment calls for long-term engagement where responsibility and decision making rest with the entrepreneur, while wage-employment is usually of temporarily limited nature with no responsibility for business decisions. Even if the employment has a long term nature as in the case of government employment, it doesn't require mobilizing household capital assets.

The constraints to self-employed engagements are therefore the main focus of this chapter because the entry barriers in terms of start-up capital, skill level (practical and managerial), access to infrastructure, social relationships, cooperation among household members and other factors are higher than to wage-employment. In this connection, Warren (2002:10) observes "rural enterprise development is a form of diversification requiring higher investment and entailing higher risk. Therefore, it is not surprising that temporary wage labor is often the first choice for impoverished farmers in need for diversifying their livelihoods" Warren (2002:10).

In the study kebeles, opportunities for wage employment are expanding faster than for self-employment. This is especially so in Shera Dibandiba and has to do with the existence of two private and one public tannery, one oil mill and a cotton ginning plant in the immediate vicinity of the kebele. A Dutch owned car assembly plant ('Holland Car') is also recently established in Shera kebele. According to information provided by the Kebele Administration of Shera, 6 investors who received land for poultry, small-scale cattle fattening and horticulture development have also started

operation. As mentioned earlier, opportunities for cooperativised engagement in non-farm activities are also available for land-less and unemployed inhabitants of both kebeles in the form of river sand and stone quarrying as well as horse-drawn cart ("gari") transport operations.

All the above and similar wage and quasi-wage employment engagements are, however, as stated earlier, easy-entry activities not subjected to the kinds of acute constraints faced by enterprise-based diversifications which are to be treated hereafter.

Household heads of the study sample were asked to tell the primary constraint preventing household members from opening a non-farm enterprise by choosing among pre-coded answers in the questionnaire. Ninety three out of the 200 respondents, i.e. 46.5 percent (25 percent is Shera and 21.5 percent in Tede) responded that insufficient startup capital is the primary constraint (Table 28). Nearly the same percentage (10 and 9.5 percent) responded that poor infrastructure and lack of appropriate skills respectively are the primary constraints. About 10 percent reported that they have never given thought to this issue. Fear of loss of land is considered a primary constraint by 5.5 percent.

Despite the high percentage of respondents who singled out insufficient startup capital as primary constraint, the percentages of those who reported absence of credit sources and lack of awareness about credit sources as primary constraints are very low (1.5 percent and 1 percent respectively). Collateral problem to borrow from banks is also considered a primary constraint by only 4.5 percent of respondents. Limited market demand and taxes are viewed as primary constraints by 4 and 2.5 percent of respondents respectively, while shortage or increasing price of inputs is considered a primary constraint by 2.5 percent of respondents.

The above perception of constraints to non-farm engagement generally agrees with the perception of the key informants interviewed for this study. However, all key informants have emphasized that farming is considered as a sufficient means of

livelihood by most inhabitants of the kebele and the vision to diversify is minimal because of lack of awareness of the opportunities and weak push factors, especially among the better off.

The proximity of both kebeles to a major urban center, i.e. Mojo Town, is also sited as a major inhibiting factor by the key informants, the reason given being that the kebeles' dwellers meet most of their needs by commuting to and from the town market. This situation is also a major contributor to the absence of a local market place in both kebeles. All key informants have emphasized skill and knowledge as key inhibitors of diversification. In the group discussion held in Shera Kebele a middle aged participant remarked:

> *Business consciousness and education in general are very low in this community. We are tradition and custom-oriented. Lack of capital is the second important problem, not the first. The community here, however, has purchasing power. There is sufficient market demand; but we always travel to Mojo town to buy what we need for consumption.*

Regarding infrastructure, the major constraint identified by key informants is electric power. Road access is not considered a constraint as both kebeles are connected to the highway crossing Mojo town and are located about 5 kms away from this main route. In this connection a participant of group discussion in Tede Kebele remarked:

> *The most serious obstacle to business in this Kebele is lack of electricity and piped water supply. How can one open a mini-hotel or pub without electricity and water supply? As regards road we have no problem.*

Having established the perception of the study households and key informants about constraints to non-farm diversification, in the following sections we will further assess the situation on the basis of information gathered from various pertinent Woreda level bodies as well as relevant proclamations and regulations.

8.1 LACK OF ACCESS TO CAPITAL AND CREDIT

Inadequate access to capital is the most commonly reported obstacle to investment and entrepreneurship; and the fact that it is singled out as the most acute constraint on diversification by respondents of this study conforms to the general pattern. A note of caution here, however, is that the startup capital requirement of micro-enterprises varies: many types of enterprises do not have specific or substantial assets in terms of building, machinery, land etc, and thus require very limited, if any, start-up capital. Such are for example local drink sales and petty trade at local markets.

As shown in chapter 7, household heads of the study sample were asked to identify the primary source of the start up capital with which they established non-farm business. Out of the 98 who are engaged in non-farm business, 45 of them i.e. about 50 percent (23 percent in Shera and 22 percent in Tede) responded that they raised the money for start up capital through crop sales (Table 18). About 12 percent have relied on family or friends to raise capital while about 7 % have used livestock sale for this purpose. Those who tapped resources of micro-finance institutions for non-farm investment purposes are only 6.7 percent, though a total of 75 households (37.5 %) have accessed micro-finance for various reasons (Table 29). As shown in Table 29, the largest number of households' (22.7%) motive for accessing micro-finance is to rent land. Those who took loan to purchase farm-ox come second in number (25.3%), followed by those who took loan for purchase of consumer goods and agricultural inputs(14.7% and 10.7%) respectively.

Therefore, from the above assessment, it can easily be inferred that the main source of capital for non-farm investment are personal household savings derived from crop and livestock sales, and loans from families and friends, micro-finance being used mainly for other purposes described above. The use of formal credit markets to start up a non-farm activity is thus limited in the study kebeles. As in many other parts of the country, informal rotating credit associations or 'ikubs' are also sources of funds in the kebeles; but they generally involve relatively small sums and cannot serve as

sources of long term loans since they are established as means of saving rather than borrowing.

The role of money lenders (usurers) is waning as reported by the inhabitants. One participant in the group discussion held in Shera Kebele remarked:

> *We used to borrow from money lenders at very exploitative terms and conditions. When mico-finance came the situation changed a lot. The money lenders are out of business now, except few. It was around July (lean months) that we were borrowing from the money lenders and repay in December (harvest season). The interest rate is usually more than 100 percent.*

TABLE 29: Households' Primary Reason for Applying for Micro-finance

			Reasons for applying								
			Rent land	Agricultural inputs	Oxen	Non-farm business eqpt.,machinery etc.	Education	Health	Consumer goods	Other	Tot
Kebele	Shera	Count	4	4	5	1			5	3	
		% of Total	5.3%	5.3%	6.7%	1.3%			6.7%	4.0%	29.3
	Tede	Count	13	4	14	4	2	2	6	8	
		% of Total	17%	5.3%	19%	5.3%	2.7%	2.7%	8.0%	10.7%	70.7
Total		Count	17	8	19	5	2	2	11	11	
		% of Total	23%	10.7%	25%	6.7%	2.7%	2.7%	14.7%	14.7%	100.0

Source: Own Survey

In the study kebeles, four formal organizations are involved in the provision of micro-credit service:

- Oromiya Credit and Saving Share Company (Mojo branch);
- Awash Saving and Credit Union;
- Public Mobilization, Labour and Social Affairs Office;and
- Busa Gonofa Mico-finance Institute (a local NGO)

Oromiya Credit and Share Company avails a maximum of 5000 birr for a person who is a member of a group of 4-6 persons. Groups are organized under centers which can have up to 60 members. A loan applicant can receive only 1000 birr or less for the first year. The maximum level of 5000 birr can be attained on the basis of a yearly increment of 200 birr which is conditional upon the repayment record of the borrower. The interest rate is 12.5 percent; and, as informed by the management, the repayment rate so for is 100 percent. The organization has 5 centers in Shera and 2 centers in Tede, and total registered borrowers in 2007 - 2008 were 193 persons in Shera and 82 persons in Tede. The total loan take out is 706,700 birr in Shera and 204,200 birr in Tede. According to the manager, the largest numbers of borrowers use the money to buy farm ox, followed by renting land, small-scale fattening and settlement of fertilizer debt incurred for fertilizer purchase.

Awash Saving and Credit Union is a federation of 25 primary credit cooperatives operating in Adama, Lume (the study Woreda), Ada Liben, and Bora Woredas. Unlike Oromiya Credit and Share Company, membership of a primary cooperative is a condition to access the services of the Union. In addition, members have to deposit savings in order to be eligible for loans. The loan take out amount is three times what the individual has saved, with a ceiling agreed upon by members. The usual ceiling is 3000 birr, though some primary cooperatives lend up to 5000 birr. The interest rate charged by the union is 10 percent while the primary cooperatives charge 12-15 percent. The union has one member cooperative in Shera and another one in Tede. The cooperative in Shera has 31 members (28 male, 3 female) with a total saving of 31592 Birr deposited by the individual members. A total of 28297 birr is lent by the

Union to members in Shera. The cooperative in Tede has 13 members (94 male and 37 female) who have saved 117353 birr in aggregate. The loan disbursed to members totals 238, 939 birr.

The Public Mobilization, Labour and Social Affairs Office of the Woreda also provides micro-credit on a revolving fund basis, at an interest rate of only 5%. Unlike the former two institutions, it targets only unemployed and landless persons, especially the youth. The stated objective is to alleviate poverty and address problems of the landless and unemployed youth. Before extending the loan, in collaboration with the Cooperative Organization Department of the Woreda Agriculture Office, it organizes the beneficiaries under cooperatives (sand and stone quarrying, horse-drawn cart transportation, etc.). The loan amount ranges from 600 birr to 4000 birr. This includes 1500 birr for grain trade, 1600 birr for small-scale cattle fattening, 1000 birr for petty trade and 800 birr for sheep and goat rearing. The largest amount, 4000 birr, is extended for horse drawn cart ("gari") transportation business. According to the head of the Office, in Lume Woreda 1331 persons (45 percent male and 55 percent female) have taken out loan since it started giving service in 2005.

In Shera kebele 64 persons have taken out a loan totaling about 83, 000 birr while in Tede 55 persons have taken out a loan totaling about 48000 birr since 2005. Most of the loan was made for petty trade, small-scale cattle fattening, and "gari" transportation service operators.

Busa Gonofa Microfinance Institute (BGMFI) is the only strictly private micro-finance institution operating in the Woreda. It started operation in 2000 after splitting from an NGO following government directive prohibiting NGOs from engaging in micro-finance activities on a profit making basis. The maximum loan it extends is 3500 birr with an interest rate of 24 percent. It has four groups with a total membership of 37 persons in Shera, and another four groups having 35 members in Tede. The total outstanding loan provided in the two kebeles is 89500 birr. The purposes for which loan are taken out are to rent land, buy farm oxen, settle debt

incurred for fertilizer purchase or down payment for fertilizer debt and grain trade, especially by women borrowers.

In summary, micro-finance programs are reaching the subjects of the study, and, prospective non-farm diversifiers do not lack all access; but loan size is limited, and ,therefore, inadequate for high return activities. The repayment period is also short, usually restricted to one year. Loan applicants are also required to form a group or cooperative which is the norm in microfinance, but this may not be convenient for individual entrepreneurs pursuing enterprise-based diversification. In the words of one group discussion participant in Tede:

> *Had it been possible to use landholding certificate as collateral to borrow adequate amount of loan from banks, many people could have started business.*

The commercial Bank of Ethiopia has a branch in Mojo town, but its accessibility is limited, especially for the poor, due to collateral problems. In such a situation Development Banks could play a role as conduits through which government policies favoring non-farm diversification are implemented. The Construction and Business Development Bank of Ethiopia is one such institution. The nearest branch is in Adama Town, which is not too far, but the Bank needs to include non-farm enterprise development as one of its priority areas.

8.2 LOCAL INFRASTRUCTURES

Local infrastructure is the second important constraint identified by the study subjects. Key informants of the study have also stressed the limitation poor infrastructure places on non-farm business development. The most severe handicap to local non-farm business development identified by the respondents is electricity. The problem is more acute in Tede than Shera kebele as no electricity service is available there.

Lack of a reliable and piped water supply is the second important infrastructural handicap identified by the key informants constraining the development of enterprise-based diversification in the kebeles. On the other hand, road is not seen as a major constraint in both kebeles. As mentioned earlier, both kebeles are located about 5 kms away from Mojo and the main highway connecting Addis Ababa and Djibouti that crosses it. Though in a state of neglect and disrepair, a segment of the old highway, which is now abandoned, also crosses Tede Kebele. The net-work of feeder roads within the kebeles seems also not particularly bad. A landline telephone service lacks, but both kebeles are covered by a mobile telephone services network.

8.3 SKILL DEVELOPMENT AND BUSINESS SUPPORT STRUCTURE

Skills and ability rank third among factors identified by household heads as constraining non-farm enterprise development. All key informants have also laid strong emphasis on this point. It is not difficult to realize that lack of skills and ability poses a barrier to entry into high return non-farm activities. However it would be incorrect to assume all non-farm activities are liable to skill constraints. Certain activities will, by their very nature, require special skills. Such are, for example, handicrafts, weaving, carpentry, metal works pottery and blacksmithing. On the other hand, activities such as simple food processing, local drink sales and petty trade are not likely to be constrained by high or specialized skill requirements.

Access to training is one way of mitigating skill deficiency but is found to be very limited in the study kebeles. The Agriculture Office of the Woreda had in the past conducted vocational training in wood work and metal work for unemployed youth in both kebeles. In Tede kebele, 10 women were also trained in the production of 'laketch' (small household cooking stove) after being organized under a cooperative and are now faring well in the business.

Such rudimentary efforts need, however, to be expanded and improved. Public institutions engaged in technology development and dissemination should also include non-farm rural micro-enterprises in their program. One such institution at

federal Level is the Federal Micro and Small Enterprise Development Agency (FEMSEDA). FEMSEDA has counterparts in all regions but the Oromiya office is not active in the study Woreda.

Other institutions, though engaged in supporting entrepreneurship directly through training and promotion, are nonetheless restricted in their mandate to areas within the urban administration. A glaring example is Lume Woreda's Trade, Industry and Transport Office whose current head has revealed in no uncertain terms that no rural counterpart organization exists to deliver the above kinds of services which the office is now providing in the urban part of the Woreda.

As shown earlier, 42 out of the 200 interviewed households (21 percent) have not received any formal education. This is a high illiteracy rate which is a serious impediment to expansion of non-farm businesses because such activity requires at least a minimal accounting know-how

8.4 LAND TENURE ARRANGEMENTS

About 5 percent of the study household heads have indicated that fear of loss of land is a primary deterrent to non-farm rural diversification. Although these are a small percentage, it is nonetheless testimony to the fact that the land holding certification drive has not totally allayed the apprehensiveness and skepticism of farmers around this crucial issue.

The key informants of this study, however, are unanimous in their rejection of the view that tenural insecurity is currently an inhibitor of non-farm diversification. Insecurity of tenure, according to the key informants, is no worry of farmers in the kebeles because, though formal land sales are prohibited, a person can rent out the land in his possession and pursue any vocation of his choice, even by changing his residence to a distant location outside the kebele. In this connection one group discussion participant in Shera Kebele remarked:

We have holding certificate; no one can evict us even if we migrate to 'ferenj ager' (overseas). The only thing required of us is to meet our tax obligation.

The Land Use and Administration Proclamation of Oromiya Region (proclamation no. 130/2007) lays dawn that "any peasant, pastoralist or semi-pastoralist has the right to rent out up to half of his holding. Duration of the agreement shall not be more than *three* years for those who apply traditional farming and *fifteen* years for mechanized farming (Article 10.1 & 10.2). The proclamation further stipulates that "any land holder, having the right to use land, can make special agreement with any investor to develop his holding. The agreement shall be registered and approved by Agricultural and Rural Development Office in the vicinity (Article 10.8). The oft-mentioned source of insecurity, i.e. land redistribution, is also laid to rest in the proclamation's article 14: "redistribution of peasants or semi-pastoralists land holding shall not be carried out in the region except irrigation land". It is further stated that any rural land holder shall be given a life time certificate of holding, and use right shall not be affected due to change of residential areas.

One can thus conclude that a legislative framework ensuring security of land ownership and at the same time facilitating the development of a rental market is present in Oromiya region. The study has also verified that the land rental market, in practice too, is very thriving in both kebeles. However, a large part of the transactions are informal so as to get around certain provisions of the law. Article 10.1 of the proclamation, for instance, provides that "any peasant, pastoralist or semi-pastoralist has the right to rent out *up to half* of his holding". In practice, however, peasants may rent out more than half, or at times, their entire holding through informal agreements.

Although this study concludes that the existing land system and legislative framework is no constraint as far as tenural security is concerned, since it has legalized the underground rental market and holding certification is well advanced, there are still gaps with relevance to rural non-farm diversification that have not attracted the attention of policy makers. One of these, which came to light during

discussion with the land Administration Department Head of Lume Woreda's Agricultural office, is that there is no law or regulation regarding how interested local entrepreneurs can rent land from fellow peasants *for non-agricultural purposes*. As shown above, the land use proclamation only lays down the rules and regulations for renting land *for agricultural purposes only*. While large investors interested in both agricultural and non-agricultural activities are accommodated by the Woreda Investment Desk, those small farmers residing in the kebele and seeking to engage in micro-enterprises, however, have no institution or legal provision to turn to. What is usually done is therefore to conclude informal rental agreements and use the land acquired in this way for the intended non-farm activity.

Another important gap that came to light is that the region's Investment Proclamation (proclamation no.115, 2006) while establishing Zonal, Woreda and Urban administration investment committees and other organs, doesn't, however, treat explicitly the promotion of rural non-farm activities in its provisions.

8.5 OTHER CONSTRAINTS

Other constraints commonly cited in the literature, such as lack of market opportunities, shortage of demand, and urban center in proximity, though by no means absent, are not found to be critical in the context of the study kebeles.

As was repeatedly mentioned, the study kebeles are close to a relatively big town. This could, however, be a boon or a curse depending on the type of non-farm activities local inhabitants would like to diversify to. Certain activities, as pointed out by the interviewees, are liable to stiff competition from Mojo town. On the other hand proximity to such an urban center is advantageous in many respects, including market opportunity and input supply. Cultural biases towards handicrafts like pottery and blacksmithing are also fast vanishing; and, therefore, are not considered a constraint at all by the inhabitants of the kebeles.

CHAPTER 9

SUMMARY AND CONCLUSION

9 .1 SUMMARY

The study population was drawn from two kebeles in Lume Woreda, East Shoa Zone of Oromiya. The first kebele (Shera Dibandiba) has a population of 2532 and the second (Tede Dildima) has a population of 2933. Both are located at a distance of about 5 kms from Mojo town.

The main source of income in both kebeles is agriculture followed by formal and informal trade, small household-based enterprises as well as river sand and stone quarrying. Seventy four percent of all households derive their primary source of income from agriculture, while 15.5% of the sample derive their primary income from trade. Four and half percent are public sector employees and 6% are private sector employees, casual laborers and pensioners.

The mean land holding in the study sample is 2.37 hectors ranging between 0.4 and 4.75 hectares. The mean number of plots for the study sites is 4.39. Twenty percent of households have reported to have 6-10 plots. Land fragmentation thus seems to be acute in the study sites.

The main types of crops grown are teff and wheat. The mean output of teff and wheat in the whole study sample is calculated to be 17.43 and 5.49 quintals per household respectively. The corresponding mean yield is 6.2 and 2.03 quintals per hectare respectively.

About 50 percent of households consider that high price of inputs is the primary constraint to agricultural production. Availability or supply of inputs, however, is hardly considered a problem. Scarcity of land is considered a primary constraint by 37 percent of house holds. Migrant hired labor during peak harvest season is common in the kebeles

Crop sale and purchase is common in the area. Fifty four households (27 percent) have negative food balance, which means that they are net buyers of grain. The mean food balance for the whole study sample, however, is positive.

Farmers in the study sites also own different types of livestock. The average number of oxen owned is 3.48. About 26 percent of farmers own a pair of oxen and about 14 percent own only one ox. The use of commercial fertilizers is very widespread. The mean total purchase in a year was found to be 402.8 kilograms. The use of herbicides and insecticides is also significant.

The majority of the study households (80.5 percent) don't believe they can achieve food security by doing farming alone. On the other hand, still a large majority (81.5 percent) think that they cannot survive without farming, while 93 percent think farming as essential for their survival.

Fifty three percent of households would like to do both farming and non-farm activities in the coming five years while 25 percent would prefer to do farming only. Thirty six percent would prefer to do non-farm business only.

If offered a large amount of money about 41 percent expressed that their first choice of investment would be buying livestock while about the same percent (40.5%) responded that their first choice of investment would be in trade or business. About nine percent would prefer to primarily invest on renting or contracting land.

From the total of 200 surveyed households, 98(49 percent) pursue non-farm activities. Sixty eight of them (69.3 percent) are engaged in only one non-farm activity while 29 of them (29.5percent) are engaged in two activities. All of the latter are from Tede kebele, giving indication that diversification is more pronounced in Tede than in Shera, which is a paradox since there is no electricity in Tede. Only one person living in Tede is engaged in 3 activities. When farming is considered as one source of income, households of the study sample have an average of 2.3 sources of income.

Non-farm micro-enterprise activities in both kebeles are primarily of service nature (local drink sale, shop-keeping, grain mill and grain trade etc.) as well as handicraft activities (mainly pottery). Sand and stone quarrying and casual labor are also important. Manufacturing activities are minimal. Those engaged in river sand and stone quarrying are organized under cooperatives and unions.

As regards the study sample, 106 (53 percent) do only household farming, while 47 (23.5 percent) do both farming and non-farm business. Fifteen (7.5 percent) are wage and salary employed. Those self-employed on non-farm business alone are 22 (11 percent). The remaining (5%) are daily laborers and pensioners.

The non-farm businesses the study households are engaged in are small in size, half of them employing just one person. The primary base of operation for most micro-enterprises is inside or very close to residence. The sales outlet for about 50 percent of micro-enterprises is the local community, though a local market doesn't exist in both kebeles.

Crop sale is the primary source of start-up capital followed by loan from friends and relatives and livestock sale. Out of the total 129 non-farm activities, only 55 are licensed micro-enterprises.

Among the survey respondents, about 37 percent were motivated to diversify into non-farm activities by small size of their land holding, and about 20 percent by lack of access to agricultural land. Another 20 percent have reported social and economic independence as their main motive to diversify. The remainders were motivated by market opportunity and the aim of obtaining income to support agricultural work.

The mean annual net income of the survey households is 17101 birr. The mean annual crop and livestock incomes are 6419 and 4556 birr respectively. The mean income from wage and salary employment is 3674 birr. The 98 households who are engaged in non-farm activities have derived a mean income of 9136 birr from this source.

Fifty-two households (26 percent) derive more than 40 percent of their income from non-farm sources while 122 households (61percent) earn more than 40 percent of their in- come from farming.

On average, for all households of the sample, crop production represents 32 percent of total household income while livestock production's share in total income is about 23 percent. Farm income (derived from both crop and livestock production) on average represents 55 percent of total income for all households. Non-farm business activities contribute for 24.5 percent of total income on average. Wage and salary and other income sources contribute for 13 percent and 7.5 percent of total income on average

Non-farm income is found to be highly correlated with total income. The correlation coefficient calculated is 0.828 (significant at 0.01 level).The majority of those who are engaged in non-farm activities (68 percent) use the income they acquired primarily for consumption and essential household expense. About 21 percent, however, reported that they would invest it to expand non-farm business activity. About 10 percent indicated their primary purpose is to invest the proceeds on-farm or purchase farm inputs.

The linear and logistic regression models run on the survey data have demonstrated that household education and age have positive and significant influence on diversification. Land holding of the family is negatively associated with diversification at a significant level. The result with respect to farm income is ambiguous. In the linear regression model, farm income is positively associated with non-farm income at a significant level, whereas in the logistic model no association is found between farm income and diversification. Diversification, measured by share of non-farm income in total income, is, however, positively associated with total income.

Asked about major constraints to non-farm enterprise-based diversification, 46.5 percent responded that insufficient start-up capital is the primary constraint. Ten

percent of the respondents think poor infrastructure is the major constraint while 9.5 percent believe lack of appropriate skills is the main problem. Fear of loss of land is considered a major constraint by 5.5 percent while 10 percent responded that they have never given thought to this issue. Key informants have emphasized that farming is considered as a sufficient means of livelihoods by most inhabitants of the kebele and the vision to diversify is minimal because of lack of awareness of the opportunities.

9.2 CONCLUSION

Rural households in the study kebeles have diversified incomes, and non-farm livelihood diversification is important. The pattern of diversification is similar on average for both kebeles. Much of the non-farm activities are in petty trade, household level small-scale food and local drink sales, traditional crafts, natural resource extraction (river sand and stone), casual/ daily labor and wage/salary employment.

Except for few grain merchants, diversifications into high value, high return activities are virtually non-existent. Low entry-barrier, low return activities predominate. Manufacturing comprises a negligible part of all non-farm activities. The majority of micro-enterprises in the kebeles employ just one person: the owner.

Women dominate many of the non-farm activities such as household-based food processing, local drink sales, local crafts and street-side petty trade. Non-farm activities are particularly important for female-headed households who usually belong to disadvantaged sections of the community. Consequently, women could be key actors in accelerated rural transformation if their role is explicitly recognized and assistance is provided to them by governmental and non-governmental agencies,

Diversification among the 'farm-rich' was found to be very uncommon in the study kebeles, though diversification, especially through enterprise development, is more feasible for them. The greatest extent of diversification was amongst the 'poor' and 'medium' inhabitants of the kebeles. But the type of diversification pursued by the

"poor" and the "medium" is mainly in a way that will not lead to accumulation for investment purposes as it is dictated by the need to meet subsistence requirements.

Although tenural security is hardly a problem, diversification in the study kebeles is to a great extent associated with negative circumstances related to landlessness. Landlessness and unemployment are most acute among the youth; and, as is to be expected, diversification driven by land constraints was found to be dominant among the youth. In such a situation, where the landless population is significant, the importance of non-farm livelihood diversification is obvious.

Diversification was also found to be significantly influenced by household head education and age. Other than these three variables (land holding, education and age), diversification in the study population is not significantly influenced by household characteristics.

The study has also shown that the empirical findings of many studies that an increase in income diversification leads to a rise in total income is valid in this case study too. The higher the degree of diversification of households, the better-off they are in terms of total income.

Lack of access to sufficient fixed and working capital is a major constraint to undertake high-return non-farm activities. The philosophy of micro-finance, which rests on non-targeted, multi-purpose and small-scale group lending schemes, is for the most part inadequate and unsuited for individual entrepreneurship. There is thus a need to facilitate the spread of rural financial institutions that operate on the basis of savings and loans organized according to conventional banking criteria.

Lack of awareness, knowledge, vision and skill are important constraints to involvement in enterprise-based non-farm activities. Awareness creation about business opportunities and provision of business support services in training, technical assistance and information are hence vital. Poor infrastructure, especially lack of electrification and piped water supply, are also major impediments to non-farm diversification.

Agricultural growth is important requirement for non-farm activities growth because many non-farm goods and services are consumed by the local community whose income still is largely dependent on agriculture. Some goods and services in the kebeles are tradables outside the Woreda, as far as Addis Ababa (grain, river sand, quarry stone, and pottery products, for example) and may not be constrained by local demand. By contrast, others such as local food processing, wood work, metalwork etc are non-tradables whose growth prospect is positively influenced by a vibrant local agricultural sector. One has to note also that, as 52 percent of the respondents indicated, most capital for non-farm activities is also accumulated through crop and livestock sales (see section 7.15).

Urban linkage is important; but its impact on diversification in the study kebeles has so for been negative. The non-existence of local market places and the observed little development of local trade is largely attributable to competition from the nearest urban center (Mojo town).

It has also been possible to observe that the formation of cooperatives and unions of cooperatives is progressing well in the woreda, including the study kebeles. Cooperatives of river sand, stone quarrying, and horse-drawn cart ('gari') transport are found to be salient features of livelihood in both kebeles.

. Access to those resources mentioned in this study (credit, land, training, business support etc) is mediated through institutional arrangements. However, consistently with other empirical findings in developing countries, the rural non-farm economy in the study area is also found to be an institutional orphan. No single government body owns or claims it, but many influence it one way or another. Review of the relevant documents, and discussion with the concerned Woreda officials, has also revealed that Land Use and Investment Proclamations and Regulations issued so far (both at regional and federal level) also don't explicitly address matters of rural non-farm activities.

9.3 IMPLICATIONS FOR POLICY

Both the Agricultural Development strategy (ADLI) and PASDEP explicitly recognize the importance of non-agricultural income diversification in rural areas. The Rural Development Policy and Strategy Paper of the Ethiopian Government (2001) also states: "we can consider our rural development activities have achieved their goal only when agriculture ceases to be the mainstay of the Ethiopian economy".

Policy intentions should, however, be translated to policy actions by mainstreaming the non-farm sector in other policy areas. Rural policies should aim at integrating farm and non-farm activities; and the conventional sector-based approached should be broadened through adoption and implementation of local development strategy that includes both farm and non-farm activities.

The government must strengthen its current drive of investing in rural infrastructure, particularly electrification, road and rural water supply. It must also intensify its role in the country's educational system, in particular in basic and vocational education provided in rural areas. In this regard, the findings of the study, which revealed that more educated farmers are more likely to involve in non-farm activities, suggests that education could be an effective instrument in achieving the aim of integrating farm and non-farm activity at local level.

The credit and finance bottleneck should be resolved by learning from the lessons of micro-finance; but, serious effort should be made to overcome its short comings on the basis of more conventional banking criteria.

As non-farm diversification requires group-based activities to mobilize know-how, capital, experience and other benefits that derive from being organized, cooperatives and unions of cooperatives should be further strengthened and promoted.

The study has revealed that enterprising farmers are eager to use their land as collateral to secure loan; therefore, this avenue of capital souring needs also to be accorded policy attention.

Finally, the study argues for clear institutional ownership over rural non-farm matters within different tiers of government. Institutional strengthening explicitly focused on rural people's access to non-farm livelihoods should be one of the priority issues in rural policy. Future amendments of regional Land Use and Investment Proclamations and Regulations too should explicitly consider the rural non-farm economy in their provisions.

9.4 IMPLICATIONS FOR RESEARCH

This study, in the course of the literature review and the actual research and analysis, has identified a number of themes for future research.

These themes which need further research are:

- The effects of income diversification on total income distribution ;
- The relationship between income diversification and total income ;
- New approaches and models for credit provision in rural areas;
- The influence of the relative prices in the farm and non-farm sectors on diversification (relative prices of outputs from and inputs to both non-farm and farm activities);
- The effects of proximity to urban centers on rural non-farm diversification;
- The relationship between land constraint and income diversification;
- The role of cooperatives in non-farm rural livelihood diversification.

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ANNEXES

NON-FARM RURAL LIVELIHOOD DIVERSIFICATION SURVEY
FEBRUARY 2008

REGION: OROMIA

ZONE: EAST-SHOA

WOREDA: LUME

KEBELE: _____

HOUSEHOLD HEAD: _____

ENUMERATOR: _____

SIGNATURE: _____

SUPERVISOR: _____

SIGNATURE: _____

Section 1: HOUSEHOLD COMPOSITION AND DEMOGRAPHICS

[ASK HOUSEHOLD HEAD]

1	2	3	4	5	6	7	8	9	10	11
					Ask for members aged 5 years and above					
Ser. No	NAME	Relationship to the household head 01 = Household head 02 = Spouse(wife) 03 = Child 04 = Grandchild 05 = Other relative 06= Domestic servant 07 = Hired worker 08 = Other non-relative	sex 1 = Male 2 = Female	age YEARS	Can you read and write in .....? Amharic 1 = Yes 2 = No	Can you read and write in .....? English 1 = Yes 2 = No	Can you read and write in .....? Afan Oromo 1 = Yes 2 = No	Can you perform simple arithmetic in writing (+,x,÷)? 1 = Yes 2 = No	Are you currently attending School? 1 = Yes 2 = No	What is your highest Level of education completed? IF AGE IS LESS THAN 5 YEARS >>next person 00 = No schooling 01 = Grade 1 02 = Grade 2 03 = Grade 3 04 = Grade 4 05 = Grade 5 06 = Grade 6 07 = Grade 7 08 = Grade 8 09 = Grade 9 10 = Grade 10 11 = Grade 11 12 = Grade 12 13 = Tech/Vocational training (10+1 /10+2 /10+3) 14 = Tech/Vocational training (12+1 /12+2 / 12+3) 15 = University/College - incomplete 16 = University/College - complete 17 = Adult literacy program
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										

Section 2: Employment

(ASK OF HOUSEHOLD HEAD OR MOST KNOWLEDGEABLE RESPONDENT)

1	2	3	4	5	6	7	8	9	10	
LIST NAME & ID FROM SECTION 1 OF ALL MEMBERS AGED 10 AND ABOVE		Were you engaged in any productive work for the household in the last 12 months? 1 = Yes 2 = No >>5	What was the employment status of members of the H.H in the primary/secondary job they did in the last 12 months ? 1 =Farm wage/salary employee>> Q6,7,8,10 2 = Non-farm wage/salary employee >>Q6,7,8,10 3 = Casual / daily laborer >> Q6,7,8,10 4 = Only farming on household farm 5 =Both farming on house hold farm and self-employed on non-farm business >> Q9,10 6 = Employer >> Q9,10 7= Only Self-employed on household non-farm business >> Q9,10 8= Unpaid family worker on household farm 9 = Unpaid family worker on household non-farm business >> Q9,10 10 = Work as part of Productive Public works(Safety Nets program,...) >> Q6,7,8,10	What was the main reason for not engaging in any productive work in the past 12 months? 1 = Actively seeking work but can't find a job 2 = Interested in finding a job, but not actively seeking work because no jobs are available 3 = Student 4 = Domestic chores/housekeeping 5 = Old age 6 = Illness/disability 7 = Not otherwise interested in work for some other reason	How much was H.H members' last payment for wages/salary in this primary/secondary job? IF NOT YET PAID ENTER EXPECTED PAYMENT	What period of time did that wage/salary payment in this primary/secondary job cover? 1 = Day 2=Fifteen days 3 = Month 4 = Year 5 = Other (specify)	In the past 12 months how much did you receive in allowances or in-kind payments such as uniform, housing, food, and transport for the same time period as the last payment in this primary/secondary job (that were not included in the salary reported in question 6)? ESTIMATE CASH VALUE OF ANY IN-KIND PAYMENTS RECEIVED	What is the major product/service of the establishment/business in this primary/secondary job?	How many days per month on average and how many months of the past year did you work in this primary/secondary job?	
									Average number of days per month worked	Total number of months worked in last 12 months
ID	NAME			>>next person	BIRR		BIRR	Describe the activity		
			Primary							
			Secondary							
			Primary							
			Secondary							
			Primary							
			Secondary							
			Primary							
			Secondary							
			Primary							
			Secondary							
			Primary							
			Secondary							
			Primary							
			Secondary							

SECTION-3 NON-FARM ACTIVITY

[ASK OF HOUSEHOLD HEAD OR MOST KNOWLEDGEABLE RESPONDENT]

1. Did household own any non-farm activity/business? ☐ 1 = Yes >> ALL Q 2 = No >>26, 27

0a	2	3	4	5	6	7	8	9	10	11
ENTERPRISE ID	What income generating activities /businesses do individuals in this household operate? INCLUDE ONLY BUSINESSES THAT ARE CURRENTLY OPERATING. WRITTEN DESCRIPTION OF ACTIVITIES	Where is this activity's primary base of operation? 1 = Home, inside residence 2 = Home, outside residence 3 = Traditional market 4 = Shop in commercial area 5 = Roadside 6 = Mobile 7 = Other (specify)	Where is this base geographically located? 1 = In this community 2 = Same FA, different community 3 = Same woreda, different FA 4 = Same zone, different woreda 5 = Same region, different zone 6 = Different region 7 = Different country	Where are your sales primarily made? 1=Informally in local community 2=Formally at local market center 3= Nearest market town center 4= Woreda capital 5= Zonal capital 6= Regional market center 7= Addis Ababa 8= Other country	Who owns this business in the household? 1= Self 2= Spouse(male) 3= Other member 4= 1&2 5= 2&3 6= 1, 2 & 3	What is the ownership status of this business? 1 = Sole proprietorship 2 = Partnership 3 = Cooperative 4 = Other (specify)	What were the main sources of start-up capital for this activity / business? 1 = Crop sale 2=Livestock sale 3 = Non-farm self-employment income 4 = Wage or salary income 5 = Remittances 6 = Micro-finance 7 = Cooperative 8 = Commercial bank loan 9 = Family or friends located in this community 10 = Private moneylenders 11 = Other (specify) RANK 1st 2nd 3rd 4th	What were the main motives for starting this activity / business? 1 = Small size of land holding 2 = No access to agricultural land 3 = Low / declining Avalable ag ricultural income 4 = Obtain income to support agricultural work(e.g buy inputs,epuipments) 5 = Market opportunity 6 = Availability of surplus labour in the household 7 = Support from NGO 8= Support from cooperative 9 = Advice from relatives/friends 10 = Social & economic independence 11 = Other (specify) RANK 1st 2nd 3rd 4th	Are the activities of this enterprise seasonal? 1 = Yes 2 = No	When did this enterprise start operating? YEAR
1		☐	☐	☐	☐	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	☐	
2		☐	☐	☐	☐	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	☐	
3		☐	☐	☐	☐	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	☐	
4		☐	☐	☐	☐	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	☐	
5		☐	☐	☐	☐	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	☐	
6		☐	☐	☐	☐	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	☐	
7		☐	☐	☐	☐	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	☐	
8		☐	☐	☐	☐	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	☐	
9		☐	☐	☐	☐	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	☐	
10		☐	☐	☐	☐	☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	☐	

0a	12,13		14,15		16	17	18	19	20	21	22	23	24	25	26	27
ENTERPRISE ID	In 1999 E.C, how many months was this enterprise active?		How many workers (household & hired) did this enterprise employ currently?		During 1999 E.C, how much money was on average received monthly from the sale of goods and services of the business?	During 1999 E.C , what were average monthly operating costs of the business?	Are any of this business' products or services consumed or used by your household instead of being sold?	What was the total value of the products or services consumed by the household in an average month?	Do you use part of the money you get from this business for yourself or for your household?	How much money from the business do you normally use for your self or your household in an average month?	During 1999 E.C, what percent of total household income were this enterprise's total sales?	During the 1999 E.C, what percent of total monthly sales were total monthly operating costs?	For what purpose do you use the income you acquired from non-farm activities? 1=reinvest on farm 2=Expand non-farm activities /businesses 3=purchase farm inputs 4= For consumption &essential expenses 5 =Other purposes(specify)	Does the enterprise have a license?	Is any member of this household planning to open a non-farm enterprise in the next 12 months?	What are the primary and secondary constraints preventing H.H members from opening a non-farm enterprise?
	12	13	14	15			1 = Yes 2 = No >>20		1 = Yes 2 = No >>22							CONSTRAINT CODES
	NUMBER OF MONTHS	NUMBER OF DAYS PER MONTH	H.H members	Hired	BIRR	BIRR		BIRR		Birr	PERCENT	PERCENT	RANK 1st 2nd 3rd 4th	1 = Yes 2 = No	1 = Yes 2 = No	PRIMARY / SECONDARY
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																

Constraint codes for 26,27

1. Insufficient startup capital
2. Lack of appropriate skills
3. Limited market/ Low demand in the community
4. Collateral problems to borrow from banks
5. Fear of loss of land
6. Absence of credit sources
7. Lack of awareness of credit sources
8. Shortage / increasing price of inputs
9. Poor infrastructure(road, electricity,water etc)
10. Licenses
11. Taxes
12. Never thought about it
13. Other(specify)

Section 4: Farm Income

[ASK OF HOUSEHOLD HEAD OR MOST KNOWLEDGEABLE RESPONDENT]

1	2	3	4	
How has household income from agriculture changed in the last 3 years? 1 = Increased 2 = Same 3 = Decreased	How many separate plots do you own?	How do you classify each of your plots in terms of fertility? 1=Fertile(lem) 2=Semi-fertile(lem-tef) 3=Infertile(tef)	What are the primary and secondary constraints to agricultural production? 1=Scarcity of land 2=Declining soil fertility 3=Shortage of labour 4=Shortage of rainfall 5=Shortage of oxen 6=Shortage of inputs 7=High price of inputs 8=Other(specify)	
	NUMBER	p=plot p1 p2 p3 p4 p5	PRIMARY	SECONDARY

5	6	7	8	9
What would you like to do most in the next five years? 1=Remain in farming only 2=Do both farming and non-farm business 3= Do only non-farm business 4=Migrate 5= Other (specify)	If you had a big amount of money today, how would you invest it ? 1=buy livestock 2= Buy / rent land 3=Start trade / business 4=Keep the cash in bank 5=other (specify)	Do you believe you will be food secure and self-sufficient if you do farming alone? 1 = Yes 2 =No	Do you think you can survive without farming? 1 = Yes 2 =No	Do you consider farming as essential for your survival ? 1 = Yes 2 = No
	RANK 1st 2nd 3rd 4th			

4.1 CROP INCOME IN 1999

4.1.1 OUTPUT

Crop Type	Total production in 1999(Kg/Quintal)	Marketed Surplus(quantity sold) in 1999		Retained as seed for next year production	Home Consumed	Purchased from market	
		Kg/Quintal	Birr	Kg/Quintal	Kg/Quintal	Kg/Quintal	Birr
Teff							
Wheat							
Pig pea							
Barley							
Lentil							
Pea							
Others							

4.1.2 INPUT IN 1999

Description	Quantity (Kg/Quintal/Litre etc.)	Value(Birr)
1) Seed		
Teff		
Wheat		
Pig pea		
Barley		
Lentil		
Pea		
Others		
2)Fertilizer		
Urea		
Dap		
3) Insecticide		
4)Herbicide		
5)Fungicide		
6)Pesticide		
7)Hired(external) labour		
8)Cost of renting land,oxen,equipment etc.		

4.2 LIVESTOCK INCOME IN 1999 E.C

4.2.1 LIVESTOCK OUTPUT

Description	Beginning Stock of 1999 (No.)	Total born in 1999(No.)	Total purchased in 1999(No.)	Total lost/died in 1999(No.)	Total slaughtered for home consumption or for ceremonial purposes in 1999(No.)	Total sold in 1999	
						Number	Birr
Oxen							
Cow							
Sheep							
Goat							
Donkey							
chicken							
Others							

4.2.2 LIVESTOCK PRODUCTS OUTPUT IN 1999

Description	Production in a typical month		Marketed(sold) in a typical month		Home consumed in a typical month (Quantity)	Production in 1999(Quantity)	Marketed(sold) in 1999		Home consumed in 1999(quantity)
	unit	Quantity	Quantity	Birr			Quantity	Birr	
Milk	Liter								
Butter	Kg.								
Iyeb	Kg.								
Eggs	Number								
Honey	Kg.								
Other(specify)									

4.2.3 LIVESTOCK INPUT

Description	Expense in an average month of 1999 (Birr)	Total expense in 1999 (Birr)
Feed		
Foder		
Vet. Medicine		
Hired(External) labour		
Other(specify)		

4.3 OTHER INCOME

Income Source	How much money(birr) did the H.H receive during an average month of 1999 from...	How much money(birr) did the H.H receive during 1999 from...
Wages & Salary		
Rent of land,oxen, etc.		
Rent of house, equipment etc.		
Crop by-products		
Pension		
Remittances		
Food for work		
Other sources		

Section 5:HOUSEHOLD FOOD CONSUMPTION

Were any expenditures made on the following items in 1999 E.C ? (1= Yes, 2= No)		In a typical **month** how much of these items did your household consume?		How much would your H.H have spent had this quantity been bought from market?
		Unit	Amount	BIRR
Teff				
Wheat				
Pig pea				
Barley				
Lentil				
Pea				
Meat				
Sugar				
Butter				
Red pepper				
Oil				
Salt				
Spices				
Onion,potatoe, green pepper				
Coffee				
Tea				
Alcoholic drinks(Araki,Tela,Tej, etc.)				
Soft drinks(pepsi,ambo, etc.)				
Others(specify)				

Section 6: HOUSEHOLD NON-FOOD CONSUMPTION

Were any expenditures made on the following items in 1999 E.C ? 1 = Yes 2 = No		How much money(birr) was expended on these items during 1999 E.C:	
		30 days	1 Year
Firewood			
Cooking fuel			
Charcoal			
Matches			
Soap			
Clothe			
Shoes&slippers			
Transport(bus&Taxi)			
Medical care			
School fees/contributions			
Uniform			
Books &stationary			
Other			

Section 7:LAND HOLDING

DESCRIPTION	AREA (Hectare)
Land held by the household	
Land rented from others	
Land taken for share cropping	
Land rented out to others	
Land given for sharecropping	

Section 8 : LAND USE

CROP TYPE	AREA (Hectare)
Teff	
Wheat	
Pig pea	
Barley	
lentil	
pea	
Others	

Section 9: HOUSEHOLD AND FARM ASSET OWNERSHIP

[ASK OF HOUSEHOLD HEAD OR MOST KNOWLEDGEABLE RESPONDENT]

1	2		3
ITEM CODE	As of today does this household own...? 1 = Yes 2 = No >>next item		How many of the item are owned by this household? IF NONE ENTER 00 NUMBER
01	Telephone(land line)		
02	Telephone (mobile)		
03	Radio		
04	Television		
05	Cassette Player		
06	Gas stove		
07	Cart		
08	Car		
09	Motorcycle		
10	Bicycle		
11	Mofer & Kember		
12	Sickle/mecha		
13	pick axe/geso		
14	Plough		

Section 10: LIVING CONDITIONS

[ASK OF HOUSEHOLD HEAD OR KNOWLEDGEABLE HOUSEHOLD MEMBER]

1	2	3	4	5	6
status of this dwelling					
What is the tenure status of this dwelling? 1 = Owned 2 = Rented	How many rooms does this dwelling contain? DO NOT COUNT KITCHENS AND TOILETS NUMBER OF ROOMS	What material are the walls of the main dwelling unit predominantly constructed of? 1 = Wood & mud 2 = Wood & grass 3 = Mud & stone 4 = Cement & stones 5 = Hollow blocks 6 = Bricks 7 = Other	What material is the roof of the main dwelling unit predominantly constructed of? 1 = Corrugated iron sheets 2 = Thatch & grass 3 = Wood & mud 4 = Other	What is the main source of light for this household? 1 = Kerosene 2 = Electricity (private) 3 = Electricity (shared) 4 = Firewood 5 = Other(specify)	What are the main sources of cooking fuel used by this household? 1 = Collected firewood 2 = Purchased firewood 3 = Charcoal 4 = Kerosene 5 = Butane Gas 6 = Electricity 7 = Plant/animal residue 8 =Others
[ ]	[ ]	[ ]	[ ]	[ ]	1st [ ] 2nd [ ]

7	8	9	10
Has this household suffered food shortage during last 12 months? 1 = Yes 2 = No >>9	How many of the past 12 months did this household suffer from food shortages? IF LESS THAN ONE MONTH, ENTER 00 MONTHS	How does the current overall living standard of this household compare to 5 years ago? 1 = Improved 2 = Same 3 = Worse	What was the main source of income for this household over the past 12 months? IN CASH OR KIND SEE CODES BELOW 1st [ ] 2nd [ ] 3rd [ ] 4th [ ]
[ ]	[ ]	[ ]	

Codes for Q10:
01 = Subsistence agriculture
02 = Commercial agriculture
03 = Rural cottage industry
04 = Casual Agriculture laborer
05 = Private manufacturing investment
06 = Trade (formal & informal)
07 = Employed public sector
08 = Employed Private sector
09 = Employed NGOs, UN, etc
10 = Casual non-agricultural laborer
11 = Gifts/donations received from relatives or friends
12 = Pension or other social security benefits received
13 = House rent
14 = Rent other than house rent
15 = Other (specify)

Section 11: ASSISTANCE TO HOUSEHOLDS FROM GOVERNMENT OR AID ORGANIZATIONS

[ASK OF HOUSEHOLD HEAD OR MOST KNOWLEDGEABLE RESPONDENT]

1 Has anyone in this household benefited over the past 3 years from aid programs (gov't, church/mosque, NGO, etc.)? ☐ 1 = Yes 2 = No >>Section 12

2	3	4	5	6	7	8	9
PROGRAM ID	What program has this household benefited from?	In which of the past three years did your household benefit from this program? 1 = Benefited 2 = Did not benefit			If benefited in 1999 (if "yes" in column 1) How much did your household receive in benefits from this program in 1999? UNIT NAME & CODE 1 = Birr 2 = Kg 3 = Packet 4 = Liter 5 = Other(specify)		For non cash benefits in 1999 E.C (If code 2-5in column 8) What is the total estimated market value of this benefit? (ASK ONLY IF Q4 IS NOT IN BIRR)
		1999	1998	1997	AMOUNT	UNIT CODE	BIRR
1	Free food distribution	☐	☐	☐		☐	
2	Food for work program or cash for work program - e.g. public works program	☐	☐	☐		☐	
3	Inputs for work program	☐	☐	☐		☐	
4	Nutritional assistance to children and mothers	☐	☐	☐		☐	
5	Free agricultural inputs distributions	☐	☐	☐		☐	
6	Other (specify)	☐	☐	☐		☐	

Section 12: ACCESS TO BASIC INFRASTRUCTURE & INSTITUTIONS

[ASK OF HOUSEHOLD HEAD OR MOST KNOWLEDGEABLE RESPONDENT]

1	2	3		
ITEM CODE	**Type of Facility**	How far is it to the nearest...? IF LESS THAN 1 ENTER IN FRACTION OF ONE		
		KM	HOURS	MINUTES
1	Postal service			
2	Public transport			
3	Drinking water (dry season)			
4	Food and grain market			
5	Agricultural input market (fertilizer,pesticide,improved seeds etc.)			
6	All weather road			
7	Dry weather road			
8	Agricultural extension service			
9	Veterinary service			
10	Financial Institutions /Micro Finance, Bank,. . ./			
11	School			
12	Health Post			

Section 13: CREDIT

[ASK OF ALL WHO HAVE RECEIVED LOANS IN THE HOUSEHOLD]

1. In the last 5 years, did any household member apply to borrow in cash or kind that must be repaid? 1 =Yes 2 =No >>9.10 ☐

	2	3	4				5	6	7	8	9				10
LOAN ID	Who in the household applied for this loan? REPEAT THIS INFORMATION IF ONE PERSON APPLIED FOR MULTIPLE LOANS. INCLUDE BOTH LOANS THAT WERE APPROVED AND DENIED.	From which source did you apply for this loan? 01 = Commercial bank 02 = Cooperative 03 = Micro-finance 04 = NGO 05 = Business firm 06 =Private money lender 07 = Trader 08 = Relative/friend 09 = Neighbor 10 = Other (specify)	Why did you apply for this loan? 01 = Agricultural land 02 = Agricultural equipment,machinery,building etc. 03 = Agricultural Inputs (fertilizer,seed etc.) 04 = Oxen 05 = Non- farm business equipment,machinery,building etc. 06 = Housing 07 = Education 08 = Health 09 = Weddings & funerals 10 = Consumer goods 11 = Other (specify) RANK				How much did you request to borrow?	How much did you actually receive?	Approximate value of collateral used to secure this loan?	How many loans were received?	What are the main reasons for not taking a loan ? 1 = Unnecessary 2 = Don't know how to apply 3 = No bank/money lenders available locally (too far) 4 = Interest rate too high 5 = Insufficient collateral/ I am too poor 6 = Have failed to repay privious loan 7 = Unable to meet demands of repayment schedule 8 =Don't want to be in debt 9 = Religious reasons 10 = Other (specify) RANK				Is any member of the household planning to apply for a loan in the next 12 months? 1= Yes 2= No
	NAME /ID		1st	2nd	3rd	4th	BIRR	BIRR	BIRR	NUMBER	1st	2nd	3rd	4th	
1		☐	☐	☐	☐	☐				☐	☐	☐	☐	☐	☐
2		☐	☐	☐	☐	☐				☐	☐	☐	☐	☐	☐
3		☐	☐	☐	☐	☐				☐	☐	☐	☐	☐	☐
4		☐	☐	☐	☐	☐				☐	☐	☐	☐	☐	☐
5		☐	☐	☐	☐	☐				☐	☐	☐	☐	☐	☐
6		☐	☐	☐	☐	☐				☐	☐	☐	☐	☐	☐
7		☐	☐	☐	☐	☐				☐	☐	☐	☐	☐	☐
8		☐	☐	☐	☐	☐				☐	☐	☐	☐	☐	☐

Section 14:CONSTRAINTS TO NON-FARM OPERATIONS AND GROWTH

1 ITEMS ID	2 Item	3 Is this item a constraint to productivity and sales growth for this enterprise? 1 = Not a problem 2 = A minor problem 3= Somewhat a problem 4 = A major problem
1	**Electricity**	
	11 Electricity Access	
	12 Electricity Cost	
2	**Telecommunications**	
	21 Fixed line access (household phone)	
	24 Mobile phone access	
	25 Mobile phone service quality	
	26 Mobile phone service cost	
3	**Water**	
	31 Water Access	
	32 Water Quality	
	33 Water Cost	

1 ITEMS ID	2 Item	3 Is this item a constraint to productivity and sales growth for this activity/business ? 1 = Not a problem 2 = A minor problem 3= somewhat a problem 4 = A major problem
4	**Transportation**	
	41 Road Access	
	42 Road Quality	
	43 Transport cost	
	44 Facilities to transport goods	
5	**Financial Services**	
	51 Possibility to borrow from family, friends or others	
	52 Possibility to borrow from formal financial institutions	
	53 Interest rates	
	54 Complicated bank loan procedures (too many forms)	
	55 Fear of not being able to pay loan installments	
6	**Markets**	
	61 Access to markets (distance and cost))	
	62 Difficult to obtain information on your product's market	
	63 Low demand for goods and services produced	
	64 Access to inputs	

DISCUSSION POINTS FOR FOCUS GROUPS

1. YOUTH GROUPS

a) In what non-farm activities do the youth mostly engage?
b) What factors encourage or discourage youth from involving in non-farm activities? What are the constraints and access barriers that you consider to affect the development of non-farm activities in the village?
c) Are there significant numbers of school-leaver youth who are unemployed? Do they try to eke out their living from non-farm activities? Activities of what sort?
d) Are you interested more in agriculture or non-farm activities? Why? What is your aspiration?
e) What is the situation with respect to land access for the youth? Are you seeking share cropping or other arrangements to access land?
f) Among organizations and institutions in the Woreda / community, which ones are most helpful and which ones are least helpful or even block the youth to engage in non-farm activities?
g) Are credit facilities available for the youth? What problems are encountered in attempting to access credit? What are the formal and non-formal institutions that enable access to credit? How effective and useful are they for the youth to engage in non-farm activities?
h) Suggestions / recommendations for overcoming problems and constraints associated with non-farm livelihood activities for youth.

2. Women groups

a) In which non-farm activities do women mostly engage? What motivates women to engage in non-farm activities?
b) What factors encourage or discourage women from involving in non-farm activities? What are the constraints and access barriers that you consider to affect the development of non-farm activities in the village?
c) Are there gender, cultural, or religious barriers to women's participation in non-farm activities?
d) Are you interested more in agriculture or non-farm activities? Why? What is your aspiration?
e) Are women discriminated in land allocation?
f) Among organizations and institutions in the Woreda/ community which ones are most helpful and which ones are least helpful or even black women to engage in non-farm activities?
g) Is non-farm employment skewed in favor of men and against women? How?
h) Are credits facilities available for women? What problems are encountered in attempting to access credit? What are the formal and non-formal institutions that enable access to credit? How effective and useful are they for women to engage in non-farm activities?
i) Suggestions / recommendations for overcoming problems and constraints associated with non-farm livelihood activities for women.

3. Selected household heads

a) What advantages and problems do you see in engaging in engaging in non-farm activities in terms of family welfare? Compare to farming and livestock raising.

b) Is farming perceived in the community as providing sufficient livelihood?

c) What are the main motives for those who are engaged in non-farm activities?

d) Does NFA have negative effects on agricultural production? Positive effects?

e) What factors are important or necessary to facilitate diversification to NFA (e.g infrastructure, finance etc)?

f) What are the barriers /impediments/constraints to non-farm diversification

-at household level
-at community level
-at woreda/govt. level

g) What types of NFA have good prospect in this community /woreda?

h) Is fear of loss of land an important factor influencing decision to diversify? Does the existing land tenure arrangement promote or inhibit diversification?

I) How does proximity to urban center(Mojo) affect NFA? (positively, negatively).

J) Are there out-migrations from this woreda /community? Why? when?

K) Is remittance income significant in the woreda/ community?

L) Suggestions / recommendations for overcoming problems and constraints associated with non-farm livelihood activities

Section 14: Constraints ...Cont'd

1	2		3
ITEMS ID		Item	Is this item a constraint to productivity and sales growth for this activity /business ? 1 = Not a problem 2 = A minor proble 3= somewhat a problem 4 = A major problem
7	Technology	71 Lack of training	
		72 Access to computers	
		73 Access to information and technology	
8	Registration and Permits	81 Government policy & regulations associated with enterprise registration	
		82 Government policy & regulations associated with enterprise operating permits	
9	Taxation	91 High taxes	
		92 Unofficial levies	

1	2	3
ITEMS ID	Item	Is item a constraint to productivity and sales growth for this activity /business ? 1 = Not a problem 2 = A minor problem 3= somewhat a problem 4 = A major problem
10	**Labor Issues**	
	101 Lack of skilled Labor	
	102 Difficulties in hiring labor from outside region	
11	**Land**	
	111 Land use regulations	
	112 Obtaining construction permits	
	113 Land use certification	
12	**Safety**	
	121 Criminality, theft and lawlessness	
	122 Conflicts and social friction	
13	**Government**	
	131 Corruption	
	132 Uncertain economic policy	
	133 Restrictive laws and regulations	

Section 15: MAJOR CONSTRAINTS

1	2	3
Serial Number	Constraint	FROM THE CONSTRAINTS JUST REVIEWED, IDENTIFY THE TOP FOUR FROM MOST TO LEAST IMPORTANT (for example 1, 2, etc.)
1	What is the most important constraint facing this enterprise?	
2	What is the second most important constraint facing this enterprise?	
3	What is the third most important constraint facing this enterprise?	
4	What is the fourth most important constraint facing this enterprise?	

Section 16: ENTERPRIZE EXPENDITURES

1	2	3
EXPENDITURES ID	ENTERPIZE EXPENDITURES	Expenditures over the past 12 months of 1999 (BIRR)
1	How much was spent on wages and salaries	
2	Raw materials	
3	How much was spent on transportation?	
4	How much was spent on fuel (Diesel,oil, wood, gas, coal, etc)?	
5	How much was spent on electricity?	
6	How much was spent on water?	
7	How much was spent on telecommunication service?	
8	How much was spent on rent/leasing (machinery,vehicles, equipment, land, buildings)?	
9	How much was spent on taxes and fees	
10	Other expenses (specify)	

Section 17: ENTERPRISE START-UP CAPITAL

1	2	3
SR No	STARTUP CAPITAL	
1	Was capital [cash or kind] required to start this enterprise? 1 = Yes 2 = No	
2	How much capital (cash and kind) did you expend to start this enterprise?	Birr
3	What is the composition of your start-up capital [cash or kind]stated above?	BIRR
	3.1 Income from sale of food crops	
	3.2 Income from sale of industrial crops	
	3.3 Income from sale of livestock & related products	
	3.4 Non-farm self-employment income	
	3.5 Wage or salary income	
	3.6 Remittances	
	3.7 Sale of assets	
	3.8 Loan from bank or cooperative	
	3.9 Family or friends or relatives located in same community	
	3.10 Private moneylenders	
	3.11. Other (specify)	

DATA / INFORMATION TO BE SOUGHT FROM WOREDA ADMINSTRATION AND SECTOR OFFICES

1. Woreda map
2. Demographic data
3. Occupational / employment data
4. Main on-farm and non- farm livelihoods
5. Data on facilities (school, health, road, bank, extension service etc)
    - Location
    - Number
    - Condition

6. Agro- ecological and land use data
    - Total area of Woreda
    - Area under forest reserves
    - Cultivated area
    - Water bodies (lakes, rivers etc)
    - Main crops and farming / production systems
    - Climate
    - Soil
    - Rainfall
    - Major livestock
    - Main production constraints (crop disease, livestock disease, draught etc.)

7. Major problems that are well known for the Woreda
8. Information on different taxes and fees levied on inhabitants including market levies and how they are collected.
9. Price data for agricultural commodities compiled at Woreda level.
10. Migration (to and from the Woreda), seasonal work
11. Community development projects /public works in the Woreda
12. Woreda level institutions and organizations. (list with their functions)
13. Agricultural productivity trend
14. Food security status of the Woreda (food deficit / food secure), If food insecure, how many people are affected?
15. Is there a government organization at Woreda level responsible for promotion of non- farm activities?. If no, which one is closer to this function?
16. Natural resources (land, water, forest etc.) in the Woreda or its periphery available for common use.
17. Rural non-farm activities/enterprises enabling policies, services, and infrastructures.
18. Permits, licenses
19. Land tenure, rights
20. Data on major enterprises in the Woreda
21. Well- known events in the Woreda in the last five years (environmental change, draught, ethnic conflict etc.)

QUESTIONS FOR KEY INFORMANTS

1. What are the main current sources of livelihood in the Woreda / survey villages?
2. What institutions and organizations exist?
    - Traditional
    - CBOs
    - Political
    - Private businesses
    - Development agencies
    - Cooperatives
    - Production services (agricultural extension , credit, input supply, marketing)
    - Social services (health, clinics, schools)
    - Credit groups, saving associations,
3. How effective are these institutions and organizations?
4. What livelihood activities are members of the community involved outside agriculture? List and rank in importance.
5. Are the activities seasonal? How do they fit in with agricultural activities individuals or households are engaged in?
6. What kinds of non-farm activities are considered low status in the community? Who are doing them? Are there families/ castes that are specialized in a particular non- agricultural occupation?
7. What is the trend of survival/extinction of traditional crafts?
8. Are there particular activities in the village or Woreda that require special permission or license in order to be allowed to do that thing? If yes what are they? Who grants permissions or licenses for these activities?
9. Where are the major sales outlets (markets) for non-farm goods and services?
10. Are there major factors which constrain people to do some forms of non- farm livelihood activity? If yes, what are these? Could you rank them in importance?
11. Do these constraining factors vary from person to person according to age, gender or other attributes? In what way?
12. Are there major factors which provide opportunity for involvement in non- farm activities in the Woreda/ survey villages? If yes, which are they? Could you rank them?
13. Is farming perceived in the community as providing sufficient livelihood earning for substantial proportion of the community?
14. How do taxation and business licensing affect peoples incentives and ability to engage in diverse livelihood activities? How are taxes levied on crops, livestock, non– farm products…..?
15. Does the existing land tenure arrangement promote or inhibit diversification, both on- farm and non- farm? Is there substantial inequality in access to land?
16. How is the rental market in land? How does it operate in practice? What is the impact on diversification? Does the current land tenure system inhibit or enable the development of a rental market in land? Can land be held as collateral for loan?

17. Are there favorable natural resource endowments in the Woreda / community for the development of the rural non-farm sector?
18. Do rural non-farm activities / enterprises face competition from enterprises in nearby towns or imported goods? Which activities face most competition? What are the role of rural towns and their infrastructure in the development of non- farm activities / enterprises?
19. Are urban / town-rural links minimal or strong? In what ways? Are there people who accumulated wealth through rural non-farm activities and established business in urban areas?
20. How is the current food price increase viewed by farmers? Does it provide motivation to concentrate on farming rather than diversification?
21. How frequent or widespread is the saling or renting of land out to large scale farmers? What activities do those who rent out their land turn to? What problems or advantages has this arrangement?
22. Are there out–migrations from this Woreda / community? When? At what season? Why? Where do people migrate to? Is the migration seasonal? Circular? rural- urban? rural – rural? cross- border? Are there return- migrants?
23. Is remittance significant in the Woreda / community? Is it used as a significant source of investment in agriculture? Non- agricultural activities?
24. Are there supports from local government and /or federal government for non-farm activities? If yes, specify.
25. What are the available local public goods and services?
26. Is it possible for a household head to migrate to towns pursuing non-farm or waged jobs without losing land rights? Does such fear exist whether for valid or invalid reasons? Are current land right rules in any way detrimental to non- farm diversification?
27. Are there any restrictions on trade and movements? If Yes, of what type?
28. Suggestions / comments about how to minimize constraints for non-farm activities.

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I, the undersigned, declare that the thesis is my original work, has not been presented for a degree in any other university and that all sources of materials used for the thesis have be duly acknowledged.

Declared by:

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Candidate

Confirmed by:

Degefa Tolossa

Advisor