

**LIVELIHOOD DIVERSIFICATION AMONG RURAL
HOUSEHOLDS IN SOUTHWESTERN NIGERIA**

BY

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ABSTRACT

Diversification is a necessity in rural areas, where farming alone rarely provides sufficient means of survival. Conceptualisation of livelihood diversification as plurality of activities from past studies is too narrow. Rather, livelihood diversification should be conceived in terms of the interplay of ability, assets and activities. Therefore, livelihood diversification among rural households in southwestern Nigeria was investigated.

Multistage random sampling technique was used to select the respondents for the study. Ekiti, Ogun and Osun states were selected from the six states of southwestern Nigeria. Twenty percent of rural LGAs were selected in the respective states to give 9, 11, and 16 LGAs. Ten percent of wards in each LGA was selected, from which 2.5% of households were selected to give 405 respondents. Structured interview schedule was used to collect data on respondents' socio-economic characteristics, livelihood abilities, livelihood activities, reasons for diversification, sources of information, livelihood assets, season of diversification, constraints and level of diversification. Indices of livelihood abilities, activities, assets, constraints and level of diversification were developed for categorisation of respondents. Data were analyzed using frequency counts, percentage, means, Pearson's Product Moment Correlation, ANOVA, linear and binomial regression at $p = 0.05$.

Respondents' age, household size and income were 52.3 ± 10.9 years, 4.82 ± 1.88 and $\text{N}18851.85 \pm 16593.65$ respectively. Most (96.3%) of the respondents were males, married (87.9%) and Christians (63.0%). Majority had farming as primary occupation (57.34%), no formal education (62.2%) and acquired their land through inheritance (73%). Most (72.4%) of them diversified into arable crop farming while 57.0% into off-farm activities. Majority (72.4%) diversified for sales and consumption only while 76.3% diversified in both seasons. Sources of

information on livelihood diversification included radio (89.9%) and relatives/friends (58.5%). Rural households had low livelihood assets ($\bar{x}=37.39\pm 11.67$) and activities ($\bar{x}=3.15\pm 1.27$), while they had high livelihood abilities ($\bar{x}=63.27\pm 12.53$). Constraints to livelihood diversification were lack of infrastructural facilities (91.9%), inadequate livelihood assets (82.0%) and poor transportation system (66.9%). Respondents' level of livelihood diversification was significantly increased by primary occupation ($\beta=0.64$), income from farming ($\beta = 0.16$), length of stay ($\beta = 0.28$) and income from non-farm activities ($\beta = 0.13$). Significant relationship existed between constraints ($r=-0.130$) and level of livelihood diversification. However, frequency of visits to urban centres ($\beta = -0.25$) significantly reduced respondents' level of livelihood diversification. Livelihood assets ($F = 35.095$), activities ($F = 2.891$) and level of livelihood diversification ($F = 6.075$) were also significantly different across the states. Livelihood diversification was significantly influenced by livelihood ability ($\beta = 0.860$), assets ($\beta = 0.29$) and activities ($\beta = 0.09$) among rural households across the states.

Level of livelihood diversification of rural households was low, in spite of their high level of livelihood abilities. Differences in level of livelihood assets and activities accounted for non-uniform level of livelihood diversification across the states. Therefore, enhanced livelihood assets and uniformity in rural development initiative could improve livelihood diversification of rural households in southwestern Nigeria.

Keywords: Rural asset, Livelihood ability, Plurality of activities.

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CERTIFICATION

I certify that this research work was carried out by Ismaila Ogunmola Ewebiyi under my supervision in the Department of Agricultural Extension and Rural Development, University of Ibadan, Ibadan, Nigeria.

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LIST OF ACRONYMS

ADP	Agricultural Development Programme
AIDS	Acquired Immune Deficiency Syndrome
ANOVA	Analysis of Variance
DFID	Department for International Development
DFRRI	Directorate of Food, Road and Rural Infrastructure
FAO	Food and Agriculture Organization
FGD	Focus Group Discussion
FOS	Federal Office of Statistics
GDP	Gross Domestic Product
HIV	Human Immune Deficiency Virus
IDI	In-depth Interview
IFAD	International Fund for Agricultural Development
ILO	International Labour Organization
LDP	Local Development Planning
LGD	Local Development Area

MDGs	Millennium Development Goals
NAPEP	National Poverty Eradication Programme
NARP	National Agricultural Research Project
NBS	National Bureau of Statistics
NGO	Non-Governmental Organization
NPC	National Population Commission
ODI	Oversea Development Institute
PPMC	Pearson Product Moment Correlation
RNFE	Rural Non-Farm Economy
RNFI	Rural Non-farm Income
RUFIN	Rural Finance Institution-Building Programme
SCN	Standing Committee on Nutrition
SLA	Sustainable Livelihood Approach
UBAES	University Based Agricultural Extension System
UNDP	United Nations Development Programme

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Rural people still find means to ensure their survival despite the condition that tends to limit social and economic opportunities available to a large proportion of the rural population in Nigeria and other developing countries. One of the common ways for rural Nigerians as well as other people in other localities with similar circumstances to meet their needs is by combining various activities that will ensure their survival within the society or localities they find themselves (Barret and Reordon, 2001). Livelihood is the totality of means by which people secure a living, have or acquire the requirement for survival and satisfaction of needs as defined by the people themselves in all aspect of their lives (Loubster, 1995). Oyesola and Ademola (2011) also defined livelihood as people's means of living including the activities they carry out to sustain themselves. Livelihoods are diverse, dynamic and complex in nature and degree of complexity depends on the environment upon which people secure their livings. Livelihood diversification among rural households in order to sustain household incomes is not a novel strategy. However, recent development in the macro and micro economic environment have brought about increasing pressure on farm income and have stimulated a search for alternative sources of revenue among rural households in developing countries (Fabusoro, Omotayo, Apantaku and Okuneye, 2010). Weeks (1995), Gwynne (1997), Enriquez (1998), Bebbington (1997), de Janvry and Sadoulet (2001) provide evidences from Latin America suggesting that a significant part of the peasant economy in many instances is not viable. Butler and Mazur (2004) equally observed that the African rate of development is lagging significantly behind much of global South despite decades of assorted development approaches. The concern and attention

given to lagging areas by rural development scholars and practitioners have called for change from emphasis on development strategies that focus on problem identification and needs assessment to approaches that place priority on the livelihood systems of the poor. This suggests that, in rural Africa, livelihood diversification is increasing owing to low income earned by rural households.

Livelihood diversification refers to attempts by individuals and households to find additional ways to raise income and reduce environmental risks which differ sharply by the degree of freedom of choice to diversify or not, and the reversibility of the income. Ellis (1998) defined livelihood diversification as the process by which farm families construct a diverse portfolio of activities and social support capabilities in their struggle for survival in order to improve their living standards. The definition of livelihood by Loubster (1995) is very fitting to this situation as he regards it as: 'the totality of means by which people secure the living they have acquired in one way or another, the requirement for survival and the satisfaction of needs as defined by the people themselves in all aspects of their lives. A livelihood comprises the assets (natural, physical, human, financial and social) the activities and access gained to these assets that together determine the living gained by the households (Ellis, 2000a). Krishnan (1996), Bryceson and Jamal (1997), Ellis (1998) and Little, Cellarius, Barret and Coppock (1997) submitted that farming on its own rarely provides a significant means of survival in rural areas of low income countries, including Nigeria. For this reason, most rural households depend on diverse activities and income sources. This diversification of sources of survival is not just a transient phenomenon, reflecting the uneven transition between full-time agriculture and full-time industries and services, which is how it conventionally tends to be interpreted. On the

contrary, it appears to be enduring and pervasive in low income countries, especially in sub-Saharan Africa (Bryceson, 1996).

Livelihood diversification is widespread, found in all locations, as well as across ranges of income and wealth. According to Barrett and Webb (2001), diversification patterns reflect ‘individual’ voluntary exchange of assets across various activities so as to achieve an optimal balance between expected returns and risk exposure based on the constraints they face. Diversity in a household and in activities also refers to the existence at one point in time of different household income sources (Ellis, 2000b). An individual or household has a diversified livelihood when relies on multiple economic activities within a year, including agricultural and non-agricultural work; that one works for oneself and works for an employer; and that one works for rural locality and other parts of the country side, towns and cities during temporary migration. At the household level, this tends to mean embarking or adding on new activities. People may be growing new varieties of high value crops (agricultural diversification) or undertaking small enterprises, casual labour or migration (non-agricultural diversification).

Diversification is a norm, very few people collect all their incomes from a source, hold all their wealth in the form of any single asset, or use their assets in just one activity. Multiple motives prompt households and individuals to diversify assets, income and activities. The first set of motives comprises what are traditionally termed “push factors”. Risk reduction, response to diminishing returns in any given use, such as family labour supply in the presence of land constraint driven by population pressure and land holdings fragmentation, reaction to crises or liquidity constraints and high transactions cost that induce household to self-provision in several goods and services. The second set of motives comprise pull factors: realization of strategic complementarities between activities such as crop livestock integration, milling and

specialization according to comparative advantage accorded by superior technologies, skills or endowments (Ellis, 2000b).

Available evidence on rural household income portfolio confirms the prevalence of livelihood diversification. The true picture is not one of the family combined with just odd bits of wage work on neighbour's farm, or in a nearby rural town centre. Most rural families have truly multiple income sources (Babatunde, 2009). This may include off-farm wage, work in agriculture, but it is also likely to involve wage work in non-farm activities and rural non-farm, self-employment and remittances from urban areas and abroad. Studies show that between 30% and 50% of rural household incomes in sub-Saharan Africa is typically derived from non-farm sources (Reardon, 1997). In some regions in South Africa, this can reach 80-90%. In South Asia, the average proportion is around 60%, reflecting in part the unequal land ownership structure in that region and the dependence of many landless or near landless families almost wholly on non-farm income sources for survival. In Nigeria, unimproved social services and oil deregulation brought unsteady national economic growth, which, no doubt, may have forced households to make adjustments that affect not only their livelihoods, but also the overall performance of the economy (Meludu and Adekoya, 2006). Oluwatayo (2009) asserts that most households in rural Nigeria engage in multiple jobs (diversify) as a panacea to augmenting their main income sources.

According to Ellis (1998), diversification, though a livelihood strategy, could have some negative effects, such as widening disparities in income distribution, agricultural productivity and diversion of resources into unproductive networking and could result in adverse gender effects. However, the positive effects of diversification outweigh the negative ones. Livelihood diversification reduces seasonality shocks in agricultural production, contributing to increased

income and livelihood assets improvement (Ellis, 1998). In some cases, it can help to mitigate risk or cope with vulnerability where risk remains high and in setting poor people on a cumulative path towards greater livelihood which can also help to reduce seasonality in labour demand and consumption (Morduch, 1995), offset the impact of natural risk factors on staple food availability, provide cash resources that enable household assets to accumulate and help people to retain the assets they already possess (Netting, 1993).

Diversification across income sources helps household to combat instability in income and thereby increases the probability to maintain livelihood security. Diverse portfolio activities contribute to the sustainability of rural livelihood because it improves its long-run resilience in the face of adverse trends and sudden shocks. In general, increased diversity promotes greater flexibility because it allows more possibility for substitution between opportunities that are declining and those that are expanding. As rural development scholars and practitioners pay increasing attention to the rural livelihood diversification for a variety of reasons, our understanding of the aetiology and effects of livelihood diversification among rural households in developing countries, including Nigeria, must likewise increase.

1.2 Statement of the research problem

In the 1970s and 1980s the Nigerian economy was almost completely agrarian and farming was considered not only a traditional activity, but also an economic activity with a clear focus on higher productivity at all levels. The small-scale farmers dominated agricultural production in Nigeria and the bulk of rural households were found in this category (Dixson, 2004, cited in Adetimirin, 2010). During this period, the Nigerian government was highly committed to and supportive of agricultural development, as shown in its annual expenditure on

agriculture. The federal government capital expenditure increased from ₦35.4 million in 1973 to ₦602.2 million in 1982. Similarly, the contributions of agriculture to the GDP between 1980 and 1985 averaged ₦34.950.00 million (Okunmadewa, Okoruwa and Adegboye, 2004)

However, government's commitment to agricultural development suffered some neglect during the oil boom days. By 1985, the index capital real GDP of agriculture was 35% lower than of 1970 (FOS, 1999; Arokoyo, 2003; Akinbile, 2007), and this degenerated more in the 1990s, making the country food insufficient and engendering drastic reversal from a net-exporting country to a net-importer of food. The effect of this was low agricultural production, which in turn, led to diminished livelihood skill options (SCN, 2004) and the declining capacity of agriculture to cope with the needs of rural dwellers.

With the implied decline in agricultural production of rural households (Mustapha, 1999; Babatunde, 2009; Oluwatayo, 2009), there is overall low income to rural households, which necessitates diversification into different livelihood activities, depending on the capabilities and assets at their disposal. The livelihood activities rural households diversify into include transportation, carpentry, tailoring, motor mechanic or repair, barbing, hair plaiting (non-farm local services), petty trading, food vending, sales of processed agricultural products, teaching and migratory wage services, which may be skilled and unskilled casual jobs.

Chamber and Conway (1992), Reardon (1997), Ellis (1998) and Bryceson (2000) observed that sustainable rural livelihood could be achieved when all the livelihood components are fully identified and analyzed for formulation and implementation of rural development policies and programmes. Olawoye (2000a) also posits that sustainable rural livelihood is a function of rural development programmes that are designed and implemented through the bottom-up approach, but the reverse is the case in most interventions in Nigeria. Some rural

development programmes that were supposed to have positive bearing on rural livelihood could not come to fruition because they were often based on assumptions. The resultant effect of this on rural households is poor standard of living arising from compounded poverty.

According to Ellis (1998), livelihood diversification varies across countries or regions. Schwarze and Zeller (2005) reported that livelihood diversification is higher among the poor than the rich in Indonesia, but the findings of Fabusoro *et al.*, (2010), Abudulai and Rees (2001) negated the assertion in Nigeria, Mali and Ethiopia.

With respect to the driving force of livelihood diversification, the empirical literature offers mixed results. Available studies in countries in the Asian region identified shrinking farm land as a driving force, while Lanjouw, Abudulaihi and Dercon (2001) present the reverse situation in Africa. Moreover, conceptualization of livelihood diversification as plurality of activities from past studies is too narrow. In Nigeria, Mustapha (1999), Babatunde (2009) and Fabusoro *et al.* (2010) used income index from activities only to report level of livelihood diversification in rural communities without taking into cognizance the ability and assets that have to effectively interact with activities before a meaningful inference could be drawn on rural livelihood diversification.

These divergent results call for further empirical research to understand better the situation in specific settings and provide knowledge that is needed for appropriate policy responses. Therefore, to promote livelihood diversification of rural households in southwest Nigeria, factors associated with it need to be well investigated with a view to coming up with effective sectorial programmes, which are best for sustainable livelihood. It is against this background that this study ventures into providing empirical answers to the following questions:

1. What are the livelihood abilities of the respondents in the study area?
2. What are the activities engaged in by rural households in the study area?
3. What are the level of livelihood assets of the respondents in the study area?
4. What factors necessitate rural households' livelihood diversification?
5. When do rural households in the study area diversify into various livelihood activities?
6. What are the respondents' sources of information on livelihood diversification?
7. What are the constraints militating against the respondents' livelihood diversification in the study area?

1.3 Objective of the study

The general objective of the study is to ascertain the level of livelihood diversification of rural households in Southwest Nigeria.

The specific objectives of the study are to:

1. Determine the level of livelihood abilities of the respondents in the study area.
2. Identify the activities engaged in by rural households in the study area.
3. Determine the respondents' level of livelihood assets that are available for livelihood diversification.
4. Determine the factors responsible for livelihood diversification of the rural households.

5. Ascertain the specific season the rural households diversify into various activities in the study area.
6. Identify the sources of information on livelihood diversification of the rural households in the study area
7. Identify the constraints militating against livelihood diversification of the respondents in the study area.

1.4 Hypotheses of the study

The study tested the following hypotheses

1. There is no significant contribution of socio- characteristics of the respondents to the level of livelihood diversification.
2. There is no significant relationship between the respondents' constraint to livelihood diversification and their level of livelihood diversification.
3. There is no significant difference in respondents' livelihood abilities, assets and activities across the states.
4. There is no significant difference in the respondents' level of livelihood diversification across the states.
5. There is no significant contribution of the abilities, assets and activities of the respondents to the level of livelihood diversification across the states of the study area.

1.5 Justification of the study

In their studies of rural livelihoods, Ebitigha (2008) Babatunde (2009) Oluwatayo (2009) and Fabusoro *et al.* (2010) reported that farming is the dominant primary occupation of rural households in Nigeria. The Nigerian economy during the first decade after independence could reasonably be described as an agrarian economy because agriculture served as an engine of the overall economy (Ogen, 2003; cited by Adeokun, Olanloye and Oladoja (2011). However, the agricultural sector suffered neglect in the heyday of the oil boom in the 1970s. Nigeria has since then been witnessing extreme poverty and insufficiency of basic food items. The effect of this greatly manifested among rural households who relied solely on traditional tools and indigenous farming methods. This situation did not only cripple the agricultural sector, but also made rural households incapable of maintaining a secure livelihood through farming alone, thereby diversifying into other means of securing a sustainable livelihood.

The quest for the appropriate and research approach to addressing rural livelihood diversification from the in-depth and household dimension necessitated this study. Sustainable livelihood is attainable when all the components of livelihood, as pointed out by Chamber and Conway (1992): ability, assets and activities, are identified and effectively utilized. The result of effective utilization of these livelihood components can go a long way in generating more income, food security and diminishing level of poverty among rural households.

The Millennium Development Goals (MDGs) developed in September 2000, has as one of its goals elimination of hunger and eradicate poverty in both developed and developing countries of the world, including Nigeria. This is the 13th year into the new millennium, Nigeria is still far from realizing the goal of food sufficiency and poverty eradication, hoped to be achieved by the year 2015 by the United Nations (Ugwu, 2007). This position was corroborated

by the assertion of Odebode (2003) that rural households were mostly affected, as almost half of the respondents (48.0%) were food insecure. ODI (2001) reported that policies and programmes of Nigerian government usually rest on assumptions about the people, particularly those in rural areas. There is, therefore, the need for government, NGOs and other rural development initiators to adopt the bottom-up approach for formulation and implementation of rural development policies and programmes. This will assist in creating an enabling environment on which rural households livelihood diversification depends. For this to take place, factors associated with livelihood diversification of rural households need to be effectively analyzed in order to assist rural development partners to implement policies and programmes that are best suitable for sustainable livelihoods. Considering the foregoing, investigating livelihood diversification of rural households in southwest Nigeria will provide a lot of benefits. Some of them are examined below:

The study will assist government and development intervention partners to understand what is really happening to people's lives, what enable some but not others to escape from poverty and how rural people are affected by the development policies and programmes. Components of livelihood ability, assets and activities that have to effectively interact before sustainable livelihood is achieved will be identified. This will assist concerned stakeholders in the study area in policy formulation process and designing programmes that give priorities to the needs of rural families.

The outcome of the study will be helpful in understanding issues at the level of households in rural communities where the vast majority of Nigerians reside and about their livelihood activities and reasons for diversification. The study will also provide empirical data in the library for documentation and future consultation on issues that concern rural livelihoods

diversification for policy formulation and improved rural development. Moreover, the outcome of the study and possible follow-up are anticipated to facilitate the development of partnership between public institutions and researchers/NGOs. This is expected to yield functional programmes that can forge sustainable rural livelihood and development as it is expected by MDGs in the year 2015.

1.6 Definition of terms

1. **Livelihood** - It is the capabilities, assets, including both material and social resources, and activities required for a means of living.
2. **Diversification** - This is the continual adaptive process whereby individuals or households add new activities, maintaining existing ones and dropping others and constantly changing livelihood portfolios.
3. **Household** - A household consists of a person or persons living together usually in the same roof or in the same building or compound who share the same source of food and recognize themselves as a social unit with a head of household.
4. **Rural Households** - These are people that live in an environment which is characterized by the narrow base of education, mass illiteracy, high level of poverty and poor standard of living. They do not differ from urban households in terms of biological differences, but socially and economically as a result of differences in cultural, social and economic experiences.

CHAPTER TWO

LITERATURE REVIEW

2.1 Concept of Livelihood

Livelihood, according to Loubster (1995), is the totality of means by which people secure living, have or acquire the requirement for survival and satisfaction of needs as defined by the people themselves in all aspects of their lives. It comprises the capabilities, assets (including material and social resources) and activities required for means of living (Scooners, 1998). In line with the above, Ellis (1999) terms livelihood as the activities, assets and the access that jointly determine the living gained by the rural household. Mishra (2007) identifies five types of capital assets that contribute to livelihood. These are human, natural, financial, social and physical assets. These assets constitute livelihood building blocks. Environment can be seen as a natural asset. It is the source of air, water, and food needed for survival. It is also the source of the material for clothing, shelter and infrastructure required for collective settlement. Food and Agriculture Organization (2000) notes that absence or denial of these basic necessities of life may constitute absolute poverty.

People pursue multiple livelihood activities. These include crop farming, livestock rearing, trading, fishing, gathering non-timber forest product, working as hired labourer, selling cooked foods or snacks, carpentry or bricklaying, blacksmith, working as a civiall servant, tailoring or hairdressing and craft making (Olawoye, 2000b). Fabusoro *et al.* (2010) asserts that livelihoods are achieved not only through incomes from jobs, but also through non-monetized activities. Some of them are often seen as coping strategies needed to cushion the effects of social, economic and environment shocks.

According to Ellis (1998), rural people gain their livelihood with varying degrees of success according to their access to resources and employment and how they deal with pressures arising from social, economic and environment changes. Households and groups of household differ greatly in the opportunities of and return available to them; hence their access to survival and satisfaction of needs (Dercon and Krishnan, 1996). The Western concept of occupation in terms of one activity by which all needs are met is not relevant to the experiences of most rural dwellers in the developing countries (Olawoye, 2000b).

2.2 Concept of diversification

Diversification refers to the continual adaptive process whereby individuals or households add new activities, maintain existing ones and drop others, thereby maintaining diverse and constantly changing livelihood portfolios (Ellis, 2000a). Diversification takes place in order to overcome risk and seasonality in natural resources-based livelihoods, but it also reflects the failure of agriculture to deliver improved livelihood in the post-liberalization era (United Nations, 2007). It is widely agreed that a capability to diversify is beneficial for households at or below the poverty line. Having alternatives for income generation can make the difference between minimally viable livelihood and destitution.

Diversification options are limited by economic constraints, such as household assets, like land and skills, and influenced by social, cultural and political factors, particularly caste and gender. Diversification can be positive if the new portfolio generates higher returns than before or negative if it offers lower returns than before (ODI, 2003). Globalization is an important driver both through push and pull processes of diversification. Mobility has been greatly

facilitated by improved roads and communication technologies which create environments conducive to diverse livelihood opportunities.

Until the beginning of the developing era, the majority of the rural population in both developed and developing countries has survived and reproduced by growing a mix of staple and cash crops, keeping some livestock, fishing and gathering forest products. Subsistence production, aimed at meeting food needs, combined with selling of small surpluses on the local market. The latter was instrumental to accessing the manufactured goods and other commodities that could not be produced by the household as well as to pay taxes and ceremonial expenses (Mehta, 2007). Anthropologists tend to agree that such diverse production patterns were instrumental to the attainment of the basic economic goals of pre-industrial rural household, maintenance of consumption standards and creation of conditions for future reproduction and avoidance of drudgery (Jha, 2006).

Although pockets of people practicing the pre-industrial mode of production may continue to exist in remote areas of the world, this livelihood strategy has entered into major straits during the last fifty years. The well-known driving factors of this crisis include:

- Population growth and the subsequent progressive shrinking of land holding size and environment degradation.
- The incorporation of rural areas into national markets and the increased vertical integration of farmers' households into national economy;
- The subsequent decrease of the relative importance of small farms as producer of agriculture commodity, owing to the expansion of capital intensive agriculture and globalization of the world food market;

- The growing (though somehow erratic) demand for both agricultural and industrial wage labour.
- The increase diffusion of new agricultural technologies and transport or communication facilities;
- Structural re-adjustment policies which decrease the availability of public support to small-scale agriculture and often make access to new technologies and information less affordable to small farmers;
- The emergence among rural people of new social needs (education, modern health care, technologies commodities) and
- The increasing importance of cash transactions in rural household economic activities.

2.3 Sustainable Livelihoods Approach (SLA)

The Sustainable Livelihoods Approach is a means of analysing and understanding the activities, assets, opportunities and needs of rural people. It describes the various assets, structures, processes and methods that rural people adopt in pursuing their livelihoods, as well as the main factors affecting rural people and the inter-relationships between these factors. It is a new development thinking from international development agencies (notably DFID and IFAD), useful in planning new strategies and in assessing existing development policies. The two key components of the SLA according to IFAD (2009) are:

- **Framework** that helps in understanding the complexities of poverty; and
- **Set of principles** to guide action to address and overcome poverty

The 'sustainable livelihoods approach' is a product of ideas and interest from debates on the various aspects of integrated rural development, sustainable development and poverty reduction strategies. According to Ellis and Biggs (2001), the notion shifts attention from exclusion and marginalisation of households from the benefit of economic growth to exploration for more effective means to support people and communities in ways that are more meaningful to their daily lives, needs and aspirations. It focuses attention on the kinds of assets owned by local people and the rural opportunities available to the people as a means of reducing the vulnerability or poverty caused by a combination of effects of trends, shocks, choices, culture, geographical and climatic conditions. This approach is being employed by governmental, non-governmental and development agencies such as UNDP, DFID and IFAD as a means for accelerated rural development, policy intervention and poverty reduction.

“A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base” (DFID 1999). The underlining principle in the sustainable livelihoods concept involves the identification of assets and resources available or accessible to rural people. These assets, according to Ellis and Biggs (2001) constitute a stock of capital which can be stored, accumulated, exchanged, transformed into use-values and reproduced to counter the negative effects of the trends, shocks and seasonal changes on livelihoods and can be analysed at individual, household and communities levels. It proposes that for livelihoods to be sustainable, all the social groups represented by these levels of analysis should be able to meet their basic needs (food and income) without compromising the natural resources or environment of their communities. Two

contexts make up SLA; first is asset vulnerability and second, issues that focuses on capital assets in terms of economic, social, human, physical and natural resources as the basis on which people construct diverse income activities (Carney 1998, DFID 1999 & 2007). According to these authors, the first issue deals with factors that make households or individuals vulnerable, which includes, population, resources and technology, shocks such as ill health, conflict and economic shocks, as well as seasonality of prices, production and employment opportunities. These are the underlining factors that determine the processes of livelihoods and dictate the income activity options, which people can pursue or otherwise.

Reardon *et al.* (2002) maintain that a sustainable and vibrant livelihood framework allows people to pursue robust livelihood means that provide layers of resilience that not only enable people to cope with change but create the potential to translate adversity into opportunity. The system describes strategies that can help eliminate poverty both at individual, household, community and regional levels such as agricultural improvement, non-farm diversification, infrastructure provision, migration, new technology, skills training and education.

2.4 Concept of rurality

The word rurality means the state of or quality of being rural. Rurality manifests in varying degrees both in the developed and less developed countries. Even though there is a broad general agreement that the term 'rurality' refers empirically to populations living in areas of low density and to small settlements, there are a wide variations in the cutting points used operationally to distinguish rural from urban areas.

Rurality has been defined on several occasions in terms of varying empirical attributes. According to Olawoye (1984), the size of a community is not sufficient information for having a well-rounded view of a village. Ekong (2003) avers that census figures have been used traditionally to dichotomize rural from urban areas but the lack of agreement on the figures has made the use of census definitions very controversial.

The 1991 Nigerian Population Census (NPC) revealed a national average of 63.72% living in the rural areas in 1988, which was lower than the 1983 figures (81%). According to the census, a rural area is defined as a settlement with less than 20,000 inhabitants. This, however, has been contested from many fronts as not being a totally encompassing definition (Omotosho, Adewumi, Fadimula 2007).

Some communities have also been classified as rural based on indicators that are ecological, occupational and socio-cultural. Olawoye (1984), from her study on degree of rurality, discovered that these three indicators are not always directly related to each other since some communities may have a high proportion of farmers, although such communities may be of relatively large size with many amenities. This clear observation makes the classification of rural areas in terms of these three indicators unreliable.

In an attempt to state a clear distinction between a rural and urban area, Ekong (2003) argues that communities could be classified as urban owing to the existence of some amenities. The settlements in Nigeria cannot boast of all these amenities. This implies that, it will not be all easy to classify some communities as typically rural or urban. Olawoye (1984) asserts that rural communities should not be considered to be homogenous units since the indicators that depict rurality and the amenities present in each settlement may vary from one place to another. Ekong (2003) also suggests the importance of thinking about rural-urban differences as a matter of degree rather than as the two are entirely different and extreme poles. This will give room for appreciation of variances in communities.

For the purpose of this study, a rural area is operationally defined as those places in Nigeria with less than 20,000 people, places in which a greater proportion of the inhabitants are engaged in farming, and areas lacking in some basic amenities and infrastructure. This is the officially accepted definition of rurality for Nigeria, used by FOS and NPC.

2.5 Rural households

Ekong (2003) defines rural household as members of a family living together, feeding together and combining resources together to meet their livelihood needs. Rural households reside in rural communities with farming as their major occupation. ODI (2000) avers that a rural household is made up of several members, all of whom have consumption needs, and some of whom provide the household labour force. The household survives by drawing on its range of asset and engaging in a variety of activities, thus generating income and other consumption goods to meet the needs of the household. In the opinion of Ellis (2000b), the household has a household head that is usually seen as the decision maker, determining how various assets should

be allocated and how consumption needs should be prioritized. However, more complex and gender-sensitive models recognize that different household members make decisions in different domains, and that aggregate measures of household welfare can hide disparities in welfare among members, particularly for women, children or the elderly.

2.6 Poverty and rural households

The rural household is characterized by poverty and one important consensus in the literature on poverty is that poverty is a rural phenomenon (Olaniyan, Okunmadewa, Yusuf, Bankole, Oyeranti, Omonona, Awoyeni, Kolawole 2005). By this, it is acknowledged that rural communities are the worst hit by poverty. Unfortunately, the importance of the rural poor is not always understood, partly because the urban poor are more visible and more vocal than their rural counterparts. Incidentally, the rural sector is the predominant sector in the Nigerian economy. It plays some fundamental roles, which include job creation at relatively low unit costs, and thus remains for most of the important growth priority of the country. Poverty in Nigeria is associated with rural areas, where agricultural activities are most predominant. More than four-fifth (86.5%) of the household participated in agriculture in the rural areas, compared with only 14.0% in the urban areas. Gender wise, more males participate in agriculture. Twenty-eight percent and 15.3% of males and females, respectively, participate in agriculture. The poor participate more in agriculture than in non-agriculture. Twenty-five of the core poor households are in agriculture, 20.0% are in non-agricultural activities. A similar pattern exists among the moderately poor households. The non-poor households participate less in agriculture (about 37.0%), with 46.1% in non-agriculture (FGN – NBS 2005).

According to Okunmadewa, Yusuf and Omonona (2007) poverty in Nigeria, in addition to its overwhelmingly rural and regional characteristic, is also strongly influenced by education, age and the nature of employment. Those without education constitute a large fraction of the poor and the extreme poor. Decomposing the factors causing the reduction in poverty shows that the overall decline of 8.9% was the net result of a 13.6% decline to the growth factor and 4.7% increase owing to the income distribution factors. Based on this analysis, promoting broad-based growth and targeted interventions in health, education and infrastructure need to be central strategies in the fight against poverty in Nigeria.

2.7 Concept of Rural Livelihood

The concept of livelihood and sustainable livelihood has become an integral part of rural development and poverty reduction in recent times. Rural livelihoods are composed of the activities that provide the means of household survival and long-term wellbeing (Stephen and Lenihan 2010). Chambers and Conway (1992) defined livelihood as that which constitutes people, their capabilities and their means of survival including food, income and asset formation. Stephen and Lenihan (2010) stated that livelihood strategies may be classified into natural resources based activities (e.g. collection and gathering, cultivation, livestock-keeping) and non-natural resources based activities (e.g. trade, services, remittances).

In the past, rural development focused on promotion of modern agriculture for poor households to guarantee food security (FAO 1998, Sen 1981, Ellis & Biggs 2001, Ashley & Maxwell 2001, Carney 2002). Most recently the emphasis has been on diversification to promote non-farm activities (Ellis 1998), sustainable livelihoods (Carney 1998 & 1999, Drinkwater and Rusinow 1999, Ellis and Biggs 2001, Scoones and Wolmer 2003, DFID 1999 & 2007, IFAD

2009), access to natural-based resources and opportunities (Freeman *et al.* 2004) and the provision of social support services to aid vulnerable and landless households (Devereux 2002, Kabeer 2002, Morduch and Shamar 2002).

Barrett *et al.* (2001); IFAD (2009) and Fabusoro *et al.* (2010) submitted that livelihoods focuses on issues concerning the coping, survival and different approaches that rural people adopt in response to socio-economic and environmental factors they encounter in their pursuit of household income and food. These coping mechanisms involve making decisions about present and future strategies through selecting investments, production system and employment options. They corroborated the above assertion that the declining farm income and market failures in African countries drive rural people to undertake non-farm activities as supplementary sources of income so as to reduce the fluctuations in household income.

Non-farm activities tend to have low entry requirements such as financial capital, skills and education that makes it attractive. Barrett *et al.* (2001) noted that non-farm is typically positively correlated with income and wealth in rural African countries, and seem to offer a pathway out of poverty if non-farm opportunities can be seized by the rural poor. The recognition of small-scale activities as important sources of income has led to the placement of the non-farm sector at the centre of rural livelihood diversification by DFID and IFAD.

2.8 Rural livelihood activities

A number of terms have been used interchangeably to refer to how people respond to their circumstances in order to survive. They include livelihood strategies (Brown *et al.*, 2006); household coping, adaptive or survival strategies (Singh and Wanmali, 1998) and income-generating or income-earning activities (Scoones, 1998). Some of these terms, although sometimes used synonymously, are somewhat different and are used depending on the degree of the difficulty encountered by rural households and the approach employed to survival. As a result, there is the need to shed more light on these terms.

Livelihood strategies can be regarded as the full portfolio of activities that people undertake in order to achieve their livelihood outcomes and objectives. In broader terms, it is referred to as range and combination of activities and choice that people make and undertake, including ways of combining and using assets, in order to achieve their livelihood goals (DFID, 2000, cited in Babulo, Muys, Nega, Tollens, Nyssen, Deckers and Mathijs (2008). Ellis (1998) posits that livelihood strategy does not encompass only activities that generate income, but also many kinds of choice, including cultural and social choices that make up the primary occupation of a household. Examples of such socio-cultural choices among rural households, include migration of male heads of household in pursuit of better livelihood, reliance on remittances and pensions by retired members of households and resorting to indecent acts of begging and prostitution, all in order to make ends meet.

Livelihood activities, on the other hand, include sets of actions or activities through which households gain their means of living. Parrot *et al.*, (2006) divides livelihood activities into four categories, as discussed below:

- **Production activities:** Those activities that produce goods and services that contributes to ‘income’ (the value of goods and services that are actually or potentially tradable). Production activities involve integrating the classical economic classification of production factors: Labour, land and capital.
- **Domestic activities:** These activities include activities like childcare, cooking and cleaning. These are not generally tradable but are essential for the well-being of household members and the reproduction of the conditions through which a family survives.
- **Consumption activities:** These activities can be seen as satisfying material wants and needs through the provisions of items such as food, clothing and medical services.
- **Exchange activities:** These relate to the transfer of goods, services, or information between individuals or groups of individuals. The activities include, for example, commercial trade, barter, and gift giving. They do not necessarily involve cash or reciprocity. The exchange of goods and services is very often a significant and dynamic component of rural economies.

So, depending on the intended purposes, livelihood activities and strategies, although often used interchangeably, do not exactly mean same things.

2.9 The Rural Non-farm Economy (RNFE)

There is little empirical literature on the structure and processes of rural livelihood in Nigeria and other sub-Saharan countries. It is also poorly understood with regards to its role and contribution to poverty alleviation and broader national economic development process. Reardon *et al.* (2002) noted that the present structure of the rural non-farm sector in developing economies results from an on-going economic transformation that has proceeded through many generations and at varying speeds in different countries and regions.

Rural non-farm sector refers to all rural economic activities outside of farming. According to Haggblade *et al.* (2002), it includes self or wage employment, full-time or part-time, formal or informal, seasonal and occasional local manufacturing or production. These authors maintained that the process typically begins with a rural village dominated by self-sufficient and households producing most of farm and non-farm goods and services they need. Gradually, as the rural population increases, local demand and market access increases, new technologies and new farm inputs becomes available, leading to increased agricultural surpluses in some products and increased opportunities for trade (Haggblade *et al.* 2002).

It has also been stated that households diversification into non-farm activities develops naturally from diminishing returns to labour or land, from market failures (for credit) or transactions (for mobility or entry into high-return niches), from *ex ante* risk management, and from *ex post* coping with adverse shocks (Barrett *et al.* 2001). Haggblade *et al.* (2002) stated that as rural farm economy grows it stimulates growth of the RNFE through a number of key linkages as:

- rising labour productivity on the farm increases food supplies and releases family workers to undertake non-farm activities;
- increases in farm incomes, together with high rural savings rates, make capital available for investment in non-farm activities;
- as agriculture modernises and its productivity grows, it requires additional inputs and services such as seeds, fertiliser, credit, pumps, farm machinery, marketing and processing of output which create a growing demand for non-farm firms providing these inputs and services; and

- as their incomes increase, farm households, like good consumers everywhere, spend much of their new income on a range of consumer goods and non-farm services.

Mellor and Lee (1972), Mellor (1976) cited in Lanjouw and Shariff (2002) stated that in the early 1970s, there was existence of a virtual cycle developing through green revolution technologies, whereby increases in agricultural output and incomes of farmers would be magnified by multiple linkages with the non-agricultural sector. These authors explained that the linkages were both backward and forward processes. According to them, the backward linkages evolve through the demand of farm inputs such as, improved seeds, pesticides, fertilisers, tools and machinery. In the same way, the forward linkages develop through higher processing demand for agricultural products. Furthermore, consumption linkages were also thought to be important as farm income increases; as it leads to an increase in demand for goods and services produced in nearby towns and communities.

These authors also revealed existence of potential linkages between farm and non-farm involving the supply of labour and capital to each other. Lanjouw and Shariff (2002) opined that with increased productivity in farming either labour is released or wages go up, the new agricultural surplus would be a source of capital for investment in the non-farm sector. The authors corroborated the opinion by stating that growth in the non-farm sector stimulated further growth in agricultural productivity via lower inputs costs (backwards linkages), and profit invested back into agriculture and technological changes. Thus growth in the two sectors would be mutually reinforcing with employment and incomes increasing in a dispersed pattern.

Haggblade *et al.* (2002), explained further that as the transformation process evolves in the rural communities, people begin to specialize in their individual skills, taking into account the local resources, market and employment opportunities available to them. As a result of this

development, non-farm local activities initially undertaken by rural households for their own consumption transform into commercial activities. Consequently, greater trade develops between rural households, small village market centres and rural towns. This structural transformation process helps to develop infrastructure which leads to reduction in production and transportation costs and increase market access in rural communities.

Several authors have shown that the rural sector transforms as development processes take place and the changes also affect the kinds of livelihoods available in rural areas. In their study of rural-urban growth linkages, Hazell and Haggblade (1990) reported that local industries and services dominate non-farm sector in rural villages of India, with growth in commerce and services, accompanied by a shift from local to industrial manufacturing, as one moves to urban centres (Lanjouw and Shariff, (2002). The same changes evolve as one moves from low to high productivity centres and even allow for the growth of traditional handicraft sector when an export market is successfully developed.

According to Haggblade *et al* (2002) linkages between rural and urban communities proceed, urban towns become important centres for labour, goods and services, and this in turn creates new market opportunities for local agricultural and rural non-agricultural activities. This process increases the demand for rural farm products, thereby increasing economic activities between the rural and urban communities. Haggblade *et al.* (2002) also stated that the higher demand on urban goods that results through this linkages, leads to increased sub-contracting of many small-scale manufacturing processes to local non-farm industries, increasing income and employment opportunities in surrounding rural communities. These linkages from rural towns to their surrounding rural hinterland take on particular importance as rural villages become better

integrated into the national urban economy, as they develop manufacturing and service activities that serve urban and export demands in addition to rural demands.

It has been shown in several studies that the growth of the rural non-farm economy depends on urban-rural linkages, institutions and the state of public infrastructure and services. The RNFE absorbs rural surplus labour, offers more profitable activities to supplement or increase farm income, exploits local comparative advantages (resources, location and labour costs), fosters rural growth and improves the welfare, goods and services in rural areas (Davis and Bezemer 2003). Furthermore, some public policy and institutional factors can aid or hinder people who wish to expand their livelihood income activities (Ellis 2001).

2.10 Livelihood Diversification processes

The central focus in the debate on livelihood diversification centres on understanding the reasons why people diversify their assets or engage in diverse income activities and the concept of coping and survival-driven strategies which rural households adopt in poverty situations (Ellis 1999, Devereux 1993). Diversification has become a livelihood pathway and strategy for rural household to sustain and increase their income.

Livelihood diversification is a term used to describe the composition of income activities available to rural populations and their contribution to the overall household well-being, (Reardon *et al.* 2007). Current understanding of poverty places considerable emphasis on ownership or access to assets and resources that can be put to productive use as a base by which the poor can construct their own pathway out of poverty (Ellis *et al.* 2003, Ellis and Freeman 2004). There are two types of income diversification – the period of capital accumulation and activity-driven diversification which occurs after capital accumulation has taken place (Davis

and Bezemer 2003). There is also diversification as a result of economies of scope. Economies of scope describe when the same inputs generate per-unit profits when spread across multiple outputs than dedicated to any one output (Barrett *et al.* 2001).

Rural livelihoods are thus maintained from a combination of assets, resources and activities which are becoming more complex and diverse, cutting across economic sectors and which many governments and agencies tend to be ill-equipped to support because of the diversity and complexity of the rural sector (Ellis 2001). Livelihood diversification enables households to survive the unfavourable rural environment by mitigating seasonality and spreading risk to reduce vulnerability to adverse trends and stress (Ellis 2001, Davis and Bezemer 2003). It has also been suggested that self-employment offer benefits of flexibility, adaptability and cultural acceptability that is otherwise unavailable in labour market (Start and Johnson 2004).

Ellis (1998), Hussein and Nelson (1998) opined that the determinants of rural livelihood diversification are influenced by over-bearing factors of necessity and choice. These authors maintained that necessity is the major involuntary and distress factor that drives poor people to diversify their income activities as a response to conditions mainly for survival or coping strategies. Similarly, it becomes a result of choice if it involves voluntary and proactive decisions undertaken by some people (possibly less poor or better-off) to invest in various kinds of assets, as a means for wealth formation that provides some long-term livelihood security (Ellis 1998).

Bryceson (1996); Dercon and Krishnan (1996) identify factors of necessity and choice as the main drivers of livelihood diversification processes. These authors believe that 'people's motives to minimise the risk of 'livelihood failure' as the main factor that influences their livelihood diversification strategies. It has also been suggested that livelihood diversification reduces the potentially damaging effects of food and other local products markets imperfections,

thus facilitating production and consumption, smoothing inter-seasonality over several years, ensuring continuous secure livelihoods and food security for the poor people (Davis and Bezemer 2003).

There are two kinds of diversification trend in the rural sector. On one hand, diversification takes place (survival strategy) because of increasing rural population growth, land fragmentation, increasing input cost, adverse environmental conditions, diminishing access to agricultural markets, declining farm income and lack of access to public services (Ellis 2001). On the other hand, diversification evolve either as a coping strategy where it is an enforced response to failing agriculture (distress-push) or as opportunity mechanism where the economy is growing and opening markets (demand-pull) (Davis and Bezemer 2003).

According to Haggblade *et al.* (2002), the global economic liberalisation during the 1990s has opened up the rural non-farm sector as never before – to new opportunities and to new treats. Kusters (2010) explained both distress-push and demand-pull diversification situations as: “In the first case (distress-pull diversification), people are pushed towards non-farm activities as they try to diversify their income sources in an attempt to reduce vulnerability and avoid falling deeper into poverty. In the second case, (demand-pull diversification), people are pulled towards non-farm activities as a response to opportunities to accumulate household income”.

Davis and Bezemer (2003) submitted that distress-pull diversification occurs in an environment of risk, market imperfections and of hidden agricultural unemployment and is usually facilitated by economic diversity which takes the household on a downward income trajectory. The authors maintain that demand-pull diversification is a response to evolving market and technological opportunities to increase labour productivity and household income. It

has also been suggested that 'poorer people and households' engage in non-farm activities as survival-driven rather than opportunity-driven strategy.

Non-farm local activities include all economic activities in rural areas except agriculture, livestock, fishing and hunting. It includes all off-farming activities, processing, marketing, manufacturing, wage and casual local employment in the rural villages. Several authors suggest that the highly diverse and heterogeneous rural non-farm sector offers opportunities for the poor as well as the rich. Poor households frequently seek economic refuge through distress diversification into low-skill non-farm employment such as basket making, pottery, small-scale retailing and seasonal labour migration (Reardon *et al.* 2002). On the other hand, the rich engage in the more sophisticated, profitable, high investment activities such as transportation, processing, contracting and manufacturing (Barrett *et al.* 2001).

A study of rural households in Tanzania showed that agriculture provided about 50% of household income, while the remaining 50% came from non-farm income activities (Chapman and Tripp 2004). The study also revealed that poorer households are most dependent on agriculture and reliance on agriculture decreases with increased diversification into non-farm activities (Ellis and Mode 2003). Despite the image of Africa as a region of 'subsistence farmers', non-farm sources account for as much as 40 – 45% of average household income and seem to be increasing in importance (Barrett *et al.* 2001).

It is well known that rural households undertake a range of farm and non-farm activities. But it is not clear however, to what extent income generated from non-farm sector is reinvested in farm production. Many authors believe that income surpluses generated off-farm can provide farmers with the capacity that enables greater on-farm improvement. However, this depends on whether rural farmers have diversified out of farming due to lack of opportunities for on-farm

innovation and expansion or they are exploiting a particular high demand for their labour off-farm (Chapman and Tripp 2004).

Three quarters of the poor live and work in rural communities and the majority will continue to do so in 2025 (IFAD, 2001). Rural development and livelihood policies need to promote small-scale farming and non-farm enterprises in order to reduce rural income inequality and poverty. This is vital because the main objective of livelihood diversification is to increase income, food security, reduce vulnerability and improved well-being of rural households (Ellis, 2000).

2.11 Impact of livelihood diversification on rural livelihoods

Livelihood diversification impacts are the achievement or output of livelihood strategies (Marschke and Berkes, 2005). The impacts of a livelihood diversification approach to development are the wholesome indices of individual, household, and community growth and development. It is not to be assumed that people are entirely dedicated to maximizing their income, rather effort should be directed towards understanding the riches of livelihood goals. This in-turn will help to understand peoples' priorities, why they do what they do, and where the major constraints lie.

Livelihood diversification impact as reported by Barret, Reardon and Webb (2001) are:-

- **More income:** The proportion of income derived from farming activity is a good indicator to evaluate the dependence of households on farming. These days, it is very rare to find farmers in developing countries collecting all their income from any one source. Households may derive their income from a diverse portfolio of activities, including work in the rural non-

farm sector. Household income determines their expenses on food, clothing, schooling, traveling, medical, housing and other components of quality living. Although income measures of poverty have been much criticized, people certainly continue to seek a simple increase in net returns in the strategies they undertake and overall increases in the amount of money coming into the households.

- **Increased wellbeing:** In addition to income and things that money can buy, people value non-material goods. Their sense of life-worth is affected by numerous factors, including: their self-esteem, sense of control and inclusion, physical security of household members, health status, access to services, political enfranchisement and maintenance of their cultural heritage. Wellbeing entails self-acceptance, positive relations with other people, autonomy, environmental mastery, personal achievement and received good will. It is an overall evaluation of an individual's life condition. Its measurement reveals the quality of life, especially when the living condition is obviously very poor.
- **Reduced vulnerability:** poor people are often forced to live very precariously, with no cushion against the adverse effect of shocks and risk; their livelihoods are to all intents and purposes unsustainable. For such people, reducing their vulnerability may well take precedence over seeking to maximize income. Poverty and vulnerability are closely interlinked and while poverty is usually defined as economic deprivation (lack of income), vulnerability entails the relationship between poverty, risk and efforts to manage risk.
- **Improved food security:** Food security is commonly conceptualized as resting on three pillars: availability, access and utilization. These concepts are inherently hierarchical, with availability necessary but not sufficient to ensure access, which is, in turn, necessary but not

sufficient for effective utilization. Sometimes analysts add a fourth pillar termed stability. Stability captures the susceptibility of individuals to food insecurity due to interruptions in access, availability or utilization.

- **Sustainable land management practices** Livelihood approach do not encroach resources for a mirage of development. Environmental sustainability or sustainability of the natural resource base is a dimension of sustainability that is important to livelihood and vital for long-term benefit or resources. Sustainable land management practices includes: residue management, mulching, composting, planting cover crops, crop rotation, intercropping, making terraces, building water harvesting structures, planting improved crop varieties, careful/reduced use of inorganic fertilizers, agro-forestry/tree planting and adoption of zero grazing for livestock.
- **Better health:** Health is not only a lack of illness, but a state of complete physical, mental and social wellbeing. Farmers become unproductive due to ill health and old age, a situation worsened by agricultural drudgery and accidents, HIV/AIDS and cancer pandemic. Health is thus a vital objective of the livelihood approach, especially because livelihood ability and human capital is always low with a sterile health.

2.12 Livelihood assets

The member of a household combine their capabilities, skills and knowledge with the different resources at their disposal to create activities that will enable them to achieve the best possible livelihood for themselves and the household as a whole. Everything that goes towards creating that livelihood can be regarded as livelihood asset. The livelihood assets available to the household, thus, represent the basic platform upon which the household livelihood may be built

(Ellis, 2000a). Livelihood assets comprise both human and non human resources upon which livelihoods are built and to which people need access (Babulo *et al.*, (2008). They constitute a stock of capital that can be stored, accumulated, exchanged or allocated to activities to generate flow of income or means of livelihoods or other benefits (Rakodi, 1999). Following the DFID (2002) framework, these assets can be divided into five different types and are sometimes represented as a pentagon constituting the five vital capitals, viz: natural, physical, human, financial and social assets. (The terms ‘capital’ and ‘assets’ are often used interchangeably in the livelihood literature).

2.12.1 Natural asset

The natural resources stocks from which resource flows useful for livelihoods are derived make up the natural asset of rural household (DFID, 2000). Examples of natural asset of rural households are land, water, wildlife, biodiversity, gold, crude oil, minerals and other environment resources (Scoones, 1998). In Nigeria, land is very important to rural households because most of them engage in farming for household and commercial purposes. In rural communities, secure access to land provides the most realistic opportunity to improve the livelihoods of rural households and develop assets that can reduce their vulnerabilities. Water as a natural asset is of importance to rural households because it is part of life of man. Water is important for domestic, agricultural and non-agricultural purposes, thereby contributing to the well-being of man (UNCED, 2000). Natural asset is transferable from generation to generation. Rural households hold on to natural asset because they perceive it as a valuable asset that can determine their socio-economic status.

2.12.2 Social asset

Social asset is made up of the social resources, which include the social networks, membership of group, relationship of trust, access to wider institutions of society upon which people draw in pursuit of livelihoods (DFID, 2000). Human beings are social animals that interact with each other to make a meaning out of life. A social individual tends to pave his way more than a non-social individual. This is a function of the personality traits of different individuals. In Nigerian rural communities, examples of social groups include cooperative societies, work exchange groups, Fadama users groups, farmers association, market association, religious organization, community-based organization, *esusu* groups and age-grade groups (Jibowo, 1992). An individual who holds a position in a social group can be said to have higher social capital than someone who is just a member of a social group. Also, a member of a social group can be said to have a higher social asset than an individual who does not belong to a social group. Rural households belong to various groups. They believe in unity and intimate interaction, since they are few in the community.

2.12.3 Human asset

Scones (1998), observes that human asset is made up of the skills, knowledge, ability to labour and good health which are important to the ability to pursue different livelihood strategies by households. Rural households in most parts of the world have high number of members, thereby contributing to the labour force of the household since farming is their main occupation (Ekong, 2003). Most of the youths leave the rural areas for urban centres in pursuit of a better livelihood (Jibowu, 1992). This has reduced the labour force of rural households, leaving the elderly ones in the village. In the contemporary Nigeria, hired labour, family labour and informal

work exchange constitute human asset of rural households. A rich and big farmer may be able to afford the services of hired labour, while a peasant farmer may not. A peasant farmer would rely on family labour or informal work exchange. ODI (2000) asserts that a household is an economic unit with its members contributing to human asset using the skills they possess to build their livelihoods.

2.12.4 Physical asset

Physical asset includes the basic infrastructure, processing equipment, production equipment and means which enable people pursue their livelihoods (DFID, 2000). The basic infrastructures include transport, shelter, energy and communication. Examples of physical asset are livestock, tractors, machineries, building, farm implements, generator, production equipments, tree crops and other equipments. ODI (2001) explains that physical asset can be sold and converted into cash in times of hardship. In most rural communities, the quantity of physical asset possessed is an indicator of the socio-economic status of the people. Physical asset of value as perceived by members of a community is usually held on to from generation to generation. It is one of the factors that can affect the productivity of a household (DFID, 2000).

2.12.5 Financial asset

Financial asset constitutes the financial resources which are available to people and provide them with different livelihood options (Scones, 1998). These include saving, supplies of credit, regular remittance, informal credit and thrift and informal work exchange. In the opinion of ODI (2000), financial asset is the household income that can be obtained by trading goods and service produced, and on the transfers to whom one may be entitled or liable, which include

pension payment, taxes, food relief and help from kin. Household income is usually measured as cash earnings plus subsistence production. Cash flow is the key measure of financial capital. Cash flow equals income minus expenditure, with adjustment for savings and consumption from stocks, measured over a given period; year, season and month are typical. In subsistence households, it equals production minus consumption. Nevertheless, there is a close correlation between people's overall livelihood asset status and resources upon which people draw in the face of hardship and their robustness (DFID, 2000). This robustness can be displayed both rising out of poverty (including one's vulnerability to shock) and indeed one's access to those assets (DFID, 2000). Different households have different levels of access to this range of assets. The diversity and amount of these different assets that household have at their disposal and the balance between them, according to Parrot *et al.* (2006), will affect what sort of livelihood they are able to create for themselves at any particular moment.

2.12.6 The asset pentagon

The asset pentagon was developed to enable information about people's assets to be represented visually, thereby bringing to life important inter-relationships between the various assets. The shape of the pentagon can be used to show schematically the variations in people's access to assets. The idea is that the centre point of the pentagon, where the lines meet, represented zero access to assets while the outer perimeter represents maximum access to assets (DFID, 1999). On this basis, different shaped pentagons can be drawn for different communities or social groups within communities as shown in figure 1.

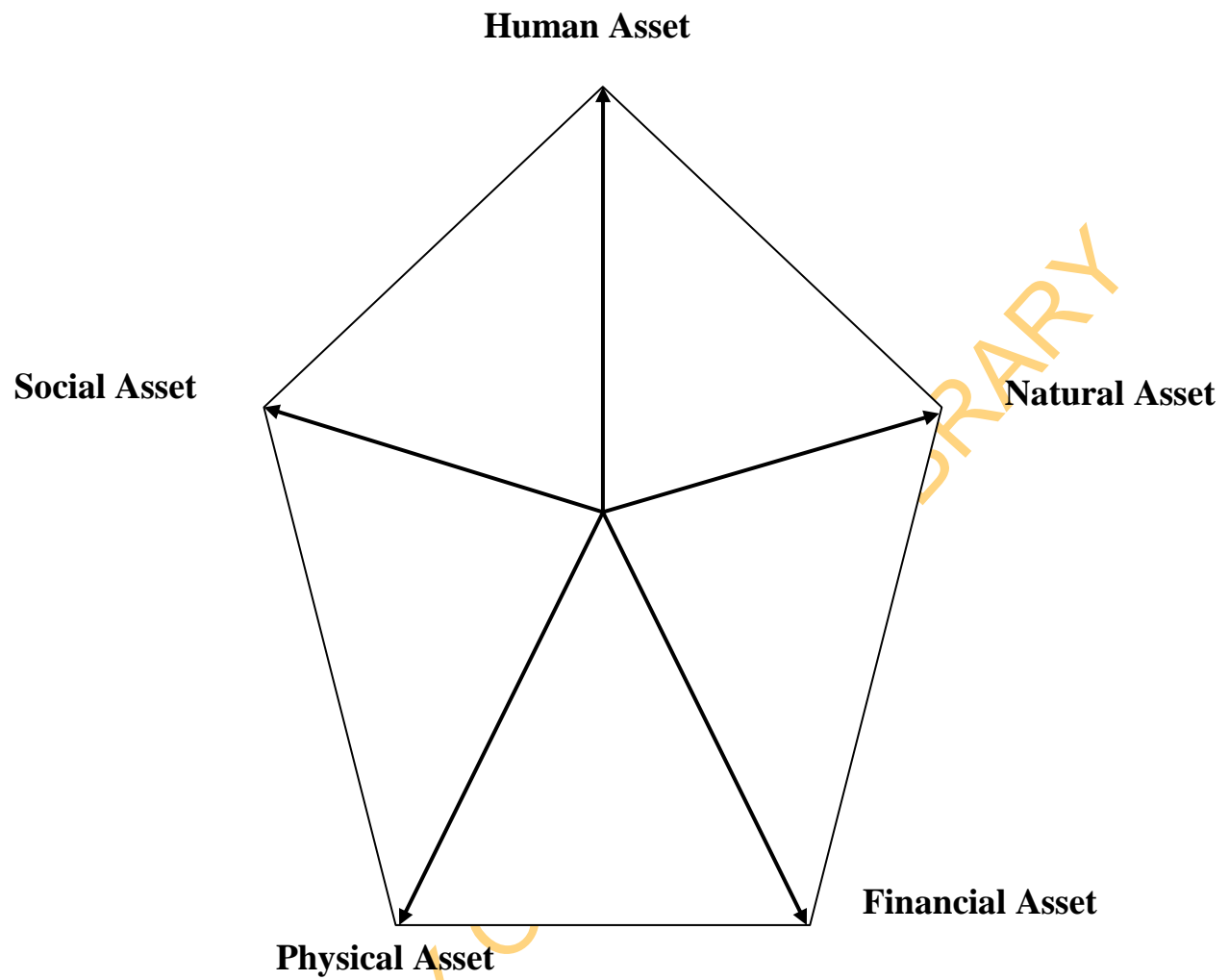


Figure 1: Expanding Pentagon Representation of Livelihood Assets

Source: Adapted from Oliver Serrat Livelihood Framework, 2006

2.13 Household determinants of livelihood diversification choices

The review of literature by Hussein and Nelson, (1999), and Ellis (2000) suggests that, although exogenous trends and shocks play an important role in pushing rural people towards a diversified livelihood strategy, diversification choices are also firmly rooted in the micro-economic logic of farming households. Different elements should be considered in this connection.

2.13.1 Availability of key assets

Availability of key assets (such as saving, land, labour, education and/or access to market or employment opportunities, access to common property natural resources and other public goods) is an evident requisite in making rural households and individuals more or less capable to diversify (Dercon and Krishan, 1996; Abdullahi and Crole Rees, 2001). Investment of a proper mix of the above endowments is the starting move of any independent activity. Labour capability and education determine the capability of finding a job and savings are often needed to migrate. Yet diversification may also develop as a coping response to the loss of capital assets needed for undertaking conventional on-farm production. Decreased availability of arable land, increased producer/consumer ratio, credit delinquency and environmental deterioration can be indeed important drives towards diversification. Economic and political shocks are often a major reason for migrating.

2.13.2 Maximization of return per unit of labour

Maximization of return per unit of labour (Ellis, 1993, 2000a) is another important element in livelihood diversification choices. This principle foresees that, at any given point in time, a rural household will choose the most cost-effective opportunity to ensure maintenance of its consumption level. This formulation can be elaborated in different ways. For instance, availability of a surplus of household labour (or a high producer/consumer ratio) may influence the household decision to engage in wage labour. Similarly, food availability and food cost volatility in the local market can affect the relative importance attributed to self-consumption production, and promote or prevent the undertaking of wage labour or engagement in income-generating enterprises. Seasonality may also lead to a cyclical shift in time allocation from on-farm to off-farm sources of revenue.

2.13.3 Risk management

Risk management is a further factor often invoked to explain diversification behaviour (Bryceson, 1996; Hussein and Nelson, 1999; Ellis, 2000a). The basic logic of this argument is that the previous experience of crop or market failure can invoke diversification as a means of spreading perceived risk and reducing the impact of total or partial failure on household consumption. The argument entails that diversification often requires choosing the second best income-generating alternative. Risk-averse farmers perceive the amount of income given up by diversifying income sources as less important than the reduction of the total failure hazard. In this perspective, risk management through diversification complements and counterbalances the above principle of maximization of return per unit of labour.

2.13.4 Strengthening the household asset basis

Strengthening the household asset basis can be an additional important factor in diversification choices. In particular, members of better-off households can undertake innovative activities or engage in highly remunerative wage labour with the specific aim of accumulating savings needed to expand land holding, offer education opportunities to the young generation or insure themselves against illness and ageing. In addition to that, diversification may also occur as a means of consolidating the natural capital of households in order to enhance the environmental sustainability of a particular livelihood strategy.

2.13.5 Opportunities

Site-specific opportunities, such as local market contingencies, development projects, infrastructure development and personal contracts might play an important role in pulling rural households towards livelihood diversification. Examples may include the opening of a market niche for non-conventional agricultural commodities, establishment of tourist resorts, a relative or friend acting as a liaison between the household and an employee in town or abroad, or the development of a cooperative enterprise in the community. These hypothetical examples suggest that the interaction of market dynamics, social capital assets and enabling interventions often play a major role in generating opportunities for livelihood diversification.

2.13.6 Identity and vision of the future

Individual and household identity and vision of the future might also shape diversification decisions. For instance, new on-farm activities can be preferred to migratory wage labour as livelihood diversification strategies, because they are perceived more consistent with maintaining a rural lifestyle. Conversely, “city lights” attraction can be an important factors in pushing youngsters to contributing to household diversification by migrating to the city or abroad.

2.13.7 Gender relationship

Gender relationships are also important in shaping diversification process. Social organizations and culture can significantly influence the relative access of diverse gender (and age groups) to household’s capital assets (Ellis, 2000b; Gladwin, Thomson, Peterson and Anderson 2001; Dolan, 2002) or constrain/promote their mobility. This might result in a different degree of involvement in diversification activities and/or in an unequal distribution of their benefits between genders (Warren, 2001). In some cultures, migratory wage labour or off-farm enterprises are basically men’s business, which results in transferring to women the whole responsibility for conventional subsistence and cash cropping (the so-called “feminization of agriculture”). However, in other cultures, women are often able to play an autonomous role in livelihood diversification by undertaking their own small-scale enterprises or migrating to the city or abroad. Intermediate situations also exist where women’s engagement in market-oriented activities is possible only as far as they entail a limited investment of household assets and do not seriously threaten the established sexual division of labour. Participation in innovation

enterprises is often advocated as an important means to promoting rural women empowerment and more equitable gender relationship within the household.

Altogether, the above consideration suggests that rural livelihood should be addressed as a complex adaptive process aimed at ensuring an optimal trade-off between satisfying immediate consumption needs, ensuring resilience against shocks and negative trends (Hang, 2000) and meeting values and expectations. Research has shown that diversifying household often pursues this threefold objective through continuous re-shuffling of their livelihood portfolio according to contingent constraints and opportunities (Bigsten and Kayzzi-Mugerwa, 1995).

2.14 Rural livelihood strategies and diversity

According to DFID's Sustainable Livelihoods Glossary, the term livelihood strategies denotes: the range and combination of activities and choices that people make in order to achieve their livelihood goals. Livelihood strategies include: how people combine their income generating activities; the way in which they use their assets; which assets they choose to invest in; and how they manage to preserve existing assets and income. Livelihoods are diverse at every level. For example, members of a household may live and work in different places engaging in various activities, either temporarily or permanently. Individuals themselves may rely on a range of different income-generating activities at the same time (DFID, 2001).

Under the thrust of this major evolutionary process and following the appeal of modernizing policies aimed at integrating the rural areas in the mainstream of national society and economy, during the ongoing "development era", rural people have been urged to progressively re-arrange their traditional livelihood portfolio. Activities no longer economically

and socially viable have been replaced with new ones better suiting the context of a more mature market economy. Moreover, “industrial” organizational pattern (such as, contract farming) have been introduced into the rural household economy, often giving birth to hybrid livelihood strategies.

2.15 Classification of livelihood strategies

Livelihood strategies have been classified according to different criteria. Scones (1998) divides rural livelihood strategies into three broad types according to the nature of activities undertaken: agricultural intensification, livelihood diversification and migration. These categories, according to Morris, Butterworth, Lamboll, Lazoro, Maganga and Marshland (2002), are not necessarily mutually exclusive and trade-offs between option types and the possibility to combine elements of different options will exist. These categories are discussed below:

2.15.1 Agricultural intensification

Intensification of agricultural production or diversification of income sources have been the two most widespread adaptations of rural people to the crisis of traditional livelihood strategies. These two responses are not mutually exclusive; contemporary rural livelihood strategies can include elements of both or shift from one to the other at different points in time. Notwithstanding, it is analytically useful to contrast some of their respective attributes. Agricultural intensification refers to the use of a greater amount of non-land resources (labour and inputs) for a given land area, so that a higher output is produced (Hussein and Nelson, 1999).

It generally focuses on the increased production of crops and agricultural commodities best suiting the agro-ecological conditions of the region and the farm and existing market outlets.

Intensification often consists in the replacement of traditional crops or agricultural commodities with new high yield varieties, requiring improved technology. However, sometimes, intensification takes the shape of an initial diversification move; new varieties and technologies are incorporated in the traditional agricultural commodities mix on an experimental basis. If the experiment proves successful, farmers may decide to invest in increasing amount of land, labour and other assets in the cultivation of the new and more remunerative variety. In both cases, agricultural intensification may lead to a decreased diversity of the farm outputs and to some form of farm long-term specialization (Pinghali and Rosegrant, 1995).

However, agricultural intensification is not always equal to mono-cropping. Indeed, most small-farmers in the world have incorporated intensification technology and know-how to operate (under a variety of arrangements) integrated farming systems, which continue to keep a significant degree of diversity (Dixon, Guller and Gibbon, 2001).

2.15.2 Rural livelihood diversification

Rural livelihood diversification has generally occurred as a result of an increased importance of off-farm wage labour in household livelihood portfolio or through the development of new forms of on-farm/on-site production of non-conventional marketing commodities. In both cases, diversification ranges from a temporary change of household livelihood portfolio (occasional diversification) to a deliberate attempt to optimize household

capacity to make advantage of ever-changing opportunities and cope with unexpected constraints (strategies diversification).

Livelihood diversification is a strategy adopted to maintain over time a diversified portfolio of activities and in adjusting it according to contingencies in order to maximize return, spread risk or achieve other household goals. By keeping the capability to operate a heterogeneous set of activities, diversifying households are likely to enjoy higher flexibility and resilience capacity than agriculture-dependent rural households. Thus, it is not surprising that, in the light of the reiterated environmental, economic and political shocks affecting rural areas of developing countries, diversification has become, during the last thirty years, increasingly attractive for many rural households.

The extent of rural non-farm income (RNFI) varies between countries and regions. A study of a sample of villages in Tanzania showed that 50% of household income comes from crops and livestock and the remaining 50% came from non-farm sources comprising wage labour, self-employment and remittances. Income from non-farm sources was higher for upper income groups than for the lowest income quartile. In this case, the poorest farmers are most reliant on agriculture and the reliance on agriculture decreases with increased diversification into non-farm income-generating activities. A study of eleven countries in Latin American indicates that non-farm income constitutes approximately 40% of rural incomes. In Brazil, for example, the share of RNFI in rural areas is 39%. Surprisingly, the higher levels were found in the zones where agriculture was successful, such as the coffee and sugar zones of the southern region. In south-eastern Brazil, agro-industrialization and urbanization have also contributed to a higher non-farm income share than the north-eastern region (Reardon, Berdeque and Escobar 2001).

2.15.3 Migration

Migration, as a livelihood strategy among rural households, may be voluntary or involuntary. As a critical strategy to securing off-farm employment, it may rely on and/or stimulate economic and social links between areas of origin and destination. Kinship structures, social and cultural norms may strongly influence who migrates. Migration will have implications for the asset status of those left behind, for the role of women and for on-farm investments in productivity (Scoones, 1998). Akinyosoye (2005) notes that labour shortages and high cost of labour in rural areas amongst others, are consequences of migration.

The dynamics associated with the pursuance of specific strategy types have also been identified with the characteristics of choice and necessity, or the motivational aspects of decision-making within the external context of constraint and opportunities. Positive strategy adaptations will typically be associated with choice. They will usually (but not invariably) lead to increased security and consumption outcomes; they may be reversed if circumstances change. Negative strategy adaptations, or adaptations born of necessity, occur when households are subject, for example, to personal misfortunes or natural catastrophe, and no longer able to cope or subsist (Davies and Hossain, 1997).

Devereaux (1993) and Davies (1996) have typified livelihood strategies by making distinction between survival, coping, adaptive and accumulative strategies, as seen in Table 1. Accumulative strategies are those which increase consumption outcomes and stocks of assets in response to opportunity. Adaptive strategies are those that seek to spread the risk of consumption failure in response to anticipated adverse trends.

This may be through the intensification of existing livelihood strategies or by diversification into new activities. Coping strategies are those that absorb the impact of an adverse shock by drawing down assets and reducing consumption. When there is no respite, coping may lead to survival strategies. With survival strategies, not only is consumption drastically reduced, but also household assets are extensively, most often irreversibly, eroded in an attempt to ward off destitution and death (Devereaux, 1993; Davies, 1996)

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Table 1: Typology and Examples of Different Livelihood Strategies

Types of livelihood strategies	Internal Livelihood System Components		
	Change in Assets	Strategies/activities	Consumption Outcomes
Accumulative	Increased stock of assets, increased flexibility across asset base.	Extensification, on-farm and off-farm diversification of cash crop, investment in social capital.	More incomes, improved, nutrition, increased security.
Adaptive	Change in mix of assets.	Extensification, on-farm and off-farm diversification of cash crop, investment in social capital.	Increased and consumption smoothing, risk reduction, risk spreading an labour smoothing.
Coping	Intensification sale of livestock, cutting down, inform of claim through skin and relatives.	Piece work, agric. labour, temporary migration, withdrawing from school.	Reduced frequency of food quantity and quality, use of relief food where available, reduction of social and ceremonial obligation.
Survival	Sales of productive assets.	Illegal activities, begging.	Starvation and destitution.

Source: Deveraux (1993) and Davies (1996)

2.16 Livelihoods and coping models

Several livelihood and coping models have been put forward by a number of researchers. For instance, Gordon, Adelman, Ashworth, Bradshaw, Levitas, Middleton, Pantazis, Patsios, Payne, Townsend and Willams (2000) opine that livelihood exudes the relationship between assets (capitals, environmental resources) activities (strategies, production, exchange) and consumption outcomes (entitlements, consumption, bundles, well-being, utility, income) within a mediating environment. Capabilities refer to the attributes (agricultural, non-agricultural) that produce income, value-added benefits and other benefits that make people's lives more satisfactory and secure. Community/household-based assets can be classified into five categories: human capital, operating at different levels, such as macro (national government policy), meso (state policies and programmes) and micro (local land-use plans). Markets also exert a major influence on livelihoods through changes in relative prices and terms of trade, and could result in change in food consumption pattern. For many rural farmers, there is a hierarchy of three objectives or priorities, all of which can overlap and co-exist. They are survival (based on stable subsistence) security (based on assets and rights) and self-respect (based on independence and choice). Once the first is achieved, people tend to pursue the second and, subsequently, the third.

Gordon *et al.* (2000) assert that the objectives of livelihoods and coping strategies vary within and across the situations; more income, increased well-being, reduced vulnerability, improved food security and more sustainable use of natural resources base. Rural dwellers' intensity of the pursuit of their priorities is subject to changes in the external environment, thereby affecting assets, activities or outcomes. The resultant adjustments in behaviour are known as coping strategies, which, if repeatedly employed, eventually become a survival

strategy, leading to erosion of assets and destitution (Turton, 2002). These survival strategies include: intensification of existing income activities, diversification into new activities, migration, drawing upon social relationship and informed credit networks, drawing upon assets (stores or, in extremis, productive assets) and adjusting patterns of consumption of vital resources, such as food. Mishra (2007) claims that, in some dry parts of India, subsistent farmers have been known to adopt coping strategies that include: reduction of food consumption and change of food consumption pattern; change of occupation, mortgage of land and other household assets; borrowing loan with the condition of repaying the loan in the form of labour and forthcoming agriculture produce, selling of non-agricultural goods; and both casual and permanent migration. Other coping strategies that have been effective include: farming, hiring out own labour, petty trading, arts and crafts, food vending and gathering of forest products for sale and consumption.

2.17 Constraints to rural livelihood diversification

Livelihood diversification is an important survival strategy for the rural household in the developing countries, including Nigeria. However, there are several constraints to successful livelihood. These constraints have been found to vary across regions as well as across livelihood groups.

Identification of constraints for a particular agro-ecological region is crucial for future policy formulation on sustainable rural livelihoods. The major constraints to livelihood diversification in the Nigerian rural communities are poor asset base, lack of credit facilities, lack of awareness and training facilities, fear of taking risk and lack of rural infrastructure.

- **Poor asset base**

It is the most important constraint to livelihood diversification in Nigerian rural communities. Possession of even a small asset enables the households to take opportunities in the non-farm sector, particularly in the self-employment sector. For example, ownership of a sewing machine may induce a person to start his own tailoring business. Similarly, possession of a bicycle may help the worker in going to the nearby town for non-agricultural employment. According to Kumar, Sing and Mathew (2006), availability and accessibility of livelihood assets by the rural households is directly proportional to the extent and type of livelihood activities of rural dwellers. Most of the landless and small farmers in rural Nigeria do not have any asset which acts as a big barrier to livelihood diversification.

- **Lack of credit facilities**

Lack of access to institutional credit is a deterrent factor in livelihood diversification. In the absence of credit support from the institutional agencies, the resource-poor households are not able to start their own non-farm business or enterprises. Katona-Apte (1998) reported the vital role played by the Bangladesh Grameen Bank in providing credit to women, which enabled them to carry out diversification activities.

- **Lack of awareness and training**

Often, rural households are unaware of the schemes provided by the government for the development of the rural sector. There is no government mechanism, nor any NGO to inform the rural households of these schemes. According to Oyesola and Ademola (2011), most of the rural households in southwestern Nigeria lack skill and training and this make them unemployable in non-farm sectors when there is failure of agriculture to provide their basic needs.

- **Fear of taking risk**

Owing to poor asset-base and lack of institutional support, the risk-bearing ability of the rural household is very low. This situation metamorphoses to unfavorable circumstances for them to diversify their livelihood portfolios. Hence, rural households find it difficult to escape from poverty.

- **Lack of infrastructure**

Infrastructure has an influential role in the development of rural livelihoods. Improved communications help easy access to market which is important for both buying and selling of goods and services and for getting non-farm jobs. Rural communities in developing countries lack basic infrastructural facilities, such as good road, water, electricity and communication facilities (Babatunde, 2009). Livelihoods that rely on these infrastructural facilities could not be accessed by the rural households

2.18 Past and present government policies and programmes that support rural livelihood in Nigeria

- **Agricultural Development Programme (ADPs)**

This is a World Bank supported programmes which started in 1976. Effective livelihood diversification is expected to yield increased income, food security and improved well-being of rural households. ADP has recorded a great achievement in this direction; the ultimate objective of the ADP is to raise productivity, increase farm output, income and standard of living of the rural farmers. Therefore, the impact of the achievement of the ADPs on the farmers or rural households can only be measured in such terms:

Oyaide (1977) cited by Igwu (2007) reported that in 1985 about 9 million tonnes grain equivalent, representing 44% total food production that year was produced by farmers involved in the programme of ADPs, he further noted that the contribution of ADP farmers to the national food basket is believed to have reached 60% now that the entire country is covered in the programme. Of the 9 million tonnes produced in 1985, 3.4 tonnes was incremental output which when valued at 1985 prices (₦350/tonne). The bottom-line of the impact of increased productivity and output is however, that farmers' income and welfare is improved. According to Kwa (1992) the average income per hectare from various crops and returns to family labour per man day for most crops were over 200% above pre-project situations in most completed ADPs. This was a significant achievement notwithstanding the impact of inflation. This rise in income, he noted, was translated into improved living standard manifested in rising proportion of rural households owning items like motorcycles, bicycles and radio. There was also increased proportion of households that obtained adult education, engaged in trading as secondary occupation and enjoyed better health conditions.

- **Rural Finance Institution-Building Programme (RUFIN)**

The objective of this programme is to strengthen microfinance institutions and establish linkages between them and formal financial institutions in Nigeria states. It lays the foundation for the long-term development of a sustainable rural financial system that will eventually improve the financial ability of the rural households in Nigeria. By reaching out to rural people, the programme ensures that they gain access to financial services and can invest in improving productivity in agriculture and small business in non-farm rural livelihood. Marginalized groups, such as women, young people and those with physical disabilities, are particularly targeted by RUFIN.

The programme supports the development of target-group organization into rural finance institutions that improve poor rural people's access to low-cost credit. It also assists microfinance institutions, including the Nigerian Agricultural Cooperative and Rural Development Bank, the National Poverty Alleviation Programme, and microfinance banks and NGO microfinance institutions operating in rural area. The programme helps them strengthen rural outreach and improve services to the most vulnerable groups, notably households headed by women. In addition, the programme works to develop new alternative financial products, promote an improved legal, policy and regulatory framework, and establish linkages between the financial system and the rural production system (IFAD, 2009).

- **University Based Agricultural Extension System (UBAES)**

The history of universities in Nigeria started with the establishment of University College Ibadan (now University of Ibadan) in 1948. The then Eastern Region Government of Nigeria established University of Nigeria, Nsukka in 1960. In 1962, the western region established University of Ife (now Obafemi Awolowo University), the northern region established Ahmadu Bello University, Zaria and the federal government established University of Lagos. Universities are at the centre of human development and since rural livelihood abilities are the lowest among rural livelihood components (Oyesola and Ademola, 2011). UBAES has played a major role in improving rural knowledge, skills and attitude, and this has assisted greatly in improving rural households' abilities for livelihood diversification.

Nigerian universities were established after the similitude of land grant universities with a commitment to render service directly to communities (Martin, 2001), they therefore have to respond to community needs. Universities working in partnership with communities seek to

increase opportunities, empowerment, and security to neutralize socioeconomic deprivation (Hampton and Higham, 2006). As the opportunity of doing multiple activities enhances economic and social welfare; the empowerment through literacy, skill, knowledge, awareness, resources and networks improves the capacity of harnessing the opportunities. The Department of Agricultural Extension and Rural Development in Nigerian universities are devoted to this course because rural welfare promotion is a core principle of extension and thus seek to increase rural income, food security, health status, mental wellbeing, sustainable use of natural resources and reduce vulnerability, the aforementioned are the expected outcomes of effective livelihood diversification (Ellis, 2000).

Nigerian universities respond to community needs at different times, for varying reasons and at varying degrees. For instance, University of Ibadan started cooperative extension with Badeku community and later abandoned it for Ileogbo in 1984 when the community gave the institution 218 hectares of land which is being used as on-farm station, field and social laboratory for both staff and students. This working relationship is a replica of the adopted village scheme which is an extension model for energizing rural economy and slow down rural-urban migration. The scheme is one of the innovations brought to agricultural research in Nigeria by National Agricultural Research Project (NARP) in 1997. The model originated from India and according to Nanavati (2004) it was designed to build resources within existing social, cultural, geographical, legal and economic context. This extension model is more of a livelihood-oriented one than a cash-oriented one. It thus seeks to increase rural abilities, access to assets, options, strategies, impact and reduce vulnerabilities (Ellis, 2000), all these are products of effective livelihood diversification.

University outreaches like capacity building, institution strengthening, literacy, nutrition. Health and sanitation programme improves livelihood ability and human capital in university adopted communities. Zadeh and Admad (2010) stated that university-community partnership is sometimes three-ways (grant giving organization – universities – communities) and as a result could be bedeviled in the areas of mutuality, operating principles, communications, power sharing, commitment, trust and evaluation.

According to Saliu and Age (2009), rural wellbeing has gradually caught attention of various organizations as the foundation of sustainable development, universities therefore cannot stay detached. University Based Agricultural Extension System is a form of institutionalizing social capital on the part of beneficiary farmers (Woolcock and Narayan, 2000) and it is a form of Cooperate Social Responsibility on the part of universities involved. Universities are active units applying the principles of social responsibility – joining hands with farmers to achieve agricultural and rural development.

- **National Poverty Eradication Programme (NAPEP)**

Nigeria predominantly rural with more than 80% of the total population living in rural areas (Joseph, 2005). The economy is basically agrarian, with most of the people living in squalor and very poor level of living which is attributed to poverty (Ajayi, 2009). Hence, the introduction of series of government's intervention programmes from independence till date of which National Poverty Eradication Programme (NAPEPs) is one, and is geared towards mitigating the effect of poverty on the livelihood of its citizenry. Idachaba (2006) corroborated this assertion that since mid-seventies, successive governments in Nigeria have come up with a

lot of laudable initiatives or programmes in which he recognised NAPEP as one the programmes to address hydra headed poverty phenomena in Nigerian rural communities.

The National Poverty Eradication Programmes (NAPEP) has its main objective to improve the socio-economic well-being of rural people, and it was established in 2001 (Alliu, 2001; Joseph, 2005 and Gumwa, 2009).

The national objectives of NAPEP are to:

- i. Promote grass roots economic activities.
- ii. Impact positively on the well-being and level of living of participants.
- iii. Promote sustainability of microfinance through savings mobilization.
- iv. Provide access to credit at the grass root level.
- v. Bring the interest rates for the low income rural populace into a more encouraging level.
- vi. Increase the participation of the poor in the economic growth and development of the country.
- vii. Stimulate increase economic activities in the rural areas.
- viii. Strengthen partnership between the federal government and other tiers of government in combating poverty among the Nigerian people.

This programme has impacted positively on rural livelihoods, particularly in southwest Nigeria and in Nigeria at large. Adekola and Oladeji (2007) reported that access to NAPEPs improve socio-economics status of youths and promote their economic independence in a study

on impact of NAPEPs on the socio-economic status of youths in Ibadan metropolis of Oyo state, Nigeria. In the same vein Akpoko *et al* (1998) also reported a positive significance impact of NAPEPs on the farmer's livelihood in terms of ownership of commercial vehicles, motorcycles, bicycles, clothing, food crops and food consumption. All these can go a long way in increasing rural households' abilities for livelihood diversification.

- **Directorate of Food, Road and Rural Infrastructure (DFRRI)**

Trends in the transformation of the rural sector shows that despite the huge investment in the agricultural sector, which was assumed will automatically bring about eradication of rural poverty and isolation has not been achieved (Daneji, 2011). This is partly due to the deplorable conditions of rural areas, enormous size and dwindling economic resources to address the problem of rural underdevelopment in Nigeria. In 1987, the Babangida administration established the directorate of foods, road and rural infrastructure (DFRRI).

On establishment, DRFFI attempted to open the rural areas through the construction of access roads, and provision of basic amenities of modern living.

According to Otubanjo (1992) cited by Daneji (2011) economic future of Nigeria depends on the development of rural areas. Therefore, the potentials of rural areas since inception were seen to be both immediate and long term. DFRRI has recorded huge success in opening up of rural areas with feeder roads and integrating it with other parts of the country. This created conducive rural environment for rural households to increase their farm productivity, stemming down rural-urban migration, improved quality of rural life and well-being which are products of effective rural livelihood diversification. The problem of DFRRI was hardly one of

enthusiasm and relevance but of variation between the quantum of resources available to subdue the problem.

- **National Fadama Projects**

Small holders agriculture is the dominant occupation of rural Nigerian which is mainly rain-fed and characterised by low land and labour productivity. Yet, Nigeria has a potential comparative advantage in the production of a variety of fresh and processed high value crops, especially vegetables during the dry season and livestock product (meat and milk) and fisheries products throughout the year. This is because the country is endowed with underground and surface water reserves, rich pastures and favourable agro ecological conditions in the country's low-lying plains with alluvial deposit called Fadama. The desire to realise the full potential of Fadama resources in Nigeria led to the design of the National Fadama Development Projects, mainly funded by the World Bank with counterpart funding by the federal and benefiting state government (Bature, Sanni and Adebayo, 2013).

The Fadama I and II projects successfully refined approaches for improved utilization of agricultural land. Fadama II is implementing an innovative local development planning (LDP) tool and building on the success of the community-driven development mechanisms. The cumulative impact of these earlier successful Bank-assisted projects attests to the robustness of the small-scale and community based approach to Fadama development in an environmentally sensitive manner. The Fadama III operation supports the financing and implementation of five main components designed to transfer financial and technical resources to rural households in:

- i. Institutional and social development.
- ii. Physical infrastructure for productive use.
- iii. Transfer and adoption of technology to expand productivity, improved value-added, and conserve land quality.
- iv. Support extension and applied research
- v. Provide matching grants to access assets for rural income generation and livelihood improvement.

According to Kudi, Usman, Akpo and Banta (2008) Fadama II impacted positively on poverty alleviation among farmers in Giwa local government area of Kaduna state. The project affected socio-economic status of the farmers and their production efficiency. They argued further that a little improvement in income of farmers as a result of their participation in Fadama projects give better purchasing power and hence the improvement of living standard. Furthermore, in a study carried out by Adeoye, Yusuf, Balogun and Carium-Sanni (2011) to examine rural infrastructure and profitability of farmers under Fadama II project in Oyo state, using infrastructural index and gross margin. They compared the infrastructural development between Fadama II local government areas and non-fadama II areas. Their findings revealed that more than half of the villages in Fadama II areas have more infrastructure than non-fadama II village. Availability and accessibility of physical assets including infrastructural facilities by the rural households, according to Oyesola and Ademola (2011) is directly proportional to abilities of rural households to diversify their livelihoods.

2.19 Basic alternatives in rural livelihood diversification

Households and individuals can diversify livelihood portfolio in different ways. Several classifications of activities included in rural livelihood portfolio have been proposed (Hussein and Nelson, 1999; Ellis 2000a and Reardon *et al.* 2001) focusing on different criteria (farm vs. non-farm; on-farm vs. off-farm activities; local vs. migratory; self-employment vs. wage labour). All these classifications are useful to making sense of the nature of the choices entailed by rural livelihoods. Diversification through development of self-employment enterprises is the one that better captures the basic socio-economic disjunction between:

1. Reproduction and strengthening the profile of the (relatively) independent rural smallholder; or
2. Assuming (at least partially) the connotation of a “semi-proletarian” rural wage earner (De Janvry, 1981).

Additional distinction between local and migratory wage labour and agricultural and non-agricultural self-employment enterprises is also important to capture the spatial and sectoral dimensions of livelihood diversification. This reflects in the classification of basic alternatives in rural livelihood strategies presented in Figure 2 below:

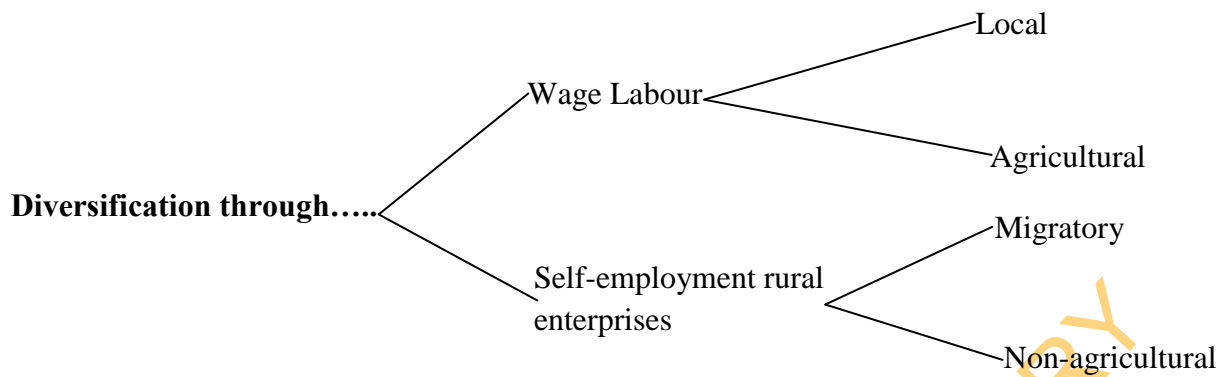


Figure 2: Basic Alternatives in Rural Diversification Strategies

In this classification, wage labour refers to the provision of work force to agricultural or non-agricultural enterprises owned by non-agricultural employers. Though sometimes employment opportunities are available locally (local wage labour), in the majority of the cases jobs are spatially distant from the places of residence and entail seasonal or long-term migration (migratory wage labour). If practised as part of a rural scheme it entails a full “proletarianization” of the rural workers. Rather, as pointed out De Janvry (1981), remittances of temporary or part-time rural wage labour very often complement an insufficient on-farm production in ensuring the satisfaction of household consumption needs. Moreover, in some instances, savings generated through wage labour (and, in particular, by migratory wage labour) can re-capitalize impoverished farms and create new opportunities for independent enterprise development.

Rural self-employment enterprises refer to activities undertaken by mobilizing labour plus other household capital assets (saving and land). Rural agricultural enterprises are often based on innovative on-farm agricultural activities (in the form of independent commercial production or control farming). On the other hand, rural non-agricultural enterprises focus on

activities such as processing of agricultural or forestry commodities, petty-trading, handicraft, home-based piecework, manufacturing, or delivery of particular services to the community or to outsiders. Such rural enterprises can develop within a single household or involve a wider social network, based on traditional or innovative forms of inter-household cooperation. The latter arrangement is particularly important to making enterprise development viable for household and individuals lacking the capital assets needed to start a self-employment activity on their own.

2.20 Small enterprises development and sustainable rural livelihood

Small enterprise development has become an increasingly appealing alternative for all the stakeholders involved in rural development. Under the thrust of budgetary constraints, policy-makers and local administrators are prone to consider the development of an economically self-reliant sector of rural micro-entrepreneurs as a possible solution to the never-solved agrarian question. Inspired by sustainable development and equity concerns, international organizations and NGOs have found that, with the increase in the number of household-based petty-enterprises, there is a non-negligible contribution to a more equitable distribution of income and opportunities, as well as an improvement in the containment of negative environment, as with most major development interventions. Eventually, social movement resisting the impact of structural re-adjustment and market liberalization on rural society might see engagement in innovative self-employment initiatives as an alternative to impoverishment and forced migration.

Overall, enterprise-based diversification looks attractive because of its alleged capacity to promote more sustainable rural livelihoods. Recent research tends to validate this hypothesis. For instance, experts consulted in the framework of FAO/World Bank global study on “farming systems and poverty” (Dixon, Gulliver and Gibbon, 2001) identified in the development of

small-scale labour-intensive household enterprises focusing on production of new cash crops and other agricultural commodities (categorized by the study under the heading of on-farm diversification) and most-promising rural poverty-reduction strategy for all eight major farming systems types (and in particular for those featuring a medium or high intensity). Moreover, several studies (Barrett and Abud, 2001; Ferreira and Lanjouw, 2001; Escobal, 2001) indicate that, in varieties of regional and local settings, farmers capable of combining conventional farming activities with innovative rural enterprises enjoy higher income and safer livelihoods than farmers deriving their income from conventional farming alone or from a combination of conventional farming and wage labour.

Notwithstanding, small enterprise development can become a viable pathway towards sustainable livelihood only if some basic conditions are made available to rural households.

These include:

- Availability of a reasonable start-up capital, which, depending on the nature of the enterprise may comprehend natural (land), human (labour, know-how), financial (saving, credit), physical (infrastructure) and social (cooperative networks) assets;
- Some degree of protection against shocks and negative trends, such as social welfare and insurance scheme.
- Supporting structures and processes including rural-enterprises-enabling policies, business development services, credit, transport and communication infrastructure (Escobal, 2001).
- Access to a well-developed market capable of providing both a steady supply of inputs, food and other consumption commodities and an outlet to enterprise outputs;

- Resilience against market failure and capacity to change the enterprise according to changes in demand and market contingencies.

As lack of these conditions is also the outstanding immediate cause of extreme rural poverty, it must be acknowledged that diversification through enterprise development is generally better for social sectors than for the “poorest of the poor” (Woldehanna and Oskam, 2001; Barrett *et al.* 2001; Rider *et al.* 2001; Abdulai and Crole Rees, 2001). Significant external resources, credit, education, training, services, infrastructure and fair market outlets are, thus, needed to make rural enterprises development a viable and effective component of rural livelihood security and poverty alleviation policies.

2.21 Context of vulnerability and livelihood

A household access to adequate livelihood assets can be affected by many factors over which household members themselves may have little control.

These factors include:

- Seasonal changes which reduce or increase the availability of different resources at different times of the year.
- Longer-term changes, or trends, which may affect different aspects of people’s livelihoods. These might include changes in population, environmental conditions, patterns of governances, economic conditions and technology. For example, changes in the economic environment owing to globalization may create either more competitions for households’ produce or new opportunities and markets for goods.

- Shocks, such as natural disasters, wars or civil unrest, or episodes of disease or ill health, which may suddenly reduce households' resources base or their access to key livelihood assets.

These are all factors that may cause households to become more or less vulnerable to poverty and can be thought of as the vulnerability context in which households operate. This context will influence the ways in which households choose to use the various assets at their disposal. For example, where the risks of drought or flooding are high, rural farmers may choose to plant less productive or less valuable crops that are more resistant to these types of risk. The way in which people use assets in their livelihood is influenced by many things. DFID (2002) put these together under the category of policies, institutions and processes, which represent the deliberate or involuntary ways in which human behaviour is influenced. Sometimes these are imposed by outsiders through laws or policies that may be designed by a government to steer behaviour, like discouraging pollution or encouraging shared or better resource use.

Moser (1998) explained that the concept of livelihood vulnerability differs from that of poverty. Whereas poverty is seen to be static, vulnerability is perceived to be dynamic and captures processes of transformation that take place as people move in and out of poverty trend. The general notion of vulnerability includes a range of external and internal livelihood factors. The external factors, according to Moser (1998), generate risk, hazards, shocks and stress in coping with emergencies to which people are differentially subjected. The internal factors represent people's own defenselessness or resilience against negative forces due to lack of the means to cope with potentially damaging conditions.

Selvarajan; S., Roy, B.C and Mrthyunjaya (2003) defined vulnerability as the extent which a natural or social system is susceptible to sustaining derange from climate change. According to them there are two sides of vulnerability, an external side of risks, shock to which an individual or household's subject, and an internal side which is defenselessness, meaning a lack of mean to cope without damaging loss. The livelihoods of the majority of the poor population are confronted with acute food and nutritional shortages caused by seasonality, famine and civil war (Devereux 2001). International trade, globalisation, economic reform, financial crisis, climate change and demographic transition are the other factors of livelihood security (Kabeer 2002).

Drinkwater and Rusinow (1999) described livelihood security as a system that facilitates adequate and sustainable access to income and other resources to enable households to meet basic needs and recover from shocks and stresses. Some factors have been identified specific to individuals or households that determine their vulnerability. Devereux (2001) stated that these factors include household's relative wealth, access to alternative income sources, the kind of support households receive from other family members and social network available.

The concept of vulnerability is closely associated with asset ownership, hence individuals, households or communities are regarded less vulnerable if they have larger asset holdings and vice versa (Devereaux 2001). Another aspect of vulnerability is the capability to manage assets (that is ability to transform assets into food and other basic needs (Moser, (1998). Swift (1989) identifies a system that shows production, exchange, consumption and asset formation processes as key to the understanding of how vulnerability is created, perpetuated and reduced. Assets include investments in humans (education, skills and health) and materials (land,

animals, infrastructure, equipment, properties and stored crops) which provide assistance in time of stress or income failure.

Livelihood strategies tend to be organized around both immediate and long-term goals and they also incorporate security and the capacity to cope with crisis. Poor households who cannot prepare in advance against crisis are more vulnerable. They find themselves in a position whereby they have less bargaining power for wages, better prices for their products, favourable credits and are therefore subjected to conditions that will make them unable to recover or protect themselves from future crisis. Also when households rely on coping strategies that cannot be reversed, they are likely to be most vulnerable and exposed to crisis for longer period (Kabeer 2002).

Poor households who face risk in times of uncertainty resort to a number of coping mechanisms that involve reductions in expenditure. (Devereux, (2001) and Kabeer, (2002). Kabeer, (2002) described the coping processes as: Households initially fall upon their own savings in form of capital (insurance mechanisms). If the situation persists, they go on to sell off productive assets and properties (such as land) at distress prices before embarking upon destitution behaviour such as distress migration. Some households go on to cut consumption, rent out their land or borrow and diversify into non-farm activities or migrate. In some situations, households will reduce or cancel planned investment activities, pull out children from school either to save money or to put them in the labour market or increase their reliance on social services and family support mechanisms.

Devereux, (2001) and Kabeer (2002) also expressed concern with livelihood insecurity by suggesting the setting up of social protection network for the poor as safety ladders to help people manage risks. They argued that social protection programmes will assist poor households

to reduce unnecessary exposure to stress, deal with adverse events and help develop human capital resources.

Two kinds of social protection strategies were proposed. First, food or cash transfer and school feeding scheme and second, micro-finance services to the rural poor (Devereux 2002). It is assumed that the rural poor are either underemployed or unemployed hence, cash transfer programmes will provide additional income to support the poor. For example, school feeding scheme will improve enrolment and attendance of poor school children as well as their educational performance. On the other hand, microfinance schemes provide small loans that enable households increase their incomes and savings (self-insurance), cope with consumption needs and diversify their livelihoods to meet their basic needs.

2.22 Concept of livelihood abilities among rural households

Ellis (2000) states that livelihood ability does not only include sheer physical labour, but also knowledge, training, good health, support, skills and years of experience.

Knowledge which is product of education can benefit individuals in the labour market by facilitating entry into higher earning occupation and by raising earnings within an occupation.

Livelihood ability promotes gender equality in the labour market. Monazza, Kingdom and Soderborn (2007) reported that in Pakistan women with no schooling at all, eighty percent are out of labour force and this increase to ninety percent for women with eight years of education. After ten years of education, women labour force participation becomes increasingly responsive to extra education, as education increases beyond ten years women begin to join the labour force in larger numbers. They reported the same scenario in Ghana where seventeen

percent of women who participated in the labour force worked in agriculture; they could not diversify into non-farm activities because of their limited knowledge, skills and trainings.

The level of livelihood ability of an individual increases productivity, quality, diversity and occupational safety, and improved health, thereby increasing incomes and leading to reduction in poverty level for such a person and his/her families (Fluitman, 2002; World Bank, 2004). Korboe (2001) corroborated this assertion that training and provision of tools to graduates would be sufficient to generate self-employment.

Livelihood ability can increase productivity which might lead to positive knock-on effects to agricultural enterprises, principally through cross-financing (Palmer, 2004). It could be established axiomatically that skills, trainings, knowledge, supports and experience that are components of livelihood ability give opportunity for an individual to get work or make work and get income, hence reducing poverty and stimulating economic growth.

Livelihood abilities help to develop livelihood assets one of the three key components required for livelihood diversification, example is social capital.

Livelihood abilities allow for a gradual building up of informal business and social networks (with suppliers, customers, other apprentices, masters and trade association), (Assad, 1993; Hart, 1973) and can also help to develop business skills and experience (Fluitman, 1994).

In general analysis, the ILO (1998) saw livelihood ability as being important for rural households in the informal economy and discussion during a workshop of donors and researchers on a draft of skills development in Sub-Saharan Africa, (World Bank, 2004) noted a definite link between skills, training and poverty reduction, and argued that livelihood ability determines good

growth, production and acceptance of innovations, (Fluitman, 2002), and is often said to be beneficial to head of rural household who diversifies his or her livelihood.

2.23 Positive effects of livelihood diversification

According to Ellis (1998), a diverse portfolio of activities contributes to the sustainability of a rural household because it improves its long-run resilience in the face of adverse trends or sudden shock. In this respect, individual and family livelihoods display similarities to larger social and economic groupings up to the level of the economy at large. In general, increased diversity promotes greater flexibility because it allows more possibilities for substitution between opportunities that are in decline and those that are expanding.

Ellis (1998) highlights the positive effect of livelihood diversification as:

- It can contribute to reducing the adverse effect of seasonality, by utilizing labour and generating alternative sources of income in off-peak periods.
- It can reduce risk. In other words, the factors that create risk for one income source should not be the same as those that create risk for another.
- It can make better use of available resources and skills, and take advantage of spatially dispersed income-earning opportunities.
- Cash resources obtained from diversification may be used to invest in or improve the quality of any or all of the five classes of capital assets distinguished earlier.
- Diversification can potentially provide environmental benefits in two ways. One is by generating resources that are invested in improving the quality of the natural resource base. The second is by providing options that make time spent in exploiting natural resources.

It is possible for diversification to improve the independent income-generating capabilities of women and, in so doing, also improve the care and nutritional status of children, since a high proportional of cash income in the hands of women tends to be spent on family welfare.

2.24 Negative effects of livelihood diversification

- **Income distribution**

Diversification can be associated with widening disparities between the incomes of the rural poor and the better-off. This occurs, as noted already, because the better-off are able to diversify in more advantageous labour markets than the poor. This, in turn, reflects asset poverty, especially with respect to human capital.

- **Farm output**

Some types of diversification may result in stagnation on the home farm. This typically occurs when there are buoyant distant labour markets for male labour, resulting in depletion of the labour force required to undertake peak farm-production demands, such as land preparation and harvesting. This occurred in southern Africa in the 1970s and 1980s, when many rural households depended on remittance from migrants to urban areas in South Africa for their food security.

- **Adverse gender effect**

These are primarily associated with the type of diversification that also helps to have adverse effects on agriculture. Where it is male labour that is predominantly able to take advantage of diversification opportunities, then women may be even more relegated to the domestic sphere and to subsistence food production.

In sum, the positive effects of diversification appear to outweigh its disadvantages. The positive effects tend to have beneficial impacts of wide applicability, while the negative effects typically occur when labour markets work in particular ways in particular places. The removal of constraints to and expansion of opportunities for diversification are, therefore, desirable policy objectives because they give individuals and households more options to improve livelihood security and to raise their own living standards.

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CHAPTER THREE

3.0 THEORETICAL AND CONCEPTUAL FRAMEWORK OF THE STUDY

3.1 Theoretical framework

Theories predict and highlight the pattern of relationship that exist between variable and concept in a study (Bakar, 1999).

Many theories have been identified, but those that are considered relevant to this study are:

- Sustainable livelihood theory
- Household production theory
- Sustainable rural livelihood and the sector approach
- Model of positive attributes of livelihood diversification
- Human ecology theory

3.1.1 Sustainable livelihood theory

Sustainable livelihood theory has become a valuable technique for investigating the means by which people are able to survive (Chambers and Conway, 1992). Sustainable livelihood analysis permits an escape from the previous deceiving classification of rural dwellers as “farmers” or herdsmen”, when the fact is that most rural dwellers have many means of support. Moreover, the different compositions of the environment have various roles in supporting rural dwellers’ existence. For instance, the river performs many functions to support rural dwellers’ livelihood.

The sustainable livelihood theory emphasizes potential, competence, capacities and strengths, rather than weaknesses and needs of rural dwellers. It relates physical environment directly to opportunities and constraints for survival and self-planned development. This is an issue that is pertinent to the study, as it investigated rural households' livelihood diversification and various strategies adopted by rural households in maintaining sustainable life. Sustainability of rural households' livelihood requires sustainable strategies and display of potential skill, competence, capabilities and strengths. Rural households must have access to various forms of assets, natural, physical, financial, human and social for them to meaningfully and profitably engage in various livelihood activities.

As posited by the Department for International Development (DFID) (1999), sustainability is explained as a function of the wise management of physical environment, economy, social environment and institutions. That is, the use of different forms of capital, rather than a reductionist one-dimensional concentration on one factor. However, sustainable livelihood theory fails to address the contention issues, which has always been who are the stakeholders having right of control over the natural resources and what constitutes fair and adequate compensation to individuals and communities whose land and related resources have been destroyed.

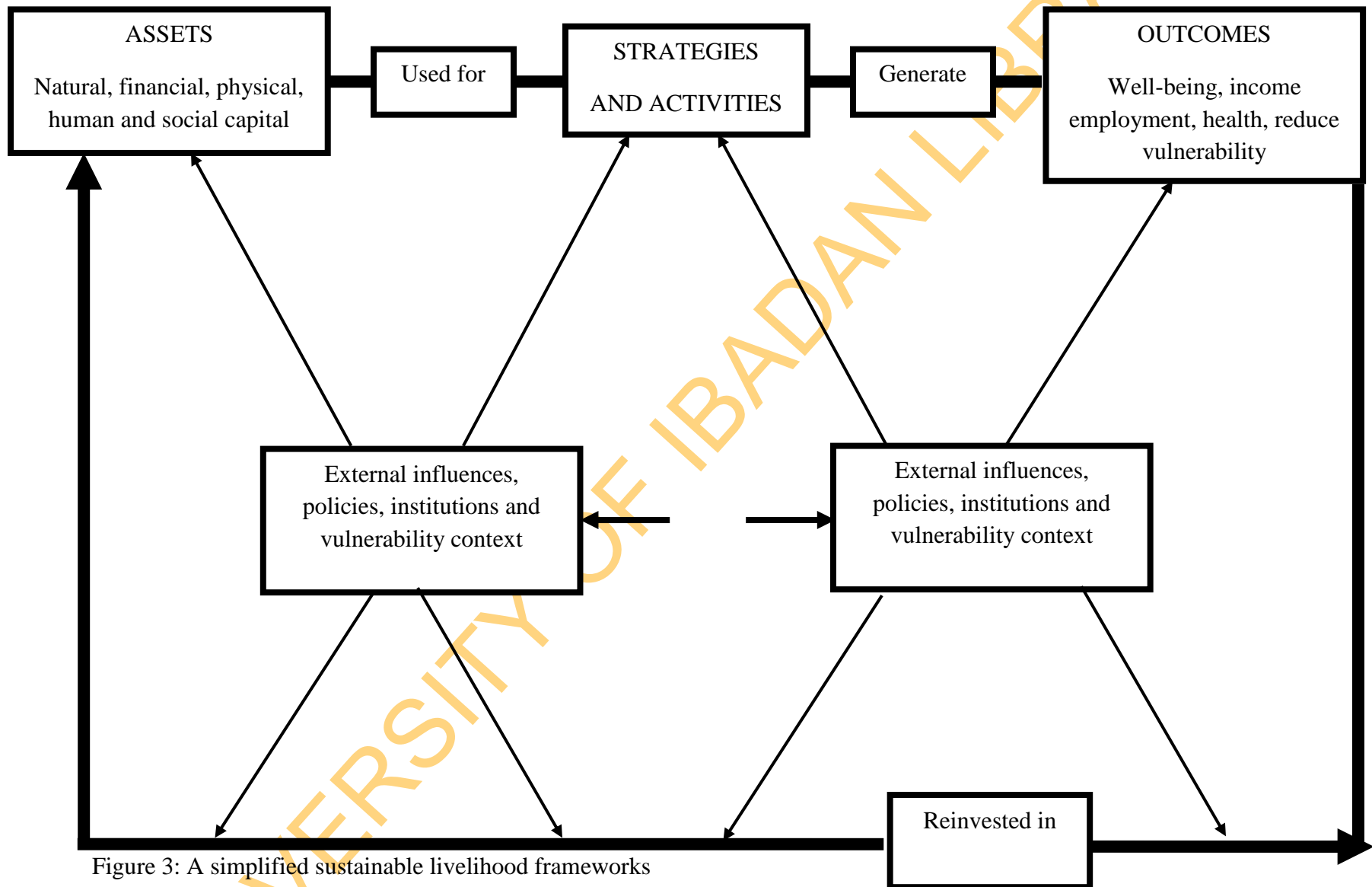


Figure 3: A simplified sustainable livelihood frameworks

Sources: C, Ashley, adapted from DFID (1999) *Guidance Sheet* and Carney (1998)

3.1.2 The Household Production Theory

This theory argues that production capabilities of rural agricultural households are derived from production resources at both the level of production and the level of exchange (Kinsella, Wilson, Jang and Renting, 2000). At the level of production, the production assets are resources like land, family labour, water, farm tools and equipment and so on. These are internal resources which the household commands that determine the production potential or capability of the household. On the other hand, production services are not intrinsic to the household but are available at the level of exchange from sources outside the rural village. Rural household production is increased with production services like the use of technology, credit, extension information, markets and transport which are channelled by both private and public organizations and require the household to claim or obtain access to them usually with money, in the wider social and institutional setting.

Chamber and Conway (1992) also argue in support of this same theory but gives a different nomenclature for the production resources from the angle of being tangible asset (production resources) and intangible asset (production services). Assets potential will still remain idle or under-utilized until it is accessible and productively utilized.

The implication of this theory is that production resources or assets have a major role to play in the ability of rural households to invest in meaningful and profitable livelihood activities that can bring higher returns, thereby improving sustainable rural livelihoods.

3.1.3 Sustainable rural livelihood and the sector approach

Stephen and Alex (1998), in their contributions to DFID conference on how best to promote improved and sustainable livelihood for rural communities, provide a framework upon which sustainable rural livelihood could be obtained through the sector approach. This sector approach has been widely promoted in the past few years in response to noted shortcomings of project-led approaches to development. The sector approach also known as the sector-wide approach is a means of managing government roles in a sector and the aid provided to it. The sector approach is based on having in place a strategy for the sector (co-ordinate here necessary with strategies for other sector) which, inter alia, spells out the role of the state in relation to the private sector (commercial and non-commercial). These include:

- An expenditure programme which integrates government donor contributions,
- A common management framework, and
- Funding commitment from both donors and the government

Livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future without undermining the natural resources base. Overall, the sector approach offers much for value to increasing the effectiveness of development aid through clarifying arms and strategies and linking investment programmes with necessary policy, institutional and budgetary reforms.

Many reasons have been advanced for the relevance of the sector approach to sustainable rural livelihoods. Some of these reasons are seen in the context of the role of government, addressing market failures and social objectives through specific policies and programmes. In promoting sustainable rural livelihood, these categories are mutually reinforcing and mutually dependent. For example, the policies for promoting enterprises development among the poor are likely to achieve the greatest impact in an environment which provides access to other supporting services, such as rural finance or basic infrastructure and where market incentives are not reduced or distorted by macro-economic policy. A shared sector strategy that is loaded with anti-poverty aims and objectives has the potential of going a long way in various options for livelihood, particularly in rural areas, through these opportunities that are readily available and accessible. Rural households are able to alleviate their poverty level and accumulate assets for better living and well-being.

3.1.4 Model of positive attributes of livelihood diversification

The positive poverty and vulnerability reduction attributes of livelihood diversification are summarized in Figure 4. Livelihood diversification is both partly predicated on and is itself increased human capital in terms of experience, education, skills and willingness to innovate.

Livelihood diversification generates earnings and remittances that tend to alter significantly the option open to the household by providing it with cash resources that can be flexibly developed. These factors contribute to lessening vulnerability by ameliorating risk and reducing the adverse consumption effects of seasonality. They also result in increasing assets beyond human capital, thereby permitting poverty to be reduced. In general, livelihood diversification improves livelihood.

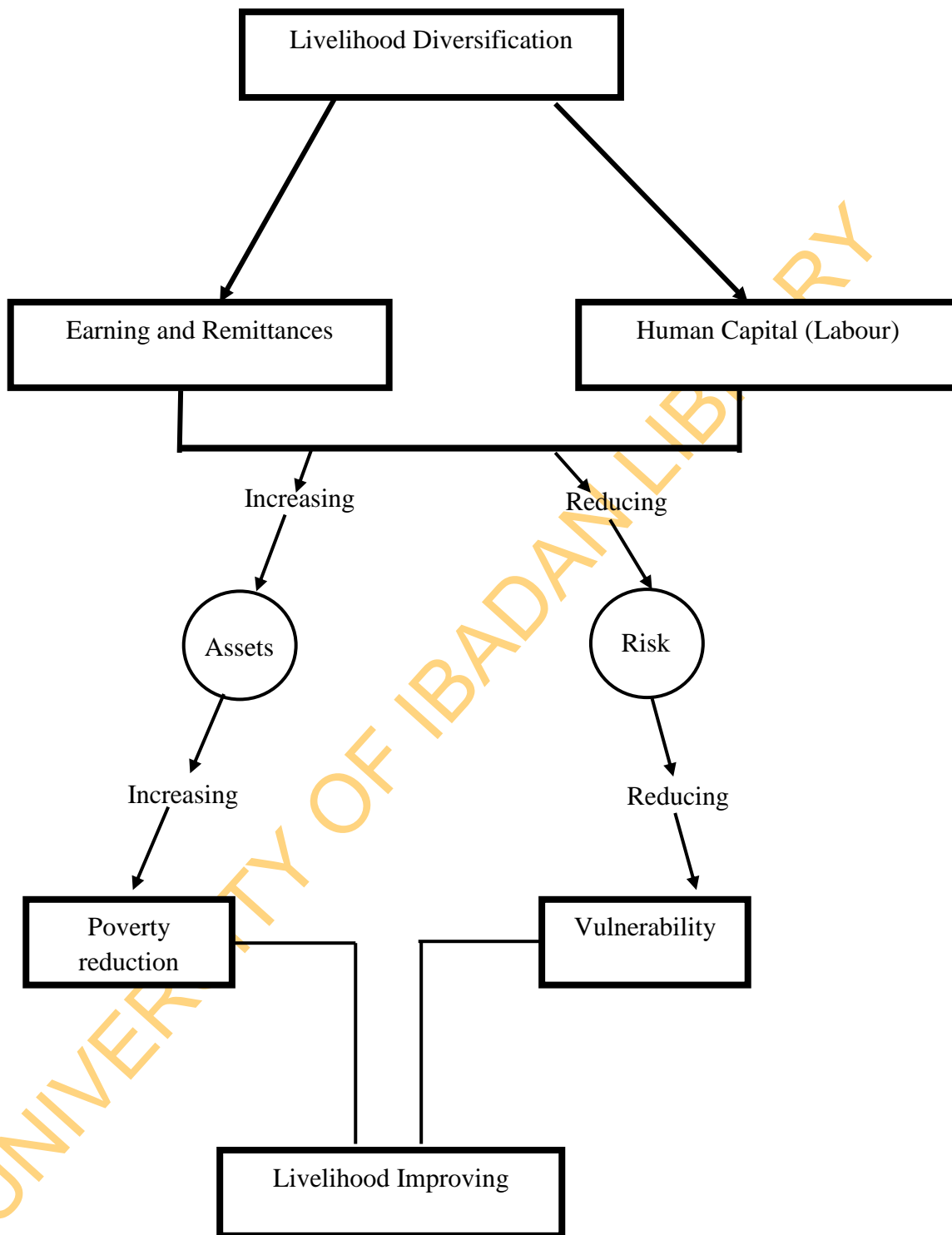


Figure 4: Positive Attributes of Livelihood Diversification

Source: Ellis (1998) adapted from DFID (1998) Diana Carney on Sustainable Rural Livelihoods.

3.1.5 Human ecology theory

The theory posits that there is always an interaction between human and their natural environment. It concerned with social phenomena which are based upon the dependence of man limited supplies of necessary resources to satisfy his needs (Hauser, 1990). This theory is important in investigating livelihoods and household food security strategies because the environment in developing countries is a livelihood issue and changes in environment have quality impact directly on rural dwellers, households' food security and livelihoods.

The implication of this theory is that man's productivity depends on the access to other physical resources in his environment, meaning that there is relationship between man and his physical environment. For example, provision of good communication facilities will help farmers obtains information on how to improve his production and invariably increase his income thereby improves his standard of living. In the same vein provision and regular supply of electricity can also make rural people to engage in other non-farm livelihood activities such as selling of cold drinks/juice especially the women as this will enable them to meet other household needs.

3.2 Conceptual framework for the study

Having gone through a review of the aforementioned theories and models, it can be deduced that none of them can independently explain livelihood abilities, assets, activities and level of livelihood diversification among rural households in southwest Nigeria. Therefore, for this study, a conceptual framework was derived from a synthesis of the theories to ensure that findings from this study get substantial evidence. The conceptual framework for exploring the level of livelihood diversification among rural households in southwest Nigeria is thus made up of the independent, intervening and dependent variables as shown in figure 5

3.2.1 Dependent variable

The dependent variable for this study is level of livelihood diversification. The following domains were investigated in this study; livelihood abilities, livelihood assets and livelihood activities. An aggregated score of each of the variable was used to describe rural livelihoods diversification. Composite score of abilities, assets and activities formed the basis for categorization into high and low level of livelihood diversification.

3.2.2 Independent variable

The independent variable of this framework consist of the respondents' socio-economic characteristics such as age, sex, education, marital status, monthly income, religion, primary occupation, household size, length of stay in the study area, source of land acquisition and cosmopolitaness. These variables have direct effects on information sources, livelihood activities and also impact on the level of livelihood diversification of the respondents.

3.2.3 Intervening variables

According to (Kerlinger, (1973); cited by Fadairo, 2013) intervening variables account for internal and directly unobservable psychological processes that in turn account for behaviour, effect and causes. They are variables which though not focused upon, still affect the dependent variable. They are factors whose influences sometimes may not be easily delineated or measured but which affect the way independent variables influence the dependent variable.

In this study, government policy, climate change and cultural preference influence the extent of livelihood diversification among rural households.

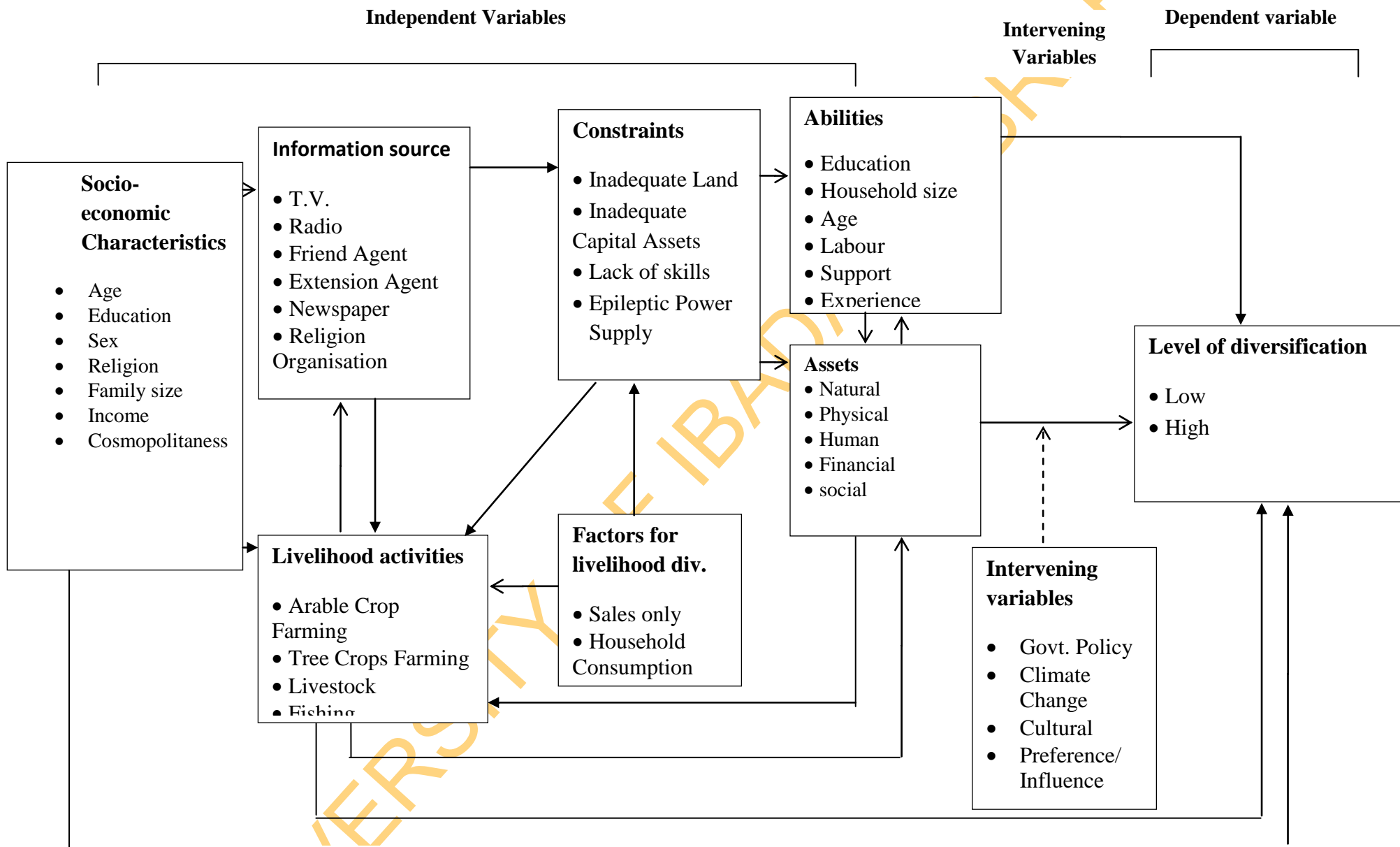


Figure 5: Conceptual Framework for Livelihood Diversification among Rural Households in Southwest Nigeria.

3.3 Description of framework and how the model works

Conceptual framework for this study as presented in figure 5 is based on the reviewed literature as well as the theoretical and conceptual orientation.

The central framework is based on livelihood diversification among rural households and why they diversification their livelihoods.

The framework consists of selected socio-economics characteristics such as age, sex, religion, marital status, monthly income, length of stay in the study area, primary occupation, household size, income from other sources and cosmopolitaness. Others are information sources, constraints, livelihood activities, factors responsible for livelihood diversification, abilities and assets as independent variables for the study, while the dependent variable is level of livelihood diversification. The intervening variables include government policy, climate change and cultural preference or influence.

Socio-economic characteristics of respondents have direct relationship with information sources, livelihood activities and level of livelihood diversification. For instance, high level of education may transform to high ability which may favourably position respondents for effective livelihood diversification. In the same vein, income earns from other livelihood activities apart from farming may serve as motivating factor for respondents to shift emphasis from farming and diversify into non-farm activities. Income at the disposal of the respondents may serve as take-off capital to diversify into different livelihood activities.

The source of information of the respondents was also expected to determine livelihood activities as well as the type of constraints to livelihood diversification of rural households. The framework further illustrates that the respondents' constraints to livelihood diversification determined their abilities, while the factors responsible for diversification has a direct relationship with the type of livelihood activities the respondents are engaged in. There is, however, interplay between each of livelihood ability, assets and activities of the respondents, which eventually determine a high or low level of livelihood diversification. Constraints to livelihood diversification also determine the respondents' assets as well as types of livelihood activities they are engaged in. Intervening variables like government policy, climate change or variation, cultural preference or influence, though outside the control of the researcher, have indirect relationship with the level of diversification of the respondents.

CHAPTER FOUR

4.0 RESEARCH METHODOLOGY

The components examined here include study area, population of the study, sampling procedure and sample size, sources of data, instrument for data collection, pre-test, validity and reliability of instrument for data collection, measurement of variables, analysis of objectives and hypotheses of the study and technique of data analysis.

4.1 Research Design

Survey design was used. The survey design is a research methodology and also an investigative tool that is commonly used in studying social phenomena.

Survey design is a research strategy that facilitates investigation on a phenomenon within its real life context. Thus, the survey design permits an in-depth investigation of individuals, groups, or events which may be descriptive or explanatory. The study considered this research design as the most analyzing data and reporting the results on livelihood diversification in the study area. The study further saw this design as appropriate for providing clear understanding of the issues being studied on livelihood diversification among rural households in southwest Nigeria.

4.2 Study area

The study was carried out in southwestern geo-political zone of Nigeria. The southwestern zone lies between latitudes 5⁰N and 9⁰N, with an area of 114,271 square kilometers representing 12% of the country's total land mass. The 2006 Census put the population of the zone at 21,974,678 (National Population Commission, NPC, 2006).

The zone has four distinct sub-ecologies, namely: swamp, mangrove forest, moist and dry low land forest and derived savannah. The zone comprises Oyo, Ogun, Osun, Ondo, Ekiti and Lagos states. Lagos, Ondo and Ogun states are situated in the tropical rainforest with swamp forest in the coastal region, while parts of Osun, Oyo and Ekiti fall in the derived savannah.

The climate of the zone is typically equatorial, with distinct wet and dry seasons. The rainy season lasts up to 9 months with two peaks in July and September. The mean annual rainfall varies from 2600 mm in the southern coastal areas of Lagos and Ogun states. Average zonal annual rainfall is 480mm. The mean monthly temperature range is $18^{\circ} - 24^{\circ}\text{C}$ during the dry season. Agriculture is the major source of livelihood of the inhabitants of the zone and this is characterized by arable cropping system, with yam and cassava as the major crops (Shaib, 1997); common tree crops in the area include cocoa, oil palm, cashew and kolanut.

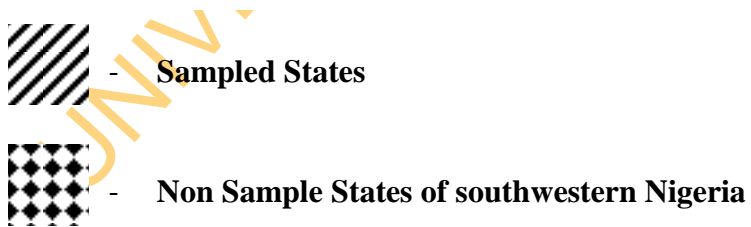
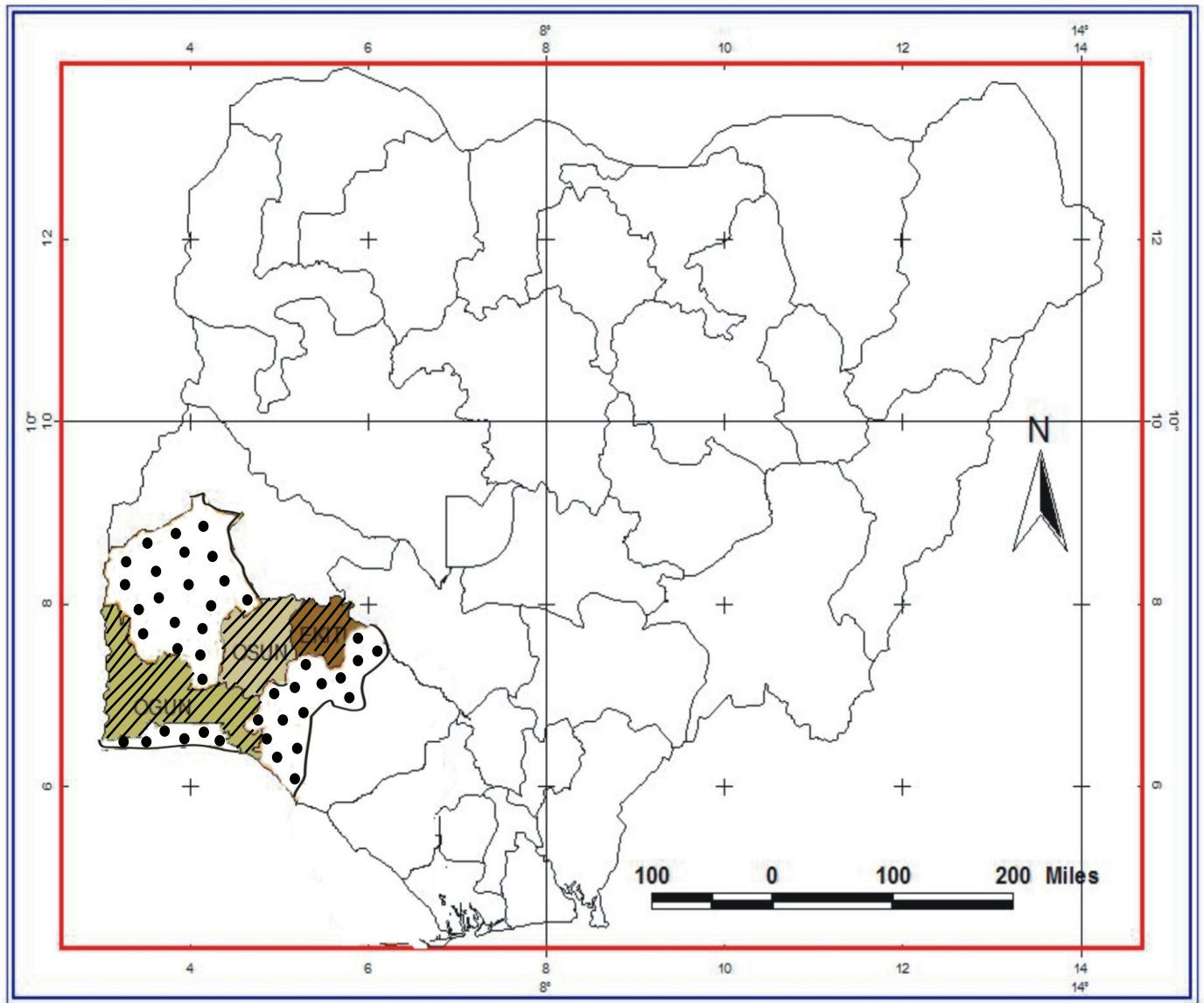


Figure 6: Southwest Geo-Political Zone of Nigeria.

4.3 The study population

The target population of the study consisted of rural households in southwest Nigeria regardless of whether they engage in agricultural or non-agricultural activities.

4.4 Sampling procedure and sample size

A multi-stage sampling procedure was used for the study. From the six states in the southwest, three states (50%) were randomly selected. The states are Ekiti, Ogun and Osun. There are 16 local government areas (LGAs) in Ekiti, 20 in Ogun and 30 in Osun states. In each of the three states selected, rural LGAs were sampled purposively. Nine LGAs were selected in Ekiti, eleven in Ogun and sixteen in Osun states. This was followed by a simple random selection of two LGAs (20%) in each of Ekiti (Ido-osi and Gbonyin) and Ogun (Yewa North and Ogun Water side), while three LGAs (Ayedaade, Atakumosa West and Ifelodun) were selected in Osun State. Ten percent of the wards in each LGA were randomly selected. The wards were Ifisin and Agbado (Ekiti), Sunwa and Ayila/Itebu (Ogun), Araromi Owu, Asa Obi and Obagun (Osun).

The total number of household heads within the selected wards was taken as given by National Population Commission (NPC, 2006), from where two and half percent (2.5%) of respondents were randomly selected to give a sample size of 405 rural households that were used for the study. The procedure for sample selection is shown in Table 2.

Table 2: Sampling procedure and sample size

States	No. of LGAs	No of rural LGAs	20% of selected rural LGAs	Selected LGAs	No. of Wards in LGAs	10% LG Wards	Selected Wards	THH in Selected Wards	2.5% THH
Ekiti	16	9	2	Ido-osi	10	1	Ifisin	909	23
				Gbonyin	10	1	Agbado	2981	75
Ogun	20	11	2	Yewa North	11	1	Sunwa	3984	100
				Ogun Waterside	10	1	Ayila/Itebu	1593	40
Osun	30	16	3	Ayedaade	11	1	Araromi	3215	80
				Atakumasa west	11	1	Asa Obi	1440	36
				Ifelodun	12	1	Obagun	2043	51
Total	66		7		75	7		16165	405

THH – Total Household Heads

4.5 Source of data

The data used for this study were obtained from both primary and secondary sources. Information from primary sources obtained through the use of both qualitative and quantitative methods, while that of secondary sources got from National Population Commission and Federal Office of Statistics, Lagos, Nigeria.

4.5.1 Qualitative methods used

Focus group discussion (FGD), in-depth interview (IDI) and problem tree analysis were the tools used to collect qualitative data. According to Olawoye (2004) FGD is a tool for studying ideas in a group context. Groups are usually differentiated by gender, generation and possibly ethnic or religious background. It relies heavily on discussion and interaction within the groups and yields more useful information when the participants are able to talk to each other about the topic of interest.

In-depth interview on the other hand with properly selected key 'informants' can be relatively easy and inexpensive way to get some types of general information about a locality, such as infrastructural development, historical background, cultural characteristics or demographic composition. Key informants are individuals in a community who are in position to give relevant and needed information on the subject matter of discuss (Shokan, 2008). Examples are traditional leaders, women and youth leaders in the society as well as leaders of workers' association.

FGDs and IDIs were conducted with rural households in each of the rural wards selected for the study. In all, 12 FGDs and 6 IDIs were conducted, two in each state of Ekiti (Ifisin and Agbado) Ogun (Sunwa and Ayila/Itebu) and Osun (Asa obi and Araromi). Each FGD included 8-10 discussants selected from farmers' association, women group' representative and other members of the community that engaged in non/off farm activities.

4.5.2 Quantitative method used

Interview schedule was used to obtain quantitative data based on the specific objectives of the study. The interview schedule was divided into six sections. The first section obtained responses on socio-economic characteristics of rural households. Sections II, III and IV elicited information on respondents' cosmopolitaness; and the activities engaged in on visitation, livelihood abilities, activities engaged in, assets, season of diversification; and factors responsible for respondents' livelihood diversification respectively. Sections V and VI sought information on sources of information on livelihood diversification and constraints to livelihood diversification respectively.

4.6 Validation of data collection instrument

The instrument for data collection was subjected to face and context validation by the research supervisor and experts in agricultural extension and rural sociology. The process resulted to correction of defective and irrelevant items and the inclusion of some others to ensure appropriateness and adequacy of the items on the instruments to measure the variables of the study.

4.7 Reliability of instrument

The pre-test instrument was administered to rural households in a rural local government in Oyo state, specifically Ibarapa North, which was excluded from the states and rural local governments selected for the final data collection exercise. The test-retest method was adopted. Pearson Product Moment Correlation (PPMC) test produced a correlation coefficient (r) of 0.67 on the basis of which the instrument was adjudged consistent and reliable for the study.

4.8 Measurement of variables

4.8.1 Independent Variables: The following independent variables were measured for the purpose of this study:

Socio-economic characteristics

Age: Age was measured on a continuous scale in terms of respondents' actual age in years.

Sex: Respondents were asked to indicate whether they are male or female

Marital Status: This was measured as single (1), married (2), widowed (3), divorced (4) Respondents chose as applicable to them.

Educational Attainment: The respondent's level of educational attainment was captured as follows:

- (1) No formal education
- (2) Primary education
- (3) Secondary education
- (4) Tertiary education
- (5) Adult education
- (6) Vocational training

Religion: The respondents were asked to indicate their religions from the following:

(1) Christianity (2) Islam (3) Traditional Religion (4) others (specify).

Primary occupation: This refers to respondents' major occupation. Respondents were asked to state primary occupation they engaged.

Monthly income: The respondents were asked to estimate their monthly income in naira from their primary occupation.

≤ ₦5, 000

₦5, 001 – ₦10, 000

₦ 10001 – ₦ 200000

₦ 20001 – ₦ 30000

₦ 30001 – ₦ 40000

₦ 40001 - ₦ 50000

₦ 50001 and above

Household Size: Actual number of people in the households of the respondents was recorded and then categorized thus: (1) 1 – 3, (2) 4 – 6, (3) 7 – 9, (4) 10 – 12, (5) ≥ 13.

Period/length of living in the area: The respondents were asked to state this in years.

Income from other sources: The respondents were asked to state income realised from other sources apart from primary occupation in Naira on monthly basis.

Cosmopolitaness:

The respondents were asked to respond to the following options to indicate how frequent they visited urban centres; frequencies and percentages were generated to describe their cosmopolitaness.

(1) Once a week

(2) Once in two weeks

(3) Once in three weeks

- (4) Once in a month
- (5) Once in several months
- (6) Once in a year

Livelihood abilities

The following variables were captured to determine respondents' livelihood abilities: age, household size, support, education, experience and labour.

Age: Actual age of the respondents was measured on a continuous scale in years. This was categorised into active (16-60years) and less active (dependents) (<16 and >60) years. Less active was assigned a score of 0 while active was assigned a score of 1.

Household size: Actual number of people in the household of respondent was recorded and categorised. A score of 1 was awarded to household size of 1-3, 2 to 4-6, 3 to 7-9, 4 to 10-12 and 5 to > 13.

Support: Respondents were asked to state their sources of support from social groups and extension. A score of 1 was assigned to social groups and 2 to extension.

Experience: Respondents were asked to state their experiences in years in various livelihood activities they involved and then categorised. A score of 1 was awarded to 1-10years, 2 to 11-20years, 3 to 21-30years, 4 to 31-40years, 5 to 41-50years, 6 to >50years.

Education: The respondents level of educational attainment was captured as follows: no formal education, primary education, secondary education, tertiary education, adult education and vocational training and then categorised into no formal education, formal and non-formal education, a score of 0 was assigned to no formal education and 1 to formal and non-formal education.

Labour: Respondents were asked to state the number of hours' work daily in their livelihood activities and then categorised. A score of 1 was awarded to 1-5 hours, 2 to 6-11 hours and 3 to > 11 hours.

The respondents livelihood abilities score was computed by summing scores of ages, households size, support, education, experience and labour. From this, the mean score was calculated. Respondents' livelihood abilities was categorised into low and high on the basis of below and above mean criterion. The respondents whose scores fell below the mean score were categorised as having low livelihood abilities while those scores fell on the mean and above were categorised as having high livelihood abilities.

Livelihood Activities engaged in and Season of Diversification

A list of activities was generated and respondents were asked to respond 'Yes' if involved and indicate period of involvement from wet, dry and both seasons. A score of 1 was assigned to each activity, 1 score to either dry or wet and 2 scores to both seasons. Respondents' livelihood activities score was computed by summing up the score for each activity and that of season(s) of involvement. This resulted to a minimum score of 0 and maximum score of 800. From this, mean score was calculated and used to categorize

respondents' livelihood activities into low and high. The respondents whose scores fell below the mean score as low and those with mean score and above were categorized as high level of livelihood activities

Factors responsible for involvement in the livelihood activities

Respondents were asked to state why they were involved in the activities from the following options and percentages of factors responsible for involvement were determined from their frequencies.

1. Sales only
2. Household consumption
3. Risk reduction
4. Sales and Consumption
5. Seasonality
6. Coping with insufficiency
7. Building on complementarities
8. Gradual transition to new activities

Livelihood Assets

DFID (2000) identifies five forms of livelihood assets namely: natural, physical, financial, human and social asset and adds that the level of these assets is directly proportional to livelihood activities. Respondents' livelihood assets were measured as follows:

(a) Natural asset:

- (i) The respondents were asked to indicate access to land, dam, river on the basis of Yes/No. A score of 1 was assigned to 'Yes' response and 0 to 'No' response.
- (ii) Season of accessibility to land: The respondents were asked to indicate the season they had access to land as wet, dry or both seasons. A score of 1 was assigned to a season whether wet or dry while a score of 2 was assigned to both seasons. Natural asset scores were then simply computed by summing up scores based on season of accessibility of respondents.

- (b) Physical Asset:** The respondents were asked to indicate 'Yes' or 'No' if they possessed a physical asset and equally indicate their numbers. Scores were assigned to these possessions. Physical asset scores were simply computed by summing up all scores in each of the sub-divisions for physical asset, which included: means of transport, type of building, type of roofing material, electric generator, television, radio, source of water and furniture.

- (c) **Financial Asset:** The respondents were asked to indicate 'Yes' or 'No' if they keep any of the following: savings account, current account, deposit account, informal credit saving (*ajo*), salary account, informal credit and thrift (*esusu*), cooperative societies, daily contribution. A score of 1 was assigned to Yes response and 0 to No response. Financial asset scores were simply computed by summing up all scores in each of the account kept.
- (d) **Human Asset:** The respondents were asked to indicate the number of persons residing in the household and their levels of education. A score of 1 was assigned to each member of the household; while score of 1 was assigned to nursery education, 2 to primary education, 3 to secondary education and 4 to tertiary education. The human assets' scores were computed by summing up the number of persons in the household plus their levels of education.
- (e) **Social Asset:** The respondents were asked to indicate whether they belonged to any of these organizations: Cooperative Societies, Work Exchange Groups, Fadama Users Group, Farmer Association, Religious Organizations, Community Development Associations, Town Development Unions, Market Association, Age-grade Group. Each of 'Yes' response was scored 1, while 'No' was scored 0, 0 and 1 were also assigned to a membership and official position, respectively. Social assets scores were computed by summing up the scores for Yes/No responses plus position held.

Finally, the overall livelihood assets' scores was obtained by summing up the total scores from natural, physical, financial, human and social assets. This gave a minimum score of 17 and maximum score of 85. The dispersion statistics mean, median and mode for the index was determined. Score of mean and above was categorized as high livelihood asset while below mean was categorized as low livelihood asset.

Sources of Information on Livelihood Diversification: The respondents were asked to state the source(s) from which they got information on livelihood diversification from the following: radio, television, newspapers, extension agents, friends, relatives/neighbours, farmers' associations and the internet. The percentage use of each source was determined from their respective frequency count.

Constraints Limiting Respondents' Livelihood Diversification: A list of constraints consisting of 17 items was provided to the respondents, they were expected to indicate severity of each of the constraint using a-3 point scale of not a constraint, mild constraint and severe constraint. A score of 0 was assigned to not a constraint, 1 to mild constraint and 2 to severe constraint.

This gave a maximum score of 34 and minimum score of 0. Mean score was calculated, and based on above and below the mean criterion, respondents' constraints were categorized into high and low.

4.8.2 Focus group discussions and in-depth interviews

Focus group discussions and in-depth interviews were conducted with rural households to obtain descriptive information related to the following:

- (i) Primary occupation of respondents
- (ii) Availability and accessibility of livelihood assets
- (iii) Livelihood activities of respondents
- (iv) Season of engagement in the activities
- (v) Socio-economic characteristics of respondents
- (vi) Source(s) of information on livelihood activities

4.8.3 Dependent variable

The dependent variable of this study is livelihood diversification of rural households. Hence, Livelihood diversification was operationalized by summing up standard scores (Z) of indices of abilities, assets and activities. From this a composite scores was obtained with minimum score of 62 and maximum of 142. Respondents' level of livelihood diversification was derived by using the below-and-above mean criterion to categorise them into low and high levels. In essence, respondents whose scores fell below the mean were categorised as having low level of livelihood diversification, while scores that fell on the mean and above were categorised as having high level of livelihood diversification.

4.9 Analysis of Objectives and hypotheses of the study

An analysis of the objectives and hypotheses of the study was carried out, as shown in Table 3. The data requirement and analytical tool are as indicated.

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Table 3

4.9 Analysis of objectives and hypotheses of the study

Objectives/Hypothesis	Meaning	Data Requirement	A Priori expected signs	Analytical Tool
1. Identify the socio-economic characteristics of rural respondents.	To examine the socio-economic characteristics of rural households	Socio-economic characteristics: <ul style="list-style-type: none"> • Age • Education • Household age • Income • Length of stay 	+ -	Descriptive Statistics
2. Determine the level of livelihood abilities of respondents.	To ascertain the level of livelihood abilities at the disposal of respondents to diversify their livelihoods.	<ul style="list-style-type: none"> • Age • Experience • Household size • Education • Labour 	+	Descriptive Statistics
3. Identify various activities engaged by the respondents.	To determine the extent of various livelihood activities the respondents are involved in	<ul style="list-style-type: none"> • Farming activities • Off-farm activities • Non-farm activities 	+	Descriptive Statistics
4. Determine respondents' level of livelihood assets.	To ascertain the level of livelihood assets available for the respondents to diversify their livelihoods	<ul style="list-style-type: none"> • Level of availability of livelihood assets. 	+	Descriptive Statistics
5. Determine reasons for respondents livelihood diversification.	To ascertain the reasons for the respondents livelihood diversification	<ul style="list-style-type: none"> • Sales only • Income • Sales & Consumption • Consumption only 	+	Descriptive Statistics
6. Ascertain specific season the respondents diversify their livelihoods.	To determine the season the respondents diversify their livelihoods	<ul style="list-style-type: none"> • Wet season • Dry season • Both season 	+	Descriptive Statistics
7. Identify sources of information of the respondents on livelihood diversification.	To ascertain the source(s) from which the respondents got information on livelihood diversification.	<ul style="list-style-type: none"> • Radio • Local association • Friends/Relatives • Extension Agent • Television 	+	Descriptive Statistics
8. Identify the constraints faced by the respondents to diversify their livelihoods.	To ascertain the problems faced by the respondents in the course of trying to diversify their livelihoods.	<ul style="list-style-type: none"> • Constraints to the extent of livelihood diversification. 	+	Descriptive Statistics

Objectives/Hypothesis	Meaning	Data Requirement	A Priori expected signs	Analytical Tool
Hypothesis 1: Test of the relationship between selected socio-economic characteristics and the level of livelihood diversification	To determine the socio-economic characteristics that influenced the respondents' livelihood diversification	<ul style="list-style-type: none"> Socio-economic characteristics Index of level of livelihood diversification 	+	Binomial Logit Regression
Hypothesis 2: Test of relationship between the constraints faced in the course of trying to diversify their livelihoods and the level of diversification.	To determine the extent to which constraints faced influence level of livelihood diversification	<ul style="list-style-type: none"> Index of constraints index of level of livelihood diversification 	+	PPMC
Hypothesis 3: Test of difference in the respondents' level of livelihood abilities, assets and activities across the states.	To find out the difference in the level of livelihood abilities, assets and activities across the states selected for the study.	<ul style="list-style-type: none"> Index of livelihood abilities, assets and activities. 		ANOVA
Hypothesis 4: Test of the difference in the level of livelihood diversification across the states	To find out the difference in the level of livelihood diversification across the states selected for the study.	<ul style="list-style-type: none"> Index of livelihood diversification 		ANOVA
Hypothesis 5: Test of contribution of the abilities, assets and activities of the respondents to the level of livelihood diversification across the states.	To find out the contribution of abilities, assets and activities to the level of livelihood diversification across the states selected for the study.	<ul style="list-style-type: none"> Index of abilities, assets and activities to the level of livelihood diversification 	+	Linear regression

4.10 Analysis of data

Data obtained from the study were coded and subjected to descriptive statistics such as mean, frequency counts and percentage distribution. Inferential statistics were used to determine the type of relationship and differences existing between the variable in the stated hypotheses. The stated hypotheses of the study were tested at 0.05 level of significance as follows:

Hypothesis 1- There is no significant contribution of selected socio-economic characteristics of respondents to their level of livelihood diversification.

Statistical tool used

Binomial Logit Regression Analysis

Hypothesis 2 - There is no significant relationship between the respondents' constraint to livelihood diversification and their level of livelihood diversification.

Statistical tool used

Pearson Product Moment Correction (PPMC)

Hypothesis 3 -There is no significant difference in the level of livelihood abilities, assets and activities of the respondents across the states of the study area.

Statistical tool used

Analysis of Variance (ANOVA)

Hypothesis 4 - There is no significant difference in the respondents' level of livelihood diversification across the states of study area.

Statistical tool used

Analysis of Variance (ANOVA)

Hypothesis 5 - There is no significant contribution of the abilities, assets and activities of the respondents to the level of livelihood diversification across the states of the study area.

Statistical tool used

Linear Regression

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CHAPTER FIVE

5.0 RESULTS AND DISCUSSION

5.1 Introduction

Chapter five presents the results of the study. It is divided into nine main sections which include; descriptive report of socio-economic characteristics of the respondents, livelihood abilities, activities engaged in by rural households, livelihood assets, factors responsible for respondents' livelihood diversification, season of livelihood diversification, source of information on livelihood diversification, constraints faced by the respondents in the course of diversifying their livelihoods and respondents' level of livelihood diversification as well as result of tested hypotheses.

5.2 Section 1: Description of respondents' socio-economic characteristics

5.2.1 Age

Age distribution of the respondents, as presented in Table 4 shows that 60.6 percent of the respondents were 55 years old and below while the mean age was 52.3 years. This suggests that majority of the respondents were in their productive age and have vigour to engage in livelihood activities. Age is an important factor when considering livelihood activities. This is because education, skills, access to capital assets and policy specificity vary across age groups. It has been argued that age, in some instances, could be an entry criterion for some livelihood activities (Bryceson, 2000, Gordon and Craig, 2001). This result is consistent with the reports of Fabusoro *et al.*

(2010) and Oyesola and Ademola (2011) who reported that most of the labour forces in rural areas of southwest Nigeria were of ages 20-55years. This is expected to have positive impact on rural livelihood diversification. Butler and Mazur (2004) asserted that livelihood diversification is higher in younger rural dwellers when compared with the older ones in Uganda. This is also expected to increase respondents' abilities in various livelihood activities they engage in.

5.2.2 Sex

The result in Table 4 shows that the majority (96.3%) of respondents were male, while 3.7 percent were female. This implies the dominance of male household heads over the females in the scene of rural income-generating activities. This result is in agreement with the claim of Ebitigha (2008) and Oludipe (2009) that males still dominate rural income-generating activities. Ekong (2003) also found that there are more male household heads of active productive age in the rural areas of southwest Nigeria than females. Hence, male dominance in income-generating activities is expected to impact positively on livelihood diversification of the respondents in the study area, as males are often considered more energetic and anxious to strive hard to improve their well-being, which is one of the expected outcomes of livelihood diversification.

5.2.3 Marital Status

The marital status as indicated in Table 4 shows that an overwhelming proportion (87.9%) were married, 2.2% single, 7.4% widowed and 2.1% divorced. The importance of marital status cannot be undermined when studying livelihood because of its influence on access to efficient use of livelihood assets as well as changing roles and

responsibilities. The implication of this result is that the respondents were responsible and mature adults who were likely to show more commitment to their work and wisely use available resources for different livelihood activities in which they are involved. While reiterating the importance of marriage in livelihood study, Ebitigha (2008) and Oludipe (2009) asserted that marriage can both increase access to livelihood assets, especially among women and thereby increase the level of their activities.

5.2.4 Educational Attainment

Table 4 shows the distribution of the respondents based on their highest level of education. Analysis of the result reveals that majority (62.2%) had no formal education, 23.8% had primary education, 6.2% had secondary education, 2.2% had tertiary education, 3.2% had adult education, while 2.5% had vocational training. The result indicates respondents' high level of illiteracy. This may significantly increase language barrier in communication with the resultant effect of low understanding and acceptance of policies that can promote accessibility and sustainability of livelihood. Oladeji and Oyesola (2000) observed that education plays a major role in information communication, as it is necessary for coding and decoding of information in some media. This result is in agreement with the study of Nasa, Atala, Akpoko, Kudi and Habib (2010) on rural livelihood diversification among rural households in Giwa Local Government Area of Kaduna State, Nigeria. This is an indication that the respondents in the study area may lack knowledge and skills which are products of education. This may likely reduce the extent of their livelihood diversification as a result of low human capital assets arising from a high level of illiteracy.

From the FGD sessions in Sawonjo Ogun State and Agbado in Ekiti state, participants noted as follows:

“....we don’t have access to education such as vocational and technical education. This may account for our unskillful ability and so we cannot diversify into non-farm activities that can increase our income and improved standard of living....”

5.2.5 Income

Table 4 also shows the distribution of the respondents based on their monthly income. Less than half of the respondents 27.4%, 20.2% and 15.3% earned between ₦5001 – N10000, ₦10001-N20000 and ₦20001-N30000 respectively as their monthly income. The mean income was ₦18851.85 while a few respondents (12.9%) earned between ₦30001-₦50000 per month. This is an indication that the monthly income level of the respondents in the study area is low. This result is contrary to that of Babatunde (2009), Oluwatayo (2009) in similar studies on livelihood diversification. They reported that rural households’ monthly income was high with mean amount of ₦65, 000. The result is however consistent with that of Oyesola and Ademola (2011), who reported a low mean income level of ₦35, 000 among rural households in Osun state, Nigeria. IDI section in Sunwa, Ogun state also showed this. According to the community leader;

“....because of some challenges such as bad road, lack of storage and marketing facilities that are facing us in this community, income realises from our livelihood activities is low....”

It is pertinent to measure the level of income in livelihood study because it has direct and vital implications for the level of livelihood activities as it is directly proportional to access to livelihood assets. This result depicts that the respondents may likely be more inspired to diversify their livelihoods in order to generate more income to alleviate poverty and prepare ground for vulnerability reduction, which is one of the aims of rural livelihood diversification. It is also envisaged that this low level of income may likely reduce respondents' access to livelihood assets, one of the main components of livelihood that have to effectively interplay with other livelihood components before meaningful and sustainable rural livelihood could be attained.

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Table 4: Socio-economic characteristics of respondents (N = 405)

Variable	Frequency	Percentage	Parameters
Age (Years)			
Less than 25	20	4.6	Mean = 52.3 SD = 10.97
26-40	45	11	
41-55	182	45	
56-70	138	34.1	
Above 70	20	4.9	
Sex			
Male	390	96.3	
Female	15	3.7	
Marital Status			
Single	9	2.2	
Married	356	87.9	
Widowed	30	7.4	
Divorced	10	2.5	
Education			
No formal education	252	62.2	
Primary education	96	23.7	
Secondary education	25	6.2	
Tertiary education	9	2.2	
Adult education	13	3.2	
Vocational training	10	2.5	
Monthly income in naira			
≤ 5,000	69	17	Mean = ₦18,851.85 SD = 16593.65
5,001 – 10000	111	27.4	
10,001 – 20,000	82	20.2	
20,001 – 30,000	62	15.3	
30,001 – 40,000	23	5.7	
40,001 – 50,000	29	7.2	
> 50,001	29	7.2	

Source: Field survey (2011)

5.2.6 Religion

The respondents' religious affiliations presented in Figure 7 shows that most of them were Christians (63.0%) while the Muslims were 32.8% and traditional religionists constituted just 4.2% of the sampled respondents. Religious belief is one of the major identities of most Nigerians. Religion is closely related to culture, so all rural development programmes and policies that will create an enabling environment for rural livelihood diversification should be within rural culture. This finding supports studies on livelihood diversification by Fabusoro *et al.* (2010) and Oyesola and Ademola (2011), who asserted that religious institutions can go a long way in determining livelihood activities in developing countries. Almost everyone is involved in one religion or the other in the study area. The implication of this is that the religious affiliations of the respondents may determine their livelihood activities and the extent of diversification.

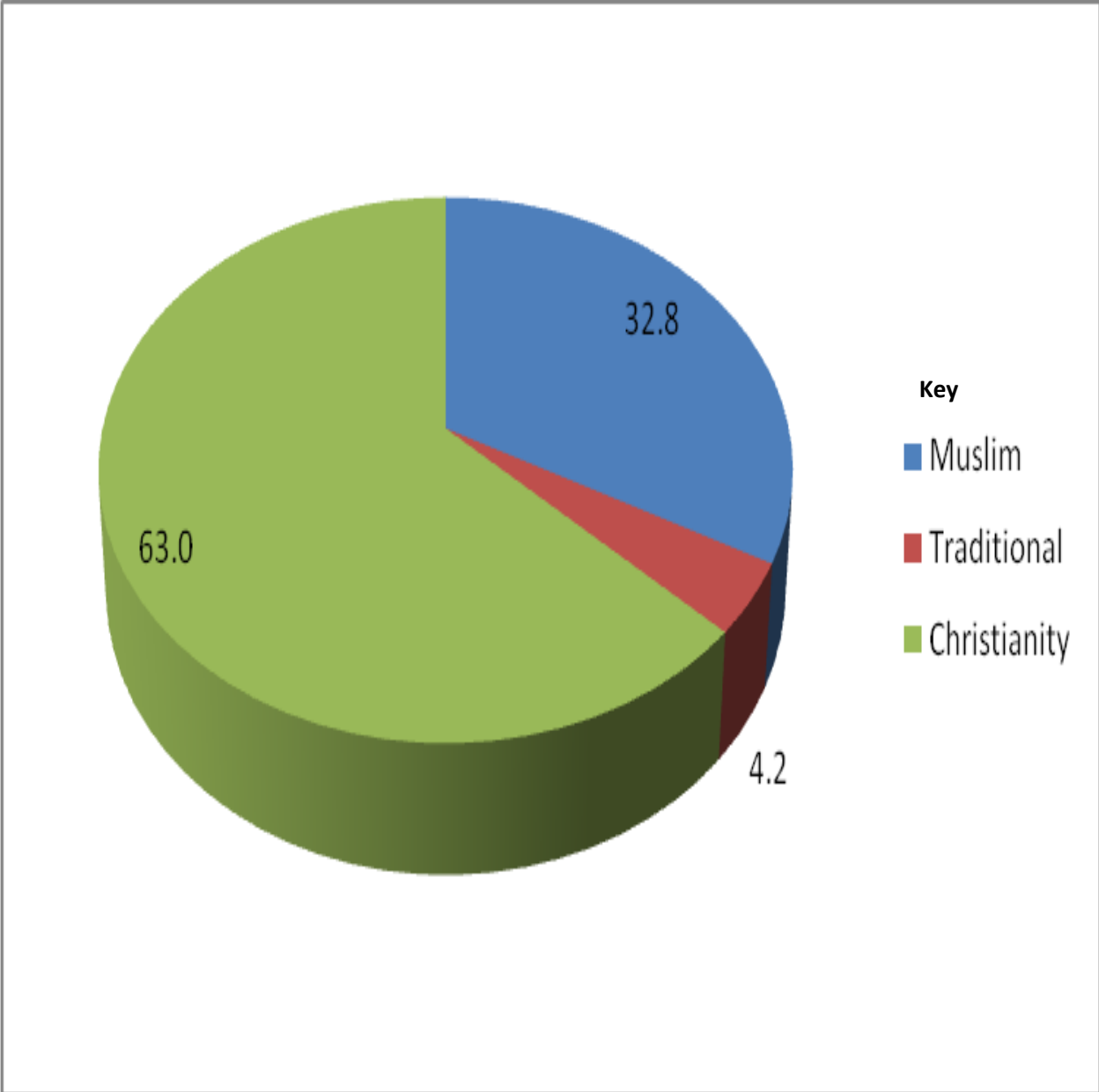


Figure 7: Distribution of the respondents by religion

5.2.7 Primary Occupation

Primary occupation is an activity one knows and engages in to make a living. As presented in Table 5 most of the respondents (57.3%) engaged in farming as their primary occupation. This is followed by artisanship, local trade, civil service and non-farm local services, with 17, 10.9, 11.4 and 3.4%, respectively. This supports the qualitative report that the zone is an agrarian one. Furthermore, FGD session conducted in Araromi Owu, Ayedaade LGA of Osun state, male participants remarked as follows:

“...farming is our primary occupation all other livelihood activities are secondary to us...”

This is in consonance with Fabusoro *et al.* (2010) and Oyesola and Ademola (2011) who reported that a larger percentage of rural dwellers in southwest Nigeria are farmers. The implication of this is that although many studies on rural livelihoods see agriculture as incapable of providing the needs of rural dwellers (Bryceson, 1996; Ellis, 2000; Adediran, 2008; Mustapha, 2009; Oluwatayo, 2009 and Fabusoro *et al.* 2010), which necessitates rural livelihood diversification, farming still remains their primary occupation. This implies that no matter the extent of rural livelihood diversification, rural households still hold on to farming as their primary means of livelihood. The income generated from farming could be used as take-off financial asset by the respondents to diversify into other livelihood activities which they feel can generate more income than farming.

5.2.8 Household size

The result in Table 5 reveals that most of the respondents (65.2%) had a household size of four to six persons. The mean household size was four point eight members and 21.0%, 12.8%, 0.7% of the respondents also had household size of between 1-3, 7-9, 10-12 respectively. This depicts a fairly large family size in the study area. This result corroborates those of Aderinto (2012) and Fabusoro *et al.* (2010) that a fairly large household size is dominant in rural Nigeria. This implies that a fairly large member of household in the study area is likely to have more diversified income sources if all the members are working and contributing to household welfare (Reardon 1997, Lawson 1999, Bryceson 1999, Edna, Mattew and Adosepe (2007)).

5.2.9 Respondents' Length of Stay in the Study Area

With regards to the length of stay of the respondents in the study area, table 5 reveals that most respondents fifty three point eight percent had been living in the study area for between (1-20) years. Twenty-seven point seven percent for between (21-40) years, while a few respondents seven point nine percent had been living in the study area for more than sixty years. This means that the majority of the respondents (81.5) had been living in the study area for between (1-40) years. Farming has been identified as respondents' main occupation (Table 5) and having stayed for many years in the study area might resulted to continuous use of land for farming with resultant effects of decline in soil fertility and farm outputs. This situation may induce respondents to shift emphasis from farming and diversify into other means of livelihood in order to better their well-beings.

5.2.10 Cosmopolitaness

Table 5 also reveals that most of the respondents (57.8%) travelled out of their communities at least once in two weeks. This shows that the respondents in the study area are well exposed and have high aspiration. Most of the journeys were made to urban centres for acquiring means of living and to visit relatives or family members. This is likely to have made them more enlightened, increased their access to information and contributed to their knowledge, skill and attitude which are resources for promoting livelihood activities. This result is however, in contrast with the findings of Nasa *et al.* (2010) and Vosank, Tari, Musa, Hammangabdo (2010) in related studies on livelihood diversification in Giwa Local Government Area of Kaduna state and Zing Local Government Area of Taraba state, Nigeria. They reported that rural household members are not cosmopolitan. But the result is in line with Adediran (2008), Fabusoro *et al.* (2010) and Oyesola and Ademola (2011) in Ogun and Osun state respectively. This infers that cosmopolitaness could be influenced by location. This result also suggests that respondents are likely to be well informed about various livelihood activities they can diversify into. This may be so as a result of their access to information through their frequent visits to urban centres

Table 5: Other characteristics of the respondents (N = 405)

Variables	Frequency	Percentage	Parameters
Primary occupation			
Farming	232	57.3	
Artisan	69	17	
Local trade	44	10.9	
Civil service	46	11.4	
Non-farm local service	14	3.4	
Household size			
1 – 3	85	21.0	Means = 4.82
4 – 6	264	65.2	SD = 1.88
7 – 9	52	12.8	
10 – 12	3	0.7	
Greater than 13	1	0.3	
Length of stay in the study area (years)			
1 – 20	218	53.8	
21 – 40	112	27.7	
41 – 60	43	10.6	
Above 60	32	7.9	
Cosmopolitaness			
Once in a Week	177	43.7	
Once in two weeks	57	14.1	
Once in three weeks	9	2.2	
Once in a month	95	23.5	
Once in several months	58	14.3	
Once in a year	9	2.2	

Source: Field survey (2011)

5.2.11 Source of Land Acquisition

The distribution of respondents by source of land acquisition captured in Figure 8 shows that most of them (73%) acquired their land through inheritance. Less than one tenth (8.9%) acquired their land through rentage while 6.2%, 3.5%, 3.2%, 2.7% and 2.5% acquired theirs land through purchase, share cropping, lease, gift and government tenancy respectively. This result is in line with that of Adeniran (2008), who reported inheritance as the main source of land of rural households in Ogun state. Access to land through inheritance among majority may be a pointer to the fact rural households are poor and could not afford land through other means other than the one transferred to them through family connection. This implies that respondents who wish to diversify their means of living into an activity that is land based or needs land to take off meaningfully may be limited as far as expansion of their livelihood base is concerned. It can also be implied that such respondents will find it difficult to record reduction in poverty and be food-secured which are part of the expected outcomes of livelihood diversification.

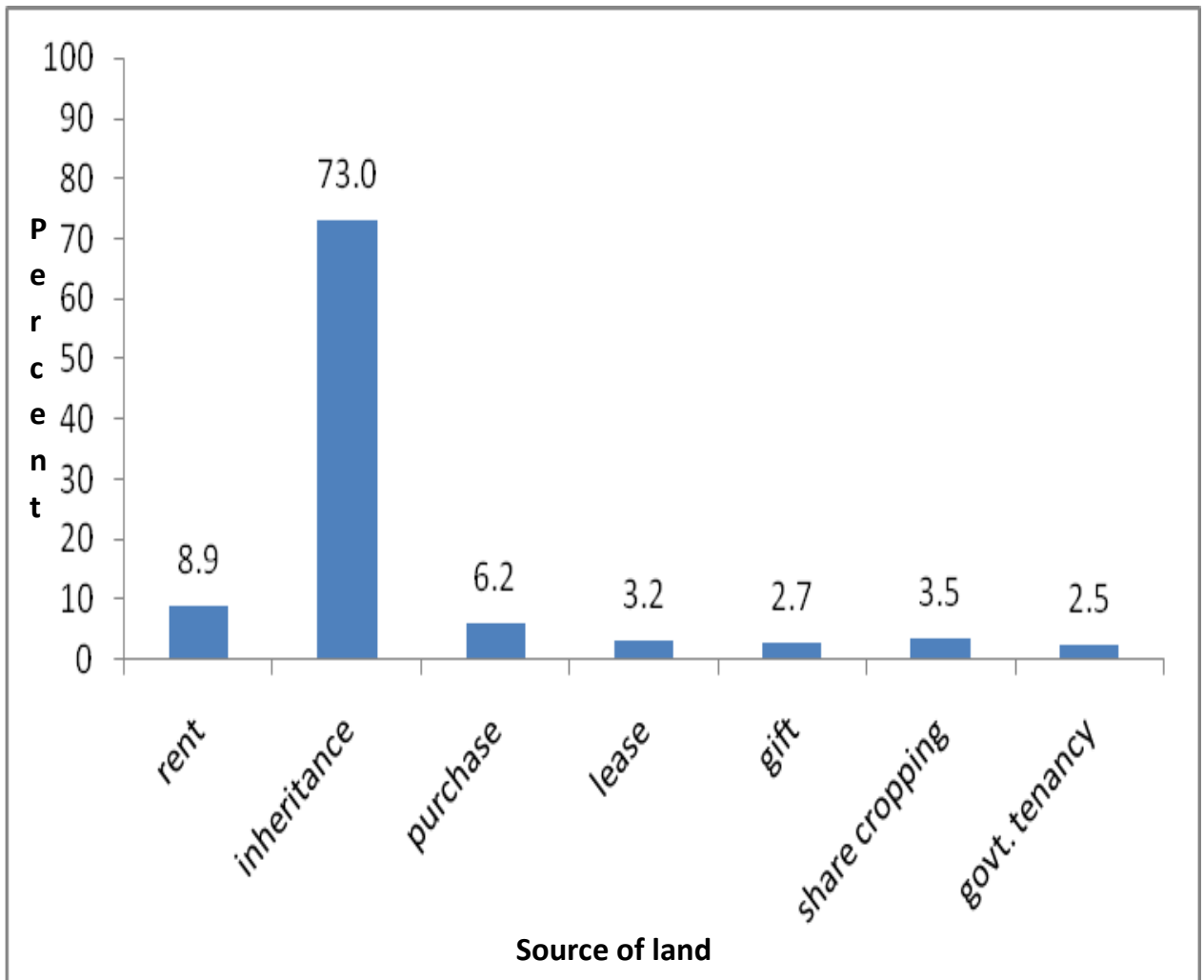


Figure 8: Distribution of the respondents according to source of land

5.3 Section 2: Livelihood ability of the respondents

5.3.1 Components of ability

Result of analysis in Table 6 revealed that majority of the respondents (87.6%) were in their active years (16-60years) which implies that their potential to engage in various income generating activities is high, thereby enhancing their livelihood abilities.

However, majority of the respondents (78%) had access to social group support only as against few (22%) who had access to extension support. There is therefore still the need for extension support in terms of capacity building in various aspects of livelihood in the context of changing times in the study area. Many of the respondents (62.2%) had no formal education. This may implies low potential ability for livelihood diversification in the study area. However, this lack of formal education does not preclude the presence of non-formal education in the area. Moreover, the presence of strong social group support (78%) is expected to counteract the short fall in formal education. Most of the respondents (87.5%) had over 10 years' experience in their chosen livelihoods. This implies high abilities. The results further reveal that majority of the respondents (76.5%) spent 6-11hours working daily. This also indicated high ability.

Table 6 also shows that majority of the respondents (65.2%) had family size of between 4-6. This shows that the respondents generally have large family size which makes more hands to be available for economic activities thereby increasing potential abilities.

Table 6: Distribution of respondents according to components of ability

Component of ability	Frequency	Category	Percentage
• Age in years			
1-15	21	Active (16-60) Less active (< 16 % >60) (dependent)	87.6
16-30	57		
31-45	95		
46-60	203		
>60	29		
• Household size			
1-3	85		21.0
4-6	264		65.2
7-9	52		12.8
10-12	3		0.7
>13	1		0.3
• Support			
Social group	316		78
Extension	89		22
• Education			
No formal education	252	No formal education	62.2
Primary education	96		
Secondary education	25	Formal and Non-formal education	37.8
Tertiary education	9		
Adult education	13		
Vocational training	10		
• Experience in years			
1-10			
11-20	51		12.5
21-30	104		25.7
31-40	129		31.9
41-50	87		21.5
>50	23		5.7
	11		2.7
• Labour (hours/day)			
1-5	34		8.4
6-11	311		76.8
>11	60		14.8

Sources: Field survey, 2011

5.3.2 Level of livelihood abilities

Aggregation of the scores for livelihood abilities in Table 7 reveals that 51.4% of the respondents had high level of livelihood ability while 48.6% had low level of livelihood ability.

Ellis (2000a) avers that livelihood ability does not only include sheer physical labour but also knowledge, age, support, skills and years of experience. This result implies that respondents in the study area have an appreciable level of ability that is expected to increase their livelihood diversification. However, there is still the need for extension support in terms of capacity building in various aspects of livelihood respondents may engage and provision for educational opportunities, especially formal education for increase in knowledge and development of entrepreneurship skills.

Table 7: Distribution of respondents based on level of livelihood abilities

Level of livelihood Abilities	Score Range	Frequency	Percentage	Mean	SD
Low	31.00- 63.26	197	48.6	63.27	12.5
High	63.27-103.00	208	51.4		

Source: Field survey (2011)

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5.4 Section 3: Livelihood activities engaged in by rural households in the study area

From the livelihood diversification typology adopted, drawing experience from the studies of Shylendra and Thomas (1995) and Fabusoro *et al* (2010), six categories of livelihood activities were identified. Table 8 highlights the various activities under each category and the percentage involved in each activity. The own-farm work is essentially working on personal farm in crop, livestock or fish farming. It is clearly observed in Table 8 that all the respondents were involved in at least one of these three.

Most of the respondents (84.4%) and (84%) were involved in arable and tree crop farming. Nearly half of the respondents (42.7%) were involved in livestock farming while only a few (11.6%) engaged in fish farming. From the opinion sought during FGD on the relevance of farm work to livelihoods and whether they would leave farming, it was noted that rural households would never leave farming even if they make very high income from other sources. This was a comment at one of the study locations from the FGDs.

“We cannot leave farming,

If we can't have enough money to spend,

We should be able to have food to eat.

This is what farming does for us;

At least, we will be able to feed our family.....”

Other reasons provided by Bryceson (1996) on the question of why people still continue to engage in agricultural activities despite high involvement in non-farm activities include: the relatively high cost of purchased food and drastic cutbacks in government social services provision, which made village life and agrarian livelihoods a vital refuge, and people's attachment to the values of their agrarian ancestors. The result also reveals that nearly half of the respondents (49.4%) were involved in off-farm processing activities.

Less than half of the respondents (44.1%) engaged in non-farm local services, such as carpentry (3.5%), shoe making (0.7%), motor repair (3.2%), tailoring (5.7%), barbing/hair plaiting (9.42%) among others. This low level of the respondents' involvement in these activities, as shown in Table 8 might be due to the fact that some of these activities require skill, market availability, necessary rural infrastructural facilities and nearness to road and urban centres, with which rural dwellers are often constrained.

The foregoing shows that majority of the respondents may not have access to market facilities and skills that can make them to be favorably disposed to livelihood diversification. The result also shows that more than a quarter of the respondents (35.0%) were into different local trades and women were found showing an appreciable higher trend in petty trading, sales of processed agricultural products and food vending. Local formal employment and migratory wage services were noted not to be common in the study area as a few number of the respondents, who constituted 8.4% and 2.2% respectively engaged in them. The inference that could be drawn from this result is that, despite non-farm livelihood activities that are springing up in rural Nigeria, agriculture still engages an overwhelming population of rural households more than other livelihood

activities. This situation calls for concern, as it has been argued by Krishnan (1996), Bryceson and Jarnal (1997), Little *et al.* (1997), and Ellis, Barret and Webb (2001) that farming on its own rarely provides a significant means of survival in rural areas of low income countries, including Nigeria.

The inference that could also be drawn from this result is that the study area lacks enabling environment for sustainable non-farm livelihood activities and if this situation is not corrected it may impact negatively in the long run on livelihood diversification of rural households.

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Table 8: Distribution of the respondents by livelihood activities engagement

Livelihoods category	Livelihood activities	Frequency*	Percentage
Own Farm	Arable farming	342	84.4
	Tree crops		
	<i>Cocoa</i>	158	39.0
	<i>Cashew</i>	19	4.7
	<i>Oil palm</i>	121	29.9
	<i>Kolanut</i>	40	9.9
	Livestock	173	42.72
	Fish farming	47	11.6
Off-farm/processing activities	Cassava processing	177	43.7
	Oil palm processing	23	5.7
	Hunting	27	6.7
	Milling of farm products	45	11.1
	Grinding of pepper	24	5.93
	Gathering and selling of NTFPs	10	2.47
	Palm tapping	10	2.47
	Non farm local services	Transportation	17
Carpentry/furniture		14	3.5
Tailoring		23	5.7
Motor Mechanic		13	3.21
Shoe making		3	0.7
Rentals		10	2.5
Barbing		19	4.7
Hair plaiting		19	4.7
Blacksmith		9	2.2
Clergy work		9	2.2
Vulcanizing		8	2.0
Butchery		4	1.0
Soap making/selling		3	0.7
Brickmaking/laying		19	4.7
Welding		1	0.2
Local trade	Petty Trading	67	17.0
	Sales of processed Agric. Products	50	12.3
	Food vending	13	3.2
	Water Trading	2	0.5
	Estate Management	9	2.2
	Local formal employment	Teaching	23
Nursing		2	0.5
LGA civil servant		4	1.0
LGA night guard		5	1.2
Migratory wage services	Unskilled casual jobs and skilled casual jobs	9	2.2

*Multiple Responses

Source: Field survey (2011)

5.4.1 Respondents' level of livelihood activities

Table 9 shows that 66.4% of the respondents had low level of livelihood activities (agricultural and non-agricultural) while 33.6% had high level of livelihood activities. This result might due to low level of livelihood assets and high constraints as revealed by this study.

DFID (2001) states that livelihood activities are economic activities that people know, own and undertake to earn income today and in the future. The livelihood activities undertaken by the people are shaped by their inherent capabilities and assets. In a related study in rural Nigeria and specifically in Giwa Local Government area of Kaduna state, Nigeria by Babatunde (2009) Nasa *et al.* (2010) level of livelihood activities was found to be low due to some constraints like low livelihood assets and ineffective rural development programmes. The implication of this result is that respondents in the study area may not be able to have increased in incomes, reduction in the level of poverty, less vulnerability, food-secured and improved well-being. All these are expected outcomes of effective livelihood diversification that could be attained through interaction of abilities, assets and high livelihood activities.

Table 9: Distribution of the respondents according to level of livelihood activities

Level of livelihood activities	Score Range	Frequency	Percentage	Mean	SD
Low	0.00 – 3.14	269	66.4	3.15	1.27
High	3.15 - 800	136	33.6		
Total		405	100		

Source: Field survey (2011)

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5.5 Section 4: Respondents' level of livelihood assets

Table 10 shows that the levels of each of the livelihood assets (natural, physical, human, financial and social) were low. The aggregate level of livelihood assets in table 11 also reveals that majority (56.3%) of the respondents in the study area had low access to livelihood assets while less than half of the total respondents (43.7%) had high access to livelihood assets. This implies that respondents' livelihood asset is low and this may have adverse effect on their abilities to diversify into meaningful and profitable livelihood activities that can bring higher returns, thereby improving their well-being. This corroborates Clay, Kelly, Mypyisi and Reardon (2002) who assert that livelihood assets are often hypothesized to affect the capacity of rural households to diversify their livelihoods. From the FGD session in Asa Obi Atakumasa West LGA of Osun state, the female participants made this assertion:

“...we don't have access to natural, physical and financial assets such as land, means of transport and formal financial facilities. The only financial assets at our disposal are informal credit and saving (ajo) and informal credit and thrift (esusu). And this incapacitated us for effective livelihood diversification...”

Table 10: Distribution of respondents according to level of components of livelihood assets

Livelihood asset	Level	Range	Frequency	Percentage
• Natural asset	Low	0 – 0.0913	394	97.3
	High	0.0914 - 6.00	11	2.7
• Physical asset	Low	2.00 – 10.4197	237	58.5
	High	10.4198 – 28.00	168	41.5
• Human asset	Low	0 – 7.4518	231	57.0
	High	7.4519 – 27.00	174	43.0
• Financial asset	Low	0 – 1.3777	246	60.7
	High	1.3778 – 4.00	159	39.3
• Social asset	Low	15 – 18.0493	262	64.7
	High	18.0494 – 20.00	143	35.3

Source: Field survey, 2011

Table 11: Respondents' level of livelihood assets

Level of livelihood assets	Score Range	Frequency	Percentage	Mean	SD
Low	17.00-37.38	228	56.3	37.39	11.67
High	37.39-85.00	177	43.7		
Total		405	100		

Source: Field survey (2011)

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5.6 Section 5: Factors responsible for respondents' livelihood diversification

Result from Table 12 reveals that rural households in the study area diversified their livelihoods for four main factors: sale only, household consumption, risks reduction, sale and consumption. The majority (72.4%) of the respondents diversified into arable crop farming for sale and consumption. More than a quarter (31.9%) engaged in cassava processing and oil processing (18.8%) as parts of off-farm activities for sales and consumption. The respondents were also involved in non-farm activities like carpentry (7.6%), transportation (2.5%) and barbing/hair plaiting (3.7%) for reduction of risk while a few respondents (1.24%) that involved in livestock production did so for consumption purposes. The results further reveal that 49% of the respondents diversified into tree crop production for sales only. This may be a means of getting enough money in order to meet the need of the households. Past researches on rural livelihoods show that rural economy no longer depends solely on agriculture but rather on the concept of livelihood diversification as a strategy in meeting their basic needs in developing countries (Ellis, 1999). The finding, therefore, implies that the respondents' factors responsible for diversification vary across individuals.

Table 12: Distribution of respondents based on factors responsible for livelihood diversification (N = 405)

Activities	Sale only	Household Consumption	Sale and Consumption	Reduction of Risks	Not involved
Own Farm	%	%	%	%	%
Arable farming	0.20	8.40	72.38	3.46	15.6
Cocoa	39.0	0.00	0.00	0.00	61.0
Cashew	4.7	0.00	0.00	0.00	95.3
Oil palm	2.96	1.76	15.06	10.12	70.1
Kolanut	2.47	0.00	6.17	1.23	90.1
Livestock	2.22	1.24	38.27	0.99	57.28
Fishing	5.20	0.00	2.40	4.00	88.40
Off-farm					
Cassava processing	1.23	7.65	31.9	2.96	56.3
Oil processing	0.24	2.22	18.8	1.48	94.3
Hunting	0.74	0.25	3.70	1.98	93.3
Milling farm products	0.99	0.00	0.49	9.63	88.89
Grinding pepper	0.49	0.00	0.25	5.19	94.07
Gathering and selling of NTFPs	0.0	0.00	1.73	0.74	97.53
Palm tapping	0.49	0.00	0.25	1.98	97.53
Non-farm					
Transportation	1.48	0.25	0.00	2.5	95.8
Carpentry	1.48	0.00	0.00	7.6	96.5
Tailoring	2.47	0.00	0.00	3.2	94.3
Motto mechanic	1.48	0.00	0.00	1.73	96.8
Shoe making	1.00	0.00	0.00	0.25	99.3
Rentals	2.00	0.00	0.00	2.22	97.5
Barbing	1.00	0.00	0.00	3.7	95.3
Hair plaiting	0.00	0.00	0.00	2.7	95.3
Blacksmith	0.49	0.00	0.00	1.2	97.8
ulcanizing	0.74	0.00	0.00	1.2	98.0
Pottery	0.21	0.00	0.00	0.49	99.3
Mat making	1.2	0.00	0.00	0.00	98.8
Soap making and selling	0.5	0.00	0.00	0.00	99.5
Brick making and laying	0.99	0.00	0.00	3.7	95.3
Local trade					
Estate management	0.99	0.00	0.00	1.23	97.8
Sales of processed agric. products	0.00	0.00	1.48	10.82	87.7
Petty trading	4.20	0.49	0.00	11.81	83.5
Food vending	0.74	0.00	0.49	1.97	96.8
Selling of water	0.50	0.00	0.00	0.00	99.5
Local formal employment					
Teaching	3.40	0.00	0.00	2.0	94.6
Nursing	0.0	0.0	0.0	0.5	99.5
LGA civil service	0.0	0.0	0.0	0.9	99.1
LGA Night guard	0.0	0.0	0.0	1.2	98.8
Migratory wage services					
Unskilled and skilled casual jobs	2.2	0.00	0.00	0.0	97.8

Source: Field survey (2011)

5.7 Section 6: Season of livelihood diversification by the respondents

The result in Table 13 shows that majority (76.3%) of those that diversified into arable crop farming and cash crops (75.0%) did so in both wet and dry seasons. The result shows that more than a quarter of the respondents (29.9%) diversified into cassava processing throughout the year. The respondents were also involved in local trade such as sale of agricultural products (12.3%) and petty trading (16.5%) in both seasons of the year. The result further reveals that 4.7% of the respondents were involved in palm oil processing, hunting (5.7%), milling of farm products (11.1%) in both seasons of the year. Other livelihood activities the respondents engaged in throughout the year included transportation (4.0%), tailoring (5.7%), barbing (4.7%), hair plaiting (4.7%), brick making/laying (3.2%).

This implies that the respondents are seriously pursuing their livelihood activities in order to meet their household needs. The involvement of the respondents in the various activities during both seasons also attests to the fact that rural households diversified their activities and are involved in more than one livelihood activity throughout the year. This finding is in agreement with the report of Fabusoro *et al.* (2010) who carried out a similar study in Ogun state and reported that rural households diversified their livelihoods in both wet and dry seasons of the year.

It could be further implied that inspite of risk associated with agriculture and variation in climatic conditions of wet and dry season of the year, respondents still strived hard to diversify into farm and non-farm activities. Effort to provide needs of the family adequately may account for continuous engagement of rural households in various livelihood activities at the both seasons of the year. Results of FGDs conducted in Osun state support this finding as participants made this assertion:

“With the economic situation in the country, we can’t be waiting for government to provide our needs, particularly basic needs: food, cloth and shelter. Therefore, we have to strive hard to meet these needs regardless of climatic variation of the season.....”

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Table 13: Distribution of respondents based on season livelihood activities are practiced (N = 405)

Activities	Wet Season	Dry Season	Both Seasons	Not involved
Own Farm	%	%	%	%
Arable farming	7.6	0.5	76.3	15.6
Cocoa	1.5	0.5	36.0	61.0
Cashew	0.00	0.0	4.7	95.3
Oil palm	0.7	2.2	27.0	70.1
Kolanut	0.0	2.5	7.4	90.1
Livestock	0.0	0.0	42.8	57.2
Fish farming	0.2	2.3	9.1	88.40
Off-farm activities				
Cassava processing	0.0	13.8	29.9	56.3
Oil processing	0.0	1.0	4.7	94.3
Hunting	0.0	1.0	5.7	93.3
Milling farm products	0.0	0.0	11.1	88.89
Grinding pepper	0.0	0.0	5.93	94.07
Gathering and selling NTFPs	0.0	0.47	2.0	97.53
Palm wine tapping	0.0	0.0	2.47	97.53
Non-farm activities				
Transportation	0.0	0.2	4.0	95.8
Carpentry	0.0	0.0	3.5	96.5
Tailoring	0.0	0.0	5.7	94.3
Motor repair	0.0	0.0	3.2	96.8
Shoe making	0.0	0.0	0.7	99.3
Rentals	0.0	0.0	2.5	97.5
Barbing	0.0	0.0	4.7	95.3
Hair plaiting	0.0	0.0	4.7	95.3
Blacksmith	0.0	0.0	2.2	97.8
Clergy	0.0	0.0	2.2	97.8
Vulcanizing	0.0	0.0	2.0	98.0
Butchery	0.0	0.0	1.0	99.0
Pottery	0.0	0.0	0.7	99.3
Mat making	0.0	0.0	1.2	98.8
Soap making and selling	0.0	0.0	0.5	99.5
Brick making and laying	0.0	1.5	3.2	95.3
Welding	0.0	0.0	0.3	99.7
Local trade				
Estate management	0.5	0.5	1.2	97.8
Sales of processed agric. products	0.0	0.0	12.3	87.7
Petty trading	0.0	0.0	16.5	83.5
Food vending	0.0	0.0	3.2	96.8
Selling of water	0.0	0.0	0.5	99.5
Local formal employment				
Teaching	0.0	0.0	5.4	94.6
Nursing	0.0	0.0	0.5	99.5
LGA civil service	0.0	0.0	0.9	99.1
LGA night guard	0.0	0.0	1.2	98.8
Migratory wage services	1.0	0.0	1.2	97.8

Source: Field survey (2011)

5.8 Section 7: Respondents' sources of information on livelihood diversification

Table 14 presents respondents' sources of information on livelihood diversification. Result reveals that majority of the respondents (89.92) obtained their information always from the radio.

More than half of the respondents (58.5%) sometimes got information through neighbours/relatives. The result also revealed low level of the use of extension agents (22.0%) as source of information on livelihood diversification. Radio, being the most accessible respondents' source of information might be due to the fact given by the respondents that radio is affordable and its use as source of information on livelihood diversification does not rely on availability and constant supply of electric power. During FGDs discussants also remarked that radio has impacted positively on them by providing timely and needed information on various livelihood activities they can diversify into by using understandable local languages to broadcast. This result is in agreement with the claim of Ajayi (2003), Ayansina and Ayandiji (2007) that the use of radio is the most popular source of information in rural southwestern Nigeria. The implication of this result is that since the respondents had access to radio and farmers' association, it is expected that they may not likely be cut-off from receiving timely information on various livelihood opportunities both within and outside their communities which they can diversify into for better living. The reports of FGD sessions conducted in Ayila/Itebu in Ogun water side LGA of Ogun state and Obagun in Ifelodun LGA of Osun state also consistent with this result, as male participants noted as follows:

“...radio is our main source of information on livelihood diversification. We don't have access to regular use of television and other electronics for information....”

Table 14: Distribution of the respondents according to their information sources

Sources	Frequency*	Percentage
Radio	364	89.9
Neighbours/Relatives	237	58.5
Friends	165	40.7
Television	146	36.0
Extension Agent	89	22.0
Farmers' Association	54	13.3
Newspaper	20	4.9
Internet	2	0.5

***Multiple Responses**

Source: Field survey (2011)

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5.9 Section 8: Respondents' constraints to livelihood diversification

Rural households' livelihood diversification in the study area associated with some challenges. Table 15 shows that most respondents (91.9%) observed that inadequate basic rural infrastructural facilities is a severe constraint. Also, 82.0%, 66.9%, 37.8% and 30.1% of the respondents respectively identified inadequate livelihood assets, poor transportation system, inadequate credit and marketing facilities as severe constraints to their level of livelihood diversification, this is in line with the information obtained during the FGDs and IDIs, where most of the respondents said they were being constrained by inadequate livelihood assets to diversify their livelihoods.

Non-implementation of government rural development policies and programmes may account for inadequate livelihood assets and basic rural infrastructure. This implies that most of the respondents may not be able to diversify into livelihood activities that require availability and accessibility of basic rural infrastructural facilities, adequate livelihood assets as well as credit and marketing facilities. This result is corroborated by Fabusoro *et al.* (2010) and Nasa *et al.* (2010) who carried out similar studies in Ogun and Kaduna state of Nigeria and reported that aforementioned severe constraints militating against rural households' livelihood diversification.

Table 15 also revealed that community culture was the least severe constraint. This also supports the finding of qualitative reports which show that community culture has infinitesimal effect on rural livelihood diversification. This finding is in contrast with Vosank *et al.* (2010) who found that culture of the community has a great influence on respondents' level of livelihood diversification in the northern Nigeria. This is an indication that constraints to rural livelihood diversification are location specific. The overall implication of this result is that the respondents' level of livelihood diversification may likely limited due to high constraints.

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Table 15: Distribution of the respondents based on constraints to livelihood diversification

(N = 405)

S/N	Constraints	Not a Constraint	Mild Constraint	Severe Constraint	Weighted Score
1.	Poor transportation systems	23.7	9.4	66.9	143.2
2.	Inadequate livelihood assets	14.8	3.2	82.0	167.2
3.	Unfavourable government policy	74.8	20.8	4.4	29.6
4.	Poor storage facilities	82.7	8.4	8.9	26.2
5.	Poor marketing facilities	56.8	13.1	30.1	73.3
6.	Lack of information	93.8	5.5	0.7	6.9
7.	Inadequate farm inputs	96.5	1.8	1.7	5.2
8.	Economic risk	89.6	8.7	1.7	12.1
9.	Environmental degradation	93.5	4.00	2.5	9.0
10.	Epileptic power supply	56.8	22.5	20.7	63.9
11.	Pest and diseases	93.1	5.9	1.0	7.9
12.	Inadequate credit facilities	35.8	26.4	37.8	102
13.	Inadequate land	95.6	3.2	1.2	5.6
14.	Community culture	97.5	2.5	0.0	97.5
15.	Inadequate skills	88.6	9.4	2.0	13.4
16.	Conservatism	97.0	0.5	2.5	5.5
17.	Lack of basic infrastructural facilities	6.7	1.4	91.9	185.2

Source: Field survey (2011)

5.10 Categories of severity of constraints to livelihood diversification

Table 16 reveals that 49.1% of the respondents' assessed the constraints as being of low severity, while 50.9% observed them as being of high severity. This result suggests that the level of constraints which limit respondents' livelihood diversification was high, as more than half (50.9%) assessed them as being of high severity. This result corroborated the findings of Ogunbamiwo (2008), Oyesola and Ademola (2011) in similar studies of livelihood diversification. They also reported high level of severity of constraints among rural households. This implies that livelihood diversification of the respondents may be negatively affected as a result of high severity of constraints. The resultant effect of this is that the respondents may not be able to diversify their livelihoods as they wish.

Table 16: Distribution of respondents by level of severity of constraints

Level	Score Range	Frequency	Percentage	Mean	SD
Low	4.00 - 13.46	199	49.1	13.47	3.007
High	13.47 - 25.00	206	50.9		
Total		405	100		

Source: Field survey (2011)

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5.11 Problem tree analysis

During the FGDs, participatory tools were utilized. Problem tree analysis was one of these tools. Olawoye (2004) describes problem tree as a participatory tool that enables the participants to understand effects of a problem in terms of the causes and thereby proffer solutions or activities to overcome the problem.

Figure 9, illustrates the composite of the results from this exercise, with several groups. The problem given to the participants of the analysis was livelihood diversification. Participants were asked to give causes of livelihood diversification as the 'root' of the problem and consequences (effects) of those conditions as the 'leaves' of the tree. The participants viewed compounded poverty, vulnerability, malnutrition, low income, poor health, land fragmentation, unaccess livelihood facilities, low ability for diversification and high level of illiteracy as effects of conditions, while food insecurity, lack of adequate information, inadequate land, lack of education, large household size, lack of access to credit facilities, lack of livelihood assets and inadequate infrastructural facilities were the root cause of the problem. This implies that the more the root cause of this problem is not given serious attention or consideration, the greater the manifestation of this effect on the wellbeing of rural households in southwest Nigeria.

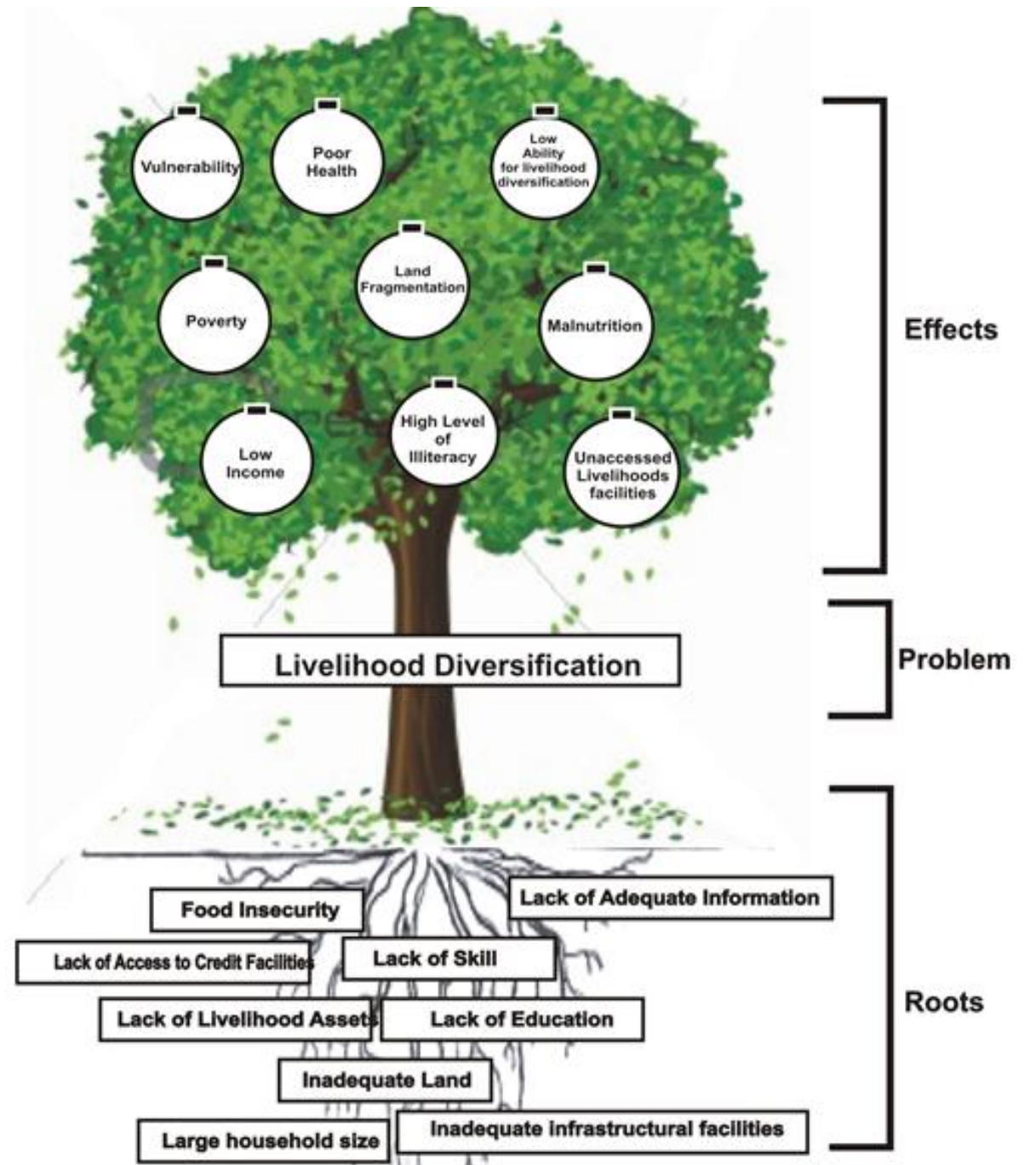


Figure 9: Results of problem tree analysis on causes and effects of the Rural Households Livelihood Diversification

5.12 Section 9: Level of livelihood diversification

Results of respondents' level of livelihood diversification presented in Table 17 shows that majority (53.1%) had low level of livelihood diversification, while 46.9% of the respondents were in high category of livelihood diversification. This implies that more than half of the respondents diversified their livelihoods at low level. This result is not in conformity with the results of Bryceson (1996), Barrett and Reardon (2000) and Nasa *et al* (2010) in Giwa Local Government Area of Kaduna state, Nigeria on livelihood diversification. They reported that rural households highly diversified their livelihoods. This result is, however, in line with that of Ogunbamiwo (2008) and Fabusoro *et al.* (2010), who reported that rural households diversified their livelihoods at low and modest levels.

The outcome of this study might be due to some severe constraints faced by the respondents, such as low level of assets, inadequate rural infrastructural facilities, and irregular power supply among others that militate against favorable rural environment for livelihood diversification in the study area. This result also suggests that government, NGOs and other rural development agencies still have a long way to go in making rural areas in southwestern Nigeria conducive to livelihood diversification. This could be achieved by re-strategizing their approach, which is top-down, emphasizing alleviation of rural poverty, and using the bottom-up approach to focus mainly on rural livelihood diversification, which has been advocated as an antidote for improvement of rural life.

Table 17: Distribution of respondents according to level of livelihood diversification

Level of livelihood Diversification	Score Range	Frequency	Percentage	Mean	SD
Low	62.00-96.35	215	53.1	96.36	14.55
High	96.36–142.00	190	46.9		
Total		405	100		

Source: Field survey (2011)

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5.13 Results of hypotheses testing

All hypotheses were stated in null form and this section reports the results of data analysis with which the hypothesis of the study were tested.

5.13.1 Contribution of socio-economic characteristics to level of livelihood diversification of the respondents

This hypothesis was analysed using the binomial logit regression.

Table 18 shows that, among the socio-economic characteristics of the respondents, primary occupation ($\beta = 0.641$, $p < 0.05$), income ($\beta = 0.162$, $p < 0.05$), other income ($\beta = 0.291$, $p < 0.05$), length of stay ($\beta = 0.278$, $p < 0.05$) frequency of visit to urban centres ($\beta = 0.254$, $p < 0.05$) contributed significantly to the level of livelihood diversification of the respondents. The implication of this finding is that some primary occupations allow respondents to engage in some other livelihood activities. This means that the level of livelihood diversification in southwest Nigeria is a function of the type of primary occupations such rural households may engage in. This is in agreement with Butler and Mazur (2004), who assert that primary occupation is a key determinant of rural households' livelihood diversification.

Furthermore, income and other income, apart from primary occupations are significant factors in the level of livelihood diversification. This result is also consistent with the claim of Babatunde (2009), Gordon and Craig (2001) and Fabusoro *et al.* (2010), that income at the disposal of rural households can go a long way in increasing financial capability to engage in various livelihood activities in order to better their living; and that income from other sources can be a driving force for livelihood diversification.

The result of analysis reveals that the length of stay of the respondents in the study area is a determinant of level of livelihood diversification. The length of stay of each household in the study area influenced the level of livelihood diversification positively. The reason may be due to the fact that the long period of stay may provide social, financial and resource opportunities which translate into higher level of livelihood diversification of rural households. Another important determinant of the level of livelihood diversification in the study area is frequency of visit to urban centres, although it has coefficient (β) of -0.254, indicating a negative but significant ($P < 0.05$) contribution to the level of livelihood diversification of the households. This implies an inverse contribution between frequency of visit to urban centres and the level of livelihood diversification of respondents. This may be as a result of the low level of livelihood assets in the study area, as found in Table 11, which poses a serious constraint to livelihood diversification.

Table 18: Regression table showing contribution of socio-economic characteristics to respondents' level of livelihood diversification

Variables	Coefficient (β)	t-value	p-value	Decision
Constant	-1.985	-1.786	0.0741	
Age	0.125	0.096	0.923	NS
Sex	-0.138	-0.433	0.665	NS
Marital status	0.156	0.490	0.642	NS
Education	-0.814	-1.461	0.144	NS
Religion	0.563	0.267	0.789	NS
Primary occupation	0.641	2.659	0.008	S
Income from primary occupation	0.162	2.749	0.004	S
Other income	-0.219	2.927	0.003	S
Household size	0.223	1.186	0.235	NS
Length of stay	0.278	4.224	0.000	S
Frequency of visit to urban centres	-0.254	-3.342	0.008	S

NS = Not significant,

S= significant,

5.13.2 Relationship between constraints and level of livelihood diversification of respondents

The result of the analysis in Table 19 shows that there is a significant negative relationship between the level of constraints ($r = - 0.130$, $p = 0.009$) that the respondents faced in their livelihood activities and their level of livelihood diversification. This implies that the level of constraints to livelihood diversification in the study area significantly reduced their extent of livelihood diversification. Therefore, the null hypothesis is rejected. According to Edna *et al* (2007), constraints faced by rural households go a long way in limiting the extent of their livelihood diversification. This may lead to poverty and inability to maintain a good standard of living.

Table 19: Correlation between constraints to livelihood diversification and level of livelihood diversification of respondents

Variable	r-value	P-value	Decision
Constraints to livelihood diversification	-0.130	0.009	Significant

P = 0.05

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5.13.3 Differences in the level of livelihood assets of respondents across Ogun, Ekiti and Osun States

Result of analysis in Table 20a shows that there was a significant difference in respondents' level of livelihood assets across the three states selected for the study - ($F = 35.905, p < 0.05$). A Post Hoc test of multiple comparisons Table 20b also supported this finding. The result is therefore interpreted as rural households in Ekiti state have the highest level of livelihood assets, followed by Ogun state, and then Osun state the least level of livelihood assets. From the FGDs conducted across the state, the participants remarked lack of essential components of livelihood assets: physical assets such as motorcycle and cars, processing and storage facilities, formal financial institutions and accessibility to quality education at their disposal. This may account for differences in the level of livelihood assets across the states.

The implication of this result is that respondents will not be able to record uniformity in their level of livelihood diversification owing to significant differences in their level of livelihood assets across the states.

Table 20a: Analysis of variance showing the difference in the level of livelihood assets in southwestern Nigeria.

Variable	DF	Mean Square	F	Significance
Level of livelihood assets	2	561.254	35.095	0.000

Table 20b: Post Hoc test of multiple comparison of difference in the level of livelihood assets between states in southwestern Nigeria

Variable	States	MD	Significance
Level of livelihood Assets	Ogun and Osun	2.57699	0.000
	Ogun and Ekiti	-1.47959	0.000
	Osun and Ekiti	-4.05658	0.000

MD = Mean Difference

5.13.4 Difference in the level of livelihood abilities of the respondents across Ogun, Ekiti and Osun States

The result of the analysis in Table 21 shows that there was no significant difference in the respondents' level of livelihood abilities across the three states selected for the study - Ogun, Ekiti and Osun ($F = 0.983, p < 0.05$). This may be due to the fact that rural households in Southwest Nigeria are often characterised by similar features in terms of age, level of education as well as availability of labour. Respondent's mean age was 52.3 years (Table 4). This depicts that respondents are matured. This state of maturity may transform into uniform wider experience and skill that can bring about similarity in their livelihood abilities.

In the same vein, respondents have large households size as earlier revealed in this study (Table 5). This is also likely to provide needed support and consequently similar livelihood abilities. All these combine to determine the livelihood abilities of rural households in Nigeria (Ellis, 2000; Oyesola and Ademola 2011). The implication of this result is that respondents are expected to have the same capacity that will interact with assets and activities for effective and sustainable livelihood diversification with expected overall outcome of improved well-being

Table 21: Analysis of variance showing the difference in livelihood abilities in southwestern Nigeria

Variable	DF	Mean square	F	Significance
Level of livelihood abilities	2	153.872	0.983	0.375

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5.13.5 Differences in the level of livelihood activities of the respondents across Ogun, Ekiti and Osun States

Test of Analysis of variance in Table 22a shows that there was a significant difference in the respondents level of livelihood activities across the three states selected for the study ($F = 2.891, p < 0.05$). Result of Post Hoc test of multiple comparisons (Table 22b) also confirmed the differences with Ekiti state having the highest level of livelihood activities followed by Osun state while Ogun state recorded the least level of livelihood activities.

High level of livelihood assets in Ekiti state might account for high level of livelihood activities recorded among respondents in Ekiti state, while least level of respondents' livelihood activities in Ogun state might be due to unfavourable rural environment which posed constraints like poor transportation system and lack of financial facilities that is very important for effective take-off in any livelihood activity.

Furthermore, result of comparison between Osun and Ekiti state which indicate not significant may be due to the fact that rural households in Nigeria are often characterised by similar features in terms of ability and accessibility to assets (Adediran, 2008) that is very germane for effective engagement in various livelihood activities.

Table 22a: Analysis of variance showing difference in level of livelihood activities in southwestern Nigeria

Variable	DF	Mean square	F	Significance
Level of livelihood activities	2	4.636	2.891	0.054

Table 22b: Post Hoc test of multiple comparison of difference in the level of livelihood activities between states in southwestern Nigeria

Variable	States	MD	Significance
Level of livelihood activities	Ogun and Osun	-0.309	0.034
	Ogun and Ekiti	-0.333	0.047
	Osun and Ekiti	-0.024	0.882

MD = Mean Difference

5.13.6 Differences in the level of livelihood diversification of respondents across Ogun, Ekiti and Osun States

Test of Analysis of Variance in Table 23a shows that there was a significant difference in the respondents' level of livelihood diversification across the three states selected for the study ($F=6.075$; $P < 0.05$). The difference might be due to variation in their access to livelihood assets, as earlier noted in Table 10, and some severe constraints, such as inadequate basic infrastructural facilities, inadequate credit facilities, and irregular power supply, among others, which may vary across the study area. Ogunbamiwo (2008) and Oyesola *and Ademola* (2011) assert that constraints and respondents' level of access to livelihood assets are directly proportional to the extent of livelihood diversification.

A Post Hoc test of multiple comparisons (Table 23b) supports the finding with Ekiti state having highest level of livelihood diversification, followed by Ogun while Osun state recorded the least. This result implies that the level of livelihood diversification among the respondents across southwestern Nigeria differed. Least level of livelihood diversification in Osun state might be due to low livelihood assets that respondents in Osun state endowed with. This is supported by clay, *et al.*, (2002) in their hypotheses that livelihood assets is germane for livelihood diversification and its adequacy and accessibility will go a long way in increasing level of livelihood diversification .

From all the IDIs sessions and FGDs conducted in Ogun and Osun state, there was confirmation of this result as participants remarked as follows:

“We can’t diversify our livelihoods as wish. This is because of unfavourable environment resulted from inadequate livelihood assets, poor transportation system and absent of marketing facilities. So, we rely on few available livelihood activities apart from farming such as sales of agricultural products, hunting and migratory wage services.....”

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Table 23a: Analysis of variance showing the difference in the level of livelihood diversification in southwestern Nigeria

Variable	DF	Mean square	F	P-value	Remark
Level of livelihood diversification	2	1255.019	6.075	0.003	S

Table 23b: Post Hoc test of multiple comparison of difference in level of livelihood diversification of the respondents in southwestern Nigeria

Variable	States	MD	Significance
Level of livelihood diversification	Ogun and Osun	3.823	0.034
	Ogun and Ekiti	-2.257	0.046
	Osun and Ekiti	-6.080	0.049

MD = Mean Difference

5.13.7 Contribution of abilities, assets and activities to the respondents' level of livelihood diversification

Result of analysis shows that abilities, assets and activities contributed to respondents' level of livelihood diversification.

Table 24 reveals that abilities ($\beta = 0.860$, $p < 0.05$) contributed highest to the level of livelihood diversification, followed by assets ($\beta = 0.297$, $p < 0.05$) and activities ($\beta = 0.087$, $p < 0.05$) which recorded least contribution to the level of livelihood diversification of the respondents. This implies that ability of respondents is the most important determinant of rural livelihood diversification in the study area. It is clearly established in various literature of livelihood studies that livelihood ability is directly proportional to the level of livelihood diversification. Monazza *et al.* (2007) and Oyesola and Ademola (2011) submitted that abilities contributed more to the level of livelihood diversification than access to assets and activities. Korboe (2001) also corroborated this assertion that livelihood ability is important for survival of rural household in the informal economy in developing countries. The level of livelihood ability of an individual increases productivity, quality, diversity and occupational safety, and improved health, thereby increasing incomes and leading to reduction in poverty level of such a person and his or her families (Fluitman, 2002). All these are expected outcomes of effective livelihood diversification.

Table 24: Regression table showing the contribution of the respondents' abilities, assets and activities to the level of livelihood diversification across the states of southwestern Nigeria

Variable	β	T	P-value	Decision
Abilities	0.860	6.505	0.000	S
Assets	0.297	9.374	0.000	S
Activities	0.087	4.934	0.000	S

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CHAPTER SIX

6.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter deals specifically with the summary of the study with reference to the major findings of the work, the conclusion is drawn from the study, recommendations based on findings and areas for further studies were also documented.

6.1 Summary of findings

The results of the study revealed that the mean age of the respondents in the study area was 52.3. The majority were male (96.3%) and married (87.9%). Household size of the respondents was fairly large, as the majority (65.2%) had a household size of 4-6 persons. Christianity was the most practised religion among the respondents (63.0%). Most of the respondents (62.2%) had no formal education. The primary occupation of the majority of the respondents was farming (57.3%). Most of them (81.5%) claimed that they had been living in the study area for 1-40 years.

The respondents were found to be highly cosmopolitan, as more than half of them (57.8%) visited urban centres at least once in two weeks. The result further reveals respondents' low income with average monthly income of ₦18851.85, with more than half (62.9%) having a monthly income range of ₦5001- ₦30000. More than half of the respondents (51.4%) had high level of livelihood ability. Result also reveals that the respondents did not rely on only one source of livelihood activity. They diversified their means of livelihoods and engaged in various livelihood activities such as arable farming (84.4%), tree crops (84%), livestock, (42.7%), fishing (11.6%), off-farm processing activities such as cassava and oil palm (49.4%), hunting, milling of farm products,

grinding and palm tapping (28.7%) others were non-farm local services, such as transportation (4.2%), carpentry (3.5%), tailoring (5.7%), motor repair (3.2%), barbing/hair plaiting (9.4%), local trade: petty trading (17.0%), food vending (3.2%), sales of agricultural products (12.3%), estate management (2.2%), local formal employment (8.4%) and migratory wage services, comprising both skilled and unskilled casual jobs, accounted for (2.2%).

From the study, it was also revealed that respondents diversified their livelihood activities for four major factors sales only, household consumption only, reduction of risks and sales and consumption. Majority (72.4%) of the respondents diversified into arable crop farming for sale and consumption, more than half of the respondents (57.0%) engaged in off-farm activities for sales and consumption, non-farm activities (29.5%), local trade (26.0%) and local formal employment (5.0%) to reduce risks. A negligible number of them (1.24%) diversified into livestock for household consumption only and tree crops (49%) for sales only in order to meet their household needs.

Radio (89.9%), relatives/neighbours (58.5%), friends (40.7%) were the respondents' main sources of information on livelihood diversification in the study area. Majority (56.3%) and (66.4%) of the respondents had low level of livelihood assets and activities respectively. Also, 76.3% and 75.0% diversified into arable crop farming and cash crops in both dry and wet seasons of the year. Similarly, (52.0%) of respondents that involved in off- farm and non-farm work (42.0%) did so in both dry and wet seasons. Furthermore, 34.0%, 8.0% and 1.2% of the respondents that diversified into local trade and formal employment as well as migratory wage services were involved in both seasons of the year. Respondents' were severely constrained by lack of infrastructural

facilities (91.9%), inadequate livelihood assets (82.0) poor transportation system (66.9%), inadequate credit facilities (37.8%) and poor marketing facilities (30.1%) for livelihood diversification. The respondents' level of livelihood diversification was found to be low among more than half (53.1%).

The study showed significant contribution of socio-economic characteristics like (primary occupation ($\beta = 0.641$, $p < 0.05$), primary income ($\beta = 0.162$, $p < 0.05$), length of stay ($\beta = 0.278$, $p < 0.05$), other income ($\beta = 0.291$, $p < 0.05$) and frequency of visit to urban centres ($\beta = 0.254$, $p < 0.05$) to respondents' level of livelihood diversification. A significant relationship also existed between constraints ($r = 0.130$, $p < 0.05$) to livelihood diversification and level of livelihood diversification. There was a significant difference in respondents' level of livelihood assets ($F = 35.095$, $p < 0.05$), activities ($F = 2.891$, $p < 0.05$) and livelihood diversification ($F = 6.075$, $p < 0.05$). Abilities ($\beta = 0.860$, $p < 0.05$), assets ($\beta = 0.297$, $p < 0.05$) and activities ($\beta = 0.087$, $p < 0.05$) contributed to respondents' level of livelihood diversification across the states of southwestern Nigeria.

6.2 Conclusions

From empirical findings of this study, the following conclusions are drawn:

Respondents were predominantly males, married and with low level of education. They were in their productive active years. Respondents' primary occupation was farming with inheritance as their main source of land acquisition. Respondents had a mean age of 52.3 and mean household size of five which could be transformed into adequate support and experience of livelihood ability needed for effective livelihood

diversification. There is overall low income of respondents with average monthly income of ₦18851.85.

Social-economic characteristics such as primary occupation, primary income, length of stay, other income apart from income from primary occupation, frequency of visit to urban centre (cosmopolitaness) are important determinants of livelihood diversification of rural households in southwest Nigeria. Respondents' level of livelihood ability was high, despite this; farming still engaged more people than non-farm activities. Each of the financial, human, social, natural and physical livelihood assets contributes to the level of livelihood diversification among the respondents. This notwithstanding, respondents' livelihood assets was low.

Many factors responsible for livelihood diversification among rural households in southwest Nigeria ranging from sales only, household consumption, reduction of risks to sales and consumption. Respondents diversified into different livelihoods (farm and non-farm) activities at both dry and wet season of the year.

Radio, friends and neighbor/relatives were the main sources of information of respondents on livelihood diversification. Inadequate basic rural infrastructural facilities, livelihood assets, credit and marketing facilities were the severe constraints militating against livelihood diversification of rural households in the study area. Abilities, assets and activities contributed to respondents' level of livelihood diversification with ability contributed the highest, followed by assets while activities recorded the least contribution. In this study, it is concluded that respondents' level of livelihood diversification in southwest Nigeria was low.

6.3 Recommendations

The following recommendations are made based on the findings of the study for the enhancement of sustainable rural livelihoods and improved standard of living in southwest Nigeria:

1. Government and NGOs should give more support to the development of formal and informal capacity building at the local level to enhance human assets of rural households and make them adopt more non-farm livelihoods. This could be achieved through provision of non-formal educational opportunities, primary education and establishment of technical and vocational schools which in addition to knowledge will provide employment and entrepreneurship.
2. Government should ensure that rural development programmes are effectively implemented, monitored and evaluated. This will go a long way in ensuring conducive rural environment in terms of provision of adequate rural infrastructure that is very germane for livelihood diversification.
3. Private investors and development partners should be encouraged to invest in rural areas. This will help tremendously in the fight against unemployment among rural households during off-season of agriculture.
4. Government, NGOs and other rural development stakeholders should try to make rural communities in southwestern Nigeria conducive for development of human ability, livelihood assets and activities. This is because these three components and their interactions are important towards ensuring effective livelihood diversification and improved well-being of rural households.

5. Enabling rural environment should also be provided by the government and NGOs in terms of establishment of micro financial institutions, access to other livelihood assets, reduction in vulnerability, training, provision of infrastructural facilities such as good roads, electricity, communication networks and farm inputs, marketing facilities, agrometeorological services as well as other programmes that will enable rural households to sustain their livelihoods at both seasons of the year.

6.4 Areas for further studies

The following areas need further research:

- i. Efforts should be made to carry out similar research work in other parts of the country so as to make general assertion on rural households' livelihood diversification in different areas.
- ii. A research work can be conducted to investigate the roles of NGOs on rural livelihood diversification in Nigeria.
- iii. Efforts should be made to carry out research work on effect of climate change on rural livelihood diversification in southwestern Nigeria.

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APPENDIX 1
QUESTIONNAIRE
UNIVERSITY OF IBADAN, IBADAN
DEPARTMENT OF AGRICULTURAL EXTENSION AND RURAL
DEVELOPMENT

This questionnaire is designed to obtain information on “LIVELIHOOD DIVERSIFICATION AMONG RURAL HOUSEHOLDS IN SOUTHWESTERN NIGERIA”.

The information obtained will be used mainly for academic purposes, responses provided will be treated with utmost confidence.

Please, kindly examine each item carefully and give the response as accurately and sincerely as possible.

Thanks you for your cooperation.

EWEBIYI, Ismail O.

SECTION A
SOCIO-ECONOMIC CHARACTERISTICS

Instruction: Please, tick or fill the blank spaces as appropriate:

1. Age in years _____
2. Sex: Male () Female ()
3. Marital Status: Single () Married () Widowed () Divorced ()
4. What is your level of Education?
 - (a) No formal Education ()
 - (b) Primary Education ()
 - (c) Secondary Education ()
 - (d) Tertiary Education ()
 - (e) Adult Education ()
 - (f) Vocational Training ()

5. What is your Religion?
- (a) Christianity ()
- (b) Islam ()
- (c) Traditional Religion ()
- (d) Others (specify)
6. What is your primary occupation?
7. How much income do you earn or make from Primary occupation?
- (a) ₦5,000 ()
- (b) ₦5,001 - ₦10,000 ()
- (c) ₦10,001 - ₦20,000 ()
- (d) ₦20,001 - ₦30,000 ()
- (e) ₦30,001 - ₦ 40,000 ()
- (f) ₦40,001 - ₦50,000 ()
- (g) ₦50,001 and above ()
- 7b. Income from other sources apart from primary occupation _____
8. What is the size of your household?
- (a) 1 – 3 ()
- (b) 4 – 6 ()
- (c) 7 – 9 ()
- (d) 10 – 12 ()
- (e) \geq 13 ()
9. How long have you been living in this area?

SECTION B

COSMOPOLITENESS

10. How frequent do you visit urban centre?
- (a) Once a week ()
- (b) Once in two weeks ()
- (c) Once in three weeks ()
- (d) Once in a month ()
- (e) Once in a several months ()
- (f) Once in a year ()

11. What are the activities you engage in while on Visitation
- (a) Businesses
 - (b) Buying and Selling
 - (c) Labour
 - (d) Sourcing of Agric, inputs
 - (e) Visit to friends and relatives
 - (f) Others (specify)

SECTION C

LIVELIHOOD ACTIVITIES ENGAGED IN BY THE RURAL HOUSEHOLDS

12a. Kindly tick from the list, livelihood activities you engage in, rank in order of importance. State period when you engage in the activities and then use the options below to indicate why you engage in those livelihood activities.

Options for reasons why rural households engage in various livelihood activities:

- 1. Sales only
- 2. Household consumption
- 3. Spreading of risk
- 4. Sales and Consumption
- 5. Seasonality
- 6. Coping with insufficiency
- 7. Building on complementarities
- 8. Gradual transition to new activities

Livelihood Activities	If involved	Rank in order of importance	Period of involvement			Reasons for Diversification 1234568
			Wet Season	Dry Season	Both Season	
Arable crop farming						
Tree crops farming:						
Cocoa						
Cashew						
Oil Palm						
Kolanut						

Livestock						
Fish farming						
Cassava processing						
Oil palm processing						
Other farm labour						
Hunting						
Milling of farm Products						
Grinding pepper						
Gathering and Selling of Non-Timber Forest product.						
Transportation						
Carpentry/furniture						
Tailoring						
Motto Mechanic						
Shoe making						
Rentals						
Barbing						
Hair Plaiting						
Blacksmith						
Clergy						
Teaching						
Vulcanizing						
Butchery						
Pottery						
Carving						
Mat making						
Soap making and Selling						

Brick making and Laying						
Welding						
Estate Management						
Petty trading						
Sales of Processed Agric Products.						
Sales of used clothes						
Food vending						
Selling of water						
Paid employment						
Palm Tapping						
Migratory Wage						
Others (specify)						

12b:

- (i) How many years of experience do you have in your livelihood activities?
- (ii) Which of the options below is your source of support for your livelihood activities?
 - a. Social groups ()
 - b. Extension ()
- (iii) How many hours do you work daily?

SECTION D

LIVELIHOOD ASSETS OF RURAL HOUSEHOLDS

Please indicate the capital assets you have access to, size and period of accessibility.

13a.

Natural capital	Yes	No	Size	When do you have access to any of the following		
				Wet season	Dry season	Both season
Lake						
Land						
Dam						
River						
Well						
Stream						
Other (specify)						

13b. Is your land access in one location? Yes () No ()

If No, State Size of land in hectare or heaps per location

Location 1 hectare(s) or heaps

Location 2hectare(s) or heaps

Location 3hectare(s) or heaps

Location 4hectare(s) or heaps

13c. In which of the location do you have Fadama area? (L1)...(L2)...(L3)...(L4).....

13d. Do you farm in all the location throughout the year? If yes indicate the season

Farm Location	Wet Season	Dry Season	Both Season
Location 1			
Location 2			
Location 3			
Location 4			

13e. How did you acquire these farm locations?

Sources of the Land							
Farm Location	Rent	Inheritance	Purchase	Lease	Gift	Share Cropping	Govt. Tenancy
Location 1							
Location 2							
Location 3							
Location 4							

14. Tick Yes or No if you possess the following physical assets and indicate their numbers:

Physical Capital	Yes	No	Number
1. Means of Transport			
Do you have car?			
Do you have motorcycle?			
Do you have bicycle			
Others (specify)			
2. Types of Building			
Cement Block Storey Building			
Red Brick Storey Building			
Mud Storey Building			
Bungalow Block Building			
Bungalow Red Brick Building			
Bungalow, Mud Building			
Wood/Zinc Building			
3. Types of Roofing Material			
Aluminum/Asbestos			
Zinc/Wood			
Thatch leaves/palm leaves			

4. Residents status			
Landlord			
Tenant			
5. Generator			
Large to serve the compound			
Small			
None			
6. Television 14' 21' 32'			
Black and White			
Coloured (size)			
Satellite/cable			
7. Radio			
Radio cassette player			
Transistor radio			
8. VHS/VCD/CD/DVD Player			
9. Sources of Water			
Tap water			
Community bore hole water			
Well			
River			
Other (specify)			
10. Furniture			
Dining Table			
Wooden Bed			
Cushioned Executive Chairs			
Wooded Benches			
Wooden Chairs			

15. Types of account kept

Financial Capital	Yes	No	Number
Saving Account			
Current Account			
Informal Accounts (Esusu)			
Regular Remittances			
Informal Credit and Thrift			

16. Human Capital

Name (first name Only)	Relationship in the household husband, wife, son, daughter, relative	Sex:		Age	Level of education	Current activities
		Male	female			
1.						
2.						
3.						
4.						
5.						

17. Tick Yes if you belong to any of this Association and indicate the position held?

Social Asset	Yes	No	Position held in the association/society
Cooperative Society			
Work Exchange Group (Aro)			
Fadama Users Group			
Religious Organization			
Community Development Association/Town			
Market Association			
Age – Grade Group			
Other (Specify)			

18. What are the benefits derived from being a member of aforementioned association(s)?

SECTION E

SOURCES OF INFORMATION ON LIVELIHOOD DIVERSIFICATION

- 19. Kindly tick your source of information on livelihood diversification and rank them in order of preference?**

- (a) Radio ()
- (b) Television ()
- (c) Newspaper ()
- (d) Extension Agent ()
- (e) Friends ()
- (f) Relatives/neighbours ()
- (g) Farmers' Association ()
- (h) Internet ()

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SECTION F

CONSTRAINTS TO LIVELIHOOD DIVERSIFICATION

20. Please indicate if the following are constraints to your livelihood diversification by responding to Yes or No and if Yes indicate the degree of severity from not a constraint, mild or severe constraint.

Constraint	Yes	No	If, Yes, level of severity		
			Not a constraint	Mild Constraint	Severe constraint
Inadequate land					
Inadequate farm inputs					
Inadequate credit facilities					
Poor transportation system					
Lack of capital assets					
Epileptic power supply					
Environment degradation					
Inadequate skills					
Lack of information					
Poor storage facilities					
Pest and disease					
Economic risk					
Poor marketing facilities					
Conservatism					
Community culture, value and norms					
Government policy					
Lack of basic infrastructure					

APPENDIX 2

PLATES



Plate 1: IDI with Community Head at Sunwa, Ogun state



Plate 2: A female head of household engaged in oil palm processing at Asa Obi Village, Atakumasa West LG, Osun state



Plate 3: FGD with men at Agbado, in Ekiti State

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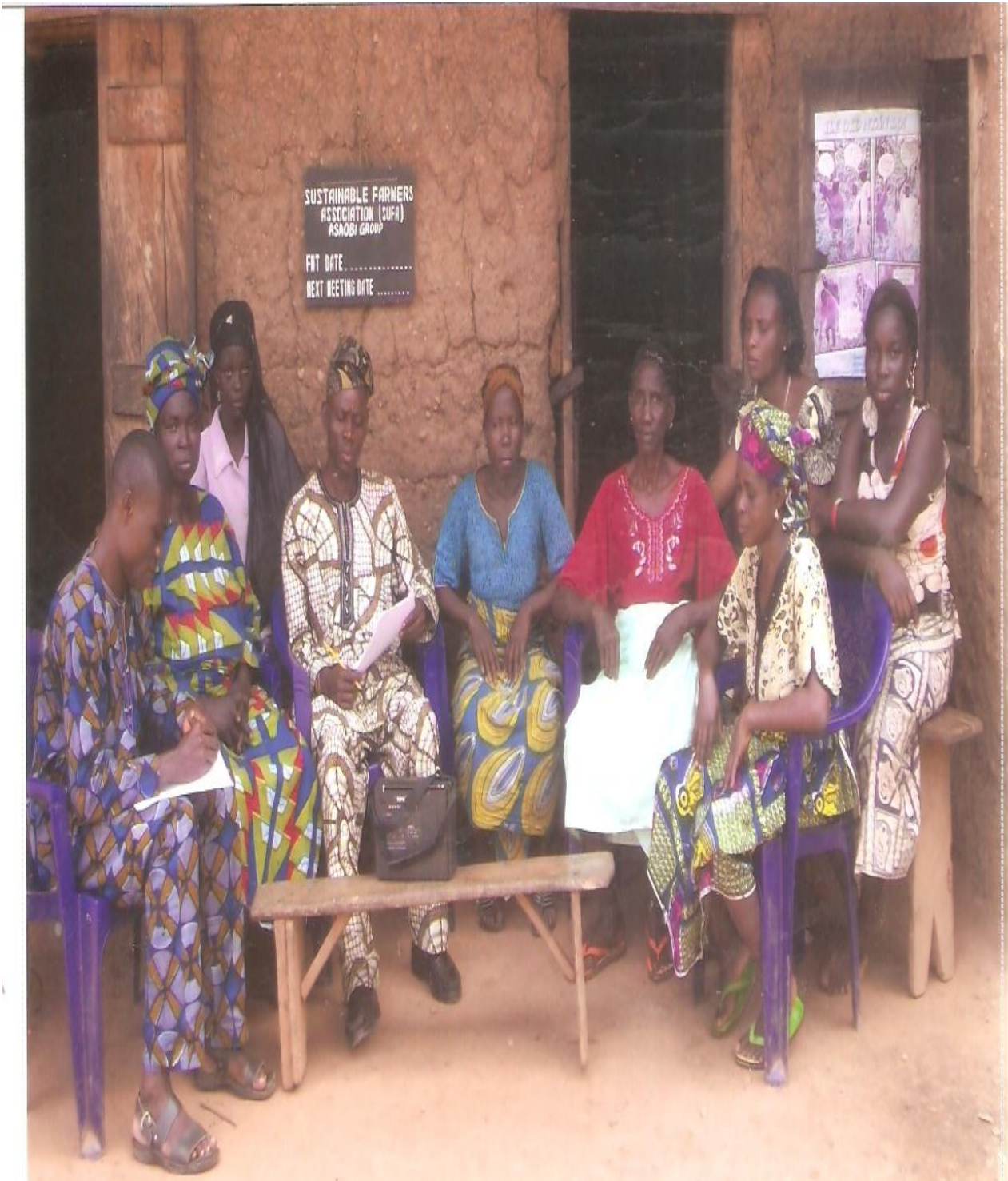


Plate 4: FGD with women at Sawonjo, Ogun state