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Adaptive Strategies Employed in Circumventing the Effects of Mono-cropping:

A Case Study of Smallholder Tobacco Farmers in Hurungwe District.

By

Dabie Mutumhe



A thesis submitted to the Faculty of Humanities, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirement of the degree of Master of Arts in Sociology (Coursework and Research)

JOHANNESBURG

DECLARATION

I declare that this research report is my own unaided work. It is submitted in partial fulfilment for the degree of Master of Arts in Sociology (by Coursework and Research Report) at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any other degree or examination in any other University.

Supervisor:

Professor Samuel Kariuki, University of the Witwatersrand, Johannesburg, South Africa.

Signed_____ on this___ day of _____ 2016

Dabie Mutumhe

DEDICATION

To my late mother Mrs M. Mutumhe, you would have been happy to see your efforts come to fruition. Also to my father Mr M. Mutumhe, this is for you.

ACKNOWLEDGEMENTS

My individual efforts would have been fruitless without the support and notable contributions made by the great people whom I would like to express my sincere gratitude to. Special gratitude goes to my understanding and knowledgeable supervisor Professor Samuel Kariuki for his expert guidance, encouragement and constructive remarks. Thank you for making this dissertation a success Prof, your expertise, inspiration and patience is ceaselessly appreciated.

Dr Stephen Louw I am also deeply and sincerely indebted to you for the constructive comments and suggestions which have been productive towards the completion of this thesis. My classmates and friends thank you for the friendship and encouragement.

I am also grateful to smallholder farmers in Jim Bakker and Freddy farms in Hurungwe district who gave up their precious time to participate in this study. I recognise that this study would not have been possible without your support and willingness. May God bless you.

Special mention also goes to my family for being the sanctuary of advice, spiritual support, financial backups and love. Lastly and importantly, my redeemer who lives, thank you for giving me life, strength and wisdom to go this far. I believe in you.

TABLE OF CONTENTS

Declaration.....2

Dedication.....3

Acknowledgements.....4

Table of Contents 5

Table of Figures.....9

List of Tables.....10

List of Abbreviations.....11

CHAPTER ONE: INTRODUCTION

Introduction 12

Background to the Study.....13

Rationale 16

Main Research Question.....17

Sub-Questions…….18

A Synopsis of the Research Methods…….18

Organisation of the Report.....19

CHAPTER TWO: LITERATURE REVIEW

Introduction 21

An Overview of the Zimbabwean Agricultural Sector……..21

A Background of the Land Reforms in Zimbabwe…….24

The Tobacco Farming Sector in Zimbabwe…….26

The Challenges Faced by Smallholder Tobacco Farmers in the Zimbabwean Tobacco Farming Sector…….29

Internal and External Constraints Facing Smallholder Tobacco Farmers……..30

Smallholder Farmers and Livelihood Diversification…….41

The Effects of Livelihood Diversification……46

Determinants of Livelihood Adaptation Choices among the Rural People……..48

Constraints to Livelihood Adaptation……56

The Sustainable Livelihood Framework……59

Flaws of the Sustainable Livelihood Framework and how they were overwhelmed….65

CHAPTER THREE: RESEARCH METHODOLOGY

Introduction 68

The Qualitative Design 68

The Case Study Design…….....70

The Study Area.....71

An Overview of the Study Areas: Freddy and Jimmy Bakker Farms……72

Summary of the Research Process: Access, Field Procedures and Experiences.....73

Target Population.....76

Sample Size……76

Sampling Method……...77

Sampling Technique……..78

Participants' Biographies and Background Information……80

Data Collection Tools…….87

Unstructured Interviews……..88

Focus Group Discussions…….94

Data Analysis……96

Reliability and Validity…….101

Ethical Considerations…….....101

Challenges and Limitations of the Study……...101

Conclusion……..104

CHAPTER FOUR: FINDINGS AND DISCUSSION

Introduction..... …….105

"We always make a plan, manipulating anything within our reach for sustainance"…...105

"Who you are and what you have dictates what you do and how you do it."…….122

"…they are innumerable and beyond our control, you even wonder how best you can sustain your family." ……132

CHAPTER FIVE: DISCUSSION AND CONCLUSION

References.....151

Appendices.....171

Information Sheets

Interview and Focus Group Discussion Guide

Ethics Protocol

TABLE OF FIGURES

Figure 2.1…… The Sustainable Livelihoods Framework

LIST OF TABLES

Table 3.1……The Participants

Table 3.2…….Participants' profiles

TABLE OF ABBREVIATIONS

FTLRP- Fast Track Land Reform Programme

GDP- Gross Domestic Programme

TIMB- Tobacco International Marketing Board

SLF- Sustainable Livelihoods Framework

NGO- Non-Governmental Organisation

CHAPTER 1: INTRODUCTION, BACKGROUND AND CONTEXT OF THE STUDY

Introduction

Drawing insights from the Sustainable Livelihoods Framework (SLF), this study is premised on the argument that smallholder farmers are presented with livelihood assets which they manipulate in livelihood adaptation. The study acknowledges the role of these assets in either strengthening or constraining their adaptive capacity. In light of this, this study sought to examine the adaptive strategies that were pursued by smallholder tobacco farmers as they endeavoured to cushion themselves against the food and income insecurity that was posed by tobacco mono-cropping. Particularly, the study aimed to identify and analyse the adaptive strategies that were pursued by smallholder tobacco farmers in Hurungwe district. This study also explored the factors that determined the choice of the adaptive strategies that were pursued and the factors that constrained smallholder farmers from strategising effectively. The study utilised the Sustainable Livelihoods Framework (SLF) as a conceptual framework and qualitative methodology was used to gather data.

Noteworthy, this study was conducted in a rural context in the Fast Track Land Reform Programme (FTLRP) resettled farms. Jim Bakker and Freddy farms situated in Hurungwe district of Mashonaland West Province in Zimbabwe were the research sites. Hurungwe district is popular for tobacco mono-cropping which continuously pose food and income insecurity to smallholder farmers in Hurungwe district given that they are pursuing it in an agricultural environment in which they are constrained by institutional, socio-cultural and technical constraints. To pull themselves out of the 'vulnerability context' which they are prone to under

the tobacco farming sector, smallholder farmers in the district formulate and reformulate their livelihood activities in adaptation hence the district was a conducive research site for a research meant to analyse the adaptive capacity of smallholder tobacco farmers.

Background to the Study

The agricultural industry sustains the development of several African economies as can be attested by its significant share in most African countries' GDP. Particularly in the Zimbabwean case, over the past fifteen years the sector has been the backbone of the economy providing 60% of the raw materials utilised in the manufacturing industry and contributing 14%-18% to the country's Gross Domestic Product (GDP) (Todaro and Smith, 2009). More importantly, the sector has been providing 40% of the export earnings and approximately 70% and 26% of informal and formal employment respectively (World Bank, 1990). However, this positive contribution of the agricultural sector to the Zimbabwean economy declined following the advent of the radical, unplanned, violent and accelerated Fast Track Land Reform Programme (FTLRP) in Zimbabwe which brought about several transformations to the sector including land holding and production patterns (Shange, 2014).

Agricultural productivity of cereal crops which are part of the staple food of Zimbabwe declined as indicated by a devastating fall of production in maize from an annual average of 1.7 million kilograms in the mid-1990s to 0.9 million and 1 million kilograms in 2000 and 2001 respectively following the implementation of the FTLRP (Sachikonye, 2003). While it resulted in the decline in the production of cereal crops, the FTLRP resulted in the flourishing of the tobacco farming sector which currently plays a significant role in the Zimbabwean economy. However, the Zimbabwean tobacco farming sector is associated with food and income insecurity due to the institutional, marketing and economic challenges which are inherent to the sector (Ncube, 2012).

This sector plays a critical role in the development of the Zimbabwean economy and livelihoods A notable contribution from the tobacco farming sector includes exports which in turn supply Zimbabwe with much needed foreign currency. In addition, the sector contributes 10% to the country's GDP and simultaneously employs 33 % of the country's labour force. The sector also provides the government with revenues which are collected from the taxes and levies on tobacco (FAO, 2004).

The advent of the FTLRP resulted in several transformations in the tobacco sector. In particular, small scale farmers who had mainly engaged in subsistence agriculture became smallholder commercial farmers under the FTLRP (Keyser, 2002). TIMB (2011) notes that out of the 60,047 farmers registered in the tobacco sector, 31,068 were FTLRP resettled smallholder farmers. Furthermore, the chaotic and unplanned nature of the FTLRP resulted in the socio-economic downturn of the livelihoods of the generality of Zimbabweans, and smallholder farmers in particular (Ncube, 2012). Faced with economic challenges prevailing in the country, smallholder farmers are biased towards cash cropping such as tobacco farming because cash crops are considered to be lucrative. For instance, tobacco is 6.5 times more profitable than cereal crops (FAO, 2004).

It is against this background that an increase in the number of smallholder farmers who joined the tobacco farming sector has been realised since the implementation of the FTLRP. TIMB (2011) notes an increase in participation in the tobacco sector from 8 537 farmers in 2000 to 60 047 farmers in 2012. An exponential growth was witnessed in 2013, with 75 000 farmers growing tobacco and the number further increasing to 106 000 in the 2014/2015 farming season (TIMB, 2011).

It is imperative at this juncture to note that tobacco farming is inherently labour and capital intensive. The inherent feature of being capital intensive poses challenges to smallholder tobacco farmers who have limited financial capacity (Tekere, 2003). This limited financial capacity is attributed to the lack of financing mechanisms as evidenced by the reluctance of financial institutions to offer credit to the farming sector due to perceived risks and transaction costs associated with the sector. In cases where financial institutions offer financial support, it is directed to large scale commercial farmers, and this leaves smallholder farmers vulnerable.

The financial constraints of smallholder tobacco farmers are also aggravated by labour, market and climate variability challenges. Smallholder tobacco farmers face inadequate provision of research and agricultural extension services which are an essential ingredient for production (Shange, 2014). Labour challenges also lie in limited household labour due to labour migration to neighbouring countries (Chimhowu, 2010). The marketing challenges faced by Zimbabwean smallholder tobacco farmers which include pricing, grading and payment irregularities cannot be ignored (Hungwe, undated). Smallholder tobacco farmers are susceptible to climate change because they practice rain-fed agriculture. Due to climate change, Zimbabwe is experiencing incessant droughts which result in pest outbreaks and soil damage, subsequently leading to poor yields among tobacco smallholder farmers (Chimhowu et al., 2010). In recent years, Zimbabwe has experienced devastating droughts in the years 2002, 2007, 2008, 2012 and 2015/ 2016 (Hungwe undated).

The various constraints discussed above are a hindrance to Zimbabwe smallholder tobacco farmers' productivity leading to household food and income insecurity. As a result, the farmers are compelled to diversify their livelihoods. Livelihood diversification has been found to be an adaptive strategy for farmers faced with challenges which limit their agricultural capacity

(Fafchamps, 2003; Chambers, 1989). Evidence indicates that livelihood diversification of smallholder farmers include both on and off farm activities (Ellis, 1998; Scoones, 1998; Perderson 1997; Upton, 1996). It was against this background that this study sought to explore the adaptive strategies employed by smallholder tobacco farmers in Zimbabwe to circumvent the effects of mono-cropping. Specific reference was made to the constraints and determinants to adaptation presented to these farmers.

Rationale

The literature that stresses the adoption of diverse adaptive strategies by the rural communities in poverty alleviation exist (Barrett et al., 2001; Block and Webb, 2001; Barrett et al., 2005; Ellis, 1998; Bryceson, 2000) but it does not sufficiently identify and examine the factors that enable the adoption of those multiple activities as well as those that constrain rural people in their efforts to pursue diverse livelihood activities. For the few that did (Khatun and Roy, 2012; Saha and Bahal, 2012; Idowu et al., 2011), they examined these from the regional and national levels thereby marginalising the narratives of those people in the places which are not 'globally connected'. They also employed quantitative methods in acquiring data which reduced their capacity to further probe into the meanings attached to the adaptive activities employed by smallholder farmers.

Moreover, major emphasis has been on the motives behind the adoption of a portfolio of livelihood activities as well as the impact of these to the development of the rural communities mainly basing on their contributions to the GDP (Haggblade, 2007; Ellis 2006; Barrett et al 2001). However, it has been argued that GDP is rarely a representative indicator of economic propensity as it does not measure well-being due to its failure to differentiate between productive and destructive livelihood activities (Mortimore, 1993). There is need for a qualitative study that

goes beyond the examination of motives and impacts, by proffering an in-depth exploration of the constraints and opportunities to livelihood diversification from a local level basing on the experiences of the concerned actors. Considering the methodological and contextual gaps highlighted above, this study sought to extend the existing body of knowledge by filling in these lacunae. Furthermore, this study is valuable in shaping relevant policy (poverty alleviation, agriculture and gender equality) and interventions.

The Overall Study Aim was

- To examine the adaptive capacity of resettled households in Hurungwe district and analyse the determinants of, and constraints to their adaptation.

The Objectives of this study were:

- To identify and analyse the adaptive strategies pursued by smallholder tobacco farmers and their households in Hurungwe district.
- To discuss the factors that determine the choice of the adopted strategies.
- To examine the complex challenges and barriers which undermine smallholder farmers and their households' willingness and capacity to adapt.

To achieve the objectives, the following research questions were developed to guide the study.

Main research question

- What are the determinants and constraints to smallholder farmers' and their households' adaptive capacity?

Sub-Questions

- In what ways are tobacco smallholder farmers and their households adapting to the food and income insecurity posed by tobacco mono-cropping?
- What are the factors that determine the choice of the adaptive strategies pursued by resettled households in response to the food and income insecurity posed by tobacco mono-cropping?
- What are the factors that constrain resettled households in their endeavours to adapt to the food and income insecurity posed by tobacco mono-cropping?

A preamble on the methods which were employed in answering the research question to achieve the outlined study aim and objectives is presented in the following section.

A Synopsis of the methods adopted in this thesis

To meet the outlined objectives of this study, a qualitative case study research design was adopted in which purposive sampling was used to select twenty seven 'information-rich' participants. A triangulation of thirteen unstructured interviews and two focus group discussions with diverse smallholder tobacco farmers which were spread over a period of two weeks from 7 to 21 September 2015 in Hurungwe district was used in the data collection phase. Based on the ability of these techniques to counter the weaknesses inherent in each other, the use of these complementing methods in this research made it possible to capture the original discourses and practices of different social actors pertaining to the adaptive strategies of smallholder tobacco farmers as well as the determinants and constraints to their adaptation. A thematic approach to data analysis was employed in 'identifying, analyzing and reporting themes within data' (Braun

and Clarke 2006:79) as shall be noted in this thesis which is structured in the manner outlined in the section below.

Organisation of the report

Chapter 1 introduced the main argument, aims and objectives of this research and provided the context of the study. It also stated the research questions and the rationale for undertaking this study. A synopsis of the research methodology was also discussed in this chapter.

Chapter 2 examines the literature around the Zimbabwean tobacco farming sector within the Zimbabwean agrarian reforms clearly outlining the transformations within the sector and how these impacted on the livelihoods of smallholder tobacco farmers. The adaptive capacity of smallholder farmers and the theoretical framework that informed this study are also reviewed in the literature review section.

Chapter 3 presents the research design and research methodology that was adopted in this study. It provides a detailed discussion of the design of the study, the study area, target population, sample size, sampling methods and techniques, data collection tools, ethical considerations and data analysis. The summary of the research procedures and process is also provided in this chapter as well as a discussion on the field experiences and access, how reliability and validity were ensured, notwithstanding the challenges and limitations which were encountered in this research.

Chapter 4 offers a presentation and analysis of the research findings. The chapter presents and discusses on the diverse adaptive strategies pursued by smallholder tobacco farmers and the determinants and constraints to their adaptation.

Chapter 5 which is the concluding chapter constitutes a general summation of the research findings in relation to the reviewed literature and theoretical insights. It then provides recommendations on how best to ensure rural poverty alleviation and development given the complex and dynamic activities pursued by smallholder farmers and the determinants and constraints to their adaptation. The overall conclusion of this study is also provided in this chapter.

CHAPTER 2: LITERATURE REVIEW

Introduction

To situate this study within its scholarly context, this chapter provides an overview of the Zimbabwean agricultural sector and a synthesis of the literature around the agrarian policies of Zimbabwe and the impacts these had specifically on the tobacco farming sector. The struggles faced by smallholder farmers within the Zimbabwean tobacco farming sector are also documented. Subsequent to this, the literature on the determinants and constraints to smallholder farmers' adaptation is documented followed by a review of the Sustainable Livelihoods Framework which was employed as a conceptual framework in this study.

An Overview of the Zimbabwean Agricultural Sector

The agricultural industry is behind the development of several African economies as can be attested by the strategic role it plays in the economic development and livelihood sustainance of the concerned actors. To be particular, in the Zimbabwean case, over the past years the sector has been the backbone of the economy providing 60% of the raw materials utilised in the manufacturing industry and contributing 14%-18% to the country's Gross Domestic Product (GDP) (Todaro and Smith, 2009). More importantly, the sector has been providing 40% of the export earnings and approximately 70% and 26% of informal and formal employment respectively (Todaro and Smith, 2009).

However, this positive contribution of the agricultural sector to the Zimbabwean economy declined following the advent of the radical, unplanned, violent and accelerated Fast Track Land Reform Programme (FTLRP) in Zimbabwe which brought about several transformations to the sector including land holding and production patterns (Shange, 2014). Agricultural productivity

of cereal crops declined following the implementation of the FTLRP (Keyser, 2002). However, the FTLRP resulted in the increase of the number of smallholder farmers who participate in the tobacco farming industry, yet exposing smallholder farmers to food insecurity and poverty.

A considerable body of literature on the Zimbabwean agricultural sector which this study draws upon exists. The literature basically traces the importance of the sector to the nation as a whole and the major changes that characterise the sector since the colonial up to the post- Fast Track Land Reform Programme (FTLRP) period. Major emphasis has been engaged on constructions of land claims and belonging by whites and blacks and the varied ideological, racial, social, political and economic standpoints generated by the land reform policies, especially the FTLRP (Kariuki, 2004; Moyo and Yeros, 2005). Prearranged to contribute to the existing literature, this section also presents an overview of the Zimbabwean agricultural industry with a bias to the tobacco farming sector, clearly outlining its history and contributions to the Zimbabwean nation and smallholder farmers. Gaining precedence over other crops, tobacco as a cash crop is currently the backbone of the Zimbabwean economy. The tobacco farming sector contributes 10% to the country's GDP and it also employs 33 % of the country's labour force. More importantly, outstanding revenues are also obtained through the tobacco farming industry (FAO, 2004). These notable contributions of the tobacco farming sector and the high concentration of smallholder farmers in the sector following the implementation of the FTLRP (Moyo, 2000) justifies why the study was focused on the tobacco farming sector.

Zimbabwe holds an approximated land area of 386 670 square kilometres of which 205 500 square kilometres of that land is reserved for agricultural purposes (Ncube, 2012).

Agriculture remains a viable backbone of many African societies which fosters the growth of the economies concurrently sustaining livelihoods. This argument is supported by the reliance of

approximately 65 % of the African economies on the agricultural sector for livelihood sustainance and economic development (Todaro and Smith, 2009). This is mainly because approximately 70% of the African population is rural based of which 9 out of every 10 rural people depend on agriculture for survival.

Just like in any other African country, in Zimbabwe the agricultural sector plays a pivotal role in sustaining the economy through food and employment provision, foreign exchange and raw material supply (Bautista and Thomas, 2006). The sector provided 14% to 18 % of the country's Gross Domestic Product (GDP), 40% of the entire export remunerations and 60% of the raw materials for industrial purposes in the past decades (Todaro and Smith, 2009). Besides, during that phase, the agricultural industry was the chief source of employment, accounting for 70 % and 26 % of informal and formal employment respectively (World Bank, 1990, Todaro and Smith, 2009).

However, the advent of the FTLRP resulted in the commercialisation of smallholder farmers thereby making them the major producers in the tobacco farming sector as they shunned the production of other crops. However, given the institutional, technical and socio-cultural factors faced by smallholder farmers in the agricultural sector (Thamaga-Chitja and Morojele, 2014), these farmers are vulnerable to food and income insecurity which impact negatively on the livelihoods of their households. In the following sector, I briefly review the literature on the Zimbabwean agrarian reforms with major emphasis on the changes in land ownership and distribution, financial systems and marketing procedures. A review of this literature is crucial because it prepares a departure point for an understanding of the impact of these land reforms on the tobacco farming sector and the livelihoods of smallholder tobacco farmers that will be discussed in the following chapters.

A Background of the Land Reforms in Zimbabwe

Zimbabwe as a former settler colony is characterised by multiple, often competing discursive constructions of land claims and belonging by whites and blacks. The Africans enjoyed economic prosperity in the agricultural sector during the pre-colonial era and their livelihoods were largely agro-based (Beach, 1977). However, as shall be detailed further in a successive chapter on the tobacco farming sector, tobacco became the backbone of commercial agriculture during the post-colonial phase yet the crop was mainly grown by large scale commercial farmers (Keyser, 2002). Noteworthy is that the farmers diversified their income sources during this phase, other crucial crops and livestock were included in their agriculture (Keyser, 2002).

This agricultural prosperity that was enjoyed by the African farmers during the pre-colonial era was however later on curtailed by the advent of the colonial rule whereby the whites seized their heritage, freedom and land (Keyser, 2002). Various precarious legislations such as the Southern Rhodesia Order in Council , the Land Appropriation Act (1930) and the Native Land Husbandry Act (1951) and the Land Tenure Act (1969) necessitated a racial unequal system of land ownership and administration which reserved fertile land for whites and assigned drier, unproductive land to blacks (Sachikonye, 2003). For example under the Land Apportionment Act of 1931, 51% of land was allocated to white farmers who were about 3000 whilst 1.2 million blacks were concentrated in the overpopulated native reserves characterised by poor lands (Sachikonye, 2003). During this phase, therefore, as shall be explained in detail, black farmers lost the capacity to produce in the tobacco farming sector since the sector was increasingly dominated by white colonial masters (Keyser, 2002).

Blacks were denied the right to own land through colonial land dispossession (Moyo, 2000). This ushered in a new property rights regime (private land ownership) which usurped prior common

property forms of land tenure. This land appropriation did not go unopposed; instead, it led to a severe contestation over land which eventually led to the liberation struggle, the main objective being land redistribution and restitution.

Subsequent to independence in 1980, Zimbabwe went through three distinct phases of land reform, the first phase was between 1980 and 1990 (Pazvakavambwa and Hakutangwi, 2006).This land resettlement was largely market-oriented and it aimed at ensuring equality in land distribution, a crucial aspect that was amiss during the colonial era and it resulted in A to D models (Moyo, 1995). During this phase, 52 000 people had been resettled by 1989 against a target of 162 000 people, hence it was a failure (Moyo, 1995).The standards of living of resettled farmers improved during this phase and it was during this phase that a shift from traditional crops to high value crops such as cotton and tobacco was noticed (Sachikonye, 2003).

The Zimbabwean government then progressed to another phase of land reform of 1991 to 1999 (Moyo, 2000). The first and second phases comprised of an alliance between the government of Zimbabwe and the white commercial farmers formed through the Lancaster House Agreement and the Economic Structural Adjustment Programme (ESAP) involving market-led land reform based on a willing-buyer-willing-seller programme (Moyo, 2000). The Agreement inhibited the land reform process because it prescribed land expropriation and ESAP (from the early 1990s) further restricted government-led land transfers, thus maintaining a racial and class monopoly over land (Moyo, 2000). Only limited land was transferred to blacks during these two phases (Moyo, 1995).

Disgruntled by the slow pace of land reform, land occupation movements of 2000 emerged during the first twenty years of independence parallel to the official land reform programmes. These occupations were largely restrained by the government as they were deemed private

property rights violation (Moyo, 2000; 2001) hence this reform phase was a state mandated affair. In fact there was increased agricultural productivity in the newly resettled areas among small scale farmers which was necessitated by the agricultural extension and credit systems (Kinsey, 1999), which were provided by the Agricultural Finance Corporation (ACF) which funded small scale farmers (Moyo, 2005).

Unlike in the first phase of resettlement whereby the settlements were planned and were serviced prior to the settling of smallholder farmers, in the FTLRP, settlement was haphazard and that made it impossible for the government to service those resettled areas, especially given the economic downturn the state was experiencing and as such there was no development or establishment of infrastructure in the resettled areas (Pazvakavambwa and Hakutangwi, 2006). These reforms, mainly the FTLRP resulted in various transformations in the agricultural industry, particularly in the tobacco farming sector and these changes are discussed immediately below.

The Tobacco Farming Sector in Zimbabwe

The tobacco farming sector assumes a critical role in the development of the Zimbabwean economy and in sustaining livelihoods. Notable contributions accrue from the tobacco farming sector given that tobacco is the most crucial export commodity in Zimbabwe. The Zimbabwean tobacco farming industry contributes 10% to the country's GDP simultaneously employing 33 % of the country's labour force. Prominently, outstanding revenues amounting to US $32 on average per farmer are also earned under the sector through the taxes and levies on the product (FAO, 2004).

Tobacco farming in Zimbabwe can be traced back to the late 1800s under the Rhodesian government yet it was mostly a preserve for large-scale commercial farmers (Keyser, 2002).

During this period, commercial tobacco growers were less than 2000 yet they occupied approximately 87 % of the area that was under tobacco cultivation (Keyser, 2002). These tobacco farmers produced an average of 180 to 240 kilograms of flue cured tobacco yearly (Keyser, 2002), hence tobacco production was minimal.

Worth mentioning at this point is that the commercial cultivation of tobacco was noticed during the colonial era yet farmers highly diversified their income sources (Keyser, 2002). Regarding this, Keyser (2002) notes that the farmers actively engaged in the diversification of various crops including maize, wheat, soya beans and groundnuts, and they also kept livestock in a bid to lessen their dependence on tobacco farming. Basing on this, Barrett et al.'s, (2001) assertion that diversification of livelihoods is a norm and not necessarily a new phenomenon is feasible.

An estimated 1.5% of smallholder farmers was also involved in the production of tobacco during the colonial era (Keyser, 2002). Subsequent to the attainment of independence, a boom in production has been documented in the tobacco farming sector (Keyser, 2002) This productivity was mainly aggravated by the adequate provision of sufficient infrastructure by the British Tobacco Company (TIMB, 2011).This boom in tobacco production can be demonstrated by the production levels of 1991 whereby 1746 tobacco farmers managed to produce 97 451. 23 kilograms of tobacco on average.

During the 1990s, the tobacco farming sector was highly occupied by large scale commercial farmers, particularly the well-resourced White commercial farmers (Keyser, 2002). It was during the 1990s that the Zimbabwean tobacco farming industry became the main source of employment and export earnings, also making notable contributions to the country's GDP (Keyser, 2002). In 1991, the sector contributed approximately 10% of the country's GDP, provided 40 % of the country's foreign earnings and directly employed over a million people

(Keyser, 2002). As noted earlier on, during the 1990s, tobacco was highly profitable and lucrative (Keyser, 2002) hence it played a notable role in sustaining the livelihoods of tobacco communal farmers.

However, the advent of the FTLRP has resulted in several transformations in the tobacco sector. This agrarian reform commercialised smallholder farmers thereby making them the major producers in the sector (Masvongo et al., 2013). TIMB (2011) notes that out of the 60 047 farmers registered in the tobacco sector, 31 068 were the FTLRP resettled farmers. Besides commercialising smallholder farmers, the FTLRP was associated with the devaluation of the Zimbabwean currency (Ncube, 2012). Given the economic downturn obtaining in Zimbabwe, smallholder farmers opted for tobacco farming given that, unlike in other crops; tobacco was paid upon delivery and in lucrative foreign currency. The crop was 6.5 times more profitable than other cereal crops and that was the reason for the high uptake of the crop by smallholder farmers for welfare (FAO, 2004). Against this background, there has been an increase in participation in the tobacco sector from 8 537 farmers in 2000 to 60 047 farmers in 2012 and the number grew to 75 000 in 2013, and 106 000 in the 2014/2015 farming season (TIMB, 2011).

A decline in tobacco productivity and tobacco payments has been noted despite the growth in terms of the areas grown (FAO, 2004). Keyser (2002) documents the fluctuations inherent in the production of tobacco. As he notes, in 2001, 8531 farmers produced 237 million kilograms of tobacco, the produce however declined in 2002 to 201 million kilograms despite an increase in the number of farmers to 12 700. Keyser (2002) further documents the decline in tobacco production from 80 million kilograms in 2003 to 68 million kilograms in 2004. He further contends that as production declined, the quality of the produce was not spared; instead it also deteriorated thereby weakening smallholder farmers' competitiveness in the markets.

These declines in production and prices are particularly caused by the multifarious challenges faced by smallholder farmers in the tobacco farming industry including finances, lack of inputs and expertise, exposure to pests, lack of sufficient labour, and marketing challenges (Keyser, 2002) as shall be detailed in the following section. Of note are the efforts made by the Zimbabwean government to resuscitate production in the tobacco farming industry. A dual marketing system was adopted in 2004 with the intention of easing marketing and economic constraints that were experienced by smallholder farmers (TIMB, 2011). Contract farming was implemented to complement the auction system yet owing to their critical role in the provision of inputs, transport and extension services credits as well as marketing services, contract lines have become the dominant channel of tobacco sales with 73% of the sales made through those channels (TIMB, 2011). Instead of increasing tobacco production and sustaining the livelihoods of smallholder farmers, contract farming has further exacerbated the precariousness of these farmers given the exploitative nature of the relationships between smallholder farmers and the contracting companies. Given this background, in the next section I discuss the 'precarity' of smallholder farmers in the tobacco farming sector. An identification of the various challenges faced by smallholder tobacco farmers that undermine their productivity thereby exposing them to food and income insecurity is crucial for the implementation of policies that can tackle them.

The Challenges Faced By Smallholder Farmers in the Zimbabwe Tobacco Farming Sector

Cervantes-Godoy and Dewbre (2013) identifies marketing (market access challenges, lack of market information, price risks and underdeveloped marketing infrastructure), production (limited arable land, inadequate inputs, extension services and climate variability) and policy problems (the privatisation of marketing boards and laws regulating the use of natural resources) as the constraining factors that expose smallholder farmers to food and income insecurity

because they increase risk and uncertainty as well as act as disincentives for production. These are a hindrance to productivity for smallholder tobacco farmers in Zimbabwe (Keyser, 2002). These assertions are also shared by Shange (2014) who contends that Zimbabwean smallholder tobacco farmers constantly encounter a myriad of difficulties which include lack of inputs, finances and adequate infrastructure which increase their susceptibility to risk and uncertainty thereby playing a disincentive role to sustainable production and ultimately resulting in high vulnerability and poverty among smallholder farmers' households and the nation at large.

Internal and External Constraints Facing Smallholder Farmers

Internal constraints refer to the shocks that inevitably compromise productivity on the part of the farmer. The farmer however has control over these challenges which include labour shortage and the absence of basic skills needed in agriculture (DBSA, 1986). Conversely, external constraints are those challenges that emanate from the broader agricultural environment which the farmers have no control over (ABSA, 1986) and these include lack of inputs and equipment, poor infrastructure, inappropriate policies and legislations, ecological factors and poor marketing services. In the following sections, these internal and external factors that expose smallholder tobacco farming households in Zimbabwe to food insecurity and poverty are discussed.

External Constraints

The external constraints that will be discussed in this section include challenges associated with marketing and policy, limited availability of inputs, credit and farm equipment, lack of adequate infrastructure and natural hazards.

Lack of Infrastructure

A lack of adequate infrastructural facilities such as transport services, post-harvest storage and processing facilities, information and communication services, markets and water sources constitute a barrier to productivity, market access and trading (Louw et al., 2006). From a modernisation perspective, the lack of these infrastructural services is responsible for underdevelopment given that access to adequate infrastructure is crucial in enhancing market access, as well as flexibility and bargaining power in those markets for smallholder farmers (Bienabe et al., 2004). As Foster (2008) puts it, the negative impacts associated with the lack of adequate infrastructure are more or similar to those emanating from crime and corruption and hence infrastructural development ought to be given a first preference if development and food security are to be realised.

However, despite the significance of access to adequate infrastructure in ensuring productivity and market access, smallholder farmers generally lack access to the above mentioned facilities (Louw et al., 2006). The situation is worse in African countries whereby infrastructural inadequacy is the continent's underbelly and has been referred to as one of the most significant hindrances to Africa's economic growth (Foster, 2008). Zimbabwean smallholder tobacco farmers are an exemplary case; they lack adequate basic infrastructural needs which include markets, storage facilities, information and communication services, transport logistics and established water sources in their communities (Zimvac, 2011).

Shange (2014) notes that tobacco auction floors are centralised in Harare, which means that farmers have to transport their tobacco to the markets. Most FTLRP resettled areas however lack adequate transportation services given that the FTLRP was radical and was not accompanied by infrastructure delivery (Shange, 2014). Thus, most smallholder tobacco farmers in Zimbabwe are

compelled to sell their produce cheaply to contractors given that transport problems constantly hinder them from participating in the agro-business supply chains, circumstances foreseen by Louw et al., (2006).

Climate Variability and its impact

Climate variability is now globally recognised as a reality and a serious threat to agriculture and the environment (FAO, 2004) and ultimately rural development given that most smallholder farmers grow their crops under rain-fed conditions. It has been noted that the poor are the most susceptible to climate change (Cooper et al., 2005) no wonder why Africa is the most vulnerable due to its widespread poverty.

Zimbabwe is currently experiencing the shocks posed by climate change, she encountered devastating droughts of 2002, 2007, 2008, and 2012 which resulted in the depletion of grazing areas, soil erosion and the drying up of crops before harvest time which impacted, and is still impacting negatively on smallholder tobacco farmers' food security and livelihood portfolios (Ncube, 2012). Hurungwe district is not spared in this, it is also vulnerable to climate variations including prolonged dry spells, erratic rainfall, and frequent droughts (in every three to four years the district experiences a drought) (Chimhowu, et al., 2010). Crop pests and failures are regularly encountered by smallholder tobacco farmers in Hurungwe district (TIMB, 2011) and this has impacted negatively on the livelihoods of the community members hence the variability in climate is a barrier to productivity for smallholder tobacco farmers.

Market related challenges

According to the Bill and Melinda Gates Foundation of 2008, the opening up of markets is a crucial element in a process of empowering rural people. However, smallholder farmers in Sub-

Saharan Africa are susceptible to marketing constraints (Senyolo et al., 2009).These marketing challenges encountered by smallholder farmers were exacerbated by the globalisation of the world market which necessitated technological advancements and agro-industrialisation (Shange, 2014). Agriculture and food systems were commercialised following the industrialisation of agriculture and that resulted in the emergence and dominance of the Multi-national Companies (MNCs) such as Lever Brothers in the global value chains (Bienabe et al., 2004). These MNCs are influential on the market and have power to control, shape and constrain the choices and practices of both farmers and consumers (Boehlje, 2000) and as such are increasingly referred to as 'a critical alternative to the dominant neo-liberal model of agriculture and trade' (Wittman et al., 2010 cited in Bernstein, 2013:1).

Gaining insight from Webster's 2006 push-pull model theory of globalisation, it can be argued that there are positive and negative impacts attached to the commercialisation and industrialisation of agriculture. The transition from traditional chains to modern chains (Boehje, 2000) brought about opportunities for smallholder farmers who possess low cost labour and intensive knowledge to produce high value crops and sell their produce in the global market (Louw et al., 2006) given that they need to produce high quality and quantity products consistently for them to remain competitive in the global market (Louw et al, 2006).

However, as anticipated by Louw et al (2006), most smallholder farmers are excluded from the global supply chains due to the lack of capacity to enter and remain competitive in those high value agricultural markets (Louw et al., 2006), hence the industrialisation of agriculture yields more harm than good for African smallholder farmers. Louw et al. (2006), postulates that smallholders have the obligation to comply with the stringent market requirements (economies of scale, good quality and consistency) which are set by food processors, large retailers, wholesale

buyers and exporters, for them to be integrated into the global supply chains of which most farmers are incapable of meeting these due to various barriers to entry into competitive international markets which they face hence they suffer from lack of markets.

In Zimbabwe, smallholder tobacco farmers constantly face challenges with regards to market access. Smallholder tobacco farmers are ill-equipped to respond to global supply chains and as such they face constraints with regards to input and output market access as well as improving their competitiveness (Keyser, 2002). These farmers lack adequate market information, services and inputs, collective action and business, and negotiation experience and as a result, they face high transaction costs which inevitably hinder their participation in the global market (Ncube, 2012; Keyser, 2002). Given the above challenges that are encountered by smallholder tobacco farmers in Zimbabwe under the industrialisation of agriculture, it can be argued that the colonial era was better off for smallholder tobacco farmers in terms of market access because at least they could access white commercial farmers dominated market networks.

This is unlike in the post FTLRP whereby the Tobacco International Marketing Board which is mandated for buying and selling farm inputs and outputs was privatised thereby resulting in the precariatisation of smallholder farmers under the Zimbabwean tobacco industry given that they lack adequate pricing information, storage and transportation facilities (Hungwe, undated). The Tobacco International Marketing Board which regulates the marketing of tobacco in Zimbabwe leaves the power for determining tobacco prices in the hands of auction floors and contractors (Tekere, 2003). As a result, smallholder tobacco farmers in Zimbabwe endure dictated low prices for their produces as well as manipulative grading systems and late payments by the buyers (Keyser, 2002).

Corruption is also inherent in the Zimbabwean tobacco auction floors to such an extent that those farmers who pay bribes are connected to sell first at the expense of those who do not pay and the failure to bribe the buyers results in low prices for example $1.10 to 0.60c per kg of quality tobacco (Ncube, 2012) compared to the average set price which is $3. 67 per kg (TIMB, 2011). Due to their individuality, smallholder tobacco farmers lack the bargaining power to counter these constraints hence are vulnerable to food and income insecurity (Keyser, 2002) until sustainable solutions to these situations can be implemented.

Low level of capital endowment and access to credits

An adequate access to working capital and credit facilities is the major bane to agricultural development. The provision of adequate capital and credit facilities is a panacea to unproductivity in the agricultural sector and as such as mentioned earlier on, the improper supply of these is a bottleneck to agricultural production (Salami and Arawomo, 2013). This is so because failure to access capital and credit hinders the adoption of new technology in farming, investment in agriculture and ultimately resulting in marketing failures (Sadoulet and DeJanvry, 1995). Despite the importance of credit provision in agriculture, the increased calls for the provision of credit facilities to smallholder farmers and the enactment and implementation of policies that enhance farmers' access to credit facilities, lack of agricultural credit facilities is still a universal problem which impacts negatively on productivity in Sub-Saharan Africa (Shange, 2014).

Various factors are responsible for the inadequate supply of credit facilities in Africa and these include smallholder farmers' limited security for loans, the unfavourable borrowing conditions which small scale farmers bear, lack of authorised banks and loaning agencies, high interest rates of private loaners, lack of trust in smallholder farmers by money loaners who consider small

scale farmers as high risk due to their lack of collateral security, governance, government policies and institutional factors (Ncube, 2012).

In Zimbabwe, most smallholder tobacco farmers face credit and capital constraints. Before the Fast Track Land Reform Programme (FTLRP), small scale farmers could access credits through the use of land title deeds as collateral. Short and medium term loans were granted by the Agricultural Finance Corporation and were guaranteed by the Zimbabwe Tobacco Association in the 1990s (Cole and Cole, 2006). However, in the post- FTLRP period, smallholder farmers lack collateral security because land is no longer accepted as collateral security for both small scale and large scale farmers (Chimhowu et al., 2010). These problems with collateral security were further exacerbated by the commercialisation of AFC (Agribank) in 2000. People's own savings bank (POSB) tried to help but it failed due to the dollarization of the economy and hyperinflation (Keyser, 2002). Tobacco farming is capital intensive (Keyser, 2002) and as such, the lack of adequate capital that characterises smallholder tobacco farmers undoubtedly results in household food and income security (Keyser, 2002). These credit constraints should therefore be tackled for smallholder tobacco farming to flourish.

Inadequate research and agricultural extension services

"The key to increased agricultural production ultimately lies in the nation's ability to disseminate relevant information to the farming community, to facilitate the effective adoption of new production techniques, application of agricultural inputs, decision making on markets, prices and methods of conserving water, soil and vegetable resources." (Kiplang'at 1999:115). This therefore means that inadequate provision of research and agricultural extension services is the bottleneck to agricultural productivity (Pazvakavambwa and Hakutangwi, 2006). Despite the important role played by research and extension services in agriculture, an inefficient provision

of research and extension services by the government of Zimbabwe has been noted (Sukume, 2004).

This results in limited access to value adding extension services, and information including information on crops, soil qualities, crop management, weather patterns, use of technology and marketing information by smallholder tobacco farmers (Keyser, 2002) which undoubtedly result in a decline in productivity since information is an essential ingredient for agricultural development (Ozawa, 2007) thereby exposing smallholder tobacco farmers in Hurungwe district to food and income insecurity.

Zimbabwean smallholder tobacco farmers are continuously constrained by a lack of adequate research and extension services provision (Keyser, 2002). Unlike in the 1980s before the implementation of neo-liberal policies whereby Agritex was operating efficiently with its qualified extension workers spread all over the rural areas, in the post FTLRP period, Agritex is currently failing to meet its intended objectives. Shange (2014) documents the failure of the Ministry of Agriculture and Lands to provide adequate extension resources to smallholder tobacco farmers following the implementation of the FTLRP. This as Shange (2014) notes, inevitably results in the vulnerability of smallholder tobacco farmers who face technical, veterinary and research support given that tobacco is a standardised crop that requires considerable skills and experience on the part of the farmer if production is to be realised (Manjengwa, 2006). A decrease in production from 165 million kilograms in 2002 to 80 million kilograms in 2003 and to a miserable 68 million kilograms in 2004 can be attributed to the lack of advanced skills on growing tobacco (Keyser, 2002).

Following the FTLRP, there was the decimation of extension workers due to hyperinflation as the government sought to cut its costs (Ncube, 2012). As a result, there are many unfilled posts

in that department and as such given that the service providers are few, smallholder tobacco farmers lack adequate extension and research services and therefore some of them rely on neighbours and private advisors (Keyser, 2002; Ncube, 2012). Given the above scenario, it can be argued that the lack of research and agricultural services is one of the most pressing constraints faced by smallholder tobacco farmers under the Zimbabwean tobacco industry which needs to be tackled immediately if smallholder productivity is to be realised. Noteworthy is the positive aspect of contract farming which provide credit to smallholder tobacco farmers in terms of inputs and technical expertise. However, the exploitative nature of the relationship between contractors and smallholder tobacco farmers ought not to be overlooked (Ncube, 2012). To this effect, it can be maintained that smallholder tobacco farmers are exposed to various constraints in the tobacco farming sector which exposes them to food and income security.

Limited access to farm inputs and equipment

The unavailability, inaccessibility and unaffordability of critical farm inputs and equipment (expensive inputs, fertilisers, machinery, chemicals, draught power, on-farm transportation, chemicals, curing firewood and barns) is another biggest constraint which hinders the productivity of smallholder farmers in Sub-Saharan Africa (Shange, 2014). Exorbitant prices are attached to farm machinery and inputs, and given their low capital endowment; smallholder farmers find it difficult to access these inputs and machines (Shange, 2014). The situation is even complicated considering that the manufacturers and distributors of these inputs and machines are mostly located in distant urban areas which make it challenging for smallholder farmers to access these because of the transportation problems which they face.

Most of the soils in the resettled areas for example in Hurungwe district in Zimbabwe are characterised by low fertility and are ecologically degraded and as such there is need for lime

and fertiliser use in order to restore acids, phosphorous and potassium levels (Ncube, 2012) if agriculture is to be productive. However, in the case of Hurungwe district, instead of being supplied with these inputs, smallholder farmers are in a dilemma. The Karoi Auction Company which used to source the inputs for smallholder tobacco farmers withdrew its services after swindling a lot of money nearly US$ 85 000 from the farmers after it had promised to supply them with inputs after the payment of subscriptions (Ncube, 2012). Due to these problems with regards to the limited access to inputs and machinery, smallholder farmers in Hurungwe district just like other smallholder farmers in Sub-Saharan Africa who face input access problems are not fully using their plots (Ncube, 2012).

It should however be noted that agricultural support initiatives by the government and NGOs were initiated to increase smallholder farmers' access to inputs and equipment. In the Zimbabwean case, the National Economic Recovery Programme (2003) was implemented to increase input supply to the agricultural sector. In 2005 the Agriculture Sector Productivity Enhancement Facility programme was introduced by the Reserve Bank of Zimbabwe and it helped to finance agricultural inputs, equipment and infrastructure investment to procure inputs for farmers. In 2005 again, Operation Maguta, a scheme which distributes inputs to farmers was launched and in 2007 the farm mechanisation programme was conducted and it provided farmers with farm machinery (harrows, scotch carts, tractors and harvesters) (FAO, 2004).

In 2010, NGO participation in the supply of inputs was noticed, in 2010 and 2011, the Presidential Well-wishers Special Agricultural programme was implemented and under this scheme, fertilisers and maize seeds were distributed to the farmers and finally in 2013 an input support programme was implemented which gives 10 kilograms of maize seeds, lime and 100kilograms of fertiliser and it is still on (Ncube, 2012). However, due to the economic

challenges associated with the Zimbabwean economy, it does not cater for the farmers in the tobacco farming sector and as a result, they have to fend for themselves. Given this, it can be argued that despite the implementation of these policies, smallholder tobacco farmers are still encountering input and equipment challenges hence are vulnerable to food and income insecurity. Contract farming seems to be beneficial to smallholder farmers especially in tobacco farming by supplying the farmers with inputs, machinery, extensive services and markets but the exploitative nature of the system (Ncube, 2012) ought not to be overlooked and as such I conclude that smallholder farmers are in a dilemma in terms of input and equipment access hence immediate sustainable solutions to these problems are required.

Internal Constraints

Shortage of labour is the internal constraint that is discussed in the following section.

Labour Shortage

Smallholder farmers in Africa are generally constrained by the lack of labour (Zimvac, 2011). Zimvac (2011) asserts that to ensure productivity on a three hectare farm, a household should at least have three able-bodied adults who are agriculturally skilled and in times of critical labour periods these adults should be at least five. However, the average labour unit of most African households is 2.5 hence a shortage of adequate skilled labour is a characteristic of most African smallholder farming households. Smallholder farming systems are labour intensive due to the lack of modernised equipment, the situation is even worse given that only 2% of the smallholders in Africa utilise animal traction and the rest rely on hand hoeing due to the lack of draught power (World Bank, 2002).

Most smallholder families in Hurungwe district only cultivate small portions of their land given that most of them are unable to hire labour due to financial constraints and as such they remain reliant on household labour (Zimvac, 2011). This inevitably limits their productive capacity and the situation is exacerbated by the migration of able-bodied men in search of greener pastures as well as the death of productive and skilled members due to HIV and AIDS (Chimhowu et al, 2010).

This section has documented the critical role played by the Zimbabwean agricultural sector in economic growth, and in livelihood sustainance. The major changes in the Zimbabwean agricultural sector have been traced within the major land reform programs that the nation underwent. More importantly, the chapter has traced the major contributions played by the FTLRP in the growth of the tobacco sector and it also managed to document the struggles that are experienced by smallholder farmers under the tobacco sector which undermine their productivity and thereby exposing them to food insecurity and poverty. In the next section, I therefore discuss the adaptive capacity of smallholder farmers basing on the argument that smallholder farmers are not victims of situations but are rather heroes who formulate and reformulate livelihood activities to sustain their lives.

Smallholder Farmers and Livelihood Diversification

Livelihood diversification refers to the process by which rural families construct a diverse portfolio of activities and social support capabilities in their struggle for survival and in order to improve their standards of living (Ellis, 1998). Livelihood diversification can also be defined as attempts by individuals and households to find new ways to raise incomes and reduce environmental risk (Hussein and Nelson, 1998:3).

Diversification can be ‘ex-ante’ (voluntary and motivated by pull factors such as accumulation) or ‘ex-post’ (involuntary, people are forced to diversify in order to overcome catastrophic shocks) (Ellis, 1998). Therefore, spreading and reducing risk, smoothing consumption patterns, accumulating assets ‘stepping up’, coping with shocks, and ensuring protection against shocks as well as survival in the face of catastrophic shocks are the reasons behind diversification among rural people (Ellis, 1998; Yaro, 2006, Bryceson, 1999). These motives for diversification vary contextually and among households and individuals and as such constant context specific studies on the motives behind the adoption of multiplex adaptive strategies are welcome and required.

Biased just like neo-classical proponents who postulate that development proceeds from strictly agrarian to non-agrarian modes of production, de-agrarianisation thinkers liken livelihood diversification to the process of edging away from agriculture towards non-farm activities; daylighting within the non-farm sector (Bryceson, 1997). Income derived from these non-farm activities account for between 35% to 50% of the total household incomes in Sub-Saharan Africa (Haggblade et al, 2007) and in some parts of sub-Saharan Africa, the income from non-farm activities contribute to as high as 80%-90% of the total household incomes (Ellis, 1998). This contrasts with the re-agrarianisation point of view which stresses the role of agriculture and crop intensification in livelihood sustainance (Yaro, 2006).

Livelihood diversification therefore includes both on-farm (livestock rearing, fishing, gardening, farming and gathering of fresh products) and non-farm activities (transportation, petty trading, migration, beer making, handicrafts and off-farm waged labour) with non-farm activities generally classified into service and commerce activities which are mainly conducted on a seasonal basis (Ncube, 2012). Agricultural intensification, livelihood diversification, migration

and multiple employments (Scoones, 1998; Ellis, 1998) are the core adaptive strategies adopted by smallholders in response to overwhelming odds.

Compelled by the need to survive in the risk prone and uncertain rural economies presented to them by the liberalisation and industrialisation of the agricultural sector as well as by the other constraints noted in the above sections, smallholder farmers are formulating and reformulating their livelihoods (Fafchamps, 2003). Smallholder farmers diversify their livelihoods following the recommendation by Chambers (1989) who suggests livelihood diversity among the poor people for them to ensure survival in the world characterised by risks and uncertainty and livelihood diversification has been referred to as the main adaptive strategy.

Colonial Africa was characterised by a hindrance of livelihood diversification which only gained momentum in the post-colonial period (Assan, 2014). Following its advocacy by the Government of Zimbabwe in the post- colonial era, livelihood diversification has become the norm, an old age phenomenon that dates back to the 1990s (Ellis, 1998; Barrett et al, 2001). As rationale, ingenuity, calculative and dynamic players; heroes of adversity, smallholder farmers consistently pursue dynamic, diverse and complex activities and income portfolios with different risks, returns and liquidity either concurrently or at different intervals for sustainable development and household food security (Ellis, 1998; Keyser, 2002; Bryceson, 2002; Chambers and Conway, 1992).

As shall be noted in the findings of this study and already shared in the theoretical framework section, minimising risk and maximising returns has increasingly become the daily bread of smallholder farmers who constantly deploy a portfolio of livelihood assets for survival (DeHaan, 2012; Carney, 1998). The choice of these ‘multiplex’ income streams depends on the type and

level of vulnerabilities encountered notwithstanding the goals and priorities of the concerned actors (Carney, 1998).

A multitude of studies on adaptive strategies and livelihoods of smallholder farmers have been conducted (Ellis, 1998; and Bryceson, 2002). In a study of different livelihood strategies of different categories of households in the rural areas of Abbottabad in Pakistan, Sarhad et al. (2008) documents the use of agricultural intensification, livelihood diversification and migration in a bid to reduce vulnerability and foster livelihood welfare. Casual labour, self- employment, dependency on government and private services as well as remittances and farming were reported as the common specific strategies pursued by the rural poor (Munir et al., 2007). Scoones (1998) traced the dynamism of livelihood strategies in the rural areas of Zimbabwe, they found out that casual labour, gold panning, gardening, beer brewing, hunting, fishing, migration, craft work , local and cross boarder trading, poultry rearing and sales and farming were the major adaptive strategies which were manipulated by rural people for poverty reduction and shock absorption.

Similarly, basing on DARE survey findings of studies conducted by various scholars in Sub-Saharan Africa, Bryceson (2002) identified migration and remittances, casual labour, livestock keeping, crop diversification, beer brewing, weaving and pottery as the adaptive strategies pursued for risk minimisation, return maximisation and capital accumulation. In the same vein, Arachchi (1998) following an empirical study conducted with Sri Lankan rural households identified food exchange with neighbours, borrowing, casual labour, and the alteration of consumption patterns, migration and the sale of productive assets as coping mechanisms meant to sustain rural livelihoods.

These studies are crucial in the livelihood adaptation body of literature in that they enlivened the analysis of adaptive strategies pursued in the rural areas by providing the real life case studies. However, most of these studies were conducted on regional and national levels (Arachchi, 1998; Bryceson, 2002), some utilised larger samples in their surveys (Munir et al., 2007) and some employed quantitative methods (Chazovachii and Mutami, 2012). Informed on the importance of constantly examining the dynamic daily lived realities of rural people (Ellis, 1998) which are ever changing (Scoones, 1998) on a context specific basis, this purely qualitative study sought to complement the existing literature by giving voices to the often marginalised smallholder farmers in Hurungwe district given that the area is understudied especially with regards to livelihood sustainance issues.

In light of this, this study sought to understand how smallholder farmers in Hurungwe district were managing to survive given the challenges which they encountered in the agricultural sector given their risky tendency of mono-cropping. The nature and course of the strategies which were pursued to keep the households and individuals from collapsing were examined. A small sample of seventeen participants from two farms in Hurungwe district was used and this made it easy for the researcher to effectively probe into the nature and course of the specific adaptive strategies employed by smallholder farmers in the district.

Amare (1999) warned against homogenising the strategies of rural people without putting into consideration the differences in the socio-economic circumstances of those people as this would blur and misinform policy options. This study informed policy options for Hurungwe district basing from the qualitative data that was specifically retrieved from Hurungwe district hence was essential in filling up some of the methodological and contextual gaps which existed in the

existing literature. Given the prevalence of adaptive strategies and their complex nature, it is crucial to know about their effects and these are discussed in the following section.

The Effects of Livelihood Adaptation

The high prevalence of livelihood diversification is ample evidence that lucrative benefits are attached to this livelihood system. A growing body of literature has emanated with regards to the effects of livelihood diversification in Sub-Saharan Africa. Positive impacts are attached to livelihood diversification yet its negative effects have also been documented hence the impacts of livelihood diversification are context specific and difficult to predict. In this section, I synthesise the literature on livelihood diversification and livelihood sustainance in Sub-Saharan Africa. The aim of this study is to strengthen the adaptive strategies that are pursued by smallholder farmers, it is only through an understanding of the impacts of these strategies to economic growth, livelihood sustainance and food security that a decision on whether to strengthen or condemn them can be made hence a review of this literature is crucial in this study.

The adoption of various adaptive strategies plays a significant role in sustaining rural livelihoods (Ellis, 1998), fostering economic growth and local development (Bryceson, 2002) as well as in ensuring equality and empowerment among individuals and households. In a SLF's viewpoint, the manipulation of diverse assets through diversified livelihoods yields favourable livelihood outcomes which include reduced vulnerability, improved food security, more income, environmental sustainability and enhanced well-being (Carney, 1998). This therefore qualifies livelihood diversification as an effective tool in retrieving rural households from a 'poverty trap' (Devereux et al., 2003).

Multiplex empirical studies that confirm the pros of diversifying livelihoods have been conducted. Assuming an economist role, in her synthesis of African studies, Bryceson (2002)

stresses the importance of livelihood diversification in fostering economic growth and local development. Her assertions tally with DeJanvry and Sadoulet (2001) who document the stimulating role played by livelihood diversification in agricultural activities. This idea is also confirmed by Tiffen (2003) cited in Nelson and Hussein (2008) who disclosed the investment of income from non-farming activities to agricultural intensification which automatically results in increased incomes (Ellis, 1998). Basing on an empirical study conducted in three districts of Zimbabwe (Makoni, Mutoko and Chivi), Chiripanhura (2010) candidly echoes the viability of livelihood diversification as a poverty reduction mechanism given the opportunity for productively and flexibly manipulating livelihood assets which it offers (Chambers, 1997 and Ellis, 1998) thereby guaranteeing poverty elimination.

Asset and income accumulation is guaranteed in diversified livelihoods and this ensures the attainment of improved assets and incomes for all which ultimately leads to stronger, empowered and confident societies (Davies, 1996). Basing from Davies' (1996) assertions, the role of ensuring equality among rural individuals and households embedded in diversified livelihoods becomes apparent. These sentiments were also shared by Ellis (2000). However, the significance of livelihood diversification as an accumulation 'stepping up' (Dorward, 2009) and equalising strategy has been criticised. Davies (1996) is of the assertion that livelihood diversification is temporary and can only ensure survival and not necessarily asset and income Instead of eliminating income gaps, critics of livelihood diversification refer to it as a strategy which engulfs income disparities between the poor and the better off (Yaro, 2006) due to the marginalisation and exclusion of the poor based on demographic and socio-economic variables (Yaro, 2006). Livelihood diversification has also been criticised for stagnating on-farm activities due to the depletion of labour following migration in search of non-farm activities (Ellis, 1998).

Contrarily, Yaro (2006) postulates that diversification into non-farm activities does not lead to the abandonment of farming. Hussein and Nelson (1998) argue for the effects of livelihood diversification across specific geographical locations. Therefore this study does not seek to criticise the available literature but instead it complements existing literature by examining the contributions made by diversified livelihoods in Hurungwe district.

Critics of livelihood diversification into non-farm activities stress the differential level of intensity and participation of rural households in diversified livelihoods based on demographic and socio-economic variables (Yaro, 2006). With regards to this, a synthesis of the literature on various factors that account for the differences in the choice of adaptive strategies to pursue is made in the following section.

Determinants of Livelihood Adaptation Choices among the Rural People

This section is premised on the argument that engagement in 'multiplex' adaptive strategies does not occur by chance but is instead determined by various factors which include demographic, socio-economic, environmental and communication factors (Barrett et al, 2001; Idowu et al, 2011). This argument is based on the Sustainable Livelihoods Framework perspective, which poses that human beings are endowed with various capital assets which they manipulate for livelihood diversification in pursuit of poverty reduction and household food security (DeHaan, 2012). These sentiments are also shared in Sen's capability approach which stresses the importance of 'capabilities' (e.g. freedom to be educated and well fed) in enabling the achievement of 'functionings' (e.g. human well-being and food security) (Sen, 1998). Five capitals are identified in the SLF and these are human capital (the level of education attained by the household head and other household productive members, household labour size and these can be further disaggregated by age and sex), natural capital (access to land), physical capital

(ownership of farm and off-farm productive assets such as livestock and machinery and the level of infrastructural development (road access, market access, media access and electricity connection)), financial capital (household or individuals' credit access, debt and income levels) and finally social capital (membership in organisations and cooperatives and social networks) (Adebayo et al, 2012; Chambers and Conway, 1991; Scoones, 1998). As the SLF attests, social relations, policies, organisations, institutions, trends and shocks modify access to and enable individuals and households to transform their livelihood assets into lived outcomes (DeHaan, 2012). A discussion of some of the above mentioned factors and their significance on the choice of adaptive strategies to pursue constitutes the contents of this section.

Efforts were made to examine and empirically test the determinants of livelihood adaptation globally, regionally, nationally and at district level and the demographic, socio-economic, environmental and communication factors mentioned above were found to be either positively or negatively significant to the diversification of livelihoods (Khan, 2007; Destaw, 2003; Berhanu, 2007 and Bezemer and Lerman, 2003). As shown above, the SLF examines the assets separately which increases the probability of failing to recognise the cohesiveness and intimate relationships that exist between these assets in their influence on livelihood diversification. As referred to earlier on in the discussion of the Sustainable Livelihoods Framework, at this phase I rescue this study from the criticism trap which the SLF is engulfed in by stressing the cohesiveness of some livelihood capitals as shall also be noted in the empirical chapter.

Under the SLF, land holding constitute physical capital whilst income level of the household is a representation of financial capital (DeHaan, 2012). In an acknowledgement of the assertions of the SLF and not necessarily seeking to dismiss it, I edify the SLF by bringing to light the intimate relationship which exists between financial and physical capital. Land is an asset which

the farmers can sell or mortgage in return for income and likewise income can be used to buy physical assets hence these capitals are dynamic and convertible and for that reason, in submission to Bourdiue's (1986) propositions cited in Giddens (2006), I seize from treating them as separate entities, to ensure that, the determinants are discussed independently without necessarily grouping them into broad capitals.

Sex of the household head and other adult household members plays a significant role in determining the adaptive strategies pursued by rural villagers. Culturally defined roles and norms characterise the rural areas and these ensure differential access and ownership of assets whereby women encounter mobility limitations and low asset access and ownership as compared to their male counterparts (Davies, 2006). In this case therefore, women's capability is deprived a notion foreseen in Sen's capability approach that the capability one can generate depends on one's gender (Sen, 1992). This is also shared by the SLF which stresses the differential access of livelihood assets depending on the influence one has (DFID, 2000). The SLF did not necessarily refer to the potential role played by gender roles in excluding individuals from asset ownership and access and as such, in this study the aspect of gender was included.

As postulated by Hussein and Nelson (2008), due to their increased asset ownership, land in this case, men are more concentrated in agricultural intensification and women mostly pursue non-farm activities given that they are mostly excluded from land ownership. In Hurungwe district, after all the land reforms, men still own the larger parts of the land and most women access land through men, hence these assertions could be adequate in explaining the situation in Hurungwe district. On the contrary, Haggblade (2007) documents the higher concentration of men in non-farm activities due to their few access constraints at the expense of women who were dominant in on- farm activities, situations necessitated by the cultural gender roles and division of labour

which obliged women to pursue activities directly related to their customary roles in the domestic sphere. Similarly, in a Tanzanian study, Lanjouw et al., (2001) found out men to be actively participating in non-farm activities than women. However, Van den Berg and Kumbi (2006) found no significant relationship between sex and the choice of adaptive studies.

Land holding is another positive and significant factor in livelihood adaptation especially in off-farm activities (Idowu et al, 2011). Khatun and Roy (2012) postulate that households and individuals with large land sizes generally adopt non-farm activities for the smoothening of their farm operations. These assertions are however subject to criticism given the body of literature that stresses the negative impact of land holding on off farm diversification (Adugna, 2008). Under that body of literature, holders of large farms are generally documented to be pursuing agricultural intensification because land ownership stimulates farming and on-farm activities (Lanjouw et al., 2001). For securing agricultural income, farmers need to stay on-farm and lower off-farm intensity (Lanjouw et al. 2001; Khan, 2007) and be that as it may, those with large farms are concentrated in on-farm activities with non-farm activities mainly pursued by the landless and the holders of small farm sizes (Beyene, 2008). The holders of small farm sizes are mostly poor and cannot sustain household livelihoods and therefore they commonly diversify into off-farm activities for meeting the ends (Corral and Reardon, 2001). This therefore means that land scarcity plays a positive and significant role in the participation in off-farm activities.

Education constitutes another determinant of livelihood diversification in Africa (Barrett et al, 2001 and Destaw, 2003). Education levels yield positive and significant impacts on the level and course of diversification among the rural people (Khan, 2007) because education access increases human capital levels and provides necessary skills which enable entry into more remunerable activities (Lanjouw et al, 2001; Idowu et al, 2011). Those households headed by

educated heads are most likely to shun agriculture and diversify into lucrative non-farm activities for welfare improvement (Babatunde and Quaim, 2009) as compared to those headed by uneducated heads that can only access refuge off-farm activities.

Empirical studies confirm the essence of education in fostering participation in non-agricultural activities (DeJanvry and Sadoulet, 2001; Abdulai and Delgado, 1999). In a study conducted in Pakistan, Fafchamps and Quisumbinging (1997) document the critical role played by education in influencing the adoption of non-farm activities at the expense of strictly peasant modes of production. They even echoed that educating a household member guarantees income increment. This point of view was also shared by Lanjouw et al., (2001) basing on the findings of their empirical study conducted in India which stressed the utility of education in improving access to non-farm activities. The positive and significant role of education to diversification into non-farm activities was also confirmed in Mexico (DeJanvry and Sadoulet, 2001) as well as in Northern Ghana (Abdulai and Delgado, 1999).

However, despite the validity of these empirical findings on educational levels' significance to livelihood diversification choices, contrary assertions have emerged. Beyene (2008) found no significant relationship between education levels and the adoption of non-farm activities. To this effect, Corral and Reardon (2001) postulate that the relationship between education levels and the choice of non-farm activities differs contextually and with the type of specific non-farm activities pursued, hence the importance of examining this relationship at local level in Hurungwe district given that this constitutes a grey area in the case of the district.

Age is another factor which determines the form and nature of diversification strategies pursued by people (Asmah, 2011). Younger farmers normally lack enough land for the sustainance of their households as compared to older farmers and as such to smooth their consumption patterns

as well as accumulated their assets and income, younger farmers indulge in non-farm diversification at a high rate (Abdulai and Delgado, 1999). Therefore, age has a positive effect on off-farm livelihood diversification for the younger household heads, in fact the young are more oriented towards non-farm activities. However, the probability for engaging in off-farm activities decreases with aging (Asmah, 2011; Barrett et al, 2001). In a study of the determinants of livelihood diversification adopted in Northern Ghana by Abdulai and Delgado (1999) the younger were found out to be more concentrated on off-farm activities yet the older farmers were found out to be more aligned to on-farm activities. These findings are congruent to the findings by Khan (2007) and Destaw (2003). On the contrary, some studies note that the need for diversifying into non-farm activities increases with age (Khatun and Roy, 2012; Wanyama et al, 2010). Sisay (2010) however, found no significant correlation between age and the choice of adaptive strategies hence an examination of these factors in Hurungwe district is significant.

The availability of adequately developed infrastructural services correlates with livelihood diversification in the rural areas (Davies, 1996). The availability of electricity, irrigation and transport facilities, communication channels and the proximity of markets is positive and pertinent in promoting engagement in non-farming activities as well as in farm activities (Escobal, 2001) hence fostering agricultural production. The absence of these results in less participation in non-farm activities and higher concentration in on-farm avenues (Abdulai and CroleRees, 2001). These assertions were confirmed in the studies by (Lay and Schuler 2008; Asmah, 2011 and Barrett et al, 2001).

Larger family sizes decrease the odds of pursuing strictly peasant modes of production (Asmah, 2011). The larger the family, the greater the potential it has to participate in both on and off-farm avenues (Bezemer and Lerman, 2003). This is confirmed in Toulmin's (1992) study of

smallholder farmers in Central Mali whereby larger households were successfully diversifying into both non-farm and on-farm activities at a higher rate compared to smaller households which were mainly concentrated on agricultural intensification. This is congruent with the findings by Sisay (2010) from an Ethiopian study. Khatun and Roy (2012) however, found no significance between household size and diversification choices.

Livestock ownership has a positive effect on the choice of on-farm activities due to the availability of draught power, at the same time; the lack of livestock compels and obliges individuals and households to actively participate in non-farm activities to make ends meet (Benin et al, 2004). Asmah (2011) is of the assertion that the probability for diversifying into non-farm avenues is decimated by 1.9 %. These postulations are in tandem with the findings of Khan (2007) and Berhanu et al (2007).

Dependency problems also push households and individuals into both on-farm and off-farm livelihood diversification strategies (Khan, 2007) due to the increased failure to meet subsistence needs brought about by the increased dependency ratios (Khan, 2007; Warren, 2002). Increased dependence ratios therefore pose negative impacts on the household's probability to diversify (Saha and Bahal, 2010). The negative effects of the dependency ratio on livelihood diversification are confirmed by Khatun and Roy (2012). However, despite their concentration in non-farm activities, households with increased dependency ratios mostly dominate in less remunerative strategies (Jansen et al, 2003).

Asset rich households tend to diversify more than the 'have nots' (Khatun and Roy, 2012). The availability of farm tools and machinery fosters diversification into on-farm activities. For example, access to ploughs is crucial for increasing farm production hence those with farm

machinery are more concentrated in agricultural intensification as compared to the non-farm sector, and those without highly adopt non-farm activities (Barrett et al, 2001).

Income levels and credit access also play an indispensable part in determining the activities pursued by smallholder tobacco farmers. High credit, income access and use, guarantee active participation in agricultural intensification yet reduce the probability of participation in non-farm activities (Khan, 2007). Farmers' access to working capital promotes agricultural intensification rather than diversification into off-farm activities. Conversely, low credit and income access and use, pushes households and individuals into low remunerative off farm activities especially those with low barriers to entry (Yaro, 2006; Barrett and Reardon, 2000). These assertions converge with the findings by (Brown et al, 2006; Berhanu et al., 2007; Sisay, 2010).

This available literature is crucial in that it gives a general understanding of the determinants of diversification. However, the differences between the findings of different scholars in this field make it obvious that attempts to generalise the determinants of livelihood diversification are guaranteed of blurring policy options and as such, this study that specifically targeted Hurungwe district is justified. Moreover, the already conducted studies mainly quantified data using regression analysis, univariate and multivariate regression models and the Tobit regression model (Idowu et al, 2011; Lay and Schuler, 2008). Quantifying data risks the loss of data during the process of reducing data to numbers. This study contributes to the body of knowledge by discussing the determinants of diversification through the use of qualitative methods which give the concerned actors opportunities to speak for themselves. In the next section I discuss the constraints to livelihood diversification.

Constraints to Livelihood Adaptation

Rural people operate in divergent, complex and risk prone surroundings (Chambers, 1989), and this rationalises the divergence in their livelihood activities as they endeavour to sustain their livelihoods in spite of the overwhelming odds. Unfortunately, despite their rationale, rural people's aptitude to construct productive strategies in a bid to rescue themselves from the 'vulnerability context' and 'poverty trap' is also constrained in the risk environments which they function in. This idea is seconded in the SLF which documents the capability of policies, institutions, processes and organisations imbedded in the rural people's environment to restrict their adaptive capacity thereby propelling them into a 'poverty trap' (DFID, 2000). This therefore implies that there are divergent constraints to livelihood adaptation and these have been documented in various studies (Khatun and Roy, 2012; Ncube, 2012; Barrett et al, 2000 and Saha and Bahal, 2012) and these include infrastructure, capital, skills, technology and asset predicaments well captured as infrastructural, promotional, economic and social constraints in Saha and Bahal (2012). These diverse constraints deplete the possibility of attaining secured livelihoods hence with my motive of enhancing rural livelihood security; I devote this section to a discussion of the divergent and complex dilemmas to adaptation recognising that the examination of these is imperative for devising solutions to them.

The availability of infrastructure including marketing, communication and storage facilities as well as financial institutions is a pre-requisite for pursuing effective adaptation strategies (Saha and Bahal, 2012). However, most rural people and smallholder farmers to be particular generally lack these facilities and this restricts their adaptive capacity. A study of livelihood diversification conducted in West Bengal, Saha and Bahal (2012) documents the lack of marketing and storage facilities as the major impediments to livelihood diversification. Similarly, Khatun and Roy

(2012) document the restrictive role to livelihood diversification that was played by infrastructural bottlenecks in West Bengal. These studies are in tandem with various studies including Woldenhanna and Oskam (2001); Bryceson (2002) and Ncube (2009). Infrastructural challenges therefore generally constrain farmers' capacity to adapt to the shocks which they experience and as such access to these needs to be improved if effective adaptation and ultimately livelihood outcomes are to be realised.

Furthermore, promotional constraints hinder the capacity of smallholder farmers to adapt in response to the overwhelming odds. These include the shortage of technical and skill training, lack of raw materials and inputs, irrigation facilities, loans and government support as Saha and Bahal (2012) postulates from a study conducted in West Bengal and this constrained livelihood diversification among the inhabitants of West Bengal. These findings are confirmed in Khatun and Roy (2012) who also document that lack of information and training on new livelihood strategies acted as a barrier to livelihood diversification in West Bengal. Mukwedeya (2009) confirms this on a Zimbabwean study as does Boru and Koske (2014) on a study of the strategising capacity of the Gadamoji agro-pastoralists of Kenya.

In addition to that, economic (lack of capital and credits), social (lack of experience on new livelihood activities, shyness on undertaking new strategies) and other factors including time constraints, climate variability, exclusion based on gender and social norms as well as degraded environments were identified as some of the major barriers to the adoption of diverse adaptive strategies among Africans (Barrett et al, 2001; Saha and Bahal, 2012; Ncube, 2012; Adams and Mortimore, 1997).

This section has identified the various factors that constrain households' and individuals' capacity to adapt to the shocks which they encounter in the risk prone environments which they

operate from (Chambers, 1989). These constraints vary contextually hence in a follow up to the already conducted studies; this study complements the available literature by examining the constraints to livelihood adaptation specifically at farm level in Hurungwe district.

Research gaps

The above sections have provided information on the adaptive capacity of rural people clearly outlining the determinants and constraints to the adaptive capacity of the rural people. In so doing, gaps within the current scholarly work that examines the adaptation capacity of the rural people have been identified. In as much as various studies examine the adaptive capacity of the rural people, few studies have been devoted to specifically examine the factors that determine the choice of the pursued adaptive strategies as well as those that undermine rural people's ability and will to diversify. For those few that considered the determinants and constraints (Khatun and Roy, 2012; Saha and Bahal, 2012; Mortimore, 1997), they examined these outside Hurungwe, hence a study that captures the daily lived realities in Hurungwe district is creditable. In addition to that, those studies were rooted in the quantitative paradigm hence they failed to provide an in-depth 'thick' descriptive analysis of the constraints that are faced by rural people from the concerned actors' perspective. This study therefore sought to address these knowledge and methodological gaps by exploring in-depth data on the constraints and determinants of livelihood adaptation from the perspective of smallholder tobacco farmers. A discussion on the SLF which was used as a conceptual framework on this study is made in the following section.

The Sustainable Livelihood Framework

In the qualitative paradigm, a theory is used to deliver the comprehensive enlightenments that inform the study and it can also function as a theoretical lens which guides the study and raise specific questions to be addressed (Creswell, 2003:121-140). In this study, I applied the

Sustainable Livelihoods Framework (SLF) as a theoretical base which directed the study and abetted in the formulation of the research questions hence I review the literature on the SLF in this section. An overview of the origins and key characteristics of the framework followed by a discussion of the components of the framework is proffered. I also provide a critical analysis of the framework and discuss its applicability and practicality to this study given my assignment of scrutinising the adaptive aptitude of smallholder farmers. The prominence of arguing in line with, against as well as beyond the SLF is given the argument being that in as much as smallholder farmers are embracing a portfolio of adaptive strategies, the impact of this livelihood diversification on their livelihoods is entrenched in the level of vulnerability, accessible assets as well as the institutes and policies that regulate their diversification capability.

The SLF is an actor oriented approach to development intervention that has been in vogue since the late 1990s. It formed a principal notion of the UK's Development for International Development (DFID) stratagem during the early years of the New Labour Government in the UK (DeHaan, 2012). The SLF is much indebted to the work and inspiration of Sen (1981) on entitlements, Chambers (1983), Chambers et al (1989) and Chambers (1994) who authored the initial paper on sustainable livelihoods frequently referred to as the sustainable livelihoods foundation paper (Glopp, 2008). The Sustainable Livelihoods Framework (SLF) was utilised by numerous organisations hence resultantly there is the DFID, UNDP, CARE, Oxfam, PGIEP and the Learning about Livelihoods framework but the DFID is frequently used (Brocklesby and Fisher, 2003). There is a thin line dividing these frameworks and their differences stem from the diverse definitions of livelihoods which they implement (DeHaan, 2012). In this study, I utilised the DFID sustainable livelihoods framework as a lens through which to gather and view data.

The SLF is principally a conceptual framework for scrutinising the determinants of poverty, people's access to resources, the diverse livelihood activities pursued by deprived people and the relationship between relevant factors at micro, intermediate and macro-levels (Brocklesby and Fisher, 2003). The framework enhances understanding of poor people's livelihoods by drawing on the chief factors that deprive them as well as on the typical relationships between those factors (DeHaan, 2012). In this study, I sought to get an in-depth understanding of how smallholder tobacco farmers in Hurungwe district were safeguarding their livelihoods given a plethora of documented and undocumented predicaments which they faced in the tobacco farming sector. Prominently, I craved to detect and evaluate the determinants and barricades to the adoption of the adaptive strategies which smallholder farmers considered indispensable for their existence from their own perspectives and chronicles hence the SLF was vital in this study.

This framework is constructed on dual strategic conceptions, the first one being a framework that assists in understanding the complexities of poverty and a set of philosophies to guide accomplishments for addressing and overcoming poverty constitutes the second fundamental component (Serrat, 2008). The SLF encompasses seven guiding principles which include placing a central emphasis on people, being holistic, dynamic and to be built on strengths (DeHaan, 2012). Promoting micro-macro links, encouraging broad partnerships and aiming at sustainability are the other principles of the SLF (DeHaan, 2012).The SLF places rural people at the centre of inter-related influences that affect how these people create a livelihood for themselves and their households (DeHaan, 2012).

In this framework, people are conceived to be living in a 'vulnerability context' in which they are exposed to risks through sudden shocks, trends over time and seasonal change (Serrat, 2008). As the framework remarks, this therefore means that human lives are dynamic to such an extent

that they constantly move in a cycle of poverty dictated by the transformations in their environment (Elasha et al., 2005). This environment referred to as the 'vulnerability context' in the SLF embraces the trends in governance, resources and demographic patterns as well as shocks (natural hazards, economic challenges) and seasonality (seasonality of prices, employment chances) (Allison and Ellis, 1998) which externally affect people's livelihoods and assets. Vulnerability therefore denotes the insecurity of human beings influenced by the changes in their external environment (Devereux, 2001).

Smallholder tobacco farmers in Hurungwe district live under the vulnerability context given the constraints (climate change, lack of adequate social amenities and finances) affecting the agricultural sector as can be attested by a decline in tobacco production from 2200 kg/ hectare in 1998 to approximately 700kg/ hectare in 2001 (The Ministry of Land and Agriculture, 2005). However, subsequent to the changes and trends constraining the tobacco farming sector in Hurungwe district, endeavours were made to recuperate productivity at a local level. Agricultural intensification and new technologies were adopted and these trends in new technologies are opportunities for securing livelihoods (Carney, 2002). The SLF regularly attributes the adversities encountered by people to trends and changes thus failing to detect the positive contributions made by those trends and transformations. In a contribution towards the completion of the SLF, though acknowledging the role of marketing, production and institutional constrains in undermining the livelihoods of smallholder tobacco farmers, this study appreciates the capacity of those constraints in influencing livelihood diversification behaviour among those farmers.

Contiguous to the people at the hub of the framework are the resources and livelihood assets which people have access to called 'capitals' usually organised in a form of a pentagon which are

used to assess people's overall base set (DeHaan, 2012). These are human (labour and skills, experience, knowledge and creativity) natural (resources such as land and water), physical (machinery, infrastructure and energy), financial (money, credit and loans), social (social networks) and the recently added political (citizenship and membership in political parties) capitals (Adato and Meinzen-Dick, 2002). Despite the constraints presented to the tobacco farming sector, smallholder tobacco farmers in Hurungwe district are capable of sustaining and revitalising their livelihoods, diverse livelihood activities are adopted including unregistered mining, poaching and trading.

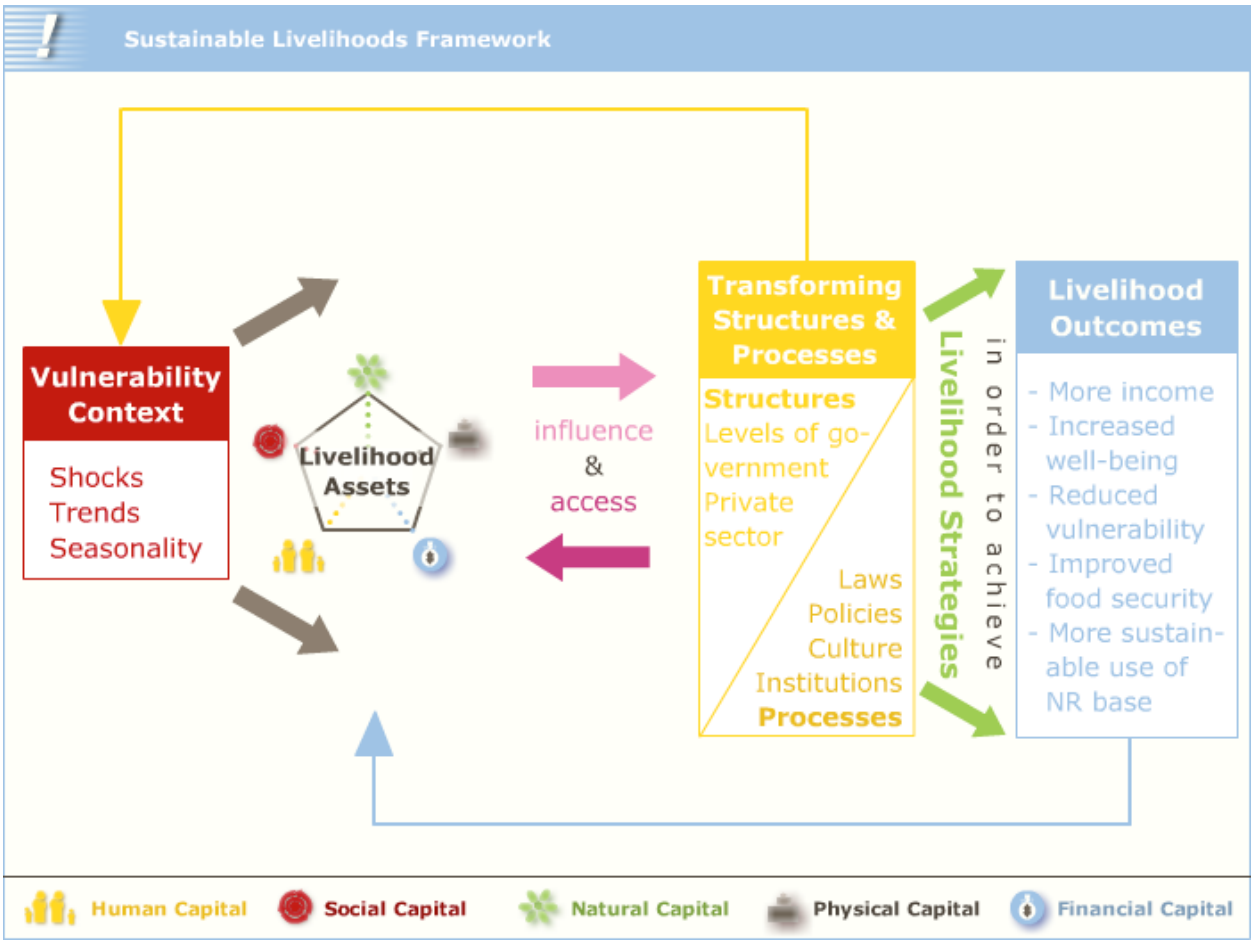
However, the impacts of these strategies to the households in the district vary which brings in the assertions by Carney (1998) that vulnerability as well as escaping from that vulnerability depends upon the capacity of asset holders to adapt. Well-versed on the numerous assets which could be employed by rural people in fortifying their lives, I succeeded in generating comprehensive data concerning miscellaneous adaptive strategies pursued by smallholder tobacco farmers in Hurungwe district. In some instances, the participants would overlook some of the activities which they employed, for example artisanal services. It was only after further probing that various artisanal activities and their contributions to households' income were mentioned hence the SLF was very crucial in this study.

Smallholder farmers are susceptible to the marketing, production and institutional challenges which characterise the agricultural sector (Baloyi, 2010) and this explicates the devastating poverty among smallholder tobacco farmers in Hurungwe district. Nonetheless, smallholder farmers are not victims of the constraints, instead they strategise mainly through the adoption of diverse livelihood activities in a bid to circumvent those constraints (Ellis, 1998). This is precisely what is transpiring in Hurungwe district, people are suffering but in turn they strategise.

However, food and income insecurity still characterise the district, what could be the problem? This is one of the questions I sought to answer in this study and potential answers were provided in the SLF which contends that policies, institutions, processes and organizations both formal and informal affect how people use their assets in pursuit of different livelihood strategies. These are said to be shaping livelihoods by influencing access to assets, livelihood strategies, vulnerability and terms of exchange (Adato and Meinzen-Dick, 2002).

Enlightened by the SLF on the capacity of institutions, laws and policies to constrain the capacity of people to diversify their livelihood activities, an enthusiasm to conduct an empirical study on the specific laws, institutions and processes that constrain people motivated this study. I felt that an empirical study on these would not just test the assumptions of the SLF but would be effective in informing the policy makers on those specific constraints basing on the narratives of the concerned people which would help in the implementation of sustainable policies, exactly the achievements that were made in this study hence the significance of the SLF in the formulation of the research questions and arguments as well as in the gathering and discussion of data in this thesis.

The SLF recognises the capacity of people to pursue manifold strategies sequentially or simultaneously (DeHaan, 2012) hence the SLF was crucial in this study for the discussion and analysis of the research findings. The livelihood outcomes after employing various strategies include better income, health and the better use of available assets (Ashley and Carney, 1999). This is further illustrated in fig 2 1.



Source: DFID 2000

Given this, it can be argued that the SLF is the best theoretical approach with which to view the complexity and dynamic nature of the livelihoods of smallholder farmers hence it was useful in this study.

The SLF is a more holistic and synthetic framework which helps to identify and value what people are already doing to cope with risk and uncertainty (Carney, 1998). It offers a method of thinking about various livelihood strategies employed by people and the factors that impact on the undertaking of these strategies (Brocklesby and Fisher, 2003). The adoption of the SLF helps in the selection of the best methods for accruing and analysing data (Murray 2000 cited in DeHaan, 2012). It was because of all these advantages that this study utilised the SLF. This

framework was appropriate for this study as it sought to examine smallholder tobacco farmers' lives, their livelihoods and the strategies they employed to cope up with the stresses and shocks emanating from tobacco mono-cropping as well as the factors that constrained their agency. However, despite its importance, the SLF has some shortcomings which I encountered in this study during the data gathering and analysis phase and as such I had to adjust it to ensure an effective enquiry and discussion into the adaptive strategies of farmers as well as the constraints and opportunities to them. The succeeding section therefore offers the weaknesses of the SLF which had the potential of misleading this study and how I tackled them.

Flaws of the Sustainable Livelihood Framework and how they were overwhelmed

Despite its widespread acceptance, the SLF has attracted many criticisms. It has been criticised for disregarding multifarious influences that might have the potential of keeping the poor in poverty (DeHaan, 2012). For Adato and Meinzen-Dick (2002), the SLF overlooked the role of social determinants including gender, ethnicity and class in pauperizing and constraining people. Likewise, I acknowledge this deficit in the SLF basing on the definition of poverty offered by DeHaan (2012) that poverty denotes exclusion of some social groups on accounts of material, physical and social variables such as gender, ethnicity and education (Serrat, 2008; Ellis, 1998).

Given the literature on the variances in asset endowment, livelihood activities and outcomes between men and women based on gender-based exclusion, I advocate the edification of the SLF since it failed to recognize the role played by these variables (Scoones, 1998; Ellis, 1998). In this study, as shall be noted in the empirical chapter, the gendered division of labour relegates women to domestic labour thereby constraining women's adaptive capacity hence in this study, the material, social and physical characteristics were given some special attention with regards to their potential in either enabling or constraining the adoption of diverse livelihood activities.

Furthermore, the SLF is condemned for failing to acknowledge the role played by inequalities of power, conflicts of interests, social rules and norms in shaping livelihoods (Murray 2000 cited in DeHaan, 2012; Scoones, 1998;). The differences in the access and control of resources due to inequalities of power are generally mentioned and these inequalities aggravate poverty (Scoones, 1998). Brujin and Dijk van (1995) contends that those who yield power are presented with an opportunity to manipulate rules and norms which regulate access to resources hence their access to resources is at variance with that of the powerless. These assertions were confirmed in a study of the Fulani in Mali whereby access to resources was a privilege of the powerful (Brujin and Dijk van, 1995). Given this shortfall, I therefore edified the SLF by emphasising the role of power, social rules and norms to livelihoods in the case of Hurungwe district.

Despite all these criticisms, the SLF remained crucial in this study and it helped the researcher to get an in-depth understanding of the farmers' livelihoods, adaptive strategies as well as the determinants and constraints to the adoption of diverse livelihoods which they encounter. The critiques of the SLF were addressed in this study by including the suggested additional concepts wherever they were relevant. The approach was modified and adapted to suit Hurungwe smallholder tobacco farmers' circumstances in instances when the framework could not provide universal solutions. Even though there has been a tendency of overlooking the importance of the SLF in adaptive strategies studies probably due to the criticisms nailed against it, basing on the experiences I had, I argue that the thinking tools of the SLF are appropriate tools to employ in studies which are meant to dig deeper into the livelihood activities of the people as well as the constraints and opportunities for diversifying presented to those people. The SLF helped me to focus on the structures and processes that governed the use of resources in Hurungwe district.

Through the use of the SLF, I managed to identify the links between the processes and structures which ultimately made it possible for me to come up with the recommendations which might improve the livelihoods of smallholder farmers hence the SLF was very useful in this study. Basing on this, it can be argued that any theory is susceptible to criticisms and as such the criticisms of the SLF should not undermine its usefulness, more can still be done through the engagement with this framework, the idea should just be to critically test and edify it as I did in this study.

Conclusion

This chapter has reviewed the literature that I engaged with in the formulation of the research questions. Specifically, the chapter has provided the literature around the Zimbabwean agricultural sector and agrarian policies and the impact these had specifically on the tobacco farming sector. The struggles faced by smallholder farmers within the Zimbabwean tobacco farming sector have been documented. Subsequent to this, the literature on the determinants and constraints to smallholder farmers' adaptation was also reviewed followed by a review of the Sustainable Livelihoods Framework which was employed as a conceptual framework in this study. The following chapter provides a discussion on the research methodology that was adopted in this study.

CHAPTER 3: METHODOLOGY

Introduction

To ensure an easy evaluation of this research and to avoid the suspicion which would result from being unclear on the research design and procedures (Attride-Stirling (2001), this chapter gives a thorough description, discussion, explanation and justification of the methodology, methods, and techniques which were used to meet the outlined objectives of this study. The procedures which were followed are also detailed as well as the experiences and challenges which were encountered throughout the course of this study.

The Qualitative Design

This study applied the qualitative paradigm in capturing and understanding a myriad of activities undertaken by smallholder tobacco farmers and their households in sustaining their livelihoods as well as in exploring the determinants and constraints to their adaptation. Qualitative research aims to understand and explain the reasons behind human behaviour, it seeks to understand a given research problem or topic from the perspectives of the local population it involves (Yin, 1994). This goes hand in hand with the tenets of the sustainable livelihoods framework which was employed in this study which is people centered and is built on people's perceived strengths and opportunities (Serrat, 2008). It was for this reason that qualitative methodology was employed in understanding the divergent adaptive mechanisms employed by farmers. The choice of qualitative methodology with respect to this study was again influenced by the fact that the methodology acknowledges subjectivism which is essential in avoiding pre-judgments, analysis and perceptions employed by the researcher's interests and beliefs on the issues of smallholder tobacco farmers' adaptive strategies which were under investigation (Khanzonde, 2004).

Qualitative methodology presented me with the flexibility to follow unexpected ideas during the research and to explore the participants' opinions effectively. This methodology is sensitive to contextual factors and for the sake of this study it allowed me to study symbolic dimensions and social meanings of the strategies pursued by smallholder tobacco farmers and their households. It also offered increased opportunities for developing empirically supported new ideas and for in-depth and longitudinal explorations of the strategies pursued by farmers as well as the constraints and opportunities for livelihood adaptation presented to them. This methodology was useful in giving a clear understanding of the activities undertaken by farmers in sustaining their livelihoods and the meanings which they attached to these activities. Employing this methodology provided valid data through the acceptance of the plurality of truth which was very useful in understanding the divergence of smallholder tobacco farmers' strategies as well as the variance in the constraints which they encountered.

Yauch and Steudel (2003:472) cited in Strauss and Corbin (1990) postulate that to fully understand human behaviour, it is essential to refer to the social factors underlying that behaviour. To fully understand the adaptive strategies pursued by tobacco smallholder farmers, I had to assess the factors underlying the choices of these strategies through further probing into the underlying values, meanings and factors related to the adoption of certain strategies. The ability to understand behaviour, values and beliefs through further probing was presented through the use of qualitative methodology hence it was very much appropriate and useful in this study. Unstructured in-depth interviews and focus group discussions are the qualitative data gathering techniques which were adopted in this study as shall be discussed in the following sections.

Adams et al. (2008) postulates that all methodologies have got their own flaws and as such qualitative approaches are in most cases criticized for being susceptible to the researchers' bias. I overcame this weakness by exercising caution and using data gathering techniques efficiently hence qualitative methodology remained crucial in this study.

The Case study design

This study aimed to provide a detailed analysis pertaining to the adaptive strategies employed by smallholder tobacco farmers in mitigating the shocks posed by tobacco mono-cropping. It also aimed to come up with in-depth descriptions and insightful explanations on the constraints presented to farmers and their households in their efforts to sustain their livelihoods. Achieving these aims would have been impossible if other methods were employed. However, through the use of the case study method which is flexible and which allowed me to effectively deal with unexpected paths of discovery (Becker, 1970) and to intensively explore the selected case study through the triangulation of data gathering methods, I managed to come up with an in-depth description and explanation of the social phenomena that was under investigation.

The adoption of the case study method in this study was useful for accruing first-hand information from the natural settings which was likely to produce valid data as compared to the use of 'derived data' (Bromley, 1986: 23). However, the use of the case study method in this research meant that this study's findings could not be generalisable and the capacity of this study to generate a theory was limited (Yin, 1994). This study did not aim to generate a theory, neither was it conducted for the sake of generalising its findings, it only sought to provide an in-depth description and explanation of the daily lived realities of farmers and their households and this was achieved hence the case study method had great relevance in this study.

The study area

Hurungwe is situated in the North western part of Zimbabwe which is about two hundred kilometers from the capital city, Harare. The population in this district is approximately 361 370 people. The district is divided into twenty six wards which cover 19,200 square kilometers which are in the natural farming regions two, three and four (Chimhowu, 2010). The district is characterized by rainfall amounts which range from 500 to 1000 millimeters. Just like any other district in Zimbabwe, the district experiences periodical seasonal droughts, pro-longed dry spells and unreliable seasons. Most areas in this district are characterized by subsistence farming and tobacco is the mainly grown crop.

Due to the increased occurrence of droughts in Hurungwe, the fall of tobacco market prices necessitated by tobacco control policies and hardships associated with accessing enough inputs, machinery, fertilizers and firewood included, most farmers are diversifying their livelihoods engaging in other non-farm activities and growing other crops, livelihood diversification is becoming common. Basing on the economic, social, and climatic conditions as well as the geographical location of the area, Hurungwe district was an adequate environment for a study meant to examine the adaptive capacities of farmers in mitigating the risks posed by tobacco mono-cropping.

Out of the twenty six wards of Hurungwe district, this study was conducted in one ward (ward 22) which was purposively selected. Freddy and Jim Bakker farms are the research sites which were chosen due to their accessibility, simplicity and permissiveness.

An Overview of the Study Areas: Freddy and Jim Bakker Farms

In this section, I briefly introduce the study areas. Information concerning the geographical location and infrastructural facilities in the study areas is proffered. Freddy and Jim Bakker are neighbouring farms which are situated forty and forty three kilometres respectively from Karoi town. The farms are in Hurungwe North in Ward 22 of the district and were resettled under the 1999/2000 FTLRP.

In terms of sanitation, few households possess 'blair' toilets, some use the toilets that were formerly used by farm workers yet most households use Upgradable Blair Ventilated Pit Latrines (UBVLP). Both farms depend on Mapofu River as a water source yet in Freddy farm there are three dams and two dams in Jim Bakker. Due to plot locations, some farmers within the farm lack access to those dams due to the lack of electricity. Some farmers especially those who are well-up use pumps for watering their fields but the rest use draught power and drums due to poor endowment of farm equipment which characterise many farmers in the district. Noteworthy is that due to the lack of draught power and farm equipment most farmers do not necessarily use the dams but just rely on rain fed agriculture.

In terms of educational facilities, Freddy farm is serviced by Mwami Primary and Secondary Schools and Jim Bakker is serviced by Mpofu Primary School, Mwami and Kapiri Secondary Schools due to the absence of a secondary school near the farm. The distances to these schools are long, from Jim Bakker farm to Kapiri School, there is an 8 kilometre distance and to Mwami the distance is approximately five kilometres. From Freddy farm to Mwami, the distance is approximately five kilometres depending on the location of the plot. In both farms, there are no crèches and as such, most young children stay on farm only to start school at the age of seven years.

Both Freddy and Jim Bakker farms are characterised by a shortage of adequate transportation facilities mainly due to the poor roads which characterise both farms. Both farms rely on CAG bus which is the only bus which operates in the area thereby supplying all the surrounding areas including Mwami, Kapiri and Mpofu. The bus passes through the farms early in the morning at around 4 am and as such most farmers find it difficult to catch the bus given that some had to walk for at most two kilometres to the roads. Some few private cars owned by individual farmers were reported to be operating in the farms yet these were very expensive USD 6.00 as compared to the bus which cost USD 3.00.

There are no markets in the study areas and the farmers usually sell their produces at the farm gates at very low prices. Mwami Township is another centre that is used for marketing purposes by the smallholder farmers from Freddy and Jim Bakker farms yet they face high competition from the communal farmers, hence market access remains a quandary for smallholder tobacco farmers in both Freddy and Jim Bakker farms. Karoi town is the major market centre for smallholder tobacco farmers yet most farmers fail to access the markets due to poor transport facilities and lack of finances.

Farming is the major livelihood activity pursued in the study areas and tobacco is the main crop grown. However, owing to the agro-ecological and other constraints faced in the district, some farmers are considering other crops including potatoes, maize, soya beans, tomatoes, cabbages and livestock production. Trading, gold mining, casual labour, migration, unregistered transport operations and wildlife poaching are the other activities which smallholder farmers in the farms are engaging in.

Summary of the research process: Access, Field procedures and Experiences

Access to the study area was sought from the village heads that I gave full details pertaining to my research plans and processes. These gatekeepers permitted me to conduct the study and officially informed the community about my presence and allowed community members to freely participate in the study if they wished to. In the first days of my presence in the area, the village heads had several walks with me in the area as I visited the potential participants whom I had selected through purposive sampling. Noteworthy at this juncture is that the researcher was an insider in Hurungwe district who shared the same cultural beliefs with the participants, most of them who were her relatives, friends and church mates and this enabled easy access to the study area and the participants.

The participants warmly welcomed me as 'one of them' and voluntarily agreed to participate in this study. Some few participants however even though they received me, they took time to trust that I wanted to conduct a research, especially those participants who were so close to me, they thought it was just a mischievous trick as we used to do in our community. After several visits and explanations on the study details aided by an information document, they however came to trust that I was genuine.

I spent the first four days visiting the participants' homes. After all had agreed to participate, I visited them again for setting up interview and discussion schedules. In most instances I discussed with the participants about my study as we carried out some chores and I attended some social gatherings with the participants. I even slept in the houses of some participants, the best moment was when I attended the apostolic church all night prayer with Madzimai Maria[1], even though I was not a member of that church, I decided visit just for the sake of meeting with

[1] An apostolic church prophetess

my research participants. These associations with the participants guaranteed rapport even though I already had some social connections with the participants.

After I had established rapport and the participants had scheduled interview venues and intervals, I then collected the data through focus group discussions and unstructured in-depth interviews which were one hour long on average. I conducted ten interviews and three discussions which were all tape recorded. After the collection of data I then transcribed the interviews and discussions and analysed the data and finally engaged in the writing of this report. Data collection and data analysis were done concurrently. This study was conducted for two weeks from 7 to 21 September 2015 and due to this limited time the transcription and analysis phases extended even after data collection.

Being an insider though it enabled me to gather rich data from the participants whom I could easily establish rapport with, at times being part of the participants posed some challenges. The participants had a habit of assuming that I knew what was happening and would just mention issues in passing. Some even blamed me for asking the things which they thought were obvious even reminding me that the same had been encountered in my family. As a patient researcher, I had to further probe for me to get full details. I kept on reminding the participants that they were experts and I was a learner who wanted to learn everything from them. It was a bit challenging to work with some participants who had been involved in some previous studies since most of them craved to benefit from participating in the study. Those participants kept on telling me that they were fed up of being asked on their problems and situations without receiving any help to solve those problems. Some constantly asked me to take their issues to the government and NGOs so that they could find some help. I however kept on reminding the participants that the study was

purely academic and as such there were no benefits which would accrue from participating in it and I also kept on explaining the significance of the research to them.

Target Population

After deciding on the research problem, study areas and the kind of information that I wanted, the first step which I took in this research was to identify the target population. This study was aimed at exploring the adaptive strategies which were employed by smallholder tobacco farmers in circumventing the effects of tobacco mono-cropping as well as examining the determinants and constrains to adaptation. Given the kind of information that I wanted, my target population comprised of all smallholder farmers in the selected research sites in Hurungwe district who had a history of tobacco mono-cropping, had faced challenges due to tobacco mono-cropping and were engaging in some adaptive strategies to circumvent those challenges. Figures for the actual target population size could not be attained in this research and following the recommendations by Kvale (2001) that knowledge pertaining to the target population and sample could be taken from the previous studies, I reviewed the previous studies but to no avail. The total estimated population of Hurungwe district of 361, 370 inhabitants, 187, 160 males and 179,210 (Ncube, 2012:164) is all that I managed to get.

Sample size

Mack et al. (2005) suggest that it is impossible to include all members of the sample frame in a study and I also realised this in my course of enquiry. Even though I could not come up with the actual number of the total target population, with the already possessed knowledge I had basing from my experiences as an insider in Hurungwe district; I realised that it was impossible and infeasible for me to include all the potential participants from the selected research sites

considering the limited time and finances and as such I decided to draw a sample. Informed that in qualitative studies there are no rules pertaining to the sample size (Patton, 2002) as this depends on the study purpose, design, data collection tools, the type of population (Adams and Schvaneveldt, 1991) as well as the degree of accuracy required and the variability and diversity in the population, but that a sample should be a represented 'taste' of the group (Berinstein, 2003), I decided to choose twenty nine individuals from the research sites as the participants of this study.

Fourteen participants had to participate in focus group discussions and fifteen in individual interviews of which they had to be males and females since I assumed that women and men were affected and responded differently. Fifteen women and fourteen men had to be involved in the study since I anticipated that this sample size would saturate me with data if the participants would be knowledgeable. The choice of the sample size was motivated by my wish to conform to the small recruitment numbers typical of qualitative researches which employ in-depth interviews as data collection tools (Miles and Huberman, 1994).

Sampling Method

Babbie (2001) notes that the correct use of sampling methods allows the researchers to minimise costs as well as to conduct accurate researches efficiently. Because I also craved to produce an efficient research report within the limited time frame and costs, I took my time determining on the type of sampling method to use. Two methods probability and non-probability sampling were available for use in this study but I finally chose to use non-probability sampling. The use of probability sampling would have increased the level of confidence during data collection (Mac Nearly, 1999: 125) which would ultimately produce results which would be generalised to the whole target population since probability samples could be 'rigorously analysed to determine

possible bias and likely error' (Frey et al., 2000:126). However, the lack of knowledge of the actual number of the target population and the limited time and resources coerced me to opt for the non-probability sampling method since it accommodated those constraints. I never sought to generalise the results of this study to the whole population. With my aim of just coming up with analytical generalisations, I easily dismissed probability sampling.

The non-probability sampling method is a convenient method of sampling which incurs little costs (Babbie, 1990:97) and is useful when choosing participants who might have sensitivities to asked questions (Fink, 1995:17) because the chance of one to be chosen is known and this motivated me to choose this method. Babbie (1990) discourages the use of probability sampling in qualitative case studies basing on the assumption that the researcher studies to discover and understand issues and therefore had to choose participants with knowledge of the issue at hand. Because I also endeavoured to learn and understand, I recognised that it was worth for me to use non-probability sampling. Despite all the advantages presented by this method, I knew that ignoring the shortcomings of this method would spoil the research and as such I worked out plans to minimise them. I used different data collection methods (in-depth interviews and focus group discussions) and the application of these methods was useful in tackling sampling biases.

Sampling Technique

After deciding on the use of non-probability sampling method, I had to again decide on the best non-probability sampling technique to use for this study. Since I already knew the kind of information and participants I wanted, I found purposive sampling worth to be employed in this study. In purposive sampling, the participants are chosen based on the judgement of the researcher with regards to their knowledge and experiences of the issue at hand. The use of this technique enabled me to minimise costs and time because I applied my own knowledge in the

selection of the participants and never wasted my time and finances reaching out to participants who lacked knowledge of the issues which were under investigation and as a result, I gathered very informative data within a short period of time.

To ensure that I select 'information rich' participants, I established a certain criteria which the potential participants had to meet for them to be involved in the study since it was important to be clear on the requirements whilst using purposive sampling (Allen, 1971). I decided that the participants had to be;

- current smallholder farmers with a history of tobacco mono-cropping
- smallholder farmers who experienced the effects of tobacco mono-cropping
- currently living in the research sites
- be adults (18 years old and above) since children were not required in the sample
- willing to take part in the research
- engaged in adaptive strategies meant for overcoming the effects of tobacco mono-cropping

I also set criteria on what would make bad participants to ensure that I would not go for them (Allen, 1971). I therefore decided that bad participants would be those who;

- lived outside the research sites even though they had been living in the area for some time (visitors in the area were taken to be bad participants)
- those aged 18 and below
- those who were not employing any adaptive strategy

I then selected the participants I judged to be suitable for this research, using the knowledge I had on their life histories, experiences and livelihood activities. Bearing in mind that the

researcher bias would result in a sample bias, I asked for help from the community in identifying suitable participants. I presented a list of the requirements to the community members and the village heads that identified some participants they regarded as the most appropriate. After the identification of the potential participants, I then personally visited them to get their consent. All the identified participants were willing to take part in the study and they chose on their own whether to participate in interviews or in discussions.

Participants' biographies and Background Information

In this section, I present the attributes of the participants including their demographic and socio-cultural characteristics. To elicit 'information rich' data in this study, a total of thirteen (13) household heads were individually interviewed. Out of these participants, six were from Jim Bakker farm whilst the other seven participants were from Freddy farm. These participants are listed in the table below. It is worthy to note at this juncture that the mentioned names are not the real names of the participants. Instead, they are pseudonyms which were chosen by the participants for anonymity. Noteworthy, two focus group discussions were also conducted in the district with both males and females.

Table 3.1: The Participants

Jim Bakker Farm	Freddy Farm
Mrs. Zino	Mr. Shoko
Mr. Munda	Mrs. Rivai
Mrs. Tino	Mr. Chino
Bobby	Mrs. Mazarira
Mrs. Zoromi	Mrs. Chigubhu

Mr Mhozo	Mrs. Marima
	Mr. Ziki

Engaging participants from diverse farms was indispensable in this study for capturing the diversity in the adaptive capacity of smallholder tobacco farmers in Hurungwe district. However, the study found out the livelihood activities of the farmers from both farms similar as shall be noted in the subsequent sections.

Table 3.2: Participants' profiles

	Farm Name		
	Freddy	**Jim Bakker**	**Total**
	Count	**Count**	**Count**
Gender			
Male	3	3	**6**
Female	4	3	**7**
TOTAL	**7**	**6**	**13**
Age			

20-29	2	2	**4**
30-39	1	1	**2**
40-49	1	1	**2**
50-59	1	1	**2**
60-69	2	1	**3**
TOTAL	**7**	**6**	**13**
Education			
Primary	3	3	**6**
Secondary	2	1	**3**
Tertiary (academic)	0	1	**1**
Vocational training	2	1	**3**
TOTAL	**7**	**6**	**13**
Marital Status			

Married	6	5	**11**
Divorced	0	0	**0**
Widowed	1	1	**2**
TOTAL	**7**	**6**	**13**
Family Size			
1-4	3	2	**5**
5-9	4	4	**8**
10+	10	5	**15**
Religion			
Christianity	5	4	**9**
Johanne Masowe Apostolic Church	2	1	**3**
Seventh Day Adventist (SDA)	1	2	**3**
Apostolic Faith Mission	2	1	**3**

(AFM)			
Sub-Total	5	4	**9**
African Traditional Religion (ATR)	2	2	**4**
TOTAL	**7**	**6**	**13**
	Farm Name		
	Freddy	**Jim Bakker**	**Total**
	Count	**Count**	**Count**
Family headship			
Female-headed	3	4	**7**
Male-headed	3	3	**6**
TOTAL	**6**	**7**	**13**
Number of interviews	**7**	**6**	**13**

Focus group discussions	**1**	**1**	**2**

Gender

As noted earlier on, a total of thirteen (13) participants were individually interviewed. Out of these participants, as shown on table 4.2, seven were women (3 from Jim Bakker farm and 4 from Freddy farm) and six were men (3 from Jim Bakker farm and 3 from Freddy farm). The choice of the participants of different genders was indispensable in this study for the generation of diverse data given that men and women are impacted on differently by the situations and that they pursue diverse strategies.

Age

As clearly presented on table 4.2, in terms of age, the participants were of different age groups with their ages ranging from twenty to sixty nine years. Four participants, (2 from Jim Bakker and 2 from Freddy) were in the age range 20-29 years, two participants (1 from Freddy and 1 from Jim Bakker) were in the age range 30-39 years, two participants (1 from Freddy and from Jim Bakker) were in the age range 40-49 years, two participants again (1 from Jim Bakker and the other one from Freddy farm) were in the age range 50-59 years whilst three participants (1 from Jim Bakker and 2 from Freddy farm) were in the age range 60-69 years. The participants of diverse ages were crucial for the extraction of diverse, rich and in-depth data given that age was identified as a determinant of livelihood adaptation in this study.

Marital Status

As is typical of Zimbabwe, most households in both Jim Bakker and Freddy farms as shown in table 4.2 are under married structures. Eleven participants were married, five from Jim Bakker farm and six from Freddy farm. Only two participants were widowed, one from Jim Bakker and another one from Freddy farm.

Educational levels

As of human capital which is defined in terms of skills, education, knowledge and ability in the SLF (DFID 2000), only one participant from Jim Bakker had tertiary education and he was a retired teacher, three had secondary education (1 from Jim Bakker and 2 from Freddy), six had primary level education (3 from Jim Bakker and 3 from Freddy) and three had vocational skills (1 from Jim Bakker and 2 from Freddy) which they acquired from an NGO, World Vision. Many participants had primary level education and that shows that education levels were very low among the participants. Due to their low education levels, farming remained one of the primary activities of the participants.

Household Composition

In terms of household composition, the households in both Freddy and Jim Bakker farms were composed of parents and children and in some instances relatives and casual farm workers. Two participants were polygamous and as such they had large household sizes of fifteen members on average yet the average household size for the other participants' households was four. The age of the participants' children varied depending on the household types that is 'younger' or 'older' households. Many 'younger' households, those households whose heads were in their twenties and thirties had children below the age of ten who could not productively contribute to family

labour due to their age yet the 'older' households had mature children who could contribute to family labour.

Religion

Religion is a crucial variable which determines people's interactions in the larger social environment. In terms of religion, nine participants were Christians of which three were members of the Johane Masowe Apostolic Church, three were members of the Seventh Day Adventist church and the other three were affiliates of the Apostolic Faith Mission church. The other four participants, two from Jim Bakker and two from Freddy belonged to the African Tradition Religion.

Data Collection Tools, Procedures and field experience

Since all the chosen participants had accepted me and were willing to take part in this study as soon as possible, I had to start the data collection process. Motivated by the eagerness to probe for deep and rich information from the natural settings regarding the adaptive strategies pursued by smallholder tobacco farmers as well as the determinants and constraining factors to strategising encountered by those farmers and their households, I employed in-depth unstructured interviews as the primary data gathering tool in this study. These interviews were complemented by focus group discussions in my endeavours to come up with accurate data. The use of complementing methods in this research made it possible for me to capture the accurate discourses and practices of different social actors since these two techniques managed to cover up for the weaknesses which were inherent in each other.

One- on- One Unstructured In-depth Interviews

In-depth unstructured interviews were the main tool used in this research to elicit for deep and rich information regarding the adopted livelihood resilience strategies from the participants. In unstructured in-depth interviews, the interviewer can collect supplementary information, the language of the interview unlike in questionnaires can be adjusted to meet the ability or educational level of the interviewee and hence misinterpretations concerning questions can be avoided, personal information can be obtained easily and samples can be controlled more effectively since non-response generally remains very low unlike in questionnaires where there is low return rate, risk of ambiguous responses and possibilities of omission (Dawson, 2002). It was for these reasons that I utilized unstructured in-depth interviews in this study anticipating to get valid data concerning the livelihood resilience capacities of smallholder tobacco farmers.

Dawson (2002) notes that interviews are expensive and time consuming especially when a large and widely spread geographical sample is taken. To minimize costs and time, thirteen interviews were conducted with household heads. I had planned to conduct fifteen interviews but the other participants were occupied with their personal businesses during the scheduled intervals and they were not replaced. For Babbie (2001), the withdrawal of participants is easily overcome if different methods of data collection are used since there will not be need to replace them due to data saturation. Because I was already saturated with rich data, I never bothered to replace those participants who did not turn up for the interviews, so resultantly; only thirteen participants were individually interviewed. Gender as was discussed in the sampling section was considered in the selection of respondents hence both male (six) and female (seven) tobacco farmers participated in the one-on-one interviews.

Even though there are no official agreed upon guidelines for conducting unstructured interviews, I found it worth for me to comply with some of the steps advocated by Punch (1998) and Fontana and Frey (2005). When I visited the participants seeking for their consent, I did not set interview schedules because I wanted at least to meet them again before the interviews. Even though most participants knew me, some even being my relatives, meeting them several times before the interviews, helped me to develop a strong relationship with them and it made them take me seriously basing from the effort which they saw me putting in the study. Mr. Munda is my uncle, when I approached him for the first time he said,

"So you now have the guts to joke with your elders simply because you are now studying in South Africa, I hope you know this is not the first day of April[2]."

However when I visited for the second time he could take me seriously and we set an appointment. The appointments with the interviewees were made in a formal and confidential manner at normal routine meeting places such as water points, churches and farm lands as well as in the participants' homes. Where clarity was needed with regard to the appointment letter, the researcher explained informally. The interviews were spread over a period of two weeks and were conducted in the participants' houses upon their requests.

After setting the interview schedules, I then developed an interview protocol which guided me in the administration and implementation of the interviews. The protocol helped me to ensure consistency between the interviews which increased the reliability of the findings of this study since I included everything that would be done in the interviews (what I would say and do when setting up the interview, in the introduction, during the interviews and in conclusion). After

[2] April fools' day

developing an interview protocol, I then developed an interview guide in which I listed the questions which would guide the interviews. Taking a hint from Kvale (2008) who suggests that good interview questions should contribute thematically to knowledge production, I designed the interview questions in a way that made them answer the main research question, the sub-questions of the study as well as provide the background information and statuses of the interviewees. I translated the questions into the local language and pilot tested the questions with the two farmers whom I had included in the first sample and this helped me with the refinement of questions as I could notice the flaws and limitations of the questions (Kvale, 2008).

Bearing in mind that I wanted to elicit accurate, rich, valid and detailed data concerning the lived realities of smallholder tobacco farmers, I constructed effective questions which made it possible for me to dig deep into the farmers and their households' experiences. The questions were open ended, neutral and were clearly worded in simple terms which could be easily understood. I also ensured that factual questions would come first before opinion ones. I familiarized myself with the questions to avoid the boring nature of having to be always referring to the guide. Unstructured interviews made it possible to explore a more personal approach to each interview as I could adapt questions basing on the responses given by the participants. In the conduction of the interviews, even though I had already given informed consent and information sheets to the participants, I re-explained the purpose of the study, why I chose the participants, the anticipated duration of the interviews, the use of the tape recorder and sought for the participants' consent again.

The interviews took form of face to face conversations. These face to face interviews enabled me to observe non-verbal clues such as facial expressions, body language, gestures and emotions of farmers as they explained their strategies and experiences. These clues elaborated what the

participants uttered and resultantly, I managed to get a better understanding of the farmers' adaptive strategies and the constraints which they faced. The interviews were conducted in the respondents' native language (ChiShona). The participants were more comfortable with and more eloquent in their native language and this made it possible for them to give a rich and detailed account of their experiences. I maintained eye contact during the interviews and this made the participants feel to be listened to (Adams et al., 2008). All the interviews were recorded upon permission of the participants and this allowed me to guard against the distortion and misinterpretation of the provided information due to forgetfulness. I occasionally verified the functionality of the tape recorder to avoid any loss of data. Each interview was one hour long on average. I avoided asking questions that would make participants think in a particular way as this was likely to produce a series of yes or no responses which would bias the results (Adams et al., 2008).

I also ensured that the participants did not drift off the focus of the interview and I also valued the ground rule that there was no wrong answer and so I assumed a listening role to all the participants' opinions which helped me to get rich information. To avoid getting false information just provided for the sake of getting me excited, I never let my opinions known by the participants. I asked questions that probed but I ensured that I did not prompt responses. At instances when the participants gave vague responses, I asked them to clarify but I never gave them responses to agree on as this would present some bias. The conducted unstructured in-depth interviews provided a holistic understanding of the experiences of farmers and their households; they presented me with an opportunity to further probe for rich subjective stories which made it possible for me to capture the lived realities and opinions of the participants (Strauss and Corbin, 1990). I was exposed to unexpected themes through the interviews and this was mainly

necessitated by my ability to present myself as a learner, relative and part of the community who sympathised with the community and had endeavors to learn more about the lived realities of the concerned actors.

From the experiences I had when I conducted unstructured in-depth interviews with smallholder tobacco farmers from Hurungwe district, I argue that being prepared for the interviews help make a good expression and reduces nervousness. Assurances of confidentiality, showing empathy, listening attentively and reminding the participants of their importance to your study makes the participants feel special and trust you and ultimately give you in-depth information concerning their lived realities. Eye contact can be used to look for enthusiasm, sincerity and for inconsistences in responses on the part of interviewees since facial expressions can reveal participants' feelings and convey their attitudes which reinforce what they say hence it is very important to maintain eye contact in unstructured interviews. I also learnt that some participants might be difficult but as a researcher, you need to always convey friendliness for you to get the required information.

Even though flexibility is important in unstructured interviews, I realised that it is important to be in control as a researcher, that is set the direction of the interview and keep the participant from straying from the planned discussion. Even though I followed the necessary protocol as I was conducting the interviews, I still valued the assertions that every data gathering technique has got its flaws. Babbie (2001) advanced that unstructured in-depth interviews are time consuming and have room for bias. To ensure that I come up with valid and reliable data, I therefore triangulated unstructured in-depth interviews with focus group discussions so as to counterbalance the weaknesses inherent in them via the strengths in focus group discussions. It is

for this reason that I feel that this study's findings represent the lived realities of the concerned actors.

Focus Group Discussions

Various scholarly definitions of focus group discussions have been offered. Babbie (2001) explains a focus group as a group of individuals selected and assembled by researchers to discuss and comment on, from personal experience, the topic that is the subject of the research. Despite the existence of various definitions, features such as being an organized discussion, collectivity activity, social events (Goss and Leinbach, 1996) and interaction demonstrate the contribution that focus group discussions make to social research.

Webb and Kevern (2001) suggest that all provided definitions stress the aspect of the interaction which makes it possible for this method to provide rich and valid data. Focus group discussions present a lot of opportunities and advantages in a social science research (Babbie, 2001). They allow the researcher to get rich information (Babbie, 2001). If one participant makes a contribution to the topic, others might remember what they would have otherwise forgotten and at times one's contributions can be corrected by others, (Adams et al, 2008) and participants can ask each other questions hence lessening the impact of the researcher bias.

All these essential opportunities and advantages were essential in counterbalancing the flaws inherent in in-depth interviews which were adopted in this study, a crucial aspect which would not be catered for by the other data gathering methods and this justifies why I chose to use focus group discussions in eliciting information regarding the adaptive strategies adopted by farmers in circumventing the risks of tobacco mono-cropping.

For Mac Intosh (1983), six to ten people per group are recommended and for Goss and Leinbach (1996), up to fifteen people are acceptable whereas for Adams et al (2008) they should not exceed eight participants but should not be less than three people since in large groups as well as in too small groups people might feel uncomfortable. A focus group discussion of seven members was therefore conducted with farmers of different ages and gender for diversity from the two research sites. Just like in the interviews, appointments were made formally and informally upon requests in daily normal routine meeting places as well as in the participants' households. To ensure that the discussions were retained and not cancelled, I was extremely flexible. The discussions were conducted in the participants' households. In these natural settings, the participants were very comfortable and as such they freely expressed their experiences, opinions and ideas.

The group discussions were one hour long on average to avoid them being tiresome on the part of the participants. Audio recording facilities were used in full consent of the participants to ensure the accurate capturing of the exact group discussion content which would be important during the analysis phase. Tape recording also helped to guard against the selectivity of the participants by the researcher which would result in some interview biases (Belson, 1967: 253). Discussions were also conducted in participants' native language (ChiShona) for eloquent and comfortable expression of the participants in discussions of adaptive strategies.

Just like in in-depth interviews, I prepared a protocol and guide prior to the discussions and these were pilot tested and refined before the interviews. I then sent reminder letters to the participants prior to the sessions. This ensured hundred percent participation in this study since all the participants turned up for the discussion. I arrived at the venues early and had informal interactions with the participants prior to the discussions. This made it possible for me to build

rapport with the participants which motivated them to participate and give rich information. To avoid raising expectations, I introduced myself to the participants even though most of them knew me. I also gave the participants a chance to introduce themselves as I put name (pseudonym) cards on their tables for remembering them. Even though I had given them information documents, I re-explained the purpose of the study, what I would use the data for and I reassured them on the issues of confidentiality. I told the participants that they were the experts and that I was just a researcher who wanted to learn. This made the participants to be so willing to give me as much information as they could.

The participants and I set the ground rules which guided our discussion and these included avoiding unnecessary movements and disruptions and respecting others' opinions. The fact that I included the participations in the implementation of ground rules was useful in obliging the participants to follow them for they never broke those rules. I arranged the participants in a circle to ensure oneness and make it easy for the participants to relate to each other. (Dawson, 2002) claims that in group discussions some participants might not participate and some powerful members might dominate the discussion. In this study, I also experienced those challenges but I managed to take quick responses to them, I verbally encouraged the quieter participants to participate and at times I would just look at the quieter side and that compelled the participants to participate. Even though there were no village heads that are assumed to be dominant, I also came across the participants who tried to dominate the discussions; however, I managed to control them through non-verbal expressions. When the participants kept on talking without leaving the floor for others, at times I would just look to the other side of the group and the participants could understand those expressions. It was for these instances that I understood the importance of eye contact in interviews and discussions.

Accuracy of data and the rate at which it is generated is high in groups (Neuman, 2006); the discussions which I conducted with household heads from the research sites facilitated an in-depth and probing discussion on the issues of survival strategies which were under discussion. The discussions were a quick and effective way of gathering data since I managed to acquire rich and valid data from fourteen participants within a period of three days yet I spent two weeks conducting thirteen in-depth interviews. The participants were freely relating to each other during the discussions, they were comfortable in sharing, so I allowed them to explain their questions and answers to each other and as such, they were freely adding on each other's sentiments which generated valid data. This openness and free expression was ensured to avoid the biases that would have resulted if the moderator had limited free expression (Neuman, 2006:412)

In this study, focus group discussions were ideal in exploring the daily lived realities and experiences of the participants as well as their perceptions, opinions, wishes and concerns. Based on the experience I had as I was conducting the discussions in Hurungwe district, I argue that it is mandatory for the facilitator to respect the participants, show interest in them and their environment and incorporate them in the decision making process (length of the discussions, ground rules and venues) if valid detailed information is to be retrieved as was the case in this study.

Data Analysis

Lacey and Luff (2007) note that there is no single right way or method of analyzing qualitative data but several approaches are available which according to them are enmeshed in two broad theoretical approaches; the grounded theory and the framework analysis. The choice of the data analysis approach depends on various aspects including the available time, funds, the research

questions and the aim of the analysis (Lacey and Luff, 2007). The grounded theory's emphasis lies on the generation of a theory as the output of research (Strauss and Corbin, 1998) whereas in the framework analysis approach, emphasis is on describing and interpreting the results within a limited time scale even though theories can be generated (Miles and Huberman, 1994).

The framework form of analysis presents an opportunity for merging the emergent concepts with a priori (Lacey and Luff, 2007). In this study I aimed to gain an in-depth understanding of the adaptive strategies that were being employed by smallholder farmers and their households as well as the enabling and constraining factors which were presented to them in their efforts to strategize. I just sought to describe and interpret the data concerning the daily lived realities of smallholder farmers within a limited scale of time I had and probably situate them in previous researches and not necessarily opining a specific theory hence the framework school of thought was the most suitable analysis approach in this study.

Thematic analysis was the actual data analysis tool I chose to use in this study. Braun and Clarke (2006:79) define thematic analysis as a qualitative method for 'identifying, analyzing and reporting themes within data'. Thematic analysis involves the process of carefully reading the data and identifying themes which then become the categories of analysis (Fereday and Muir-Cochrane, 2006). Thematic analysis is a very flexible tool with the potential of providing 'a rich and detailed, yet complex account of data' if conducted in a 'methodological and theoretically sound way' (Braun and Clarke, 2006:6) and which can be used in both inductive and deductive methodologies (Frith and Gleeson, 2004).

In thematic analysis, the researcher is presented with the opportunities for drawing interpretations from the collected data which is an aim of all good qualitative researches

(Fereday and Muir-Cochrane, 2006), an aim I also shared. Thematic analysis presents the researcher with opportunities for coding and categorizing the collected data into themes through the use of his/her own judgment of what determines a theme (Fereday and Muir-Cochrane, 2006). In the case that the data has been collected through the triangulation of instruments as was the case in this study, thematic analysis is capable of producing and presenting data in an effective way which has the potential of reflecting the realistic nature of the data collection (Creswell, 2009; Hayes, 1997). It was because of these anticipated benefits of thematic analysis that I chose to utilise it in this study.

Attride-Stirling (2001) recommends being clear on how data was analysed since failing to do that makes it difficult to evaluate the research and impede other researchers in the future from conducting related studies. From this study, I came to realise that there is no single accepted procedure of conducting thematic analysis, a myriad of procedures to follow were proffered by various scholars (Braun and Clarke, 2006; Lacey and Luff, 2007 and Miles and Huberman, 1994). In this study, thematic analysis was not conducted from a vacuum; I adhered to some of the procedures recommended by the above listed scholars. I however assumed a flexible role which was allowed by the thematic analysis since following rigid rules is unnecessary in thematic analysis (Braun and Clarke, 2006:11). I omitted and added some procedures depending on the kind of data I had and the type of report I wanted to come up with.

The analysis of corpus data in this study started with the transcription of the audio recorded data. I put all the necessary effort to ensure that the transcriptions represent the audio recorded data in its original nature to avoid loss of data. A couple times after the transcription process, I listened to the recordings again whilst checking on the transcriptions. I included both spoken words and non-verbal clues which I thought were adding meanings to the spoken words in the

transcriptions. Doing the transcription process on my own was time consuming especially considering that I had used different data gathering methods. However, it was very crucial for me because I could familiarise myself with corpus data and generate ideas of what was contained in the data as well as what was interesting during the transcription phase. Since the transcriptions were in the local language, I then translated them as part of the transcription phase. I organized the data in easily retrievable sections and made several copies to avoid any data loss. I used pseudonyms in the transcripts to ensure anonymity as I had promised the participants.

After the transcription phase though I had understood the data during the transcription phase, I re-read the transcriptions twice to ensure familiarity with the depth and breadth of the data. During this phase, I read 'actively' searching for meanings and patterns in preparation for the initial coding stage. Re-reading was so essential in shaping my ability to identify possible themes. In this preliminary coding, I was interested in the ideas of the adaptive strategies pursued by smallholder tobacco farmers as well as the presented constraints and determinants. These were readily available in the transcripts so I accorded them some codes. I then proceeded to the initial coding phase whereby I manually organized the data into meaningful groups. At this stage, I was identifying interesting aspects from the data which were repeated which I then highlighted to indicate that they were potential themes.

After identifying the codes, as many as I could, I then matched them up with the data extracts which demonstrated them in a table which enabled me to visually display the ideas from the data. It made it easy for me to develop and test the interpretations (Miles and Huberman, 1994). I included some texts, key words, short quotations and pages of relevant passages from the transcriptions in the tables for me to quickly remember what the potential patterns were all about.

The potential themes were identified in terms used by the respondents as well as some which I already knew from the existing literature and the employed theoretical framework.

After all the data was initially coded and presented on the table, I then analysed the codes combining them to form broad themes. This phase was a bit difficult, after forming main themes and sub themes from the initial codes; I had the other codes which could not suit in those themes and sub-themes. I then had to temporarily form a miscellaneous theme for those codes (Braun and Clarke, 2006). I then had to refine the themes to cater for the codes which were in the miscellaneous category, some of the categories also had little evidence to support them and I felt that they could not be candidate themes.

In reviewing my themes I applied Patton's (2002) dual category judging criteria of 'internal homogeneity' and 'external heterogeneity' which argues that clear identifiable differences be apparent between themes and for the data in the same theme the same meaning should also be seen. Since a clear difference was absent in the other themes, I then had to break some themes into separate themes and other themes had to collapse into others or go into the new themes I formed until all the extracts for each theme were forming a coherent pattern. After that, I then defined and further refined the themes. I made efforts to ensure that the themes were precise, concise and punchy and analysed the data that was within them.

I referred to the research questions during the analysis phase to ensure that I accurately identified the quotations that would relate to the objectives of the research. Due to time limits, I could not finish up the data analysis phase concurrently with data collection therefore I ended up having accumulated data which made it difficult for me to analyse data so basing from the experiences I had, I recommend doing these concurrently for future researches. This analysis tool however was

useful in this research since it presented me with an opportunity for finishing up data analysis even after data collection. The flexibility nature of this analysis tool enabled me to capture the complex meaning of the data I had gathered which made it possible for me to provide, describe and analyze a rich, detailed and complex data within a short period of time.

Reliability and Validity

Framework analysis is criticized for reliability issues and it is crucial to explain on how issues of reliability and validity were ensured (Lacey and Luff, 2007). For building 'reliability in themes analysis coding' (Hosmer, 2008: 58), I included two reviewers at an early stage of the analysis phase to evaluate the identified themes and test if they were compatible with the whole text. Informed on the themes which needed refinement by the reviewers who had consensus, I then further refined the themes. The triangulation of data gathering methods that I did in this research, made it possible to effectively draw the analysis of different forms of data together which ensured the reliability and validity of this study. As I was drawing interpretations from the data, I also referred to previous studies which helped me in testing the conclusions which I made from the analysis for reliability (Lacey and Luff, 2007).

Ethical Considerations

Neuman (2006:129) opines that researchers are morally and professionally obligated to adhere to ethics even in instances when the participants are ignorant of those ethics. In light of this, I obligated myself to respect and protect the rights, needs, values and desires of the participants (Creswell, 1994). Permission to conduct this study was given by the University of the Witwatersrand's Non-Medical Human Research Ethics Committee after submission of the research proposal and all the protocols which would be taken in the study to ensure total protection of the participants and those procedures were adhered to throughout the course of this

study. All the participants had full details of the study clearly and unambiguously explained to them before they agreed to participate. The participants were informed that the research was carried out specifically for academic purposes and they were given full information of the pursued degree and the institution attended, and were informed that participation was voluntary.

By virtue of being an insider in the research area, I thought the participants would force themselves to participate due to fear of straining the relations by refusing to participate, so I explained clearly to the participants that if they decided not to participate or withdraw from the study, nothing would be held against them. The potential participants were told that since the study was for academic purposes only, there were no benefits accruing from participating in it and that they were not going to be harmed. The participants were also informed that they were free to refuse answering some questions whenever they would feel uncomfortable to do so and were told that they were free to withdraw from the study at any time of their wish. Permission to record the interviews and discussions was sought from the participants prior to their commencement.

Aspects of anonymity, confidentiality and privacy took a central stage throughout this study. The researcher promised the participants not to share or use disclosed information in ways that could harm them. The researcher assured the participants that their identity in relation to this research would remain anonymous through the use of pseudonyms which they chose for themselves and all these promises were valued throughout this study. The participants who participated in focus group discussions were informed that confidentiality could not be guaranteed hence were cautioned not to disclose the issues they wanted to remain private. The participants were also cautioned not to take the discussed issues out of the discussion venues. The findings of this study

are published truthfully using numbers and pseudonyms to ensure privacy and protection of the participants.

Challenges and Limitations of the Study

Researches that are conducted in a language that is different from the one used in the write up of the report are liable to information loss due to translation problems which at times might not be totally overcame (Babbie, 1990). In this study, I encountered some translation problems. Even though I took a lot of time and effort in the translation process, it was not easy for me to come up with terms and expressions which would effectively capture the emotional connotations hidden in the participants' sentiments. Gaining the comparability of meanings was also a great challenge in some instances and there is a possibility that this had some impacts on the validity of this research. However, as a researcher and translator with the proficient understanding of the local language used during data collection as well as with intimate knowledge of the participants' culture, I tried my best to ensure that cultural connotations of the participants' sentiments were made explicit. In some instances I would even consult some people who were also knowledgeable on the language and culture of the participants on the effective use of meanings and words.

This study was routed in the qualitative paradigm and was conducted in a specific single ward of Hurungwe district and as such the findings of this study might not be generalisable to the district as a whole and might not represent the adaptive strategies that are employed by all tobacco smallholder farmers. This study however contributes to the knowledge base by providing rich in-depth data concerning the adaptive strategies that are employed by smallholder farmers in circumventing the risks posed by mono-cropping as well as the constraints and opportunities presented to them which was its aim as a qualitative study.

The use of focus group discussions as qualitative data gathering methods in this study had the potential of providing limited information since the participants were cautioned to withhold the information that would expose them so chances that the participants weighed their sentiments is high and this might have impacted on the validity of this study. However, the focus group discussions were triangulated with one-on-one in-depth interviews to minimize their limitations. This study was also conducted within a limited time scale and had limited funds assigned to it since I was funding it myself and as such, a small sample was used and this might have impacted on the validity and reliability of the study.

Conclusion

This chapter has elaborated on the procedures and steps which were followed in this research. Methods of data collection, the study area, data analysis, the selection of participants and the ethical considerations which were observed have also been explained. A qualitative methodology was adopted in this research whereby unstructured in-depth interviews and focus group discussions were used as data gathering techniques. A non-probability sampling design was used in which the research site and participants were selected through purposive sampling. Ethics were observed to ensure that respondents were not harmed throughout the research process. Translation, time and funds contributed to the limitations of this study. The empirical findings of this study are presented, discussed and analysed in the following section.

CHAPTER 4: PRESENTATION, ANALYSIS AND DISCUSSION OF EMPIRICAL FINDINGS

Introduction

This empirical chapter delivers a comprehensive demonstration, assessment and argument of the research discoveries which accrued from unstructured interviews and focus group discussions which were conducted with smallholder tobacco farmers from Hurungwe district. The research findings are analysed in relation to previous studies under each research objective.

"We always make a plan, manipulating anything within our reach for sustainance"

This study found out that despite a myriad of shocks and uncertainties that were posed to smallholder tobacco farmers in the tobacco farming sector, they remained champions rather than victims of circumstances. Tobacco smallholder farmers in Hurungwe district as rationale, calculative and dynamic players continuously and successfully partook diverse and complex adaptive strategies to sustain their livelihoods as well as to reduce their vulnerability and poverty. Livelihoods were constantly formulated and reformulated to curb the daily woes thereby confirming the assertions by Giddens (2006), Sen (1981) and the Sustainable Livelihoods Framework that rural households and individuals manipulate an array of livelihood assets which they are endowed with for existence, poverty reduction and asset accumulation (Chambers and Conway, 1992).

This section answers the first research question, it presents and analyses the data that originated from Hurungwe district with regards to the multiple adaptive strategies that were adopted by smallholder tobacco farmers in resuscitating their livelihoods against the insecurities posed by

tobacco mono-cropping. These adaptive strategies include agricultural intensification, migration and remittances, illegal mining and self-employment in micro-enterprise avenues.

Agricultural Intensification

The findings that accrued from Hurungwe district disclosed that agricultural intensification has become the norm among smallholder tobacco farmers as they endeavor to resuscitate their livelihoods against the struggles which they encounter within the tobacco farming sector. Particularly, in response to climate variability, input and finance shortage, ten interviewees clearly disclosed that they intensified their agricultural practices and this was also confirmed in both focus group discussions that were conducted in the study areas. Reliance upon household and hired labour for augmenting labour input in pursue of intensified agricultural activities was reported. As was disclosed, intensification of agricultural activities in the district was implemented in the form of crop diversification through intercropping, crop rotation and multi-cropping. Intercropping of tobacco and other drought resistant crops including sorghum and millet was reported.

The use of indigenous knowledge systems in soil management was also reported as part of agricultural intensification in both discussions and interviews. With regards to this, organic manure application was reported. These practices as the participants disclosed were undertaken for soil structure improvement, increased water holding capacity and organic matter for productivity. This was well captured from the focus group discussions,

"We can't just watch our children suffer, of course we do not have money for inputs and equipment and the rainfall is very low but we try our best to produce. We are resorting to our

traditional farming systems including conservation tillage and manure use because we know they can sustain us."[3]

In almost similar sentiments Mrs. Zino said,

"Since I cannot buy fertilizer, I apply manure in my fields, that way I am guaranteed of a better yield."[4]

Noteworthy, three participants from the interviews and five from both discussions disclosed their inability to intensify their agricultural practices owing to various constraints that bedeviled them including the lack of finances, inputs, equipment, labour and time constraints as shall be detailed in the following sections. However, this does not dismiss the critical role that was played by agricultural intensification in the lives of smallholder tobacco farmers.

Tiffen et al (1994) define agricultural intensification as an increased investment of labour and capital on a piece of land for increased production. This definition has been extended by Adams and Mortimore (1993) who identify labour input, capital creation in form of water and land management techniques as agricultural intensification mechanisms. The findings that accrued from Hurungwe district confirm these definitions given that smallholder tobacco farmers were intensifying their agricultural practices through increased investment in labour, capital and land and soil conservation methods. However, these findings contrast with Dorsey (1999) who defines agricultural intensification strictly in terms of the extension of the cultivated area yet overlooking the increase in production of the currently cultivated land. In Hurungwe district, agricultural intensification was specifically through the increased investment in already cultivated area and not necessary the extension of cultivated land.

[3] Sentiments from a focus group discussion conducted in Jim Bakker Farm.
[4] An Interview with Mrs. Zino

By stressing the role of agricultural restructuring and intensification as part of the longer adaptive strategy of smallholder tobacco farmers in Hurungwe district, this study confirms various studies that were conducted in Africa. Tiffen et al., (1994) documents the importance of agricultural intensification in sustaining the lives of the rural people basing on a study that was conducted in Kenya. Mortimore (1993) also confirms this basing on a study that was conducted in Northern Nigeria. Last but not least, Boulier and Jouve (1988) documents the evolution of new farming systems as the farmers were intensifying their agricultural production in a study that was conducted in various regions: Senegal, Burkina Faso, Mauretania and Niger. Owing to this, it can be argued that agricultural intensification is one of the most viable adaptive strategies that smallholder farmers can rely on for livelihood sustainance and asset accumulation. These findings lead to the deconstruction of the de-agrarianisation theorists (Bryceson, 2002) who document the dwindling significance of agriculture in the lives of the rural people.

In the following sections, I specifically discuss the varied agricultural intensification measures that were undertaken by tobacco smallholder farmers. The main agricultural intensification adaptation strategies of smallholder tobacco farmers that were identified in Hurungwe district and are discussed in the next sections include crop and livestock integration, soil conservation strategies and the changing of planting dates.

A. Integration of Varied Crop and Livestock Production

The integration of livestock and crop production has recently become a major adaptive strategy pursued by smallholder tobacco farmers as they adapt to the struggles which they face in the tobacco farming sector. The interviews and focus group discussions that were conducted in the district revealed that many smallholder tobacco farmers were resorting to the practice of rearing livestock whilst at the same time growing various crops. The cultivation of various drought

resistant crops including millet sorghum, and the fast maturing Sirdamaize 113 was revealed. In terms of livestock, the rearing of various animals including goats, chickens, cattle and sheep was reported. With regards to this, Mr. Shoko said,

"Growing tobacco used to be a lucrative avenue which sustained our households but nowadays growing it just makes you a popper that is why some of us are adopting varied drought resistant crops and livestock in our agriculture."[5]

Mr. Munda also said,

"I own six cattle and I also grow tobacco and maize. At least now that I have cattle I am secured. When my cows give birth, we sell some of the milk which gives us some income. I also plough in some people's lands with my cattle as they pay me either in cash or kind. They might pay in grains or work in my fields but still it's a benefit on my side. I can also sell manure or a beast itself depending with the encountered shocks."[6]

Sentiments from a discussion are also worth mentioning here, it was echoed

"Gone are the days we would just grow tobacco and accrue cash for all our needs. Of course we will not give up from growing tobacco but we diversify our crops and income activities. Most farmers are now seeing the need for diversification. New crops are now grown. I myself now grow drought resistant crops such as millet and sorghum in my fields, tomatoes, rape and potatoes in my garden"[7]

As ten participants reported from the conducted interviews and was later on confirmed in the discussions, by integrating crops and livestock, smallholder tobacco farmers were guaranteed of food security given that they would dispose livestock in times of crisis. Barter trading of

[5] An interview with Mr. Shoko
[6] An Interview with Mr. Munda
[7] Sentiments from a focus group discussion.

livestock and crops in return for other valuables including wheelbarrows and kitchen utensils was reported. The obtaining of manure for sale and field use was also reported as well as the draught power which they benefited from livestock production. Three participants reported that they ploughed in the fields of the other farmers who had no draught power and through that way they managed to get some cash or grains. By ploughing a hectare for someone using draught power, at least one would get USD 40. 00 and some would carry curing firewood for the farmers without cattle and scotch carts for USD 10.00 per load.

To this effect, it can be argued that the integration of crop and livestock production is a sustainable livelihood strategy that is employed by smallholder farmers in Hurungwe district in mitigating the effects of mono-cropping. This confirms the conclusions drawn by the National Research Council of 1989 that crop and livestock integration result in increased yields, income stability and year round employment. In the case of Hurungwe district, because crop and livestock integration is carried out appropriately and efficiently, it augments smallholder tobacco farmers' income and produce hence alleviating poverty and contributing to higher nutritional level. The integration of crop and livelihood diversification as a useful adaptive strategy meant to sustain livelihoods in the face of agricultural uncertainties has also been documented among the Gadamoji agro-pastoralists of Marsabit country, Kenya (Boru and Koske, 2014).

B. Use of Indigenous Knowledge Systems in Soil Fertility Management

The interviews and discussions that were conducted with smallholder tobacco farmers in Hurungwe district revealed that the farmers were much more concerned about the decline in soil fertility and reduced rainfall. In efforts to manage the risks associated with poor yields and erratic rainfall patterns, the study findings disclosed that smallholder tobacco farmers made various investments in soil management. Eight interviewees reported the adoption of organic

manure as a technique which they employed in their endeavors to improve the structure, water holding capacity and organic matter of their soils for productivity. The findings of this study confirm the assertions by Chomba et al., (2014) that smallholder farmers in Southern Africa employ indigenous knowledge systems as they pursue varied investments in soil management.

The adoption of traditional methods among smallholder farmers in Hurungwe district for example use of organic manure was mainly because the farmers lacked sufficient funds to buy farm inputs and equipment. For example as the study findings disclosed, organic manure prepared from livestock dung was opted for due to its affordability and accessibility. Mr. Shoko said,

"I want to use inorganic fertilizer but I do not have money so in most instances I use manure because that is what I can afford, still I am managing to raise the structure of my farmlands."[8]

In support of this, Mrs. Rivai shared this,

"Acquiring organic matter is a problem so in most cases we prepare our own organic matter using plants and animal dung… the other option is that after harvesting our plants, we use the stalks in preparing our own organic matter."[9]

Those farmers without livestock would buy manure from their neighbours. It was reported that in both farms, a packaged fifty kilograms bag of manure was sold for US$ 3.00 or could be traded with a chicken. Interviews with two participants disclosed that some farmers would wander around the grazing areas picking up animal droppings which they prepared for farm use.

In addition to this, smallholder tobacco farmers in Hurungwe district used plant based organic manure (compost) in their plots and as was revealed these were workable in improving the structure of their soils.

[8] An interview with Mr. Shoko
[9] An Interview with Mrs. Rivai

Furthermore, the slash and burn method was also manipulated by smallholder tobacco farmers (ten out of a sample of twenty-seven) and as they disclosed, the method was also viable in improving the structure of their soils by adding nutrients in form of potassium. This finding confirms assertions by Simorangkir (2007) who documents the economic benefits of the slash and burn method basing from a study that was conducted in Indonesia.

Phillips-Howard (1955) cited in Ncube (2012) postulates the importance of soil management practices as the bedrocks of increased crop production and ultimately livelihood sustainance. In this vein, based on the findings which accrued from Hurungwe district, it can be argued that smallholder tobacco farmers are largely resilient in employing their indigenous knowledge systems for increased farm production and ultimately livelihood sustainance.

C. Changing of planting dates

Smallholder tobacco farmers in Hurungwe district largely depend on rain-fed agriculture yet they constantly encounter incessant droughts in their district which ultimately results in poor yields and food insecurity (Ncube, 2012). In rationale, smallholder tobacco farmers in the district alter planting dates as an adaptive measure to climate variability. Year to year shifts of planting dates were reported as a common adaptive strategy by all interviewees (13) and discussants (14). Smallholder tobacco farmers reported that they patiently waited for the rains to come for them to sow their seeds instead of just sowing after ploughing as they used to do before the hit of incessant droughts in their district as they feared that unexpected high temperatures would dry up their seeds. With regards to this, Mr. Chino said,

"Due to the changes in the rainfall patterns we no longer have fixed rain seasons, instead, we grow our crops as the rain dictates."[10]

This was also disclosed in an interview with Mr. Tino as he said,

[10] Sentiments from Mr. Chino a discussant

"Nowadays it is difficult for us to follow the 'traditional' growing seasons; we grow our crops as the rains come."

The participants however reported that even though the modifications of planting dates had become common, they were quite aware that the strategy would not totally guarantee their productivity. By documenting changes in planting dates as an adaptive strategy, this study is in tandem with Deresa et al.'s (2009) study in the Nile Basin of Ethiopia.

A 'quick route to riches': Unregistered Small-Scale Mining

The findings of this study revealed that smallholder tobacco farmers were resorting to the alluvial extraction of gold for survival and income accumulation. In regards to this, Bobby said,

"...we go to the rivers for gold extraction and in that way, we are managing. If you are lucky enough you get a lot of money."

The information that accrued from the interviews and discussions revealed that men, women and children were adopting this avenue as they deemed it lucrative. Gold mining activities were mainly done along Angwa, Mwami, Chikuti and Mapofu rivers as well as in nearby disused mines. The participants reported the lucrativeness of unregistered mining. It was reported that a tenth of a gram of gold scraps was sold for USD $ 2 or USD $ 1.50 depending on the market and period of year to the smugglers who were always available. Three participants from the focus group discussions reported that it was possible for them to get ten grams of gold scraps per day and hence as they revealed, unregistered mining was a viable strategy in coping up with the insecurities and shocks that emanated from the tobacco farming sector. Regarding this, Mr. Ziki said,

"... kufa nenzara muno muHurungwe kuda hatingambofi nenzara iro goridhe riri tii[11]*. Last year they paid USD$ 1000 for all my tobacco, if I had not been calculative enough to go to Chikuti for gold panning my family would have starved but look we are all here well fed and dressed. I even managed to buy inputs through the money that I accrued from gold panning our quick route to riches"*[12]

Almost similar sentiments were shared from both focus group discussions. The farmers revealed that they had managed to buy inputs, farm equipment and food as well as start petty businesses through unregistered gold mining. The findings clearly disclosed that even though the farmers were gaining much from unregistered gold mining, they mainly engaged in this activity during off- farm seasons as they waited for the next farming seasons.

Based on these findings that accrued from Hurungwe district, it can be argued that illegal gold mining is a viable safety net and key poverty alleviation mechanism for smallholder tobacco farmers. These findings confirm the assertions by scholars who document the importance of unregistered mining as an important livelihood strategy for the poor people (Dreschler, 2001). Dreschler (2001) documents that women in Zambia and Mozambique were denied free participation in small scale mining owing to certain superstitions and taboos. The findings of this study have shown that women were participating freely in unregistered mining hence at this juncture, it can be deduced that access to resources vary contextually. Small scale mining is increasingly undertaken as a full time activity by many Zimbabweans. In closer sentiments, in the case study of Ghana, Dreschler (2001) reported mining activities as the destructors of agriculture. Contrarily, basing on the findings of this study, it can be argued that unregistered

[11] Dying of hunger in this district is a choice given the excessive availability of gold.

[12] An interview with Mr. Ziki

mining activities are capable of sustaining agriculture given that the farmers managed to buy farm inputs and equipment through unregistered gold mining. Last but not least, Dreschler (2001) view unregistered mining as a 'hand to mouth activity'; hence they overlook unregistered mining's capacity to promote long term sustainability and asset accumulation. These assertions contrast with the findings of this study given that smallholder tobacco farmers were accumulating livelihood assets by starting up petty businesses, purchasing farm equipment and fabricating their agriculture through unregistered mining activities.

Self-Employment in micro-enterprise avenues

The findings that accrued from Hurungwe district revealed that smallholder tobacco farmers were increasingly participating in micro-enterprise activities in a bid to secure their livelihoods. Participation in small businesses including informal trading, informal transport operations and shebeen operations were reported from both Jim Bakker and Freddy farms.

Shebeens: It was reported from the interviews and discussions that were held with smallholder tobacco farmers that running shebeens was another livelihood activity which better off farmers were engaging in so as to secure their lives given the numerous predicaments which characterised the tobacco farming sector. Interviews with Mrs. Moyo and Mrs. Muza disclosed that they owned shebeens. As they reported, they were getting 'fair' outcomes from alcohol trading given that the community provided a market for their alcoholic beverages which they purchased from Karoi town. These two participants mentioned shebeen operation as a lucrative livelihood activity that enabled them to resuscitate their livelihoods from a vulnerability context which they are often thrown into in the tobacco farming sector.

Unregistered Transport Operations: Unregistered transport operations were reported to be flourishing in Hurungwe district as most individuals opted for these due to their convenience and

flexibility systems. The interviews and discussions revealed that most individuals valued motor vehicles at times even more than cattle. Owning a car as was reported gave one a status in society and as such successful farmers would buy cars and these were reported to be playing important roles in resuscitating the livelihoods of tobacco mono-croppers from the shocks of tobacco mono-cropping. Three participants who were interviewed reported that they had lorries and one participant reported that he owned a car and these motor vehicles were used in transporting people to Karoi since there were few buses in the study area due to the poor roads that characterized the rural areas of Hurungwe district.

Those transporters also reported that they would transport people's tobacco bales to the floors and that they would get various piece jobs which included transporting school children to their school competitions, transporting building materials and firewood for schools and community members among other things.

The prices were provided from both focus group discussions,

"One person to Karoi pays USD$ 3.00, A load of building materials and firewood locally is USD$ 15.00 and a load of school pupils is USD $ 45.00." [13]

Informal transport operators accrued notable lucrative income from their operations to such an extent that some farmers would admire them. In an interview, Mr. Ziki said,

"Those with cars are priviledged; they have nothing to worry about because their business runs throughout the whole year. Even if you don't have money, you run around and get it if you want to travel. If I manage to buy one, I am sure I won't struggle anymore."[14]

[13] Sentiments from focus group discussions
[14] An interview with Mr. Ziki

The discussants from both focus group discussions also explained unregistered transport operations' effectiveness in sustaining the livelihoods of smallholder tobacco farmers.

Informal and Formal Trading

The interviews and discussions that were held with smallholder tobacco farmers from Hurungwe district disclosed that formal and informal trading activities were some of the strategies which smallholder tobacco farmers engaged in so as to circumvent the insecurities posed by tobacco mono-cropping. In regards to this, **the trade of natural resources** including wild fruits, mushroom and firewood both locally and in Karoi was reported. Mrs. Mazarira was a renowned vendor of natural resources. She reported that as a widow, she could not produce good yields from her plot owing to labour shortages and as such for the upkeep of her family; she diversified into mushroom and firewood trading. Through the trading of natural resources, Mrs. Mazarira managed to purchase food for her family thereby rescuing the family from a 'food insecurity trap'.

Unregistered cross boarder trading of groceries, kitchen utensils and clothes was also reported from Jim Bakker and Freddy farms. Ten participants from the interviews identified unregistered cross boarder trading as one of the lucrative activities that were pursued in Hurungwe district and this was also shared in both focus group discussions. Mrs. Chigubhu is an example of a tobacco farmer who also diversified into illegal cross boarder trading. She went to as far as Botswana and South Africa for buying merchandise for sale in Zimbabwe. She reported that it was difficult to accumulate assets through illegal cross boarder trading owing to the various challenges she reported to be faced in illegal mining yet she disclosed that survival was guaranteed in this avenue. She postulated,

"Of course you might fail to buy a tractor and start a big business but you will always manage to put food on the table if you are a cross boarder trader."[15]

Last but not least, smallholder farmers in Hurungwe district had various artisanship skills (brick moulding, crocheting, basketry, weaving, craft, oil and candle making, tailoring, welding, home gadget repairs, baking and beer brewing) which they banked upon for survival. It was reported from the discussions and interviews that smallholder tobacco farmers would manipulate their skills to make products which they in turn sold in their efforts to moderate the adversities that were springing from agronomy. This was well apprehended from Mr Munda's assertions as he concurred,

"…as farmers we have recognised that it is high time we diversify into other accomplishments such as brick laying, tailoring, candle and ice making, basketry, baking and beer brewing."[16]

The discussants from both groups said,

"…nowadays we no longer rely on tobacco farming alone, we engage in various activities including brick moulding, beer brewing, thatching, craft making and tailoring." [17]

Seven participants in this study disclosed that at least one member of their household was involved in artisanal services which they banked on for survival. It was reported that some women had received training from a Non- Governmental Organisation World Vision on baking, candle, oil, sewing and ice making and that explained the high levels of vocational skills in the study areas. This confirms Yaro's (2006) assertions that NGOs are crucial in the establishments of new non -farm activities.

[15] An interview with Mrs. Chigubhu
[16] An interview with Mr. Munda
[17] A sentiment that was captured from the focus group discussions

These findings which accrued from Hurungwe district have revealed the viability of self-employment under small scale diverse activities as an adaptive strategy thereby confirming the assertions by Mukwedeya (2009) who documents self–employment as a worldwide adaptation strategy. The findings of this study disclosed that informal micro-enterprises and rural artisanal services of smallholder tobacco farmers in Hurungwe district were vital components of livelihood diversification as the agriculturalists struggled to cushion themselves against the 'vulnerability trap' which they were immersed in by the mono-cropping of tobacco. These findings therefore confirm the findings by Mukwedeya (2009) who document the importance of micro-enterprises in sustaining the livelihoods of the poor people. As the participants disclosed, they mainly accrued survival rather than accumulation benefits from the micro-entrepreneurial avenues which they pursued hence the findings of this study confirm the conclusions by various scholars (Davies, 1996; Cekan, 1992; Assan and Kumer, 2009) that households mainly derive survival benefits than accumulation from non-farm activities.

Migration and Remittances

This study found out rural out migration and remittances to be important adaptive strategies which smallholder tobacco farmers in Hurungwe district pursued in a bid to emancipate themselves from the 'vulnerability context' and 'poverty trap'. These findings confirm the postulations by Assan (2014) that migration is part of the rural people's livelihood activities. Interviews and discussions with smallholder tobacco farmers from Hurungwe district revealed that in times of crisis they relied on the assistance rendered by their children and close relatives who were working either formally or informally in local towns or who migrated to South Africa and Botswana. Farming inputs and equipment, clothes, cash and food were reported to be remitted back home which secured the livelihoods of those who were left behind. Five out of the

seventeen smallholder tobacco farmers who participated in this study reported to be receiving remittances. Mrs. Marima is one of the participants who received remittances. In an interview, she had this to say,

"My children send me groceries, money and farming inputs, I raised them up well and they are now taking care of me, they are a source of my hope.[18]

In almost similar sentiments to those of Mrs. Marima, Mr. Mhozo boasted about his two educated children whom he reported to be taking care of his needs. They took turns to buy him food, farming inputs and farm equipment. One of those sons worked in Harare and as he reported, he gave him the money which he used for opening up a tuck-shop and also bought him two cows and a scotch cart and also paid for his medication. Mrs. Rivai also reported of receiving seeds and fertilizers from her son and maize from her daughter who was married to a successful farmer in Masvingo. Mr. Chino's son who worked in South Africa bought him cows and a scotch cart, he also send the money which he used for buying his wheelbarrow. Mrs. Zoromi received food items from his nephew in the 2013 drought and the fertilisers she used in her fields in 2014. She said,

"If it wasn't for my nephew I don't know where I would have been. For all my bales they gave me USD300 and that is what I was supposed to live on until the next harvest. That wasn't enough for me to buy inputs and food as well as pay for my own health expenses and my children's educational expenses. My nephew helped me with these, he is an angel sent from God and he cares for me I can't complain."[19]

[18] An interview with Mrs. Marima
[19] An interview with Mrs. Zoromi

The discussions which were held also confirmed the utility of remittances in sustaining the livelihoods of smallholder tobacco farmers in Hurungwe district. Basing on these findings which accrued from Hurungwe district, it can be argued that migration and remittances are viable adaptive strategies that can be manipulated in asset accumulation and livelihood sustainance by smallholder farmers. By underscoring the importance of remittances in uplifting the lives of rural people, the findings of this study are in tandem with the proponents of the multiplier model of migration (Durand et al., 1996) who document the importance of migration and remittances in poverty alleviation and rural development.

However, the findings of this study are contrary to the conclusions that dismiss the competence of rural people to invest and survive from the received remittances (Davies, 1996). These differing arguments can be attributed to the fact that smallholder farmers in Hurungwe district viewed migration and remittances as short term adaptive strategies and as such they had to prioritise investment into permanent strategies.

Various scholars contend that diversified activities especially in the non-farm sector are largely 'stop-gaps' which are only temporary and are characterised by very low returns that can only ensure household survival and not necessarily asset accumulation (Davies, 1996; Neihof, 2004; Whitehead and Kabeer, 2001). These assertions contrast with DeJanvry and Sadoulet (2001) who emphasise the ability of diversified livelihood activities to accumulate assets. In the case of Hurungwe district, agricultural intensification, migration and unregistered mining as adaptive strategies were viable in securing livelihoods as well as in the accumulation of assets yet the income that derived from some artisanal services and micro-enterprises was better qualified as a 'gap filler'. With regards to this, it can be argued that the impact of adopted adaptive strategies to livelihoods differ by locations and specific activities. The impacts of livelihood diversification to

livelihood sustainance vary contextually and by households and specific livelihood activities because even the level of participation in multiple adaptive strategies also differ due to a range of factors including age, land holdings and the level of household income (Khatun and Roy, 2012). In the following section, I therefore discuss the factors that were reported to be influencing the choice of adaptive strategies of smallholder tobacco farmers in Hurungwe district in response to the second research question.

"Who you are and what you have dictates what you do and how you do it."

Smallholder farmers in Hurungwe district were engaging in multifarious adaptive strategies as they endeavoured to sustain and resuscitate their livelihoods. However, the form and intensity of livelihood adaptation was varied across households and this can be best explained in the SLF. The SLF emphasises the role of policies, institutions, processes and organisations in determining access to and use of diverse capital assets (DFID, 2000). In the SLF, the attainment of a range of livelihood assets is believed to lead to positive outcomes since these assets are building blocks towards livelihood sustainance (Scoones, 1998).

Differential access to resource endowments is acknowledged to be resulting in the differential paths of adaptation to take among the rural people in this framework. This is so because natural (farm size, irrigated farm land area and ownership of livestock), social (unpaid labour and social networks), financial (household savings account and credit access), physical (farm equipment, easy access to transport and markets) and human (education level, possession of skills, health) capitals determine the path of diversification to pursue (Hussein and Nelson, 1998). This is confirmed in various studies which document that the ability of a household to diversify is determined by various factors including social connections, access to financial capital, markets and skills (Hussein and Nelson, 1998; Barrett et al, 2001; Chambers and Conway, 1991;

Scoones, 1998). As a complement to the existing theoretical literature basing on the findings which accrued from the discussions and interviews conducted with smallholder farmers in Hurungwe district, this study argues that the choice of adaptive strategies to pursue is determined by divergent, multifaceted and corresponding influences ranging from demographic, socio-economic to institutional factors and this was well elaborated in Mrs. Mazarira's narrations who had this to say,

"Who you are and what you have dictates what you do and how you do it." [20]

Almost similar sentiments were shared by all the other participants and were later on shared in the discussions. In this section I therefore discuss the determinants of livelihood adaptation among smallholder farmers in Hurungwe district. Various factors linked to education, infrastructure, access to farm capital and landholding, household head age and remittances among others were identified as the major factors that influenced the choice of adaptive strategies to pursue. These determinants are discussed within the SLF.

Human Capital Endowment (Education levels, Skills, Age)

Human capital refers to assets such as education, skills and age and these were reported to be the factors which determined the level of adaptation of a household as well as the type of adaptive strategies that a household pursued. The findings which accrued from Hurungwe district have shown that the level of education, amount of skills possessed and the age of the household head were the important factors that determined the choice of adaptation strategies that a household undertook.

[20] An interview with Mrs. Mazarira

In terms of **age**, the findings which accrued from the interviews and discussions which were held by smallholder tobacco farmers from Hurungwe district have shown that the age of the household had a positive bearing on the type of adaptation path that a household pursued. It was reported that the households that were headed by younger heads, those in their 20 engaged in fewer livelihood activities as compared to the households with older heads, those in their late 40s. Regarding this, Mr. Munda said,

"Your age as a head of the house determines what you can do to earn a living. Look I am getting old; do you think I can go to Chikuti for gold panning? With all these backaches I can't do that. My family just depends on agriculture that is all we can do at least for now…"[21]

Mrs. Zvidzai uttered,

"Some of us are aged so we suffer from many diseases of aging and as such we cannot perform other activities, I cannot indulge in gold panning neither can I roam around the streets selling agricultural produces. We just depend on our plot for survival at least we stay at this plot so we can manage it better."

Almost similar sentiments were shared by the other three participants who were in their late 50s and were confirmed in both focus group discussions. In terms of age therefore two important points rose from the district. The findings revealed that high participation in diversified livelihoods was reported among households with older heads yet they mainly pursued on-farm activities. Those households with younger heads engaged in few activities yet most of the activities which they pursued were mainly non-farm. These findings from Hurungwe district are inconsistent with other studies (Bryceson, 2002; Berhanu et al., 2007) which suggest that younger household heads pursue more diversified livelihoods than older households yet the

[21] An interview with Mr. Munda

findings are in tandem with the findings by Khatun and Roy (2012) from a study conducted in West Bengal.

In addition to that, it was also reported from Hurungwe district that the level of education (formal and vocational skills possession) of the household head determined the type of livelihood activities to pursue. Those who possessed vocational skills and formal education were reported to be more likely to engage in off-farm avenues compared to their counterparts who lacked formal education (tertiary) and vocational skills. Regarding this Mr. Shoko said,

"…I am not educated that's why I am stuck here in this farm labouring in other people's plots whilst my age mates are formally employed in Karoi."[22]

Mr. Zhondo was illiterate and as he disclosed, the only avenues which were open to him were on-farm casual labour and agricultural intensification. He mentioned about his two friends who migrated to Karoi in pursuit of off-farm lucrative waged employment, he could not join them because he lacked the required education and skills. Mr. Mando survived on craftsmanship services because he was skilled in welding, thatching and house construction. Makoni and Makoti survived on craft making because they were skilled in crafting. However, Mr. Zhondo lacked the relevant skills and education and as such the lack of skills and his low level of education were barriers to participation in lucrative off-farm activities for him except for low remunerated off-farm activities with low barriers to entry.

Based on these findings, it can be argued that human capital (education and skills) endowment plays a pivotal role in determining participation in the off farm sector in Hurungwe district

[22] Interview with Mr. Shoko

whereas the lack of education and skills downgrades the individual to low remunerated activities particularly casual on farm labour in other people's fields (maricho) to put it in the participants' vernacular language. These results from Hurungwe district are consistent with the results which emanated from other studies which were conducted in various parts of Africa (Davies, 2006; Barrett et al, 2001; Khatun and Roy, 2012 and Idowu et al, 2010; Hussein and Nelson 1998) which document the importance of education and skill possession as the key determinants to entry into more remunerable activities. However, the findings of this study are incongruent to the findings by Beyene (2008) who concluded that there was no significant relationship between educational levels and livelihood diversification.

Physical Capital access

Physical capital refers to assets such as infrastructure (markets, transport, roads, vehicles, water supply, sanitation, energy and communication facilities), tools (farm equipment) and technology (improved seeds, fertiliser and pesticides). The findings that accrued from the interviews and focus group discussions that were held in Hurungwe district revealed that the choice of adaptive strategies to pursue were influenced by the community and household's access to infrastructure, farm equipment and new technology thereby the findings of this study confirm the assertions by Barrett et al (2001) that physical resources endowments influence diversification and adaptation behaviour.

The availability of **equipment and tools** was reported to be playing an indispensable part in determining the path of adaptation to follow among smallholder farmers in Hurungwe district. Mrs. Zino, Mr. Munda and Mr. Shoko resorted to agricultural intensification through crop and livestock integration because they possessed draught power, ploughs and adequate farm inputs.

Likewise, availability of sewing machines and sewing material necessitated three participants from the study to engage in tailoring, hence asset ownership plays a significant role in livelihood diversification in Hurungwe district whereby the selection of adaptive strategies to pursue was determined and guided by the available asset portfolios. These findings from Hurungwe district are at par with other studies (Lay and Schuler, 2008 and Barrett et al, 2001).

Block and Webb (2001) note the positive and significant role played by asset ownership in livelihood diversification. These assertions were also advanced by Barrett et al (2001) who emphasises the importance of access to farm assets such as ploughs and draught power in livelihood diversification particularly into on-farm activities just as was the case with Mrs. Zino, Mr. Munda and Mr. Shoko. Mrs. Zino intensified her farming systems at the same time pursuing tailoring services and this was influenced by asset ownership. These findings draw this section to the argument that physical asset endowed households are more capable of diversifying their livelihoods as compared to the poor hence confirming Lay and Schuler (2008)'s assertions that asset ownership plays a crucial role in ensuring productive livelihood adaptation.

Infrastructural variables including market and transport access were also reported to be in the choice of adaptive strategies to pursue among smallholder farmers. Due to the absence of established markets and means of transportation in the district, most farmers opted to diversify into the production of products which had readily available local markets that is which could be traded locally such as vegetables, beer and food items. This was well captured in Mrs. Marima's sentiments as she echoed,

"…the only option left for us is to dance according to the market tune, it is far much better for me to produce low remunerable products such as tomatoes and buns than to produce highly remunerated products without markets."[23]

Similar assertions were shared by the other five participants. Based on these findings therefore it can be concluded that smallholder farmers' engagement in multiple adaptive strategies is governed by external factors with infrastructural variables playing a pertinent role in determining the type of activities to pursue. These arguments are in sync with the arguments by Asmah (2011) and Barrett et al (2001). Taking a hint from Asmah (2011) that access to markets and transport is significant for livelihood diversification, this study recommend initiatives meant to improve infrastructure especially market and transport access for successful adaptation to be met.

Natural Assets (Land Holding and Water Availability)

Access to natural assets including land, irrigation services and water supply was reported to be a significant factor which determined the level, type and intensity of livelihood adaptation among smallholder farmers in Hurungwe district. Due to the fact that all the participants were resettled under the fast track resettlement phase, the farmers reported that they had abundant land which opened access to on-farm avenues hence most farmers in both Jim Bakker and Freddy farms were influenced by their landholding to pursue agricultural activities. However, the challenges which they faced in the farms including climate variability and shortage of irrigation services as they reported compelled them to pursue other non-agricultural avenues as they sought to sustain and resuscitate their livelihoods. This was exemplified in the case of Mrs. Hoto and other farmers especially in Jim Bakker farm where farmers were advantaged with the availability of

[23] An interview with Mrs. Marima

large farm sizes that were under irrigation facilities developed by individual farmers. Mrs. Hoto pursued agricultural intensification and at the same time she was involved in tailoring.

Regarding this, Mr. Ziki said,

"...kana usina zvokudiridzisa zvakakwana nemamiriro ekunze aya mumunda hapana chinobuda."[24]

Almost similar assertions were shared in both discussions hence in this case, based on the findings that accrued from Hurungwe district, it can be argued that the availability of large land sizes especially under irrigated areas or near water sources is crucial for livelihood adaptation into both on and off-farm activities. Idowu et al (2011) notes that large landholding was associated with the pursuing of strictly on-farm activities yet Khatun and Roy (2012) argue that landholding is linked to off farm activities hence the findings of this study are unique in their own way. I ascribe these differences to the differences in the constraints which the farmers were adapting to.

Social Variables

Social capital variables including labour and migration were also mentioned as important factors which determined the choice of adaptation strategies to pursue in Hurungwe district. The availability of remittances was reported to be enabling household participation in both off and non-farm activities since those remittances could be used to increase investments. This was well represented in Mr. Mhozo's case; he managed to open up a tuck shop using the money that was remitted back to him from his son who worked in Harare. Similarly, farm inputs and equipment

[24] Without sufficient irrigation facilities it becomes very difficult for you to be productive in agricultural livelihoods due to incessant rains.

were continuously remitted to Mrs. Zino and that made it possible for her to pursue crop and livestock diversification hence remittances were crucial in livelihood adaptation. These findings confirm the assertions by Bezemer and Lerman (2002) who stress the important role played by migration in ensuring family up keep through increased participation in on and off-farm work.

The availability of adequate **household labour** is another important factor which enabled livelihood adaptation in both on-farm and off-farm activities in Hurungwe district. Larger family sizes were reported to be more capable of engaging in both on and off -farm adaptive strategies as compared to smaller family sizes due to the availability of household labour. Zimvac (2011) notes that the farming systems pursued by smallholders are labour intensive, likewise, most farm adaptive strategies which were pursued by smallholder farmers in Hurungwe district were labour intensive hence were a first preference for larger households which had more able bodied adults.

Mr. Munda's household is a typical example. Mr. Munda was married to two wives and he had seven children. The family engaged in crop and livestock integration, at the same time, Mr. Munda's sons pursued unregistered mining during the dry seasons whilst his wives took turns to trade the fish he bought from Kariba as well as to sell farm produces. Likewise, Mr. Chino was polygamous with two wives and ten children and he also stayed with his siblings' children. He was a successful farmer who integrated crops and livestock in his farming. In top of that, his sons casually engaged in cross boarder trading and his wives also traded farm produces in the farm. These diversification patterns were necessitated by the availability of labour hence the availability of labour either from the household or hired labour influence participation in both on and off-farm activities. In a group discussion it was uttered,

"We are too few in our households; in most cases it is only one wife, two young children and the father so we only employ activities with limited mobility such as on-farm casual labour and growing a few things that we can manage in our plot."[25]

These findings which accrued from Hurungwe district therefore show that household size and the availability of household labour determine the type and intensity of adaptive strategies pursued. The higher the number of household labour, the more a family was likely to adapt effectively through livelihood diversification and on farm intensity. The findings of this study are congruent to other studies (Toulmin, 1992; Bezemer and Lerman, 2003).

Financial Capital

Financial capital variables including credit access, household financial savings and income levels were reported to be significant factors that determined the choice of adaptive strategies among smallholder farmers in Hurungwe district. The information that accrued from the discussion revealed that farmers who had better savings and income levels particularly those who received remittances, and those who had better access to credit facilities mainly a few civil servants and the farmers who were contracted by Mashonaland Tobacco Company and Chidziva Tobacco Company mainly pursued agricultural intensification in adaptation to the shocks of mono-cropping. This was mainly so because those farmers could afford farm inputs, equipment and labour.

Contrarily, the farmers who had limited credit access and those who lacked savings were reported to be mainly pursuing low remunerated off-farm activities as they sought to raise income for farm inputs for participation in on-farm adaptive strategies. This confirms the

[25] Sentiments from the conducted focus group discussions conducted in both Jim Bakker and Freddy farm.

assertions by Reardon and Taylor (1996) that off-farm activities are pursued to tackle capital constraints. Basing from these findings which accrued from Freddy and Jim Bakker farms, it can be argued that high income and savings levels as well as credit access among smallholder tobacco farmers in Hurungwe district had a positive and significant effect on the adaptive strategies that were pursued. The findings of this study relate to various studies (Sisay, 2010; Barrett et al, 2001; Warren, 2002; Hussein and Nelson, 1998) which document household income levels as key determinants to adaptation among the rural people.

This section has documented and discussed various factors including those linked to education, market, capital and credit access, landholding, household head age and labour availability which were reported to be important in determining the choice of the adaptive strategies that smallholder farmers pursued. Particularly, factors including irrigation facilities, credit and capital access were reported to be associated with increased participation in farm activities among smallholder farmers in Hurungwe district whilst a short supply of these was reported to be coercing farmers to participate in low remunerated off-farm activities. It is for these reasons that this study advocates initiatives that enhance credit, capital and infrastructure access among smallholder farmers for poverty alleviation. A discussion on the constraints to the adaptive capacity of smallholder tobacco farmers in Hurungwe district is proffered in the following section in response to the final research question.

"…they are innumerable and beyond our control, you even wonder how best you can sustain your family."

The SLF diagnoses the role played by environmental, institutional, infrastructural, technological and socio-economic factors as mediating influences which either facilitate or inhibit the livelihood adaptation process (Ellis, 1998). In relation to this, as a confirmation to the SLF, the

findings which accrued from Hurungwe district suggest that heterogeneous factors constrain smallholder farmers' adaptive capacity as well as their will to adapt. The numerous constraints referred to as "innumerable" and "beyond smallholders' control" from a discussion which was conducted by the households in Hurungwe district which include financial barriers, labour shortage, climate variability, inadequate infrastructure and poor credit access are presented and discussed in this section through the use of the asset pentagon as a tool with which to view and analyse data. It should be noted that some amendments were made to the asset pentagon as I endeavoured to overcome the weaknesses of the SLF by accommodating the aspect of gender.

Financial Capital Dearth

The interviews and focus group discussions that were conducted with smallholder tobacco farmers revealed that the farmers were financially constrained and as was reported, the financial constraints which the farmers encountered were rendering their adaptive capacity unproductive if not totally restricting them. As the farmers reported from both focus group discussions, the farmers possessed some vocational skills which they believed would sustain their livelihoods if successfully manipulated. However, all the participants from the focus group discussions agreed that they lacked funds and that was a major challenge which hindered them from pursuing lucrative diversification strategies.

This information that accrued from the focus group discussions confirmed the sentiments that were provided by two participants from the interviews. Mrs. Zino and Mrs. Mazarira reported that they had received sewing machines from World Vision and they believed that if they would pursue tailoring at least that would sustain their livelihoods yet they lacked start-up capital. Regarding this, Mrs. Zino concurred

"…I have got a sewing machine but without money for raw materials, I can't engage in tailoring."[26]

In another context, Mrs. Mazarira said,

"There are so many things that we can do to sustain our lives but we don't have money that is why we are struggling. Suppose we get loans, I can tell you, our lives will never be the same again."[27]

Based on this information which accrued from Hurungwe district, it can be argued that financial deficit is one of the major predicaments that are encountered by smallholder tobacco farmers which impede their adaptive capacity. All the participants demonstrated their eagerness to adopt lucrative on and off-farm adaptive strategies but as they reported, their precarious financial positions were obstructing them from adapting. The unavailability of financial capital for starting up businesses and pursue some lucrative non-farm activities including cross boarder trading therefore was a major constraint that was faced by smallholder farmers in Hurungwe district.

The financial constraints as was reported particularly stemmed from the inability of the concerned actors to access loans due to the complicated procedures that were followed in accessing loans as well as their lack of collateral security given that commercial banks were reluctant to accept land as collateral security. All the participants mentioned financial capital lack as a major restriction to their adaptation capacity hence the lack of finances constitute a major barrier to adaptation and it is for this reason that I recommend initiatives that enhance smallholder farmers' access to credit basing on the positive role that was played by the Bangladesh Grameen Bank in enabling livelihood adaptation by successfully providing credit to women (Katona-Apte 1988 cited in Khatun and Roy 2012). These findings are in tandem with

[26] An interview with Mrs. Zino
[27] An interview with Mrs. Mazarira

other studies (Saha and Bahal 2012; Khatun and Roy, 2012) which document the lack of financial capital as a key constraint to livelihood adaptation and diversification

Physical Capital Inadequacy

While smallholder tobacco farmers in Hurungwe district were making notable efforts to adapt in a bid to circumvent the effects of tobacco mono-cropping, the information that accrued from Freddy and Jim Bakker farms has revealed that smallholder farmers' adaptive capacity was restricted by infrastructural, technological and production equipment deficits. This confirms the assertions by Barrett et al. (2001) that physical capital variables are a pre-requisite for livelihood adaptation because all the participants who were involved in this study expressed how physical capital inadequacy was making their hopes for asset accumulation and satisfactory subsistence unachievable.

From the interviews and discussions that were held, marketing and production problems including poor market access, inadequate inputs and equipment, lack of extension services and irrigation facilities were reported as the major constraints which restricted smallholder tobacco farmers' ability to cushion themselves against the effects posed by tobacco mono-cropping. It was reported that in some instances, these constraints would force farmers to maintain their risky livelihood activity (tobacco mono-cropping).

As noted earlier on, Jim Bakker and Freddy farms were characterised by a lack of marketing facilities. The farmers reported that they had to go to Karoi town for markets yet with the high transportation costs, most farmers reported that they had to sell their products especially farm produces at cheap prices in the farms or at Mwami a nearby shopping centre. The situation was reported to be unbearable for artisanal products given that usually following tobacco harvests

there would be a massive influx of hawkers and traders into the district who sold their products at cheap prices thereby exposing smallholder farmers to high competitions which they could not withstand. Inadequate communication services, technological facilities, extension services, irrigation facilities, farm inputs and farm equipment are some of the major challenges which smallholder farmers in Hurungwe identified as hindrances to their adaptive capacity.

Based on these findings which accrued from Hurungwe district, in complement to the available literature and the SLF, it can be argued that the lack of physical capital inevitably drives smallholder farmers in a vulnerability context and ultimately poverty trap only to be rescued by the enhancement of access to physical assets. To this effect, I reiterate the argument that poor access to physical assets is a common challenge faced by smallholder farmers which undermines their adaptive capacity. This is in tandem with other studies (Khatun and Roy, 2012) which document the lack of physical assets as a major barrier to livelihood diversification and adaptation. It is against this backdrop that I advocate policies and initiatives that enhance access to physical assets particularly in the rural areas if food security and sustainable development is to be attained.

Agro-ecological Constraints

Access to natural capital (land, water, wildlife and environmental resources) is needed for successful agricultural intensification (Scoones, 1998). In his theory of organic analogy, Spencer (1884) cited in Giddens (2006) notes that there is an interdependence of parts whereby parts exist for the benefit of the whole system to such an extent that the absence of a single part undermines the functionality of the system. Almost similar philosophies are shared by Scoones (1998) who asserts that the amalgamation of different livelihood resources is critical in pursuit of different livelihood accomplishments. This therefore means that the lack of one capital endowment,

natural capital in this case has the capacity of undermining the adaptive capacity of smallholder farmers and this was shared in Mr. Shoko's sentiments who uttered,

"Some things are just beyond our control as smallholder farmers, we can run around and get seeds and draught power but without rains it becomes useless."[28]

With regards to the issue of rains, Mrs. Zino concurred,

"The rains are no longer predictable, we try everything but the poor rains affect us, sometimes the rainfall becomes incessant to such an extent that you can't work in the fields and at times we receive very low rainfall which cannot sustain even the so called drought resistant crops."[29]

The information that was gathered from Hurungwe district revealed that climate variability was one of the principal constraints to smallholder farmers' adaptive capacity. Climate variability in the form of inadequate rainfall, poor seasonal distribution of rainfall, chains of droughts, irregularity in the arrival of rains, inadequacy in the amount of rains received and failures of rains in the middle of the growing seasons were reported as the major challenges that constrained the adaptive capacity of smallholder farmers especially in agricultural intensification particularly crop and livestock production. Natural forest based adaptive strategies including the collection and sale of firewood and wild fruits were also reported to be affected by climate variability due to its roles in causing deforestation and land degradation. All the participants complained of substandard harvests and the loss of harvests which they encountered in the 2013/2014 drought. The situation was reported to be worse off for the farmers who relied on Mapofu river as their water supply given that the river dried up during the drought a situation which hindered the farmers from pursuing water planting as an adaptive strategy.

[28] An interview with Mr. Shoko
[29] An interview with Mrs. Zino

The farmers also mentioned that climate variability resulted in increased pests and crop diseases which stalled their productivity. In this instance, based on these findings which accrued from Hurungwe district, it can be argued that climate variability is a major structural factor which severely constrain smallholder tobacco farmers' agency and limit their opportunities for adaptation. This study's findings are equivalent to the findings by Jufare (2008) from the study that was conducted in rural Ethiopia which document climate variability as a major constraint which affected livelihood adaptation hence impeding the capacity of households to attain food security and escape poverty. Adams and Mortimore (1997) also document climate variability as a constraining factor to smallholder farmers from their study of livelihoods conducted in Northern Nigeria and the same has been shared by Khatun and Roy (2012) from their study of West Bengal.

Human Capital Lack

As noted earlier on, human capital encompasses factors such as education, skills, and labour (Scoones 1998). These human capital variables determine the adaptive capacity of smallholder farmers (Barrett et al., 2001; Davies, 2006; Idowu et al, 2010). The interviews and discussions that were held with smallholder tobacco farmers in Hurungwe district disclosed that most of these farmers lacked basic skills and that acted as a major hindrance to adaptation for them. All the participants identified the lack of basic skills as a constraint to their adaptation.

Unlike in other African countries such as Tanzania, Sudan and Kenya whereby the governments increased their budgets towards entrepreneurship, in the case of Hurungwe district, all the participants disclosed that nothing has been done by the government in their areas with regards to technical skills training (carpentry, masonry, tailoring and so on) even though they appreciated the role that was done by World Vision which trained a few women from the community.

The situation was worse off given that the participants had low levels of basic managerial skills due to their low levels of education, this constrained their adaptive capacity hence based on the findings that were accrued from Hurungwe district, I argue that the lack of adequate skills and skill training constitute major barriers to livelihood adaptation in both agricultural intensification and non-farm activities. These findings authorise (Jufare, 2008; Saha and Bahal, 2012; Barrett et al., 2000; Khan and Roy, 2012) who document the limited availability of skills, skill training and technical guidance as the major constraints affecting livelihood adaptation.

Shortage of labour also constitutes another constraint faced by smallholder tobacco farmers in Hurungwe district which severely undermined their adaptive capacity. Shange (2014) documents the shortage of labour as a characteristic of most African smallholder farming households. In confirmation to this, the findings of this study revealed that most smallholder farmers' farming systems were labour intensive hence making it impossible for them to pursue other non-farm activities. It was reported from the conducted interviews and focus group discussions that labour shortage was another factor that hindered most farmers in Hurungwe district from implementing some adaptation practices including soil conservation practices.

Mr. Ziki's family is a typical example of a farmer whose household was constrained by labour shortage from pursuing productive adaptive strategies. As he reported, his family was comprised of parents and their two children who were under ten years of age. The children could not contribute to farm labour because they were young and the parents could not adopt off farm labour due to the time constraints which they faced given that their primary activity (tobacco farming) could not leave enough time for them to pursue off-farm activities. All the participants reported that in one way or the other, the shortage of labour was one of the major constraints to

livelihood adaptation which they encountered. Similar findings were shared in Adams and Mortimore (1997).

Institutional Constraints: Law Enforcement

The Sustainable Livelihoods Framework contends that institutions, laws and policies shape livelihoods by influencing access to assets, livelihood strategies, vulnerability and terms of exchange (Adato and Meinzen-Dick 2002). This was confirmed in the case of Hurungwe district whereby the enforcement of law was reported to be obstructing individuals and households from pursuing some illegal adaptive strategies which they deemed necessary for survival and asset accumulation including unregistered wildlife poaching, unregistered gold mining and informal transport operations.

With regards to the role of law as a constraining factor, the discussants from both focus group discussions concurred,

"These corrupt police are no longer concerned with the actual crime cases; you just find them where money is. For anything illegal that you do you must be prepared for arrests, attacks, deaths and paying fines." [30]

This was also shared by Bobby who said,

"In Chikuti I tell you, if you are not prepared those Campfire scouts and police kill you because they always hunt for illegal gold miners."[31]

Regarding illegal transport operations and law enforcement, Mr. Munda said,

[30] Sentiments from both focus group discussions
[31] An interview with Bobby

"In the informal transport industry we are just working for the police, the roadblocks are scattered everywhere like mushroom".[32]

Smallholder tobacco farmers from Hurungwe district complained that the state was pauperising them by deeming anything they did to sustain and uplift their livelihoods illegal. The findings of this study revealed that subsequent to the proliferation of illegal survival strategies adopted in resuscitating and sustaining livelihoods, the government also enacted various laws meant to combat these. Various forestry and conservation laws constrained smallholder farmers' adaptive capacity. As was reported, the laws required the farmers to have the permits and to be paying taxes for them to operate legally. However, with the lack of funds for undertaking the required paperwork, as smallholder farmers disclosed, they kept on operating illegally yet this exposed them to violence by the Campfire scouts and the police. As the discussants disclosed, some of their friends and relatives were injured, arrested and some even killed by the officials who always harassed unregistered miners.

For unregistered transport operators, it was reported that they were at unease with the police and council officials who would clamp their wheels and collect spot fines. Firewood collectors were not spared in this and the situation was exacerbated by the recent establishment of a police station at Mwami shopping centre. Based on these reported experiences of smallholder farmers in Hurungwe district, it can be argued that law enforcement is an institutional constraint which impedes livelihood adaptation. These findings tally with (Ellis, 1998) who documents the role played by government policies in impeding the preferred diversification strategies.

[32] An interview with Mr. Munda

Gender related Constraints

The findings of this study revealed that women were constrained by gender inequalities from pursuing some productive and highly remunerated non-farm adaptive strategies. As the discussants disclosed, time and labour constraints were inherent in female headed households and these restricted them from undertaking some lucrative surviving strategies such as migration. These findings confirm the assertions by Ellis (1999) who identifies gender inequality as one of the key factors which constrain women from pursuing productive and highly remunerated non-farm adaptive activities.

In a study conducted in Uganda, Haggblabe (2007) documents how gender based institutional barriers excluded women from accessing formal credit. Unlike in Uganda whereby women were restricted credit access, in Hurungwe district women could access credit yet due to time and labour constraints, female headed households found it difficult to pay back the loans and as such many of them reported that they were blacklisted by the tobacco contactors and as such they faced input and equipment shortages. Haggblade (2007) documents the differential adaptation capacity of women and men. He postulates that women were less likely to diversify their livelihoods as compared to men who had less access constraints.

Slightly different, in the case of Hurungwe district, women were actively involved in both on-farm and off-farm activities including gold panning and small enterprises. However, the incomes were controlled by husbands who in most times used them to pursue their personal interests. Mrs. Chigubhu's story depicts this, she was involved in cross boarder trading whilst her husband was more inclined to farming. However, she was given the start-up capital by her husband and as such the husband controlled the income which accrued from cross boarder trading. This confirms Sen's (1981) assertions that the benefits one reaps from his or her labour are governed by

cultural systems which define who gains control over resources. Based on these findings which accrued from Hurungwe district, it can be argued that gender inequalities are a major constraint to livelihood adaptation encountered by women.

Conclusion

This chapter has provided a presentation, discussions and analysis of the study findings which accrued from the interviews and discussions with smallholder tobacco farmers A detailed presentation and discussion of the factors that determine the choice of adaptive strategies among smallholder tobacco farmers as well as the constraints they encounter in their endeavours to diversify was presented. The next chapter provides conclusions of the study and key recommendations.

CHAPTER 5: CONCLUSION AND KEY RECOMMENDATIONS

Preamble

Centred on the argument that smallholder farmers are presented with livelihood assets which they manipulate in adaptation to the overwhelming odds with a wide range of factors determining and constraining their adaptive capacity, this study was set out to explore the determinants and constraints to smallholder farmers and their households' adaptive capacity. Specifically, the study has identified the nature and form of the adaptive strategies that were pursued by smallholder farmers in Hurungwe district. In addition to this, the study also explored the factors that determined the choice of adaptive strategies as well as those that constrained smallholder farmers' adaptive capacity. A consideration of these dynamics was critical for influencing policy on poverty alleviation as well as for acquainting smallholder farmers on the prospective ways of adapting to precarious milieus.

The board of literature on smallholder farmers and livelihood adaptation particularly in Africa has been extensive and thorough on the motives and impacts of adaptation particularly to climate change (Haggblade 2007; Adger et al., 2007) yet it is incomprehensive and incomplete on numerous fundamental questions within the livelihood adaptation discourse given that smallholder farmers are experiencing a plethora of predicaments. This study sought to address three of these questions listed below.

- In what ways are tobacco smallholder farmers and their households adapting to the shocks encountered due to tobacco mono-cropping?
- What are the factors that determine the choice of the adaptive strategies pursued by resettled households in response to the shocks of tobacco mono-cropping?

- What are the factors that constrain resettled households in their endeavours to adapt to the shocks posed by tobacco mono-cropping?

In the sections below, I synthesise my research findings within the SLF as a conceptual framework which guided this study and clearly discuss the theoretical and policy implications of the study. Subsequent to this, I give an overall conclusion of the study.

Empirical Findings

In this section, I provide evidence and a synthesis of the arguments which I made on the empirical chapter clearly showing how the arguments amalgamated to answer each research question of the study. In this section, I also provide the theoretical and policy implications of the study basing on the research findings. In a reiteration to the main arguments which emanated from this study and which guided this study, I maintain that:

- Smallholder farmers are rationale actors who devise diverse and complex strategies in adaptation to the effects posed by tobacco mono-cropping
- The adaptive capacity of smallholder farmers as well as their choice of adaptive strategies to pursue is determined by a wide range of factors ranging from demographic, socio-economic to institutional factors
- Innumerable predicaments thwart the capacity and will of smallholder farmers to adapt to the shocks posed by tobacco mono-cropping

The main findings were that smallholder farmers were adapting to the shocks posed by tobacco mono-cropping and that a wide range of factors were determining and constraining smallholder households' adaptive capacity. These findings are discussed within their respective titles in relation to the sub-research questions in the following sections.

Question 1: In what ways are tobacco smallholder farmers and their households adapting to the shocks encountered due to tobacco mono-cropping?

This question was answered within the title:

"We always make a plan, manipulating anything within our reach for sustainance."

Based on the information that accrued from the interviews and discussions that were conducted with smallholder farmers in Hurungwe district regarding this question, I argue that smallholder farmers are heroes rather than victims of circumstances. This is so because despite the shocks that were posed on them due to the mono-cropping of tobacco including food insecurity, low income levels, land degradation and the depletion of soil fertility, the farmers strategised to minimise these effects. Various on farm and off-farm activities were pursued which include the breeding of drought resistant crops and livestock, crop and livestock integration, implementation of water and soil conservation methods, artisanship, unregistered mining, migration, trading and engaging in casual labour.

The findings of this study have contributed to the available board of literature by documenting the importance of both on-farm and non-farm activities in sustaining the livelihoods of the rural people. These findings confirm the assertions by Yaro (2008) who also documents the significant role played by both on-farm and off-farm activities in the lives of the rural people as they seek to cushion the shocks which they encounter. By stressing the significance of both agricultural and non-agricultural activities in ensuring the sustainance of the rural people, the findings of this study differ from the assertions by the de-agrarianisation and proletarianisation theorists (Bryceson, 2002; Bryceson, 1999) who document the dwindling significance of agriculture in favour of non-farm activities.

Question 2: What are the factors that determine the choice of the adaptive strategies pursued by resettled households in response to the shocks of tobacco mono-cropping?

Responses to this question were provided under the title:

"Who you are and what you have dictates what you do and how you do it."

The information that accrued from Hurungwe district confirmed the second hypothesis of this study that a wide range of demographic, socio-economic and institutional factors determine the choice of adaptive strategies pursued by smallholder farmers and their households. The majority of farmers revealed education levels, skills, health status, infrastructural facilities, land holding, equipment, labour, migration, credit access and household income levels as the factors that determined the choice of the adaptive strategies which they pursued. These factors were discussed within the asset pentagon of the Sustainable Livelihoods Framework. These findings confirm the arguments by the Sustainable Livelihoods Framework and its exponents who document how differential access to resource endowments result in different adaptation strategies to pursue (Barrett et al., 2001; Hussein and Nelson, 1998; Scoones, 1998; Chambers and Conway, 1991).

Question 3: What are the factors that constrain resettled households in their endeavours to adapt to the shocks posed by tobacco mono-cropping?

This question was answered within the title:

"…they are innumerable and beyond our control, you even wonder how best you can sustain your family."

Based on the information that was retrieved from Hurungwe district, I argue that a number of factors hinder smallholder farmers' adaptive capacity. The lack of financial, natural, economic and physical capital access as well as some social and institutional issues including gender relations, religion and law enforcement constrained the farmers' ability to strategise. This was proven from the interviews and discussions which were held as smallholder farmers disclosed that diverse factors including the lack of adequate infrastructure, climate uncertainty, livestock diseases and pests, water shortages, law enforcement, gender relations, lack of equipment, lack of skills and education, poor resource base, labour shortages, institutional laws and time constraints were hindering their adaptation capacity. These constraining factors were discussed within the SLF owing to the assertions that poor capital asset endowment restricts the partaking of livelihood activities. The SLF overlooked gender as a potential constraint to individuals and households' adaptive capacity yet in this study the participants revealed how gender roles constrained them hence aspects of gender were included in the discussion of constraints to smallholder farmers' adaptation as a complement to the SLF.

Livelihood adaptation particularly through livelihood diversification has been documented as a significant and viable strategy which sustains rural livelihoods (Carney 1998; Ellis 1999). The findings of this study complement existing literature by documenting the significance of livelihood diversification as an adaptive strategy which managed to rescue smallholder farmers from the shocks posed by tobacco mono-cropping. There has been a debate within the existing literature as to whether livelihood diversification is an asset accumulation or survival strategy. Mukwedeya (2009) refers to it as an asset accumulation strategy yet other scholars (Davies,

1996) maintain that livelihood diversification is a survival rather than an asset accumulation strategy. This study's empirical findings have however proven that asset accumulation and survival are both the outcomes of livelihood diversification. The study findings have revealed that the livelihood outcome of livelihood diversification is determined by the type of activities pursued, for example casual labour and artisanship services proved to be survival strategies yet assets could be accumulated through migration.

However, even in migration some families could not accumulate their assets; this study has attributed these differences to the diverse constraints which were faced by smallholder farmers. In Hurungwe district, livelihood adaptation has been influenced by the availability of social and economic factors including the availability of skills, access to credit, infrastructural availability. The lack of capital, credit and skills however constrain the adaptive capacity of the rural people. Against this background, with an aim of ensuring poverty alleviation, this study proffer the following recommendations for the government, Non-Governmental Organisations (NGOs) and smallholder farmers as poverty reduction measures.

- Given that the lack of human capital is one of the major factors hindering smallholder farmers, the government and NGOs should enhance rural people's education access that is formal, vocational and extra-curriculum education so as to increase formal and self-employment opportunities for the rural people.
- Financial capital inadequacy either hinders farmers' adaptive capacity or drives them into low remunerable jobs hence the creation of micro-finance institutions which provide credit facilities to the rural people by the government is a desirable policy enterprise.
- The government should ensure infrastructural development in the rural areas as that would facilitate access to markets for both on-farm and off-farm inputs and outputs.

- Given the inequalities in asset access based on gender and the gender stereotyping of non-agricultural avenues, efforts should be made to empower women for them to access livelihood assets on the same level as men.
- The government and NGOs should support rural people's attempts to adapt by providing them with long term cash and asset loans.
- Peer to peer sharing of vocational skills are encouraged for the rural people for them to enhance their skills for non-farm activities.

To conclude, the study has investigated on the adaptive strategies that are pursued by smallholder farmers and their households in response to the shocks posed by tobacco mono-cropping. More importantly, the study has explored on the determinants and constraints to livelihood adaptation. The study has found out that smallholder farmers are calculative to such an extent that they devise diverse adaptive strategies to circumvent the overwhelming odds. However, the study has found out that smallholder farmers' adaptive capacity is determined by complex factors ranging from demographic, socio-economic to institutional influences. A wide range of factors has also been found out to be impeding smallholder farmers' adaptive capacity hence policy interventions which intend to tackle rural poverty should consider solutions to these constraining factors first if they are to be successful.

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INFORMATION DOCUMENT

Study title: "An Assessment of the Survival Strategies Employed by Smallholder Farmers in Mitigating the Shocks they Experience due to Mono-cropping of Tobacco in the Post Fast Track Land Reform program era."

My name is Dabie Mutumhe and I am currently registered as a student at the University of the Witwatersrand in the Department of Sociology. I would like to conduct a research on the strategies employed by smallholder farmers in mitigating the shocks they experience as a result of the mono-cropping of tobacco.

It is hoped that this research will help us better understand the contribution of the employed mechanisms which can help smallholder farmers to see the need for diversifying. I therefore wish to invite you to participate in this study which will entail being interviewed by me. Your participation is entirely voluntary and refusal to participate will not be held against you in any way. If you agree to take part, I shall arrange an interview at a time and place suitable for you.

The interview will take about 45 minutes to an hour and with your permission I would like to tape record the interview. You may refuse to answer any questions that you feel uncomfortable with answering and you may withdraw from the study at any time. Please be assured that your personal details and responses will be kept confidential and no information that could identify you will be included in the final report.

Please feel free to ask any questions regarding the study and I will answer them to the best of my ability. I may be contacted on my cell phone number at ----------or alternatively you can contact my supervisor, Samuel Kariuki on ----------.

Thank you for your time

Kind Regards

Dabie Mutumhe

CONSENT FORM

I have been given the information sheet on the Research Title: "Adaptive strategies employed in circumventing the effects of tobacco mono-cropping." I have read and understood the information sheet. If I agree to participate in the study, I will be interviewed for approximately 45 minutes to one hour about the shocks that I am experiencing due to tobacco mono-cropping and the survival strategies that I am employing in circumventing those shocks.

I understand it is up to me whether or not to participate in the interview and that there will be no penalty or loss of benefits if any to which I am entitled if I decide not to participate. I also understand that I may discontinue participation at any time until the interview has been typed without any penalty or loss of benefits to which I am otherwise entitled.

I understand that the researcher involved in this study will make every effort to ensure confidentiality and my name will not be used in the study reports. No identifying information will be included when the interview is transcribed. I have been given the contact details that I may call if I have any questions or concerns about the research.

This study has been explained to me. I have read and understand this consent form, I agree voluntarily to participate in the interview for this study.

…… (Signature of participant) …….
(Date……)

……. (Signature of researcher) ……..
(Date)……)

CONSENT FORM FOR TAPE RECORDING

I_____ hereby consent to the tape-recording of the interview. I understand that all information will be kept confidential and that the tapes will be kept in a locked cabinet and will be destroyed two years after publication of the final report.
Name of participant…….
Signature……..
Date…….

FOCUS GROUP DISCUSSION GUIDE

Group Discussions Questions

- How is tobacco mono-cropping impacting in your area?
- What are the common strategies that have been adopted in your community in response to the effects of mono-cropping?
- What factors have influenced the choice of those strategies?
- What external support have you received to strengthen the adopted strategies?
- How effective have been community level groups or networks in supporting community livelihood strategies?
- What impact has been made by the adopted strategies in ensuring community livelihood sustainance?
- What factors are enabling or constraining you as a community in pursuing your adaptive strategies?
- What would you recommend smallholder tobacco farmers encountering shocks of mono-cropping to do in ensuring their livelihood sustainance?

ONE ON ONE INDEPTH INTERVIEW GUIDE

Questions

- How is tobacco mono-cropping impacting on your household?
- What are the common strategies that you have been adopting at household level in response to the effects of mono-cropping?
- What factors have influenced the choice of those strategies?
- What external support have you received to strengthen the adopted strategies?
- What impact has been made by the adopted strategies in sustaining your family?
- What factors are enabling or constraining you and your family in pursuing your adaptive strategies?
- What would you recommend smallholder tobacco farmers encountering shocks of mono-cropping to do in ensuring their livelihood sustainance?

Research Office

HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)
R14/49 Mutumhe

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER: H15/06/62**
PROJECT TITLE	Adaptive strategies employed in circumventing the effects of mono-cropping: A case study of tobacco smallholder farmers in Hurungwe District, Zimbabwe
INVESTIGATOR(S)	Ms D Mutumhe
SCHOOL/DEPARTMENT	Sociology/
DATE CONSIDERED	26 June 2015
DECISION OF THE COMMITTEE	Approved unconditionally
EXPIRY DATE	13 August 2018

DATE 14 August 2015 **CHAIRPERSON** _____
(Professor J Knight)

cc: Supervisor : Professor S Kariuki

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10005, 10th Floor, Senate House, University.

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to completion of a yearly progress report.**

_____ _____/_____/_____
Signature **Date**

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES