A STRATEGIC EXPLORATORY ENTREPRENEURSHIP STUDY OF SUSTAINABLE AGRICULTURAL BUSINESSES IN ZIMBABWE: CASE STUDIES OF MITCHELL AND MITCHELL IN MASHONALAND EAST PROVINCE AND DOTITO IRRIGATION SCHEME IN MASHONALAND CENTRAL PROVINCE.

BY

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DECLARATION

I, **Joice Teurai Ropa Mujuru,** declare that this thesis entitled *A Strategic Exploratory Entrepreneurship Study of Sustainable Agricultural Businesses in Zimbabwe: Case Studies of Mitchell and Mitchell in Mashonaland East Province and Dotito irrigation Scheme in Mashonaland Central Province* is the result of my own research except as cited in the references. The thesis has not been submitted in candidature of any other degree. I submitted a copyright of the thesis in favour of the University of Zimbabwe.

Date ………

Signature……

DEDICATION

I dedicate this thesis to my late husband, the girls “Kumbirai, Chipo, Nyasha and Kuzivakwashe” and the grandchildren.

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The journey for my Doctoral thesis needs another researcher to do the study because it is a thesis on its own. I believe, The Almighty God knew it was going to be done in my life time. A girl child, from back of the beyond, dusty grounds where nobody ever thought something of this nature would be achieved.

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ABSTRACT

The Government of Zimbabwe introduced a holistic approach to the reduction of poverty through irrigation schemes and strategic entrepreneurship skills as a response to the general decline in agricultural production due to recurrent droughts and sanctions. This study explored the strategic entrepreneurship in agri-businesses at Dotito Irrigation Scheme in Mashonaland Central and at Mitchell and Mitchell in Mashonaland East Provinces. The overall objective of the study was to formulate comprehensive and sustainable agricultural strategies and a contemporary bottom up approach model for entrepreneurial farming businesses that would alleviate poverty in the country. Specific objectives of the study were to document opportunities, challenges and factors that inhibit agricultural growth, identify the entrepreneurial strategies employed by the farmers to increase productivity; to assess managerial capability of the local farmers to increase food security; to discuss the level of involvement and inclusion of women and youths in promoting agricultural businesses and to examine the relationship between sustainable agricultural strategies and strategic entrepreneurship. The study was guided by the Strategic Entrepreneurship Model and the findings were also linked to the Model which informed the study. The research employed qualitative and quantitative paradigms. Questionnaires, observations and key informant interviews were used to collect data. Responses were quantified, categorized and coded to show patterns, frequencies, graphs and tables for analysis and discussion of the findings. The study concluded that entrepreneurial agriculture was central to the creation of wealth for the society and the promotion of its social development. The strategic entrepreneurship skills training workshops made a momentous bearing on the success of small-holder business farmers. As a result of this, women are no longer relegated to the margins of development as they currently have equal access to inputs and resources like their male counterparts. Lack of finance and markets are the major challenges encountered by the small-holder farmers. The study also concluded that social networks help farmers in solving some of the challenges. Major recommendations to the government are that it should introduce strategic entrepreneurship skills training workshops for all farmers in the country. The government should support them adequately through the provision of infrastructure, subsidized inputs and assist them by venturing into bilateral and multilateral trade agreements with other countries. This way, the farmers enjoy diversified and sustainable markets. The study also recommended that families should make entrepreneurial practice part of their culture and that the agricultural bank be adequately funded to afford them cheap loans.

LIST OF ABBREVIATIONS

AGRIBANK	Agricultural Bank
AGRITEX	Agricultural, Technical and Extension Services
BACOSSI	Basic Commodity Supply Side Intervention
CES	Cooperative Extension Service
ESAP	Economic Structural Adjustment Programme
EU	European Union
FTLRP	Fast Track Land Reform Programme
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
GGL	Global Gap License
GoZ	Government of Zimbabwe
IFRCRCS	International Federation of the Red Cross and Red Crescent Societies
ILO	International Labor Organization
IRP	Intensive Reform Programme
LRP	Land Reform Programme
MDGs	Millennium Development Goals
NGO	Non-governmental Organization
OECD	Organization for Economic Countries Development
SDF	Social Development Fund
SEDCO	Small Enterprises Development Corporation
UAE	United Arab Emirates
UNRISD	United Nations Research Institute for Social Development
UNDP	United Nations Development Programme
UNGA	United Nations General Assembly
WTO	World Trade Organization
ZHDR	Zimbabwe Human Development Reports

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CHAPTER 1

INTRODUCTION TO THE STUDY

1.0 Introduction

Strategic entrepreneurship is considered as the vehicle for transforming agriculture into a major economic activity which can increase the country's Gross Domestic Product (GDP), as well as enhancing the achievement of some of the Millennium Development Goals (MDGs) such as the alleviation of poverty and reducing hunger by 2015. The research aimed at exploring the concept of strategic entrepreneurship in the farming context since research has shown that agriculture plays a prominent role in both the developed and developing nations. This study also enhances the understanding of the relevance of strategic entrepreneurship in the farm–business. An increase in agricultural productivity contributes significantly to the socio-economic well-being of families and this will directly lead to the improvement of the country's economy. Evidence from studies done by other scholars indicate that strategic entrepreneurship is indispensable in the farming context. This chapter highlights the background to the study, statement of the problem, objectives, research questions, significance of the study and delimitation. The end of the chapter introduces the plan of the thesis.

1.1 Background to the Study

This study was about developing a successful entrepreneur at family level and its contribution to the socio-economic well-being of the family and individuals in Zimbabwe. The research is mostly designed to:

- assess the impact of empowerment interactions with specific focus on the family in order to improve its life at that level;

- enhance a human development model that could be used by central government to alleviate poverty and raise the people's general standard of living ; and
- assess the extent to which targeted rural families could impact the overall national economic development.

Successful agriculture significantly contributes to the economic development of Zimbabwe. The provision of adequate nutritious food improves the health of individuals and contributes to the development of the economy.

The study was confined to Mitchell and Mitchell in Mashonaland East and Dotito Irrigation Scheme in Mashonaland Central Provinces. In order to carry out the study, the researcher made the following assumptions:

- the target population was physically fit to participate in agricultural initiatives;
- the target population possessed a piece of land to work on;
- the clans were settled as homesteads; and
- each farmer worked on the plot as a family unit.

In light of the above, it was clear that people should be at the centre of development. The application of strategic entrepreneurship in the farming business may lead to an increase in productivity, which will improve the socio-economic well-being of these families. This means that investing in human development is a key to human growth and improvement of the quality of life. Developing a successful entrepreneur at family level contributes ultimately to national economic growth and the socio-economic well-being of the family. This, then confirms the proposition that, empowering the rural family through the provision of affordable inputs, significantly improves its economic well-being.

In Zimbabwe, agriculture is viewed by the government as one of the main mechanisms for improving the livelihoods of the rural poor. Government has put in place policies and several initiatives that address the historical imbalances of land ownership. During the 2011/2012 agricultural season, Zimbabwe produced a total of 1,451,629 tonnes of maize and 53,000 tonnes of wheat against an annual national requirement of about 1,800,000 tonnes (Republic of Zimbabwe, 2012). Thus, the country failed to produce enough food to meet its needs and had to rely on imports (Republic Of Zimbabwe, 2012). The Republic of Zimbabwe has noted that the country has a double burden of malnutrition where about 10% of children aged 6-24 months consume the minimal acceptable diet (Food and Nutrition Council and the Ministry of Health And Child Welfare, 2010). Zimbabwe's Medium Term Plan 2011-2015 policy on agriculture is to ensure food security and nutrition at household and national levels, improve agricultural financing infrastructure and farmer support institutions (Government of Zimbabwe, 2011). However, currently it is recorded that national food security is decreasing. One of the Millennium Development Goals (MDGs) is to eradicate hunger by 2015. Nonetheless, agricultural productivity is declining at an alarming rate in some parts of the country due to climate change and sanctions. This study was therefore aimed at exploring the role of entrepreneurship strategies in the agricultural business.

Agricultural business has many sources of uncertainty from the way the resources are allocated to changing weather conditions. The agricultural industry is characterized by problems of pest and diseases, changes in the soil and changes in the input and output prices. All these require farmers to be strategic entrepreneurs who will achieve high productivity despite the fact that they encounter challenges in their day to day running of the agricultural business.

Strategic entrepreneurship became popular in the 21st century as the main vehicle for economic growth in every economic activity. However, in developing nations strategic entrepreneurship has not been applied in agriculture. Agriculture is considered as a key factor of the economy providing a livelihood to about 75% of the population and 40-50% of exports as well as raw materials for use by the industrial sector (Whiteside, 1998). It occupies the most central place in Zimbabwe's economy, contributing 16-20% of the GDP. In addition, the Government of Zimbabwe (2011) revealed that agriculture contributed over 40% of national export earnings and 60% of raw materials to agro-industries. FAO and The Government of Zimbabwe Country Programme Framework (2012-2015) highlighted that over 70 % of the population derives its livelihood from the agricultural sector directly and indirectly. This shows that agriculture plays a pivotal role in the country's economic development.

Agriculture-related formal employment supports a third of the formal labour force. FAO (2010) and the International Federation of the Red Cross and Red Crescent Societies (IFRCRCS) (2012) noted that Zimbabwe is primarily an agro-based economy and crop production is the main form of livelihood for the rural population. Zimbabwe became increasingly food-insecure since 2000 due to a number of factors (Mujeyi, 2009). He also notes that, during this period, the country had been failing to meet its cereal food grain requirements through its own production and had increasingly become reliant on food aid and commercial food imports to meet the national cereal deficit. Thus, the role of strategic entrepreneurship becomes very crucial in agriculture as it equips small-holder farmers with skills which could enable them to increase productivity.

The requirement for an entrepreneurial culture on the land based sector has been recognised in recent decades (Bergevoet et al, 2005; McElwee and Bosworth, 2010). However, this has

not been recognised in agricultural business in Zimbabwe. Espinosa (2007) notes that farmers must assume responsibility for their own development by adopting new principles, values, attitudes and behaviours that lead to the liberation of social energy with synergistic results, in order to generate sustainable development in the agricultural sector.

Enhancing entrepreneurial competence and capacity of the farmers, appears to be very problematic but the results benefit the nation at large. Educational processes are needed for the farmers in order for them to develop entrepreneurial skills in their agricultural business. Quatman and Chelladuri (2008) explain that farmers should embrace inter-organizational networks in order to remain competitive in today's markets. However, some of the small-holder farmers in Zimbabwe are failing to meet market demands especially at international level and they end up venturing into non-farm activities such as gold panning and retailing to support their families. This is as a result of several factors which include trade protectionism. Protectionism restrains trade between states through methods such as tarrifs on imported goods, quotas, embargoes and other government regulations designed to allow fair competition between the import and export of goods and services produced domestically. European countries sometimes want to protect their farmers as they put in place, rules and regulations that hinder the exportation of agricultural produce by developing economies. For instance, Ingco et al (2004) note that Sanitary and Phytosanitary (SPS) is used as a protectionism agent by developed countries against the developing nations. This was authorized under the World Trade Organization (WTO), with the aim of protecting animal and plant life and health within member states from risks arising from contaminants and pests. Therefore, the approval procedures, inspection and certification in order to get Global Gap License (GGL) act against developing economies as they cannot afford to carry out these compliance tests. This renders some of Zimbabwe's agricultural products not acceptable on

the international markets. They expect high standards and quality produce. Sometimes they demand high standards which are prohibitive since some of them are beyond African economies' reach.

McElwee (2008) notes that entrepreneurial and market orientation as well as organisational competence and ability to use social networks are important capacities upon which farmers can build competitive advantage to help them succeed in free markets and eventually achieve sustainable development. In Zimbabwe, entrepreneurial skills such as those of social networking among the farmers have not yet been regarded as useful by the small-scale farmers. Social networks can be useful to the agricultural entrepreneurs as they can help supplant weak institutions and attain the collective efficiency necessary to overcome infrastructure constraints in order to speed up market entries (Mesquita and Lazzarini, 2008).

Developing farmers' entrepreneurial competence enables them to become less dependent on government free provisions, to respond to the growing demand for quality and to respect the natural environment. Thus, in Zimbabwe, farmers' entrepreneurial competence must be enhanced in order to lessen the burden that the government has.

Arguments by scholars recognise the importance of land as fundamental to curbing rural poverty. Land has been acquired by the state on the understanding that it would promote decent rural livelihoods and development. However, this has not been achieved fully. The government's slogan "Our Land Is Our Prosperity" assumes that land could improve the rural livelihoods as it is the root of economic growth. The government has made available, more land to the people. Sithole and Ruswa (2003) cite aims of the "Fast Track Land Reform Programme (FTLRP)" such as decongestion of communal areas, indigenisation of the large-scale commercial farming sector, reduction of poverty and the promotion of sustainable utilisation of land in order to create sustainable economic, political and social stability.

However, some of these aims are yet to be fully achieved as farmers are trying hard to meet the target.

Zimbabwe's agriculture experienced several transformations since 1980 when Zimbabwe attained independence and these have consequently led to a few positive outcomes. The following is the history of land reform in Zimbabwe since 1980. There was a widespread agreement on the need for land reform in Zimbabwe as a means of alleviating poverty and mitigating a higher degree of inequality, including a highly unequal distribution of land between the white minority and black majority (United Nations Development Programme, 2000). The three main phases of land reform produced some positives as recognised in Mhondoro Ngezi, Masvingo and some other areas of Zimbabwe as was reported by Moyo and Yeros (2005), Scoones et al (2010) and Mkodzongi (2013). Phase 1 of 1980-1997 land reform involved the establishment of Intensive Resettlement Programme (IRP) which focused on developing infrastructure and other socio-economic services to ameliorate the plight of people who were negatively affected during the war of liberation (Chistike, 2003). The first phase of these reforms was initially rehabilitative, targeting refugees, displaced people, squatters, the landless and land shortage in overpopulated communal areas, thereby de-congesting them.

Thus, a land reform and land redistribution policy adopted soon after independence in 1980, addressed the land ownership imbalances created by the colonial regime. This phase did not achieve the intended goal of settling a large number of people. For instance, the willing-seller willing-buyer approach meant that, inevitably, settlements were scattered. It was therefore, difficult to generate economies of scale in the development of settlement areas by giving them adequate infrastructure.

The second Phase of the land reform and resettlement programme came into being at a time when the government was reeling under a number of negative economic developments. Among such developments was the introduction of the Economic Structural Adjustment Programme (ESAP), whose effect on the economy and the general populace was negative (Masiiwa, 2004). This, together with the failure of the first phase of land reform, formed the basis of the development of phase two of the Land Reform Programme of September 1998 to December 2004.

In September 1998, the Government prepared documentation of the Land Reform and Resettlement Programme Phase II, in which it outlined a programme aimed at acquiring five million hectares and settling 91,000 families (UNDP, 2000). The beneficiaries were to include the landless poor, overcrowded families, youths as well as graduates from agricultural colleges and others with experience in agriculture who were to be selected in a gender balanced manner. Phase II was expected to bring the total redistributed land to about 8.5 million hectares (UNDP, 2000). The aims were to reduce poverty, increase agricultural GDP by increasing the number of commercialized small-scale farmers, promoting environmentally sustainable land utilisation and creating conditions for peace and stability. The Phase II programme was prepared in advance of an organised Government Donor Conference on land reform that heralded the Government's interest in entering into dialogue with donors on land reform (Matodi, 2008). However, donors were not prepared to finance the inception phase and the aims of this were not achieved due to lack of funding. UNDP (2000) stated that, as a result of the failure of a substantive follow-up to the Donor Conference of 1998 and two years of minimal activity, the Government of Zimbabwe resolved to implement Phase II at an accelerated pace, which was code named “Fast Track”. This facilitated the Fast Tract Land Reform (FTLR) where the landless were now occupying farms. The aim was to accelerate the process of land acquisition of 5 million hectares planned for Phase II and completing it by

December 2001. The objectives of the FTLR were the same as those of Phase II. However, the targets of the programme in terms of land redistributed and beneficiaries increased tremendously to 9 million hectares.

According to Mkodzongi (2013), Zimbabwe's recent experience with land reform has demonstrated that redistributive land reforms have the potential to address distortions in land ownership, by replacing the colonial era dualistic land ownership structures with a broad based tri-modal structure which allows historically marginalised peasants to access land and natural resources formally endorsed by the land monopolies. This brief background to the land redistribution may compel researchers to investigate further on the successes and the failures of the land reform process in Zimbabwe. This may provide solutions to deeply entrenched problems facing the agricultural sector in the country today. In addition to that, it may also help the government and interested parties of the international community to come up with strategies that may help Zimbabwe's much debated land reform.

The agricultural sector has faced more challenges compared to other sectors such as mining. As a result, the government introduced irrigation schemes between 1996 and 2005 in some areas where these schemes were not implemented during the colonial era. The implementation of such new approaches were to transform Zimbabwe's agriculture into a major economic activity with the potential to alleviate poverty and empower the rural poor. This was part and parcel of the land reform programme. Furthermore, the difficult micro-economic conditions exacerbated by the sanctions and international isolation enforced by Western Countries had a direct bearing on the farmers' ability to efficiently make use of their newly acquired land. To this end, entrepreneurship skills training workshops were introduced in some of the rural areas, including the Dotito Irrigation Scheme and Mitchell and Mitchell Project.

1.2 Statement of the problem

Decreased agricultural productivity, output and profitability of local farmers leading to regular shortages in food supply despite abundant fertile land and enabling policies led to this study. This research was carried out in order to find a way through which the strategic entrepreneurship concept could be incorporated into the farming sector and how such a phenomenon could empower agriculture. After the land reform programme, there was a decrease in productivity among some of the small-scale farmers and Zimbabwe continued to face food challenges and crisis yet it used to be Africa's bread basket, where on 15 September 1988 in New York, President Mugabe was awarded The Hunger Prize for Leadership for Sustainable End of Hunger.

Some researchers have found that lack of farming inputs, the political situation and the economic downturn have largely contributed to the decrease in agricultural productivity which has led to this food crisis. The food situation within the country has deteriorated yet Zimbabwe has fertile soil and there is enough land. The government is also providing an enabling environment for the farmers to increase productivity but production remains low. There is also a recorded increase in unemployment which is also caused, in part, by the decrease in agricultural productivity. Agriculture contributes greatly to the stability of the economy and if there is a decrease in productivity, its role becomes invisible. The researcher anticipated and argued that strategic entrepreneurship had a role to play in the farming context.

1.3 Objectives of the Study

The overall objective of the study was twofold, that is, to formulate comprehensive sustainable agricultural strategies and to formulate a contemporary bottom-up development

model for farming businesses that addresses the food begging bowl attitude that had become prevalent in the country and to alleviate poverty.

Specific objectives

1. to document opportunities, challenges and factors that inhibit agricultural growth;
2. to identify the entrepreneurship strategies employed by farmers in order to increase productivity;
3. to assess the managerial capability of the local farmers in order to increase food security;
4. to discuss the level of involvement and inclusion of women and youth in promoting entrepreneurial agri-business activities; and
5. to examine the relationship between sustainable agricultural strategies and strategic entrepreneurship.

1.4 Research Questions

1. What were the challenges and factors that inhibited agricultural growth?
2. What were the entrepreneurship strategies employed by farmers to increase productivity?
3. What was the managerial capacity of the local farmers for increasing food security?
4. What was the level of involvement and inclusion of women and youth in promoting entrepreneurial agri-business activities? and
5. What was the relationship between sustainable agricultural strategies and strategic entrepreneurship?

1.5 Significance of the Study

Apparently there are a few researches in Zimbabwe which have tried to employ strategic entrepreneurship in farming. Most of the researchers who conducted studies on Zimbabwe's

Land Reform looked at the pitfalls of the programme and little if not none of the studies focused on integrated sustainable agriculture and strategic entrepreneurship. In developing countries, strategic entrepreneurship in agriculture was considered as foreign to the discipline of Business Management. The results from this study will assist policy makers in implementing policies which will consider local farmers as entrepreneurs.

This research tried to show the interface between strategic entrepreneurship and sustainable agriculture in the academic arena. The study will enable Zimbabwean farmers to increase their agricultural productivity as it is indispensable and will enable them to acquire new skills which will enable them to increase productivity as well as enhancing food security nationwide. It is also anticipated that policy makers can make use of the findings and recommendations to promote the growth of entrepreneurial agri-businesses in the country. Promoting entrepreneurial agri-businesses would contribute towards the achievement of some of the Millennium Development Goals such as alleviation of poverty and reduction of hunger.

1.6 Delimitations

The study focused on sustainable agri-business in order to empower rural families or rural households to fend for themselves. It was confined to Mitchell and Mitchell in Mashonaland East, where farmers have been resettled and Dotito Irrigation Scheme, in a communal area setting in Mashonaland Central. The strategic entrepreneurial agri-businesses in these two areas referred to above were intended to transform agriculture into a major economic activity in order to uplift the lives of rural people and ultimately increase the country's GDP.

1.7 Conclusion

The study was on strategic entrepreneurship and sustainable agriculture. The researcher's overall aim was to formulate sustainable agricultural strategies that would reduce the

problems of food shortages in the country. Purposive and random sampling techniques were used to choose the respondents for the interviews and questionnaires. Statistical Packaging for Social Sciences (SPSS) and content analysis were used to analyse quantitative and qualitative data respectively. Background to the study has shown that more needs to be done to transform Zimbabwe's agriculture for it to assist in the achievement of some of the MDGs, facilitating economic development and improving the socio-economic well-being of families in the country.

1.8 Research Plan

Chapter 1 has focused on the introduction.

Chapter 2 deals with literature review.

Chapter 3 deals with the model.

Chapter 4 looks at the research methodology.

Chapter 5 deals with the field work.

Chapter 6 focuses on analysis and discussion.

Chapter 7 deals with conclusion and recommendations.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

This chapter is a review of studies conducted locally and internationally on sustainable agricultural entrepreneurship. It looks at how entrepreneurship, strategic entrepreneurship and sustainable agriculture are defined. The role of entrepreneurship has been amplified in the chapter. In order to understand strategic entrepreneurship, there ought first to be an explanation of the characteristics of entrepreneurs. This chapter also examines the ways in which entrepreneurship in agricultural business can promote human development.

2.1 Strategic Entrepreneurship and Entrepreneurship

Strategic entrepreneurship is not a precise concept with a particular theoretical paradigm (McElwee, 2005). In addition to that, strategic entrepreneurship research in connection with agriculture is relatively scarce (McElwee, 2007). From this explanation, it therefore becomes necessary to define entrepreneurship and strategic entrepreneurship in order to fulfil the objectives of this research. Entrepreneurship is an elusive concept which gained a variety of meanings and is very difficult to define. Several scholars have different definitions, of this term. The potential benefits of entrepreneurship identified by scholars include business creation, financial gain, competitive advantage, national identity and economic growth. In the European Union Project (EU), the concept of entrepreneurship is used to explain the phenomenon of value creation within new and existing business (Wolf and Schoolemmer, 2007). Shane (2003) notes that entrepreneurship has many definitions depending, on the lens through which it is observed and he defines it as an activity that involves the discovery,

evaluation and exploitation of opportunities to introduce new goods and services and raw materials through organising efforts that previously had not existed.

McElwee (2005) avers that entrepreneurship is a concept that has to be defined clearly, depending on the context of the business because of the wide range of interpretations that exist in literature. He notes that entrepreneurship is used to explain the phenomenon of the creation of value within new or existing businesses. In line with this study, value creation denotes the ability and the innovativeness of small-scale farmers to establish firm skills which enable them to increase productivity despite the fact that there are changes in the environment. Thus, small-scale farmers have to value agriculture and come up with strategies which transform it rigorously to be the main economic activity which can alleviate poverty, reduce hunger and create employment. To operate profitably, farmers need to harness all their skills so that they can withstand harsh conditions.

Entrepreneurial skills that are needed by farmers are related to tasks and activities; for instance, a small-scale farmer needs certain skills such as how to approach customers, how to make customers satisfied, how to grow crops and which type of a crop to grow? They should also be able to identify business opportunities so that they will remain in business. In line with the nature of this study, entrepreneurship skills are those qualities that are required by the small-scale farmer to recognise business opportunities and to be able to provide food for the family, community and for the nation. Contemporary literature on entrepreneurship starts with Schumpeter's view on the subject. Schumpeter (1949) describes an entrepreneur as "an idea man and a man of action who possesses the ability to inspire others, who does not accept the boundaries of structured situations. He is a catalyst for change and is instrumental in discovering new opportunities, which make for the uniqueness of the entrepreneurial function".

Entrepreneurship in rural areas serves vital functions. Petrin (1997) notes that an entrepreneurial economy not only shapes the number of dynamic entrepreneurs and encourages creation and development of indigenous businesses but gives local communities an opportunity to decrease the reliance on state's free provisions and dependence on external help, or at least to make this support work effectively to ensure self-sufficiency of these communities. Rural areas are in need of people with particular ability to recognise and exploit valuable business opportunities (Bosma and Levie, 2009).

There is total confusion in the minds of theoreticians and practitioners with regard to entrepreneurship (Shelan Pao , 2000). According to Hirsrich (2002), an entrepreneur is an individual who takes risks and starts something new and the process of doing that is called entrepreneurship. Hoskinsson et al (1999) note that entrepreneurs seek to create the future and they must take risks and be aggressive, proactive and innovative. In the agricultural context therefore, farmers' entrepreneurial efforts can significantly contribute to a better future which is associated with an increase in GDP, improvement in health, creation of employment and guaranteed food security. Entrepreneurial farmers must identify anomalies or opportunities where no current markets exist and farmers should not be driven out of business due to the non-existence of markets. Farmers should, as they grow, identify the type of crop which suits the existing environment.

2.2 Sustainable Entrepreneurship

Sustainable development is perhaps the most important subject of our time and entrepreneurship has a positive impact on this subject, that is, an entrepreneurial action is to develop and be sustained. It must be nurtured and maintained with a guarantee to exist. Sustainable entrepreneurship is focused on preserving natural life, support and community

sustainability in pursuit of perceived opportunities to bring future products, processes, and services into existence for gain (entrepreneurial action), where a gain is broadly construed to include economic and non-economic benefits to individuals, the economy and society's development.

Without knowledge of entrepreneurial opportunities for sustainable development, empowerment of the rural poor is unlikely to become a reality in the contemporary world. For entrepreneurial actions that preserve nature to be considered sustainable entrepreneurship, they must develop gains for the entrepreneur and society. It has long been accepted that entrepreneurs can generate economic wealth for themselves and their impact on development can be realized nationally. They can generate gains for others that include economic, environmental and social, including employment opportunities, improved access to quality, valuable goods and revenue for the government. The environmental gain generated could reduce air pollution, improve air quality, drinking water quality and could enhance living conditions. The social gains include improved child survival rates, longer life expectancy, superior education and equal opportunity in society. Explanation on sustainable entrepreneurship can be considered highly idealistic, but people today are motivated to use the tool of entrepreneurial action to sustain the natural environment, communities and develop gains for others.

Some time ago, it was not very popular to view farming from an entrepreneurial perspective (Knudson et al, 2004). Entrepreneurship in the family business such as farming helps the family to survive and be able to meet their needs. According to Gassen and Errington (1993:97), the primary aim of many family businesses is not to maximise profit but to maintain control and pass a secure and sound business to the next generation. In Zimbabwe

some of the small-scale rural farmers only produce food for family consumption, with no extra for sale. Salamon (1992) notes that entrepreneurial farmers energetically devise strategies driven to expand, innovate, increase profit or improve the family's social standing. Entrepreneurship is important as it enhances and increases productivity. There are clear differences which can be observed between the farmers who devise the entrepreneurship skills and those who do not. Kodithu et al (2002) conducted a study where they observed that successful farmers were better able to mobilise resources and pursue multiple purposes; these had started additional businesses to complement the paddy cultivation in Sri Lanka. They also found out that these successful farmers had good management skills as well as entrepreneurship skills which were complementary and interdependent. Summer et al (2009) found that in rural communities, building and enhancing entrepreneurship capacity were critical for economic growth and were often part of comprehensive economic and strategic plans of local authorities.

2.3 Strategic Entrepreneurship in Agriculture

Developed and developing countries view agriculture as one of the drivers of economic development. In Zimbabwe it contributes 16% to the GDP and it has been documented that agriculture plays a pivotal role in the economic development of third world countries. The researcher proposes that small-scale farmers be equipped with strategic entrepreneurship skills for agriculture to be transformed. Davidson (1994) notes that entrepreneurship is expected to positively influence economic growth both at national and regional levels. Thus, agriculture is a business on its own, which calls for the need to consider farmers as strategic entrepreneurs. Kirzner (1973) says that entrepreneurship can be seen as a mechanism through which temporal and spatial inefficiencies in an economy are discovered and reduced. This clearly reveals that agriculture and entrepreneurship work hand in hand for the benefit of the

country at large. Agriculture should incorporate entrepreneurship for it to be successful in the changing environment. Increased speed of change in the environment mean that entrepreneurship becomes even more important (Landstrom, 1999). In the contemporary society, entrepreneurship has received increased interest as a result of its positive influence on the economy.

Agriculture is an industry and entrepreneurship cuts across all industries that are primary, secondary and tertiary. Therefore, the researcher wanted to explore how strategic entrepreneurship could be incorporated into the small-holder farming businesses. Entrepreneurship is regarded as one of the drivers of rural economic development and agriculture contributes significantly to the growth of rural areas. Therefore, this, requires the consideration of strategic entrepreneurship in the agricultural context. The Organisation For Economic Countries Development (OECD) (1998) notes that stimulating entrepreneurship is deemed as a promising way of increasing job creation and fostering economic growth. In support of this, success in agriculture is marked by an increase in productivity (bumper harvest) and these outputs will be sold within the country and or can be exported. Consequently, the country's GDP will increase. Higher productivity also leads to higher demand for labour although there is increased use of technology. The strategic entrepreneurial farmer who is engaged in agricultural business will also be self-employed together with his or her family. Studies in developed countries have shown that entrepreneurship is a vital ingredient for successful agriculture.

Farmers can as well utilise farm resources to create new businesses within farm related areas such as food processing as a strategy to curb problems faced by the changing environment. Price reduction which resulted from technological development, pressure on import barriers

and massive changes on the demand side pushed farmers into alternative sources of income and also forced them to excuse themselves from practising agriculture. However, if small-scale farmers practise other agriculture related activities, they will be able to do well in harsh environmental conditions which obstruct them from achieving their goals. Strategic small-scale farmers can process the raw materials from farm produce and sell the output. They can also preserve vegetables and sell them later; make cheese from milk, make peanut butter from groundnuts which is value addition. Farmers can sell processed mealie-meal and meat in bulk and that process creates employment. This will enable them to survive in the economic environment when the international prices for raw materials fall. When there is a reduced demand of their harvest, farmers can, themselves, engage in secondary industry where they can convert these raw materials into finished goods locally or internationally. All these skills are entrepreneurial and can transform agriculture into a major economic activity in the country. Thus, strategic entrepreneurship is crucial in agriculture.

Entrepreneurship is considered as the main factor for the survival of small-scale farming in an ever changing and increasingly complex global economy (McElwee, 2005). Strategic entrepreneurial farmers should view their farms as businesses where they earn profit. These farmers should also be passionate about their businesses. Individual farmers look for better ways to organise their farms and try new crops, rear better animals, diversify productions, reduce risk and increase profits (Kahani, 2012). Small-scale farmers the world over have shown remarkable ability to adapt (Hassain and Zafar, 2010). Farmers overcome the range of barriers to entrepreneurship and they need to manage their farms in a sustainable and profitable way with the flexibility to adapt to a rapidly changing agricultural environment.

Strategic entrepreneurship is key to sustainable agriculture and the success or failure of sustainable agriculture largely decides the fate of rural Malaysia (Kahani, 2012). Farmers know that in addition to the personal satisfaction they get from working on the soil, they are also stewards of land and water and are the crucial economic force in rural communities, providing consumers with a healthy diversity of conscientiously produced food and fibres. This clearly elaborates the fact that in Malaysia entrepreneurship plays a significant role in agriculture as it is the case in Zimbabwe.

2.4 Human Development and Entrepreneurship

Entrepreneurship is, without doubt, a catalyst for human's economic, social and physical development as well as political empowerment. It significantly contributes to the expansion of all sets of human capabilities. It is a bottom up development model which enhances the abilities of individuals to achieve their social and economic goals. Gries and Naude (2010) note that entrepreneurship matters for human development. In economics, the role of entrepreneurship has been neglected and moreover, economists have focused on the impact of entrepreneurship on output (GDP, productivity, employment) and not so much on human development (Gries and Naude, 2010). Alkire and Foster (2008) cited in Gries and Naude (2010) also explain that literature neglected the relationship between entrepreneurship and human development. The researcher therefore, wanted to fill this gap by showing that there is a strong relationship between entrepreneurship and Human Development.

Human Development programmes must take a large percentage of any country's annual budget if the government, in all its transactions, is conscious of its people's well-being and interests. As a result, such programmes, of necessity, require a holistic approach to development to enable the people so targeted to reach their optimal level of development

(UNDP, 2000). This approach allows communities to realize their full potential and with proper training and financial support, to develop further, their entrepreneurial skills that will eventually guarantee their sustainable development as well as social, economic and political empowerment.

This captures the heart of the study of Dotito Irrigation Scheme and Mitchell and Mitchell Project as it traces a model to develop a meaningful entrepreneur at grass roots level. The study is in line with the United Nations Development Programme (UNDP) (1991) outline which brought to the fore, the key attributes and characteristics of human development. The major attributes include access to income and employment opportunities, education and health, as well as a clean and safe physical environment. The other important characteristic that measures human development is an opportunity available to families to participate fully in community decisions.

As one re-thinks of African development, one must not lose sight of some key views generated by the World Bank (1989), Deng and Oshikawa (1991), Elbadawi (1996) regarding the theory and practice of development in Africa during 1965-2005. The general view is that the 1980s were, by all accounts, years of the African development crisis. Generally, extremists insist that the entire post-colonial era has been a period of stagnation and this is the time when Zimbabwe had just attained its independence. However, there is general agreement within the confines of African development economies, that "external as well as internal factors, were responsible for the crisis and that adjustment was necessary, but insufficient, to restore and to sustain economic growth" (Deng, 1991:67).

The Concept of human development, according to the Zimbabwe Human Development Report (2000:6), stresses that human beings should be put at the centre of the development process. The report underpins the point that people should not be marginalized nor made mere cogs in the process of development. Interestingly, the report observes that human development relates to the process of widening people's choices as well as their level of well-being. Furthermore, the Zimbabwe Human Development Report (2000) explains that living a long and healthy life, acquiring better knowledge and having access to the resources needed for a decent standard of living are indicators of human development.

The Dotito Irrigation Scheme and Mitchell and Mitchell research projects should therefore, be viewed in the context of efforts to search for sufficient conditions and strategies that can cause macro-economic adjustment, generate or bring about sustained economic growth in the Zimbabwean national interest. It is shown in this research that one of the most important requirements for economic growth from a sustainable development perspective is the empowerment of households or families at local levels, making them beneficiaries of development projects or programmes that make them participate fully in the design, implementation and management of the said projects.

As Deng (1985) pointed out, raising the quality of life of a community should be the main objective of any public policy in the context of national development. This is true in both developed and developing countries. As one becomes increasingly aware of the challenges of global warming and climate change, the key to raising the quality of life in a country such as Zimbabwe, must be the rational utilization of renewable resources in the prosecution of rural development and in particular, the development of agriculture. Serageldin (1995) points out that the failure of African agriculture to achieve a reasonable growth rate has essentially

compounded the intertwined nexus of problems relating to poverty, rapid population growth and environmental degradation. He further observes that,

> Rapid population growth, environmental degradation and low agricultural growth in sub-Saharan Africa are closely linked. Shifting cultivation and trans-human pastoralism, adapted to low population density situations that were common in the Africa of the past, are environmentally damaging when population densities become high. With population density, traditional farming and livestock practices cause soil and forest degradation. Soil degradation causes crop and livestock yields to decline, curtailing agricultural growth.

Hence, the need for intensive agricultural practice is required. Serageldin (1995) notes that, slow agricultural growth contributes to slow economic growth and inhibits the demographic transition to lower population fertility rates. A rapidly increasing population of poor rural people prey on the rural environment, wildlife, forests and land for survival. This reality precipitates the formulation of Ecological Principles for Economic Development, (Dasman et al, 1974).

Studying the participation of the family unit in human development is the key to human growth and improvement of quality of life. The development of Dotito Irrigation and Mitchell and Mitchell projects provide opportunities for the family unit to invest in the development of its capabilities in areas of education, training, creativity, sharing knowledge, product marketing and community development. According to the UNDP study (1998), as the family becomes entrepreneurial and economically empowered, it begins to enjoy self-respect, a sense of belonging to a community and self-fulfilment.

The Zimbabwe Human Development Report (2000) summarizes the crucial factors which enhance human development. These are:

- improving social well-being;
- strengthening productive sectors and expanding employment;
- exploiting and regenerating national resources in a sustainable manner;
- providing for current and future needs;
- transferring knowledge, technology and skills and using traditional wisdom and culture and building local capacities;
- empowering people to participate in decisions that affect their lives, enhancing gender equality; and
- providing social protection and safety nets.

The outlined attributes form the centre of the study to understand how the lives of family units at Dotito Irrigation Scheme and Mitchell and Mitchell Project have been improved by the intervention of Government when it engaged these communities to participate in horticultural business. This was done through issuing land and introducing strategic entrepreneurship skills workshops. The issue of land, a resource upon which human development rests, is critical.

By focusing on the farmer and the demand for technology, the debate on intensification versus extensification would essentially become a function of resource endowment for each category of farmers, which is largely determined by physical, political, social factors and institutions.

Agricultural practice on the African continent has shown a tendency to select both, technology and crop without any consultation with the farmer vis-à-vis technological

requirements and crop preferences. It goes without saying that productivity growth in African agriculture will only occur once those who work on the farm are sufficiently empowered to use production techniques of their choice in growing what is profitable from their perspectives. Apart from that, creating an enabling environment through policy reforms can only have significant impact if African farmers were empowered to make choices with respect to technology and crop. For African farmers to be able to make informed choices, there must be adequate investment in physical, economic and social infrastructure.

Once this arrangement is in place, there can be sufficient capacity to facilitate transmission of market signals among the various players in the economic market. It is very important that the marketing signals work. As Cleaver and Donovan (1995: 5) point out,

> When marketing and input supply systems do not work and producer prices are artificially low relative to input costs, the risks to farmers who are dependent on these systems increase. Risk-averting farmers will not use these market-dependent methods in this situation. The extensive African crop farming and livestock systems which use much land, little capital and labour which are less dependent on markets are rational farmer- responses to these various natural and government-made constraints.

Finally, the characteristic of empowerment of the rural family will be analysed in the context of political empowerment, social empowerment, economic empowerment and provision of credit.

2.4.1 Political Empowerment of rural farmers

Political empowerment of rural farmers poses numerous questions and issues in socio-economic development as it presupposes the existence of an economic power base.

Participation in the political process does not necessarily assure the poor's electability to the national legislative institutions of their respective countries without the menacing requirements of an economic power base. It however, means they possess the capacity to be heard and to vote for the people of their choice who should technically represent their interests in the national political formation and agenda. As Deng (1998) puts it, nothing should really prevent them from being elected to the national legislative bodies if the rules were right. Participation in the political process, inclusive of voter registration, is the defining feature of a broad-based political authority.

Deng (1998) rightly observed that there must be a link between public administration institutions and the rural family farmer to entangle them in the social value systems of the community being served. Political empowerment requires that there be ownership of public administrative institutions by the community to guarantee their social empowerment. Ideally, therefore, public administrative institutions, which are basically the intermediaries between the community and national government institutions, must be based on proportionate representation of the rural family-farmers, inclusive of the chiefs and the local authorities.

2.4.2 Social Empowerment

The cornerstone of any social empowerment programme is education, health and training. For the rural farmer, there must therefore be greater access to education and health services. Social empowerment also requires that there be respect and acknowledgement of positive traditional values and other community organizations that foster principles of social integration, harmony and stability (Deng 1985). Social empowerment is simply, a matter of survival with dignity. Agriculture is not only an engine for growth in African economies, but also the key sector in the reduction of poverty and a vehicle for ensuring equity-enhancing

policies. Communities such as the Dotito Irrigation and Mitchell and Mitchell rural farmers, as agricultural players, ought to be regarded in this context. Equity and efficiency are simply compatible when it comes to rural African social and economic empowerment. In this case, it follows that traditional cultures that hinder and frustrate the social rights and roles of women in the community must be reformed or discarded if they are not reformable (Deng, 1985). It also follows that, the education, health and training of women is critical if comprehensive social empowerment is to be achieved. Patriarchal empowerment that is, recognizing only male social organizations or sending only boys to school is insufficient to alleviate poverty and to achieve a sustainable human development.

In Zimbabwe, as is the case elsewhere on the African continent, human rights groups are not concerned with extending people's civil power and will therefore not be capable of helping to empower the rural family unless they give greater emphasis to this cultural dimension. There is therefore, need to place greater emphasis on social duties as on social rights. Clearly, there is urgent need for government to enforce civil society to design mechanisms that empower women socially and economically. If this is not urgently attended to, there shall always exist a major obstacle to economic and political empowerment of rural communities such as those in Dotito Irrigation Scheme in Mashonaland Central and Mitchell and Mitchell Project in Mashonaland East Provinces.

2.4.3 Economic Empowerment

Economic empowerment in such areas as those referred to above should be regarded and viewed in a wider context of rural development in Zimbabwe which is what Deng (1985) called, "community economics". Participation in agricultural economics by the rural family should be regarded in the context of revenue generation by way of taxes, which taxes ought

to be spent in the development of their social services and according to their priorities in pursuit of their own well-being.

The rural entrepreneurs of the above areas possess the capacity to improve their own economic situation and to contribute to the growth of the national economy. Consequently, in order for the rural family-farmers to fully participate in the productive activities of the national economy, they must have easy access to economic resources and institutions. It means that the rural small-scale farming community should be provided with basic economic assets and inputs so as to improve their production initially and Dotito Irrigation Scheme and Mitchell and Mitchell project farmers have to be considered accordingly.

The provision of basic assets such as equity-enhancing land reform measures (already provided by Government in Zimbabwe), micro-credit, other physical infrastructure and extension services, should be implemented in consultation with the concerned communities. As Deng (1985) points out, this implies that interventionist actions should be undertaken not only in response to market failures, but more importantly, in empowering the communities so that they can take care of the poor and other vulnerable groups in the society. Deng (1985) further notes that, three measures are central in the process of economic empowerment of the ordinary African people.

These are centred on:

- skills development,
- provision of credit, and
- Small-scale enterprises.

The Dotito Irrigation Scheme and Mitchell and Mitchell project illustrate how these three measures are interwoven.

The measure of skills development is central to any empowerment policy, as it is an important instrument enabling communities to combat poverty in their societies. Economists recognize labour as the most valuable asset that ordinary people have in their possession. Hence, skills development is a requirement for small-scale rural farmers. In Zimbabwe, this requirement was recognized through the creation of the Social Development Fund (SDF) during the implementation of the Economic Structural Adjustment Programme (ESAP) of 1990-95. At that time, retrenched and laid-off labour from both the public and private sectors was given intensive short-term courses in basic skills required in the sectors of the economy that were likely to absorb them. As of July 1995, SDF in Zimbabwe generated employment of approximately 5 000 people, most of whom were self-employed mainly in micro enterprises. Therefore, this was a way of promoting economic empowerment at individual level.

2.5 Provision of Credit

The Zimbabwean experience demonstrates that the SDF is the most appropriate instrument for the provision of economic resources, such as credit to the rural family entrepreneur. Stein (1994:28) observes that to be impoverished is to lack ability or power to change one's situation. It is thus imperative that, for poverty alleviation efforts to be effective and sustainable, the strategies employed have to be internalized by poor people in a way that they themselves will be able and motivated to continue improving their quality of life. Consequently, SDFs were set up in a number of African countries to address the likely short-term efforts of structural adjustment programmes (Deng, 1988). The SDF should be one of

the instruments available for the financing of poverty alleviation on projects and programmes such as Dotito Irrigation Scheme and Mitchell and Mitchell Project.

2.6 Indigenisation and Entrepreneurship

Many countries of the world developed various policies and economic programmes to promote entrepreneurship. Loans and inputs to farmers put the Zimbabwean people in the face of their own responsibility and offered a great opportunity to start businesses and help Zimbabwe to be a better place by providing goods and services to the people. This is supported by the Zimbabwean Indigenization and Economic Empowerment Act of 2007 which is meant to empower every Zimbabwean thorough community share ownership schemes and group participation in several business activities.

This study's vision was to embrace the importance of investing in people, namely the poor, those who belong or stay at the "back of the beyond, the forgotten lots" using positive and substantive strategies for growth and development with particular emphasis on poverty eradication. According to Yunus (1975), goals and strategies must be broken down to the village and family levels and then solved from there with supplementary assistance from the central government. The entire exercise in planning should be reversed so that the national plan is mainly the sum of thousands of smaller plans developed at village level. Individuals and communities create wealth with government playing a facilitative role. This study tried to revolutionalise the whole setup. If need be, the poor in society, whether in the developed or developing countries, should take a leaf from this approach.

An example can be taken from Denmark in the 1700s where men of between 15 and 35 years of age were not allowed to look for employment outside their areas of birth unless fully

qualified to look for employment elsewhere (OECD, 1998). This practice led to the reorganization of the farm set up and taught them that schools were to be attended during periods of less farming activities and to do farm work when the climate allowed them to do so. Investing in education is a precondition for a community's development and a means of facilitating economic growth in the country.

As for Zimbabwe, land is now in the hands of the majority who were living in abject poverty. Realizing that the most important resources that are required for development are people, land and water, surely it would not take the country a long time to develop its rural poor families to a level that they would be self-sustaining.

A sweeper, an astronaut or anybody renowned has a family background. They have earned indelible acts from the family background and this is what shapes the future of that human being. Multitudes have not made it in life because they failed as from the beginning. Chombo (1998) cited in Chivaura and Mararike (1998) speaks about Human Factor in Education. It is not only formal education that matters but it should be able to develop personology that is deep-rooted in human nature that helps develop fully positive Human Factors (HF) that are, "social milieu and culture, psychological and spiritual factors such as one's emotions, motivations, habits, attitudes, opinions, religious convictions, values and goals" (Werner et al, 2002)

Benjamin Afori-Amoah (1998) cited in Chivaura and Mararike (1998) says that education instils in the individual a sense of self-development, responsibility, accountability and dedication to building his or her community and nation. Zimbabwe would not be the first country to revolutionise its economy. China, with the population of 1.3 billion people, did the

same in 1979 when it initiated a new political line that was switching from pursuing class struggle approaches to economic construction and reconstruction approaches. This meant a major re-adjustment of the country's economic development strategy. They took the following two steps:

a) doubling the Growth Domestic Product (GDP) within a year, for two consecutive years,

b) virtually modernized their economy by the 21st Century. This manifested itself in the state, having more than enough to eat and wear, a living condition of better off than the past but not wealthy. The Chinese economy has been growing at an average rate of 9% per annum for a number of years and this shows the big shift that has taken place from a Planned Economy to a Market Economy.

When Mintzberg and Quinn (1991) wrote about power, culture, systems and structure, they meant that power gives authority, control, leadership, stewardship and guidance. Social Development Fund (SDF), Youth Development Fund (YDF), Basic Commodities Supply Side Intervention (BACOSSI), Small Enterprises Development Corporation (SEDCO) and many other rural development funds should have been modified and redirected if they were meant to empower the rural poor. If people continue to receive handouts without any production taking place, the nation will continue to dig its heels deeper into poverty.

2.7 Sustainable Agriculture and Entrepreneurship

Sustainable agriculture is generally defined as an approach to agriculture that focuses on producing food in a way that does not degrade the environment and contributes to the livelihood of communities. According to the Food, Agriculture, Conservation and Trade Act

of (1990), sustainable agriculture refers to an integrated system of plant and animal production practices that will enhance the quality of life for farmers and the society. It is a widely discussed topic by researchers and practitioners. According to Sullivan (2003), sustainable agriculture has three pillars namely economic profitability, environmental stewardship and social responsibility. Economic viability can be achieved only when the farmer applies strategic entrepreneurship skills at the farm. Characteristics of economic viability involves an increase in family savings consistently whilst its debt goes down, more profit gain every year and reduced reliance on government payouts.

In addition to that, social responsibility as a pillar of sustainable agriculture denotes that the quality of life for those who work and live on the farm and the local community should be improved, that is, there must be a symbiotic relationship between the farm and the local community. According to Sullivan (2003), there must be a fair treatment of workers, positive farm family relationships and personal farm interactions with consumers. This means that, an entrepreneurial farmer must establish good relations with customers if the farmer is to remain in business. Social responsibility also emphasizes that sustainable agriculture must support other businesses and families in the community, the circulation of money in the local economy and enable young people to take over their parent's farms and continue farming (Sullivan, 2003). These indicators are in tandem with components of entrepreneurial agriculture.

Furthermore, the other pillar of sustainable agriculture, that is, the environmental stewardship, reinstates the utilization of ecologically sound practices that have little or no adverse effect on natural ecosystem. This means that, farmers have to adapt strategies that have little harm to the environment. These may include mulching, use of manure, maximizing

diversity through planned crop rotation, intercropping, companion planting, composting and year round soil cover (Cooperative Extension Service, 2012). The aspect of environmental stewardship as a pillar of sustainable agriculture can be related to agricultural entrepreneurship in the sense that an entrepreneurial farmer should always avoid risk and thus, by showing a concern for the environment, the farmer is able to minimize higher chances of degrading the soil. Henceforth, sustainable agriculture can be considered as entrepreneurial farming.

This study makes a unique contribution by combining sustainable agriculture with strategic entrepreneurship. Very few studies linked sustainable agriculture and strategic entrepreneurship at national level. Literature has also shown that the pillars of sustainable agriculture are entrepreneurial.

2.8 Conclusion

The above explanations clearly reveal that sustainable agriculture is a broad concept and it does not have a single authoritative definition. However, all these definitions draw similarities in explaining the goals of sustainable agriculture. Most of the definitions highlighted the aspect of promoting stable, prosperous farm families and communities, enhancing the environmental quality as well as alleviating poverty in communities. Furthermore, these explanations on strategic entrepreneurship indicate that agriculture should be viewed as a business which requires entrepreneurship skills so that it will continue to exist in the era where the agricultural sector is faced with profound economic and environmental changes. In order for the farmers to live a stable and prosperous life in their communities, they can employ strategic entrepreneurship skills.

CHAPTER 3

RESEARCH MODEL

3.0 Introduction

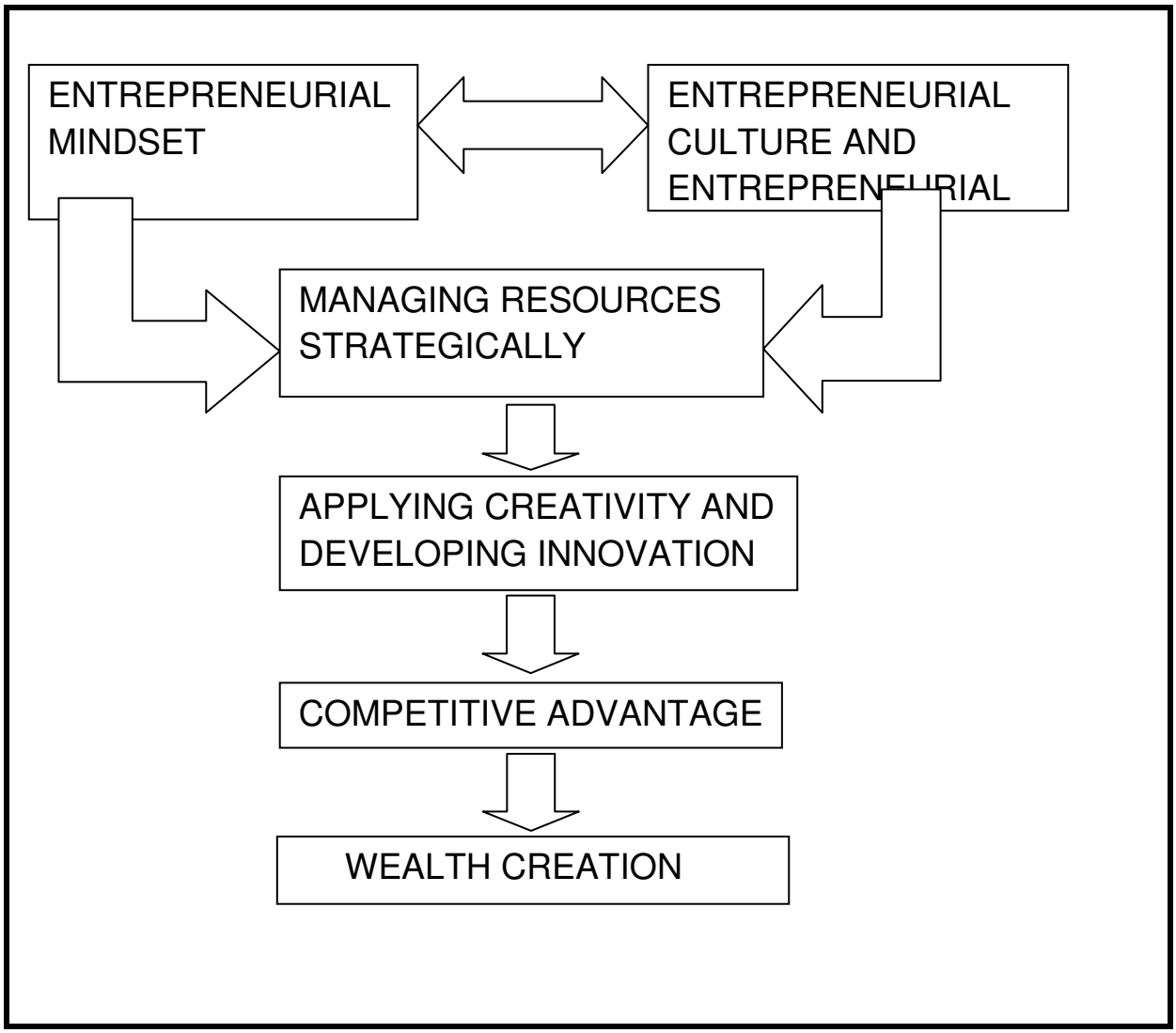
This chapter provides and explains in detail, the model which informed the study (strategic entrepreneurship). The strategic entrepreneurship model was indispensable in this study because it clearly illustrates how the integration of opportunity–seeking behaviour and advantage-seeking behaviour can lead to the creation of wealth in the business, in relation to the study of the agricultural business. The model has six dimensions namely; entrepreneurial mindset, entrepreneurial culture and entrepreneurial, managing resources strategically, creativity and innovation, competitive advantage and wealth creation which were linked to Dotito Irrigation Scheme in Mashonaland Central and Mitchell and Mitchell Project in Mashonaland East Provinces.

3.1 The Strategic and Entrepreneurship Model

Entrepreneurship and strategic management are concerned with growth and wealth creation. Entrepreneurship is currently the way to go as it is the stimulus for wealth creation by individual firms in economies (emerging, developing and developed). Peng (2001) says that strategic entrepreneurship is concerned with understanding the reasons for differentials among firms' wealth creation. Peng (2001) further highlights that entrepreneurship result in effective growth. Such growth is expected to build economies of scale, reduce cost of production, increase sales, increase market as well as profit for the firm. These aspects are signs of growth which also contribute towards achieving a competitive advantage for the individual firm. Such growth will result in firms ploughing back into the business, thereby providing the multiplier effect to the individual business. Thus, growth through wealth

creation makes it easier to stimulate further growth through further allocation of resources available.

Figure 3. 1: THE STRATEGIC ENTREPRENUERSHIP MODEL



Source: Hitt et al (2003) Journal of Management

3.2 Integrating Entrepreneurship and Strategic Management

The basic tenets of entrepreneurship and strategic management were integrated and summarised by Ireland et al (2001). According to Ireland et al (2001), firstly one has to identify relevant research questions on wealth creation in new ventures and established firms. Hitt et al (2001) suggest that the integration of strategic management knowledge and

entrepreneurship creates strategic entrepreneurship. This combines effective advantage-seeking behaviour (strategic management) with effective opportunity-seeking behaviour (entrepreneurship) into a firm. Thus, entrepreneurship and new firms tend to excel in opportunity-seeking behaviour which establishes companies that excel in the exercise of advantage-seeking behaviour.

3.2.1 Entrepreneurial Mindset

An entrepreneurial mindset contributes to a competitive advantage and is necessary for wealth creation. It has a growth-oriented perspective through which individuals promote flexibility, creativity, continuous innovation and renewal. Even when clouded with uncertainty, the entrepreneurially-minded persons can identify and exploit new opportunities which result in cognitive abilities (Averrez and Barney, 2002). Entrepreneurial mindset at individual firm level could support the growth of individual firms and the entire economy. Several scholars note that Sweden's economy was enhanced by the entrepreneurial mindset.

Recognising entrepreneurial opportunities is a key to wealth creation which is associated with entrepreneurial mindset. Entrepreneurial opportunities are common in markets where new methods of production, new goods and services can be introduced and sold at a profit (Shane and Venkataraman, 2000). The market place often provides entrepreneurial opportunities. The market also lures creation of wealth as it provides entrepreneurial opportunities necessary to stimulate entrepreneurial alertness. The existence of entrepreneurial alertness stimulates development of entrepreneurial mindset, behaviour, culture and leadership in a firm. Entrepreneurship insights also trigger research for markets where new goods or new services can be sold.

3.2.2 Entrepreneurial Culture and Entrepreneurial Leadership

Organisational culture is a system of shared values and beliefs that shape the firm's structural arrangements and its members' action to produce behavioural norms. Schein (1985) says that culture has been defined by the following properties:

- shared basic assumptions;
- inverted, discovered or developed by a given group;
- learn to cope with the problem of external adaptation and internal integration in ways;

a) those that have worked well enough to be considered valid;
b) those that can be taught to new members of the group; and
c) those that have the correct way to perceive, think and feel in relation to those problems.

In any business set-up, culture is very important as it is the driver of the cognitive framework which influences how organisational members perceive issues and how it affects the firm's competitive landscape. Effective entrepreneurial culture is characterised by multiple expectations. Such expectations facilitate strategic management of a firm's resources. Entrepreneurs with opportunity-seeking and advantage-seeking behaviours have an effective entrepreneurial culture which creates new ideas in the firm. McGrath and MacMillan (2000) added that entrepreneurial culture fosters and supports the continuous search for entrepreneurial opportunity, which results in sustainable competitive advantages for the firm. An entrepreneurial culture develops in an organisation where the leaders employ an entrepreneurial mindset. Therefore, entrepreneurial culture and entrepreneurial mindset are inextricably interwoven. Leadership effectiveness is linked to the success of all sizes and types of firms. Further, entrepreneurial leadership enhances both opportunity-seeking and

advantage-seeking behaviours through influencing others to manage resources strategically in the firm. An effective entrepreneurial leader believes that the firms must be strategically entrepreneurial in order to create the most value out of its operations (Covin and Slein, 2002). This desired end is possible only when a leader has an entrepreneurial mindset and culture. This can then lead to strategic management of resources.

3.2.3 Managing Resources Strategically

Barney and Arikan (2001) cited in Hitt et al (2001), define resources as the tangible and intangible assets a firm uses to choose and implement its strategies. Resources that are rare and valuable can yield a competitive advantage. Where resources are also simultaneously imperfectly imitable and unsubstituted or non-transferable, they can lead to a sustainable competitive advantage. From a strategic perspective, the resources-based view stipulates that competitive advantage is built from the resources the firm develops or acquires to implement its product market strategy. As a complement to Porters' (1985) theory of competitive advantage based on the firm's product market positions, the resource-based view also notes that competitive advantage can also be understood as competition among resource positions held by firms. Thus, competitive advantage lies upstream of product markets and is grounded in the firm's way of doing things, which is difficult to imitate. The strategic management of the firm's resources is likely to produce sustainable and competitive advantages (Gove et al, 2003). Strategic management of resources facilitates the simultaneous and integrated use of opportunity-seeking and advantage-seeking behaviours. Thus, managing resources strategically affects the value derived from the intangible and tangible assets that organisations use to develop and implement their strategies. To this end, managers are critical to the firms' performance because they understand the potential of the firm's resources that are owned and controlled and how they are allocated strategically.

3.2.4 Applying Creativity and Developing Innovation

Creativity is an approach to work that leads to the creation of new and appropriate ideas, processes, methods or solutions (Barney and Arikan, 2001). Creativity is important for companies operating in highly competitive markets and in markets where there are multiple opportunities to differentiate goods and services. Creativity should not be an event but a continuous process for a firm. According to Smith and Gregorio (2002), creative skills are based on four aspects which are:

- the ability to manage diverse matrices of information;
- the ability to suspend judgement as complexity increases;
- the ability to recall accurately; and
- the ability to recognise patterns of opportunities.

Creativity is also regarded as the basis for innovations which are achieved through strategic management of resources. Creativity influences both qualitative and quantitative features of all forms of innovations. There are two types of innovation and these are disruptive and sustaining innovation. Smith and Gregorio (2002) added that organisational managers with substantive knowledge in a given area are creative in developing sustaining innovations while managers with a breadth of knowledge across disciplines are creative in developing disruptive innovations.

Perry-Smith and Shalley (2003) further explain that sustaining creativity results in actors generating new ways of creating value through their work, while disruptive creativity is displayed as actors reconfigure known work procedures into new alternatives. According to the authors, disruptive innovation produces revolutionary change in the markets while

sustaining innovation leads to incremental change. Incremental or sustaining innovation is the product of learning how to better exploit existing capabilities that contribute to competitive advantages.

3.2.5 Disruptive Innovation

Disruptive innovation is that form of innovation which creates new markets and new business models (Johnson and Dawn, 2002). It is the type of innovation that drives growth in industries better than market leaders. Disruptive innovation enhances competitive advantage through introduction of new markets, new ways of playing the competitive game and new ways that are different from existing business models. Internet banking, low cost airlines, direct insurance and online brokerage trading are examples of destructive innovations. Firms focused on disruptive innovations access entrepreneurial opportunities that can shift the base of competition in the industry.

3.2.6 Sustaining Innovation

It is that form of innovation that help firms earn higher margins by selling better products to their best customers. Such types of innovations are comprised of break-through technology development (new or major changes in production processes) and simple incremental engineering improvements that leap up the trajectory of performance improvement. Hart and Christensen (2002) state that incremental improvements are regarded as “creative intentions” in that they help the firm to extend the existing competitive advantages that promote its growth as a path to wealth creation. Incremental innovations are important in that they help the firm derive maximum value from the firm’s current capabilities.

3.2.7 Competitive Advantage

It is the strategic exploitation of the firm's resources for its improved performance compared to its competitors. It also involves exploiting entrepreneurial opportunities that contribute to the firm's efforts in wealth creation. Firms that motivate people to pursue entrepreneurial opportunities contribute to their competitive advantages (Day and Wendler, 1998 cited in Hitt et al., 2001). Additionally, temporary competitive advantage occurs when entrepreneurs fail to manage resources strategically (Hitt et al, 2001). Ireland (2000) and MacGrath and McMillan (2000) reveal that opportunity-seeking and advantage-seeking behaviours are necessary for wealth creation and building competitive advantage.

3.2.8 Wealth Creation

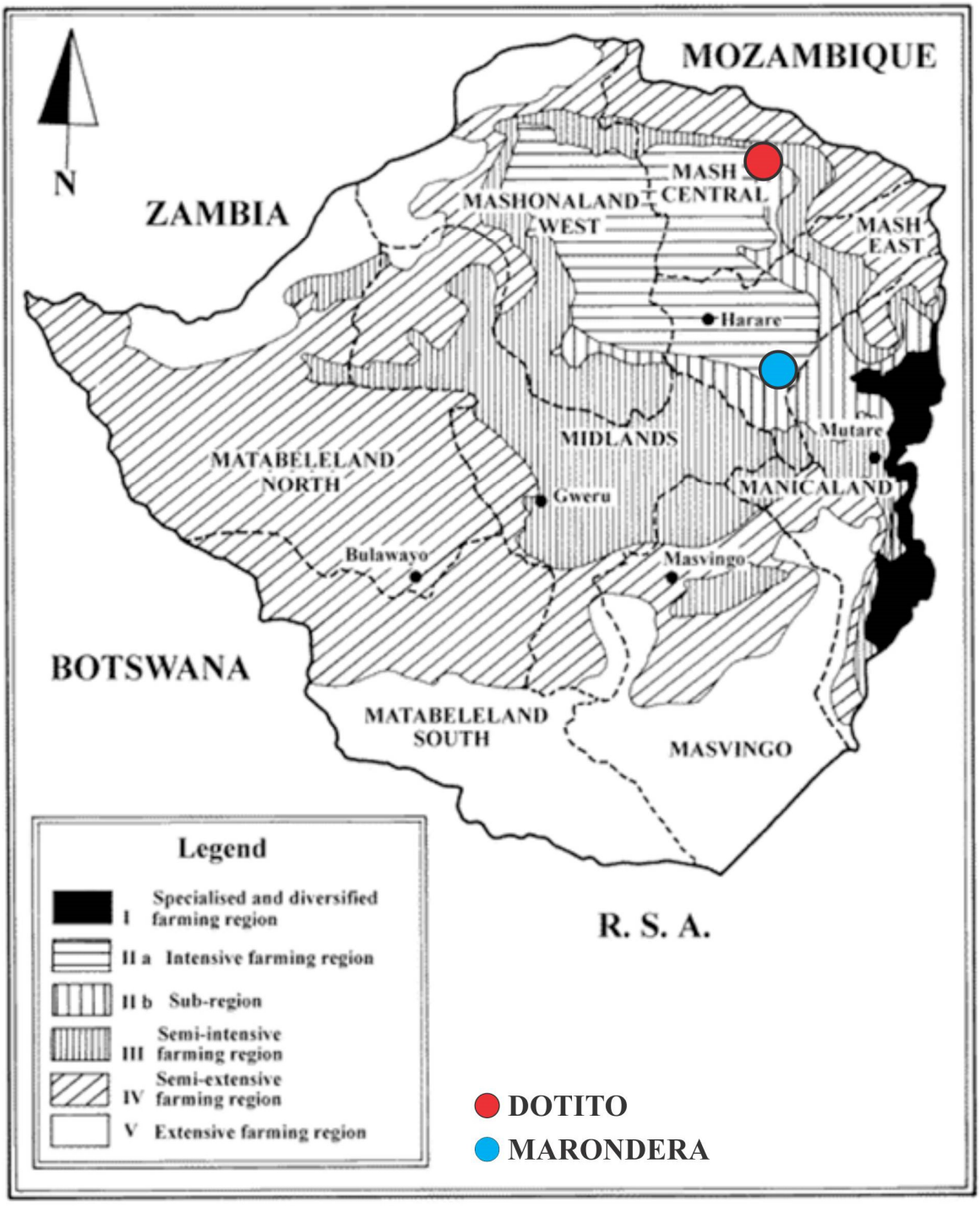
It is a process of creating value for the firm or firm's stakeholders (Hitt et al., 2001). Wealth creation requires properly structured entrepreneurial framework and entrepreneurial mindset for the leaders. Properly structured entrepreneurial framework involves setting goals, establishing strategic opportunities and determining appropriate time for launching the strategy required to exploit an entrepreneurial opportunity. Such entrepreneurial framework should be linked consistently with strategic allocation of the firm's resources.

Wealth creation is more of the outputs produced after working hard, putting effort and the application of strategic entrepreneurship skills. Thus, entrepreneurial mindset, entrepreneurial culture and leadership, strategic management of resources and the application of creativity and development of innovation, work hand in hand to create wealth. Mitchell and Mitchell Project in Mashonaland East and Dotito Irrigation Scheme in Mashonaland Central Provinces are such sustainable agricultural activities which are being operated on strategic entrepreneurial basis for wealth creation.

3.3 The Areas Under study

The study was conducted in two irrigation projects which were selected in two provinces in Zimbabwe. These irrigation schemes are Dotito in Mashonaland Central Province and Mitchell and Mitchell which is under Marondera in Mashonaland East Province. There is a map of Zimbabwe on the next page which shows the location of areas under study.

Figure 3.2: Map of Zimbabwe showing Mashonaland Central and Mashonaland East Provinces.



3.3.1 Mitchell and Mitchell Project

Mitchell and Mitchell Irrigation scheme is under Mashonaland East Province in Marondera. The irrigation was initially known as Nyamakaira. It was named Mitchell and Mitchell after establishing good and strong relations with Mr Mitchell who was an exporting agent for horticultural produce. Mitchell and Mitchell is in region 2B. The soils are derived from Doromitic parent material hence they are reddish clay soils. The area experiences high temperatures of about 25 degrees celcius in summer. In winter the area experiences low temperatures of between 2 to 11 degrees celsius. Moreover, the area receives an annual rainfall of between 800-1200mm.

Nyamakaira Irrigation, which is now known as Mitchell and Mitchell, was established in 1996 by the government to improve the livelihoods of poor rural people.

The small-scale farmers grow a variety of crops such as maize, soya beans, chillis, peas, goose-berries, tomatoes and potatoes. However, the majority of these farmers are growing crops such as chillis, green beans, peas and goose-berries for the fresh produce market. They grow these crops for the purposes of exporting them so that they can feed their families, buy their day to day needs and send their children to school. They have since established many markets where they sell their produce. They used to sell their produce at Mbare Msika (common market in Harare), to the local people and now they are also selling to Rollex which is the largest exporter of fresh produce in Zimbabwe.

The farmers feel happy about their business. In summer they grow green beans, which is called fine beans, baby corn, goose-berries and chillis. They grow three types of chillis such as bird eye, serenade and fresno. In winter they grow peas (mange tout), sugar snaps and

goose berries. All these are for export with help from Rollex Institution in Marondera. The small-scale farmers seem to be very successful in their farming business as they are continuously engaging in that business. They normally face some challenges when reaping due to the shortage of labor. Most of these farmers venture into contract farming with Rollex. They get free advice, inputs such as fertilizer, seeds, spraying chemicals and the technical backup from the institution. They pay for the inputs when they get paid from their exported harvest. There are some qualified field officers who frequently visit the contracted farmers to offer help at every stage of their crops. Nonetheless, the farmers do not just enter into the contract farming, rather they enter through procedures. They have to complete application forms.

These application forms require the farmer to provide his or her contact details, history of farming, type of irrigation, source of water and power, labour, land ownership details and all the equipment that the farmer owns. The application form will be evaluated by Rollex management staff to assess whether the farmer qualifies for inputs and the technical back-up services in order to promote his or her farming business. If the farmer is unsuccessful, he or she can always bring the produce to Rollex Institution so that they can be exported. There are about 300 farmers at Mitchell and Mitchell Project in Marondera. The majority of farmers have more than one hectare. They practice irrigation farming during the winter season and when it becomes extremely dry in summer, they also irrigate their crops.

Most of them get water from a dam. The water is pumped from the dam to the plots using electricity. Farmers therefore, face challenges when there are power faults. They also practise mulching in order to keep moisture as a way of conserving water during dry periods. The majority of these farmers are able to send their children to the most expensive schools which

they could not afford if they were working in the office or were formally employed. They are also importing cars from Japan which they could not do when they were formally employed. Actually, the small-scale farmers in Marondera are earning large profits from their agricultural business. These farmers have higher expectations. They are now able to buy planters, tractors and some machines to make their tasks easier as they are aiming to expand their farming businesses. They are producing crops of export quality. Women are also in the entrepreneurial farming business and they are favourably competing with men. These farmers are employing a large number of people who are coming from as far as Mutoko, Murehwa, Goromonzi and Harare.

There are a number of social and economic activities which are carried out in Marondera but most of them revolve around farming (GoZ, 2010). The farmers in Marondera have diverse skills which enable them to increase productivity. In addition to that, some of these farmers seem to be in harmonious relationships with their farm workers. The councilors, village heads, Agricultural Technical and Extension Service (AGRITEX) officers and the District Administrator (D.A) are working with these farmers. They attend training workshops to broaden their farming knowledge.

3.3.2 Dotito Irrigation Scheme

The Dotito Irrigation Scheme is located in the North-Eastern Province of Mashonaland Central and is under Pfura Rural District Council. It is one hundred and eighty-six kilometers from the capital city of Zimbabwe, Harare. Dotito is a growth point which has a clinic, a police post, a primary school and a secondary school. It falls under region two of Zimbabwe's six climatic regions.

It started in 2003. It is just 3km from Dotito Growth Point along the Harare-Mkumbura Road. The project started with less than 70 people who were willing to participate in the irrigation scheme. The irrigation scheme gets water from a dam which is 4 kilometers away. The area experiences high temperatures of about 30 degrees Celsius in summer. The soils are reddish to sandy loam and now infertile. The community relies on rain fed agriculture and the area receives an annual rainfall of between 700-1000mm. The irrigation scheme has a total of 100 hectares, 95 of which are occupied. The project has the potential of being extended to 120 hectares.

The scheme has a committee that provides leadership, which comprises a chairperson, vice chairperson, secretary, vice secretary, treasurer and three committee members. The Committee also works with advisors who include an AGRITEX officer, a Councilor and the District Administrator. Dotito Irrigation Scheme is a project which was implemented by the government with the aim of improving the economic status and the livelihood of the rural poor, supplementing their diet, creating employment as well as increasing food production. The project is viewed as a mechanism which strongly facilitates the achievement of the aforementioned goals. There is a dam which supplies irrigation water to the farmers and each entrepreneurial farmer pays six (6) dollars per month for maintenance purposes. There are about 95 farmers and each farmer has half a hectare. They grow crops such as green maize, cucumber, carrots, cabbage, groundnuts, potatoes, tomatoes, pumpkins and beans. Their farming activities are perennial and that means they harvest throughout the whole year.

Farmers feel blissful, cheerful, pleased and contented with their agricultural business despite the fact that they face some challenges such as theft, power outages which result in the shortage of water for irrigation and lack of cold storage room for perishable produce. These

ecstatic entrepreneurial farmers have high hopes for their agricultural businesses. Economic profits derived from the project enable the farmers to send their children to school as well as buy cattle and other materials which uplift their wealth status in rural areas. They try hard to make sure that their produce is sold before going bad. Way back, Dotito irrigation farmers used to sell their produce to Dubai, Belgium, and United Kingdom and they were paid in American Dollars before the multi-currency system was introduced in this country. At one point in time (that is before the acute economic turbulence in 2009 in Zimbabwe), women who were engaged in this project became bread winners as they were able to support their families with the profits they got from their produce.

Each individual farmer earns approximately a hundred dollars per month from their produce. There are a lot of people who normally come from distant places such as Mukumbura, Zambara, Mutasa, Kaitano and Kapiripiri (Dande area) looking for employment in these projects. In addition to that, some of the community members are being employed by these entrepreneurial farmers. Currently, their market seems to be haphazard and they are no longer selling in bulk as they used to do when they started. They are trying hard to increase productivity. Their produce looks very healthy and attractive on the market at Dotito Business Centre. Some of the farmers did not have livestock for draft power when they started farming. Due to their hard work, they now have cattle of their own which they bought as a result of earning more profits from their produce. These farmers are expecting to produce more for the whole nation as well as taking their previous position of being the leading rural vegetable exporter in the country. To keep moisture and to add nitrogen into the soil, they practise what is called intercropping. They have two types of farming, that is, the dry land farming and the irrigation farming. Actually, this project is improving the livelihoods of the

rural farmers as they are creating wealth which enables them to survive despite the fact that the economy of the country is at its downturn.

When the project was at its initial stage, some of the local people had a negative view of it as they did not know that it would flourish. The area is now ever busy as people from different parts of the district are buying produce from this irrigation scheme. The project has empowered the rural poor.

3.4 Conclusion

The strategic entrepreneurship construct that is opportunity and advantage-seeking behaviour contributes to how firms create wealth the world over. Firms that identify potential business opportunities and are able to exploit them competitively will create wealth for their owners and value for the customers. Firms that build such competitive advantages and are able to identify valuable entrepreneurial opportunities are likely to sustain those advantages over time. Such firms will continue creating wealth for their owners. Hence, all firms, regardless of existence (new or old) and size of establishment (small and large), must engage in both opportunity-seeking and advantage-seeking behaviour. Firms entering the market must establish competitive advantage for their new goods and services in order to compete with established firms' products. Alternatively, established firms risk losing their markets to new venture-firms if they are not innovative and fail to take opportunity and advantage- seeking behaviours.

CHAPTER 4

RESEARCH METHODOLOGY

4.0 Introduction

Research methodology is the glue that holds the research processes together and provides a road-map of what the researcher has to use in carrying out the research (Lewis et al, 2007). Thus, methodology can be defined from two different angles. In one form, methodology is identical to a research model employed by the researcher in a particular project, including basic knowledge related to the subject and research method in question and the framework in context (Lather, 1992). In another form, it relates to the nature of theoretical and more abstract context in terms of how data is collected and analyzed by the researcher and is perceived in conjunction with distinctive research principles, research paradigms and mutually exclusive theoretical principles. These principles determine the research methodology used in the research. There are basically two research methodologies resulting from the above definitions and these are qualitative and quantitative methodologies which are dealt with here under.

4.1 Mixed Methods Approach

Mixed methods approach is generally defined as the combination of qualitative and quantitative research paradigms in collecting and analysing data in research. According to Creswell (2012), mixed methods research approach is a procedure for collecting, analyzing, and mixing both quantitative and qualitative research methods in a single study to understand a research problem. The approach provides a complete understanding of the problem. The use of mixed methods as distinct from either qualitative or quantitative is gaining popularity and according to Creswell (2003), this approach has been more widely recognised with the

publication of a number of texts dealing specifically with mixed methodologies. This method was used in research to allow generation of rich data which is in relation to the relatively unexplored area of strategic entrepreneurship farming in agricultural businesses. The research exploited the strengths of both quantitative and qualitative approaches to enhance the validity, credibility and reliability of the results. Mixed methods is more comprehensive in investigating a problem than employing one method.

According to Leach and Onwuegbuzie (2009), Social Science and Humanities researches are complex and therefore cannot be easily accomplished using one method. The convergent parallel design is the type of mixed method approach that was adopted by the researcher. This method involves the concurrent collection of both qualitative and quantitative data. The researcher collected quantitative and qualitative data concurrently and analyzed the two data sets separately. Finally, the researcher mixed the two databases by merging the results during interpretation and would sometimes amalgamate it during analysis. The convergent parallel design was used because the researcher wanted to collect both types of data in one visit to the areas which were under study and both types of data had an equal value for understanding the research problem.

4.1.1 Qualitative Approach

This study employed the qualitative and quantitative paradigms. Qualitative research or phenomenological research is defined as a method in focus, which concentrates on words and observations to express reality and attempts to describe people in a natural situation (Denzin and Lincoln, 1994). Creswell (1994) considers qualitative research as an inquiry process of understanding people through interpreting their naturalistic behaviour in different situations. It aims at understanding a phenomenon from the participants' point of view who are directly involved with the phenomenon under study (Eldabi et al., 2002). Since such type of research

is invariably conducted in the field, qualitative research is sometimes referred to as field research (Dooley, 1992). This is because human behaviour is not as easily measured as phenomena in the natural sciences (Neville, 2005). For instance, human behaviour is not always observable (for example, inner thought process) such that it becomes hard to generalize. Such a study can be referred to as a case study because the rich insights can be lost when such complexities from personal experience, introspective life story, interviews, and observational, historical and visual texts are reduced to a series of generalisations. People have different interpretations on given events, which shows that meanings do change with the way others interpret them. It is associated with explanation of stable behaviour from an individual perspective, which is more common in social sciences which are diverse.

Stangor (2011) adds that qualitative research as a methodology, is concerned with understanding the processes of social and cultural contexts which underlie various behavioural patterns and is mostly concerned with exploring the "why" questions of research. There are so many types of qualitative research with different roots and these are case study, phenomenology, historical ethnography and grounded theory. The case study method focuses on one case, or perhaps a smaller number of related cases from which the researcher seeks a lot of detailed information. Maree (2007) defines a case study research method as an inquiry that investigates a contemporary phenomenon within its real-life context when the boundaries between phenomenon and context are not clearly evident and in which multiple sources of evidence are used. Grounded theory is more of detailed information.

Strauss and Cobin (1990) posit that grounded theory is inductively derived from the study of the phenomenon it represents that is, it is discovered, developed and provisionally verified through systematic data collection and analysis of data pertaining to that phenomenon. Therefore, data collection, analysis and theory stand in reciprocal relationship with each other

(Strauss and Cobin, 1990). Grounded theory is more of an inductive method whereby the theory is built from data collected (Stangor, 2011). Phenomenological approach is derived from the perspective that human behaviour is not easily measured as phenomenon in the natural sciences. Phenomenological approach is particularly concerned with understanding human behaviour from the participant's own subjective frames of reference (Blaikie, 2010).

Ethnography is a research method whereby the researcher engages himself or herself totally with the community or social setting for a considerable amount of time, asking questions and generally observing what is going on (Brymen and Bell, 2007). This type of qualitative research evolved from anthropology and the close study of communities. Ethnography is usually explained as participant observation and this is whereby the researcher becomes a working member of the group, society or community or situation which is being observed. The researcher shared the same experiences with the respondents. Ethnography can be done overtly (whereby the respondents know what is happening) or covertly (whereby the respondents are unaware of what is happening). Normally ethnographers spend a significant amount of time in the field so that they can study the lives of the people from within (Robson, 2002). The aim will be to understand the inherent meanings of gestures, displays, symbols, songs, sayings and everything else that has some implicit or tacit meaning in that culture (Maree, 2007). In essence, the researcher tries to be invisible but involves himself or herself in unobstrusive observation.

Document analysis is an approach whereby the researcher analyses documents and texts in a systematic manner. The defining characteristics of document analysis is largely based on secondary sources, that is, it critically engages with the understanding of concepts, and therefore, it is aimed to supplement to our existing body of knowledge and understanding (Morris, 2003). Critical analysis of literature is also crucial in document analysis. When the

documents are being utilised as data gathering tools, the researcher focuses on all types of written communication that may shed light on the phenomenon that he or she will be investigating. Stangor (2011) notes that document analysis is a form of qualitative research in which documents are interpreted by the researcher to give a voice and meaning around the topic.

The historical study involves studying the past events and comparing them with the present. Maree (2007) states that historical research is a systematic process of describing, analysing and interpreting the past, based on information from selected sources as they relate to the topic under study. Historical research tends to be descriptive and attempts to construct a map of the past. It attempts to provide the basis for understanding and perspective for judging current events and trends and in this case, it is aimed at impacting on decision making and policy formulation (Blaikie, 2010).

Table 4.1: A summary of the five major types of qualitative research

TYPE	DEFINING FEATURES
Ethnography	It focuses on describing and explaining the culture of people. It requires the researcher to immerse himself or herself among the people whom she or he is studying for a period of time, asking questions and observing what is going on. The researcher will be studying the naturally occurring behaviours of the group. Data collection techniques used in this type of qualitative research are observation and interviews. One of the prominent researchers who did ethnography is anthropologist Malinowski who studied the Island Trobrianders in 1914.
Grounded theory	It is a qualitative approach with the aim of developing and generating

	a theory from data that the researcher has collected. For instance, one might collect data from employees who left an organisation without notice and develop a theory to explain why this phenomenon transpired and finally develop a theory on labour turnover. It uses observation and interviews as data collection instruments.
Case study	Focuses on providing a detailed account of one or more cases. Provides a rich and holistic description of context, theme and issues. It is also an empirical inquiry that investigates a contemporary phenomenon with its real life context, especially when boundaries between phenomenon and context are not clearly evident. It is mainly anchored in real life situations. In-depth-interview is the main data collection tool.
Phenomenology	The researcher attempts to understand how one or more individuals are experiencing a phenomena or a practice. For instance, the researcher might interview 10 orphans and ask them to describe their experiences of the death of their parents. It interprets the meaning of the participant's experience.
Historical research	The researcher focuses on past events. Aims to determine consistency with other documents. The main sources of data include written documents and artifacts.
Document analysis	The researcher will be analysing written materials or documents.

Source: Researcher 2013

4.1.2 Advantages of qualitative research

The advantages are:

- involves conducting research in their natural settings;
- provides interpretations and meanings of all human behaviour and characteristics;
- result in rich understanding of the respondent's words, hence the researcher obtains unanticipated information which might also be useful for the research;
- it raises the importance of the researched hence it is humanistic in nature;
- through interpretation of different meanings it allows higher flexibility in research;
- it presents the phenomenon in a realistic view of the situation;
- involves sustained interaction with people being studied;
- it determines the idiographic causation;
- useful for studying a complex phenomenon;
- can conduct cross-comparisons and analysis; and
- offers a strong validity check regarding the knowledge, beliefs, practices and life events and conditions of people.

4.1.3 Disadvantages of Qualitative Research

The disadvantages are:

- due to the subjective nature of responses, there is a problem of reliability as results cannot be measured objectively;
- there is a problem of collecting irrelevant data or information from respondents;
- it requires a lot of time as you have to understand each respondent;
- difficult to generalize the knowledge produced by the research to other people or other settings;
- researcher's bias is inbuilt and is unavoidable;

- analysis of qualitative data is difficult and requires accurate description of participant responses, for instance, starting with responses from open ended questions and interviews into wide themes;
- problems of subjectivity and detachment, that is, the results are more easily influenced by the researcher's personal bias and idiosyncrasies; and
- it violates ethical considerations of people by getting into their detailed personal life.

4.1.4 The Quantitative Approach

The quantitative or positivist approach is a situation where the researcher prefers working with observable social reality and that the end product of such research can be law-like generalizations similar to those produced by the physical and natural scientist (Saunders, Lewis and Thornhill, 2003). It provides the structure, process and theoretical background for basic research practices in natural and social scientific researches (Abraham and Westhuinzen, 2002). Quantitative is also known as traditional, experimental or empiricist as advanced by authorities such as Comte, Mill, Durkheim, Newton and Locke (Clarke, 2005). The following standards constitute the theoretical principles and assumptions of quantitative approach which are summarised as follows:

- Reality can be measured objectively with only one truth.
- Human beings are subject to fixed patterns that are empirically observable and should provide the answers as fixed by law.
- The researcher should remain distant and independent of what is being researched.
- The values of the researcher do not interfere with, or become part of, the research and the research is value-free.
- Research is based primarily on deductive forms of logic and theories and hypotheses are tested in a cause-effect order; and

- The goal is to develop generalizations that contribute to theory that enables the researcher to predict, explain, and understand some phenomenon.

Quantitative data have numerical values in the range of 0 to 100. It can be discrete or continuous if it takes on any real value in some interval. The ideological basis of this school of thought is quantitative behaviourism and positive epistemology.

4.1.5 Advantages of the Quantitative Approach

- There is clear and objective orientation established through a systematic procedure which allows researchers to get data or information which is free from vague and sloppy approaches (Stergious, 1991).
- The researcher can identify the relationship and can manipulate reality in line with some purpose through estimations.
- There is greater opportunity for the researcher to retain control of the research process.
- The results may be understood by individuals in other disciplines.

4.1.6 Disadvantages of the Quantitative Approach

- The over-emphasis of positivism and quantitative measures is ironing and unjustified, for it cannot capture, the real meaning of social behaviour.
- It restricts experience by directing to what is perceived as objective and measurable.
- It fails to separate differences in the inner thought of human nature, thus ignoring the essence of life of different respondents.
- It is weak at understanding social processes.
- Inflexible – direction often cannot be changed once data collection has started.

4.2 Comparison of Quantitative and Qualitative Approach in Application

Quantitative or positivist approach is based on tight and pre-structure conceptual framework throughout the whole methodological process of the research while qualitative is interpretive with no pre-structure conceptual frameworks (Hardiker and Liwood, 1987). In addition to that, it deals with measurable and objective aspects whereas in qualitative research, it is interpretive and subjective. Researchers who are of the humanistic persuasion favour the qualitative approach and prefer to conduct their researches qualitatively. Such researchers prefer qualitative research because quantitative research fails to capture the human science which depends on control of extraneous factors. Qualitative research captures the naturalistic settings, even with experimental designs which are time consuming (Robson, 2002). Schinder and Cooper (2006) note that one of the important differences between qualitative and quantitative research methodology is the level of involvement required by the researcher. In qualitative research, the researcher is required to be much more involved and prepared than the quantitative researcher. Furthermore, in qualitative research, the researcher, is required to interpret information and make his or her own personal judgements. Thus, qualitative research deals with interpretation and communication which requires a lot of effort from the researcher, whereas, quantitative research has specific requirements and expected outcomes can be measured and predetermined because of the factual basis of the information being collected (Creswell, 2009).

Up to this point, it appears as if one design approach is better than the other, or worse. The best approach is to be well versed in both and choose what is appropriate for the research topic, questions or hypotheses propositions. Stangor (2011) says that qualitative and quantitative data interpretations are inter-changeable and the important consideration is how

data is presented and what questions it is being used to answer. Furthermore, Blackie (2010) adds that both quantitative and qualitative are important if one is to understand issues in the group under study. What is important is to acquire the relevant skills that equip one to use them appropriately. Although most researchers do either quantitative or qualitative research, some have suggested mixing and combining one or more research methods in one study to gain a deeper understanding of the causes of social phenomena (Maree, 2007). This study employed the mixed method approach to enhance the validity and credibility of the results.

According to Creswell (2009) and Collis and Husssey (2009), the choice of methodology is influenced by the researcher's philosophical perspective, research problems and assumptions. Blaikie (2010) also notes that methodology is influenced by research objectives, questions, the research model and propositions. This research was aimed at examining the role of strategic entrepreneurship in the small-scale farming business, to document the opportunities and challenges that inhibit agricultural growth as well as identifying the entrepreneurial strategies adopted by farmers to increase productivity. Thus, the qualitative approach was necessary as it gave a voice to the farmers to clearly explain in detail how they were conducting their farming businesses. Simply put, this approach can be used to unravel the problems faced by farmers and to generalise the results in order to provide solutions to the country's food crises.

4.3 Research Methods

Research methods are tools for data generation and analysis. Practically, methods are tools of the trade for the social scientist and are chosen on the basis of criteria related to or even dictated by the major elements of the methodology or approach in which they are embedded, such as perceptions of reality, definition of science, purpose of research and type of research. If the type of research is qualitative, methods derived from that approach are case study,

participant observation, focus group discussion, to mention but a few. If the research is quantitative, the methods derived from the approach are experimental, discovery and surveys. Although methods in general are methodological, their content, structure and procedure are dictated by the underlying approach or methodology as explained above. As this study employed mixed method approach, it used extensive interviews, surveys and observation methods.

4.3.1 Population and Sample

According to Melville and Goddard (1996), the population is any group that is the subject of research interest. Oxygen molecules in the universe, super computers in the world or dogs in a particular city could all be population-groups a researcher wants to study. The population of this study was divided into two as shown below:

- Dotito Irrigation Scheme-95
- Mitchell and Mitchell Irrigation Project-300

4.3.2 Sample Size

It is often not practical or possible to study the entire population. According to Creswell (2009), a sample is a subset of a population. To this end, it is necessary to make general findings based on a study of only a subset of the population. However, a sample must be representative of the population. Like the population given above, the samples of this study are broken into two as shown below:

- Dotito Irrigation Scheme-76
- Mitchell and Mitchell in Marondera-169

To get the samples given above, the random sampling method was used.

Sample Size Determination

The sample size of the population in each study area was determined by using Krejcie and Morgan's 1970 formula. This formula was chosen on the basis that it considers three important factors when determining the sample size, if one is to come up with a sample that is representative of a given population. These factors are; level of confidence, degree of accuracy and the precision level (sampling error). Nonetheless, the sample sizes which were used in the research were extracted from the table which was shown by Krejcie and Morgan (1970) using the same formula. The table has sample sizes which are applicable to any defined population. The formula is as follows;

$$s = X^2 NP(1-P) \div d^2(N-1) + X^2 P(1-P).$$

s = required sample size.

***X*2** = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841).

N = the population size.

P = the population proportion (assumed to be .50 since this would provide the maximum sample size).

d = the degree of accuracy expressed as a proportion (.05).

Krejcie and Morgan (1970) produced a table with sample sizes for different populations. The researcher verified the relevance and applicability of the formula and extracted the sample size for each area under the study, that is, Mitchell and Mitchell in Mashonaland East and Dotito Irrigation Scheme in Mashonaland Central provinces. Below is the table with sample sizes for any defined population.

Table 4.2: Table for Determining Sample Size from a Given Population

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	**300**	**169**	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	**76**	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note =*N* is population size.
***S* = sample size.**

Adapted from Krejcie and Morgan (1970)

4.3.3 Dotito Irrigation Scheme

In this research, the sampling frame or the population was made up of all the people in the Dotito Irrigation Scheme who had a piece of land within the project to practise the entrepreneurial farming business. Selection of the respondents was done to minimize the collection of more data which would be very difficult to analyse, to save time and to save the

resources. Seventy-six (76) respondents were chosen using random sampling. Among the seventy-six (76) chosen, sixty-seven (67) were farmers who were to fill in questionnaires which had both open and closed questions. Nine (9) respondents were for the key informant interviews with the people who had specialised roles and worked with the farmers in their day-to-day farming activities.

The respondents for the interviews were chosen using purposive sampling. This method of sampling is used with a specific purpose in mind (Creswell, 2009). The respondents who were purposively selected included two (2) village heads, a councillor of the ward, the chief, two (2) AGRITEX officers, two (2) members of Farmers' Association and the DA. These were purposefully selected because they had specialised roles to play with the farmers.

4.3.4 Mitchell and Mitchell Project

In this area, a representative sample of 169 was drawn from the population of 300. The researcher put all the farmers into four groups that were female farmers with less than a hectare, female farmers with more than a hectare, male farmers with less than a hectare and male farmers with more than a hectare. From these groups a simple random sampling method was then used to select the 160 respondents. Blaikie (2010) notes that in stratified sampling, the population is divided into a number of homogeneous, non-overlapping groups called strata. Within each stratum, independent sampling, that is, simple random or systematic sampling is then conducted. This method was chosen because each element in the population had an equal chance of being selected. This means that an objective mechanism is used in the selection procedure and there is no human or subjective interference in this process.

The researcher also used purposive sampling to select 9 respondents with key positions for the interviews. These included the chief, 2 village heads, 2 AGRITEX officers, a councillor

and the District Administrator and 2 members of Farmers' Association at Mitchell and Mitchell Project. These were chosen because they play a specific role in the farming business.

4.4 Data Collection Instruments

Data collection offers opportunity of assessing a research design. The researcher needs to determine the type of the data collection instruments. The data collection instruments chosen for this study were:

- Questionnaires
- Structured and unstructured interviews
- Telephone interviews
- Both participant and non–participant observation, and
- E-mail facilities.

Questionnaires

Stangor (2011) notes that a questionnaire is a set of fixed format, self–report items to be completed by respondents at their own pace often without supervision. Blaikie (2010) defines questionnaire as an instrument of collecting primary data in which respondents are asked a list of carefully structured questions chosen after considerable testing in order to entice the reliable responses. A questionnaire in this research was chosen because it was considered as valid, reliable and objective. It also enables the respondents to feel free when responding to the questions as well as enabling the researcher to collect data from a large population within a short period of time. Questionnaires are cheaper than interviews because the researcher can mail the questionnaire to many people. The researcher chose to use questionnaires because they would produce honest responses than interviews, particularly when the questions involve sensitive issues such as the source of income and annual income because respondents are

more likely to perceive their responses as being anonymous than they are in interviews (Stangor, 2011).

In comparison to interviews, questionnaires are likely to be less influenced by the characteristics of the experimenter. For instance, if the topic concerns race or gender related attitudes, how the respondents answer might depend on the race or sex of the interviewer and how the respondent thinks the interviewer wants him or her to respond (Blaikie, 2010). Because the experimenter is not present when the questionnaire is completed or at least is not directly asking the questions, problems are less likely. However, questionnaires have some problems since the response rate is not immediate and it may be low. This may lead to incomplete conclusions because the people who return the questionnaires may respond differently than those who do not return them would have (Stangor, 2011).

The researcher can sometimes increase the response rate by providing gifts or monetary payments for completing the surveys, making the questionnaire appear brief and interesting, ensuring the confidentiality of all the data and by emphasizing the importance of the individual in research (Lewis et al, 2007). Follow up of mailings, can also be used to remind respondents that they have not completed the questionnaires, with the hope that they would then do so. This was difficult to do at Dotito Irrigation Scheme since the local farmers there, rarely visit their emails and so the researcher had to call them when doing a follow up on uncompleted questionnaires. A questionnaire addressing the research objectives was designed and administered to 67 respondents at Dotito Irrigation Scheme and 160 respondents at Mitchell and Mitchell project.

Before administering the questionnaire, the researcher gave them to the supervisor to check for mistakes and then made a pilot study with four participants from the targeted group. This was done to check on ambiguity, structure and sequencing of questions and to determine whether the respondents were able to understand the questions. The instrument was revised and was also administered to those who had not participated in the pilot questionnaire. The final questionnaire was the one which was then distributed to the respondents as a data collection tool. This instrument had disadvantages in that some of the respondents returned it uncompleted and they lied when they were on their own.

Interviews

On interviews, the researcher communicates with the respondents openly. They may take place over the telephone. Zikmund and Babin (2007:211) note that personal interviewing is a form of direct communication in which an interviewer asks respondents questions in a face to face situation. This method generally increases the percentage of people willing to participate because of the presence of an interviewer (Blaikie, 2010). The main merit of personal interviews is that the interviewer is in complete control of the interview set up. Where respondents are evasive, the interviewer can attempt to gain their confidence (Kvale and Brinkmann, 2009). Furthermore, a well-trained interviewer can be flexible by asking all types of complex questions and can use extensive probing (Neuman, 2006:301). However, interviews have disadvantages which might as well jeopardise the research. The main disadvantage of personal interviews is that of high costs which are associated with its preparation, application, the need to train the interviewers, that is, the research assistants who need to be paid for conducting interviews as well as being reimbursed for travelling expenses (Welman et al, 2005). Although interviewing is a skilled activity, the appearance, tone of voice and question wording may affect the respondent (Kvale and Brinkmann, 2009).

Researchers recognise these problems and use ways such as training, briefing, quality control and guidelines to minimize their impact. In this research, the researcher used telephone and structured and unstructured interviews to collect data from some of the respondents.

a) Structured interviews

In this type of interview, questions are detailed and developed in advance, much as they are in survey research (Maree, 2007). Because researchers want more objective data, the structured interview which uses quantitative fixed–format items is the most common one. On unstructured interviews, the questions are prepared ahead of time and the interviewer reads the questions to the respondent. Structured interviews have an advantage over unstructured interviews for they allow better comparisons of respondents across different individuals because the questions, time-frame and response format are controlled to be the same for each respondent (Stangor, 2011).

b) Unstructured Interviews

These are informal discussions where the interviewer wants to explore in-depth knowledge on a particular topic with another person in a spontaneous way. However, even in unstructured interviews, it is likely that the researcher would have a pre-decided range of topics to cover in the discussion (Neville, 2007). In an unstructured interview, the interviewer, talks freely with the person being interviewed about many topics which are related to the study (Stangor, 2011). The questions asked during an unstructured interview, differ from one respondent to the other and the interviewer must be trained to ask questions in a way that gets the most information from the respondent and allows the respondent to express his or her feelings. Blaikie (2010) notes that unstructured interviews provide in-depth information about particular concerns of an individual or a group of people and this may

produce ideas for future research policy or policy decisions. Nonetheless, it is very difficult to adequately train interviewers to ask questions in an unbiased manner and to be sure that they have actually done so.

Telephone Interviews

Kvale and Brinkmann (2009) note that telephone interviews are conducted over a telephone and include using a cell phone. It has a number of advantages over the face to face and these include:

- produces faster result;
- relatively inexpensive as there are no travelling and accommodation expenses incurred;
- offers anonymity; and
- can be controlled easily.

Telephone interviews have some disadvantages such as:

- limited to verbal exchange therefore they cannot show respondents any visual material;
- no observational data, that is, of facial expressions; and
- respondents can lie.

Thus, in this study the researcher made use of structured interviews to collect data from the respondents or people in key positions at both Dotito Irrigation Scheme in Mashonaland Central and Mitchell and Mitchell Project in Mashonaland East Provinces. These respondents included the chief, the DA, AGRITEX officers, a Councilor as well as village heads. Telephone interviews were used to collect data from the District Administrators in both provinces.

Observation

Kvale and Brinkmann (2009) define observation as the systematic process of recording the behavioural patterns of people, objects and occurrences as they are witnessed. A wide range of information about the behaviour of people and objects can be observed. The researcher observed the farmers' physical actions in their fields, spatial relations and their entrepreneurial behaviour. However, cognitive phenomena such as attitudes, motivations, expectations, intentions and preferences cannot be observed (Stanger, 2011). Zikmund (2003) says that a further limitation to observation is that the observation period is generally of short duration. Due to limited time, the researcher observed the fields of ten respondents. The researcher was accompanied by the village head to observe ten fields of farmers in both provinces which were under study. There are two types of observations which are participant and non-participant observation. Observed data were recorded in the research dairy.

Types of Observation

- **Non-participant observation**

Is a data collection method which is used extensively in qualitative research by which the researcher is required to enter into the study area to observe events, activities and interactions, with the aim of gaining a comprehensive understanding of the phenomenon or the problem in the natural setting. The researcher in this study, was a non-participant observer who was just looking at the situation from a distance (etic approach). Under this approach, the observer does not participate directly in the activities being observed. Non-participant observation is relatively unobstrusive qualitative research strategy for gathering primary data about some aspect of the social world without interacting directly with its participants (Blaikie, 2010). Gerald (2010) notes that a non-participant observer has no contact

whatsoever with the researched, but watches and records events through one way mirrors or with cameras.

Some of the advantages of non-participant observation are that, it is easier to record information and observations if one is not participating. In addition to that, by reducing the level of interaction between the researcher and the participants, one can reduce the risk of the Hawthorne effect, however this only happens if observation is covert. The main disadvantage of non-participant observation is that, if the observation is overt, the researcher is at more risk of the Hawthorne effect as people know that they are being observed. Thus, Stangor (2011) notes that it is the least obstrusive form of observation, but has the limitation that the researcher does not become immersed into the situation and hence does not really understand what he or she will be observing.

- **Participant observation**

It has become understood as one of the most promising for studying problematisation, practices and the actions and objects constituting it (Bueger and Mireanu, 2012). Under this, the researcher immerses himself or herself completely in the setting, to the extent that those who are being observed do not know that they are subjects for observation. Gerald (2010) defines participant observation as an attempt to utilise all the available human senses to collect data and interpret it. It involves feeling around, seeing, hearing and tasting. As a research practice which is deeply immersed in a local context, it allows the researcher to record very specific types of data which otherwise remain hidden or are immediately visible (Creswell, 2009).

Walsh (2009:170) also notes that detailed information is not revealed in some interviews, and this is why participant observation is crucial for understanding what is going on. Participant

observation usually enables the researcher to experience what the actors do and say to a degree that he or she would not be able to do if studying from a distance or relying only on representations produced in such environments. This type of observation is seldom used as it raises serious ethical concerns when those being observed have not granted consent to being observed or when not aware that they are under observation.

E-mail Facilities

This entails electronic questionnaire and electronic interviewing. The researcher sends a structured questionnaire to the respondents electronically and the respondent responds to it at his or her own free time. Early quantitative studies indicated that electronic questionnaires had a very favourable response rate when compared to typical 20-50 per cent response rates usually achieved by conventional mail surveys (Nachmias and Nachmias, 1996). E-mail questionnaires cost less to administer both in terms of money and time (Stangor, 2011). In addition to that, it is also possible to send the same e-mail to multiple addresses in one action. Most e-mail software allows the dispatcher of the message the option of notification when the recipient has received the message and when they have read it (Anderson and Gansneder, 1995). However, this method raises the question of ethics. It becomes virtually impossible to guarantee the respondents anonymity and the validity of the questionnaire will be compromised. Nonetheless, the researcher assured the respondents of the confidentiality of the results. The use of names of the respondents in a study of this nature was not a problem since the topic under study was open to anyone and not a sensitive issue.

Electronic interviewing makes use of more interactive and immediate nature of e-mail either in the form of one-to-one interviewing or the setting up of electronic focus groups (Blaikie, 2010). Foster (1995) states that interviewing by electronic mail is not constrained by

geographical location or time zone and the need for proximity between the interviewer and the interviewee is not an issue. Coomber (1997) says that electronic interviewing data require no additional transcription, that is, the text from email interviews can easily be tailored for any word processing package or computer based qualitative analysis package with minimal alteration. Under e-mail interviewing, the data are eventually analysed exactly as the interviewee wrote (Anderson and Gasneder, 1995). This method also reduces the problem of interviewer bias. However, lack of non-verbal communication in electronic interviewing can pose a problem to both the interviewer and the respondent.

Electronic questionnaires and electronic interviewing require the availability of internet and a computer. The majority of respondents in this study did not have computers and email addresses. The researcher emailed the questionnaire to the District Administrator of Marondera who was unavailable at the time data collection started in earnest. Some of the respondents who had email addresses were very busy to the extent that the research assistant could not talk to them and the researcher had to email the questionnaire to these respondents so that they would complete them. However, the electronic interviewing was not done in this research.

4.5 Data Analysis

This study applied content analysis for analysing the qualitative data. Content analysis is a systematic approach to qualitative data analysis that identifies and summarises message content. The main advantage of applying content analysis was that it helped the researcher to understand and interpret the raw data. The researcher also made use of the Statistical Package of the Social Sciences (SPSS) on a small scale to analyse quantitative data. SPSS provided an accurate and transparent picture of the data. The use of SPSS and content analysis in analyzing quantitative and qualitative data improved the quality of research.

4.6 Limitations

The researcher met some challenges in the field. Some of the respondents were from time to time not willing to respond to questions and the questionnaires. However, the experience gained from this study would be of great help to other researchers engaged on entrepreneurial studies. The research had some limitations which were rooted in the methodological approach used; that is, the qualitative approach limited the generalizability of the findings. According to Blaikie (2010) there is no research that is purely perfect due to weaknesses and limitations which arise from the sample size, accessibility to key informants and other difficulties.

4.7 Ethical Considerations

The researcher obtained a letter from the Faculty of Commerce prior to data collection in the field. This was done to gain access to the area of study. Permission was sought from the District Administrators in the two study areas to conduct the study and it was granted. The chief, councilors, village heads and members of the community were informed about the study. In fact, all the respected protocols in the community were informed about the study before the collection of data started in earnest. Good and effective researchers should possess what Adjiboloso (2000) termed positive human factor attributes such as integrity, motivation, honesty, wisdom, understanding, knowledge, skills, dedication, commitment, trustworthiness, vision, responsibility, accountability and loyalty. The researcher tried all means possible to make sure that these attributes were maintained. Muzvidziwa (2004) notes that ethically driven research entails establishing caring relationships and a concern for the well–being of the respondents. The researcher made sure that caring relationships were encouraged. Privacy and confidentiality of the information that was provided by the respondents was assured. In addition to that, there was an assurance of anonymity by the researcher and that was done through the use of pseudo-names on questionnaires. The respondents were told not to give

their real names if they wanted to do so during interviews. This was all done with the aim of assuring anonymity. The research did not interrupt the respondents on their day to day activities. The respondents were not forced to provide answers. After the collection of data, debriefing was done. The respondents were informed about the results of the study and that was done so that future researchers would be allowed to enter into the area for another study. Thus, debriefing is an ethical consideration which enables future researchers to gain access into the area of study and this would promote the goals of research in the community.

4.8 Conclusion

This chapter dealt with the research design leading to the pointing out of two major research approaches namely, qualitative and quantitative. It further looked at the research methods, population, sample size, data collection instruments and data analysis. The next chapter will deal with the research findings.

CHAPTER 5

RESEARCH FINDINGS

5.0 Introduction

This chapter deals with the findings from field work. It gives a significant account of what farmers at Dotito Irrigation Scheme in Mashonaland Central and at Mitchell and Mitchell in Mashonaland East Provinces grow, their aspirations, opportunities, constraints and entrepreneurial capabilities, as well as how they operate. The presentation of these findings is in fact in tandem with the research objectives, research questions and the conceptual model which is informing the study. The findings are based on data collected from in-depth interviews with nine respondents in key positions in each of the two provinces which were under study. These were asked to explain the benefits of agriculture to the community, the support they give to the small-scale crop producers, challenges faced by the farmers and how these farmers were coping. Data were also collected from 227 respondents to whom questionnaires were administered. Findings from 224 out of 227 respondents were presented since three questionnaires were spoiled.

5.1 Findings from Field Work

Findings from the study have shown that all the farmers at Dotito Irrigation Scheme in Mashonaland Central and at Mitchell and Mitchell in Mashonaland East Provinces were satisfied with their agricultural business. They reported that they were:

- able to send their children to school;
- upgrading their houses to better standards;
- earning continuous income though not adequate; and
- able to buy stands in the township though the income was low.

Most of the respondents reported that their standards of living were improving as they were able to reduce poverty. The respondents reported that their way of living transformed for the better. They were now able to meet their day-to-day needs though they did not get enough. In addition to that, some of the respondents reported that they were able to buy generators for irrigation and farming implements such as tractors and cultivators.

All the respondents reported that agriculture assured them food security. The respondents reported that they were able to supplement their diet. One of the respondents stated that:

> *We are able to balance our diet; we eat potatoes and beans, sadza (thich porridge made out of maize meal) with vegetables, meat and sometimes with sour milk. If you do not have livestock for meat, you just sell your potatoes and buy meat, fish or whatever the kind of food you wish to buy to supplement your diet.*

Women respondents explained that they were satisfied with their agricultural business because of the fact that their economic well-being had improved. They reported that they were no longer subordinate to their husbands. All women reported that their position in the society was changing for the better. They explained that they were no longer housewives or child-bearers or men's commodities but that they were also becoming bread winners in the households. They reported that strategic entrepreneurship skills in agriculture, gave them the opportunity to be part of the planning team as well as meeting the economic needs of their families, though with some challenges.

The majority of the respondents reported that they were happy with their agricultural business because they were earning a continuous income although it was inadequate. They reported that they even got income which was more than that of lowly paid civil servants. They explained that agriculture created a stable form of employment which did not need one to

enter through interviews and applications. Most of the employed respondents pointed out that agriculture added to their income. All the respondents at Dotito Irrigation Scheme explained that agricultural business was also enabling them to venture into non-farming business activities.

5.2 Profiles of the Respondents

5.2.1 Age of the respondents

Most of the respondents (81%) were between 30-50 years of age. 7 % were below the age of 30 and 12% were above 50 years of age. The information on the ages of respondents is contained in table 5.1 below.

Table 5.1 Ages of Respondents

Age range (Years)	Frequency	Percentage
Below 30	16	7.0%
30-50	182	81.0%
Above 50	26	12%
Total	**224**	**100.0**

5.2.2 Marital Status of the Respondents

Table 5.2 below shows the marital status of the respondents. Findings showed that 84% of the respondents were married, 5 % were divorced, 1, 7 % were single, 8 % were widows and 5, 3 % (others) did not want to explain their marital status.

Table 5.2 Marital Status

Marital Status	Frequency	Percentage
Married	188	84.0%
Divorcee	12	5.0%

Single	4	1.7%
Widowers	8	4.0%
Others	12	5.3%

5.2.3 Sex of the Respondents

Findings showed that 46% of the respondents were males while 54 % were females at both Dotito Irrigation Scheme and Mitchell and Mitchell Irrigation Scheme. These are shown in table 5.3 below:

Table 5.3 Sex of Respondents

Sex	Frequency	Percentage
Male	103	46.0
Female	121	54.0
Total	**224**	**100.0**

5.2.4 Respondents' Level of Education and the Duration engaged in the farming business

The tables below shows respondents' level of education and duration in farming business:

Table 5.4 Level of the Respondents' Education

Educational level	**Frequency**	**Percentage**
Basic	178	80%
Certificate	22	10%
Diploma	21	9%
Degree	3	1%
Other	0	0%
Duration in the Farming Business		
Period (Years)	Frequency	Percentage
Less than a year	8	4%
One	8	4%
Two	12	5%
Three	19	9%
Four	43	19%

Five and above	134	60%

Findings showed that 80% of the farmers had basic education, 10% held certificates, 9% held diplomas and 1% held degrees. Findings also showed that 4% of the respondents engaged in farming activity for less than a year, 5% for 2 years, 9% for 3 years, 19% for four years and 60% for five years or more.

5.3 Findings on what improved Farmers' Productivity.

On farming activity, farmers improved productivity because of:

- agricultural entrepreneurship skills;
- dedication and commitment to their agricultural business;
- support from members of the community, churches and the government;
- being keen to be in business and being hardworking;
- the availability of land for one to work on;
- being innovative, creative and strong;
- being cooperative and able to work with others;
- being of good management of human and capital resources;
- being able to take risks;
- being able to adapt to the changing environment; and
- being able to remain focused on agricultural business.

5.4 Expectations of respondents at Dotito Irrigation Scheme in Mashonaland Central and at Mitchell and Mitchell in Mashonaland East Provinces on their Agricultural Activity.

The majority of respondents reported that they were expecting high productivity. They also stated that they were expecting to provide food for the nation and to alleviate poverty in the

country. The majority of the farmers reported that they were expecting to be the leading exporters of the much needed agricultural outputs at international level.

An increase in farm implements was also one of the farmers' expectations. They were expecting to make agricultural business, the country's main economic activity which would contribute significantly to the GDP. Respondents also said that they were expecting to expand their hectrage of farming land.

5.5 Challenges facing farmers as Agricultural Entrepreneurs.

Lack of finance to upgrade or improve their roads to facilitate easy transportation of their produce to the markets was one of the challenges explained by all respondents. They said that their income was not sufficient to maintain their roads. All the respondents reported that there was a short supply of water during the dry season. Their income was not sufficient to buy more pipes to supply adequate water for all the farmers.

The respondents stated that lack of markets was one of the challenges they were facing. They also reported that agricultural produce had flooded the market, resulting in a fall of prices. The respondents lamented that the flooding of agricultural outputs had reduced their capacity to make profits from their agricultural business. Findings revealed that selling the produce on the local market also reduced their profits because the local people in the rural areas did not have enough money to buy the produce at profitable market prices.

All the respondents at Dotito Irrigation Scheme cited lack of security as one of the challenges they were facing. They complained about thieves and cattle vandalising their crops. The respondents explained that their income was not sufficient to buy fence to protect their crops.

All the respondents at both Dotito Irrigation Scheme and at Mitchell and Mitchell in Mashonaland East Provinces, felt challenged by lack of time to rest, do other tasks, visit their relatives, mentor their children as well as socialising with colleagues in the villages. They complained about the fragmentation of social networks in the villages. All the respondents reported that their social fabric was breaking as they were busy concentrating on their projects all year round. Female farmers reported that they were overworking as they were expected to fulfil their wifely roles again.

All the respondents at Dotito Irrigation Scheme and Mitchell and Mitchell cited lack of adequate support from the state and non-state actors. They lamented that government policies relegated them since they were getting little support as compared to that being given to commercial farmers. The respondents reported that they also wanted tractors like those given to the large-scale farmers. All respondents indicated that financial institutions were not willing to extend credit to them although they had the potential to produce enough to enable them pay back their debts.

All respondents reported that they did not have storage facilities such as cold-rooms to keep their produce fresh while waiting for sale. All respondents also added that they were being forced to sell their produce at low prices so that they could clear them before they lost value.

All respondents at Mitchell and Mitchell in Mashonaland East Province reported that they had labour shortage as their pieces of land were too big to be worked by a few individuals.

5.6 Strategies for coping with Challenges by the Entrepreneurial Farmers

All the respondents reported that they used buckets to irrigate their crops in the dry season when the supply of water dwindled. They further reported that they were practicing mulching

to retain moisture. The majority of the respondents at Mitchell and Mitchell indicated that they were avoiding growing and planting crops which required a lot of water during the dry season.

All respondents indicated that they were drying some of their produce and selling it later when it would be in short supply on the market. Some of the respondents revealed that they were practising barter trade so that they could have other goods which they also needed. Respondents reported that they were solving the problem of market challenges by practising barter trade. Findings showed that farmers were getting cattle, goats, building material as well as clothes through barter trade.

Respondents also reported that they were trying to establish good relations with the owners of supermarkets so that they would sell their produce directly to them at a reasonable price since these supermarkets had large cold rooms in which they kept their fresh produce before sale.

All respondents highlighted that they were entering into agreements and contracts with contractors so that they could be assisted with inputs and be provided with ready markets for their produce. These contractors exported the farmers' fresh produce to European markets where these agricultural products were in demand and competition was low.

The majority of the respondents at Mitchell and Mitchell stated that they were venturing into cooperatives where they would be working together as one. They formed groups of about eight to ten people where they would assist one another in doing the challenging and demanding tasks such as mulching and weeding. Respondents highlighted that the groups they formed were being guided and governed by the rules and regulations of their day to day

operations. They also said that they avoided misunderstandings in order to keep good relationships among themselves.

Respondents formed joint ventures to enable them to cope with the challenges of the individualistic approach. Furthermore, they highlighted that the policy of working together in groups, enabled them to successfully market their outputs to the supermarkets. They reported that they were selling their produce in bulk as one and thereafter share the money in accordance with quantities contributed.

Furthermore, the respondents highlighted that joint–ventures enabled them to cope with the problem of labour shortage. Respondents at Mitchell and Mitchell in Mashonaland East Province explained that they were hiring labour from distant places such as Murehwa and Mutoko.

Farmers at Dotito Irrigation Scheme in Mashonaland Central Province indicated that they organised themselves into day and night shifts in order to cope with the problem of security. To do so, they said that they were contributing small amounts of money to hire professional security guards to guard against thieves. All respondents said that they were trying their best to make sure that they harvested quality products which would entice or lure customers at the market.

5.7 Measures taken by the farmers to reduce the contamination of their produce

To prevent contamination of their outputs farmers:

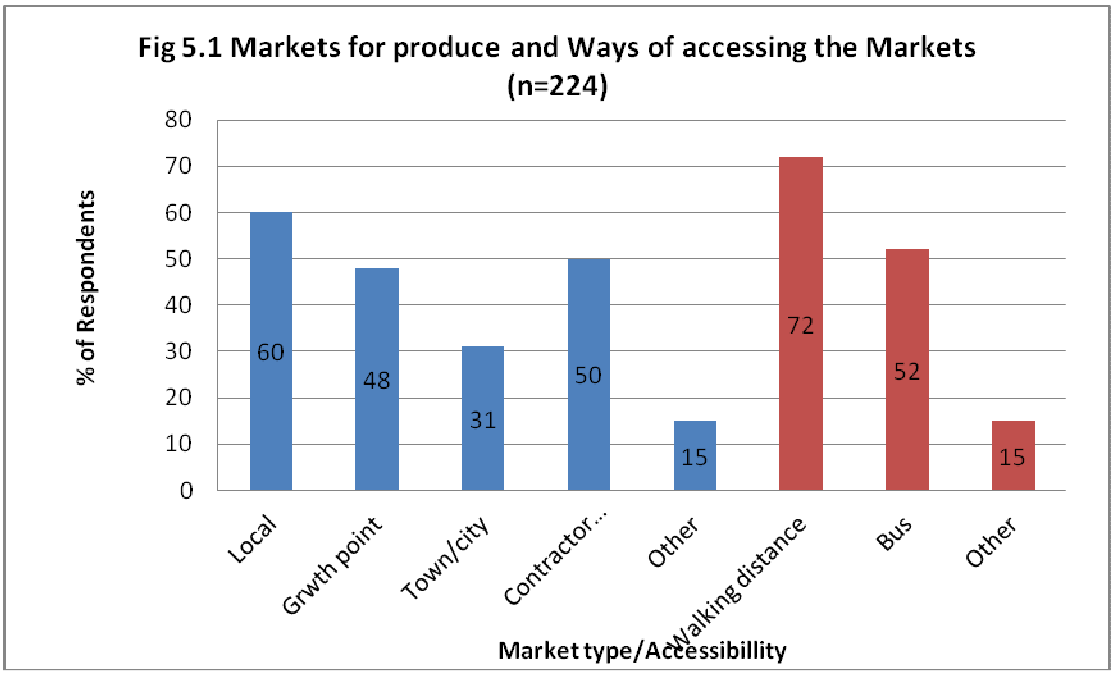
- used dried leaves of gum trees as a preservative ;
- put ashes in the granaries where they stored maize to prevent small insects or

organisms from destroying their produce;

- bought pesticides such as "*Chirindamatura* and *Shumba*" to spray in order to prevent contamination of their maize;
- surrounded their granaries with oil to prevent the contamination of their produce;
- used aloe as an antibiotic to prevent the spread of diseases among their livestock; and
- were advised not to be in contact with moisture when harvesting onions, tomatoes, green beans and maize.

5.8 Markets for the farmers' produce and ways of accessing the markets.

Farmers used several ways of selling their produce which included growth points, nearby towns and contractors.



Source: Created by the researcher from the research findings 2013

Fig 5.1 is a summary of the findings on where farmers sold their produce. The majority of the respondents (60%) sold their produce within their locality. A significant proportion of the

sample of 50% sent their produce to the contractor for export and 48% sent them to the nearby growth point. Some sent their produce to towns/cities (31%). In terms of accessibility, 72% of the markets were within walking distance and 52% of the household members used the bus as a more convenient way of accessing the markets. Fifteen percent (15%) indicated that they were using trucks and lorries to carry their produce to cities and towns.

5.9 Sustainable Use of the Environment

The findings showed that farmers were doing their best to keep the environment sustainably. Instead of using fertilisers only, farmers were also making use of manure to improve soil fertility. They also said that they were practising intercropping on leguminous plants which enabled the conversion of atmospheric nitrogen into the soil. All respondents reported that they were practising zero tillage although it was a demanding task. Respondents at both Dotito Irrigation Scheme in Mashonaland Central and Mitchell and Mitchell in Mashonaland East Provinces reported that they were practising mulching to retain soil moisture as well as reducing soil erosion.

Farmers also practised crop rotation to control pest and plant diseases. Respondents said that they were sticking to the principles they were taught by the AGRITEX officers about conservation farming to ensure the sustainable use of the environment. Some of the respondents even highlighted that their knowledge of land conservation enabled them to use the land sustainably while practising their agricultural entrepreneurial business. Respondents reported that they were also practising aforestation to prevent desertification, which is the desolation and the degradation of the environment. They said that they were planting more trees on their land.

5.10 Challenges encountered by the Entrepreneurial Farmers

All respondents at both Dotito Irrigation Scheme in Mashonaland Central and Mitchell and Mitchell in Mashonaland East Provinces, reported that the greatest challenge they faced when they started their farming was lack of strategic entrepreneurship business skills. They reported that they did not have adequate strategic skills for farming and their productivity remained the same. They reported that they did not have skills to support their marketing and farming business.

Respondents at both Dotito Irrigation Scheme in Mashonaland Central and Mitchell and Mitchell in Mashonaland East Provinces, reported that they were not able to buy inputs and farming implements during the start of the farming period before the strategic entrepreneurship skills workshops were introduced in 2010.

5.11 Methods used by farmers to measure their success

All respondents reported that they measured the success of their agricultural business by the income they got per year as well as the household and farming implements they bought. The majority of the respondents also explained that they measured the success or failure of their agricultural business by the output produced from their pieces of land against inputs they used. The respondents also indicated that they compared their current outputs with those of the previous year. A few respondents (26%) highlighted that they measured the success of their agricultural activity by comparing their output with those of their fellow farmers in the entrepreneurial agricultural business.

5.12 The Significance of Strategic Entrepreneurship in Agriculture

Findings showed that strategic entrepreneurship enhanced agricultural productivity and the sustenance of agriculture among families for generations. All the respondents at Dotito

Irrigation Scheme and at Mitchell and Mitchell started to see their farms as businesses when strategic entrepreneurship skills training workshops were introduced by the government. The majority of the respondents showed that they had developed passion for their agricultural business as a result of attending strategic entrepreneurial workshops. One farmer as he completed the open-ended questionnaire explained:

> *Before we got deeper knowledge about strategic entrepreneurship in farming, we thought of selling our land and migrate to urban areas for employment. We were not able to pay school fees for our children and there was not enough food to feed our families. We even failed to meet our day-to-day needs. In fact, whenever we grew crops, the harvest was just discouraging. Yields were decreasing. There was also no market for our produce, such as beans which was as a result of being of poor quality. We had little knowledge on how to grow crops in a way which would not degrade its quality. Our employees would sometimes refuse to work with us saying that we were not paying them well. We did not even know how to produce quality products. We only became enlightened when the government introduced strategic entrepreneurship skills training workshops for farmers. We saw a remarkable change in our agricultural productivity as a result of applying strategic entrepreneurship skills in our agricultural business. The application of strategic entrepreneurship skills in our farming enabled us to improve in packaging of our products as well.*

Findings demonstrated that the respondents were now able to take calculated risks to make their farms profitable. Most of the respondents explained that strategic entrepreneurship skills enabled them to respect each other, employees, traders, transporters and other important stakeholders in the agricultural business. They were now working together with the suppliers, customers, transporters and other stakeholders to make the whole system work better and be more enjoyable and profitable. Farmers were now able to identify opportunities as a result of gaining knowledge about strategic entrepreneurship. Farmers at Dotito Irrigation Scheme

were able to choose the vegetables that grew well in their area, something that they could not do before they attended the strategic entrepreneurship skills workshops.

5.13 Farmers perceptions on Climate Change

Findings indicated that all the respondents perceived climatic change as a reality. Respondents reported that they had noticed temperature and rainfall variations. Temperatures were sometimes becoming exceedingly high. At Mitchell and Mitchell in Mashonaland East Province, farmers noticed dramatic changes in temperatures. They were experiencing abnormal drop in temperatures in summer. Rains were falling even in Winter. Findings showed that these farmers were struggling to deal with climate change. However, the respondents explained that they were trying their best to deal with it.

5.14 Support given to the farmers by the people in key positions.

The DAs from both Dotito Irrigation scheme in Mashonaland Central and Mitchell and Mitchell in Mashonaland East Provinces, indicated that they were supporting the small-scale farmers by coordinating the programmes being implemented by the government. They also reported that they passed on the farmer's grievances and challenges to the government so that solutions could be found. The DAs reported that they were working well with AGRITEX officers to support these farmers. The councilors and village heads also reported that they were utilising the land efficiently.

Chiefs in both provinces highlighted that they were supporting these farmers by encouraging the spirit of harmony, working together and making sure that there were no misunderstandings. Chiefs in both provinces explained that they were supporting farmers by

making sure that all had the land to work on. DAs indicated that they were also supporting the farmers by making sure that they shared inputs from the government equally without discrimination on the grounds of sex, background or religion. AGRITEX officers in both provinces highlighted that they were supporting farmers by supervising and monitoring their activities to make sure that they stick to conservation agriculture which would not disturb the soil but sustain the environment. AGRITEX officers also reported that they were educating farmers about sustainable irrigation patterns.

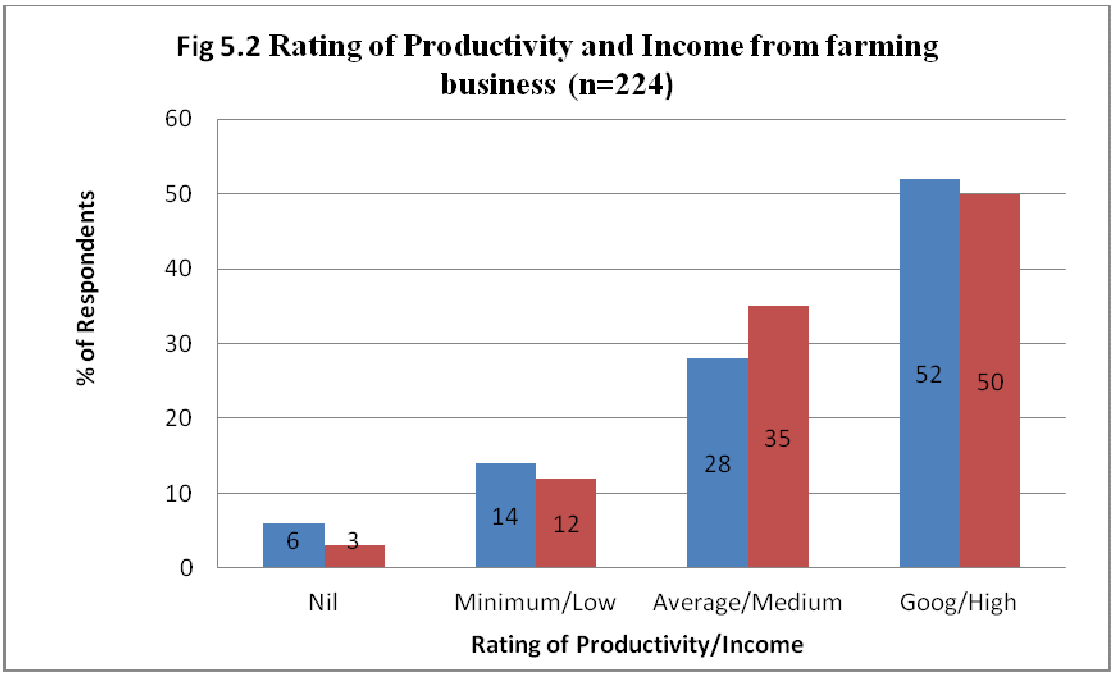
The findings revealed that chiefs, DAs, village heads and councilors were supporting farmers differently in a way which enabled them to improve productivity and to remain in their agricultural businesses.

5.15 Main economic activity at Dotito Irrigation Scheme in Mashonaland Central and Mitchell and Mitchell in Mashonaland East Provinces.

All respondents in key positions at Dotito Irrigation Scheme and at Mitchell and Mitchell indicated that the main economic activity at these areas was agriculture. Findings from the study showed that agriculture was the main economic activity which enabled people to meet their day to day needs. Findings also showed that there were other economic activities at Dotito Irrigation scheme such as retailing and flea markets but these activities were not sustainable.

5.16 Productivity and income for the farmers

The majority of the respondents indicated that they noticed an increase in productivity and income and this is shown in figure 5.2 below:



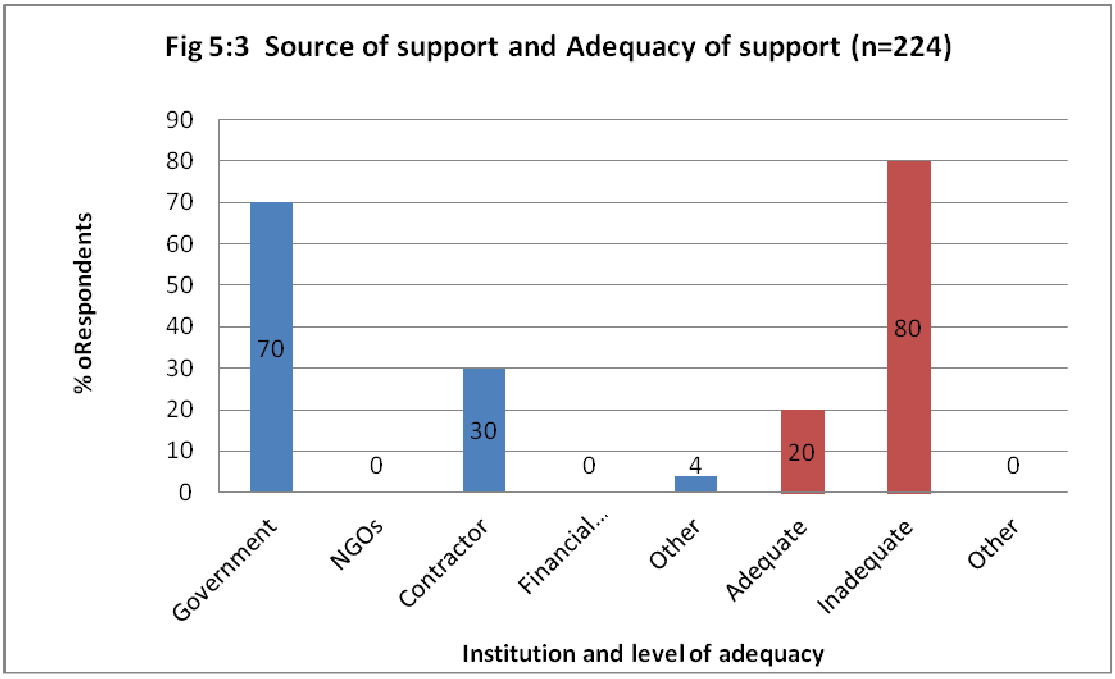
Source: Created by the researcher from the research findings of 2013

5.17 Benefits of Agriculture at Dotito Irrigation Scheme in Mashonaland Central and at Mitchell and Mitchell in Mashonaland East Provinces.

All respondents in key positions in both provinces reported that agriculture created employment for the local people. They stated that they had seen a remarkable improvement in people's standards of living through agriculture. Respondents in key positions also highlighted that the local communities were competing to buy farming equipment such as tractors, generators, and ploughs. DAs and councilors also indicated that they had also noticed a remarkable improvement in productivity resulting in the improvement of the people's standards of living. Respondents in key positions stated that local people in these areas had food. Food security had been achieved by the local people as a result of irrigation. Through agriculture, people were now able to send their children to school. The farmers had improved their houses through entrepreneurial farming. Some of the farmers were buying stands in urban areas and building materials in order to build better houses.

5.18 Support from the State and Non-State actors

Respondents in key positions in both provinces explained that farmers were getting support from the state and non-state actors through provision of farming inputs such as fertilizers, seeds and sometimes chemicals. Respondents also explained that they were being supported by contractors and 80% of the respondents highlighted that the support from both the state and non-state actors was inadequate.

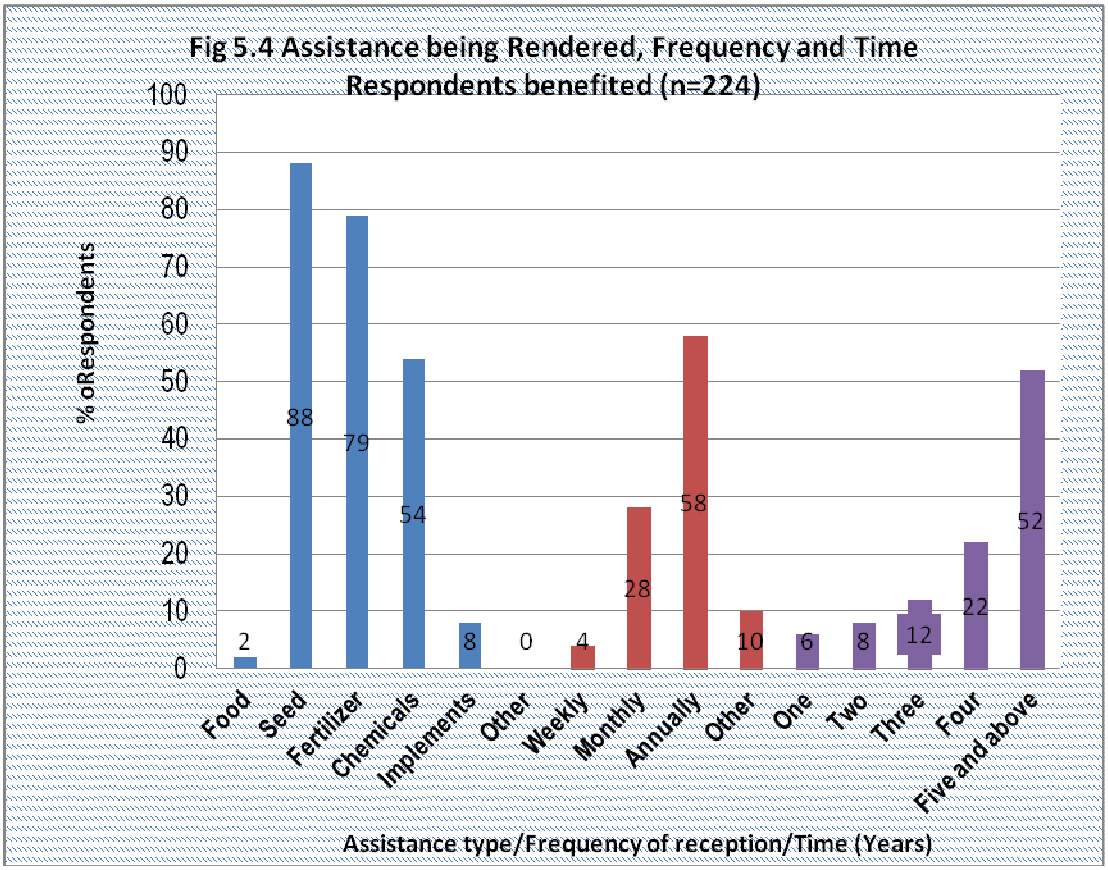


Source: Created by the researcher from the research findings of 2013

In terms of support, the Government was providing 70% in most cases, and the remainder (30%) was coming from the contractor whom they were producing for, for export to the European Union (EU), in particular, Belgium. However, 80% of the farmers felt that the support was still not adequate at all.

Fig 5.4 illustrates the type of assistance the farmers were getting, which is in blue and the frequency of receiving of the support which is in red. Generally the bulk of assistance was in

the form of inputs, mainly seed, fertilizer and chemicals. These inputs were expensive; 58% of the farmers received these inputs once a year. (52%) of the farmers benefited from the input support scheme for at least five years. Findings showed that support from the state was still not adequate, especially the provision of farming inputs.

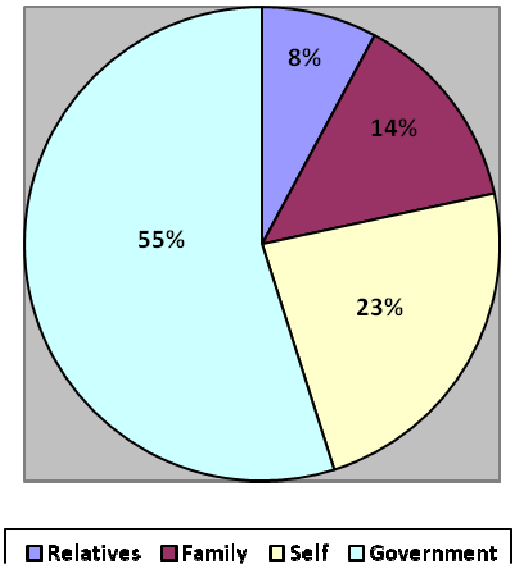


Source: Created by the researcher from the research findings of 2013

5.19 Source of inspiration in Agricultural Business

Findings showed that 55% of the respondents were inspired by the government to engage in agricultural businesses. Twenty-three (23%) of the respondents were not inspired by anyone. Eight (8%) were inspired by their relatives while fourteen (14 %) were inspired by their families.

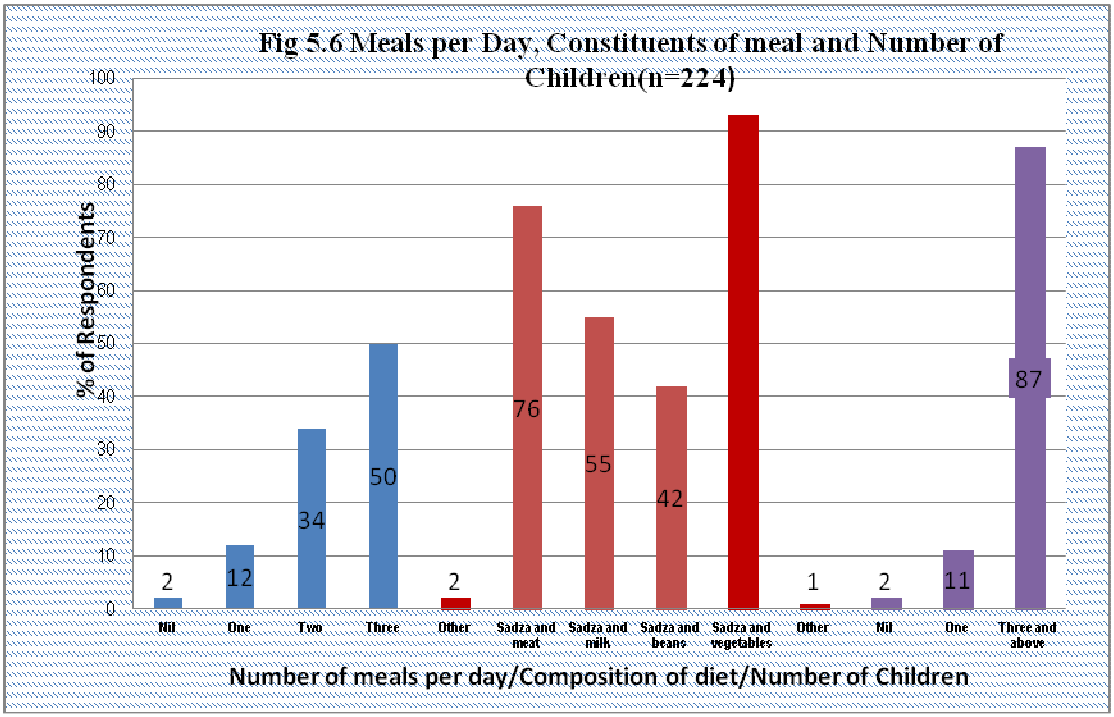
Fig 5.5: Source of Inspiration in Agricultural Business (n=224)



Source: Created by the researcher from the research findings of 2013

5.20 Respondents' number of children, number of meals per day and constituents of the meal.

Eight-seven percent (87%) of the respondents had more than 3 children, 11% had one child and 2% said that they did not have children. Findings showed that 50% of the respondents ate three times per day, 34 % ate two times per day, 12% ate once per day, 2% did not specify. Ninety-three percent (93%) of the respondents ate sadza and vegetables, 72% ate sadza and meat, 55% ate sadza and milk and 45% ate sadza and beans. From interviews, respondents indicated that they ate sadza and fish; sometimes ate pumpkins, boiled fresh ground nuts and green mealies.



Source: Created by the researcher from the research findings of 2013.

5.21 Conclusion

The findings presented in this chapter have shown that strategic entrepreneurship helped farmers to increase productivity. However, respondents explained that they were facing some challenges such as lack of labour, security and adequate inputs. It was reported that the farmers were able to send their children to school, get income to support their families, buying stands in towns and were also upgrading their houses to better standards. The application of strategic entrepreneurship in the farming business has contributed significantly to the increase in productivity. The findings have also shown that the majority of the respondents responding to the questionnaires were between the ages of 30-50 and the majority were married and had children. Findings from the key informant interviews and the questionnaires were consistent, designating the validity and reliability of the results. Respondents were also using the land sustainably and were expecting to increase productivity. The next chapter deals with the analysis and discussion of the findings which were presented.

CHAPTER 6

ANALYSIS AND DISCUSSION

6.0 Introduction

This chapter analyses and discusses the findings which were presented in chapter 5. It also analyses the socio-economic activities at Dotito Irrigation Scheme in Mashonaland Central and Mitchell and Mitchell in Mashonaland East Provinces. The economic value of strategic entrepreneurship for poverty alleviation was addressed as well as the demographic relationships and study variables. The applicability and relevance of the strategic entrepreneurship model in the study was also analysed and discussed in this chapter. Computer software programmes such as Statistical Packaging for Social Sciences (SPSS) version 20 was used to assist in analyzing data. In fact, SPSS was used in computing demographic data and the entrepreneurial strategies adopted by the farmers in order to increase productivity. Content analysis and thematic narrative analysis were used to produce meaningful information from open ended questionnaires. The analysis was done in accordance with the research objectives.

The analysis and discussion of findings relate to the objectives stated below;

- to formulate a bottom-up development model that addresses the food begging bowl attitude and alleviate poverty;
- to document opportunities, challenges and factors that inhibit agricultural growth;
- to identify the entrepreneurial strategies adopted by the farmers to increase productivity;
- to discuss the level of involvement of women and youth in promoting agri-business activities; and

- to examine the relationship between sustainable agricultural business strategies and strategic entrepreneurship.

6.1 Demographic Relationships and Study Variables

There were data on demographic relationships intended to describe demographic variables of the sample of respondents who responded to the questionnaire. It was also intended to assess if these variables had any influence in the research findings. The demographic data consist of sex, age, level of education and years of experience in the farming business.

On sex distribution of the respondents, the data in table 5.3 of chapter 5 showed that females constituted the highest percentage (54%) than their male counterparts who comprised 46% of the total population in the farming business in both study areas. Similar findings established by the International Labour Organisation (ILO) (2012), found that in South Asia 44% of men and 56 % of women workers were engaged in agriculture. This signifies that more females were involved in agricultural activities in rural areas as their husbands were in urban areas or doing other businesses at their homesteads to support the family. Women in this study demonstrated their entrepreneurial capabilities and maximised their resources fully to increase productivity despite the fact that they were facing some challenges, such as work overload as they were expected to fulfil societal expectations while working on their pieces of land.

ILO (2012) notes that rural women are resourceful economic agents who contribute towards the income of the families and the growth of communities in a number of ways. Moreover, the study has shown that gender had no influence in horticultural activities as both men and women found their productivity increasing after the application of entrepreneurial skills in

their farming businesses. Thus, the study refutes the United Nations Research Institute of Social Development (UNRISD)'s (2010) findings which showed that gender exerts an influence in agricultural activities as females and males carried out different agricultural tasks. Gender might wield influence in agricultural activities due to different roles that men and women play in the household. However, women in this study have shown their maximum entrepreneurial capabilities by competing with men despite the fact that they were overburdened by household chores.

Furthermore, the findings demonstrated where these two areas are, in terms of promoting gender equity. The study showed that there was a wider recognition of both males and females in accessing the resources. Respondents in key positions explained that their role was to make sure that inputs were distributed to the farmers equally, regardless of sex. This implied that women had gained a platform in order to be involved in rural economic activities compared to the pre-independence era and just after independence. Gaidzanwa (1991) explains that a woman was required to produce a marriage certificate in order to get land, credit facilities and inputs. This means that some time ago female farmers had no access to land and inputs which is now history.

Although most of the studies which were conducted on entrepreneurship demonstrated that gender had influence in entrepreneurial activities, this study found out the opposite, as gender appeared to have no influence in entrepreneurial agriculture such as horticultural activities.

6.1.1 Age and Marital Status of the Respondents

The research findings presented in Chapter 5 have shown that most farmers in both provinces were married and had children who were going to school. This shows that, rural farmers needed to increase their productivity in order to support their families. The fact that the

majority of these farmers had children who were going to school meant that, the agricultural practice in these areas would not be stopped since these people wanted money for their sustenance. The majority of the farmers in the irrigation scheme were still active as they were able to work for themselves. This actually promoted the sustainability of the agricultural practice in the areas under study.

6.1.2 Farmers' level of Education

The research findings showed that the majority of the respondents (80%) had basic education, 10% had certificates, 9% had diplomas and 1% had degrees. These findings demonstrate that most of the farmers at both Dotito Irrigation Scheme in Mashonaland Central and Mitchell and Mitchell in Mashonaland East Provinces were not highly educated. Most of them said that their highest level of education was Zimbabwe Junior Certificate (ZJC). Some of them explained that they just went to school to be able to read and write. Despite the fact that the majority of the farmers had basic education, the findings have shown that there was an increase in most of the farmers' agricultural productivity. This implies that there was no relationship between agricultural productivity and academic level of education. The introduction of strategic entrepreneurship skills workshops helped the majority of the farmers to increase productivity since it was being done practically and they were taught in their mother language. Thus, strategic entrepreneurship skills workshops introduced by the government resulted in an increase in agricultural productivity. Although there were very few people with degrees and diplomas, productivity had increased.

6.1.3 Farmers' Level of Experience in the farming business

Findings have shown that the majority of the farmers (60%) had five or more years of experience in the farming business. The majority of these farmers reported that their agricultural productivity increased when they started to apply strategic entrepreneurship skills

in their farming businesses. The fact that the majority of farmers with five years and more could not increase productivity before the introduction of strategic entrepreneurship workshops proved that experience alone was not adequate for the farmer to increase productivity; the application of strategic entrepreneurship skills in the farming businesses might have had the desired results.

6.2 Wealth Creation through Entrepreneurial Agriculture

Findings from the study confirmed the applicability of the Strategic Entrepreneurship Model. The research showed that entrepreneurial agriculture had improved the rural livelihoods as these agri-businesses enabled individuals and families to increase their income and to eventually acquire assets. Respondents in key positions reported that farmers were competing to buy farming equipment such as, tractors, generators and ploughs. Further, the findings showed that entrepreneurial agriculture created employment for both men and women. In this study, wealth encompasses ownership of productive assets such as business equipment and assets as direct benefits. In this case, farmers were able to buy livestock such as cattle**.** Baines et al (2003) and Chegini and Khosshnat (2010) further support this by noting that strategic entrepreneurship is an instrument driving economic development, creating wealth and employment. These are indicators of wealth creation at local and national levels. Wealth creation has been the pursuit of regional and rural development policies and programmes. Self-employment, as in the case of the farmers in the study and employment of friends and relatives are generally perceived as a way of increasing or stabilizing income and contributing towards improved livelihoods. All these eventually lead to wealth creation, simply because income generated from agriculture is wealth. Below is an illustration of the relationship between productivity and income which leads to the creation of wealth.

6.2.1 Relationship between productivity and income

Findings have shown that there is a direct relationship between productivity and income. As productivity increases, income also increases. This is shown on Fig 6.1 below:

Fig 6.1: Relationship between Productivity and Income

Correlations				
			Improvement in productivity	Improvement in income
Spearman's -- rho	Improvement in productivity	Correlation Coefficient	1.000	.799**
		Sig. (2-tailed)	.	.000
		N	224	224
	Improvement in income	Correlation Coefficient	.799**	1.000
		Sig. (2-tailed)	.000	.
		N	224	224
Correlation is significant at the 0.05 level (2-tailed).				

Source: Findings from the Researcher 2013

One of the objectives of the study was to develop a bottom-up development model that would alleviate poverty. The study however, showed that entrepreneurial agriculture increases productivity which consequently leads to an increase in income. When income increases, people are able to buy basic goods and this reduces poverty. Thus, the study examined whether there was any relationship that existed between productivity and income generated from farming business. Spearman's correlation reveals a positive correlation and a statistically significant relationship between the two. The implications of the findings are that farmers are producing more and have increased income levels.

Furthermore, the United Nations General Assembly (2011) views farmers as entrepreneurs who boost the economy of a country. The study observes that, increased agricultural productivity, assures food security which promotes the health of individuals in the country. Some of the respondents explained that they were exporting their produce to the international market, earning foreign currency. Thus, a bulky export of farm produce such as green beans, baby corn and chillies enables the inflow of foreign currency into the country. Foreign currency enables the country to buy equipment for use in building its infrastructure. This implies that agriculture increases the country's (GDP). Additionally, agriculture fosters relationships, friendship and harmony among member countries. Thus, entrepreneurial agriculture has proven to be an effective tool for the creation of wealth.

This demonstrates that entrepreneurial agriculture has the potential to create wealth in the country. In fact, the results from the study tally with the explanation which was put forward by Gollin et al (2002). Their explanation is that, rising agricultural productivity encourages farmers to maximise structural transformation needed for Africa's income to catch up with more advanced economies. This shows that rising agricultural productivity creates wealth for the nation.

In addition to that, findings have shown that increased agricultural productivity allows farmers to engage in non-farming agricultural activities such as trading in non-agricultural products. The fact that some of the farmers get US$180 per week when their farming businesses are at peak, suggest that these farmers can invest their money by venturing into non-farming businesses. This shows that increased agricultural activity through entrepreneurial farming, can create wealth.

6.3 Social Development and Agricultural entrepreneurship

United Nations Research Institute for Social Development (2010), explains that social development is a process which is concerned with processes of change that lead to the improvement in human well-being, social relations and social institutions that are equitable, sustainable and compatible with the principles of justice. Although the principles of social justice are difficult to determine, findings from the study have shown that entrepreneurial agriculture improves the human well-being of individuals as well as their social relations. This was further supported by the fact that farmers themselves reported that entrepreneurial agriculture allows them to establish relations with various stakeholders who are involved in their agricultural businesses. Findings from chapter 5 showed that entrepreneurial agriculture promoted social development. The majority of the farmers indicated that they had seen a remarkable increase in their agricultural productivity and this allowed them to send their children to school and to access private doctors when they were in need of medical care. All these are indicators of social development.

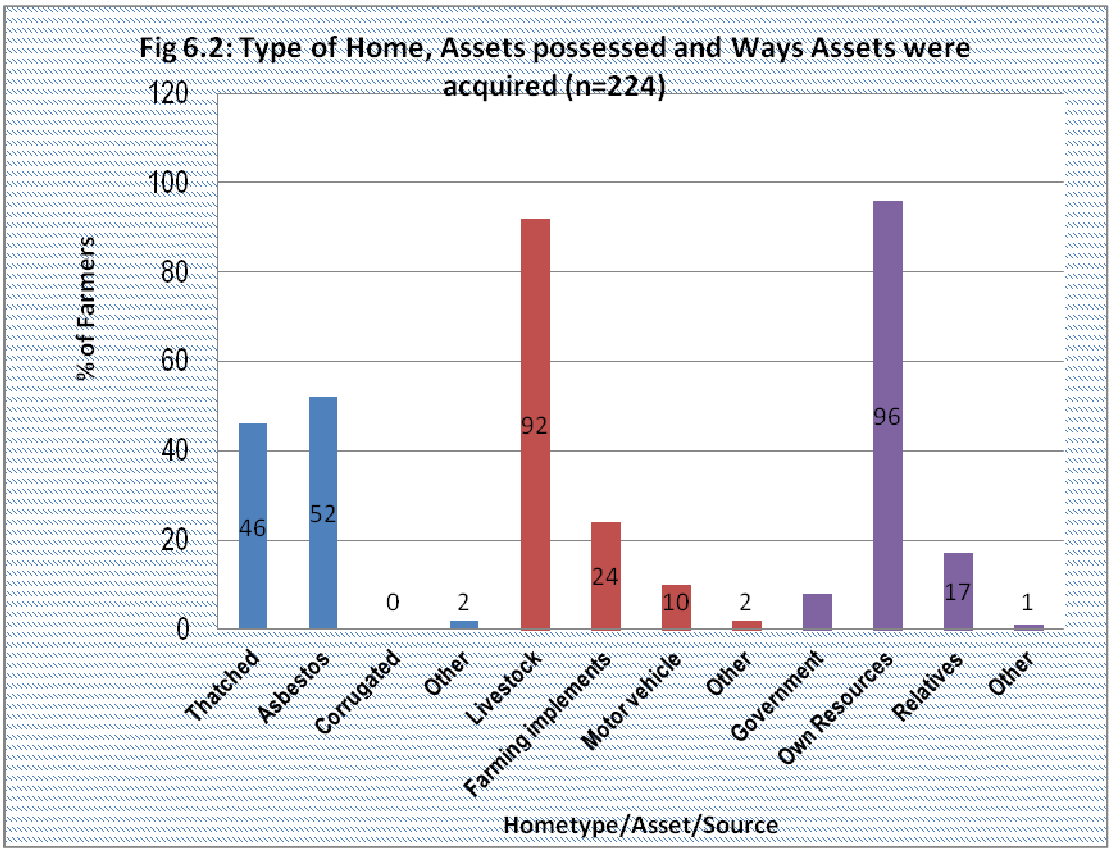
In addition to that, empowerment, promotion of gender equity and sustainable development are achieved through entrepreneurial agriculture at Dotito Irrigation Scheme in Mashonaland Central and Mitchell and Mitchell in Mashonaland East Provinces. Women reported that they were now involved in decision-making in the household when they started earning income through farming. They also explained that agriculture had economically empowered them compared to the time when they practised subsistence farming where they were only producing food for family consumption. They said that they used not to have independence in their households and they remained subordinate to their husbands. Nonetheless, entrepreneurial agriculture had come to their rescue. All these are indicators of social development. The study has also shown that entrepreneurial agriculture has empowered the

rural poor and restored their dignity. Seers (1972) notes that development should be seen as creating the conditions for human potential and the study has confirmed that. Thus, entrepreneurial agriculture supported by the government and non-governmental organisations at its inception can be an effective development programme which promotes social development that alleviates poverty. Griffin and Knight (1990) state that economic growth on its own, may not solve or even alleviate poverty in a reasonable time period. However, promoting entrepreneurial agriculture proves to be the sound development programme that alleviates poverty in the country. Dotito Irrigation Scheme in Mashonaland Central and Mitchell and Mitchell Project in Mashonaland East Provinces have shown that they have created the conditions for human dignity. The farmers in the study are now capable of supporting themselves though their income is still low.

Social Development encompasses material achievement such as good health, education and access to the goods and services which are necessary for decent living (Pinstrup and Cheng 2009). This shows that agricultural entrepreneurship in both provinces under study, promotes social development as the local people are now able to buy goods and services which are necessary for their decent living. The findings also demonstrated that the majority of the farmers achieve a sense of security, dignity and the ability to be part of the community through social recognition.

Baines et al (2003) note that a good shelter is a precondition for social development. Findings from the study have shown that the majority of the farmers were able to build better houses while others were upgrading their houses as a result of increased agricultural productivity. Social policy scholars are of the view that social development occurs when an individual has productive assets or property that allows him or her to meet the day-to-day needs. Farmers at

Dotito and Mitchell and Mitchell Project improved their houses as a result of entrepreneurial agriculture. The graph below shows the assets that most of the farmers in this study possess.



Source: The Researcher 2013

The graph above shows what the farmers acquired in the form of assets. This shows the importance of strategic entrepreneurship in agriculture. It enabled individuals to acquire assets such as livestock on their own without necessarily being given by the government. This is one of the success stories of strategic entrepreneurship in the agricultural business.

6.4 Household Management Strategies for Food Security.

The research findings have shown that farmers are capable of managing their produce for family consumption. Both men and women have reported that they had used some of their horticultural produce to feed their families. Furthermore, they said that they used gum tree leaves to prevent the contamination of their produce such as maize. For custody of their

produce, they kept beans, maize and dried vegetables for family consumption. Research findings have shown what was achieved when the farmers applied entrepreneurial skills in their agricultural businesses. Akinbami et al (2011) say that findings have established that entrepreneurial agriculture in Nigeria's rural areas has served as a panacea in achieving food security. They further note that entrepreneurial skills promote an integrated approach to supporting agriculture where there are climate change and food security problems. Farmers at Dotito irrigation Scheme said that their children were no longer going to school hungry. When selling their agricultural outputs, farmers have used barter trade. This implies that the farmers had adopted several strategies in order to make sure that their children get a balanced diet.

6.5 Constraints that Restrain Agricultural Growth

Agricultural growth was hindered by lack of finance to upgrade their roads to facilitate easy transportation of their produce to the markets. Lack of cheap loans and access to credit were stumbling blocks in their day-to-day running of agricultural businesses. Briviova et al (2010) acknowledge the same findings that lack of capital and access to affordable credit by the small-holder farmers, affected agricultural growth in Kenya.

Unavailability of markets for their produce was a constraint to their agricultural businesses. Because of this, farmers ended up selling their produce at lower prices to the local people who could not afford higher prices. Gathee (1991) says that the shortage of markets and cold rooms negatively affected horticultural farmers.

Farmers at Dotito Irrigation Scheme and Mitchell and Mitchell Project lamented the shortage of water pipes during the dry season when the temperatures were high. They said that their crops wilted and as a result, productivity was reduced. In addition to that, farmers at Mitchell

and Mitchell Project reported that they were challenged by lack of labour. The reason for this was that most of the locals at Mitchell and Mitchell were in the farming business as well and therefore most of them were busy working on their pieces of land. The study has also shown some differences in challenges faced at Dotito Irrigation Scheme and Mitchell and Mitchell Project. Farmers at Dotito Irrigation scheme faced the problem of theft, while at Mitchell and Mitchell there were shortage of labour.

Furthermore, the research findings showed that some of the problems encountered by the farmers were gender specific. Female farmers said that some of the challenges they faced were lack of time as mothers to mentor their children since they were always busy working on their pieces of land. They said that at times they did not attend some of the family functions due to the fact that they had a lot of work to do on their fields.

6.6 Main Economic Activities at Dotito Irrigation Scheme and Mitchell and Mitchell

The results from the study have shown that the main economic activity in these areas was agriculture. Respondents in key positions explained that the local people in these areas relied chiefly on horticulture and livestock.

Table 6.1: Main Economic Activities that Households Practised (n=224)

Economic activity	Frequency (%) of households involved	Frequency (%) of households involved seasonally
Livestock	98(44.0)	10(5.0)
Horticulture	202(90.0)	5(5.4)
Other	5(2.0)	0(0.0)

Table 6.1 exhibits the main activities that households were engaged in. Horticulture was revealed as the major economic activity; hence, it was the source of livelihood at household level by the majority (90%). A significant proportion is involved in animal husbandry (44%). Very few (5%) depend on other livelihood strategies, mainly trading. 2% of the farmers were engaged in these economic activities seasonally. The implication is that these farming activities are done throughout the whole year. This showed that farmers were continuously earning income, hence they were able to meet their day to day needs. Findings have shown that farmers in these study areas were competent entrepreneurs as they were able to diversify in their agricultural businesses. Rudmann (2008) notes that a successful entrepreneur diversifies in order to increase profits as well as fight competition.

6.7 Sustainable Use of the Environment

Majority of the farmers reported that they were trying their best to use their land sustainably. They explained that they were practising conservation farming in order to reduce the degradation of the land. They also said that they were practising mulching to reduce the loss of moisture from their crops when the temperatures were exceedingly high. This shows that farmers in these areas were strategic in terms of managing their environmental resources. Schumpter (1949) views an entrepreneur as a person who is able to reduce future uncertainties. In this scenario, the farmers demonstrated that they were able to reduce the degradation of their land in future by practising conservation farming. The majority of the farmers at Mitchell and Mitchell explained that they were planting trees in order to reduce the effects of deforestation. In both provinces they explained that they were using manure to improve the quality of their soil. This implies that farmers in these areas were practising conservation agriculture and as such were using their land sustainably.

Table 6.2: Sustainable Agriculture Activities and Sustenance (n=224)

Item	Frequency	Percentage
Knowledge of Conservation Agriculture	199	89%
Availability of skills to sustain Agricultural activities in Global Warming environment	178	79%
Existence of policies to promote Agricultural Activities	126	56%
Need for Specific kind of assistance from State or Non-state actors	186	83%
Possibility of producing bumper harvest without State assistance	152	68%
Adequate farm implements	99	44%

Table 6.2 reveals that the farmers had a lot of training in terms of conservation farming for sustainable development. The majority (89%) knew conservation farming. However, those with necessary skills to enable them to sustain their agricultural activities in an environment marred by global warming were 79%. This demonstrated that, strategic entrepreneurship training workshops introduced by the government in these areas, improved the entrepreneurial capability of the local farmers. The majority of the farmers (89%) knew conservation farming. However, there was great demand for assistance from the state or non-state run actors (83%) in certain areas. 44% indicated that farming implements were inadequate.

6.8 Poverty Alleviation and Family Dignity through Entrepreneurial Farming

Findings from the study have shown that entrepreneurial farming can alleviate poverty. This is supported by the World Bank Report (2008) which states that agricultural development through innovation or entrepreneurial skills is central to poverty reduction. The study

findings are also in line with what Mbam and Nwibo (2013) support, that entrepreneurial agriculture is a strategy for poverty alleviation among farming households in Igbo-Eze, North Local Government Area of Enugu in Nigeria. Entrepreneurial agriculture proved to have a significant effect in reducing poverty among farming households. The study has shown that farmers' income allows them to have easy access to goods and services. The concept of poverty includes material deprivation such as food, shelter and access to basic services such as health and education. The findings have shown that entrepreneurial agriculture helps farmers to gain dignity and power.

Women said that they had gained power in the households through agriculture. In addition to that, the findings have shown that increased agricultural productivity increases the chances of promoting individual's standing in the community. Farmers were now getting income and adequate food was being served on their tables to feed their families. The availability of food in the family stabilises the family as well as increasing the performance of children at school. Thus, the findings also showed that entrepreneurial agriculture has helped farmers to alleviate poverty among their families.

6.9 Farmers' Entrepreneurial Competence

Findings have shown that the majority of the farmers at Dotito Irrigation Scheme in Mashonaland Central and Mitchell and Mitchell in Mashonaland East Provinces had become entrepreneurially competent and proficient. Respondents explained that their agricultural productivity improved because of applying strategic entrepreneurship skills which they were taught such as, being dedicated and committed to work, being keen to be in business, being cooperative, innovative and creative, good management of human and capital resources, being able to take risks and the ability to adapt to the environment. All these skills are indicators of being entrepreneurially competent. This implies that small-holder farmers at

Dotito Irrigation Scheme and Mitchell and Mitchell had improved their farming skills in the agricultural business.

Findings from the study showed that the farmers in the areas under study internalised the strategic entrepreneurial skills. They had shown that they were able to measure the success or failure of their agricultural businesses. They measure the success or failure of their agricultural businesses by weighing the output against inputs that they used. This was a clear indication of being entrepreneurially competent.

Farmers in both provinces proved to be competent entrepreneurs. A competent entrepreneur is recognised by being able to take strategies that promote the smooth functions of his or her business (Nwibo and Okorie, 2010). The farmers have applied strategies to reduce the contamination of their produce. They said that they surrounded their granaries with oil to prevent small-organisms from destroying their stored produce. They also used chemicals such as Chirindamatura (*grain protector)* and Shumba (*lion grain protector)* in order to prevent the contamination of their stored maize. The fact that these farmers were taking strategies to prevent the contamination of their produce indicates that they were entrepreneurially competent because they knew how to manage their agricultural businesses successfully.

6.10 Rural Development and Entrepreneurial Agriculture

Findings from the study demonstrated that there is a relationship between entrepreneurial agriculture and rural development. Findings presented in chapter 5 have evidently shown that entrepreneurial agriculture is a catalyst for rural development. Entrepreneurial activity is unquestionably considered as an engine for economic growth and innovation (Baumol, 1990). Thus, entrepreneurial agriculture contributes significantly to the development of rural areas. Entrepreneurial agriculture has created employment for several people, provided adequate

food for local consumption, enabled people to upgrade their houses to better standards and allowed some of the local people to buy farming implements such as tractors, cattle and ploughs. At Dotito Irrigation Scheme in Mashonaland Central Province, farmers say that there are now able to buy stands in Dotito Township and this is a positive rural development. From the study,fifty-five percent (55 %) of the respondents at Dotito Irrigation Scheme reported that they bought stands at Dotito Township. They reported that they bought these stands in high density areas where they could afford. This clearly showed the importance of irrigation farming systems in rural areas. They indicated that each stand, covering 300 square metres cost US$600. These farmers paid the money in instalments until they finished. Those who did not finish paying the instalments explained that they had already started building houses because they were given permission to build since they managed to deposit half of the price of their stands. All these are rural development indicators.

6.11 The Role of State and Non-State Actors in Promoting Entrepreneurial Agriculture

The research findings have shown that the state has played a pivotal role in promoting entrepreneurial agriculture. Farmers say that the irrigation schemes were introduced by the government. Furthermore, the government introduced strategic entrepreneurship skills to equip these small-holder farmers with skills that enabled them to remain in the farming business and to increase agricultural productivity. Inputs such as fertilizer, farming implements and chemicals come from the government. AGRITEX officers also come from the government to help farmers in their irrigation schemes. Although support from the government is inadequate, the findings have shown that the government has played a pivotal role in promoting agriculture. There were also non-state actors such as contractors who provided inputs and technical advice to the farmers. These contractors helped the local farmers to market their produce on the international markets such as Belgium and United Kingdom.

6.12 The Strategic Entrepreneurship Model in the Agricultural Industry.

The key issues of the findings on the operations of the farming business are innovation and creativity. The report on the farmers' ability to produce products that meet the international standards as well as their ability to change the types of crops, confirms the relevance of the strategic entrepreneurship model in the agricultural business. Innovation and creativity, as dimensions of strategic entrepreneurship model, helped farmers to remain in the agricultural business. Farmers at Dotito irrigation Scheme in Mashonaland Central and Mitchell and Mitchell in Mashonaland East Provinces had become innovative and creative after attending the strategic entrepreneurship skills training workshops. Christesen et al (2002) note that innovation that consists of improving the performance of established products to meet the needs of existing markets is referred to as sustaining innovation. Farmers in the areas mentioned above are now trying their best to make sure that their green beans meet international standards.

The researcher's findings showed that farmers at Dotito irrigation scheme in Mashonaland Central Province were creative for they had put in place a system which protected their produce against the high risk of theft and vandalism. Farmers organised themselves into groups where they had day and night shifts to guard against thieves. Furthermore, they hired a security company to help them guard their irrigation scheme.

6.13 Conclusion

The research findings were analysed and discussed in this chapter. The challenges faced by the farmers in these two areas were discussed. Major challenges identified include poor infrastructure, lack of finance, security, markets, shortage of labour and the problem of theft. It has been pointed out that there is a positive relationship between strategic entrepreneurship

and sustainable agriculture. It has been shown that the application of entrepreneurial skills increased agricultural productivity which has consequently led to the improvement of the people's standard of living. This chapter has demonstrated the applicability of the strategic entrepreneurship model in farming businesses.

The next chapter deals with recommendations and conclusions regarding the strategic entrepreneurship agricultural business.

CHAPTER 7

CONCLUSIONS AND RECOMMENDATIONS

7.0 Introduction

This study explored strategic entrepreneurship skills in agricultural businesses at Dotito Irrigation Scheme in Mashonaland Central and Mitchell and Mitchell in Mashonaland East Provinces. This chapter concludes the main and specific objectives of the study and the model by drawing deductions from the findings presented, discussed and the methodology used. It gives recommendations regarding the promotion of entrepreneurial agri-businesses and offers suggestions on areas of further research. The need to promote entrepreneurship knowledge in small-scale agricultural businesses is emphasised.

7.1 Conclusions

The conclusions that are drawn from the study showed that entrepreneurial agriculture is vital for the creation of wealth in society. The use of strategic entrepreneurship skills in agricultural business is significant as it increases productivity. In fact, strategic entrepreneurship in the farming business enhances the smooth functioning of rural agricultural businesses. In addition to that, the application of strategic entrepreneurship skills in agricultural businesses has a significant bearing on the success of small-holder business farmers in rural areas.

Entrepreneurial agriculture contributes significantly to the socio-economic development of the country by generating income through exporting the produce to international markets as

well as creating employment for local people. It also promotes social development by alleviating poverty among the poor rural farmers. Thus, the study concluded that successful entrepreneurial agricultural business is a catalyst for solving the country's incessant woes of hunger, poverty and unemployment. Simply put, the study's aims were achieved.

The study concluded that the government supports and encourages entrepreneurial agriculture by providing enablers such as developing infrastructure, expanding the irrigable land and introducing strategic entrepreneurship skills workshops. Improved infrastructure such as the improvement of roads and transport allow farmers to ferry their produce to the market. Entrepreneurship skills workshops activated the entrepreneurial mindsets of the farmers to be able to deal with challenges they faced.

The majority of the small-scale rural farmers are married and have children who are going to school. These farmers in the irrigation schemes were happy and satisfied with what they were doing. They were expecting to increase productivity despite the fact that they were encountering some challenges.

Successful agricultural small–scale rural farmers did the following to increase productivity;

- worked hard;
- applied strategic entrepreneurship skills in their farming business;
- were innovative and creative;
- prepared to take risks;
- cooperated with each other in the farming business;
- adapted themselves to environmental changes;
- practised good management of their capital resources; and

- were dedicated and committed to their work.

An increase in agricultural productivity leads to an increased agricultural income which consequently leads to the creation of wealth which improves people's standard of living. Thus, increased agricultural productivity enhances human development and provides a sense of security, dignity and the ability to be part of the community through social recognition. Furthermore, increased agricultural productivity reduces higher chances of the scourge of HIV and AIDS since women who are most likely to contract the disease as a result of poverty and unemployment, would be fully employed. The study also concludes that the failed Growth Point Development Policy of 1985 which was enunciated by the then Prime Minister, President R.G.Mugabe can now be fulfilled provided entrepreneurial agriculture is promoted. Farmers at Dotito Irrigation Scheme in Mashonaland Central Province were able to buy stands at the growth point as a result of increased agricultural productivity. This means that if entrepreneurial agriculture continues, growth points would expand due to increased income that the farmers will be realising.

Thus, this study has made an original contribution to the discipline of Business Management especially on strategic entrepreneurship and agricultural businesses by small-holder farmers.

The research has shown that women are no longer relegated to the periphery of development programmes and policies as was the case in the pre-independence era. Furthermore, women and men have equal access to machinery, inputs and resources. The research elaborates that promotion of entrepreneurial agriculture is one of the most effective weapons of empowering the unemployed rural women and youths.

The challenges encountered by small-holder farmers included:

- shortages of irrigation pipes during the dry season;

- lack of security for their produce;
- lack of markets where they can sell their produce profitably;
- lack of sufficient storage facilities such as cold-rooms; and
- shortage of labour at Mitchell and Mitchell Project as most of the surrounding rural people are also involved in entrepreneurial agriculture.

Farmers in the areas studied had proved that they were entrepreneurially competent as they were able to cope with some challenges. The study has shown that agriculture is the mainstay of the country's economy which plays a pivotal role in creating downstream industries which may resuscitate the industrial life of Zimbabweans. Majority of the farmers sold their produce at the local markets while a few served international markets because of stiff competition. The introduction of irrigation schemes and strategic entrepreneurship skills training workshops increased food security. This enabled the rural farmers to feed themselves and managed to access goods and services without necessarily relying on the government's free provisions.

The establishment of sound relationships with various stakeholders in the agricultural business made a significant contribution to the smooth running of agri-businesses. For instance; when the farmers established strong links with supermarkets, there were able to sell their produce to these supermarkets without facing many challenges. Thus, building strong relationships with employees, contractors and customers helps farmers in their day to day running of the business. Poor rural farmers had different techniques of ensuring food security in their households. They practised barter trade to make sure that their families got balanced diet.

7.2 Recommendations

Conclusions derived from the study lead to the following recommendations:

- Entrepreneurship skills in the farming business proved to be effective tools for revitalising Zimbabwe's entrepreneurial agriculture into its original position of being Africa's bread basket. Entrepreneurial farming promotes economic growth, yet our understanding of the role of entrepreneurship skills in the farming business is shallow. The government is therefore recommended to encourage entrepreneurial farmers to embrace and employ strategic entrepreneurship skills in the farming businesses.
- As the rural farmers are resource deficit, it is recommended that the government provide consistent and adequate support in the form of infrastructure and cheap finance. For instance, improved infrastructure such as roads enable farmers to ferry their produce easily to the market.
- The farmers are encouraged to view farming as business. That is, farmers must be geared for the market.
- The government should assist in seeking markets for the small-holder farmers. Furthermore, it should organise workshops and seminars with people from different countries for this enables it to establish local, regional and global market linkages which would help farmers sell their produce to several markets. In addition to that, the government should send people from the Ministry of Agriculture, Industry and International Trade Development to other countries to identify markets where the local farmers' produce can be sold.
- Furthermore, the government should venture into multilateral and bilateral agreements with other countries such as the United Arab Emirates (UAE) which is

a desert where people do not grow much food. The local farmers can fill in that gap and enjoy diversified markets, and through that the local produce can be exported duty-free. It is also recommended that the government crafts protectionist policies to protect the local farmers from foreign competition through the imposition of import tariffs so that the local producers will be at an advantage when selling their produce.

- The government is also implored to make sure that the small-scale farmers get subsidized inputs and farming implements such as tractors such as those given to the large-scale commercial farmers.
- It is further recommended that strategic entrepreneurship skills training workshops, be introduced to all farmers in rural areas so that they become entrepreneurially competent when conducting their agri-businesses.
- An entrepreneurial spirit is very important to every individual, it is recommended that families make an entrepreneurial practice as part of their culture.
- The Ministry of Education should design a syllabus on entrepreneurial education from primary school to Higher and Tertiary levels.
- The study recommends that an Agricultural Bank (AGRIBANK) be adequately funded in order to help farmers in their agricultural businesses.
- The government should introduce a policy that will promote business between small-holder farmers and food outlets in order to promote locally produced products.

7.3 Areas for further Research

There is need for economic researchers to come up with economic indicators on how agricultural productivity can increase the county's GDP. These can formulate and explain the

matrices to be employed by the country to get to the economic level of a developed country. The economic researchers can also come up with figures that can reveal how small-scale farming can contribute meaningfully to the country's GDP.

Furthermore, research on the role of strategic entrepreneurship in other sectors of agriculture (for example; animal husbandry, dairy and piggery) in developing economies, should be undertaken.

7.4 Conclusion

In conclusion, strategic entrepreneurship skills are important in agricultural business since they promote human development. Small-scale farmers increase productivity for the good of their families and stakeholders in agricultural businesses. The study recommended that the government should encourage and support farmers to incorporate strategic entrepreneurship skills in their agri-businesses. Areas for further research have been identified and these included the need for economic researchers to come up with economic measures on how agricultural productivity can meaningfully contribute to the country's GDP.

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APPENDIX A: QUESTIONNAIRE

QUESTIONNAIRE

Good day, I the Vice President J.T .Mujuru. I am a part time DPhil candidate with the University of Zimbabwe focusing on a topic entitled, "A Strategic Exploratory Entrepreneurship Study of Sustainable Agricultural Business: Case studies of Mitchell and Mitchell in Mashonaland East and Dotito Irrigation Scheme in Mashonaland Central Province". Local farmers are encountering challenges as a result of climate change and globalization. In this changing environment strategic entrepreneurship in the farming business can be the vehicle for increasing productivity .This questionnaire is made to examine the role of strategic entrepreneurship in sustainable agricultural businesses. The researcher wants to know what you do; you want, need and express your views as a farmer.

Your responses are important for recommendations to policy makers and other stakeholders.
It is important to answer all the questions as honestly as possible.
Your answers in this questionnaire shall be treated as confidential.
Thank you for being willing to complete this questionnaire
Please mark the applicable block with an X.

X

SECTION A: ADMINISTRATIVE INFORMATION

A1). Enumerator ……

A2).Area of study ……

A3). Name of respondent (pseudo name)……

A4). Sex of respondent Male ☐ female ☐

A5). Age of respondent- below 30 ☐ 30-50 ☐ Above 50 ☐

SECTION B: ECONOMIC ACTIVITIES

B1). What is the main economic activity are you engaged in?

a) Livestock Yes ☐ No ☐

b) Horticulture Yes ☐ No ☐

c) Cash Crop Yes ☐ No ☐

d) Other (please specify)……..

B2). Is it seasonal?

a) Livestock Yes ☐ No ☐

b) Horticulture Yes ☐ No ☐

c) Cash crop Yes ☐ No ☐

d) Other Yes ☐ No ☐

e) Other (please specify)……

B.3). Where do you sell your produce?

a) Local Yes ☐ No ☐

b) Growth Point Yes ☐ No ☐

c) Town/City Yes ☐ No ☐

d) Contractor Yes ☐ No ☐

e) Export Yes ☐ No ☐

f) Other (please specify)……

B4). **How accessible are the markets?**

a) Within walking distance Yes ☐ No ☐

b) By bus Yes ☐ No ☐

c) Other (please specify)……..

SECTION C: SUSTAINABLE AGRICULTURE

C1). What skills do you have to support your economic activities?

a) Basic Yes ☐ No ☐
b) Certificate Yes ☐ No ☐
c) Diploma Yes ☐ No ☐
d) Degree Yes ☐ No ☐

e) Other please specify)…….

C2).How do you view your farming activity?

a) Short Term Yes ☐ No ☐
b) Medium term Yes ☐ No ☐
c) Long term Yes ☐ No ☐
d) Viable Yes ☐ No ☐

e) Other (Specify)……

C3). How long have you been engaged in this farming activity

a) Less than a year ☐
b) One Year ☐
c) Two Years ☐
d) Three Years ☐
e) Four Years ☐
f) Five Years and above ☐

C 4) Where do you store your outputs?

……

……

……

C.5) Do you train your workers and family members about the farming business?

Yes ☐ No ☐

C.6)What measures do you take to prevent the spoilage of your outputs?.....

.....

.....

……

……..

C.7) Has there been an improvement in productivity?

a) Nil ☐

b) Minimum ☐

c) Average ☐

d) Good ☐

C.8). Has there been an improvement in income

a) Nil ☐

b) Low ☐

c) Medium ☐

d) High ☐

C.9). To what do you attribute this growth or lack there of

a) Skills ☐

d) Financial support ☐

c) Extension services ☐

C.10). How do you view the project in 5-10 years?

a) Not Functional ☐
b) Surviving ☐
c) Thriving ☐
d) Growing ☐
e) Other (please specify)……

C.11) Are you satisfied with your agricultural activity? Yes

Yes ☐ No ☐

Explain your answer above……..

……

C.12) Do you get any support from institutions?

a) Government Yes ☐ No ☐
b) Non-Governmental Organizations Yes ☐ No ☐
c) Contractor Yes ☐ No ☐
d) Financial Institutions Yes ☐ No ☐
e) Other

(specify)…….

C.13)Is the support adequate?

a) Adequate Yes ☐ No ☐
b) Inadequate Yes ☐ No ☐

c) Other (please specify)……

C.14). What do you think needs to be done to improve productivity your produce?

a) Financing Yes ☐ No ☐

b) Roads Yes ☐ No ☐

c) Transport Yes ☐ No ☐

d) Extension Services Yes ☐ No ☐

e) Marketing Yes ☐ No ☐

f) Other (please specify)…….

C14b).What do you think can be done to increase the marketing of your produce?

a) Financing Yes ☐ No ☐

b) Roads Yes ☐ No ☐

c) Transport Yes ☐ No ☐

d) Extension Services Yes ☐ No ☐

e) Marketing Yes ☐ No ☐

e) Other (please specify)……..

C.15) Do you know anything about conservation agriculture?

Yes ☐ No ☐

C.16) Do you have skills which will enable the sustenance of your agricultural activities in the era of changing rainfall and temperature patterns?

Yes ☐ No ☐

C.17) Are there any policies which you think should be changed to promote your agricultural activities?

Yes ☐ No ☐

C.18). Do you need a specific kind of assistance from state and non-state actors?

Yes ☐ No ☐

C.19). Do you think that you can produce bumper harvest without assistance from the state and non-state actors?

Yes ☐ No ☐

C.20). Do you have adequate farming equipments?

Yes ☐ No ☐ .

SECTION D: FAMILY DIGNITY AND ENTREPRENUERSHIP

D1). What free assistance are you getting?

a) Food	Yes	☐	No	☐
b) Seed	Yes	☐	No	☐
c) Fertilizer	Yes	☐	No	☐
d) Chemicals	Yes	☐	No	☐
e) Implements	Yes	☐	No	☐

f) Other (please specify)……

D2). How many times do you receive the assistance?

a) Weekly	Yes	☐	No	☐
b) Monthly	Yes	☐	No	☐
c) Annually	Yes	☐	No	☐

d) Other (please specify)……..

D3). For how long have you been receiving these handouts?

a) One Year	Yes	☐	No	☐
b) Two Years	Yes	☐	No	☐
c) Three Years	Yes	☐	No	☐
d) 5 Years and over	Yes	☐	No	☐

D4). What kind of a home do you have?

a) Thatched	Yes	☐	No	☐

b) Asbestos Yes ☐ No ☐

c) Corrugated Yes ☐ No ☐

d) Other (specify)……

D5). What assets do you have?

a) Livestock Yes ☐ No ☐

b) Farming Implements Yes ☐ No ☐

c) Motor Vehicle Yes ☐ No ☐

d) Other (specify)

……..

D6). How did you acquire the assets?

a) Government Yes ☐ No ☐

b) Own Resources Yes ☐ No ☐

c) Relatives Yes ☐ No ☐

d) Other (specify)

……

D7). How many meals do you have per day?

a) Nil Yes ☐ No ☐

b) One Yes ☐ No ☐

c) Two Yes ☐ No ☐

d) Three Yes ☐ No ☐

e) Other (please specify)……..

D8). What do they consist of?

a) Sadza and meat Yes ☐ No ☐

b) Sadza and sour milk Yes ☐ No ☐

c) Sadza and beans Yes ☐ No ☐

d) Sadza and vegetable Yes ☐ No ☐

e) Other (please specify)……

D9). How many children do you have?

a) Nil Yes ☐ No ☐

b) One Yes ☐ No ☐

c) Three and above Yes ☐ No ☐

D10). What are they doing?

a) School Yes ☐ No ☐

b) Work Yes ☐ No ☐

c) At home Yes ☐ No ☐

d) Abroad Yes ☐ No ☐

e) Other (please specify)……

D11). Do you have an easy access to health facilities?

Yes ☐ No ☐

D12). Do you have a toilet?

Yes ☐ No ☐

D13). Do you have access to portable water?

Yes ☐ No ☐

D.14)How does your family benefit from the farming business?.....

……

……

……

……

SECTION E: CHALLENGES AND OPPORTUNITIES IN THE FARMING BUSINESS

E.1) Who inspired you to do this agricultural business?…….....

……

……

E.2)How do you measure your success?.....

……

……

E.3) What makes your agricultural business success?.....

……..

……..

……..

E.4) What are the major challenges that you encounter as an entrepreneurial farmer?

……

……

……

……

E.5) What solutions do you think should be provided to the farmers?.....

……

……

SECTION F :ENTREPRENEURIAL COMPETENCE AND STRATEGIES

F.1)What are your expectations?.....

……

……

…….....

F.2)Do you plan for you farming business? Yes ☐ No ☐

F.3)What are your future prospects of this farming business?

Bad ☐ very good ☐ good ☐

F.4)How good are you at these areas?

	Poor	Average	Good	Very good
a) arketing your farm produce?				
b) Adapting to environmental changes?				
c) Satisfying your customers?				
d) Pricing your products?				

F.5) **What challenges did you face when you started your farming business**?.....

……

……

……

F.6) **What products do you produce?**.....

……

……

…….....

F.7)**Which markets do you normally serve?**

Local markets ☐ outside local(other regions) ☐

F.8)**Have you ever attended workshops for farmers?** Yes ☐ No ☐

F.9)For sustainable use of the environment, what do you do in your farming business to protect the environment?.....

……

……

APPENDIX B: CONSENT FORM

RESEARCH INTO A STRATEGIC EXPLORATORY ENTREPRENEURSHIP STUDY OF SUSTAINABLE AGRICULTURAL BUSINESS: CASE STUDIES OF MITCHELL AND MITCHELL IN MASHONALAND EAST AND DOTITO IRRIGATION SCHEME IN MASHONALAND EAST PROVINCES.

Conducted by Joice .T.R Mujuru

University Of Zimbabwe PHD Candidate

Faculty of Commerce

I……confirm that I understood the nature and purpose of the research. My participation in the study is voluntary and I am free to withdraw at anytime during the course of the research without giving reasons. I agree to be interviewed and be audio recorded.

……. Date…….

Signature of participant

……. Date……....

Signature of the researcher

APPENDIX C: AN INTERVIEW GUIDE FOR THE PEOPLE IN KEY POSITIONS

1) What is the main economic activity of the people in this area?
2) Is there an increase or a decline in productivity?
3) What do you think can be done for the people who have their agricultural activities declining?
4) What challenges do the local farmers face and how are they coping?
5) What kind of support do you give them?
6) What are the benefits that the local farmers gain from their agricultural economic activities?
7) What else are the local farmers doing to improve productivity?
8) Are there any other economic activities that people do besides farming?
9) What is the highest educational level of most of the local farmers?
10) Do you think that their skills are adequate enough to support their agricultural activities?
11) What kind of support do the local farmers get from the state and non-state actors?
12) Do you think that the support from the state and non-state actors is adequate enough?
13) What do you do to make sure that farmers are utilizing the land sustainably?

APPENDIX D: LETTER OF INTRODUCTION

UNIVERSITY OF ZIMBABWE
FACULTY OF COMMERCE
Commerce, Arts & Social Studies Bldg.
P. O. Box MP 167, Mt Pleasant, Harare
Telephone: 263-4-303211Ext: 13000
Email: dean@commerce.uz.ac.zw

FROM THE DEAN'S OFFICE

02 December 2013

TO WHOM IT MAY CONCERN

Dear Sir /Madam

Re: Request for Assistance in Completing the Enclosed Questionnaire on Strategic Entrepreneurship

The bearer (R. Kasimba) is the Research Assistant representing Mrs. J.T.R. Mujuru, studying a PhD at the University of Zimbabwe. During the course of her study the bearer is expected to carry out a field work on "A Strategic Exploratory Entrepreneurship Study of Sustainable Agricultural Business: Case Studies of Mitchell and Mitchell Project in Mashonaland East Province and Dotito Irrigation Scheme in Mashonaland Central Province". The results of the study will help in shaping agricultural entrepreneurship in Zimbabwe.

Your responses are important in contributing to the reliability of the study. All responses will be strictly confidential and will be used only in combination with those of other respondents.

Thank you for your co-operation and time.

Prof. I. Chaneta

The Dean of Commerce - UZ