# LIVELIHOOD CAPABILITIES' DIVERSIFICATION STRATEGIES AMONG SMALL- SCALE COFFEE FARMERS IN HAI AND ARUMERU DISTRICTS, TANZANIA

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**ABSTRACT**

*As the time went on, the level of livelihood complexities as a result of poor/low earning and income among small-scale coffee farmers is increasing. To ameliorate this situation, small-scale coffee farmers are compelled to adopt different livelihood diversification strategies so as to meet their daily livelihood requirements. Specifically, the paper intends to examine types of livelihood capabilities diversification strategies adopted by small-scale coffee farmers and assesses obstacles encountered by small-scale coffee farmers towards adopting livelihood capabilities diversification strategies. A cross-sectional research design using a mixed methods approach was adopted whereby 250 respondents were surveyed at their households. Data were collected mainly using a household survey, focus group discussion and key informants' interview. Results revealed that shortage/lack of credit facility (capital) and available economic opportunities are among the determinants of small-scale farmers to adopt new livelihood diversification strategies. As a diversification strategy to coffee production, small-scale farmers were found dealing with livestock keeping, vegetable production, small and medium businesses while others were taking part in formal and informal employments. It is concluded that adoption of livelihood diversification strategies has been necessitated mainly by falling in income accrued from coffee; coffee is still a fundamental cash crop among small-scale farmers and small-scale farmers encounters several constraints in the process of producing coffee. The study recommends that credit sources with affordable conditionality should be made available and affordable by microfinance institutions to enable small-scale farmers acquire financial services for livelihood diversification strategies. Community members at village and ward levels should be proactive, ready and willing to diversify their economic activities by embarking on multiple income generating activities. Furthermore, the paper recommends to local administrative authority (wards and villages leadership) in collaboration with extension officers to take a deliberate initiative in mobilizing small-scale coffee farmers towards exploiting the available economic opportunities such as loans from microfinance institutions like Savings and Credit Co-operative Society (SACCOS) and Village Community Banks (VICOBA) where they can get capital for embarking into livelihood diversification strategy. In so doing, this will improve not only production among small-scale coffee farmers but also livelihood capabilities in meeting their daily lives and livelihood capabilities in adopting diversification strategies.*

**Keywords:** *Diversification Strategies, Livelihoods Capabilities, Small Scale and Coffee Farmers*
**Paper type***: Research paper*
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## 1. INTRODUCTION

Livelihood diversification strategy among small-scale coffee farmers is a critical mechanism for improving production, income and profits from non-coffee economic activities (Rusike & Chrispen, 2016). Over the past three decades coffee farming as a primary source of income has failed to guarantee sufficient livelihood support for most of farming households in developing countries and at the same time, agricultural development policies have largely produced little improvement especially in Sub-Saharan Africa (Tsehaye, 2017). As a result, diversification into off-farm, on-farm and non-farm activities has become the norm (UNDP, 2016: Jolliffe, 2014).

In Tanzania, the earnings from traditional cash crops such as coffee have been decreasing annually due to the fall in price in the world market and heavy taxes on the export crops (URT, 2012). Similarly, the fall in export earnings is also attributed by the decline in product quantity and quality which also leads to low prices and low incomes and therefore worsening the livelihood capabilities among small-scale coffee farmers hence necessitating them to think of other livelihood capabilities diversification strategies (Farzana., Rahman., Sultan., Raihan., Hague., Waid., Choudhury& Ahmed, 2017; Kamara, 2014; IFAD, 2007). Different authors such as Lienert& Burger (2015), Valdes-Rodriquez & Perez-Vazquez (2011), Qinzilbash*et al*., (2008) &Sen (2005) have defined the concept of livelihood capability differently. According to Valdes-Rodriquez (2011) the term livelihood refers to the way in which people earn income to cover for different basic needs such as clothes, food, shelter and medication. It then reflects to a means of making a living which encompasses peoples' capabilities, assets, income and activities required to secure the necessities of life.

At the same time, the term capability according to Lienert& Burger (2015) refers to the ability to achieve the functioning to constitute for the better life; it also refers to the reaction potential to challenges and crises which reflects to the power or ability to do something or state of being capable. Therefore, for the sake of this study the definition by Lienert (2015) &Sen (2005) was adopted whereby livelihood capability refers to the ability of small-scale coffee farmers in meeting their daily basic needs and their power in adopting different livelihood diversification strategies which reflects to the ability or power of an individual in making a living.

Livelihood capability diversification strategies among small-scale farmers in developing countries has been and still is a workable mechanism for emancipating community members from different socio-economic hurdles (Rakotobe, 2016; Coulibay, 2015). Different authors such as Ellis, (2007); Lienert& Burger (2015) have defined livelihood capability diversification strategies differently focusing on diverse of economic activities and social support required to improve their standard of living. Others have considered livelihood capability diversification strategies based on gender of the households' members, soil fertility as well as frequency and magnitudes of crop failure, (Mulinya, 2017: Samson, *et al.,* 2015).

Livelihood capabilities' diversification strategy in this study refers to the totality of initiatives, efforts, approaches and methods of production adopted in order to improve production so as to meet the daily basic requirements and improve the total socio-economic wellbeing of the community members among small-scale coffee farmers (Faustine, 2016; MacArthur and John, 2013). According to Mulinya (2017) the adoption of different livelihood capability diversification strategies is not a smooth process or over-night decision as it needs capital, individual's readiness, information and knowledge among other ingredients.

Despite the government and Non-governmental organisations' efforts in assisting small-scale farmers such as Agriculture First-(*Kilimo Kwanza*), National Strategy for Growth and Poverty Reduction-(NSGPR),

Agricultural Sector Development Programme-(ASDP 1&2) and establishment of Tanzania Coffee Research Institute-(TACRI) in 2000. All of these efforts aimed at improving agricultural production, maximising profits and improving the general small-scale farmers (coffee farmers included) livelihood capabilities but still there had been a deterioration in their livelihood capabilities in managing their daily lives hence compelling them to think on how to emancipate themselves through adopting different livelihood capability diversification strategies (TCB, 2017: Mussatto., Machado & Martins, (2011).

Different scholars such as Mulinya (2017) & Coulibay (2015) have acknowledged the importance of small-scale farmers in developing countries adopting livelihoods capabilities' diversification strategies as the best practices in overcoming problems resulting from crop failure, price fluctuations, low incomes and climate change. For example, Rakotobe (2016) described that as a livelihood diversification strategy; small-scale farmers in developing countries raise cattle or poultry on small plots or produce charcoal for sale in urban areas while in other places if production of ordinary food or cash crop fails, as a livelihood capability diversification strategy, small-scale farmers grows cassava and yams to overcome the situation.

However, for the past three decades there has been increasing evidence that small-scale farmers in developing countries rarely rely on agriculture alone, but often maintain a portfolio of incomes in which off-farm activities are important component which accounts for 35% to 50% of the total household income, and 58% globally (UNDP, 2016; Piotr& Anna, 2014; MacArthur & John, 2013: Haggblade*et al.*, 2010).

Furthermore, Farzana*et al.*, (2017): Faustine (2016): UNDP (2016) argue that, apart from coffee, small-scale farmers in Tanzania grow variety of crops as a livelihood capability diversification strategy due to the fluctuations in coffee production and deterioration of their livelihood conditions. Despite the government's efforts in improving coffee production and small-scale farmers' income; livelihood capabilities' diversification strategies among small scale coffee farmers is still an issue to be resolved. In Tanzania, studies on small-scale coffee farmers have concentrated much on the effects of agricultural policies, agricultural marketing reforms, and analysis of agricultural marketing, coffee sector and coffee industry (Faustine, 2016; TCB, 2012).

Therefore, the study at hand examined the livelihood capability diversification strategies among small-scale coffee farmers' households as a result of fluctuating in income accrued from coffee in terms of its adequacy and sustainability. Specifically, the study intended to assess types of livelihood capability diversification strategies adopted by small-scale coffee farmers in the study area and examine obstacles encountered by small-scale coffee farmers towards adopting different livelihood capability diversification strategies.

### 1.2 Theoretical Underpinnings of the Study
The study was guided by Sustainable Livelihood Approach by (DFID, 2001) and supplemented by Farm Household Production Theory by Shultz, (1964). Sustainable Livelihood Approach is a framework which analyses factors that affect people's livelihood. SLA helps in understanding the complexity of poverty and mainstreaming rural poor at the centre of web of inter-related influence that affect how these people create and improve their livelihoods (Ellis & Allison, 2001).

Different frameworks have been developed to deal with sustainable livelihood mainly in developing countries such as IFAD, CARE, FAO & DFID (Dorward, *et al.*, 2003; Hobley& Shields, 2000). The theory has proved to be useful for researchers, programme interventionists, policy formulators and implementers. The theory creates an understanding on the strategies small-scale farmers' households

have adopted due to variability in production, income and livelihood capabilities mainly among small-scale farmers.

The approach has been applied by different researchers such as Serrat (2017); Morse & Nora (2013); Herold*et al.,* (2013); andVipins (2013) in different developing countries such as Zimbabwe, Bangladesh, Zambia, Ethiopia, Lesotho and India in dealing with rural economy, rural poverty, rural livelihood, rural development, livelihood diversification and sustainable livelihoods, and proved to be very useful hence, it was proper for it to be used in examining livelihoods' capabilities diversification strategies among small-scale coffee farmers in this case.

SLA can be used to identify key constraints and opportunities for development intervention among small-scale coffee farmers (Dorward, *et al.,* 2003). However, it creates an understanding of the lives of the poor and marginalized people like small-scale coffee farmers as well as their linkage to poverty reduction initiatives, food security and livelihoods (Kumar., Paul., Singh &Chahal, 2015: Benett, 2010). Despite SLA being unable to explain procedures relevant to be undertaken to improve livelihood capabilities among small-scale farmers but the approach appears to be fundamental in discussing about sustainable agriculture in developing countries hence catered for discussing about livelihood capabilities diversification strategies among small-scale coffee farmers in this respect.

## 2. METHODOLOGY

The study was conducted in Hai and Arumeru districts in Arusha and Kilimanjaro region respectively. The selection of the two districts based on their geographical location, culture/history of the coffee farmers, climatic conditions and their long involvement in coffee production. In addition, deterioration in coffee production (around 20% in 2015 compared to 1990 production) which was depended by nearly 50% of the population in the two districts necessitated this study to be undertaken (Craparo*et al*, 2015; Kemantha, 2015: Maghimbi, 2012). The other key reason was the uprooting of coffee trees to pave way for other economic activities in the area. The afore-mentioned reasons compelled this study to be undertaken in Hai and Arumeru districts, Tanzania.

The study used a mixed methods approach (sequential transformative approach which encompasses the use of qualitative then quantitative or quantitative then followed by qualitative approach) to collect qualitative and quantitative information. During data collection, a cross-sectional research design was used to collect qualitative and quantitative information on livelihood capabilities diversification strategies among small-scale coffee farmers from primary and secondary sources.

The design was chosen because it enabled collection of information from different groups of respondents at once, gave room to make comparisons among different groups of respondents to see how dependent variable relates to independent variables and the method saved time and other resources required to accomplish the task. The main method of data collection was household survey through the use of structured and semi structured questionnaire. Other methods included focus group discussion by the use of a focus group guide and key informant interview using key informants interview guide were also used to collect the information which could not be collected otherwise.

The required sample size was determined using Rule of the Thumb approach by Al-Bayyati (1971). The approach states that a sample size of 30 respondents and above is statistically accepted for data analysis. Rule of the Thumb has been used by different researchers in different fields and proved to be very useful (Hogg & Tanis, 2010: Aguinis& Harden, 2009; Carmen & Betsy, 2007). Therefore, it was applied in this study to estimate a sample size of 250 respondents (only small-scale coffee farmers producing an average

of 100kg and above per year).The distribution of the sample size across the districts, wards and villages was as depicted below, (Table 1).

**Table 1: Sample Size Distribution across Wards and Villages in Hai and Arumeru Districts**

| Ward | Number of Villages | Selected Villages | Number of Participants | Total |
|---|---|---|---|---|
| Masama East | 2 | Sawe | 20 | 55 |
| | | Mbweera | 35 | |
| Roondoo | 2 | Modio | 30 | 75 |
| | | Roo | 45 | |
| Nkwarisambu | 2 | Nkwarisambo | 35 | 60 |
| | | Ndoombo | 25 | |
| Akyeri | 2 | Akyeri | 40 | 60 |
| | | Sing'isi | 20 | |
| Total | 8 | | 250 | 250 |

In each district, two wards and four villages were purposively selected i.e. Masama East and RooNdoo in Hai district (with a total of 130 respondents) and Nkwarisambu and Ndoombo in Arumeru district (with a total of 120 respondents). Selection of the wards and villages were done deliberately because not all areas (villages and wards) producing coffee in Arumeru and Hai districts. After sample size determination and being provided with a list of all small-scale coffee farmers producing an average of 100 kg and above, a simple random sampling technique was used to obtain the respondents required for the study.

The main method of data collection was household survey supplemented by focus group discussions and key informant interview. By the aid of ward and village leadership in picking the respondents, a total of four focus group discussions conducted: One focus group discussion with eight (8) respondents (male and female) in each ward. Furthermore, in order to get a deeper understanding of the subject matter, a total of six key informant interviews were conducted. Key informant interviews involved two district agricultural officers (Hai and Arumeru) and four ward executive officers from the afore-mentioned districts.

Qualitative data were analysed using content analysis by putting together the themes which resembles that is emphasizes pinpointing, examining and recording patterns within data in order to describe phenomenon and how are they associated to a specific research question. In order to have the livelihoods' capability levels; nine abilities were established through pilot study (household head ability to own a house(s), household head ability to buy clothes, household head ability to have three meals per day, household head ability to earn income apart from coffee, household head ability to pay for medical services, household head ability to own transport, household head ability to run business, household head ability to own livestock and household head ability to pay for children's tuition fees).

The capabilities were then tested in the main data collection after assigning them scores on each capability. The scores were Yes = 1 and No = 0. After the data entry, total scores scored by each respondent established whereby the maximum score was 9 and the lowest score was 0. Basing on the scores, a median score was calculated to determine the group level formation. Finally, four levels established namely; no capability; low capability; moderate capability; and high capability (Table 2).
In ensuring content validity for the data collected, the pre-testing of questionnaire was done in order to

test the data collection instruments, assess time for data collection, check availability of the study population, test procedures for data processing and analysis and check if the findings make sense. The pre-testing of the questionnaire was done on 16 respondents in both Hai and Arumeru districts (eight respondents from each district; four respondents from each ward and two respondents from each village) a month before actual data collection. Reliability of the data collected was determined by calculating the Cronbach's Alpha which is a measure of internal consistence that is how closely related a set of items are as a group. Cronbach's Alpha is considered to be a measure of scale reliability. In this case, the reliability coefficient was 0.68. The optimum value for the reliability ranges from 0.65 to 0.8 and the calculated results are within the acceptable ranges hence making the data collected reliable.

## 3.0 FINDINGS AND DISCUSSIONS

### 3.1 Livelihood Capability Levels among Small-Scale Coffee Farmers

Small-scale coffee farmers in Hai and Arumeru districts have different capability levels which in one way or another determine substantially the extent in which they do participate in coffee production or how do they adopt different diversification strategies, (Table 2).

**Table 2:  Livelihood Capability Levels**

| Levels | Frequency (n) | Percent (%) | Capability Index |
|---|---|---|---|
| No Capability | 23 | 9.2 | 0.0 |
| Low Capability | 98 | 39.2 | 0.1-4.44 |
| Moderate Capability | 46 | 18.4 | 5.0 |
| High Capability | 83 | 33.2 | 5.1-9.0 |
| Total | 250 | 100.0 | |

From the livelihood capability level (Table 2), the mean score results were found to be 5.0 (18.4%) which was at moderate level implying moderate livelihood capabilities among the small-scale coffee farmers in the study area.  Zero (0) in the livelihood capability level implied no capability at all and from 0.1-4.4 (39.2%) implied low capabilities among small-scale coffee farmers. This implies majority of small-scale coffee farmers in Hai and Arumeru districts had low livelihood capability level.  From 5.1to 9.0 (33.2%) considered to be high livelihood capability level among small-scale coffee farmers. Thereafter, chi-square and cross tabulation were used for showing the association between livelihood capabilities and diversification strategies among small-scale coffee farmers. Results obtained were presented using tables and figures.

### 3.2 Type of livelihood diversification strategies among small-scale coffee farmers

Livelihood capability is a result of multiple livelihood activities performed by small-scale farmers in their daily lives. Small-scale coffee farmers have so far adopted different livelihood diversification strategies so as to meet their basic requirements such as food, shelter and education due to the fluctuation in coffee production and decline in income accrued from coffee. Table 3 presents the findings on livelihood capability diversification strategies adopted by small scale coffee farmers in the study area.

**Table 3: Diversification strategies against livelihood capabilities level among small-scale coffee farmers**

| Diversification Strategies | Livelihood Capability Levels in percentages (%) | | | | Total |
|---|---|---|---|---|---|
| | No capability | Low capability | Moderate capability | High capability | |
| Animal keeping | 9.2 | 39.2 | 18.4 | 33.2 | 100 |
| Vegetable/Horticultural Production | 10.4 | 39.8 | 19.9 | 29.9 | 100 |
| Small and Medium Businesses | 0.0 | 18.8 | 25.0 | 56.3 | 100 |
| Formal and Informal Employment | 0.0 | 50.0 | 12.5 | 37.5 | 100 |

*Chi -square (12.161; p=0.0041) likelihood ratio (15.746; p=0.0041)*

The livelihood diversification strategies among small scale coffee farmers included animal keeping (dairy farming, poultry and piggery), vegetable production (horticultural production), small and medium businesses as well as formal and informal employment such as casual or part time labour. The findings from Table 3 show that 39.2% of the respondents who were found to take part in animal keeping as a diversification strategy had low livelihood capability. With regard to vegetable production, of all respondents 39.8% had low livelihood capability.

Further, the results show that 56.3% of all respondents who participated in small and medium businesses as a diversification strategy to coffee production had high livelihood capabilities. It should be noted here that business requires capital and high capability means high capital and other economic potentialities required for investment to take place other factors being equal. However, among small-scale coffee farmers with formal/informal employment, 50% had low capability.

Chi-square results were 12.161; p-value of 0.0041. This implies that there is a close association between the type of diversification strategies and livelihood capability levels among small scale coffee farmers that is why the results are statistically significant. It was learnt that for small scale coffee farmers with no capability at all, it is harder for them to adopt a diversification strategy compared to other livelihood capability levels.

Other livelihood levels (low capability, moderate capability and high capability) are aspiring for livelihoods' improvement and no capability category is dormant. For example, according to TCB (2017), the price for coffee has been almost stagnant for about twenty years. In 1995 one kilogram of coffee was sold between 1,500Tsh to 2,500Tsh whereby, in 2017 (almost 22 years later) the price ranged between 2,500Tsh to 3,500Tsh.Therefore, if small-scale coffee farmers could not adopt diversification strategies, their livelihood conditions could be in shamble due to yearly raising in cost of living while the income accrued from coffee is almost constant and sometimes declining. The same findings were corroborated by discussants in Ndoombo Village during a focus group discussion session as follows:
> "...truly, since we diversified our economic activities, we have improved our income tremendously.....we are getting income from coffee, dairy farm, poultry and horticultural activities.....Indeed, we are no longer

*facing minor common financial constraints.....we are paying school fees for our children, built modern houses and owning other household assets....for sure, our lives are better after the adoption of livelihood diversification strategies to coffee production...*" (Ndoombo village, 19 June, 2016).

This implies that livelihood diversification among small-scale coffee farmers has enabled them not only improve their households' income but also the general livelihood conditions by being able to acquire their daily basic needs at the required quality and quantity. These findings are in line with Babatumbe and Qain (2009) and Barrett *et al.,* (2011) in their discussion on income diversification and household livelihood strategies, they found out that in order for small scale farmers to thrive well economically they have to diversify their economic activities so that in the event of falling in price or output they will be able to maintain their livelihoods' status for getting their usual basic needs such as health services and food.

During key informant interviews in Ndoombo and Nkwarisambu wards, it was also noted that the betterment of small-scale coffee farmers' livelihood depends on how they are capable in diversifying their economic activities. It was found that small scale coffee farmers in the study area have diversified their economic activities by embarking on small and medium businesses such as buying and selling of used clothes "*biasharayanguozamitumba*", opening up small shops, acting as middle men by buying agricultural produce from the farmers and selling them to the markets, operating motor cycle businesses "*biasharayabodaboda*" while others were found dealing seriously with horticultural production "*Kilimo cha matundanambogamboga*"

### 3.3 Livelihood Capabilities' Diversification Strategies per District

Small-scale coffee farmers in Hai and Arumeru districts have adopted different livelihood diversification strategies due to the decline in coffee production, income accrued from coffee, profitability and livelihood capabilities in terms of food, education and health services (Table 4).

**Table 4: Livelihood capabilities' diversification strategies per district between Hai and Arumeru**

| Livelihood Capability Indicator | Pooled Data | | Arumeru District | | Hai District | |
|---|---|---|---|---|---|---|
| | N | Percent | n | Percent | n | Percent |
| Animal Keeping | 250 | 51.1 | 105 | 40.0 | 145 | 42.0 |
| Vegetable Production | 211 | 43.1 | 103 | 39.0 | 108 | 28.7 |
| Small Business Venture | 150 | 49.0 | 54 | 14.0 | 96 | 25.0 |
| Renting Land for other activities | 08 | 1.6 | 00 | 02 | 08 | 2.9 |
| Formal and Informal Employment | 04 | 0.8 | 00 | 06 | 04 | 1.4 |
| **Total** | **619** | **100** | **259** | **100%** | **361** | **100%** |

In principle, both Hai and Arumeru districts' small-scale coffee farmers have adopted various livelihoods' capabilities diversification strategies due to different problems emanated from coffee production such as falling in price and yearly price fluctuations. Despite Hai and Arumeru districts adopting different livelihood capabilities' diversification strategies there are some slight differences in terms of the adoption process and magnitudes of its adoption. It was noted that small-scale coffee farmers diversified from coffee production to animal keeping (diary production), vegetable production, small business, renting land to other users and casual labour.

The findings in Table 4 show that in Hai district 42% of the respondents explained their great concern that they are now dealing with animal keeping instead of coffee production as it pays more regularly and profitably while in Arumeru district it was 40% of the respondents. Vegetable production as a livelihood diversification strategy was more profound in Arumeru district than in Hai district.

Furthermore, the findings indicated that in Hai district only 28.7% of respondents were dealing with vegetable production as a diversification strategy while in Arumeru district 39% were found actively dealing with vegetable production. With regard to small business venture, the variations were significant in Hai district compared to Arumeru district. It was found out that 25% of the respondents in Hai district were dealing with small business ventures while in Arumeru district it was only 14% of the respondents.

Livelihood diversification strategies differ from one district to another depending on factors such as weather condition, knowledge, soil, pests, capital and available avenues. The dominant or major activities which were found in Hai and Arumeru districts include among others animal keeping, vegetable production and small business ventures while the minor one was renting land and casual labour respectfully which accounted for less than ten percent of the respondents across all districts as indicated in Table 4. These findings concurred with the URT, (2012); Maghimbi (2007) who found out that coffee farmers in Kilimanjaro have changed the pattern of 100% reliance on coffee by diversifying into other economic activities such as horticultural production for their livelihoods' improvement and sustenance.

When community members were asked if their livelihood status was attributed to coffee production, (YES/NO RESPONSES) the majority (63%) said their status was attributed to other economic activities apart from coffee. They pointed out that they had adopted livelihoods' diversification strategies which have enabled them to embark on off-farm, non-farm and on-farm activities which pay better than coffee production in terms of profits and livelihood support.

These results concurred to TCB (2017) who found out that one of the major causative factors for decline in coffee production in Tanzania is the adoption of different livelihoods' diversification strategies among smallholder farmers who used to produce nearly 90% of the entire coffee in the country before economic liberalization. However, the remaining portion (37%) of respondents agreed their livelihood to rely on coffee and they are not thinking of adopting any livelihood capabilities' diversification strategy. During the Focus Group Discussion at Sawe Village, discussants stated that:

> *"...we are very old and therefore it is difficult for us to deviate from what we have been doing for more than 40 years.... we don't want to be mentally disturbed by the newly emerged economic opportunities such as vegetable production.... we managed to care our families through coffee sales,therefore we will continue producing it and not otherwise even if the price fluctuates..."* (Sawe Village, 20 May, 2016).

This implies despite livelihoods challenges and decline in income from coffee, there is a significant percent of small-scale coffee farmers who are still relying on coffee production as their major source of income and they are not intending to forego it. However, it was evidenced that small scale coffee farmers who are still seriously and rigorously embarking on coffee production are of advanced age mostly above 60 years and assumed to be not easy to diversify their economic activities.

Further, small-scale coffee farmers pointed out that indeed, despite the ups and downs in coffee prices, it has played a great role in improving their household income as well as their livelihoods' capabilities in acquiring basic needs such as education, food and shelter. About 76.1% of the respondents (YES/NO RESPONSES) agreed to have been supported by coffee in one way or the other in their life time. They

insisted that they will continue producing coffee despite so many hurdles. Income from coffee tends to supplement the total household income and therefore, enabling small scale coffee farmers to deviate into other economic activities though by no means always a reliable source of income.

It was also revealed that about 23% of the respondents pointed out that coffee production is not contributing anything to their income. But it was learnt later that this category is made up of individuals without coffee plots at all or those who have pulled away from coffee production completely. As a result, their livelihoods depend on other economic activities such as business or horticultural production for their survival.

The influence of coffee production on savings and adoption of livelihood diversification strategies among small-scale coffee farmers cannot be underestimated. Saving is a very important component in the livelihood diversification process. The more the savings, the more the chances for adopting new livelihood capabilities' diversification strategies, business certainties, prosperity and business expansion. It was revealed that about 66% of the respondents pointed out that coffee production has not contributed to their savings while the remaining 34% of the respondents confirmed their savings which has enabled them to effect for different livelihood requirements to be attributed by coffee production.

Savings from coffee has enabled small-scale coffee farmers to diversify their economic activities through adoption of different livelihood diversification strategies. Irrespective of the source(s) of money to be saved, saving is useful to cater for anticipated and unanticipated livelihood needs. During focus group discussion in Mbweera village it was stated as follow:

> "…savings from coffee had enabled us to be how we are……..through savings, we managed to build houses, opening up small shops and embarking on other income generating activities ….currently, we have diversified our economic activities but these new activities have their origin from coffee savings…and in the contemporary time many people are admiring our economic progress…" (Mbweera village, 20 June, 2016).

This means community members still admitting the importance of saving towards diversification of economic activities. Savings provide capital necessary for diversification of our day to day economic activities and, in so doing; it enables our livelihood capabilities to be improved.

### 3.4 Constraints encountered by small scale coffee farmers in acquiring credit

Adoption of new livelihoods capabilities' diversification strategies among small scale coffee farmers requires capital (credit support), time and personal commitment. Capital is however very fundamental pre-requisite for someone to adopt new livelihood diversification strategies though acquiring it small-scale coffee farmers encounter numerous constraints (Fig. 1).
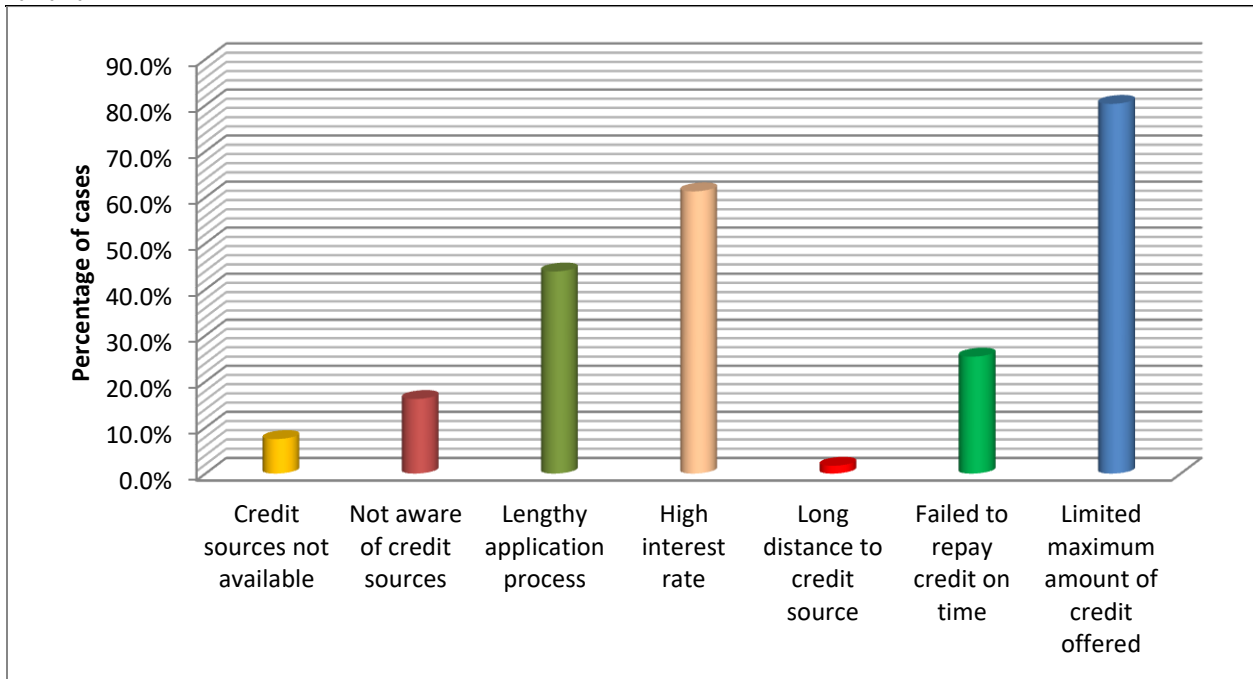
**Figure 1: Constraints in acquiring credit facility for adopting livelihoods' diversification strategies**

The findings in Figure 1 show that several constraints were limiting small-scale coffee farmers in acquiring credit facility which could help them adopting different livelihood diversification strategies and finally improve their livelihood capabilities such as high interest rate, long application process, inability to repay credit on time, awareness of credit sources and unavailability of the credit facility itself. The findings revealed that 41.3% of the respondents are not getting credit facility for adopting livelihood diversification strategy simply because of the limited amount of credit offered while 23.6% are not getting credit simply because of the attached high interest rates and 20.4% explained their great concern to be too long application procedures.

These and many other factors inhibit small-scale coffee farmers from obtaining credit facility which could cater for buying farm and livestock inputs as a result enabling them to adopt livelihood capabilities' diversification strategies which could ultimately enable them reduce if not to overcome their socio-economic constraints that hinder the acquisition of decent livelihood in terms of food and health services. It was further explained by discussants during focus group discussion in Sawe village that:

> "…we are ready and willing to adopt new livelihood capabilities diversification strategies because of poor income from coffee but the critical problem is how and where to get capital for investment….sometimes we may know where to get the capital inform of credit support but we don't have the necessary qualifications and that's why we are still relying on a single product because of the prevailing constraints in credit acquisition…" (Sawe village, 28 May, 2016).

These findings add to Farm Household Production Theory by Shultz (1964) which stipulates that for small scale farmers to adopt a new livelihoods' diversification strategy and produce better they have to be enabled in terms of capital, inputs and extension services. But to a large extent the availability of capital, inputs and extension services among small scale coffee farmers is limited or not existing. Hence, as a result, this limits small-scale coffee farmers from adopting different livelihoods' diversification strategies. The findings also concur with key informant interview in Masama East ward that majority of small-scale coffee farmers want to diversify and adopt new livelihoods' diversification strategies but the

major constraint to them is capital. Under normal circumstance, there is no economic activity which does not require capital.

### 3.4 Theoretical Implications of the Findings

The findings obtained from the study concurred with the assumptions from the SLA by DFID (1997) and Farm Household Production Theory by Shultz, (1964) which stipulates that production among small-scale farmers is affected by their inability to adopt new livelihoods' diversification strategies due to their low capital, poor skills, inadequate knowledge and low assets which altogether impair their ability to invest. This study is a unique by being able to put together livelihood capabilities, diversification strategies and small-scale coffee farmers.

Therefore, the findings have confirmed the SLA by DFID (1997) to be quite useful and very much applicable on the diversification strategies on livelihood capabilities among small-scale coffee farmers in Hai and Arumeru districts, Tanzania. The findings have shown that in order for small-scale coffee farmers to improve their livelihood-capabilities; adoption of livelihood diversification strategies through embarking into varieties of economic activities is inevitable. Despite the theory being useful in this context, so far, no study has been conducted directly on livelihood capabilities' diversification strategies among small-scale coffee farmers in Tanzania and hence this study has filled that gap.

### 4.0 CONCLUSION AND RECOMMENDATIONS
### 4.1 Conclusion

Based on the objectives and the findings, the study concludes as follow: Adoption of livelihoods capabilities diversification strategies among small-scale coffee farmers has been necessitated primarily by falling in income accrued from coffee production, hence compelling them to improve and adopt livelihood diversification strategies in order to increase productivity and maximize profits, hence being able to meet their daily basic requirements such as health services and education. Among other economic activities performed by small-scale coffee farmers, coffee production still plays a fundamental role as a source of savings for other economic occupations aiming at improving livelihood capabilities through adopting different livelihood capabilities' diversification strategies.

In addition, small-scale coffee farmers encounter several constraints in the process of adopting livelihood diversification strategies such as limited maximum amount of credit offered, lengthily application procedures, high interest rate, inability to repay credit on time, unawareness of credit sources and unavailability of credit sources. Hence, removal of constraints and expansion of opportunities for diversification are very fundamental in giving individual and household members more capabilities to improve livelihood and therefore raising the standard of living, maximising profits and improving income.

### 4.2 Recommendations

In order to ameliorate the situation of small-scale coffee farmers not being able to adopt a diversification strategy mainly due to low livelihood capabilities, the paper recommends the following measures to be taken into consideration: Diversification of economic activities among small-scale coffee farmers is very fundamental and unavoidable for easy adoption of new livelihood capabilities' diversification strategies. It is recommended to small-scale coffee farmers at village and ward level to be proactive, ready and willing to adopt livelihood capabilities' diversification strategies as a tool for emancipation from different economic constraints emanating from coffee production.

The adoption of livelihood diversification strategies can easily be done by soliciting capital which is very fundamental for economic production. Finally, it is recommended to Micro Finance Institutions to widen the sources of credit and improve conditions for its acquisition in order to be more user friendly hence enabling more small-scale farmers to acquire and embark on different livelihood occupations which can generate more profits hence ultimately improving their livelihood conditions in obtaining their daily basic requirements.

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