

**DETERMINANTS OF PARTICIPATION IN LIVELIHOOD  
DIVERSIFICATION AMONG PEASANT FARMERS IN RURAL UGANDA**

**SEERA SYLVIA**

**MASTER OF ARTS IN POPULATION AND DEVELOPMENT**

**2008/HD15/12591U**

**B.A. SOCIAL SCIENCES**

**A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE  
REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF  
ARTS IN POPULATION AND DEVELOPMENT OF  
MAKERERE UNIVERSITY**

**JUNE 2014**

## **DECLARATION**

I, Seera Sylvia declare that the work presented in this dissertation is original and it has never been presented before to any other institution of higher learning for any academic award.

Signed.....Date.....

**SEERA SYLVIA**

REG. NO. 2008/HD15/12591U

STUDENT NO. 208002763

MA, Population and Development

## APPROVAL

This dissertation has been supervised and submitted with the approval of my supervisors namely;

### SUPERVISORS:

.....

Date:.....

**Dr. Gideon Rutaremwa (PhD)**

Associate Professor

Department of population Studies

College of Business and Management Sciences (CoBAMS)

Makerere University, Kampala

.....

Date:.....

**Dr. Lubaale Yovani Moses (PhD)**

Lecturer/Senior Programmer

Department of Population Studies

College of Business and Management Sciences (CoBAMS)

Makerere University, Kampala

## **DEDICATION**

To my late mother Sr. Catherine Namuganyi Muyimbwa who laid a foundation for my academic career and success in my life. To my sister Dr. Proscovia Namuwenge for her financial and moral support that has enabled me to do my Masters degree. To all peasant farmers and stakeholders engaged in the field of livelihood diversification and consider it as an alternative venture to enhance to their standards of living which eventually leads to development at individual, household, community and national levels.

## **ACKNOWLEDGEMENTS**

I would like to take this opportunity to extend my sincere thanks to my lecturers for their continued guidance academically that has made me do this research. In a special way I thank my supervisors; Dr. Gideon Rutaremwa and Dr. Lubaale Yovani, Dr. Betty Kwagala, for their guidance on report writing.

In a special way, I would like to thank my husband Mr. Fredrick Kalyesubula for his financial, and moral support that has helped me reach this academic level and all my family members in general, for their patience and prayers while am away for studies.

Lastly but not least, I thank my fellow students in the college like Nabaggala Sarah, Hisinya Fatuma, Twesigye Julius, and so on, for helping me in the discussions held.

## TABLE OF CONTENTS

DECLARATION .....	i
APPROVAL .....	ii
DEDICATION .....	iii
ACKNOWLEDGEMENTS .....	iv
LIST OF TABLES .....	ix
LIST OF ABBREVIATIONS AND ACRONYMS .....	x
ABSTRACT .....	xi
<b>Chapter One: Introduction .....</b>	<b>1</b>
1.1 Background to the study .....	1
1.2 Statement of the problem .....	3
1.3 Objectives of the study.....	4
1.4 Hypotheses of the study .....	4
1.5 Justification of the study .....	5
1.6 Conceptual framework.....	6
1.7 Definition of key concepts .....	8
1.8 Lay out of the dissertation.....	10
<b>Chapter Two: Literature Review .....</b>	<b>11</b>
2.1 Introduction.....	11
2.2 Participation in entrepreneurship training and participation in livelihood diversification .....	11
2.3 Belonging to an association and participation in livelihood diversification.....	12
2.4 Independent factors influencing participation in livelihood diversification .....	12

2.4.1 Age and participation in livelihood diversification .....	13
2.4.2 Sex and participation in livelihood diversification .....	13
2.4.3 Marital status and participation in livelihood diversification .....	14
2.4.4 Education and participation in livelihood diversification .....	14
2.5.5 Region and participation in livelihood diversification.....	15
<b>Chapter Three: Methodology.....</b>	<b>16</b>
3.1 Introduction.....	16
3.2 Data source.....	16
3.3 Study variables.....	16
3.4 Data selection.....	17
3.5 Data analysis .....	17
3.5.1 Univariate analysis.....	17
3.5.2 Bivariate analysis .....	18
3.5.3 Multivariate level.....	18
3.6 Limitations of the study .....	20
3.7 Ethical considerations .....	20
<b>Chapter Four: Findings of the Study .....</b>	<b>21</b>
4.1 Introduction.....	21
4.2. Distribution of respondents by background characteristics .....	21
4.2.1 Age of respondents .....	21
4.2.2 Sex of respondents .....	23
4.2.3 Marital status of respondents .....	23
4.2.4 Religious affiliation of the respondents .....	23

4.2.5 Education level of respondents .....	24
4.2.6 Region of respondents.....	24
4.3 Intermediate Factors.....	24
4.3.1 Participation in entrepreneurship training.....	25
4.4.2 Belongingness to an association .....	25
4.4 Relationship between respondents’ characteristics and participation in livelihood diversification .....	26
4.4.1 Age of a peasant farmer and participation in livelihood diversification.....	26
4.4.2 Sex and participation in livelihood diversification .....	28
4.4.4 Education level and participation in livelihood diversification .....	28
4.4.5 Region and participation in livelihood diversification.....	29
4.4.6 Religious affiliation and participation in livelihood diversification .....	29
4.4.7 Belonging to an association and participation in livelihood diversification.....	29
4.4.8 Entrepreneurship training and participation in livelihood diversification .....	30
4.5 Determinants of Participation in Livelihood Diversification in Uganda .....	30
4.5.1 Age as a determinant of participation in livelihood diversification.....	32
4.5.2 Sex as a determinant of participation in livelihood diversification .....	32
4.5.3 Marital status as a determinant of participation in livelihood diversification .....	33
4.5.4 Education as a determinant of participation in livelihood diversification .....	33
4.5.5 Region as a determinant of participation in livelihood diversification.....	34
4.5.6 Religion of a peasant farmer as a determinant of participation in livelihood diversification .....	34
4.5.7 Belonging to an association as a determinant of participation in livelihood diversification	35



4.5.8 Entrepreneurship training as a determinant of participation in livelihood diversification ..	35
<b>Chapter Five: Summary of findings, Conclusion and Recommendation .....</b>	<b>37</b>
5.1 Introduction.....	37
5.2 Summary of the findings.....	37
5.3 Conclusions.....	38
5.4 Recommendations for policy and programmes .....	39
5.5 Further research .....	41
<b>References .....</b>	<b>42</b>
<b>Appendices.....</b>	<b>46</b>

## LIST OF TABLES

Table 4. 1: Background characteristics of respondents .....	22
Table 4.2: Distribution of respondents by the intermediate variables .....	25
Table 4.3: Relationship between respondents' characteristics and participation in livelihood diversification .....	27
Table 4.4: Results of the Logistic regression model showing the background characteristics and proximate determinants of participation in livelihood diversification.....	31

## **LIST OF ABBREVIATIONS AND ACRONYMS**

ETP	Entrepreneurship Training Programme
FAO	Food and Agricultural Organization
HAI	Help Age International
ILO	International Labour Organization
LFPR	Labour Force Participation Rate
MSEs	Micro and Small Enterprises
NAADS	National Agriculture and Advisory Services
NFEAs	Non Farm Economic Activities
PEAP	Poverty Eradication Action Plan
PSF	Private Sector Foundation
RNFS	Rural Non-Farm Sector
UBOS	Uganda Bureau of Statistics
UIA	Uganda Investment Authority
UN	United Nations
UNDP	United Nations Development Programme
UNHS	Uganda National Household Survey

## **ABSTRACT**

Participation in livelihood diversification (NFEAs) is gaining prominence in most developing economies due to the increasing inability of the farm sector to support rural livelihoods especially among the peasant farmers. This study aimed at investigating the determinants of participating in livelihood diversification in Uganda. The source of data was 2009/10 Uganda National Household Survey (UNHS) this was conducted by the Uganda Bureau of statistics (UBOS) using a nationally representative probability sample of 6,800 households. Within these 7,188 respondents had participated in livelihood diversification within the last one week prior to the survey.

Data were analyzed at three different levels namely univariate, bivariate and multivariate levels. At bivariate level; age, sex, marital status, level of education, region and participation in entrepreneurship training were significant to participation in livelihood diversification. While at multivariate level, all age groups ranging from below 19 to 59 years, females, widows/widowers, the singles, the illiterates, those with lower primary, and A level +, the Easterners, Westerners and those who had not participated in entrepreneurship training were significant to participation in livelihood diversification.

It is therefore, recommended that any intervention aimed at bringing improvements in rural livelihoods through the rural non-farm sector should target these individual specific factors. Then also the insignificant factors in Uganda but very important variables according to other studies like belongingness to an association should be considered also. This will help to increase the incomes of the peasant farmers at household level and improve their standards of living which will bring about development at all subsequent levels.

## **Chapter One**

### **Introduction**

#### **1.1 Background to the study**

Empirical evidence from a variety of different studies suggests that rural households do indeed engage in multiple activities and rely on diversified income portfolios. In Sub-Saharan Africa, a range of 30–50 percent reliance on non-farm income sources is common; but it may attain 80–90 per cent in Southern Africa (Frank Ellis, 1999). Livelihoods of rural dwellers in Uganda depend on agricultural and or non-agricultural activities, with agricultural activities accounting for a lion's share of households' income. In 1972, 70% of Ugandans lived in households where the heads' main activities were crop productions (Appleton *et al.* in Smith *et al.* 2001). In 1997/98 agriculture accounted for 44% of Uganda's GDP (Beijuka in Smith et al. 2001). More than two thirds of rural household income was derived from agriculture in 1999, with land comprising about half the value of total asset endowment (Deininger and Okidi in Smith et al, 2001).

In an extensive analysis of household survey from 1970s through the 1990s it was discovered that average non-farm income share was 40 percent in Latin America, 32 percent in Asia and 40 percent in Africa. Many studies in Africa find a positive association between non-farm diversification and household welfare and also discovered that livelihood diversification is a coping strategy used during times of drought (Ersado, 2006). In recent times, there has been an increasing recognition that the rural economy is not confined to the agricultural sector alone.

In South Asia, on average, roughly 60 per cent of household income is from non-farm sources; however, this proportion varies widely between, for example, landless households and those with access to land for farming. In Sub-Saharan Africa reliance on agriculture tends to diminish continuously as income level rises, that the more diverse the income portfolio the better-off is the rural household (Csaki and Lerman, 2000). A number of studies also indicate that households in Sub-Saharan Africa, whose households have a big number of poor people, heavily depend on agriculture and related activities also benefited from household livelihood diversification. For instance, livelihood diversification through off-farm activities offer an important route out of poverty, provide higher income earnings, increase food consumption, generate employment and reduces income inequality (Escobal 2001; Adugna 2006). Ersado (2006) also reiterates that livelihood diversification is a key way of ex-ante risk management or ex-post coping with shocks.

Deininger and Okidi (in Smith et al. 2001) using data for the period 1988-92, found that almost 50% of households and one third of households had started a non agricultural enterprise. However, MFPED/UNDP's (in Smith et al. 2001) contemporary study found that 78% of rural dweller's primary occupation was agriculture, and only 27% had a secondary occupation.

There are several factors responsible for observed livelihood diversification at the household level. These factors include among others; self insurance against risk in the context of missing insurance and credit markets, agriculture faces risks and uncertainties these occur in respect of natural factors and calamities like drought, floods, change in demand, prices and tastes which causes decline in agricultural income (Barret et al., 2001; Barret and Reardson 2000). Very few evidence exists among the urbanites on the role of livelihood diversification. But in most rural

areas of developing countries, diversification into non-farm income sources is growing and accounts for a considerable share of household income.

In terms of employment Islam (1997) reports that the share of non-farm sector in rural employment in developing countries varies from 20% to 50% in terms of income, Reardon (1997) finds rural non-farm income shares in Africa is estimated at 93% and Ellis (2000) states that 30–50% is common in Sub-Saharan Africa. In Asia and Latin America, FAO (1998) estimates non-farm income shares to be 32% and 40% respectively. As identified by De Janry and Sadoulet (2000), non-farm economic activities can be a potential exit path for the poor rural households. But participation in non-farm economic activities sector is not automatic it depends on a number of factors which many researchers have identified as factors relating to individuals, households and location.

## **1.2 Statement of the problem**

According to UBOS (2010) the annual labour force growth rate was 4.7 percent and the majority of the workers (82%) were in the rural areas. Seventeen percent of the labour force did not have any formal education while 66 percent of the working persons are employed in agriculture.

At regional level, the northern region had the highest proportion (37%) of working persons with a secondary activity. The trend has generally remained so over the two survey periods.

Overall 28 percent of the working population was engaged in a secondary activity which indicates a six percentage increase from 22 percent in 2005/06. The proportion is higher for males compared to that of females. Working persons in rural areas (31%) were more likely to engage in secondary activities compared to their urban counterparts (13%). However, peasant farmers in rural areas are still victims of the vicious cycle of poverty as evidenced by the UNHS

2009/10 report (UBOS, 2010), showing that the period between 2005/06 and 2009/10 was marked with worsening income inequality; little is known about the determinants of participation in livelihood diversification activities among peasant farmers in rural Uganda. The problem is to find out the reasons that underlie the persistent existence of low incomes among peasant farmers despite the fact that their proportion of participation in livelihood diversification is relatively high.

### **1.3 Objectives of the study**

The general objective of the study was to investigate the determinants of peasant farmers' participation in livelihood diversification in rural Uganda.

The specific objectives of the study were:

1. To examine the influence of the demographic factors on peasant farmers' participation in livelihood diversification in Uganda.
2. To assess the influence of the socio-economic factors on peasant farmers' participation in livelihood diversification.

### **1.4 Hypotheses of the study**

The following hypotheses were tested:

1. Young peasant farmers' are more likely to participate in livelihood diversification than their older counterparts.
2. Male peasant farmers are more likely to participate in livelihood diversification than their female counterparts.
3. Polygamously married peasant farmers are more likely to participate in livelihood diversification than their monogamously married counterparts.



4. Peasant farmers with O level education are more likely to participate in livelihood diversification compared to those with lower primary education.
5. Peasant farmers from the Northern region are more likely to participate in livelihood diversification than their counterparts from the West.
6. Muslim peasant farmers are more likely to participate in livelihood diversification than their Christian counterparts.
7. Peasant farmers who belonged to an association were more likely to participate in livelihood diversification than their counterparts who did not belong to any association.
8. Peasant farmers who had participated in entrepreneurship business training are more likely to participate in livelihood diversification than their counterparts who had not.

### **1.5 Justification of the study**

Participation in livelihood diversification is significant because of the following reasons:

It acts as alternative way of earning incomes meanwhile the farmers wait for their crops and animals to be harvested for sale. Large families can make use of it to earn additional incomes since agricultural products are in most cases cheap therefore fetching little incomes. Livelihood diversification can act as an income shield when natural calamities strike and destroy the crops for both short and long term periods. It generally provides extra incomes which can be used for improving the standard of living of the rural population eventually bringing about development.

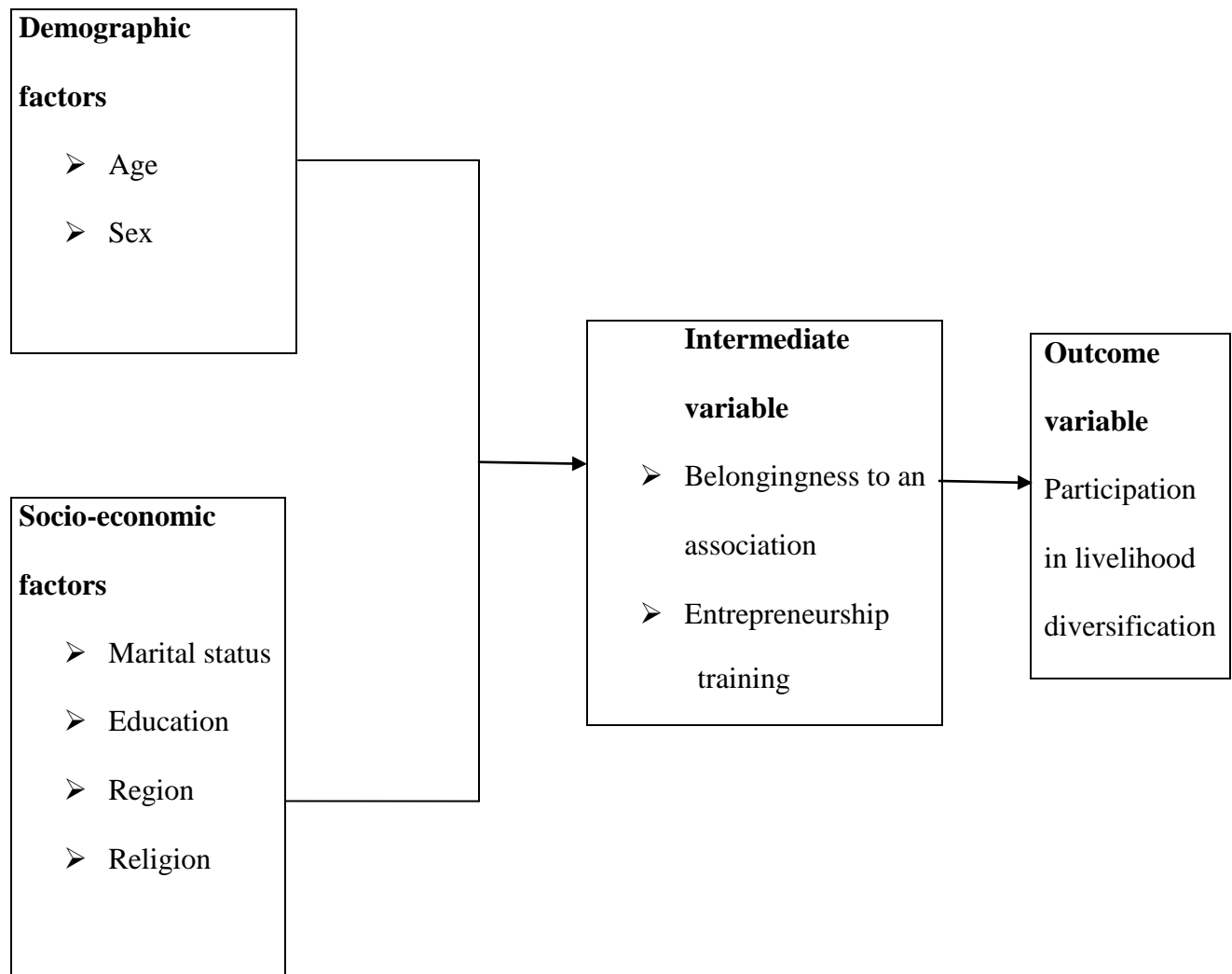
The study findings will add to the stock of knowledge on the subject and thereby help scholars to clearly understand the interplay of the existing relationship between socio-demographic factors and participation in livelihood diversification in Uganda. In this regard, the study shall act as a reference for similar future studies.

## **1.6 Conceptual framework**

Figure 1.1 shows a conceptual framework used to explain the relationship between the variables examined in this study. The decision to participate in livelihood diversification is made by a single individual (head of a household) Haggblade et al (2002). According to the UNHS 2009/10, participation in livelihood diversification was composed of six categories like: employees, employers, own account workers, helping without pay in a household business, apprenticeship and working on a household farm. The dependent variable that is participation in livelihood diversification meant being employed in a non farm job/business by someone else for pay. According to the researcher, the LFPR of peasant farmers who were actively participating in livelihood diversification activities in Uganda accounted for 29.2 percent in the week prior to the survey. Meanwhile main job/business meant farming (agriculture) according to the UNHS 2010 report. The researcher coded 1 for main job employment which meant a private household job/business (farming i.e. crop and animal husbandry). Secondary jobs/businesses (Non-farm economic activities) were coded 0 for this study which meant employment in non-farm jobs/businesses (supplementary activities).

**Figure 1.1: Determinants of participation in livelihood diversification**

**Independent variables**



A conceptual framework shows the direct relationship between the background and intermediate factors that lead peasant farmers to participate in livelihood diversification. Individuals and household characteristics affect their decision to participation in livelihood diversification. Therefore, some additional assumptions are required to interpret these determinants as exogenous factors. In contrast to farming which is essentially a household endeavor, supplementary activities are mainly individual undertakings.

The nature of supplementary activity calls for a closer look at individual diversification behavior, because diversification is commonly associated with risk behavior, an assessment of attitude to risk has been made. Multiple measures of risk aversion provide an insight into how personal differences shape individual livelihoods. For instance, if a peasant farmer chooses to belong to an association it means that they are minding the risk that might come with engaging in a given supplementary activity. Gordon and Graig (2001) found micro-credit schemes to be often associated with group-lending, thus emphasizing the importance of belonging to a group/organization.

Participation in livelihood diversification also depends on actual opportunities for supplementary activities. The local opportunities in a region as an exogenous factor determine individual involvement in livelihood diversification. For instance, an individual who resides near a fishing locality can as well do fish mongering as a supplementary activity during the night in addition to crop and animal husbandry during the day (de Groote and Coulibaly, 1998).

Participation in livelihood diversification (NFEAs) also depends on present comparative advantage and on the dynamics of technological and institutional development. The existence of entrepreneurship training centers like for women groups which are well facilitated in terms of personnel who are knowledgeable and well equipped with modern ideas and technology in an area will lead to formation of small scale projects (Tellegen, 1997; Scott, 1995).

### **1.7 Definition of key concepts**

**Livelihoods:** Refers to the various ways one can use to earn a living. A popular definition is that provided by Chambers and Conway (1992) where a livelihood ‘comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living.

In this particular study in addition to farm activities a peasant farmer can get involved in other income generating activities in order to earn money. In the UNHS 2009/10 they included; brick laying, bodaboda riding, medical workers, teaching, builders, casual laborers, sales and so on.

**Peasant:** Is a poor agricultural worker/farmer who owns/rents a small piece of land which he cultivates himself. In this study, the focus is on peasant farmers who participate in non-farm economic activities in order to earn incomes.

**Household:** Refers to a group of persons normally living together and taking food from a common kitchen.

**Livelihood diversification:** Therefore, refers to the other ways one can use to earn a living apart from the main source. According to Ellis (2000), defines livelihood diversification “as the process by which rural households construct an increasingly diverse portfolio of activities and assets in order to survive and to improve their standard of living”. There is a general agreement that diversification is of benefit to people living in poverty by reducing the vulnerability that comes with dependence on a single set of resources or a single economic sector (Ellis et al.,2004) it should be noted that livelihood diversification is not synonymous with income diversification.

**Off-farm income:** Refers to wage or exchange of labour on other farms within agriculture.

**Non-farm income:** Refers to non agricultural income sources like non-farm rural wage or salary employment and so on.

**Supplementary activities:** In this study they are all activities other than main jobs or businesses of employees.

## **1.8 Lay out of the dissertation**

The dissertation is divided into six chapters. Chapter one is comprised of the background to the study, statement of the problem, objectives of the study, hypotheses, justification of the study, conceptual framework and definition of key concepts. Chapter two consists of the literature review of the peasant farmers on the socio-demographic characteristics and participation in livelihood diversification. Chapter three presents the methodology of the study which comprise of the introduction, sources of data, study variables, data analysis which included univariate, bivariate and multivariate levels of analysis. Chapter four presents the findings of the study, which shows: the demographic and socio-economic factors of the peasant farmers' relationship between participation in livelihood diversification and the determinants of participation in livelihood diversification in Uganda. Chapter five presents a summary of research findings, conclusions of the research findings, recommendations and future research agenda. References are presented after chapter five.

## **Chapter Two**

### **Literature Review**

#### **2.1 Introduction**

This chapter discusses the literature on the factors that determine participation in livelihood diversification activities in Uganda and beyond, looking at both developed and developing countries. It also shows the existing literature on the independent variables that lead peasant farmers to participate in livelihood diversification.

#### **2.2 Participation in entrepreneurship training and participation in livelihood diversification**

The Entrepreneurship Training Programme (ETP) suggests training individuals in the art of entrepreneurship. Despite the original objective of educating some 1,286 entrepreneurs over the first three years of the program in Uganda, after five years of educating men and women in the fundamentals of running a successful business, some ten thousand had been trained in various parts of the country of which 53 percent were women. ETP is free of charge and applying for acceptance involves the completion of a simple registration form, either at UIA offices or online. The ETP training lasts five days during which four modules are covered including; business basics, business planning, enterprise management and social-personal aspects of the business Kyejjusa (2010).

Persons who have had some form/level of vocational/entrepreneurship training are more likely to work non-farm. Undergoing some form of vocational training/apprenticeship either formal or informal, equips the individual with specialist skills to engage in certain non-farm jobs such as tailoring, repair works (motorbikes, tapes/radio), carpentry, and masonry and so on. Such jobs

are often characterized by high entry barriers for many of the rural populations due to the specialist skills required. The importance of specialist skills in non-farm employment is indicated by authors such as Reardon et al. (1998) and Bryceson (1999).

### **2.3 Belonging to an association and participation in livelihood diversification**

Kojo (2012) observed that the probability of participation in NFEAs increases if a person belongs to a group. Thus, belonging to a social network increases ones chances of engaging in NFEAs. Gordon and Graig (2001) found micro-credit schemes to be often associated with group-lending, thus emphasizing the importance of belonging to a group/organization.

### **2.4 Independent factors influencing participation in livelihood diversification**

A considerable number of researches have been carried out in the field of livelihood diversification. For instance Smith (2001) points out that numerous factors determine the abilities of rural households to diversify their livelihood strategies away from both crop and livestock production into off- and non-farm economic activities. These determinants are identifiable both as pre-conditions, namely history, social context and agro-ecology; and the ongoing social change linked with extreme interventions, such as infrastructural and service provision. According to Ellis (2000), reasons for livelihood diversification are seasonality, risk strategy, response to labour and credit markets failure, accumulation strategy and coping behavior, and adaptation. According to Bryceson and Jamal (in Tefera et al. 2004), 40- 45% of an average African household-income is from non-farm employment and has been increasing overtime. Ellis contends that livelihood diversification is more than income diversification and includes property rights, social and kinship networks, and access to institutional support (Tefera et al. 2004). Empirical evidence shows that activity and income diversification in rural



livelihoods in Sub-Saharan Africa has become of increased importance (Barret et al. in Tefera et al. 2004).

#### **2.4.1 Age and participation in livelihood diversification**

According to Kojo (2012) the probability of participation in NFEAs decreases with age. Older people stand a 0.966 chance of not participating than their younger counterparts. Thus young people are more likely to take up opportunities in the RNFS but the likelihood of participation declines as they get more and more old. This finding is similar to what Abdulai and Delgado (1999) in Ghana and elsewhere in Bolivia, Vietnam and El Salvador by Sanchez (2005), Hung Pham (2006) and Lanjouw et al (2001) respectively.

#### **2.4.2 Sex and participation in livelihood diversification**

The probability of participation in NFEAs increases with being a woman (Kojo, 2012). The odds in favour of participating reduce by 6.15 for men. The implication is that women are more likely to go into NFEAs than men in the study area. This finding is consistent with the findings of Newman and Canagarajah (2001) in Ghana and Uganda. The study revealed that, for many men non-farm economic activity ends at the beginning of the farming season, while the women are able to synchronise non-farm activities with that of farm work. According to Griffith et al. (1999), the majority of the poor in Sub-Saharan Africa are women and hence has greater need for the income that can be secured through involvement in the RNFS. This finding however contrasts the findings of Lanjouw and Shariff (2002) in India, Lanjouw (2001) in El Salvador and, Lanjouw et al. (2001) in Tanzania.

### **2.4.3 Marital status and participation in livelihood diversification**

Also, being married decreases the probability of one participating in livelihood diversification (NFEAs) Kojo (2012). Thus, individuals who are singles, divorcees/separated and widows are more likely to engage in NFEAs than married persons.

### **2.4.4 Education and participation in livelihood diversification**

According to Demissie et al, (2013), the effect of education of household head on non/off-farm wage employment income is found to be significant and negative at one percent level of significance showing disparity on the effect of education between self employment (positively related) and wage employment incomes. The result shows that heads of households with little formal education, the probability and willingness to search for wage labour may be low as they are pulled towards the more profitable non/off-farm self employment activities. Hence, the illiterate heads of households are mostly pushed to the less attractive wage employment activities. De Janvry and Sadoulet (2001), in their study the effect of educational attainment on household head on the multiple non/off-farm self and wage employment income is found to be significant and positive at 5 percent level of significance. The result confirms that households with formal education had the possibility and capacity to participate into both wage and self employment activities than the households with no formal education. Based on this result, one may argue that literate household heads have willingness and knowledge to participate in multiple non/off-farm self and wage employment activities as compared to those households with no formal education. Also Kojo (2012) contends that the probability of participation in NFEAs increases with number of years of schooling. The odds in favour of participation increase by about 1.132 for educated people. Thus, the more educated a person is, the more likely the person will engage in NFEAs, especially those found in the formal rural non-farm sector.

According to Gordon and Graig (2001), better educated members of rural populations have better access to any non-farm employment on offer, and are also more likely to establish their own non-farm businesses. Education was pointed out as a key determinant of participation in the remunerative non-farm sector by De Janvry and Sadoluet (2001) while Meharia (2002) found a strong, significant association between traditional RNFE and low literacy and modern RNFE and high literacy.

### **2.5.5 Region and participation in livelihood diversification**

Persons residing in communities in the Wa Municipal are more likely than those in Nadowli District to engage in NFEAs. The communities located in the Wa Municipal are close to the regional capital and this promotes rural non-farm economic activity. Aside having access to the urban market for their products and services, they are also privy to certain non-farm jobs such as stone gathering which are near in the Nadowli District Kojo (2012). Proximity to the regional capital may also increase the amount of time spent working non-farm as found by Abdulai and Delgado (1999). Johansson (2005) also found location (region) to play vital role in the viability of non-farm activity.

## **Chapter Three**

### **Methodology**

#### **3.1 Introduction**

This chapter presents a description of the source of data that was used, variable selection, the methods of data analysis like; percentage and frequency tables, chi-square test and the logistic regression model. The study included respondents (peasant farmers) both males and females involved in livelihood diversification.

#### **3.2 Data source**

The study used data from the 2009 Uganda National Household survey about the labour force module and socio-economic questionnaire. The UNHS 2009 was conducted by the Uganda Bureau of Statistics (UBOS) using a nationally representative probability sample of 6800 households selected for survey. A total of 7,188 peasant farmers aged 14-64 years were interviewed within the labour force and the socio-economic questionnaire. The focus of this study was on the respondents who had main and secondary jobs/businesses. Out of 7,188 respondents only 1,831 peasant farmers had more than one income generating activity in the last week prior to the survey were considered.

#### **3.3 Study variables**

The study variables included; participation in livelihood diversification as the dependent variable which comprised of a main job/business (agriculture) and a secondary job/business. This was captured by the question “In the last week, did you have more than one income generating activity such as a job, business, household enterprise, or farm?” The focus of this study is on secondary jobs/business. The intermediate variable were belongingness to an association (Yes or

No) and participation in entrepreneurship training (with a Yes or a No response). The independent variables were; Age (below 19, 20-29, 30-39,40-49, 50-59, 60+), Sex (males and females), Marital status (Married monogamously, Married polygamously, Divorced/separated, Widow/widower and Never married), Education (No education, Primary, O level, A level+) Region (Central, Eastern, Northern and Western) Religion (Catholics, Protestants, Muslims, Others)

### **3.4 Data selection**

Data was selected from both the labour force and socio-economic questionnaires. Both data sets were merged together and only suitable variables were retained/selected for data analysis while the rest were dropped.

### **3.5 Data analysis**

Data was analyzed at three stages in order to achieve the objectives of the study. The independent variables were analyzed using STATA (version 12) data analysis software. Which include the following;

#### **3.5.1 Univariate analysis**

This was the first level of analysis; the independent variables were analyzed and presented in form of percentages and frequency tables, describing selected socio-economic and demographic characteristics of the respondents and their influence on participation in livelihood diversification. Practically questions in the UNHS 2009/10 dataset containing the required information was tabulated in order to get the frequencies and percentages for the various selected variables.

### 3.5.2 Bivariate analysis

At this level of analysis, the researcher tested the association between the dependent variable and independent variables by use of cross tabulations. The Chi-square test statistic was used to determine the level of significance between the dependent variable (participation in livelihood diversification) and independent variables (age, sex, marital status, education, region, religion, entrepreneurship training and belongingness to an association). Conventionally the chi-square test statistic takes on the formula below;

The chi-square test statistic took the formula as indicated below:-

$$\chi^2 = \sum_{i=1}^r \sum_{j=1}^c \frac{(O_{ij} - E_{ij})^2}{E_{ij}} \dots\dots\dots 3.1$$

Where

$\chi^2$  = is the Chi-square. This was tested at a 95% confidence interval

i = 1 ..... , r

j = 1 ..... , c

$O_{ij}$  = observed frequency from the variables of the ith row and jth column of the cross tabulations

$E_{ij}$  = is the expected frequency assuming independence between variables of the ith row and jth column.

r = number of categories (rows) of the independent variables

c = number of categories (columns) of the dependent variable.

### 3.5.3 Multivariate level

At multivariate level of analysis a binary logistic regression model was fitted to study the determinants of participation in livelihood diversification. The interpretation was based on the

odds ratio (ORs), and statistical significance was fixed at 95% confidence intervals (CIs). The odds ratios greater than one (>1) implied increase in the probability of participating in livelihood diversification, while the odds ratios less than one (<1) implied reduction in the probability of participation in livelihood diversification and the odds ratios equal to one showed no difference.

The odds ratio is the probability of peasant farmers to participate in livelihood diversification to the probability of not participating in livelihood diversification, if the coefficient is positive, it means there are increased odds or probabilities in participating in livelihood diversification, while a negative coefficient means there are reduced odds or probability in participating in livelihood diversification. This is intended to calculate the odds ratio for the likelihood of the main study variables.

Conventionally the binary logistic regression model takes on the following formula:

$$\text{Log}\left(\frac{P_i}{1 - P_i}\right) = a + b_1x_1 + b_2x_2 + \dots + b_kx_k + e \dots\dots\dots 3.2$$

Where

i = 1, 2,.....k

xs = are the independent variables (age, sex, marital status, education, region, religion, entrepreneurship training, belongingness to an association)

p = is the probability of participating in livelihood diversification

(1 - p) = is the probability of not participating in livelihood diversification

b = the estimated coefficients

k = are the number of independent variables

Reference categories were created to test the set of hypotheses among different variables. They include age, sex, marital status, education, region, religion, entrepreneurship training and belongingness to an association. A category with the highest frequency at bivariate level was taken as reference category among different variables during analysis. The category for age was that of “30-39”, Sex “males”, Marital status “ married monogamously”, Education “upper primary”, region Northern region, Religion “Catholics” belongingness to an association “yes” lastly those who had participated in entrepreneurship training were considered as reference.

### **3.6 Limitations of the study**

Section 9 of the socio-economic questionnaire containing important variable could not merge with the labour force questionnaire thus, variables like access to credit was not included in the study.

The data set limited the researcher to the time frame for which it was collected, which was considered to be too short that is “only those who had secondary jobs/businesses one week prior to the survey”.

### **3.7 Ethical considerations**

The data was received when all the identifiers had been removed and was in the public domain, hence no ethical requirement was necessary apart from acknowledging UBOS.



## **Chapter Four**

### **Findings of the Study**

#### **4.1 Introduction**

This chapter presents the findings of the study of participation in livelihood diversification among peasant farmers in rural Uganda. At the univariate level, background characteristics and intermediate variables that affect participation in livelihood diversification are presented. The bivariate level presents the association between the types of response given and the various independent variables. The multivariate level presents the factors that determine participation in livelihood diversification.

#### **4.2. Distribution of respondents by background characteristics**

Section 4.2 presents the distribution of respondents by the socio-demographic factors. These include; age of the peasant farmer, sex, marital status, education level, region, religion. The results are displayed in Table 4.1.

##### **4.2.1 Age of respondents**

Age is an important demographic factor that influences one's behavior consequently influencing the rate at which they participate in livelihood diversification. More than half of the respondents (59.4%) belonged to both the age brackets of 20-29 and 30-39 years that is 35.5 percent and 23.9 percent respectively. This is a true reflection of the most active and energetic age groups among Ugandan peasant farmers. These were followed by peasants falling in the age group 40-49 years who accounted for less than a quarter of the farmers (13.4%).

**Table 4. 1: Background characteristics of respondents**

<b>Variables</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Age groups</b>		
Below 19	700	9.7
20-29	2,551	35.5
30-39	1,717	23.9
40-49	966	13.4
50-59	577	8.0
60+	677	9.4
<b>Total</b>	<b>7,188</b>	<b>100.00</b>
<b>Sex</b>		
Male	3,355	46.7
Female	3,833	53.3
<b>Total</b>	<b>7,188</b>	<b>100.00</b>
<b>Marital status</b>		
Married monogamously	3,507	48.8
Married polygamously	1,152	16.0
Divorced/Separated	509	7.1
Widow/widower	558	7.8
Never married	1,462	20.3
<b>Total</b>	<b>7,188</b>	<b>100.00</b>
<b>Religion</b>		
Catholics	3,114	43.3
Protestants	2,297	32.0
Muslims	873	12.2
Others	904	12.6
<b>Total</b>	<b>7,188</b>	<b>100.00</b>
<b>Education</b>		
No Education	2,248	31.3
Lower Primary	1,382	19.2
Upper Primary	1,992	27.7
O level	958	13.3
A level+	608	8.5
<b>Total</b>	<b>7,188</b>	<b>100.00</b>
<b>Region</b>		
Central	2,048	28.5
Eastern	1,553	21.6
Northern	1,998	27.8
Western	1,589	22.1
<b>Total</b>	<b>7,188</b>	<b>100.00</b>

#### **4.2.2 Sex of respondents**

Results of the study in Table 4.1 indicate that female peasant farmers participated highly (53.3%) in livelihood diversification compared to their male counterparts (46.7%) respectively. This is not surprising given that few females in Uganda do not own land, are poorer compared to the males and are able to synchronize both farm and off-farm activities.

#### **4.2.3 Marital status of respondents**

This is another factor that influences ones decision to participate in livelihood diversification or not. Results in Table 4.1 reveals that almost half (48.8%) of the respondents who are married monogamously participated highly in livelihood diversification. Following from the above results about sex, husbands are able to support their wives with resources like money (capital) participate in livelihood diversification especially when the farming season ceases. This was followed by the singles who accounted for less than a quarter of the respondents (20.3%). The explanation is that both men and women have extra time to get involved in off-farm activities since they are not committed to family care obligations. The divorced/separated category participated less in livelihood diversification (7.1%) may be because they were not motivated to take up off-farm activities and decided to concentrate on farming.

#### **4.2.4 Religious affiliation of the respondents**

Findings of the study in Table 4.1 indicate that Catholics constituted the largest proportion of peasant farmers who participated in livelihood diversification accounting for 43.3 percent. This was followed by the Protestants with 32 percent. The Muslims participated least in livelihood diversification.

#### **4.2.5 Education level of respondents**

Education as a factor influences decision making and it acts as a gateway to participate in livelihood diversification activities that correspond to ones education level. Results of the study in Table 4.1 indicate that the majority of the peasant farmers who participated most in livelihood diversification were illiterates (31.3%) while only 8.5 percent had attained higher education. This is a true reflection of the Ugandan context where the majority of the peasant farmers in rural areas have got low levels of education. Peasant farmers were able to access the readily available traditional livelihood diversification activities which correspond to their level of education.

#### **4.2.6 Region of respondents**

Although during data collection the country had been divided into nine regions, during data analysis this was reduced to four regions. Table 4.1 reveals results that more peasant farmers from the Central region participated in livelihood diversification (28.5%), followed by the Northerners (27.7%) and the least from the Eastern region (21.6%). Participation in livelihood diversification was almost averagely spread countrywide.

#### **4.3 Intermediate Factors**

The intermediate factors that influenced participation in livelihood diversification according to the conceptual framework were; participating in entrepreneurship training and belonging to an association. The results are shown in Table 4.2.

### 4.3.1 Participation in entrepreneurship training

Participation in entrepreneurship training is one factor that directly influences participation in livelihood diversification activities. It is assumed that all off-farm activities are trainable. This variable was categorized into two responses; “Yes” to include all the trained respondents and “No” to cover all the respondents that had not had any training in entrepreneurship training. The results in Table 4.4 indicate that the majority of the respondents (90.4%) had not had any training in entrepreneurship businesses/jobs. This could be explained by the lack of training centers in rural areas coupled by the low literacy rates among the peasants which hinder participation in modern entrepreneurship skills.

**Table 4.2: Distribution of respondents by the intermediate variables**

Variable	Frequency	Percentage
<b>Entrepreneurship training</b>		
Yes	745	9.6
No	6,443	90.4
<b>Total</b>	<b>7,188</b>	<b>100.00</b>
<b>Belongingness to an association</b>		
Yes	118	1.6
No	7,070	98.4
<b>Total</b>	<b>7,188</b>	<b>100.0</b>

### 4.4.2 Belongingness to an association

Belonging to an association is a very important factor in determining whether to participate in off-farm activities or not. Belonging to an association exposes and promotes peasant farmers to access social capital in which off-farm benefits are gained. Cooperation in the form of credit unions, producer organizations, and women credit associations for milk and churches like mothers union, singles, choir members and so on. These have a positive effect on the income generating capacity of their members. The results in Table 4.2 indicate that the majority of the respondents (98.4%) did not belong to any association.

#### **4.4 Relationship between respondents' characteristics and participation in livelihood diversification**

Background variables were cross tabulated with the dependent variable (participation in livelihood diversification). Results of the analysis involving demographic and socio-economic factors are displayed in Table 4.3.

##### **4.4.1 Age of a peasant farmer and participation in livelihood diversification**

Age of a peasant farmer was cross tabulated with participation in livelihood diversification as shown in Table 4.3. Results indicate that participation in livelihood diversification was mostly engaged in by middle aged peasant farmers compared to the young ones and the old ones. For instance, among farmers aged 30-39 years, 35 percent were involved in livelihood diversification, this reduced to 29 percent among farmers aged 50-59 years, and the percentage was lowest among farmers aged 19 and below. This means that the proportion of farmers engaged in non-farm economic activities reduced among the very young and old ones. Age as a variable was significant to participation in livelihood diversification.

**Table 4.3: Relationship between respondents' characteristics and participation in livelihood diversification**

Variable	Frequency	Participation in livelihood diversification	
		Yes (%)	No (%)
<b>Age groups</b>			
Below 19	700	15.5	84.5
20 -29	2,551	28.2	71.8
30 -39	1,717	35.0	65.0
40 -49	966	34.5	65.5
50 -59	577	29.0	71.0
60+	677	19.2	80.8
$\chi^2 = 113.1$	<b>df=5</b>		<b>p=0.000</b>
<b>Sex</b>			
Male	3,355	32.3	67.7
Female	3,833	26.3	73.7
$\chi^2 = 26.7$	<b>df=1</b>		<b>p=0.000</b>
<b>Marital status</b>			
Married monogamously	3,507	31.7	68.3
Married polygamously	1,152	30.8	69.2
Divorced/Separated	509	31.2	68.8
Widow/widower	558	28.4	71.6
Never married	1,462	19.5	80.5
$\chi^2 = 61.3$	<b>df=4</b>		<b>p=0.000</b>
<b>Education</b>			
No education	2,248	25.6	74.4
Lower primary	1,382	31.2	68.8
Upper primary	1,992	31.6	68.4
O level	958	26.5	73.5
A level+	608	31.5	68.4
$\chi^2 = 23.0$	<b>df=4</b>		<b>p =0.000</b>
<b>Region</b>			
Central	2,048	23.7	76.3
Eastern	1,553	25.8	74.2
Northern	1,998	36.6	63.4
Western	1,589	29.7	70.3
$\chi^2 = 80.1$	<b>df=3</b>		<b>p=0.000</b>
<b>Religion</b>			
Catholics	3,114		
Protestants	2,297	30.4	69.6
Muslims	873	28.7	71.3
Others	904	29.2	70.8
		26.1	73.9
$\chi^2 = 5.7$	<b>df=3</b>		<b>P=0.126</b>
<b>Belonging to an association</b>			
Yes	118	35.5	64.5
No	7,070	29.1	70.9
$\chi^2 = 2.1$	<b>df=1</b>		<b>p =0.145</b>
<b>Entrepreneurship training</b>			
Yes	745	34.0	66.0
No	6,443	28.7	71.3
$\chi^2 = 7.5$	<b>df=1</b>		<b>p=0.006</b>

#### **4.4.2 Sex and participation in livelihood diversification**

Participation in non-farm economic activities reduces with being a female. For instance 32.3 percent of the males participated in livelihood diversification, this reduced to 26.3 percent among the females. Therefore, the sex of a farmer has an effect on the magnitude of a farmer's decision to engage in livelihood diversification. Results of the study show a significant relationship between the two sexes ( $p=0.000$ ).

#### **4.4.3 Marital status and participation in livelihood diversification**

A cross tabulation of marital status of peasant farmer and participation in livelihood diversification was done to find out whether there is a relationship between participation in livelihood diversification and their marital status. The results were that the marrieds whether monogamously or polygamously and the divorced/separated had almost an equal percentage of over 30, of participating in livelihood diversification. The singles had the lowest proportion (19.5%) of participating in livelihood diversification. The difference was significant ( $p=0.000$ ).

#### **4.4.4 Education level and participation in livelihood diversification**

Education is such an important aspect in promoting the choice and magnitude of non-farm economic activity one is to get involved in. Findings of the study indicated that participation in livelihood diversification increased with attainment of higher education levels. The proportion of peasant farmers who participated in livelihood diversification rose from 25.6 percent among the illiterates to 31.6 percent among those with upper primary level of education. The trend remained almost the same among those with A+ level of education. The difference was statistically significant ( $p=0.000$ ).



#### **4.4.5 Region and participation in livelihood diversification**

The location of a peasant farmer has an influence on the level of participation in livelihood diversification. A high proportion of peasant farmers from the Northern region participated in livelihood diversification (36.6%) compared to farmers from other regions. Peasant farmers from the Central region had the lowest percentage (23.7%) of participating in livelihood diversification. Farmers from the Northern region engaged more in non-farm economic activities may be due to the existence of numerous Nongovernmental organizations in the region that offer different services to them. The difference in participation in livelihood diversification by regions was statistically significant ( $p=0.000$ ).

#### **4.4.6 Religious affiliation and participation in livelihood diversification**

Results in Table 4.3 reveal that Catholics had the highest percentage of participation in livelihood diversification 30.4 percent while the others category were the least in participating in livelihood diversification accounting for 26.1 percent. However, religion as a variable did not have a significant effect on participation in livelihood diversification ( $p=0.126$ ).

#### **4.4.7 Belonging to an association and participation in livelihood diversification**

Results in Table 4.3 reveal that the more peasant farmers belonged to an association, the higher were the chances of participating in livelihood diversification (35.5%). Meanwhile those who did not belong to any association had lower levels 29.1 percent of engaging in non-farm economic activities. The chi-square results show that there is no relationship between belonging to an association and participation in livelihood diversification ( $p =0.145$ ).

#### **4.4.8 Entrepreneurship training and participation in livelihood diversification**

Table 4.3 shows that 34 percent of the peasant farmers who had entrepreneurial skills participated in livelihood diversification compared to (28.7%) who had not. The results show that there is a significant relationship between participation in livelihood diversification and having entrepreneurship training ( $p = 0.006$ ).

#### **4.5 Determinants of Participation in Livelihood Diversification in Uganda**

This section presents findings at the multivariate level of analysis. It gives the demographic, socio-economic and intermediate determinants of participation in livelihood diversification. A logistic regression model was used to explore the relationship and the results of the analysis are presented in Table 4.4

**Table 4.4: Results of the Logistic regression model showing the background characteristics and proximate determinants of participation in livelihood diversification**

<b>Variables</b>	<b>Coefficients</b>	<b>Odds ratio</b>	<b>Sig (p-value)</b>
<b>Age of peasant farmer</b>			
< - 19	0.537		0.000
20 – 29	0.721	1.711	0.000
30 – 39(ref)	-	2.066	-
40 – 49	0.661	1.000	0.000
50 – 59	0.358	1.937	0.039
60+	-0.185	1.431	0.330
		0.831	
<b>Sex</b>			
Male (ref)	-	1.000	-
Female	-0.389	0.677	0.000
<b>Marital status</b>			
Married monogamously (ref)	-	1.000	-
Married polygamously	-0.079	0.924	0.326
Divorced/separated	0.162	1.175	0.151
Widow/widower	0.331	1.393	0.010
Never married	-0.462	0.629	0.000
<b>Education</b>			
No education	0.174	1.189	0.044
Lower primary			
Upper primary (ref)	0.199	1.221	0.013
O level	-	1.000	-
A level+	-0.003	0.992	0.971
	0.221	1.247	0.059
<b>Region</b>			
Central	0.138	1.148	0.115
Eastern	0.717	2.048	0.000
Northern (ref)	-	1.000	-
Western	0.402	1.494	0.000
<b>Religion</b>			
Catholics (ref)	-	1.000	-
Protestants	0.012	1.011	0.865
Muslims	0.081	1.094	0.392
Other	-0.074	0.928	0.436
<b>Entrepreneurship training</b>			
Yes (ref)	-	1.000	-
No	-0.289	0.749	0.002
<b>Belongingness to an association</b>			
Yes (ref)	-	1.000	-
No	-0.200	0.819	0.339

**Note: ref: Represents the reference category**

#### **4.5.1 Age as a determinant of participation in livelihood diversification**

Age group 30-39 years was taken as the reference category. The analysis showed that all the coefficients for age were positive apart from that of age group 60+ years. This implies more likelihood for young peasant farmers to participate in livelihood diversification. For instance farmers aged 20-29 years had increased odds (OR=2.066) of participating in livelihood diversification compared to farmers aged 30-39 years. This finding is in conformity with earlier researchers like Kojo (2012) in Ghana. According to Kojo (2012) the probability of participation in NFEAs decreases with age. Older people stand (p=0.966) chance of not participating in livelihood diversification than their younger counterparts. Thus young people are more likely to take up opportunities in the RNFS but the likelihood of participation declines as they get more and more old. This finding is also similar to what Abdulai and Delgado (1999) in Ghana and elsewhere in Bolivia, Vietnam and El Salvador by Sanchez (2005), Hung Pham (2006) and Lanjouw et al (2001) respectively.

#### **4.5.2 Sex as a determinant of participation in livelihood diversification**

Sex is a significant factor in determining a peasant farmers' participation in livelihood diversification as observed from the bivariate analysis. Males were taken as the reference category. The analysis displayed a negative coefficient for females. This implies that a change in sex from male to female reduces the odds (OR=0.677) of participating in livelihood diversification. This finding is unrealistic to the researcher given the argument that for many men non-farm economic activity ends at the beginning of the farming season, while the women are able to synchronise non-farm activities with that of farm work. According to Griffith et al. (1999), the majority of the poor in Sub-Saharan Africa are women and hence had greater need for the income that can be secured through involvement in the RNFS.

#### **4.5.3 Marital status as a determinant of participation in livelihood diversification**

Marital status is an important factor in determining participation in livelihood diversification. Results in Table 4.4 indicated that peasant farmers who are married polygamously and the never married had reduced odds (0.924 and 0.629) of participating in livelihood diversification compared to farmers who are married monogamously. This finding is unrealistic to the researcher for the never married category given that being single disentangles one from marital obligations. Marital obligations can be a setback to participation in livelihood diversification which is not the case for the singles. This argument is in line with earlier findings of Newman and Canagarajah (2001) in Ghana and Uganda that being single; widow/widower increases the probability of participating in livelihood diversification.

#### **4.5.4 Education as a determinant of participation in livelihood diversification**

Results displayed that the level of education of a peasant farmer was significant in determining whether a peasant farmer is to participate in livelihood diversification or not. The analysis showed that the coefficients are positive apart from O level education. Positive coefficients imply more likelihood of participating in livelihood diversification no matter the level of education attained. For instance, all peasant farmers had equal chances of participating in livelihood diversification compared with those with upper primary education. The finding for O level education and participation in livelihood diversification is unrealistic given the fact that the probability of participation in livelihood diversification increases with number of years of schooling. According to Kojo (2012), the odds in favour of participating in NFEAs increase by about 1.132 for educated people. Thus, the more educated a person is, the more likely the person will engage in NFEAs, especially those found in the formal rural non-farm sector.

#### **4.5.5 Region as a determinant of participation in livelihood diversification**

Region as a variable was also significant in determining whether a peasant farmer was to participate in livelihood diversification or not. The coefficients were positive implying more likelihood of participating in livelihood diversification in all the regions. For example, farmers from the Eastern region had increased odds (OR=2.048) of participating in livelihood diversification compared to farmers from the Northern region. Farmers from the Central and Western regions had equal chances (OR=1.148 and 1.494 respectively) of participating in livelihood diversification with those from the Northern region. Peasant farmers in the Eastern region had double chances of participating in livelihood diversification probably because by the time of the survey they had or were experiencing harsh weather conditions like heavy rains causing floods among the Teso region, long spells of drought, landslide in the Mt Elgon region and so on.

#### **4.5.6 Religion of a peasant farmer as a determinant of participation in livelihood diversification**

Results indicate that religion was not a significant factor in determining participation in livelihood diversification. Catholics were taken as the reference category. The analysis displayed positive coefficients apart from that of Other religious category. The positive coefficients imply increased likelihood of farmers belonging to different religious affiliations to participate in livelihood diversification. For example, farmers belonging to protestant and Muslim sects had equal chances (OR= 1.011 and OR=1.094) of participating in livelihood diversification compared to their counterparts from the Catholic faith. Other sects had reduced odds (OR=0.928) of participating in livelihood diversification.

#### **4.5.7 Belonging to an association as a determinant of participation in livelihood diversification**

Peasant farmers who belonged to an association were taken as the reference category. Results indicate that belonging to an association as a variable was not significant to participation in livelihood diversification. The analysis displayed a negative coefficient for peasant farmers who did not belong to an association. This implies less likelihood of farmers belonging to an association to participate in livelihood diversification. For example, farmers who did not belong to an association had reduced odds (OR=0.819) of participating in livelihood diversification compared to farmers who belonged to an association. This can be explained by the absence of meaningful associations in rural areas like micro-credit schemes often associated with group lending.

#### **4.5.8 Entrepreneurship training as a determinant of participation in livelihood diversification**

Results indicated that having entrepreneurship training was significant to participation in livelihood diversification ( $p=0.002$ ). Peasant farmers who had entrepreneurship training were taken as the reference category. The coefficient was negative for farmers who did not have entrepreneurship training, implying less likelihood of participating in livelihood diversification. For instance, farmers who did not have entrepreneurship training had reduced odds (OR=0.749) of participating in livelihood diversification compared to farmers with entrepreneurship training. This can be explained by the fact that undergoing some form of vocational training/apprenticeship either formal or informal, equips the individual with specialist skills to engage in certain non-farm jobs such as tailoring, repair works (motorbikes, bicycles, radio and so on ), carpentry, and masonry. Such jobs are often characterized by high

entry barriers for many of the rural populations due to the specialist skills required. The importance of specialist skills in non-farm employment is indicated by authors such as Reardon et al. (1998) and Bryceson (1999).



## **Chapter Five**

### **Summary of findings, Conclusion and Recommendation**

#### **5.1 Introduction**

The study aimed at establishing the factors that determine participation in livelihood diversification among peasant farmers in Uganda. This chapter presents a summary of the findings, conclusion and the recommendations.

#### **5.2 Summary of the findings**

The study was based on the 2010 Uganda National Household Survey. A sample data of 7,188 peasant farmers who had secondary jobs/businesses in the last one week prior to the survey in rural Uganda was analyzed and the summary is given here below.

At univariate level, it's obvious that the majority of the peasant farmers (59.4%) were aged 20-39 years which are considered to be energetic and active in participating in livelihood diversification activities. Besides, a greater part of the farmers (64.8%) were married and a considerable number 20.3 percent had never been married. Over a half 53.3 percent of the respondents were females and a large percentage of the respondents were illiterates (31.3%) while few respondents had attained A level+ education (8.5%). Christian farmers were the majority (75.3%) while Muslims constituted 12.2 percent. The majority of the respondents 90.4 percent did have entrepreneurship training and did not belong to any association (98.4%). The Central and Northern regions constituted the majority of the respondents (56.3%) with the Eastern region had the least respondents.

At bivariate level, it was discovered that there was a significant association between the following variables; age, sex, marital status, education, region, entrepreneurship training and participation in livelihood diversification. However, variables like religion and belongingness to an association were not significant to participation in livelihood diversification in rural Uganda.

Multivariate analysis using a binary logistic regression, it was indicated that the following variables were statistically significant to participation in livelihood diversification in rural Uganda. These included; all age groups ranging between below 19 to 50-59 years, the females, the widow/widower and the never married marital status categories, the illiterates, lower primary and Alevel+ education categories, the Easterners and Westerners and those did have entrepreneurship training skills. While categories that were not statistically significant to participation in livelihood diversification included; age group 60+, those who were married polygamously and the divorced/separated, those with O level education, farmers from the Central region, all the religious affiliations and those who did not belong to any association.

### **5.3 Conclusions**

In rural Uganda, age of a peasant farmer, sex, marital status, education level, region and possession of entrepreneurship skills were significant variables in determining whether a peasant farmer will participate in livelihood diversification or not. Younger peasant farmers as well as the females were found to be more likely to participate in livelihood diversification compared to their older and male counterparts respectively. However, these points should be noted about the rural non-farm sector;

- a. The majority of the NFEAs are temporary, low skilled and low return activities but some are lucrative.

- b. The rural non-farm sector is informal.
- c. It provides the bulk of non-farm employment for the rural households.
- d. The intensity of performing these NFEAs increases during the off-farming season when the rains cease and farming cannot take place.
- e. Although women are far more engaged in the NFEAs than men, the opportunities available for working non-farm are greater for men than those for women.
- f. Following this study findings participation in livelihood diversification is influenced by several factors and not a single factor. Age, sex, marital status, years of schooling (education level), vocational training (entrepreneurship training), and location (region) all play an important role in determining participation in livelihood diversification in Uganda.

Participation in entrepreneurship training is very important in influencing peasant farmers' participation in livelihood diversification irrespective of the level of education they have.

#### **5.4 Recommendations for policy and programmes**

The following suggestions based on the findings of the study were made as a way of increasing participation in livelihood diversification by all peasant farmers in the active and energetic age group of below 19 to 50-59 years so as to reduce the risks associated with non participation in livelihood diversification. Participation in livelihood diversification is widespread but not minimally undertaken by peasant farmers in rural Uganda.

Hence, policies aimed at improving the rural non-farm sector must concentrate on improving the factors that influence participation in NFEAs. For example, policies that are geared towards strengthening the rural non-farm sector should target the young rural population since they are

more likely to take up opportunities in the rural non-farm sector. Education should be placed on educating the rural population at primary level and programmes like Universal Primary Education (UPE) and Universal Secondary Education (USE) should be strengthened in the villages since most Ugandans reside there. As Meharia suggests traditional rural non-farm economic activities are associated with low literacy while modern livelihood diversification activities are associated with high literacy. This implies that NFEAs can be formal for the highly educated and informal/traditional for the lowly educated and the illiterates. Therefore, the RNFS covers all peasant farmers depending on their levels of education. Thus, dependence on the agricultural sector alone will slowly but steadily reduce since both sectors can co-exist implying development.

Since formal vocational training resource centers are limited, using informal training methods such as the methodology adopted by Livelihood Empowerment and Sustainable Development Programme (LESDEP) in Ghana is essential. Therefore, there is an urgent need for government and Nongovernmental Organizations to put enough resources in the field of Non-farm sector (NFS) of rural Uganda if the current worsening income inequality among peasant farmers is to be dealt with effectively.

The performance of certain NFEAs such as charcoal/wood fuel production and stone mining predispose the environment to all forms of environmental degradation. Providing alternative NFEAs or regulating such activities will be essential in combating environmental degradation. There should be programmes/projects aimed at expanding the non-farm economic opportunity options for women and economic infrastructure such as roads, electricity, and communication

facilities need to be provided and /or improved in rural areas to support the performance of NFEAs.

### **5.5 Further research**

A qualitative research can be carried out to investigate “reasons for the low participation in livelihood diversification by peasant farmers despite the existence of various secondary jobs/businesses in rural Uganda”. Further still, a comparative study can be conducted “to compare peasant farmers’ in the active age group and the participation in livelihood diversification between the different regions of the country”. More factors than those studied should be investigated in order to have a wider knowledge of the determinants of participation in livelihood diversification in Uganda. Some of the factors that are important but were not covered in the study include; income earned per stated period/annually from NFEAs, access to credit from financial institutions and so on.

## References

- Arsene M. Balihuta and Kunal S., (2001): Macroeconomic policies and Rural Livelihood Diversification: A Ugandan Case-study LADDER Working Paper No.3.
- Appleton. S. et al., (1999): Changes in poverty in Uganda (1992-97): Mimeo, Oxford: Centre for the study of African Economies.
- Appleton, S. (2001): Poverty Reduction during Growth: The cause of Uganda, Mimeo, University of Nottigham. Activity Diversification in Rural livelihoods.
- Barrett, Reardon T., (2000): Asset, Activity and Income Diversification among African Agriculturalists., Some Practical Issues.
- Brons (2005): The Role of Farm Supplementary Income in Burkina Faso. Ph.D. Thesis, Wageningen University.
- Brycesson D., (1999): African Rural Labour, Income Diversification and Livelihoods Approaches: A long term development perspective. Review of African Political Economy Vol. 26, No.80; pp171-189.
- De Janvry A, Sadoulet E (2001): Income Strategies among Rural Households in Mexico. The Role of Off-farm Activities. World Develop. 29(3):467- 480.
- Department For International Development (DFID), (1999): Sustainable livelihood Guidance sheets. [http://www.livelihoods.org/info/info\\_guidance Sheets.html](http://www.livelihoods.org/info/info_guidance_Sheets.html) 05 July 2008.
- Ellis F (2000): The Determinants of Rural Livelihood Diversification in Developing Countries. J. Agric. Econ. 51(2): pp 289-302.
- Escobal J (2001): The Determinants of Non-farm Income Diversification in Rural Peru. World Develop. 29(3): pp 497-508.
- Cain and McNicoll, (1988): Livelihoods, Diversification and Agrarian Change. Carswell et al. (2000): 'Sustainable livelihoods in Ethiopia, IDS Research Report, Brighton: IDS.
- Davies S., (1996): Adaptable livelihoods; Coping with Food Insecurity in the Malian Sahel, London: Macmillan Press.

- Ellis F., (1998): Survey Article: Household Strategies and Rural Livelihood diversification  
Journal of Development Studies, Vol 35, pp 1-38.
- Ellis F., (2000): Rural Livelihoods and diversity in Developing Countries. Oxford University  
Press, Oxford.
- Ellis F., (2004): 'Sustainable Livelihoods', entry in Routledge Encyclopedia of International  
Development, London: Routledge.
- Ellis F., and Bahiigwa G., (2003): 'Livelihoods and Poverty Reduction in Uganda', World  
Development, Vol.31, No.6, pp.997-1013.
- The Entrepreneurship Training Programme (2010): Evaluation Report.
- Kampurira G., (2008): Socio-demographic determinants of women's employment status in  
Uganda. Master's thesis, Makerere University.
- Kojo S., (2012): American international journal of contemporary research Vol. 2 No. 8.
- Ministry of Finance, Planning and Economic Development (2004): Poverty Eradication Action  
Plan. Kampala: Republic of Uganda. March 20.
- Reardon T., (1997): 'Using Evidence of Household Income Diversification to Inform Study of  
the Rural Nonfarm Labor Market in Africa', World Development, Vol.25, No. 5, pp.735-  
747.
- Reardon T., J. Berdegue and G. Escobar (2001): 'Rural Nonfarm Employment and Incomes in  
Latin America: Overview and Policy Implications', World Development, Vol.29, No.3,  
pp.395-409.
- Sands F., (2012): Transforming Ugandan Women's Livelihoods Through Entrepreneurship.  
Master's thesis, Katholieke Universiteit Leuven.
- Saith A., (1992): The Rural Non-Farm Economy: Process and Policies. Geneva: ILO, World  
Employment Programme.
- Scoones I., (1998): Sustainable Rural Livelihoods: A Framework for Analysis. IDS Working  
paper, No. 72.
- Scoones R., (2009): Livelihoods Perspectives and Rural Development. Journal of Peasant  
Studies Vol 36.

Smith L., Mazzucato V., (2003): Houses, Businesses and Urban Livelihoods: The Influence of Transnational networks on economic activities in Accra, Ghana. International Workshop on Migration and Poverty in West Africa, University of Sussex.

UBOS (2010): Uganda National Household Survey Report, Labour force survey module, section 4.

UBOS (2010): Uganda National Household Survey Report, Socio-Economic survey questionnaire, Section 2, 3, 4, 13.

UN (2007): The Millenium Development Goals Report. New York.



## Appendices

Batch Sequence Number

--	--	--	--



**UGANDA BUREAU OF STATISTICS**



THE REPUBLIC OF UGANDA

### LABOUR FORCE SURVEY MODULE

<b>SECTION 1A: IDENTIFICATION PARTICULARS</b>			
1. STRATUM:			
2. DISTRICT:			
3. SUB-STRATUM: (Urban = 1, Other Urban= 2, Rural = 3)			
4. COUNTY:			
5. SUB-COUNTY:			
6. PARISH:			
7. EA:			
8. HOUSEHOLD SER. NO.:			
9. SAMPLE NO.:			
10. NAME OF HOUSEHOLD HEAD:			
11. LOCATION ADDRESS OF HOUSEHOLD:			

THIS SURVEY IS BEING CONDUCTED BY THE UGANDA BUREAU OF STATISTICS UNDER  
THE AUTHORITY OF THE UGANDA BUREAU OF STATISTICS ACT, 1998.

---

THE UGANDA BUREAU OF STATISTICS  
P.O. BOX 7186,  
KAMPALA,  
TEL: +256-414-706000, 230370  
Fax: 0414 - 230370  
E-mail: [yubos@yubos.org](mailto:yubos@yubos.org)  
Website: [www.yubos.org](http://www.yubos.org)

## SECTION 4: EMPLOYMENT AND HOURS OF WORK

											Skip Pattern
	Serial number in HH Roster										
	Name of household member										
	Age of household member										
4.0	In the last week, did you have more than one income generating activity such as a job, business, household enterprise, or farm? 1=Yes 2=No	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	
PRE4.1 These next questions are about the main income generating activity you engaged in last week. That is the one where you usually work the most hours per week, even if you were absent from it last week for reasons such as illness, holiday, or family obligations											
4.1	What kind of work do you usually do in the (main) job/business that you had during the last week? DESCRIBE THE OCCUPATION AND MAIN TASKS OR DUTIES IN AT LEAST 2 WORDS. (E.g. vegetable farmer, primary school teacher, computer programmer.)										
4.2	What are the main goods/services produced at your place of work or its main function? DESCRIBE THE INDUSTRY (e.g. Restaurant, school, appliance factory, real estate office.)										
4.3	When did you start working for this employer or start running this business? Year(YYYY) in four figures: Month(MM) in 2 figures (Ex: 08 for August)	YYYY	MM	YYYY	MM	YYYY	MM	YYYY	MM	YYYY	MM
4.4	In this (main) job/business that you had during the last week, were you... 1=Working for someone else for pay <sup>1</sup> 2=An employer (a person who pays one or more people to work for him) 3=An own-account worker (a person running a business with no employees) 4=Helping without pay in a household business 5=An apprentice 6=Working on a household farm	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	(>>4.5) (>>4.12) (>>4.12) (>>4.12) (>>4.14) (>>4.17)

<sup>1</sup>Include paid domestic workers, paid workers in household businesses, gardeners, security guards, etc. Payment may be in cash or in kind (eg. Food, accommodation). This category includes all employees: part-time, casual worker and piecework.



**UGANDA BUREAU OF STATISTICS**



THE REPUBLIC OF UGANDA

**THE  
UGANDA  
NATIONAL  
HOUSEHOLD  
SURVEY  
2009/10**

--	--	--	--

---

## ***SOCIO-ECONOMIC SURVEY QUESTIONNAIRE***

---

### **SECTION 1A: IDENTIFICATION PARTICULARS**

1. STRATUM:			
2. DISTRICT:			
3. SUB-STRATUM: (Urban = 1, Other Urban= 2, Rural = 3)			
4. COUNTY:			
5. SUB-COUNTY:			
6. PARISH:			
7. EA:			
8. HOUSEHOLD SER. NO.:			
9. SAMPLE NO.:			
10. NAME OF HOUSEHOLD HEAD:			
11. LOCATION ADDRESS OF HOUSEHOLD:			

*THIS SURVEY IS BEING CONDUCTED BY THE UGANDA BUREAU OF STATISTICS UNDER THE AUTHORITY OF THE UGANDA BUREAU OF STATISTICS ACT, 1998.*

---

THE UGANDA BUREAU OF STATISTICS

P.O. BOX 7186

KAMPALA,

TEL: +256-414-706000, 230370

Fax: 0414-230370

E-mail: [ubos@ubos.org](mailto:ubos@ubos.org)

Website: [www.ubos.org](http://www.ubos.org)



### Section 3: Survival status of Parents and Migration of Household Members

Ask only household members (usual and regular members).

PERSON	For all household members below 18 years		For all household members aged 10 years and above					
	Is the natural father of [NAME] living in this household?	Is the natural mother of [NAME] living in this household?	Since 2004, has [NAME] lived in another place, such as another village, another town or country, for 6 or more months at one time?	When did [NAME] move here [CURRENT PLACE OF RESIDENCE] the most recent time?	In what district or country did [NAME] live before coming to [CURRENT PLACE OF RESIDENCE] the most recent time?	Was the place where [NAME] lived before coming here a rural or urban area?	What was the main reason [NAME] came to [CURRENT PLACE OF RESIDENCE] the most recent time?	In how many <b>other</b> places (such as another village, town or abroad) did [NAME] live for 6 or more months at one time since 2004?
1= Yes 2= No, Alive 3= No, Dead 4= No, Don't know	1= Yes 2= No, Alive 3= No, Dead 4= No, Don't know	1= Yes 2= No (>>Next person or if last person, to Sec. 4)	Year	DISTRICT CODE  See Manual Annex 6	1= Gazetted Urban 2= Other Urban 3= Rural	See codes below		
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>

#### Codes for 8

1= To look for work

2= Other income reasons

3= Drought

4= Land Eviction

5= Other land related problems

6= Health related problems

7= Disability

8=Education

9= Marriage

10= Divorce

11= To escape insecurity

12= To return home from displacement

13= Abduction

14= Follow/join family

96= Other (specify)

## Section 4: Education: All Persons 5 Years and above

Ask the following questions about all members of the household (usual and regular) who are 5 years and above.

P E R S O N I D	Can you read and write with understanding in any language?	Have you ever attended any formal school?	Why have you not attended school?	What was the highest grade that you completed?	Why did you leave school?	What grade were you attending in the last schooling year?	<b>[ASK IF COL 5 &gt;= 41, Else skip to Col.15]</b> In what area did you specialize in your studies?	What grade are you currently attending?	Who manages the school?	What type of school are you currently attending?	Distance to the school in km?
1	2	3	4	5	6	7	8	9	10	11	12
	<b>See codes for Col. 2 below</b>	1= Never attended 2= Attended school in the past (>> 5) 3= Currently attending school (>> 7)	<b>See codes for Col. 4 below</b>  [>> 15]	<b>See Manual Annex 2</b>	<b>See codes for Col. 6 below</b>	<b>See Manual Annex 2</b>  <b>If attended earlier than last year record 98</b>	<b>See Manual Annex 3</b>	<b>See Manual Annex 3</b>	1= Government 2= Private 3= NGO/religious organization 4= Other (specify)	1= Day 2= Boarding (>> 13a) 3= Day and Boarding	<b>ONLY FOR DAY SCHOLARS</b>

**Codes for column 2**  
1= Unable to read and write  
2= Able to read only  
3= Able to read and write  
4= Uses Braille

**Codes for Column 4**  
1= Too expensive

2= Too far away  
3= Poor school quality  
4= Had to help at home  
5= Had to help with farm work  
6= Had to help with family business  
7= Education not useful  
  
8= Parents did not want  
9= Not willing to attend  
10= Too young  
11= Orphaned  
12= Displaced  
13= Disabled

14= Insecurity  
96= Other (specify)  
  
**Codes for Column 6**  
1= Completed desired schooling  
2= Further schooling not available  
3= Too expensive  
4= Too far away  
5= Had to help at home  
6= Had to help with farm work  
  
7= Had to help with family business

8= Poor school quality  
9= Parents did not want  
10= Not willing to attend further  
11= Poor academic progress  
12= Sickness or calamity in family  
13= Pregnancy  
96= Other (specify)

## Section 4 cont'd: Education: All Persons 5 Years and above

Ask the following questions about all members of the household (usual and regular) who are 5 years and above.

PERSON	How much has your household spent during the past 12 months on your schooling?						Are you currently receiving a scholarship or subsidy given by the government or school to support your education?  1= Yes 2= No	Did (NAME) participate in any business, entrepreneurship, or micro-enterprise development training?  Yes = 1 No = 2	Did (NAME) learn a trade or technical skill?  Yes = 1 No = 2 (>>Next Person)	What type of trade or technical skill did (NAME) learn?  <b>See codes for Col. 17 below</b>	How did (NAME) acquire this trade or skill?  1=Vocational School/Course 2=Apprenticeship or on the job training 3=Learned from a friend/family member 4=From an NGO or community organization 5=Other (specify)
	School and registration fees (contribution to school development fund)	Uniforms and sport clothes	Books and school supplies	Boarding fees	Other expenses	Total expenses					
1	13a	13b	13c	13d	13e	13f	14	15	16	17	18

### Codes for Col. 17

- 1 Welding
- 2 Carpentry
- 3 Construction
- 4 Masonry
- 5 Electrician
- 6 Plumbing

- 7 Automotive/Transport Repair
- 8 Computer Repair
- 9 Phone Repair
- 10 Sewing/Tailoring/Textiles

- 11 Crafts/Basket Weaving
- 12 Catering/Food Service

- 13 Laundry/Dry Cleaning
- 14 Beautician/Hair/Nails
- 15 Health care/Traditional Medicine
- 16 Massage/Reflexology
- 17 Agriculture/Land Management/Fishery
- 18 Accounting/Book Keeping
- 96 Other (specify)

**SECTION 13: CULTURAL PARTICIPATION (For all members 18 years and above during the last 12 months)**

P E R S O N I D	What is (NAME'S) religion?  1=Catholic 2=Protestant 3=Muslim 4=Pentecostal 5=SDA 6=Traditionalist 96=Other (Specify)	Does (NAME) listen to/watch any music videos?  1=Yes 2=No	Does (NAME) do any kind of reading?  1=Yes 2=No (>> 7)	What kind of materials does (NAME) read?  <b>Circle all that apply</b>  Books = A Newspapers = B Magazines = C Journals = D Other (Specify) = X	<b>If code B in Column 5;</b>  Which newspaper(s) does (NAME) usually read?  <b>Circle all mentioned</b>  New Vision = A Monitor = B Orumuri = C Etop = D Bukedde = E Rupiny = F Red Pepper = G Other (Specify) = X	Did (NAME) participate in any cultural activity in the last 12 months <i>such as music gala, introductions, marriages, funerals, initiations etc?</i>  <b>Circle all mentioned</b>  Visit to cultural sites = A Visit to theatre for shows = B  Participation in music galas = C  Attended introduction, funeral rite, marriage ceremony = D  Social events such as birth, giving of names, initiation into adulthood etc = E  Participated in any traditional game = F  Library = G  Other (Specify) = X Did not participate in any cultural activity = Z	Did (NAME) get income from any cultural activities in the last 12 months?  1=Yes 2=No	<b>If Yes, from which one(s) did you get income?</b>  <b>Circle all that apply</b>  Herbal medicine practice = A Mat/basket making = B Music = C Drama = D Bark cloth making = E Interpreters = F Other (Specify) = X
1	2	3	4	5	6	7	8	9
				A B C D X	A B C D E F G X	A B C D E F G X Z		A B C D E X Z
				A B C D X	A B C D E F G X	A B C D E F G X Z		A B C D E X Z
				A B C D X	A B C D E F G X	A B C D E F G X Z		A B C D E X Z
				A B C D X	A B C D E F G X	A B C D E F G X Z		A B C D E X Z
				A B C D X	A B C D E F G X	A B C D E F G X Z		A B C D E X Z





					mm/yyyy		4=Profitability 5=Technical problems 6=Gov't regulations 7=Competition 8=Poor management 9=Theft 10=Harassment 96=Other (Specify)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

**Interviewer:** FOR EACH HOUSEHOLD ENTERPRISE/ACTIVITY LISTED I.E. CODE 1 IN COL 3, ADMINISTER THE RELEVANT QUESTIONNAIRE

**HRS  
END TIME**

--	--	--	--