THE RISE OF MICRO AND SMALL-SCALE ENTREPRENEURIAL ACTIVITY IN A MELTING DOWN ECONOMY: A CASE OF ZIMBABWE

by

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ABSTRACT

Entrepreneurship is viewed as a pertinent vehicle for economic growth, development, employment creation and income generation (entrepreneurial effects). Small-scale, micro and medium enterprises (SMMEs) are the dominant entrepreneurial activity in Africa, but less than 1% of these SMMEs grow to ten or more employees. A lack of homogeneity among SMMEs, making it difficult for common policies to be effective is the problem most often identified as the cause of this lack of growth. In the period 1997 to 2008, Zimbabwe experienced an economic meltdown which plunged many citizens into poverty. On the other hand, a steep growth in micro and small-scale enterprises (MSEs) was also observed in both formal and informal sectors. Following the meltdown these MSEs are still operational but with minimal contribution to the recovery of the economy. This thesis looked at the micro and macro aspects of micro and small-scale entrepreneurship in Zimbabwe in the wake of the economic meltdown.

At the macro level, the objective was to develop a model that best describes the relationship between the economic meltdown and the growth of micro and small-scale enterprises (MSEs) in Zimbabwe, by testing for the presence of refugee effects. Understanding the relationship between entrepreneurship and key macroeconomic growth indicators is critical for generating growth and development in both a normal, and a meltdown economy. Using annual data from 1980 to 2010, a multivariate Vector Error Correction Model (VECM) was run, with the total number of MSEs, unemployment rate, inflation rate, liquidity (proxied by money supply) and real GDP as the dependent variables. The main findings of this study indicate the presence of refugee effects from unemployment, albeit minimal, and that the growth in MSEs was significant because of the shortage of liquidity. The relationship between unemployment and entrepreneurship is not linear, but squared and positive in both instances.

At the micro level, three objectives underpinned this study. The first objective was to examine whether there were differences in entrepreneurial attributes between formal sector and informal sector firms, using descriptive statistics and non-parametric t-tests. The second objective was to assess the nature of the growth constraints of existing MSEs (formal and

informal), and compare them across the two sectors. The constraints were examined from two sources: internal and external. The methodology used in this case was factor analysis and principal component analysis. On the basis of the constraints classifications generated from principal component analysis, a regression was done to test whether the constraints are related to the willingness to formalise by informal MSEs. The contribution of need for achievement (N-Ach) on willingness to formalise was also tested in a logistic regression.

Relevant data for the micro level analysis was collected by means of a survey in Harare, Zimbabwe. Using a questionnaire, 150 MSEs operating in both formal and informal sectors were interviewed. The questionnaire had 3 sections: the first section characterised the MSEs; the second section looked at the growth constraints of the MSEs and last section measured the need for achievement (N-Ach) of the business owner, using the Mehrabian scale of achieving tendency. The data collected was analysed using SPSS and STATA.

 The main findings were that the characteristics of the MSEs in the formal sector are different to those of the informal sector. Formal sectors identified internal factors as hindering the growth of their business more than the external factors, whereas the informal MSEs identified more external factors as constraints to their growth. From the logistic regression analysis, 'regulatory factors' and 'technology factors' were found to have a significant impact on the willingness by informal MSEs to formalise their business. Improving N-Ach may significantly decrease the odds of the informal MSEs formalising their businesses.

The study concluded that MSE growth was in response to the economic meltdown, being driven by the refugee effects from a need for liquidity and rising unemployment. Secondly, uniform policies for MSEs in formal and informal sectors fail to address their individual growth needs because of the differences in the dynamics of entrepreneurs operating in the formal sector and informal sector. Thirdly the odds of willingness to formalise by informal MSEs are positively linked to the regulatory framework around the process of business registration.

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DEDICATION

This study is dedicated to my parents Thomas Musuna and Rosewiter Musuna as a fulfilment of your dream.

ACKNOWLEDGEMENTS

LIST OF ABBREVIATIONS AND ACRONYMS

ARDA……………..…..Agricultural Rural Development Authority

DRC……………...…Democratic Republic of Congo

ESAP………………….Economic Structural Adjustment Programme

EU……………………European Union

FDI……………………Foreign Direct Investment

GDP…………….……Gross Domestic Product

GNP…………………..Gross National Product

GNU…………….……Government of national Unity

ILO…………………...International Labour Organisation

IMF…………………International Monetary Fund

MDC…………………..Movement for Democratic Change

MSE…………………..Micro and Small-scale Enterprise

N-Ach…………………Need for Achievement

OECD………………....Organisation for Economic Co-operation and Development

SADC…………………Southern African Development Committee

STERP……………...…Short-term Emergency Recovery Progam

TEA…………………...Total early-stage Entrepreneurial Activity

VAR…………………..Vector Auto Regressive

VECM………………...Vector Error Correction Model

ZADMO………………Zimbabwe Aid and Debt Management Office

ZANU(PF)……………Zimbabwe African National Union- Patriotic Front

ZIMPREST…………...Zimbabwe Programme for Economic and Social Transformation

ZIMRA……………….Zimbabwe Revenue Authority

CHAPTER 1:
INTRODUCTION

1.1 Background Information

Zimbabwe, once the bread basket of the Southern African Development Committee (SADC) region, turned in the last 10 or so years, into a country of starving people and political conflict. Ever since late 1996, the Zimbabwean economy has been going downhill. This economic fall was characterized by high levels of poverty, fuel shortages, and hunger (to the extent that many had to rely on wild fruits for survival) (Robertson, 2006). Use of high denomination currency notes, deteriorating infrastructure, absence of teachers in learning institutions due to low salaries, empty shelves in the supermarkets, untreated water systems, outbreak of disease, such as cholera, the closure of big hospitals and the absence of the rule of law had all become part of day to day life, which together with the printing and supplying of excess money into the economy, caused inflation to keep rising (Moss, 2007). These were the effects of the economic meltdown that hit Zimbabwe between 1997 and 2008. The worst was experienced in 2008 when inflation reached a record high 14,1 billion %, and unemployment grew to 80% (CIA factbook, 2012). Currently, and post meltdown, unemployment is still above 90%, and the majority of the citizens are still struggling to make ends meet (World Bank Data, 2013).

Complementing the rising inflation was a rise in micro and small scale entrepreneurial activity especially in the informal sector. During the economic meltdown the informal sector grew faster than the *formal* sector, housing approximately 3 million people compared to 1.3 million in the *formal* sector as of June 2005 (Coltart, 2008). In this study, informalisation is defined as any form of economic activity that is not recorded in the official statistics, or does not comply with government regulations. Lack of barriers to entry into this sector and the drive for tax evasion are among the reasons why most people resort to the informal sector (Gerxhani, 2004; Ubogu, Laah, Udemezue and Bako, 2011). The minimal regulations which govern operations in the informal sector make it an easier option especially for those people who fail to enter the *formal* sector.

The sudden growth in the number of informal enterprises during the economic meltdown was very apparent, as most vendors used the street pavements to market their goods, creating

considerable pedestrian congestion. For those who were still formally employed during the meltdown period, the work place proved a favourable platform for their business. One usually opted to stay employed in order to utilize company resources such as telephones, office space, stationery, a car and fuel to run errands. The result was a steep growth in micro and small-scale enterprises (MSEs).

The steep growth in micro and small-scale enterprises (MSEs) especially during the meltdown period came with its own economic challenges, as most of these MSEs in Zimbabwe are housed in the informal sector and their benefits to the economy are measured as close to nil. A lot of the activities in the informal sector can benefit the economy in the recovery process, but because they are not captured in the country's records, the economy fails to benefit from them. In order for the entrepreneurial effects to be realised, it is important that the entrepreneurial activity in Zimbabwe be formalised. There is a need for the informal MSEs to grow from being places of survival to being part of the *formal* economy and contribute to the country's development. The informal sector cannot be ignored as it houses the greater percentage of the country's labour force (Coltart, 2008). The Zimbabwean government has already taken steps towards the regularization of the informal sector by creating structures that support the sector, for example a ministry responsible for the informal sector and a Fund for micro and small-scale businesses have been established in 2010 (Chigwenya and Mudzengerere, 2013). However, recent evidence suggests that the government is struggling to formalise the informal sector possibly because the sector is not properly regularised and there is only a vague understanding of the actual needs of the entrepreneurs in this sector (NewZimbabwe.com, 2014). A common policy approach has always been adopted without considering that the *formal* and informal sectors are structured differently. There is a need to understand the characteristics of the informal sector and how it is formed before providing incentives to boost enterprise development.

Literature categorises the reasons for informalisation into three: for economic reasons; or non-economic reasons; or a combination of both (Van Rooyen, 1990). The economic reasons are driven by economic recessions which cause stagnation, depreciation of assets and a rise in unemployment, and eventually stimulate informal activities (Gerxhani, 2004). These to some extent, explain the story in Zimbabwe. Other economic reasons that are cited in the literature are low industrialisation and productivity, surplus labour in the economy, low technology and

the intensive use of cheap unskilled and semi-skilled labour (Gerxhani, 2004:282). These factors are common in most developing countries where there is a high presence of underutilisation of skilled labour and informal sector activities.

On the other hand, the non-economic factors are greatly influenced by the role of the 'state'[1] in overcoming structural barriers and providing opportunities for informalisation (Van Rooyen, 1990). Non-economic factors include financial pressures, institutional constraints (tax evasions and loan requirements), over regulation of the market sector, limited skills or education, poor living situations, poor environment, cultural traditions, high levels of corruption, and geographical factors (Gerxhani, 2004). Once a government loses the trust of its people with respect to supporting non-economic factors, the citizens will resort to the informal sector for survival, and one way to gain back the trust is by addressing the concerns of the entrepreneurs in the informal sector and encouraging them to revert to the *formal* sector (Gerxhani, 2004; Preston-Whyte and Rogerson, 1991).

Literature also shows that the same economic and non-economic factors that influence informalisation also impact on the growth of business, but is labelled differently as internal and external factors (Mahadea and Pillay, 2008). Internal factors are those aspects of the business that the owner has control over, like access to finance, human resources and management skills, and innovation and technology adoption. The entrepreneur has control over access to finance as his or her individual traits will determine his capabilities for obtaining a loan from financial institutions. Someone with good entrepreneurial abilities and leadership skills, or a good track record compared with someone who lacks these attributes, will easily access finance from the financial institutions (Lucas, 1978; Mahadea and Pillay, 2008; Parker, 2009).

On the other hand, external factors are independent of the entrepreneurs' influence. These are mainly controlled by the government or policy makers. These factors include legal restrictions, such as taxation, licensing and formalisation, socio-economic conditions, such as hyperinflation, political instability and corruption, and reliability of infrastructure (Dheher and Gassebner, 2007). These external factors are usually in favour of the *formal* sector,

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[1] State refers to the government

although they tend to increase transaction costs (Mahadea, 1997). Where tax rates are very high, there is likely to be a migration of entrepreneurs to the uncontrolled informal sector (Dheher and Gassebner, 2007). By addressing the key internal and external factors for each sector, the entrepreneurs in both sectors have a potential to grow and contribute to Zimbabwe's economic recovery plan.

1.2 Problem Statement

Following the economic meltdown, the government of Zimbabwe embarked on a number of policies targeted at supporting entrepreneurial development as a way to boost economic recovery and growth. The importance of entrepreneurship in economic growth through employment creation and income generation, especially micro and small-scale entrepreneurship, has been well researched for normal economies, and is popular among policy makers in first world nations (Deakins and Freel, 2012). Of key importance is the "*entrepreneurial effect,*" where an increase in entrepreneurial activity is associated with a decrease in unemployment, which subsequently contributes to economic growth. However, the challenge in most developing countries and countries going through a crisis has been where the "*refugee effect,*" associated with micro and small-scale entrepreneurship, dominates the "entrepreneurial effect". The refugee effect refers to an increase in entrepreneurial activity being used as a survival platform because of an absence of other options or avenues to generate income[2]. The higher the degree of refugee effect over entrepreneurial effect makes entrepreneurial activity problematic, as the economic benefits of cutting down unemployment or generating income will not be realised.

Studies that have examined the entrepreneurial and refugee effects have found that the entrepreneurial effect definitely occurs in different environments (Audretsch, Carree and Thurik, 2001; Thurik, Carree, Van Stel and Audretsch, 2008; Ghavidel, Farjadi and Mohammadpour, 2011). These studies, from both developed and developing nations, have ascertained the negative relationship between entrepreneurship and unemployment; as entrepreneurial activity increases unemployment decreases. However, there is a lot of ambiguity around the refugee effects. Both positive and negative relationships have been

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[2] Entrepreneurial effect and refugee effect works in opposite directions. Where entrepreneurial activity reduces unemployment (negative relationship) it is referred to as entrepreneurial effects. On the other hand, when the rise in unemployment increases entrepreneurial activity (positive relationship) it is referred to as the refugee effect.

noted with refugee effects, and the literature is still not conclusive on the impact of unemployment on entrepreneurship. Thurik et al., (2008), for example, found that unemployment is positively associated with new business start-ups, but Audretsch and Fritsch (1994) found a negative relationship, and Carree, Van Stel, Thurik and Wennekers (2002) found no statistically significant relationship between the two at all. From the previous findings, it is possible that unemployment might not be the only source of the refugee effect; hence it is important to establish the causes of the refugee effect when working with economies that are recovering from some crisis, especially if promoting entrepreneurial activity is part of a recovery plan. This study intends to test the sources of the refugee effect in Zimbabwe, especially during the meltdown. By identifying the sources of refugee effects, policies to control them can then be recommended, and in so doing enhance the entrepreneurial effects.

Secondly, the 21st century came with a worldwide campaign to support the informal sector, deviating from the traditional view which identified the informal sector as a disruption. There are those who believe that the informal sector is important as an avenue for apprenticeship before moving into the *formal* sector (Newadi and Pietersen, 2008: 315). The argument here is that entrepreneurship in the informal sector should be supported as it supplies the building blocks or training ground for successful entrepreneurs in the *formal* sector. The informal sector should be embraced as a necessary and important part of the economy and should receive the same privileges and support as the *formal* sector. This study will show that a "common-policy approach" when addressing issues concerning *formal* and informal entrepreneurs is not beneficial to the economy and will only encourage further growth of the informal sector with minimal benefit to the economy. The concerns of the *formal* sector should be addressed separately from those of the entrepreneurs operating in the informal sector and at the same time providing a channel that encourages the informal sector entrepreneurs to grow and move into the *formal* sector.

The major challenge faced by informal sector traders is the regulatory framework which distinguishes it from the *formal* sector and hinders development and growth (Deakins and Freel, 2012). As a result, it is seen as a 'fall back' platform with nothing permanent being expected to come from it. Evidence from some studies, especially those looking at African countries, suggests that there are some entrepreneurs who have been operating in the informal

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sector for some time and have no intention of moving to the *formal* sector (Newadi and Pietersen, 2008). Major reasons for the hostility towards formalization of their enterprises are the high costs of formalization, and lack of incentives for formalizing (Ishengoma and Kappel, 2006). Many researchers are of the view that the only way the informal sector can be formalized is if there is deregulation of the market, greater private property rights and the abolishment of state regulations like licenses and taxation (Gerxhani, 2004; Welsh, 2005).

Deregulation of the market, greater private property rights and the abolishment of state regulations will definitely help alleviate the regulatory problems faced by individuals operating in the informal sector. However, research from Nigeria suggests that the problems in the in*formal* sector have more to do with a lack of recognition and acceptance of the sector by the government and policy makers, than in regulatory needs (Chikuezi, 2010). All the other challenges faced by informal traders emanate from the lack of recognition by their government. There are some African governments who still believe that the informal sector is a disruption to economic development, hence should be done away with. Some governments keep trying to eliminate this sector but evidence from other countries show that it is a sector which will always exist. For example, in 2002 the Zimbabwean government undertook a cleanup campaign and destroyed all unlicensed business shelters, enforcing a ban on street vending. This did not stop informal trading, even though traders now pay a small fee to the municipality for the market sites that were erected. As long as the *formal* sector fails to grow, the informal sector will continue to grow as the labor force grows (Chikuezi, 2010). Alternatively, instead of wasting resources fighting the informal sector, the same resources could be used to provide incentives for informal entrepreneurs to formalize their businesses.

Newadi and Pietersen (2008) note that in developing countries the informal sector tends to encounter many constraints. These include low returns, and an absence of security which minimizes both growth and the anticipated benefits of entrepreneurship, such as poverty alleviation and reduced unemployment. This could be the reason why some African governments do not recognise the informal sector; believing it to be unnecessary, illegal and a disruption to the economy. However, if the government provides incentives to encourage MSEs to grow, they will generate revenue and contribute to the economy.

Addressing the economic and non-economic factors can possibly contribute to improving entrepreneurial activity and the willingness of the informal sector enterprises to formalise. Another aspect which hasn't been researched extensively is the role of psychological traits, like the need for achievement when making decisions on growing or formalising a business. Need for Achievement (N-Ach) refers to the desire for accomplishment or an inner urge to improve (McClelland, 1961). Someone with a higher N-Ach has a long term vision for his or her business and will put more energy into making it successful. Research is needed to investigate the contribution of the internal and external factors to the slow growth in MSEs in the two sectors (*formal* and informal), and also analyse how the growth constraints affect the willingness by informal entrepreneurs to formalise their businesses. The study will also test the application or relevance of David McClelland's concept of the need for achievement (N-Ach), to the willingness to formalise by informal sector entrepreneurs. N-Ach has been found to contribute significantly to business success, but there is little research considering its contribution to the choice between operating in the *formal* or informal sector by micro and small-scale entrepreneurs (McClelland, 1961; Mahadea, 1994; Shane 2003). This study will test whether the enhancement of N-Ach levels could prompt the informal business owners to formalise their businesses.

1.3 Goals of the Study

The main goal of the study is twofold. Firstly, there is the macro aspect, which by testing the sources of the refugee effect investigates the relationship between growth in MSEs and the economic meltdown. Secondly, at micro level the study investigates whether 'common policy approach' could work when addressing growth concerns of MSEs in both the *formal* and informal sectors in Zimbabwe.

1.4 Specific Objectives at macro level are:

(i) To identify the causes and characteristics of the economic meltdown in Zimbabwe during the period 1980-2010.

(ii) To determine the extent to which the fall in GDP has contributed to the growth in MSEs.

(iii) To determine the extent to which the rise in unemployment has contributed to the growth in the number of MSEs.

(iv) To determine the extent to which the rise in inflation has contributed to the growth in

the number of MSEs.

(v) To determine the extent to which liquidity shortages have contributed to the growth in the number of MSEs.

1.5 Specific Objectives at micro level are:

(i) To characterise the MSEs in the informal sector and compare them to those in the *formal* sector.

(ii) To examine the growth constraints of the MSEs in the *formal* sector and compare them to those in the informal sector.

(iii) To assess the extent to which the growth constraints influence the willingness to formalise by informal sector entrepreneurs.

(iv) To compare the N-Ach level of entrepreneurs in the MSEs in the *formal* sector with those of the entrepreneurs in the informal sector.

(v) To test the significance of N-Ach in the willingness to formalise by informal entrepreneurs.

(vi) To suggest strategies or approaches to help expand the MSEs in both the *formal* and informal sector and enhance their contribution to the economy through policy recommendations.

1.6 Justification for the Study

Coming from a state of economic meltdown and political instability during the period 1999-2008, it is likely that it will take a few years before the Zimbabwean economy can provide employment for its people. One way to ensure human survival with minimal crime is to encourage the growth and development of MSEs, both in the *formal* and informal sectors. MSEs are definitely a quick way to earn an income and bring food to the table, and therefore should be encouraged. This study will make some policy recommendations that will address the importance of MSEs in Zimbabwe's road to recovery from the effects of the economic meltdown.

In Zimbabwean literature, it is felt that a gap exists on MSEs operating in the informal sector and their importance in the fight against unemployment and poverty alleviation during the country's economic meltdown. The MSEs are the highest employers, not only in Zimbabwe, but also in most developing countries and yet they are not adequately recognised or supported

by their own governments. As unemployment and poverty keep rising, year in year out, MSEs can be the only solution and there is a need to ensure that something is done to improve these businesses and make them more profitable.

Most countries in sub-Saharan Africa support micro and *formal* ventures, with little support being directed towards the informal sector, and yet it is this sector which houses the greater percentage of the labour force. Mostly it is the unemployed, retrenched or even retired who use the informal sector as a survival platform. Even those who are classified as poor are found in the informal sector, trying to salvage something for their families. Unless the government addresses the limitations of informal sector firms, and empowers the individuals who operate them, the fight to alleviate poverty and create employment will remain a losing battle.

This study centres on the activities of an abnormal time; that of the economic meltdown in Zimbabwe. Most, if not all previous studies on MSEs were done in normal times, with no extremes. As this study focuses on micro and small firm entrepreneurship in a meltdown situation in Zimbabwe, it will definitely be a new addition to the existing literature. In this study, we will also look at the importance of N-Ach in business decisions. Many studies have found a strong relationship between N-Ach and business performance. Hence, there is a need to examine how the N-Ach of the MSEs relates to their choice of where to operate - either in the *formal* or informal sector; and whether N-Ach can be used to motivate MSEs to move from the informal to the *formal* sector.

1.7 Limitations of the Study

The main challenges for the study were limited financial resources and absence of consolidated secondary data set. The study involved some travelling to the country of study as well as recruitment and training of enumerators to help with data collection. As a result, a smaller sample targeting 150 firms was then used for micro analysis. Data for the macro analysis was sourced from published and unpublished sources from World Bank Data, Central Statistics Office Zimbabwe and the Economic Information Services for Zimbabwe Statistics website.

CHAPTER 2:
THE ZIMBABWEAN ECONOMY: 1980-2012

2.1 Introduction

After close to two decades of economic problems, the Zimbabwean economy is now growing. In 2009, the country recorded a real growth rate of 5.8%, followed by 8.1% in 2010, 9.3% in 2011 and 5% in 2012 (Worldbank Data, 2013). Despite the positive real growth rate, the country still has a long way to go on its road to recovery from the economic meltdown experienced over the period 1997 to 2008. Economic problems, like political instability, large external debt, insufficient *formal* employment, and retarded infrastructure development, shortage of water and electricity and regulatory deficiencies are among the critical factors that the current government needs to address for Zimbabwe to experience sustainable growth and development.

The deterioration of the economy, which led to the economic meltdown, is believed to have started in 1997 when the country was experiencing the aftermath of the structural reform programme that was implemented in 1991 (Coltart, 2008). The situation was worsened by the Zimbabwean army's involvement in the Democratic Republic of the Congo's (DRC) war (1998-2002), which drained the economy's resources, and contributed to high budget deficits (Coltart, 2008). The subsequent controversial land reform programme coupled with repeated devaluations of the Zimbabwean dollar and printing money by the Reserve Bank of Zimbabwe, all contributed to the economic meltdown (Matandirani, 2011). The formation of the Unity government in February 2009 was the turning point for the Zimbabwean economy. Although structural weaknesses still existed in the economy, the formation the Unity government brought hope to many Zimbabweans. This chapter will take us through the journey of the Zimbabwean economy since attainment of independence in 1980. It consists of five main parts: the first section discusses the Zimbabwean economy from 1980 to 1996; the second section discusses the economic policies implemented in Zimbabwe since 1991; the third section looks at the Zimbabwean economy over the period 1997-2008; the fourth section looks at the post economic meltdown period, 2009 to date; and the last section discusses the recovery plan post-economic meltdown.

2.2 The Economy: 1980-1996

2.2.1 Independence and its promises

After many years of British colonial rule, the Lancaster House Constitutional Conference held between September-December 1979 and chaired by Lord Carrington, the British Secretary of State for Foreign and Commonwealth Affairs gave birth to the new Zimbabwe in 1980. After independence, the new government was made up of 80% black Zimbabweans and 20% whites. It inherited an industrialized and diversified economy with manufacturing, hotel and restaurants and agricultural and forestry sectors contributing the most to the economy (see figure 1 below) (Robertson, 2006). The new government promised "growth with equity," mainly aimed at redistributing wealth to the vulnerable and underprivileged.

Figure 1: Percentage distribution of GDP by industry, 1985-1994
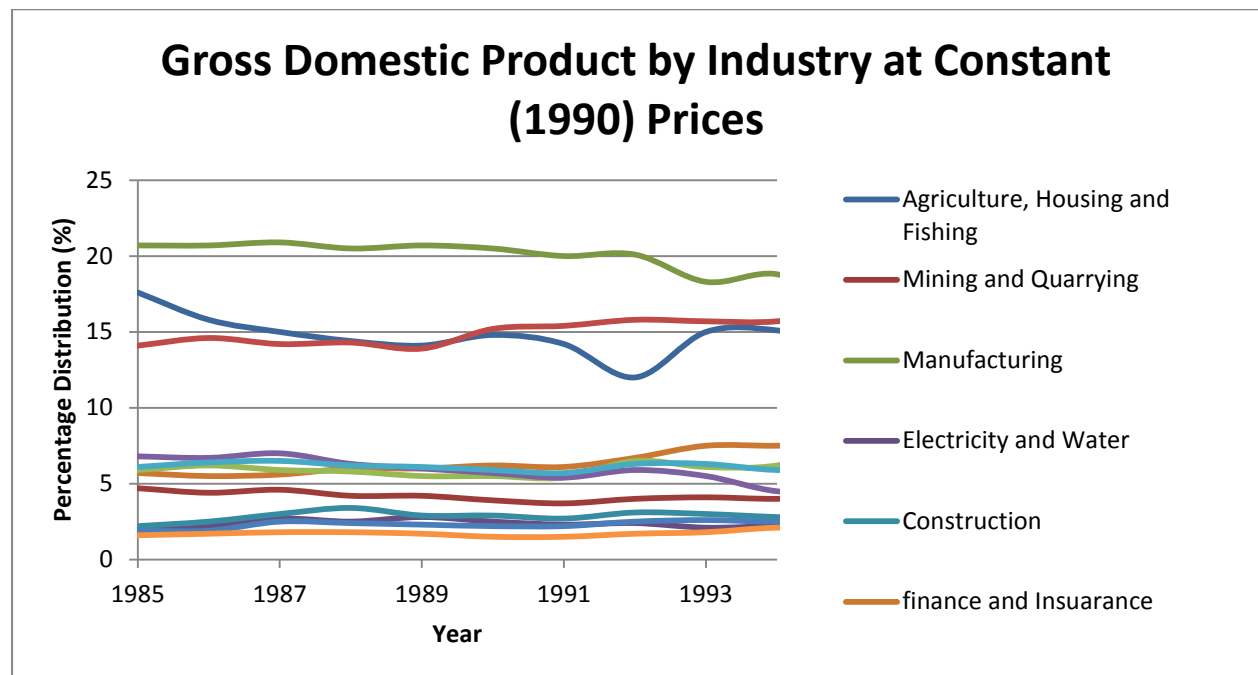
Source: Authors own graph using data from Zimbabwe Statistical Yearbook, 1998

Between 1985 and 1990, the manufacturing sector contributed the most to GDP (about 20.5%), followed by the agricultural and mining sectors (both with an average of approximately 15%). The colonial government developed a lot of processing plants for the agricultural commodities that were being produced in the country. These included milling companies (e.g. National foods), packaging (e.g. Cairns), processing (e.g. Tanganda Tea, Dairiboard, sugar refineries and Lever Brothers) and many others. There has always been a

strong forward-backward linkage between the agricultural sector and the manufacturing industry. The growth of the agricultural sector meant the growth of the manufacturing sector and vice versa (Musuna and Muchapondwa, 2008).

Although the first ten years after independence were challenging, the new government managed to keep the economy growing. What was driving the new government was the eagerness to ensure equality for all. Priority was given towards improving the education sector, health sector and rural infrastructure development, and the new government managed to achieve this in the first 5 years of office. The economy was also doing especially well in the manufacturing and agricultural sector. Figure 2, below, shows the contribution of the agricultural sector to economic growth between 1980 and 1996. In 1985 the agricultural sector recorded a growth rate of about 24%, with the highest (29%), recorded in 1993. Although the real agricultural GDP growth rates show a negative trend over the period 1980 – 1996, it is important to note that there was positive economic growth in most years between 1980 and 1996 (see figure 3 below). The data in figure 2 is highly volatile with major troughs in 1983 (-18%), 1986 (-10%), 1992 (-24%) and 1995 (-9%). These were the drought years and the harvests in these years were poor. Since agriculture was one of the biggest contributors to GDP, any slight change in factors that determine agricultural production, like rainfall, could impact on GDP.

Figure 2: Real agricultural GDP growth rates, 1980-1996
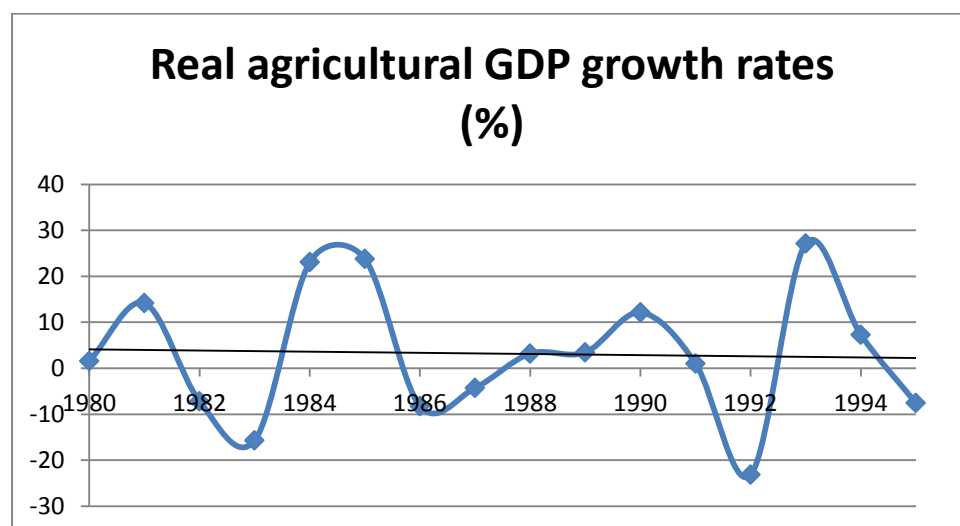
Source: Author's own graph using data from Worldbank Data 2012

Figure 3: GDP growth rates (%), 1980-1996
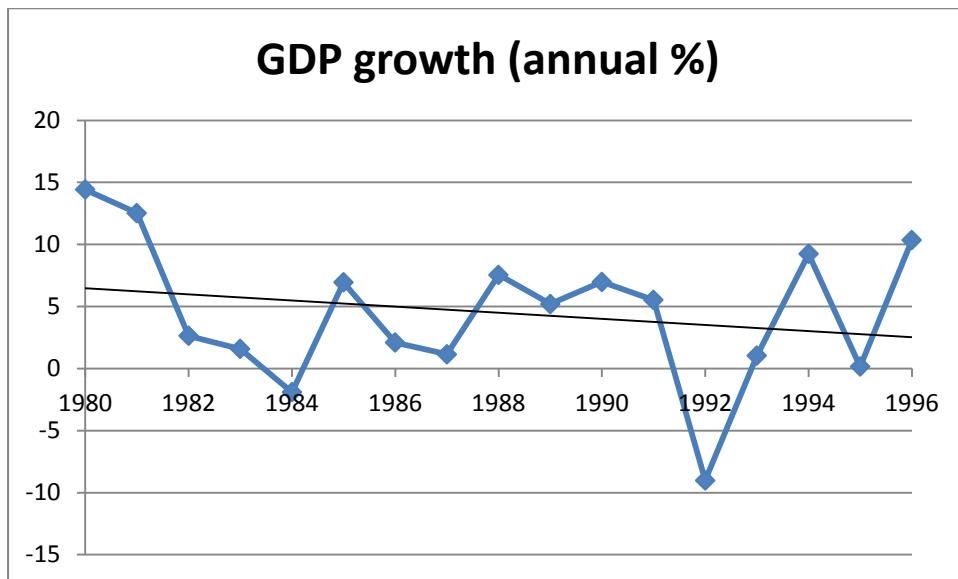
Source: Author's own graph using data from Worldbank Data, 2012

The drought periods also explain the troughs in GDP growth rates as shown in figure 3. The average economic growth during the period 1980-1996 was 4.5% (Worldbank Data, 2013). The highest economic growth of 14.4% was experienced in 1980, and thereafter growth has been trending downwards, although most years recorded a positive growth rate. As the economy was growing, inflation was also trending slowly upwards (see figure 4 below).

Figure 4: Year on Year Inflation, 1980-1996
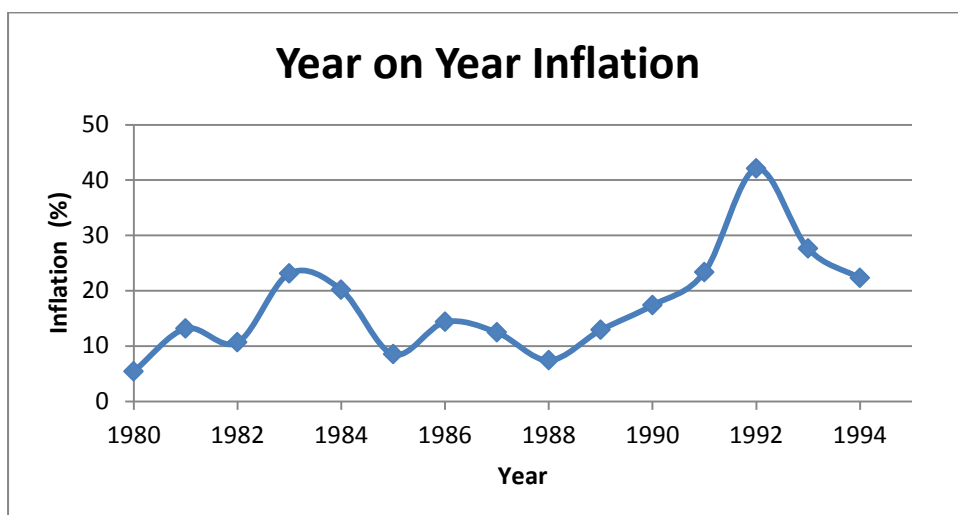
Source: Author's own graph using data from Worldbank Data, 2012

Year on year inflation rose steadily between 1980 and 1995, from 5.4% to 22.6%, averaging around 15%. However, the drought years (1983, 1986, 1992 and 1995) also caused some peaks with the highest inflation being registered in 1992, where the inflation rate was 42% (see figure 4 above). In 1991, Zimbabwe embarked on an Economic Structural Adjustment Programme (ESAP), the effects of which caused inflation to rise steeply between 1992 and 1995[3]. Kapoor, Mugwara and Chidavaenzi (1997) believe that the Zimbabwean government failed to complement structural reforms with fiscal restraint, and this resulted in high domestic rates of interest and high inflation as well as a growing domestic debt burden (see figure 5 below), that consequently hindered the growth of the private sector.

2.2.2 Public Debt

The government was committed to improving the welfare of the Zimbabwean population through free health and free education for the vulnerable and under privileged; however these activities were being run on borrowed funds. Between 1980 and 1996, total real debt rose from US$287.44 million to US$1,338.18 million, with external debt rising from US$785 million to US$4 billion 984 million in 1996, (see figure 5 and 6 below) (Zimbabwe Statistical Yearbook, 1997; World Bank Data, 2014). Most of the debt in 1980 was inherited from the Ian Smith regime, borrowed to finance the civil war (Jones, 2011). Between 1980 and 1996, the Zimbabwean government borrowed US$4,20 billion to fund their expenditure in the reconstruction projects and managed to payback an average of US$450 million each year. The devaluation of the Zimbabwean dollar in 2006 and 2008 also forced the government to borrow more from the international community, and so create more debt. On average 30% of the country's exports as well as 25% of government's revenue were used to pay the debt, causing a huge outflow of foreign exchange and resources (Jones, 2011). Throughout the 1980s, the Zimbabwean government borrowed from international lenders in order to finance various developmental projects that they embarked on post-independence, as well as use the new loans to pay for old loans.

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[3] The structural reform programs that were implemented in Zimbabwe are discussed in section 3.2.7 Economic Policies since 1991.

Figure 5: Real Public Debt, 1980-1996

Real Public Debt (Z$ Million)
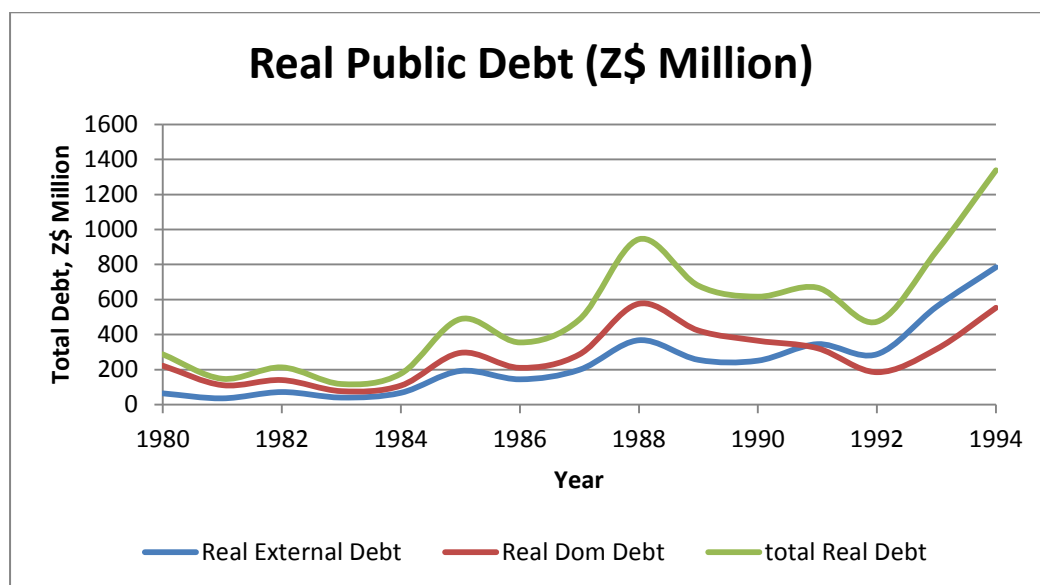
Source: Author's own graph using data from Zimbabwe Statistical Yearbook, 1997.

Figure 6: Zimbabwe external debt and repayment, 1980-1996

Zimbabwe external debt, and repayment, 1980-1996
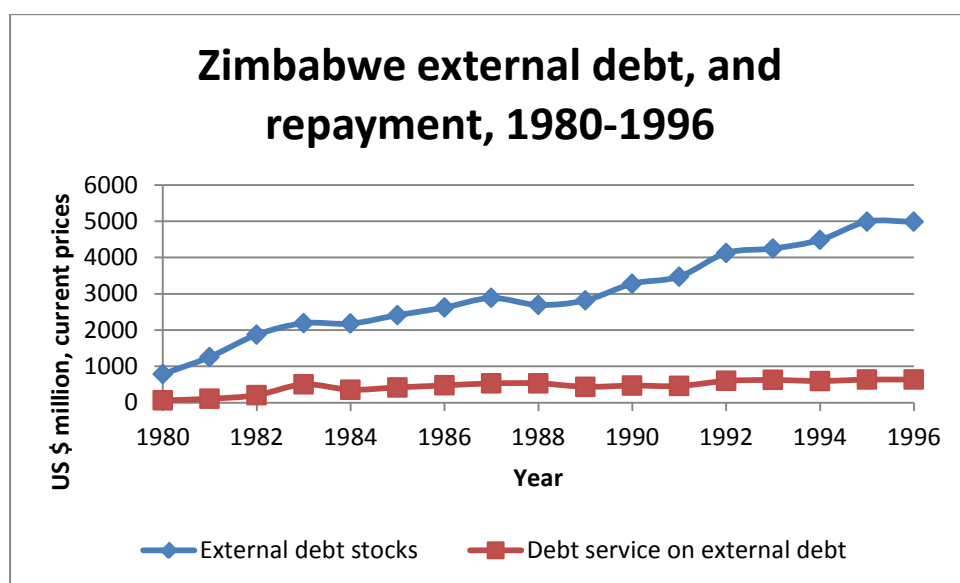
Author's own graph using data from World Databank; International Debt Statistics, 2014.

Total real debt has been on the rise ever since, and to date it is still a major hindrance to economic development in Zimbabwe. Although the ruling government tried to contain real debt within reasonable amounts between 1980 and 1990, it was still growing (see figure 5 above). Domestic real debt was always above external real debt between 1980 and 1991 but contained below Z$500 million. From 1991, external real debt grew above the domestic debt

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when more money was borrowed to finance the 5 year structural adjustment programme (ESAP) that was implemented from 1991-1995 (Kapoor, Mugwara, Chidavaenzi , 1997) (more details on the structural reforms in section 2.3). Among the core objectives of the programme was black empowerment (through entrepreneurship) and trade liberalization.

2.2.3 Entrepreneurship

The history of small-scale enterprise in Zimbabwe dates back to the colonial era, between 1888 and 1979, where blacks engaged more in primary industry activities like farming, mining, pottery and iron smiting (Rukuni, Eicher and Taruvinga, 2006). During the same era, whites operated in the secondary and tertiary industries being protected from any competition from the blacks by policies such as the Land Husbandry Act of 1951, which barred Africans from owning more than 5 cattles, and the Tribal Trust Land Act of 1965, which restricted land ownership by blacks to communal areas only (Rukuni et. al, 2006). As a result, the blacks were restricted to running small businesses, being peasants in reserves or being mineworkers (Wild, 1997).

There were laws and regulations which also hindered the growth and expansion of the small businesses that were owned by blacks. For example, they could not freely market their maize and the market prices for produce from black farmers were ridiculously low (Rukuni et al., 2006). For this reason, the black farmers could not become commercial farmers. On the contrary, white settlers in Zimbabwe were supported financially by the state and were given favourable prices for their crops by the marketing boards (Rukuni et al, 2006). The harsh environment made it unfavourable for black entrepreneurs in Zimbabwe to grow their businesses; therefore they remained stuck as subsistence entrepreneurs,[4] and this is still the case for most black entrepreneurs in other African countries (Wild, 1997). Wild (1997) argues that delays in the development of African entrepreneurship, specifically in colonial Zimbabwe, were a result of the barriers to an accumulation of capital.

The coming of independence saw the removal of colonial laws and regulations that forbid black businessmen accessing capital and markets. Black entrepreneurs hoped that the government would support them with credit allocations, import licenses and foreign currency

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[4] Subsistence entrepreneurs seek profits, but do so in order to support a family. Proceeds are spent on day to day expenses rather than being used for firm growth.

allocations. However, the much anticipated price controls in retail and transport, difficulties in obtaining bank loans, government bureaucracy, scarcity of goods and the reduced purchasing power of consumers, all worked against the growth of black entrepreneurs in Zimbabwe (Wild, 1997).

After the attainment of independence in 1980, the black entrepreneurs who had established themselves during the colonial era, felt marginalized because the government failed to redistribute wealth (land and capital) to them (Wild, 1997). Lack of capital meant the black entrepreneurs could not grow their businesses, and therefore they remained small scale entrepreneurs. Failure by the government to induce private investment and to create private employment also worsened the situation to the extent that investment fell to its lowest since the Second World War in 1989 and so did employment. By 1991, a fifth of the adult population of Zimbabweans were employed in the informal sector (Wild, 1997).

The new black government that came into power in 1980 advocated for a socialist state, hence it pursued policies that fostered state control of the private sector. Due to corrupt tendencies, the political elite manipulated the fruits of independence to their advantage. Instead of encouraging the development of new entrepreneurs, the politicians used their political influence to expand their own private businesses. Wild (1997) identified this development as the rise of 'clientelistic capitalism'[5] in Zimbabwe, a move away from the socialism which was preached at independence. As Lord Acton, the English historian wrote "Power tends to corrupt, and absolute power corrupts absolutely…." - this was the manifestation of Wild's words in post-independent Zimbabwe. The political elite used their power to create clientele networks for their business in Zimbabwe by closing any possible avenues for emerging entrepreneurs. The result was a growth in informal micro-enterprises. In 1991 there were about 845 000 micro-enterprises operating in the informal sector, employing about 30% more labour than in the *formal* sector in Zimbabwe (Kapoor et al., 1997). This sector continued to blossom and grow as more and more people looked for means of making a living in informal activities after becoming victims of the economic structural reform programmes being implemented during the period 1991-1995 (Kapoor et al., 1997).

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[5] This economy is characterized with money, political power and social connections.

2.2.4 Land redistribution

The Zimbabwean government embarked on a policy of land redistribution soon after independence in 1980. The drive for land redistribution was to ensure equal distribution of land between the whites and blacks in the 5 natural regions that make up the agro-ecological zones in Zimbabwe (Rukuni et al., 2006). The natural regions in Zimbabwe are based on soil type, rainfall and climatic conditions (see table 1 below). Of the five regions, regions 1-3 are the most favourable ones. They are suitable for most crops and receive enough rainfall for full maturity of crops. Besides crop production, animal husbandry is also suitable for these regions.

Table 1: Agro-ecological Regions

Region 1	**Specialised and Diversified Farming** - Receives above 1050mm of rain per year. - Receives some form of precipitation all year round. - Less than 2% of the total area of Zimbabwe - Suitable for afforestation, production of fruits and intensive livestock.
Region 2	**Intensive Farming** - Receives between 750-1000mm of rain per year. - Short rainy seasons. - 15% of total area of Zimbabwe. - Suitable for crop and livestock production.
Region 3	**Semi-Intensive Farming** - Receives 650-800mm of rain per year. - Experiences severe mid-season dry spells. - 19% of total area of Zimbabwe. - Suitable for livestock production, fodder crops and cash crops (maize, tobacco and cotton).
Region 4	**Semi-Extensive Farming** - Receives 450-650mm of rain per year. - Experiences seasonal droughts and severe dry spells during rainy season. - 38% of total area of Zimbabwe. - Suitable for livestock production and drought resistant crops.

	Extensive Farming
Region 5	- Total rain received annually is too low for production of even drought resistant crops. - 27% of total area of Zimbabwe. - Suitable for cattle ranching or game ranching.

Source: Author's own table using data from Rukuni et al. (2006).

At independence, the white commercial farmers "held title to about 51% of the land outside urban areas and national parks (44% of the total land area of Zimbabwe) with farms ranging from 500 to 2000 ha in size, and mostly in the better ecological zones (natural regions I, II and III)" (Musuna and Muchapondwa, 2008:11). Before independence, the blacks stayed in the Tribal Trust Lands which were in Regions 4 and 5 of the agro-ecological regions (Rukuni et al., 2006). As the liberation struggle was all about fighting for the land, independence meant moving to the fertile lands that were previously occupied by the white settlers. The land redistribution was to be done on a willing-buyer, willing-seller basis according to the Lancaster Agreement. America and Britain offered to sponsor resettlement by providing the money which was going to be used to compensate those farmers who were willing to sell their land. The first phase, which commenced in 1980 and lasted until 1986, was considered successful but the second phase (1986-1996) did not progress as smoothly as planned (Rukuni et al., 2006).

The second phase resettled 70 000 families on 8.5 million ha of land instead of the targeted 162,000 households (Moore, 2001). A major problem, as pointed out by the government, was the failure of the British government to honour their promise of financing the land redistribution (Rukuni et al., 2006). As a result, the government took things into their own hands and started compulsory acquisition. These acquisitions were meant to force the white farmers with more fertile arable land to sell part of their land to the government, and the redistribution was to be carried out within a specified period using funds from the IMF (Rukuni et al., 2006). By 1995, land holdings had changed to the following:

Figure 7: Share of total land in regions 1-3
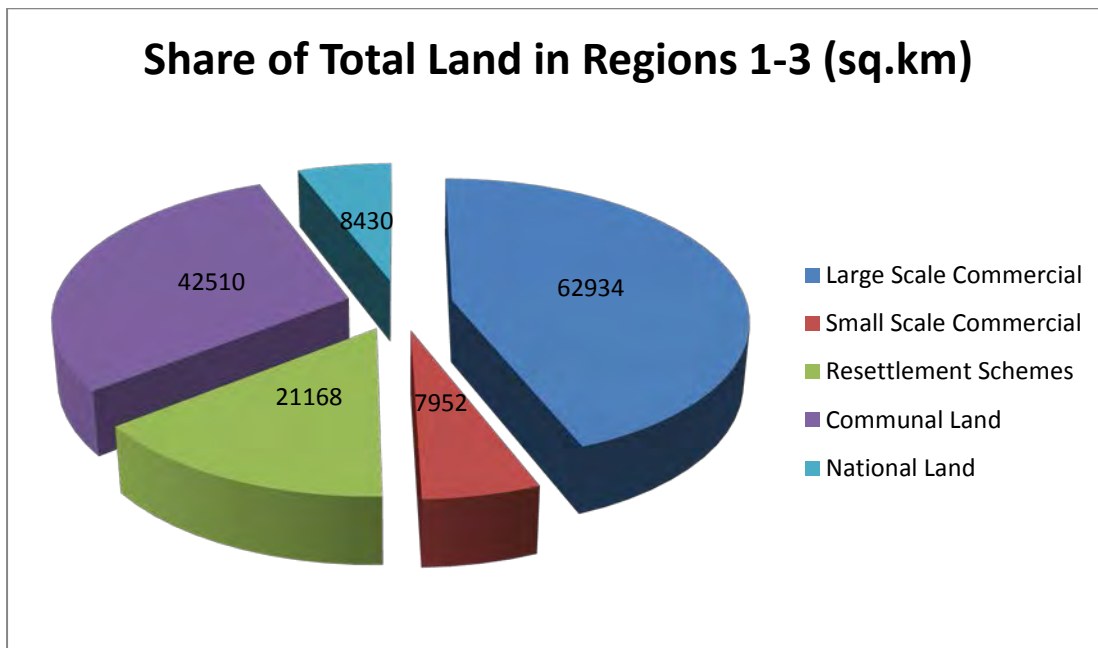
Source: Author's own graph using data from Zimbabwe Statistical Yearbook, (1997).

74% of all communal land is in Region 4 and 5;

44% of all small scale commercial land is in region 4 and 5;

51% of all large scale commercial land is in Region 1-3;

63% of all resettlement land is in region 1-3.

In 1997, about 51.4% of Zimbabwe's population (about 5.5 million people) lived on communal lands. There were 5100 large scale commercial farms and 9650 small-scale commercial farms in 1997, occupying 50% of the total land in Zimbabwe (62934 sq.km and 7952 sq.km respectively) (Zimbabwe Statistical yearbook, 1997). The white farmers who volunteered to sell land on willing-buyer, willing-seller terms, sold those pieces of land which were non-productive (Moore, 2001). Fifteen years after independence, the blacks who are the majority in the country were still crowded on to the less productive communal land and agricultural production remained the pillar of the Zimbabwean economy.

2.2.5 Agricultural Production

The economy of Zimbabwe is driven by agriculture. More than 50% of the country's population resides in the communal areas where the major source of income is subsistence farming. Communal farmers have 30 or less hectares of land for use in any agricultural

activity (crop production or cattle rearing) whilst commercial farmers have more than 30 hectares (Musuna and Muchapondwa, 2008). Communal farmers mainly produce food crops, such as maize, sorghum, millet and rapoko. Besides producing food crops, they also produce some cash crops such as soya beans, cotton and tobacco, but on a smaller scale compared to the commercial farmers (Rukuni et al., 2006). According to Musuna and Muchapondwa (2008) commercial production mainly depends on area cultivated and capital. Capital refers to all the inputs that are used, like fertilisers, seeds, chemicals and machinery. Unlike commercial production smallholder agriculture production is, to a greater extent, dependent on rainfall (Musuna and Muchapondwa, 2008). Periods of high annual rainfall are associated with a good harvest and poor rains with a poor harvest. Figures 8-10 below show the plots of total annual production between 1980-1996 of two major crops grown by communal farmers (maize and cotton) and total annual rainfall.

Figure 8: Total annual maize production by communal farmers, 1980-1996
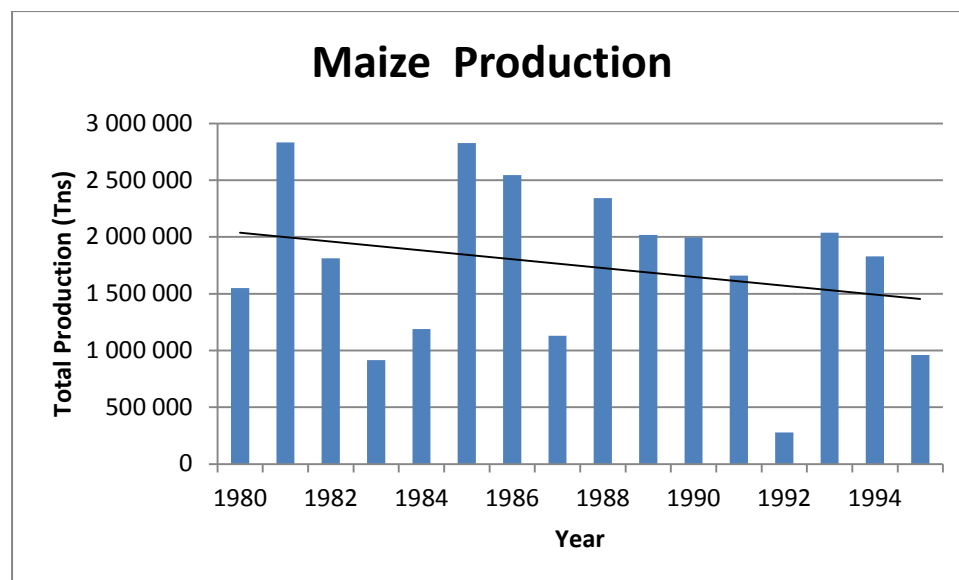
Source: Author's own graph using data from Zimbabwe Statistical Yearbook, (1997).

Between 1980 and 1996, maize production was trending negatively with major troughs in the drought years (1983, 1986 and 1992). The same trend is also observed with cotton production (see figure 9 below) as well as total annual rainfall (see figure 10 below). The similarity in the trends of the maize production, cotton production and total annual rainfall shows the extent to which the communal farmers, who do not have access to irrigation, rely on rainfall for their production.

Figure 9: Total annual cotton production by communal farmers, 1980-1996
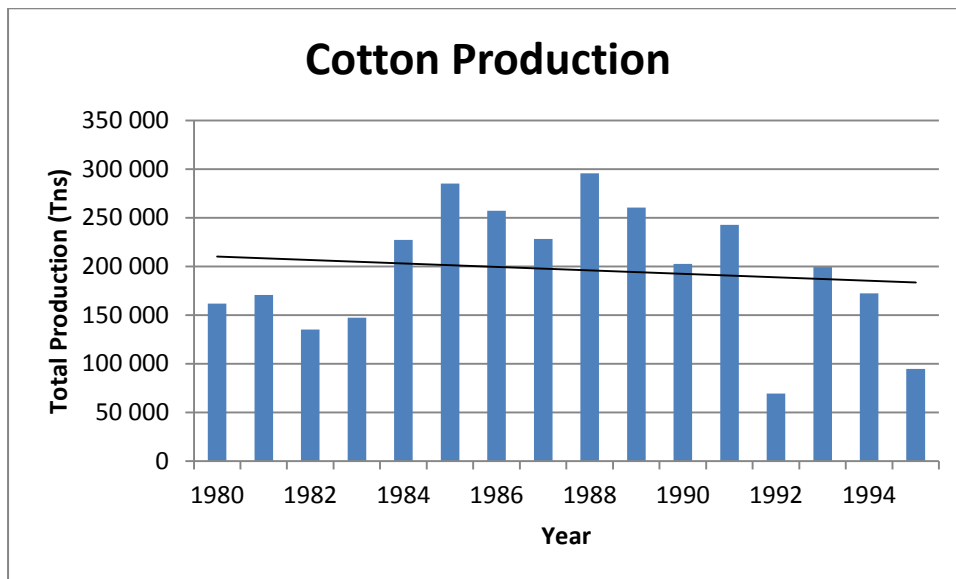
Source: Author's own graph using data from Zimbabwe Statistical Yearbook, (1997).

Figure 10: Total annual rainfall, 1980-1996
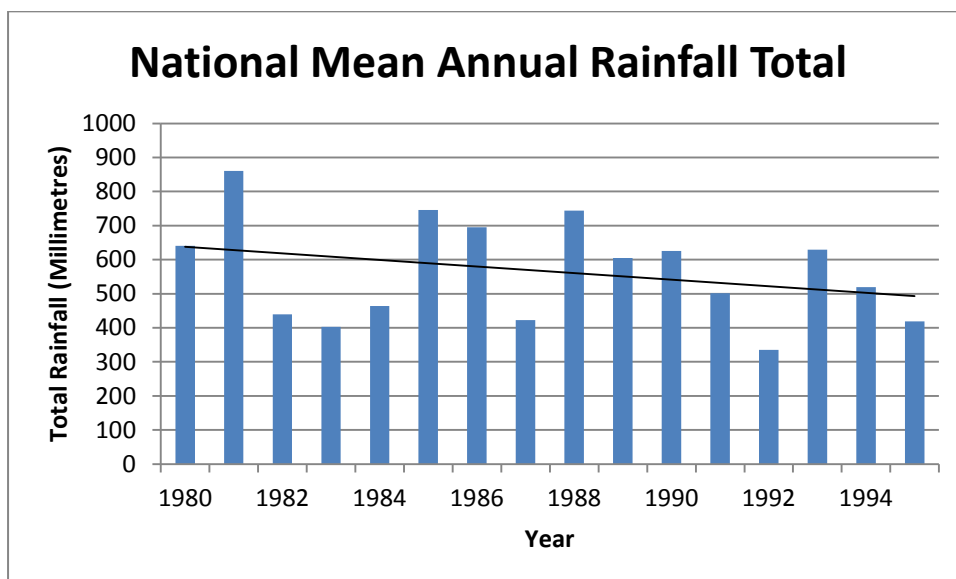
Source: Author's own graph using data from Zimbabwe Statistical Yearbook, (1997).

On the contrary, the commercial farmers who complemented rain water with irrigation had better yields. Figures 11-13 below, shows total production of 3 major cash crops (wheat, tobacco and soya beans) grown by commercial farmers.

Figure 11: Total annual wheat production by commercial farmers, 1980-1996

Wheat Production
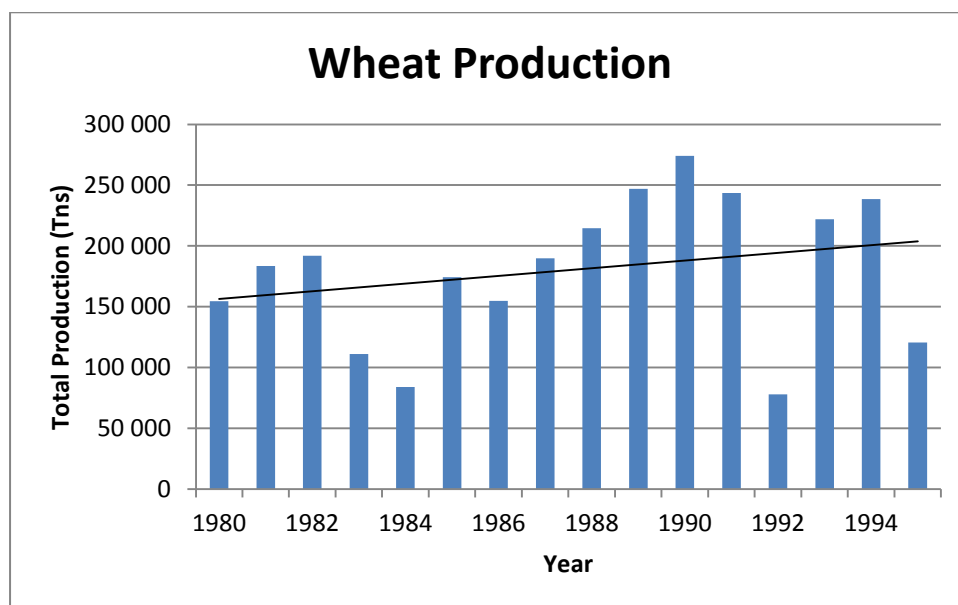
Source: Author's own graph using data from Zimbabwe Statistical Yearbook, (1997).

Figure 12: Total annual tobacco production by commercial farmers, 1980-1996

Tobacco Production
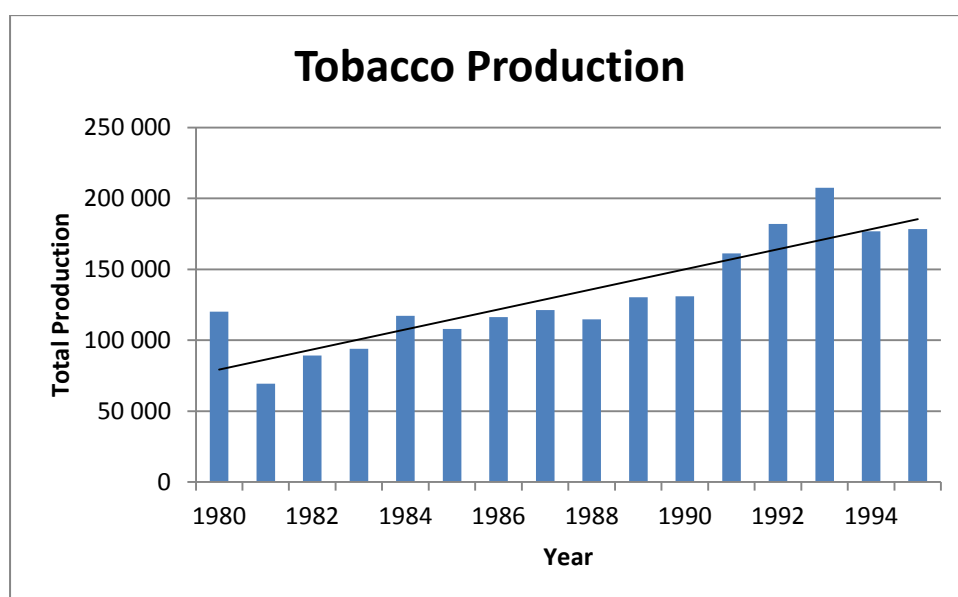
Source: Author's own graph using data from Zimbabwe Statistical Yearbook, (1997).

Figure 13: Total annual soya bean production by commercial farmers, 1980-1996
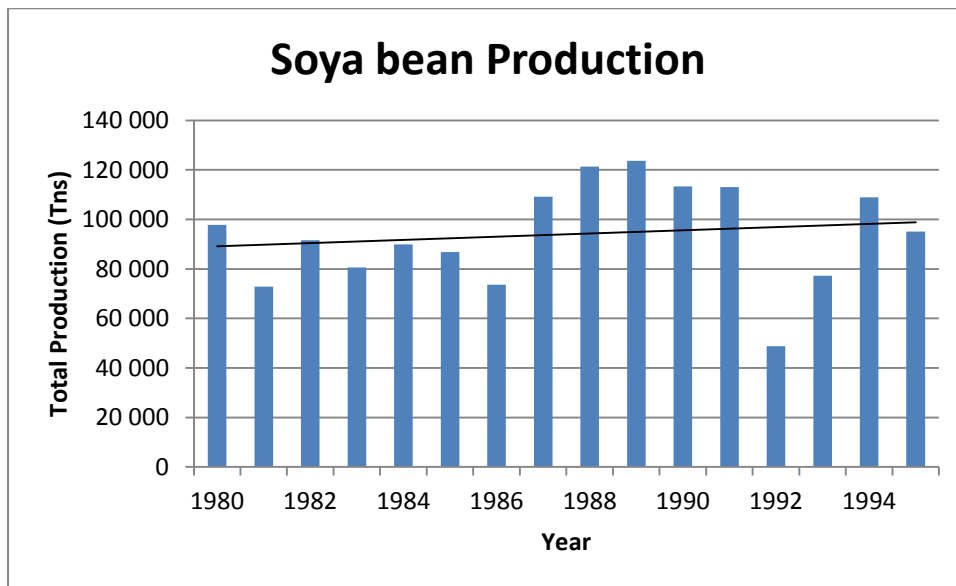
Source: Author's own graph using data from Zimbabwe Statistical Yearbook, (1997).

The production of wheat, tobacco and soya bean shown above, are from commercial farmers only. Over the period 1980-1996, production levels by commercial farmers have generally been on a positive trend, as shown in figures 11-13. One possible reason for this upward trend was the increase in support from the government through subsidized credit and favourable market price (Musuna and Muchapondwa, 2008). Most of the subsidised financial support from the government was granted to commercial farmers who had the collateral to support their loan applications (Musuna and Muchapondwa, 2008). Also, the market prices for the cash crops were pegged above other crops, making them more lucrative. In 1992, wheat and soya bean production was greatly affected by the drought experienced in that year, together with maize and cotton (Rukuni et al., 2006).

The smallholder and communal farmers who were the intended beneficiaries of financial subsidies, in most instances failed to benefit as they could not produce the required collateral or were given too little assistance to support subsistence farming. As a result, communal farmers failed to improve their capital base and remained subsistence farmers. Commercial farmers have always performed better than subsistence farmers and the ruling party has used the land issue to campaign for votes from the many black subsistence farmers. Promises such as relocation to commercial farms were made to the subsistence farmers, but were not kept by the ruling party causing the frustrated subsistence farmers to start the land invasions in 2000

(Rukuni et al., 2006).

This chapter has thus far outlined the production of certain crops by commercial and communal (subsistence) farmers for the period 1980 to 1996. Further details on post 1996 agricultural production are presented in section 3.3. Besides improving agriculture between 1980 and 1996, the government also invested in infrastructural development. The next section discusses the government's involvement in post-independence development of the education, health and transport sectors.

2.2.6 Education, Health and Transport Networks

At independence, the new Zimbabwean government campaigned for "education for all." New schools were built throughout the country, especially in the rural areas and resettlement areas. Table 2 below shows a summary of growth in the number of schools, enrolments, and number of teachers in different academic institutions between 1980 and 1995. Free education in primary schools was introduced in the rural areas in 1980. All other government schools operated on a highly subsidised fee structure. Between 1980 and 1996 enrolments in primary schools almost doubled, rising from 1,236,000 to 2,482,508 and the number of primary school teachers increased from 28,500 in 1980, to 63,475 in 1995 (see table 2 below) (Zimbabwe Statistical Yearbook, 1997). Post-independence enrolment has continued to cause shortages of trained teachers, with the pupil-teacher ratio increasing from 35 to 39 in primary schools and 24 to 27 in secondary schools between 1990 and 1996 (Zimbabwe Statistical Yearbook, 1997).

Table 2: Number of Schools, Enrolment and number of Teachers

Institution		1980	1985	1995
Primary Education	**No. of Schools**	3,160	4,297	4,633
	Enrolment	1,236,000	2,065,154	2,482,508
	No. of Teachers	28,500	N/A	63,475
Secondary Education	**No. of Schools**	N/A	1,276	1,536
	Enrolment	N/A	534,287	711,094
	No. of Teachers	N/A	N/A	26,82s5
	No. of Study Groups	109	649	210

Distance Education	Enrolment	9,423	42,070	17,446
	No. of Teachers	208	1,084	438
	No. of Centers	56	282	150
Adult Education	Enrolment	6,879	46,806	16,321
	No. of Teachers	309	2,364	1,502
University of Zimbabwe	Enrolment	2,240	5,846	10,606
Agricultural Colleges	Enrolment	300	789	604
Teachers Training Colleges	Enrolment	2,824	1,4637	17,466

Source: Author's own table using data from Zimbabwe Statistical Yearbook, (1997).

N/A means not available

The health sector and transport networks also received considerable attention from the new government. Free treatment was made available for everyone in government hospitals. New clinics were built and made accessible to everyone in remote areas. With all these developments being carried out throughout the country, it is obvious that huge sums of money would be needed to fund the projects. However, income did not match expenditure. "At the time of independence, some 6,000 farms produced 14 per cent of the Gross Domestic Product, 95 per cent of all marketed agricultural produce, and about 33 per cent of the nation's exports. Yet in 1980, only 25 per cent of these farms paid any income tax, yielding less than 6 per cent of all income tax revenue received by the Government" (Seidman, 1982:1). To match the expenditure, the government had to borrow. The government borrowed both domestically and internationally to supplement the shortfall in income. As a result, public debt increased from Z\$287.44 million in 1980 to Z\$1,338.18 million in 1995. Managing this debt was among some of the challenges that the new government faced. The donors could not continue funding the country unless structural reforms were put in place to rectify the debt crisis that the country was now in (Sichone, 2003).

2.3 Structural Reforms since 1991

2.3.1 Economic Structural Adjustment Programme (ESAP) – (1991-1995)

Ten years after independence, the Zimbabwean government was sunk in a huge debt which was part of the economic crisis that had hit the country. The foreign donor agents that had been supporting post war re-construction were threatening to stop assisting unless some structural reform was put in place. In 1990, the Zimbabwean government succumbed to the

pressure from the donors and agreed to implement a five year reform program (Sichone, 2003). The Economic Structural Adjustment Programme (ESAP) was the first reform programme to be implemented in the country in 1991, following the suggestion by the International Monetary Fund (IMF). Key policies were on trade liberalisation, agricultural pricing and marketing reform and simplification of the investment licensing regime. Although the country was now in the hands of the blacks, the economy was still run and controlled by a white minority with structural reform aimed at empowering the blacks (Sichone, 2003). In terms of the ESAP, measures introduced were:

- Removal of price controls;
- Removal of wage controls;
- Reduction of government expenditure;
- A 40 per cent devaluation of the Zimbabwean dollar;
- Removal of subsidies on basic consumer goods;
- Liberalizing the foreign currency allocation system;
- Removal of protection of non-productive import substituting industries and increased profit remittance abroad; and
- A radical restructuring of the various parastatals and other public enterprises (Sichone, 2003).

The implications of the structural adjustment programme's implementation were not positive, and many researchers agreed that the adjustment programme of 1991 was an initial contributory factor to economic meltdown, lasting until 2008 (Sichone, 2003; Ishengoma and Kappel, 2006; Luebker, 2008). The adjustment programme raised the cost of living, decreased the real wage in the *formal* sector, and caused the closure of some *formal* enterprises resulting in job retrenchments (Ishengoma and Kappel, 2006). As a result, the informal sector grew immensely as many retrenched people were forced into self-employment for survival. In order to correct the shortfalls of the first phase, the government felt the need to implement the second phase of ESAP (Sichone, 2003). This will be covered in the next section.

2.3.2 **Zimbabwe Programme for Economic and Social Transformation (ZIMPREST 1996-2000)**

The second phase of the structural adjustment was implemented from 1996 to 2000 in a program known as ZIMPREST. The ultimate goals for the program were to achieve a real annual GDP growth of 6% and to create 44000 new jobs per year. ZIMPREST aimed at achieving the objectives of ESAP as well as implementing the following:

- Increasing savings and investment by at least 23% of GDP;

- Reducing the budget deficit to under 5% of GDP;

- Improving the quality of democratic institutions;

- Pursuing good governance, and;

- Eliminating corruption (Sichone, 2003).

Overall, the two programmes ESAP and ZIMPREST, did more harm than good. The economic situation continued to deteriorate and what had once been the 'bread basket of Southern Africa,' became an impoverished country recording a poverty rate of 67% in 1995 and a 50% unemployment rate in 2000 (Sichone, 2003). The effects of these programmes are highlighted in the literature as being contributing factors leading to the economic meltdown that later hit the country between 1997 and 2008 (Coltart, 2008). The meltdown, its causes, and the way it manifested itself, is discussed further in section 2.5.

2.4 The Economy: 1997 to 2008

2.4.1. **Agricultural Production**

Post ESAP, the Zimbabwean economy started deteriorating and the agricultural sector was amongst the hardest hit. The economic situation was worsened by recurring droughts between 1997 and 2000. These droughts affected agricultural production which was the main source of foreign currency in the country. The agricultural sector also experienced a setback in 2000 with the invasion of farms by war veterans. After the land invasions some of the remaining farmers opted not to farm due to fear of not knowing whether they were going to be forcibly removed from their farms or not. From 2000 onwards, agricultural production deteriorated, the manufacturing sector also collapsed, and the Zimbabwean economy lost a lot of revenue (Matandirani, 2011).

Total cereal production dropped from 3,130,664 metric tonnes in 1996, to 2,740,175 metric tonnes in 1997 and to 908,945 metric tonnes in 2002 (World Bank data, 2013). Although it increased slightly between 2003 and 2004, it then started falling again recording only 691,669 metric tonnes in 2008 (see figure 14 below). The fall in cereal production turned the country from being a net food exporter to a food importer (see figure 15 below), and Zimbabwe had to rely on donors to provide for the country's needs. According to the United Nation's Food and Agriculture Organisation and the World Bank, cereal production in 2008 of 691,669 metric tonnes could only meet 55% of the country's needs, and 352,000 metric tonnes of food aid was needed to feed 4.1 million people (Coltart, 2008).

Figure 14: Total Cereal Production: 1997-2008
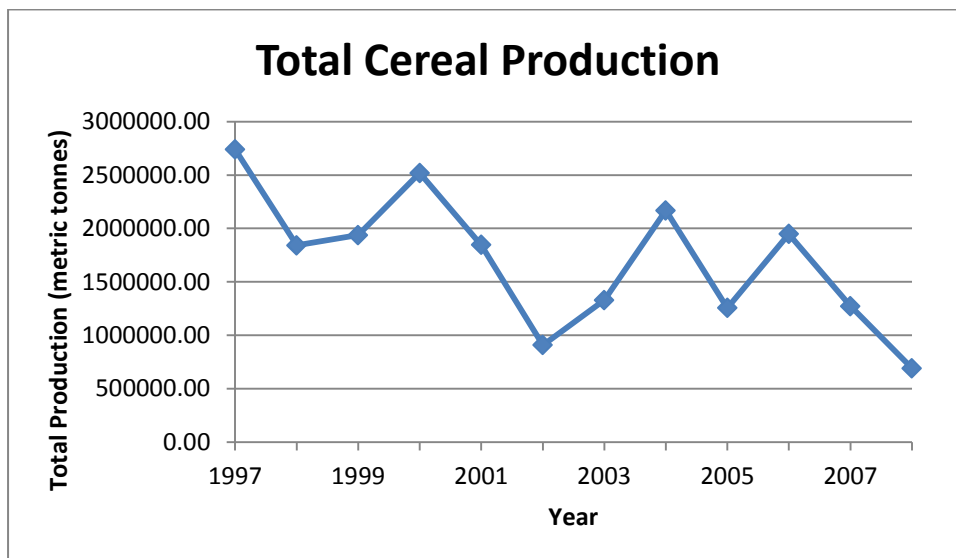
Source: Author's own graph using data from Worldbank Data, (2013).

Between 1997 and 2001, more than 50% of total imported merchandise was food (see figure 15 below). Zimbabwe changed, as indicated earlier, from being a net exporter to a net importer of food crops like maize and wheat.

Figure 15: Food imports and exports as a percentage of total merchandise of imports and exports: 1997-2008

Food Imports and Exports (% merchandise imports and exports)
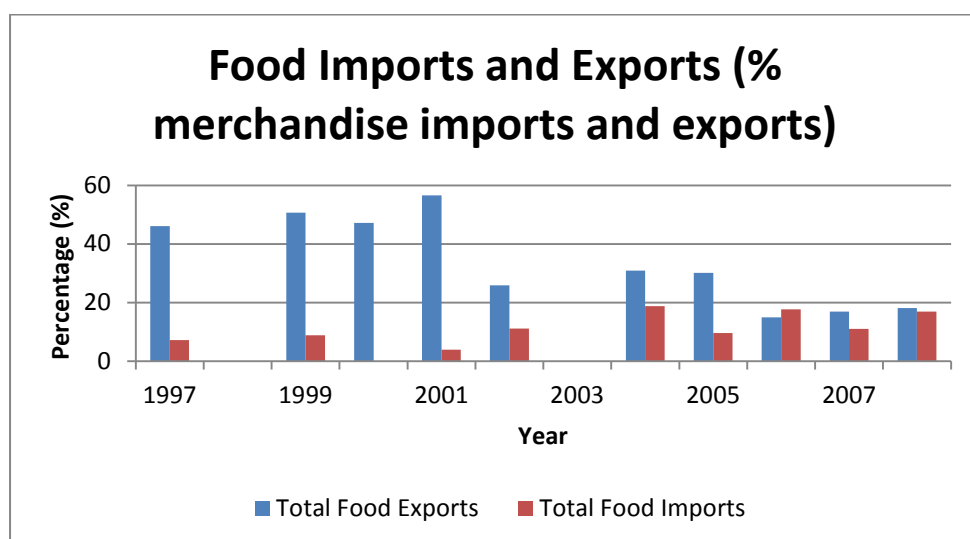
Source: Author's own graph using data from Worldbank Data, (2013).

The agricultural sector, which was formerly the back bone of the economy, regressed significantly. The manufacturing sector also deteriorated because of the forward-backward linkage that existed between the agricultural sector and manufacturing sector. Between 1996 and 2008, the real agricultural GDP growth rate fell from 20% to -40%. Agricultural production was also disrupted by the subsequent controversial land invasions in March 2000, and the government sponsored 'Fast Track' land reform programme that ran between July 2000 and December 2001, affecting mostly tobacco production. Dating from the colonial era, tobacco was the main foreign currency earner for the country, until most of the tobacco farmers lost their land during the 'Fast Track' land reform programme. The new farmers who took over the farms failed to match the production levels of the previous owners. In 2000 earnings from tobacco were US$600 million, but decreased to less than US$300 million in 2002 and less than US$125 million in 2007 (Coltart, 2008). The new black farmers who were now occupying the invaded farmers could not match the standard that was set by the white commercial farmers (Moore, 2001). This impacted adversely on the foreign reserves of the country.

As a whole, between 1999 and 2008 the economy shrunk by more than 60% (see figure 16 below) (Worldbank data, 2013). The worst period was between 2003 and 2008 when the economy shrunk by 23.7% and 18.8% respectively (figure 16). This is worse than the decline

in GDP for countries affected by civil war, such as Côte d'Ivoire (7%), Democratic Republic of Congo (19%) and Sierra Leone (25%) (Moss, 2007).

Figure 16: Real GDP Growth Rates since 1997-2008
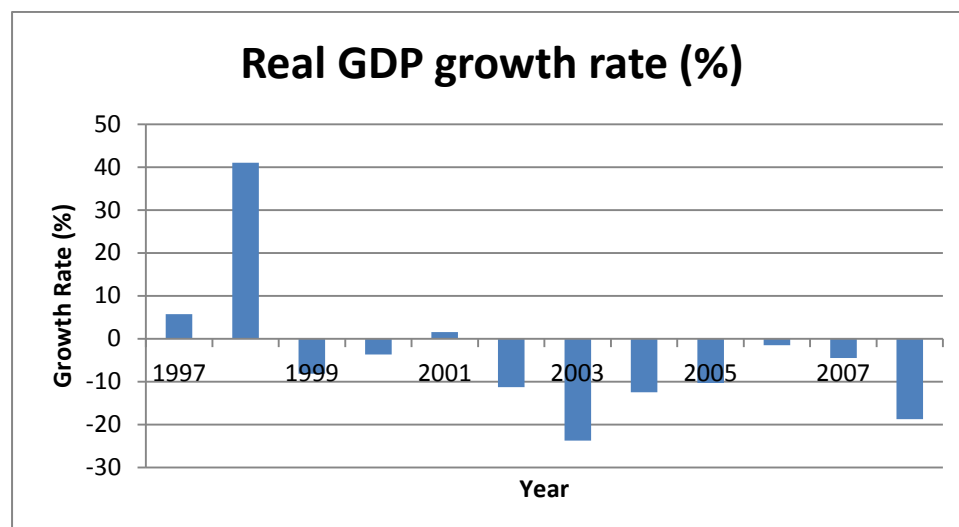
Source: Author's own graph using data from Worldbank Data, (2011).

2.4.2. **Manufacturing Sector**

The other sector that was greatly affected by ESAP was that of manufacturing through trade liberalization. Central to trade liberalization was the removal of policies that controlled and protected domestic goods over imported goods. The move to remove controls on products opened up the domestic market to cheaper imports resulting in the closure of many manufacturing industries, especially the textile industry (Sichone, 2003). Between 1998 and 2006, manufacturing productivity declined by more than 47% (Coltart, 2008). Since 2005, government policies that required exporters to sell a maximum of 30% of their foreign earnings to the Reserve Bank of Zimbabwe at the falsely pegged exchange rate further crippled the manufacturing sector (Coltart, 2008). The situation was worsened by the government's price control policy of June 2007, whereby the government halved all prices as a coping mechanism for rising inflation. Following this policy, within 6 months manufacturing output fell by more than 50% as many manufacturing firms shut down (Coltart, 2008).

2.4.3. **Unemployment**

The closure and downsizing of many industries resulted in the rapid growth of both unemployment and the informal sector. In 1996, the unemployment rate was sitting at just

below 10%, but by 2000 it had more than quadrupled to 50%, and by 2009 had increased to over 80% (Worldbank, 2013). By 2010, the unemployment rate was sitting at 95% (see figure 17 below).

Figure 17: Unemployment rates since 1997-2010
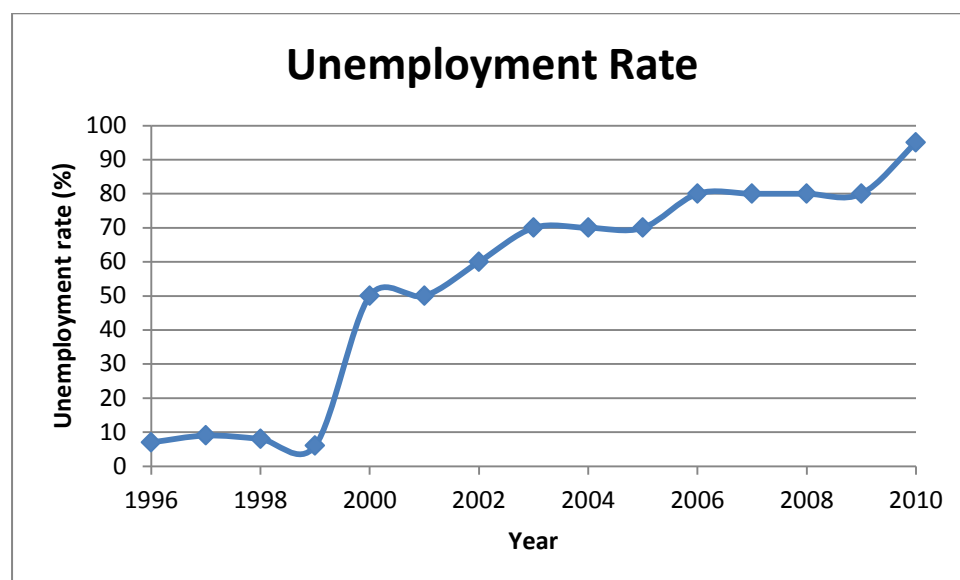
Source: Author's own graph using data from Worldbank Data, (2011)

Employment in both the agricultural and industrial sectors increased significantly from 1980 to 1994, but thereafter there was a significant reduction, especially in the industrial sector. Big agro-processing industries, for example tea, fruits and vegetables, sugar cane, mealie meal, and timber which were among the top employers in the country, experienced significant downsizing (Coltart, 2008). Not only were manufacturing industries retrenching workers, but also the service sector (see table 3 below). Between 1999 and 2004, employment in the industrial sector dropped from 11.8% to 9.3%, and in the service sector from 28.1% to 15.3%. The service sector had the most job losses of the three sectors. Males (4.7% change) were hit harder compared to females (0.2% change) in the industrial sector, while in the agricultural sector the land invasions of 2000 had increased the employment levels. Most of the people who were working on the white farms that were invaded were left jobless overnight. However, the new farmers who were previously unemployed found themselves employed overnight. Statistics show that employment in the agricultural sector improved from 60% in 1999 to 64.85 in 2004 (Worldbank data, 2013).

Table 3: Employment by sector

		1999	2004
Agriculture	Total employment	60	64.8
	Female	69.5	71.1
	Male	50.9	58.8
Industry	Total employment	11.8	9.3
	Female	4.6	4.4
	Male	18.7	14
Service	Total employment	28.1	15.3
	Female	25.9	13.2
	Male	30.3	17.3

Source: Author's own table using data from Worldbank data, (2013).

2.4.4. Inflation

Similarly, the inflation rate in Zimbabwe increased from double figures in 1996 to four digits in 2006 (see figure 18 below). In the year 2001, for instance, the inflation rate rose to over 100 per cent. By 2007, it had shot up to about 24000% and in the following year, 2008, it rose to a world record of 14.1 billion % (Worldbank Data, 2013). Figure 18 below shows how inflation suddenly jumped as the economy continued to collapse. The increase in inflation was also a result of the excessive printing of money by the Governor, of the Reserve Bank of Zimbabwe, especially over the period 2004-2008 (Matandirani, 2011).

Figure 18: Inflation Rates since 1996
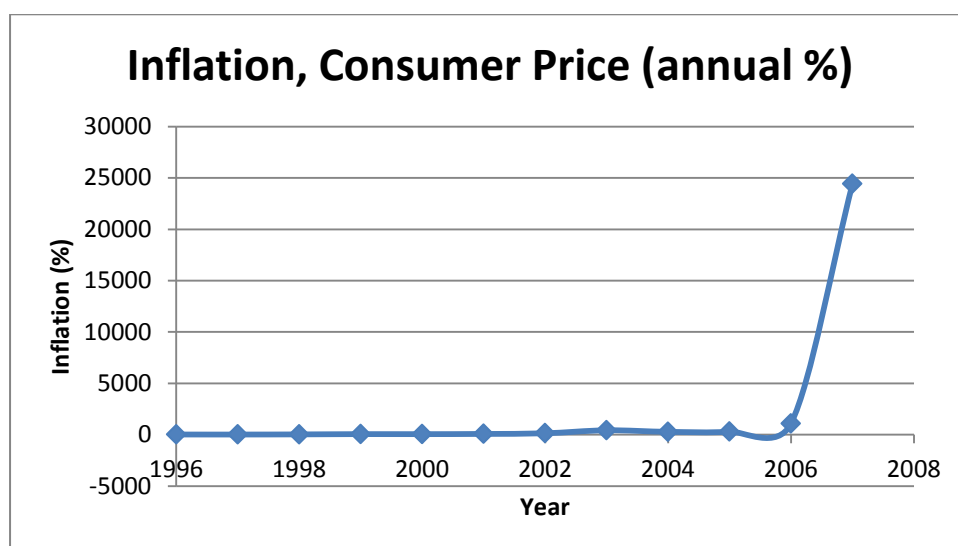
Source: Author's own graph using data from Worldbank Data, 2011

2.4.5. **Exchange Rate**

In 1991, the official exchange rate for US$ to Zim$ was 1 to 55 and yet the black market rate was 1 to 300. The huge difference indicated that something was wrong in the country. Although the official rate was pegged on the unrealistic rate, the black market rate kept rising at an uncontrollable rate. As of late 2008, the official exchange rate of the Zimbabwean dollar against the American dollar was 1:30,000 and yet the black market rate was 1:1,000,000,000,000 (CIA factbook, 2012). No country would accept the Zimbabwean dollar for any form of trade. The Zimbabwean economy itself could not accept its own currency for business, although it was illegal to use foreign currency. One could trade using either the US$, British pound, euros or fuel coupons with US$ value. Public institutions like schools and hospitals also could not accept the bulk Zimbabwean dollar, but were willing to accept the fuel coupons which were purchased in US$s (Moss, 2007; Matandirani, 2011).

Obviously, the economy had crumbled and the government became desperate for foreign currency. The black market became a profitable business and was fuelled by the injection of cash by the Governor, of the Reserve Bank of Zimbabwe, through the so-called 'buyers'[6] (Matandirani, 2011). The objective was to buy out all the foreign currency from individuals in order to boost the country's depleted reserves. The buyers had to get the foreign currency no matter the price. It was out of control to the extent that the holder of the foreign currency could peg a rate that pleased him or her. The result was an ever rising rate of exchange for the US$ and other foreign currencies. There was speculation everywhere and prices of basic commodities were changing at least twice a day. Everything became unaffordable. Unpaid electricity bills, water bills, housing bills and school fees all piled up in people's houses. Salaries were just a drop in the ocean as both the monetary and real sectors had collapsed (Moss, 2007).

2.4.6. **Public Debt**

External debt did not stop growing and it was intensified by the devaluation of the Zimbabwean dollar.

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[6] Buyers were the people who were employed by the reserve bank to go and buy out any foreign currency that was traded in the black market.

Figure 19: Zimbabwe external debt, and repayment, 1997-2008
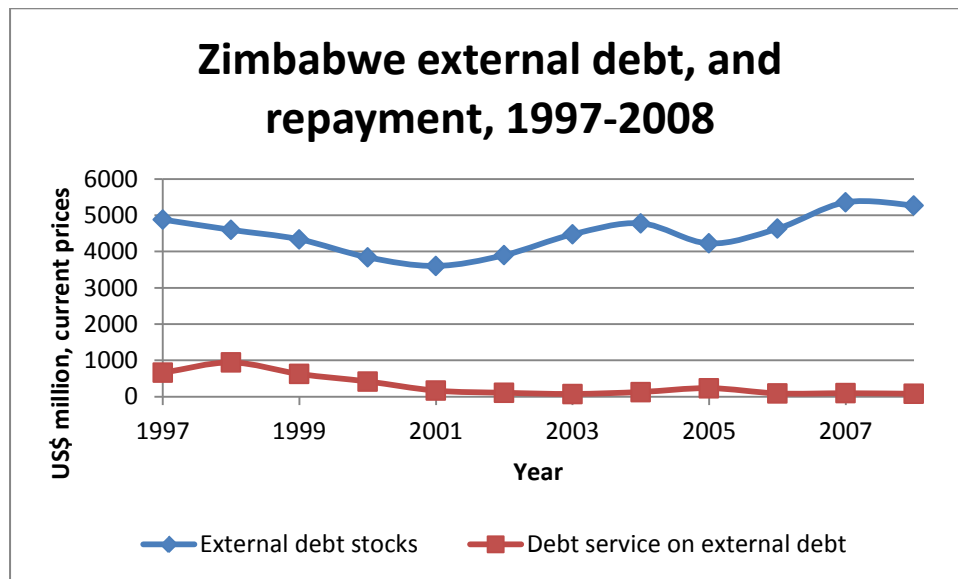
Source: Author's own graph using data from World Bank data, (2014).

As of 2011, the debt owed to the rest of the world was estimated to be around US$10.7 billion (113.5% of GDP) (Jones, 2011; IMF Report, 2012). It is estimated that US$750 million of this debt comes from the loans that were given by the World Bank, African Development Bank and IMF for structural adjustment in 1992 (Jones, 2011). As the structural adjustment programme was kicking off, a severe drought hit the country and more loans were granted to provide help in the form of drought relief to millions of people. Further loans were granted between 1998 and 2000 to help meet the repayment of old loans and provide credit for small businesses (Jones, 2011). The intended beneficiaries, who were the small business owners, failed to benefit from the loan as most of them were unable to meet the requirements due to the deterioration of the economy. Loan disbursements then stopped in 2000 when Zimbabwe defaulted on its World Bank debts (IMF report, 2012). The debt crisis carried on after the meltdown and in 2012 an Aid and Debt Management Office (ZADMO) was established to strategize on how to handle both aid and debt.

As the economy was collapsing micro and small-scale entrepreneurial activity was intensifying, especially in the informal sector. Could one say economic collapse fostered growth in informal entrepreneurship or was it a question of opportunity versus necessity? Answer to this question will be provided by this study.

2.4.7. **MSE growth in the formal sector**

As the economy was failing, something postive was also happening among MSEs. Entrepreneurial activity grew sharply, as observed in figure 20 below. The figure shows that the number of MSEs in the *formal* sector increased from 7488 in 1996 to 11069 in 2002. The increase was particularly significant from 2004 onwards, as shown by the huge jump of 16780 MSEs in 2004 to 85210 in 2008. Similarly, the number of firms in the informal sector increased significantly and is believed to be more than double that of the *formal* sector (Ishengoma and Kappel, 2006).

Figure 20: Total SMEs in the formal sector since 1996
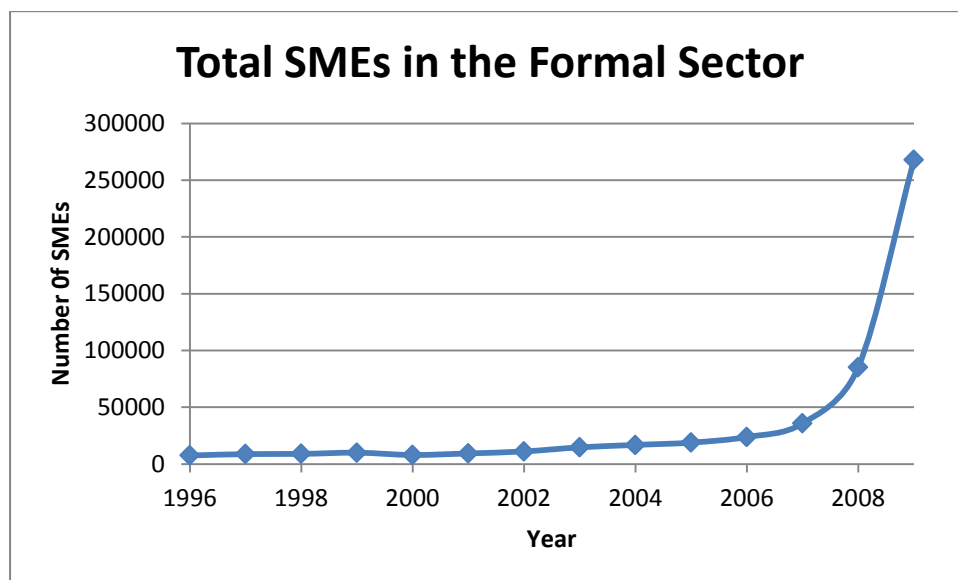
Source: Author's own graph using data from Worldbank Data, (2013) and City council report Harare, (2011), Zimbabwe Labour Statistics Yearbook, (2004).

The change in the path of the Zimbabwean economy over the two periods, 1980-1996 and 1997-2008, has been attributed to the economic meltdown that the economy experienced from 1997 to 2008. Although much can be said about the effects of the meltdown, it is equally important to discuss what could have triggered the meltdown and this will be dealt with in the following section.

2.5 The Economic Meltdown

2.5.1 **Defining Economic Meltdown**

An economic meltdown has no straight forward definition, but it can be explained in terms of its characteristics. The Oxford English Dictionary (2014) defines the figurative use of

meltdown as, "a disastrous event especially a rapid fall in share prices". Capozzi (2010) characterises economic meltdown as a crisis that is a result of intertwined factors, namely high unemployment, no liquidity, hyperinflation, lack of consumer confidence and the falling of the stock market and real GDP. Capozzi (2010) identifies the major causes of an economic meltdown as speculation, currency devaluation, natural and man-made disasters, and political conflicts. These events characterised the Zimbabwean economy from 1997 to 2008. This study defines economic meltdown as a period of hyperinflation (inflation above 50%), high unemployment, no liquidity and extended periods of drop in real GDP. The literature suggests that the triggering factors started in 1996 in the aftermath of ESAP (Luebker, 2008). However, this author thinks the factors were carried over after independence from the Rhodesian government. These factors will be discussed towards the end of this chapter.

2.5.2 Triggers of the Economic Meltdown

The reasons for the economic meltdown are mixed and are intertwined with wrong policies, land invasions, the collapse of democratic institutions and governance. The reasons frequently cited in the literature include:

> the aftermath of ESAP; Zimbabwe's costly involvement in the conflict in the DR Congo; high pay-outs to veterans of the liberation war that had inflationary consequences; the often chaotic implementation of the country's land reform programme; the decline of export revenue from the agricultural sector; high budget deficits that were financed through money creation, and subsequently high inflation; economic distortions caused by price regulations and the misalignments of the foreign exchange rate; erosion of property rights and entrepreneurial freedom; international sanctions such as travel restrictions on the country's elite; declining FDI inflows and lack of access to credit and balance of payment support from agencies such as the IMF and the World Bank (Luebker, 2008:17).

Some of these factors associated with the economic meltdown are examined below.

2.5.3 Aftermath of ESAP

Although ESAP did manage to attract foreign aid which helped strengthen the Zimbabwean dollar and increase imports between 1991 and 1995 as a percentage of GDP from 27.16% to 40.92%, the program also created some dents on the economy (World Bank Data, 2013). The increase in imports made the local products more expensive relative to the imports and caused a decrease in demand for domestic products. According to a UNDP report (1999), imports

created such competition for local manufacturers some were forced to close down, increasing unemployment levels from 22% in 1992 to 35% in 1996.

ESAP also required the government to increase its expenditure. The government had to borrow internationally from IMF to finance its expenditure. The failure by the government to keep spending within the requirements of ESAP meant that they had to borrow domestically as well, causing the interest rates to rise. This was a huge blow to local manufacturers as it became more costly to operate and expand their businesses (Sichone, 2003).

ESAP also caused some political conflicts resulting from such measures as price decontrols, reduction in social services and retrenchments which were all part of the program. There was a constant need to balance the demands of competing economic groups, e.g. interests of the workers vs new businesses. The drought of 1991/92 season also contributed to the economic meltdown. The drought was so intense it resulted in low agricultural output, increased government expenditure on food imports and social expenditure. Maize production fell by 25% in the 1990-1991 agricultural season, and a further 33% in the 1991-1992 agricultural season (Jones, 2011). The result was a country plunged deeply into poverty, unemployment, debt and hunger (Kapoor et al., 2007). After ESAP a number of other events also contributed to the economic downfall. Some of these events are discussed below.

2.5.4 Deployment of the army to DRC

Although the effects of the collapsing economy were seriously felt in 2008, it is believed that the meltdown actually started in late 1996, triggered among other things, by the budget deficit caused by the involvement of the Zimbabwean army in the DRC war, which drained the country's foreign reserves (Coltart, 2008). In 1994 and 1995, military expenditure steeply increased from about Z$215 million in 1993 to about Z$1,4 billion and Z$1,3 billion respectively and then dropped to Z$269 million in 1996 (see figure 21 below). Most of this expenditure was targeted at stocking ammunition and for the upkeep of the deployed soldiers and their families. Moore (2001) argues that a large sum of unbudgeted funds was used in this exercise, putting a huge dent in the diminishing foreign currency reserves.

Figure 21: Government Military Expenditure, 1990-2008

Military Expenditure (current local currency unit Z$)
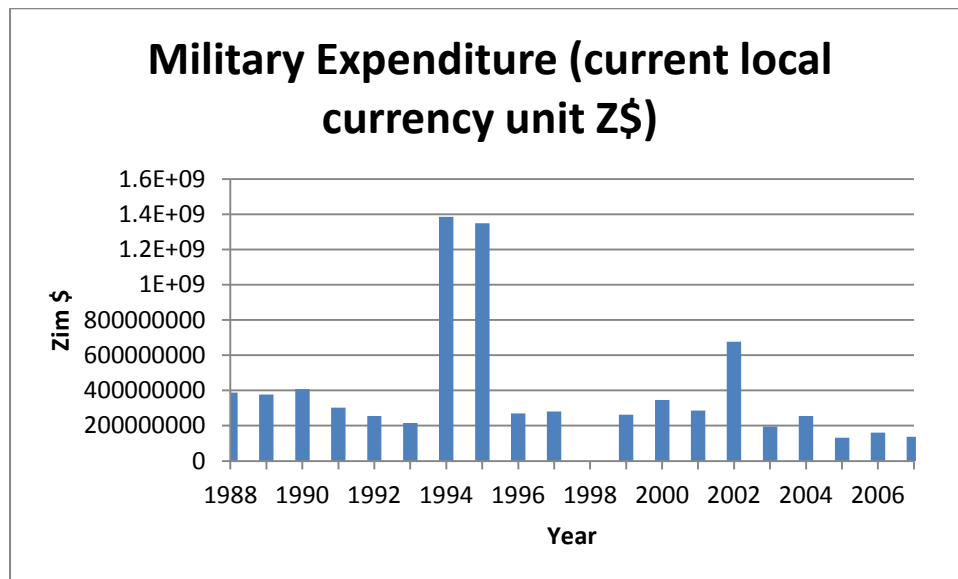
Source: Author's own graph using data from Worldbank Data, (2011).

2.5.5 Compensation of the war veterans

Adding to the budget deficit created by the deployment of the army to the DRC in 1996, in 1997 the government then used large sums of money to compensate the war veterans. Each individual received a lump sum of Z$50,000 and a tax-free monthly pension of Z$5,000 for 50000 war veterans (Moore, 2001:262; Matandirani, 2011). Z$4.5 billion was allocated by the government to cater for the demands by the war veterans (Moore, 2001). The announcement in 1997 of this move to compensate war veterans caused the stock market to crash and the Zimbabwean dollar started falling (Matandirani, 2011). Because compensation of war veterans was unbudgeted for, there were many economic repercussions. It caused the largest deprecation of the Zimbabwean dollar which then triggered intensive inflation. In the midst of it all, the IMF-imposed austerity measures were removed (Games, 2002; Sichone, 2003). On the political side, there were serious political conflicts that were brewing between MDC and ZANU (PF), the two dominant political parties in the country. In response to the rising inflation, the government imposed price controls on many basic goods, announced the intended acquisition of 1471 farms in 1997, and imposed a 5% surtax to pay for land resettlement (Moore, 2001). Most commodities were no longer available in supermarkets, but were always available on the black market. The price controls worked in favour of the black market traders instead of the general public. Government action only added to the failure of the economy and by the end of 1998 only a few of the promised 1471 farms were acquired

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and redistributed (Moore, 2001; Games, 2002).

2.5.6   Land invasions by war veterans

Moore (2001:255) believes that the land invasions in March 2000 were a reflection by the war veterans about how they felt about the ruling party ZANU (PF). The invasions were more the frustration felt by unmet resettlement promises made by the government since independence. In the Constitutional Referendum that was voted against in February 2000, ZANU (PF) was lobbying to remove the willing-buyer, willing-seller clause in order to facilitate the intensive acquisition of 1471 farms they had promised the people in 1997 (Moore, 2001:255). The referendum also promised to extend the presidential powers. The opposition party was against the adoption of the new referendum. The voters voted against the referendum which triggered the land invasions of the white settler farms by war veterans in March 2000.

The loss by ZANU (PF) was a huge wake up call for its policy makers and also a possible indication of the outcome of the upcoming June 2000 elections (Moore, 2001:256). It was only logical for ZANU (PF) to step up their election campaign, which resulted in their funding the land invasions by the war veterans. Unemployed youth were hired to run the invasions at a daily rate of between US$10 to US$70 (Moore, 2001:256). Most of the new black farmers who were subsequently resettled on the invaded farms came from communal lands and had minimal capital to use on the larger pieces of land. They did not receive any infrastructure or agricultural support service from the government, nor did they get title deeds to the new pieces of land (Moyo, Rutherford and Amanor-Wilks, 2000).

The government's subsequent 'Fast Track' land reform programme, which was intended to run from July 2000 to December 2001, was characterized by chaos and violence, and badly damaged the commercial farming sector. The commercial sector was the traditional source of exports and foreign exchange and the provider of over 400,000 jobs. Zimbabwe was turned into a net importer of food products (Moyo et al., 2000). In August 2002, the government announced the 'Fast Track' land reform complete, by which time damage had been done which might take years to rectify (Chiremba and Masters, 2003).

2.5.7   Smart sanctions

The effects of the above events were mostly felt by the citizens of Zimbabwe. As of 2004,

72% of the population were below the national poverty line (World Bank data, 2013). People lost their lives because of political conflict and hunger leaving many children orphaned in the process (Moyo et al., 2000). The international community felt there were human rights' infringements caused by the ruling party, and imposed the controversial "smart sanctions" on some members of the ruling party. At the same time the Zimbabwe Democracy and Economic Recovery Act of 2001 was also passed. The Act was enacted by the Senate and House of Representatives of the United States of America in Congress and aimed at providing support for a transition to democracy and promoting economic recovery in Zimbabwe. The Act blocked all American aid to Zimbabwe until the rule of law was operational in the country[7] (Magaisa, 2009). A number of analysts felt that this was an unfair move for ordinary Zimbabwean citizens (Mutandirani, 2011). The role that the sanctions were supposed to play, that of compelling the government to promote democracy and human rights, was not achieved. Instead the sanctions and the Act hit the poor and were a threat to human rights and democracy. As Magaisa in newzimbabwe.com (2009) rightfully said, "Democracy cannot flourish in poverty but needs a stable economic foundation." Banning aid to a country which was already depleted of resources could have fuelled the economic meltdown, as the whole situation was politicised (Magaisa, 2009).

2.5.8 Operation Murambatsvina in 2005

Another contributing factor to the meltdown was Operation Murambatsvina (Operation drive out rubbish or Operation restore order) where the government used bulldozers to destroy informal settlements in urban areas leaving thousands of people homeless and the informal sector, which had become the main source of income for the majority of Zimbabweans, destroyed (Coltart, 2008; Matandirani, 2011). According to the United Nations, this operation directly affected approximately 700,000 people who were the bread winners to approximately 2, 4 million people. This operation was condemned by the opposition party in the country as well as non-governmental organisations and the international community as they felt the exercise infringed on human rights. This was not the only operation, but all the government

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[7] In September 1999 the IMF suspended its support under a "Stand by Arrangement" approved for economic adjustment and reform in Zimbabwe.
In October 1999 the International Development Association, IDA, suspended all structural adjustment loans, credits, and guarantees to the Government of Zimbabwe.
In May 2000, the IDA suspended all other new lending to the Government of Zimbabwe.
In September 2000, the IDA suspended disbursement of funds for ongoing projects under previously approved loans, credits, and guarantees for the Government of Zimbabwe.

operations mostly affected the ordinary citizens who made a living from the informal sector, dragging most of them below the poverty line (Coltart, 2008).

The Zimbabwean economic meltdown did not happen overnight, but was a result of many possibly wrong choices made by the government of Zimbabwe. Since 1991, there were many decisions that were made by the government and the international community, some for political reasons, but all impacted adversely on the general citizens. After about a decade of economic breakdown, light dawned on the country in the form of a unity government between MDC and ZANU (PF), mediated partly through the leadership of Thabo Mbeki, the then President of South Africa.

2.5.9 Control of Money Supply by the Government

If not managed properly, the control of money supply is a huge contributing factor to economic instability. Mises (2013) argues that the involvement of the state in the monetary system causes economic instability and can also cause social instability. Increasing the money supply is usually used as a monetary tool when the policy makers want to increase consumption and forcefully create an artificial boom (Mises, 2013). According to Mises, this policy is unsustainable and will eventually cause the economy to crash. Increases in money supply are highly inflationary and will eventually increase the cost of borrowing and make it less profitable for business owners to borrow and invest in the growth of their businesses. This will force them to shut down and people will be retrenched.

Examples of such experiences are firstly the Great Depression of 1930 where there was a huge credit build up in the 1920s, followed by an economic collapse (Kelly, 2010). The same also happened with the 2008 financial crisis which was characterized by huge mortgage loans being extended to people in lower-income brackets. This eventually became unsustainable causing the economy to crash (Ivashina and Scharfstein, 2010; Kelly 2010). This also happened in Zimbabwe where many government projects, discussed in the previous sections, were financed through borrowed funds and the excessive printing of money. Looking back into the 1980s after the attainment of independence in Zimbabwe, the reconstruction of the country was financed through both domestic and foreign debt. More debt was accrued in the 1990s when the government was correcting the effects of ESAP, as well as compensating the war veterans with lump sum bonuses in 1997, while at the same time the Zimbabwean

government was involved in the DRC war. The economy failed to sustain the pressure resulting in the economic meltdown.

Besides economic distress, a government's involvement in the monetary system can also cause social instability. This can result in the rich getting richer and the poor getting poorer (Mises, 2013), as the poor bear the brunt of the price increases caused by increased demand for goods and services - a consequence of increased money supply; whilst the rich capitalize on the large proportion of the total money supply. The only other survival tool available to the poor will be outside what the economy can provide, such as in the informal sector. This could be a possible explanation for the sudden growth in MSEs during the meltdown, especially in the informal sector.

2.6 Economic Recovery Plan

2.6.1. Formation of the Government of National Unity (GNU)

A coalition government was formed on 13 February, 2009 after intense talks between the then ruling ZANU (PF) government and two other opposition parties (MDC- Tsvangirai and MDC- Mutambara). This was a crucial turning point for the Zimbabwean economy as it brought to an end the partisan violence and created a framework for power sharing between the three parties. One good thing that came out of this Unity government was the **dollarization of the Zimbabwean economy**. Dollarization was adopted in March 2009 and allowed currencies such as the Botswana pula, the South African rand, and the US dollar to be used locally. This ended hyperinflation and restored price stability, but exposed structural weaknesses that continue to inhibit broad-based growth (CIA World Factbook, 2011). Entrepreneurial activities continue to blossom in this new era. Many families still rely on the MSEs that were developed during the meltdown period as a source of income.

Priority was set on reviving the economy and the coalition government quickly implemented its first policy which was the Short-term Emergency Recovery Program (STERP) in March 2009. This policy ran for 9 months, targeting the stabilisation of the macro and micro economy through recovery of savings, investment and growth. The inclusive government relied on international donors to help finance its programmes as the economy had depleted all its reserves during the meltdown. By the end of 2009, the new inclusive government had managed to reduce year-on-year inflation to 6.5%, revenue collection increased to about 14%

of GDP from less than 4% at the beginning of the year (African Development Bank, 2011,2013). Government expenditure was maintained within the fiscal budget. On the negative side, the current account deficit widened to nearly 17% and external debt remained a challenge.

At the beginning of 2010, STERP was succeeded by the three year Macro-Economic Policy and Budget Framework (2010-2012). This framework addressed the short-comings of STERP and also promoted public and private investments and expenditure in line with poverty reduction and the attainment of the Millennium Development Goals (MDGs).

Table 4: Macroeconomic Indicators post economic meltdown

	2009	2010	2011	2012
GDP growth (annual %)	5.98%	9.62%	10.55%	4.42%
Inflation	6.5%	3.0%	4.8%	6.1%
Exports of goods and services (% of GDP)	29.31%	47.64%	53.81%	44.31%
Imports of goods and services (% of GDP)	59.70%	78.48%	95.77%	76.06%

Source: Author's own graph using data from World Bank Data, (2014) and African Development Bank Report (2013).

The inclusive government managed to promote economic growth, recording 9.62% growth in 2010 and 10.55% in 2011 (see table 4 above). Although still positive, 2012 recorded a slightly lower growth rate of 4.42%. Inflation has been maintained in the single digits range with a year-on-year inflation rate of 3.0% in 2010, and 6.1% in 2012. Exports have also improved significantly from 29.31% of GDP in 2009, to 53.81% in 2011 and then dropping slightly to 44.31% of GDP in 2012. Imports still remain high as the country relies more on neighbouring countries for food and other services. As the country is still trying to find its footing, food production levels are still not enough to feed the whole country. In 2009 imports of goods and services constituted 59.7% of GDP, which then rose to 95.77% of GDP in 2011, before decreasing to 76.06% in 2012.

To complement the three year Macro-Economic Policy and Budget Framework, a 5-year Medium Term Plan was also adopted in 2011. The macroeconomic targets for the MTP included:

- A rise in GDP to US$9 billion by 2015;
- An average growth rate of 15% per annum;

- Revenue and expenditure of up to 30% of GDP;

- Savings and investment of up to 25% of GDP;

- Budget deficit of 5% of GDP by 2015;

- Single digit inflation figures;

- Three months of import cover;

- Infrastructure development with emphasis on rehabilitation and completion of outstanding projects;

- Implementation of pro-poor strategies for poverty reduction;

- Promotion of programs that ensure gender parity in access to education, health and other social services.

Some of the targets of the MTP appear far-fetched as the Zimbabwean economy is already showing signs of struggling. A target of an average of 15% per annum GDP growth might not be achievable given that the average growth rate between 2009 and 2012 was around 7.5%. It is critical that the economy starts generating income and creating employment in order to enhance production and progress towards achieving the targets set in the MTP. Promoting the growth of micro and small-scale entrepreneurships, that were established before and during the meltdown, could be a possible tool and a cheaper option given that they are already functional. This research investigates the possibility of using micro and small-scale entrepreneurs in its road to recovery.

2.7 Synthesis of the Chapter

Although the meltdown is believed to have started in 1997, triggered by the huge devaluation of the Zimbabwean dollar, the deficit from increased spending on war veterans, and the war in the DRC, the root cause can be tracked back to the time of independence in 1980. The huge budget deficit, which only became problematic in 1997, was initially created in the reconstruction phase post-independence and has been increasing over the years. The rapid economic growth that was observed in the 1980s was financed by debt from the IMF, World Bank and other international banks (Jones, 2011). New debt, created by the reconstruction of Zimbabwe, was added to the original debt carried over from the Ian Smith regime, resulting in a huge debt burden. The Zimbabwean government has struggled to pay back this debt over the years and it still remains a challenge. Most of the country's income from exports and from

government revenue in the 1980s was committed to debt repayment forcing the government to either borrow more, or print more money to finance its developmental fiscal budget. As a result, high budget deficit and high inflation have always characterised the Zimbabwean economy. Makochekanwa (2011) in his study on the relationship between budget deficit and inflation in Zimbabwe established that the two are positively correlated.

In 1990, when Zimbabwe was due to pay its first instalment for the loans disbursed in the reconstruction phase, inflation was around 18%, and rose further to around 42% in 1992 when Zimbabwe experienced one of its worst droughts. The government had to import food which increased the budget deficit further. Both inflation and the budget deficit continued to increase through the aftermath of ESAP, and other non-developmental activities, such as compensation to war veterans and land invasions, that occurred in the late 1990s. In 1999, inflation rose above 50%, marking the start of a period of hyperinflation which lasted until 2008. The meltdown period 1999-2008 was a catastrophic period, and caused damage which may take a life time to repair.

Since the formation of the coalition government and the dollarization of the Zimbabwean economy in 2009, inflation has been kept to a single digit, and government expenditure has been kept within its fiscal budget.

2.8 Conclusion

Zimbabwe's economy has grown after the meltdown period despite continuing political uncertainty. After a decade of contraction, the economy recorded real growth of 3.4% in 2013. Although the country is recording positive real growth, the government of Zimbabwe still faces a number of economic problems, including infrastructural and regulatory deficiencies, on-going indigenization pressure, political uncertainty, a large external debt burden, and insufficient *formal* employment (CIA World Factbook, 2012). Until early 2009, the Reserve Bank of Zimbabwe routinely printed money to fund the budget deficit, causing hyperinflation. The coalition government has worked hard to restore stability but there is still much that needs to be done to take the country back to the years when it was the bread basket of Southern Africa. Entrepreneurship is critical to restoring growth of the Zimbabwean economy. This is covered in the next chapter.

CHAPTER 3:
ENTREPRENEURSHIP AND ITS IMPORTANCE

3.1 Introduction

Entrepreneurship has always been viewed as a significant vehicle for economic development with its ability to create employment and generate income (Acs, 2008). In some African and under-developed countries, the perceived economic benefits of entrepreneurship are not clearly observed (Mboma, 2008). For instance in Zimbabwe, unemployment and poverty levels have been rising year after year, and so was the number of entrepreneurs in both *formal* and informal sectors. Barreira, Dhliwayo, Luiz, Naude and Urban (2008) identify the problem as the type of business that dominates most African countries. Small-scale, micro and medium enterprises (SMMEs) are the dominant entrepreneurial activity in Africa, but less than 1% of these SMMEs have ten or more employees (Barreira et al., 2008). Worse still, the lack of homogeneity of the SMMEs makes it difficult for common policies to be effective in entrepreneurial development. However these SMMEs also have a welfare benefit, which makes them popular activities among under-developed and unstable nations. It is for this reason that Barreira et al., (2008) have concluded that the abundance of SMMEs in Africa is an indication of underdevelopment rather than thriving small-scale entrepreneurship.

On the other hand many developing nations, such as China and India, have succeeded in advancing economic growth and development partly through entrepreneurship. For instance in 1978, the Chinese economy was ranked number 100 on the world's largest economy ranking, but moved to second position in 2000, largely through the support of small businesses and by embracing market-oriented policies (Anderson, Li, Harrison and Robson, 2003; CIA Factbook, 2012). From 2000 to 2010, China grew at an annual rate of more than 10% (O'Neill, 2013). It seems Africa has a lot to learn from developed or developing nations before its entrepreneurial activity can be fruitful and bring about the much needed solutions to the poverty pandemic on the continent.

This chapter focuses on formulating working definitions for the key concepts of this study. It consists of four parts: the first section starts by defining entrepreneurship; the second section looks at the entrepreneurial decision making process, with the concept of 'Need for Achievement' in entrepreneurial decision making also being discussed; thirdly the economic

roles of entrepreneurship in job creation, economic growth, innovation, competition and firm formation will be discussed; and the last section will review some empirical studies that have discussed the determinants of entrepreneurship.

3.2 Economic elements of Entrepreneurship

3.2.1 Neoclassical Theory

In literature there is no consensus on the definition of entrepreneurship with different economists using its economic functions to define it. From the neoclassical economic theory, the entrepreneur is seen as an agent in the production process, using human and other resources to organize factors of production and create wealth, and entrepreneurship as a system that consists of entrepreneurs (Parkin, 2010). The theory identifies the market as an entity that creates and distributes wealth through many buyers and sellers. The market forces of demand and supply ensure that the market converges to equilibrium. If there is a disequilibrium, prices have to be adjusted accordingly in order to restore equilibrium in the market. The role of the entrepreneur is clustered with that of managers as making resource allocation decisions so as to maintain market equilibrium. Neoclassical theory does not recognize the existence of the entrepreneur as the "economic man" hence has been criticized (Parkin, 2010).

 In line with the shortcomings of the neoclassical theory in defining the role of the entrepreneur, more academics and theorists have come up with their own "functional definitions[8]" which now make up the foundation of the core concepts in entrepreneurship. The rest of this section discusses the contributions made by four economists to entrepreneurship in economic theory.

3.2.2 Joseph Schumpeter (1934)

Schumpeter (1934) was among the first economists to criticize the neoclassical theory and make a commendable contribution to entrepreneurial theory. He defined an entrepreneur as an innovator through 'creative destruction'. He identifies the entrepreneur as someone who develops new combinations of innovation in the economy by destroying the old ones. The entrepreneur can be anyone despite their social status or wealth. The innovation abilities of an

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[8] Functional definition- defines an entrepreneur in terms of what an entrepreneur does.

entrepreneur allows him/her to destroy existing economic order by creating new products, new production methods, new markets, new sources of supply of raw materials and new forms of organization resulting in new demand (Barreira et al., 2008). Using business cycle theory, Schumpeter showed how new innovation can result in economic booms due to the activities of imitators, leading to economic growth.

Besides innovative qualities, the entrepreneur also possesses leadership qualities. Schumpeter identifies successful innovations as depending on leadership not intelligence. People are entrepreneurs when they actually engage in the process of making new inventions and lose the role once they have built it. There is no active role for the entrepreneur once the optimal decisions are made. The Schumpeter entrepreneur is a person who will not necessarily create his own business and who also can operate as a manager because once a business is created that person is supposed to settle down and run the business in the same way as everyone else runs their business, and thus ceases to be an entrepreneur. Another characteristic of the Schumpeter entrepreneur is that the entrepreneur's role of being an innovator does not include the element of risk taking because everything is done under conditions of certainty and perfect competition (Barreira et al., 2008).

3.2.3 Israel Kirzner (1973)

Kirzner (1973) defined an entrepreneur as someone who does not initiate but facilitates adjustment to change in the face of uncertainty by identifying arbitrage opportunities. Alertness is the core quality of an entrepreneur which allows him/her to identify the loopholes, for example underpricing, in the market and use this information to his or her advantage. Kirznerian entrepreneurship is defined as "the alertness to and foresight of market conditions…" (Stolyarov II, 2005: 161). According to Kirzner (1973), entrepreneurship is seemingly costless and a person can become an entrepreneur if he is alert to recognize opportunities unnoticed by others. Actually entrepreneurship is not costless because it does involve resource expenditures. The entrepreneur will make a profit from foreseeing opportunities that others have overlooked under uncertainty of whether his/her foresight is correct or not.

3.2.4   **Mark Casson (1982)**

Casson (1982:20) also made a contribution to the theory of entrepreneurship by defining an entrepreneur as "someone who specializes in taking judgmental decisions about the coordination of scarce resources". The entrepreneur's goal is to maximize profits. The judgments are based on different perceptions of a situation resulting from differences in access and interpretation of information. In this scenario, the entrepreneur will be viewed as a planner.

3.2.5   **William Baumol (1990)**

Baumol (1990) combined the two functions of the entrepreneur, that of being a manager and a Schumpeterian innovator. He presented an entrepreneur as a person whose entrepreneurial actions can change from being productive to unproductive depending on the structure of incentives in the economy. He identifies 3 classes of entrepreneurship namely, productive, destructive and non-productive. Productive entrepreneurship creates wealth and is associated with innovation and contributes positively to economic growth. Unproductive entrepreneurship involves mainly rent-seeking and is not good for the economy as it destroys the natural laws of economics like demand and supply. Destructive entrepreneurship also has a negative effect on GDP (Acs, 2010). These 3 classes are closely linked to the economic stages of economic development (factor driven, efficiency driven and innovation driven). The number of productive entrepreneurs increases as one move from factor driven economies to innovation driven economies and the distribution of these 3 classes of entrepreneurship in each economy will depend on the institutions and incentive structure in that economy.

3.3 Non-Economic elements of Entrepreneurship

3.3.1   **Psychological Elements**

The functional definitions given by the four economists above, do not give a theoretical framework that can be used to explain the role of entrepreneurship. As a result, recent researchers have drawn on theories by sociologists, psychologists and political scientists who define an entrepreneur in terms of human attributes, personality or motive. The focus shifted from simply trying to explain the economic meaning of entrepreneurship to understanding the sources of entrepreneurs' motivation and understanding the decision-making process to becoming an entrepreneur (Hebert and Link, 2009).

The key characteristics which have been identified as important traits for any entrepreneur are: need for achievement (N-Ach); calculated risk-taker; creativity; high internal locus of control; innovative; need for autonomy, vision, ambiguity tolerance; and self-efficacy among others (Deakins and Freel, 2012). Some researchers have advocated for McClelland's need for achievement to be the key characteristic. N-Ach is defined as the desire to excel and a high N-Ach is associated with a higher level of business success. However, there are also those who think that its importance could be overrated as it is a difficult characteristic to measure, hence has been criticized (Deakins and Freel, 2012). The same can also be said with the other characteristics like internal locus of control and self-efficacy. In the midst of all the criticism, the Mehrabian Scale of Achieving Tendency has been supported as a good measure for N-Ach (Elliot and Dweck, 2005; Scannell and Allen, 2000). N-Ach and the Mehrabian measure will be discussed further in the next section as it is a key component in this study.

3.3.2   Need for Achievement (N-Ach)

According to McClelland (1961) human behavior is greatly influenced by three factors which are Need for Power, Need for Achievement and Need for Affiliation. Need for Power is the desire to have control over other people's behaviour. Need for Affiliation is the desire to have a mutual understanding relationship. Need for Achievement (N-Ach) is the desire to excel. These three needs are closely related and McClelland (1961) believes that every individual possess a different mix of needs. The bias towards one of the motivational needs will determine their working style. A stronger power motivation usually depicts someone who is greedy, selfish and wants to control and suppress others (McClelland, 1961). A strong affiliation motivation is associated with someone who needs to be liked hence always takes other people's opinions into their decision making capacity. A strong achievement motivation is associated with someone who is results driven, not money driven, and these people with high N-Ach tend to be good leaders and entrepreneurs. These three needs are acquired over time and can be moulded by an individual's life experience. They can be taught and can be achieved by learning to a certain extent (McClelland, 1961).

The N-Ach captures one's eagerness to succeed in a business. It also shows an individual's desire for significant accomplishment, mastering of skills, control, and these desires then motivate risk taking (McClelland, 1961). This desire is mainly for personal fulfilment, not for social recognition or profits. N-Ach is not a common characteristic among most people. It is

influenced by a combination of internal and external factors (Storey, 1995). Internal factors include personal drive, individual values and educational background (Mahadea and Pillay, 2008; Shane, 2003).

N-Ach can be measured by the use of questionnaires. According to Finneman (1977), a questionnaire approach is a reliable instrument to measure N-Ach. In this study N-Ach will be measured by using Mehrabian Scale of Achieving Tendency. This scale has been found to have a high reliability index (Elliot and Dweck, 2005). It consists of a set of 26 questions that are administered to male and female respondents, measured on a nine-point scale from +4 to − 4. The overall N-Ach score of each surveyed entrepreneur is obtained by adding up the scores of each question. A higher positive value indicates a greater N-Ach level, and the reverse is also true.

Is it possible that the N-Ach could explain the high percentage of MSEs operating in the informal sector in Zimbabwe and in many other countries? The argument here is that those entrepreneurs with a lower N-Ach tend to operate in the informal sector, as they do it more for survival than business growth. By understanding how achievement motivation affects or influences choice of sector to operate in, policy makers responsible for supporting SMEs could use this information to enhance the development of firms and formalisation of businesses launched by these small entrepreneurs.

Recent studies have looked at the role of N-Ach in business performance (Shane, 2003; Parker, 2009; Sarasvathy and Venkataraman, 2011). Mahadea (1994) found a positive relationship with respect to measures of business performance, reflected in terms of real asset growth, sales growth and labour growth. He also found a pattern between N-Ach level and sophistication of business, and the (professional) background of the risk-takers. Entrepreneurs in service and manufacturing firms had the lowest level of need achievement, those in retailing had a higher level of need achievement and those in super-marketing (previous managers and professionals) had the highest N-Ach level (Mahadea, 1994). Shane (2003) agrees that N-Ach is an important variable for entrepreneurial performance. Other researchers found other factors that are critical to effective entrepreneurship, at both *formal* and informal levels. These are locus of control, creativity, education, innovation and training, need for

autonomy, internal locus of control and risk taking propensity (Caird, 1988; Boschoff and Hoole, 1998; Mahadea, 2001; Baumol, 2010).

Clearly, entrepreneurial performance depends on need achievement, and those with higher levels in need achievement are more than capable of creating employment opportunities for themselves and for others. The informal sector in Zimbabwe houses entrepreneurs from different professional backgrounds who are educated enough to know that the informal sector is an illegal sector. Macroeconomic and labour market conditions might have forced them to venture into business out of necessity. It is thus important to investigate why most SMEs in Zimbabwe are operating in an illegal sector, and possibly come up with policy recommendations that will channel support into this sector or encourage them to move to the *formal* sector. The role of N-Ach in influencing the decision to move to the *formal* sector is investigated in this study. It is only appropriate that the MSEs in Zimbabwe be encouraged to move into the *formal* sector where most of the financial support is found. Investigating the importance of N-Ach in the choice of sector to operate in, may help to ascertain if policies that enhance individual N-Ach can be recommended. This may encourage MSEs in Zimbabwe's informal sector to move to the *formal* sector.

3.4 Linking Economic and non-economic elements of entrepreneurship

3.4.1 Individual-Opportunity Nexus

From the economic and non-economic definitions discussed above, it is clear that the two approaches used by the different academics do not converge. The definitions provided above include defining an entrepreneur in terms of their functional role, or individual characteristics, or opportunities they respond to, or their resource acquisition process. The failure by these academics to show the link between their own definition and that of the previous academic is what motivated Shane (2003) to develop what he termed the "Individual-Opportunity Nexus" for entrepreneurship.

The individual-opportunity nexus "examines the characteristics of opportunities; the characteristics of the individual that discover and exploit them; the processes of resource acquisition and organizing; and the strategies used to exploit and protect the profits from those efforts" through a means-ends framework (Shane, 2003:4). The means-ends framework involves making well informed and logical plans/ decisions on how to make profits, taking

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into consideration the available information about the entrepreneurial opportunity. It is the role of the entrepreneur to create this means-ends framework before a new venture can be operationalized.

In light of this framework, entrepreneurship is defined as "an activity that involves the discovery, exploitation of opportunities to introduce new goods and services, ways of organizing, markets, processes, and raw materials through organizing efforts that previously had not existed (Shane 2003:4).

Shane (2003) further breaks down this definition into two operational definitions, namely self-employment and formation of new firms. *Self-employment* is the act of working for personal profit and not for a wage (Shane, 2003:5). Formation of new firms is the forming of a business venture that was previously not in existence (Shane, 2003:5). The link between entrepreneurship and firm formation will be discussed in later sections. The definition of entrepreneurship as self-employment by Shane (2003) is the one that is used in this thesis.

The next section discusses how an individual decides on whether to become an entrepreneur or not, using the means-ends framework which was developed by Shane (2003).

3.4.2 Entrepreneurial Decision Making Process

The process of decision making in economic theory has always been allied to the price system where the prices contain all the information about activities happening in the economy. However, in the entrepreneurial decision making process, prices fail to provide the required information on how to allocate resources effectively, on expected future revenues, or information on the existence of entrepreneurial opportunity[9] (Shane, 2003). Entrepreneurial decisions are thus made through *judgmental decision-making*[10] using *means-ends framework*[11] (Shane, 2003). The entrepreneurial decision is not a collective decision but rather an individual decision based on individual assessment of the entrepreneurial opportunity using the means-ends framework.

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[9] An entrepreneurial opportunity is defined as "a situation in which a person creates a new means-end framework for re-combining resources that the entrepreneur believes will yield a profit" (Shane, 2003).
[10] Judgmental decision-making involves making decisions that require judgment that is different from the judgment of others.
[11] Means-ends framework is a way of thinking about the relationship between actions and outcomes.

The opportunity can avail itself through the environment or through the individual. Individual attributes play a crucial role in the decision making process as well as environmental and psychological factors. Most academics, economists, psychologists and sociologists who have worked on defining entrepreneurship agree on the two sources of opportunities. From Schumpeter's perspective, the opportunity is new and innovative through technological changes, or political changes or socio-demographic changes (Fuduric, 2008). From Kirzner's perspective, market disequilibria caused by errors in decision making is the source of the opportunity. A Schumpeterain entrepreneur is the creator of the opportunity whilst the Kirznerian entrepreneur is a discoverer of the opportunity (Fuduric, 2008). After the entrepreneur has discovered the opportunity, he/she has to exploit the opportunities and start a new venture. Both processes require the entrepreneur to engage his/her personality traits (psychological factors) and capacity (non-psychological factors).

The individual decision making process to exploit entrepreneurial opportunities can be summarized as follows:

Figure 22: Individual Decision-Making process

Non-psychological factors:
- Education
- Career experience
- Age
- Social position
- Opportunity cost

Entrepreneurial Opportunities

Psychological factors:
- Motivation
- Core evaluation
- Cognition

Environmental factors:
- Economic
- Political
- Demographic and cultural

Opportunity Exploitation- start a new business venture or not
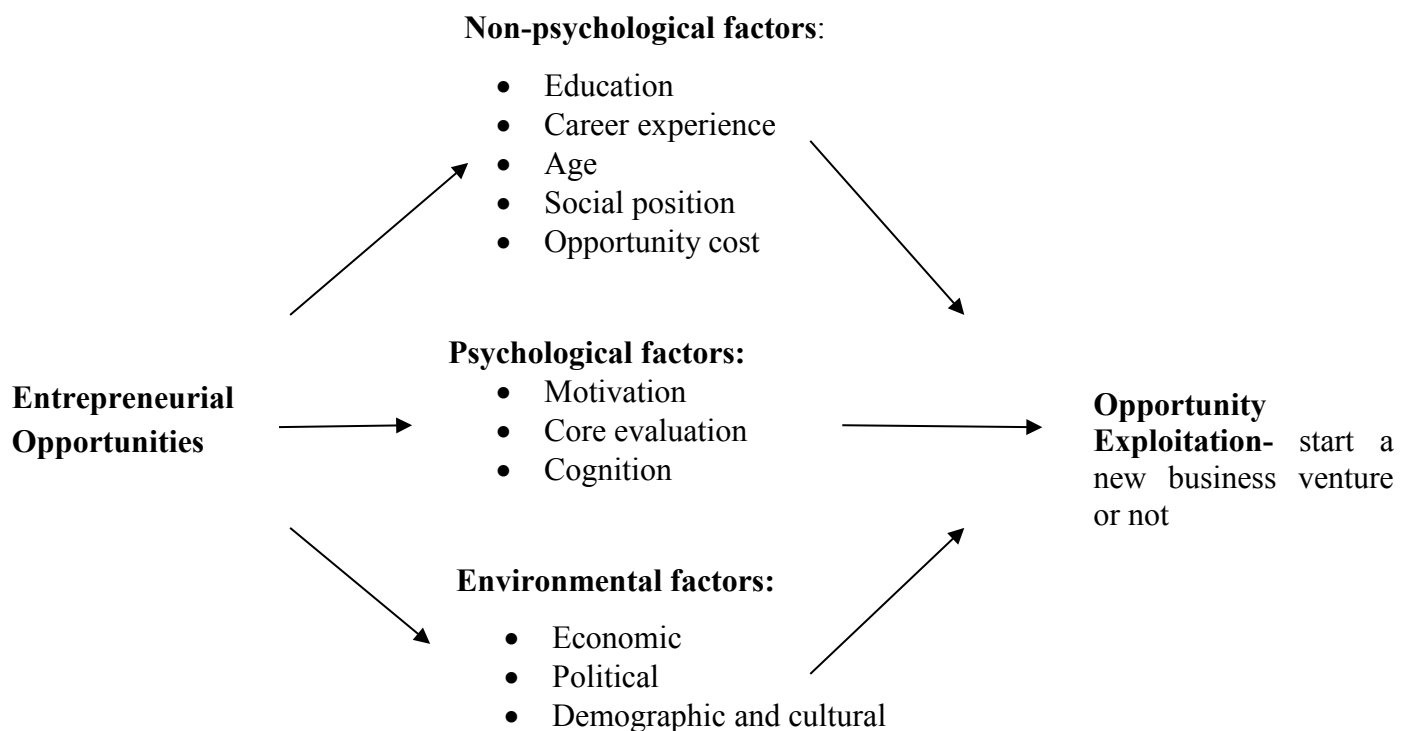
- Industrial

When an entrepreneurial opportunity avails, the entrepreneur will compare the "expected value of exploitation (both monetary and psychic) against the opportunity cost (best alternative use of their time plus the premiums for bearing uncertainty and illiquidity)" before making an entrepreneurial decision that will give him/her a profit/loss (Shane 2003:62). The expected value of exploitation should exceed the opportunity cost for one to engage in the entrepreneurial activity. The expected value is influenced by the nature of opportunity, non-psychological factors, psychological factors, environmental factors and individual characteristics of the entrepreneur (Shane, 2003).

Environmental factors such as economic, political, demographic and cultural influence the opportunities for entrepreneurship. They can either create or weaken the opportunities. For example, the state of the economy plays a crucial role in influencing the type of entrepreneurial activity which can range from innovative to illegal ventures. Stable economic conditions, unemployment rates, income disparity and capital availability are all believed to either cause an increase or a decrease in the exploitation of entrepreneurial opportunity (Fuduric, 2008). For instance, high income disparity can push low wage earners into entrepreneurship due to the low opportunity cost of entrepreneurship. On the other hand, high income disparity means those with very low income might not have the financial capacity to start a business. On the political front, the government has a bigger role to play in facilitating the exploitation of entrepreneurial opportunities. A more flexible rule of law, less stringent licensing and bankruptcy policies, deregulation of markets, efficiency-enhancing resource related policies, and targeted sectorial policies will increase entrepreneurial activity (Fuduric, 2008).

Individual-level characteristics that influence the expected value of exploitation of an entrepreneurial opportunity are education, career experience, general business experience, functional experience, industry experience, start-up experience, secondhand learning, age, social position, social status and social ties, among others (Shane, 2003). These factors improve the individual's social networks which increases an individual's early access to

information. An educated executive is better informed than a school dropout and is likely to discover an opportunity faster than the school dropout. Literature has it that people in certain careers like engineering, natural sciences and research and development, are likely to discover new venture opportunities as they have access to new knowledge and technology (Fuduric, 2008). Also working experience is an added advantage for someone who wants to be an entrepreneur as a lot of social networks that encourage opportunity discovery are created during the working period (Delmar and Davidson, 2000).

The psychological factors are classified under three classes' namely motivational needs, core evaluation and cognition. These three classes are made up of different arms as shown in table 5 below.

Table 5: Psychological factors that influence entrepreneurial decision making

Aspects of personality and motives	- Extroversion - Agreeableness - Need for Achievement - Risk Taking - Desire for Independence
Core self-evaluation	- Locus of control - Self-efficacy
Cognitive properties	- Overconfidence - Representativeness - Intuition

Source: Shane, (2003).

All the psychological attributes stated in table 5 above are believed to be positively related to exploitation of entrepreneurial opportunities. Cognitive properties are important in decision making because exploitation of entrepreneurial opportunity is usually done under uncertainty, with limited information and time pressure (Fuduric, 2008). According to Shane (2003) extroverts are more likely to exploit an opportunity than are introverts, because they are more comfortable with taking risks. Extroverts are able to assemble resources and organize them under conditions of uncertainty. In the same manner, people with a high level of internal

locus of control and self-efficacy are more likely to be entrepreneurs than those that have an external locus of control (Shane, 2003).

3.5 Synthesis of the Definition of Entrepreneurship

The economic elements of entrepreneurship[12] on their own fail to give a functional definition that can be used in defining entrepreneurs in Zimbabwe. When the economic elements are combined with non-economic elements, entrepreneurships then become activities that can be easily defined among other economic activities. Shane (2003:4) provides a definition of entrepreneurship which embraces all the elements when he defines entrepreneurship as "an activity that involves the discovery, evaluation and exploitation of opportunities to introduce new goods and services, way of organizing, markets, processes, and raw materials through organizing efforts that previously had not existed". He combines the Schumpterian entrepreneur of creative destruction and the Kirznerian entrepreneur who is alert to opportunity as well as the psychologist and sociologists' theories on the contribution of human traits and personality in the entrepreneurial activity.

Although this definition conceptualizes all theories on entrepreneurship, it cannot be operationalized in an empirical research like this one. The definition used in this study is the one provided by Shane (2003) where entrepreneurship is defined as self-employment, being the activity of performing work for profit rather than wages. This activity could be in a business with employees or in a one man business. When entrepreneurship is defined as self-employment it becomes measurable and can be used in empirical research.

The next section discusses the economic roles of entrepreneurship by identifying its importance in economic development.

3.6 Economic Roles of Entrepreneurship

Despite having so many different angles in approaching the entrepreneurship process, one common fact among the researchers is that entrepreneurship is critical for economic development. Literature identifies the key roles of entrepreneurship in economic development as: job creation, innovation, economic growth, competition, firm formation and expansion.

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[12] The economic elements were discussed on pages 53-55.

The next section will look at each role and reveal the findings of different researchers in different countries' contexts.

3.6.1 Entrepreneurship and Job Creation

Small-scale entrepreneurial activity has been commended for its role in economic development and the well-being of society through job and income creation, among other things. In recent years, the focus by policy makers has diverted towards small firm start-ups and high investments in research and development as key strategies for fighting unemployment (Badal, 2010). Audretsch and Thurik (2001) argue that the increasing focus on new small firm creation has been caused by the increase in uncertainty in the world economy. The smaller firms are more flexible in dealing with adverse changes than large firms and adapt faster than large firms to any changes, like a change in technology. Evidence from literature suggests that young and small firms perform better than the older or larger firms, in terms of employment creation (Blanchflower, 2000). The biggest challenge with small-scale entrepreneurship has been the high exiting rates which makes it an unreliable employment creator (Baptista, Escaria and Madruga, 2008).

The major problem with entrepreneurship is that some of the new start-ups have a low survival rate. For example, as of 2000, in the United States new business start-ups have been creating an average of 39.75% new jobs annually, of which 40% of these new firms shut down within the first 3 years (Spletzer, 2000). By 2008, the new firms in the United States accounted for 43% of the new jobs created annually and 20% of these firms collapsed within the first year. The high failure rates have been the reason why many researchers have recommended the need for concentrated support on the new small-scale firms by their respective governments or any other non-government organizations as these new small-scale firms could be the only solution to the economic growth problems worldwide (GEM Report, 2010).

The higher failure rates among the new entrants, suggest that the net relationship between new firms and jobs created is not always positive. Baptista et al., (2008) argue that the overall impact depends on whether the new firms bring about market growth. Unless the new markets create positive supply-side spillovers through innovation, greater competition, efficiency, product differentiation and improved quality, the new firms will not contribute significantly

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to employment growth (Baptista et al., 2008:50). The empirical studies that are documented in the literature are diverse, in some cases showing a positive impact and in others a negative impact of the new entrants on employment growth depending on the methodology that was used (Thurik et al, 2008; Ghavidel et al. 2011).

More recent researchers have emphasized the existence of lagged response with respect to the supply-side spillovers of new firms being visualized (Baptista et al., 2008). From a study on the Portuguese economy, Baptista et al. (2008) found that it took about 8 years for the supply-side spillovers of the new entrants to be realized. As with many other studies, the direct effects were observed immediately in the form of new jobs entering the market. In another study done in Germany, the findings were that it took 6 years before the indirect positive effects kicked in (Fritsch and Mueller, 2004). In Great Britain it was only in the 4th year when the indirect positive effects kicked in (Mueller, van Stel and David, 2007).

More research is still being done to try and explain the relationship between entrepreneurship (new firms being created) and employment creation. However, one thing that is clear is that there is a relationship between entrepreneurial activity and employment creation which can be explained differently from one country to the other. Entrepreneurship could be the solution for the high unemployment rate, especially in Africa, but it requires the inputs of the researchers to make country-level policy recommendations.

3.6.2 Entrepreneurship and Economic Growth

Literature has conclusive evidence on the importance of entrepreneurship on economic growth but its impact differs from country to country depending mainly on the stage of economic development (GEM Report, 2013). The other possible reason for the disparity on the impact of entrepreneurship on economic growth could be that there is no universally agreed measure of entrepreneurship. Depending on the scope and country under study, different variables have been used as proxies for entrepreneurship, among which are business ownership rates, the number of nascent entrepreneurs, self-employment rates and new patents or trademarks (Van Stel, Wennekers, Thurik and De Wit, 2003; Ovaska and Sobel, 2005).

It is only until recently when the Global Entrepreneurship Monitor project was first implemented in 1999, that a model relating entrepreneurship and economic growth was

developed. The GEM model was based on the concept that the contribution of entrepreneurial activity to a country's economic development depends on that country's phase of economic development in line with Porter's typology of "factor-driven economies", "efficiency-driven economies" and "innovation-driven economies" (GEM Report, 2013).The main objectives of the GEM project are:

- To measure differences in entrepreneurial attitudes, activity and aspirations among economies;
- To uncover factors determining the nature and level of national entrepreneurial activity;
- To identify policy implications for enhancing entrepreneurship in an economy

(GEM Report, 2013).

GEM views entrepreneurship as a continuous process comprised of 4 phases namely, nascent entrepreneurs, entrepreneurs who own and manage a new business, entrepreneurs who own and manage an established business and finally discontinued businesses. By combining the rates of the nascent entrepreneurs and that of the owner-managers entrepreneurs who have been operating for less than 42 months, it will give what the GEM calls the Total early-stage Entrepreneurial Activity (TEA). TEA is calculated as a percentage of the adult population (18-64 years old) and is highest for factor-driven economics like Zambia and Nigeria with 39%, and lowest among the innovation economies like Italy and Japan with 3.4% and 3.7% respectively (GEM Report, 2013). From the GEM Report (2011) one of the findings was that TEA is not directly linked to economic growth. A high TEA rate does not necessarily imply a direct positive economic growth. What matters is the profile and institutional context of entrepreneurship in that country. The profile of entrepreneurship refers to the ratio of TEA to established business ownership and to discontinued businesses.

When economies are in the innovation-driven stage, the relationship between TEA and GDP per capita is less pronounced than when they are in the factor-driven stage (GEM Report, 2013). This is mainly so because of the increase in job opportunities as the economy moves from factor driven to innovation driven. Entrepreneurial attitudes, perceptions of opportunities, capabilities, and fear of failure, and entrepreneurial intentions all affect TEA rate and its overall impact on economic growth. More precisely, individual motivation – necessity driven or opportunity driven – and social inclusion – demographics, education,

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women involvement, and household income – have a lot to contribute towards the TEA rate (GEM Report, 2013).

Carree and Thurik (2005) suggest a framework to explain how entrepreneurship influences economic growth through linking the entrepreneurial roles and the impact of entrepreneurial capital. The three roles, as identified by the scholars who initially defined the concept of entrepreneurship, are: innovating (Schumpeterian entrepreneur); profiteering (Kirznerian entrepreneur); and risk-taking under conditions of uncertainty (Caree and Thurik, 2003). A lack of entrepreneurial activity is thus associated with low rates of innovation, unused profit opportunities and risk averse attitudes, leading to low economic growth (Caree and Thurik, 2005).

There will also be no link between entrepreneurship and economic growth if the following three impacts of entrepreneurial capital are not realized. Firstly, entrepreneurial capital should create knowledge spillover, augment the number of enterprises (move from large scale to small-scale) and increase competition, and promote diversity among firms within the same location (Audretsch and Thurik, 2004). "It is the exchange of complementary knowledge across diverse firms and economic agents that yield an important return on new economic knowledge. The geographic environment promotes knowledge externalities which lead to innovative activity and economic growth" (Caree and Thurik, 2005:8).

Evidence in the literature on the impact of entrepreneurship on economic growth, shows that a positive relationship is expected if entrepreneurship is defined as innovation, or the introduction of new products, or by increasing competition through the introduction of variations on existing products and as increasing market efficiency (Van Stel et al., 2005). The entrepreneurial activity in many developed nations is characterized by these activities, hence a greater percentage of their growth in GDP is attributed to entrepreneurship.

Over the years, developed nations have seen a shift from large companies to smaller firms in different industries, increasing competition. Developed economies have also experienced a

shift from a '*managed economy*'[13] to an '*entrepreneurial economy*'[14] allowing for knowledge spillover (Deakins and Freel, 2012, van Stel et al., 2005)). However, the magnitude and importance of entrepreneurship still differ from one country to the other depending on its stage of development (GEM Report, 2011). Highly developed countries tend to benefit more from entrepreneurship compared to less developed countries, the reason being that there is more opportunistic entrepreneurship compared to necessity entrepreneurship in highly developed countries. Opportunistic entrepreneurship contributes positively to economic growth as it is usually done for profit reasons and the entrepreneur always strives to make the most from the available opportunity (Acs, 2008; GEM Report, 2013).

The positive relationship between entrepreneurship and economic growth has been supported by many studies in different countries and there is also evidence suggesting that the relationship is not linear, but could be quadratic (Van Stel, 2005; Acs, 2008; GEM Report, 2011).

3.6.3 Entrepreneurship and Innovation

Drucker (2011) defined innovation as a means by which entrepreneurs exploit available opportunities to create new services and businesses. These opportunities can be in the form of new knowledge, changes in demographics, perceptions, or industry structure.

The link between entrepreneurship and innovation can be traced back to the works of Schumpeter (1934) and his vision of capitalism. He defined entrepreneurship as a practice which involved consciously implementing innovation, in terms of novel factor combinations, and introducing new goods, markets, modes of production, organizational forms, or sources of raw materials (Barreira et al., 2008:10). According to Schumpeter (1934) the process of innovation can be described as 'creative destruction' as it creates disequilibrium in the economy which will require other market actors to act upon it to restore economic equilibrium. Many factors like transparent of rule of law, sophisticated information and technology, high levels of income, developed industrial structures, diverse markets, only to

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[13] Managed economy- as defined by van Stel et al. (2005:331) - is the political, social and economic response to an economy dictated by forces of large-scale production, reflecting the predominance of the production factors of capital and (unskilled) labor as the sources of competitive advantage.

[14] Entrepreneurial economy- according to van Stel et al. (2005:331) is the political, social and economic response to an economy dictated not just by the dominance of the production factor of knowledge, but also by the presence of entrepreneurial activity to accommodate knowledge spillovers.

mention a few, need to be in place for innovation to happen (Fuduric, 2008). Creative destruction will devalue, if not destroy, previous investments and labour skills. Failure by market actors to adjust accordingly to the destruction may cause permanent economic distress.

In today's economics, innovation has been attuned to represent new forms of organizing, research and development, patents, new business models or methods of reaching customers (Deakins and Freel, 2012:191). Innovation no longer only involves destruction but also includes improving previous innovations with less emphasis on technological inventions, an incline towards Kirznerian entrepreneurship (Fuduric, 2008). Nevertheless, a common feature with all definitions of innovation in the literature is that they refer to the creation of something new or the discovery of something new, with the entrepreneur as an agent. Also, innovation is not circumscribed by the size of firm, that is, it can be done in both large and small firms. As more and more things are invented, competition in the market will also increase.

3.6.4 Entrepreneurship and competition

The concepts of entrepreneurship and competition are two notions that neoclassical economists have failed to link mainly because neoclassical economics emphasize maintaining market equilibrium through price and quantity adjustments. Under perfect competition, everyone has equal access to information, giving no comparative advantage on any individual hence no market process is allowed. In the theory of firm, it is only under imperfect competition that the entrepreneurial role is identified as a building block to monopoly power (Kirzner, 1978). Imperfect knowledge creates profit opportunities which then promote Kirznerian entrepreneurship.[15]. Competition will thus exist in the market process and individuals "gravitate closer and closer to the limits of their ability to participate gainfully in the market" (Kirzner, 1978:12). The ability for entrepreneurship to allow for knowledge spillover means that competition will also be enhanced and new firms will also be formed. New firms are formed by individuals who are alert to business opportunities and act on these opportunities.

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[15] Refer to page 48 for a definition of Kirznerian entrepreneurship

3.6.5　Entrepreneurship and Firm formation and expansion

Once the entrepreneur has made a decision to launch a business, he/she will then proceed to start the actual operations. Most businesses start small and given the right opportunities can grow into a larger firm. However, some start small and remain small and this has been the major problem with many businesses in Africa. The main reason for the failure of the small firms to expand has been identified as lack of financial capital (Deakins and Freel, 2012).

Worldwide, government intervention towards small-scale entrepreneurship has been intensified, and researchers and policy makers believe that entrepreneurship is the answer to low economic growth and unemployment problems; hence entrepreneurship should be supported (Deakins and Freel, 2012). In 2005, the European Commission re-launched the 'Lisbon Strategy', also known as the 'Strategy for Growth and Jobs'. The main goal of this strategy is to encourage all EU nations to promote the formation of small firms and to prioritize the needs of established small firms so that they can grow. SMEs are now a key source of dynamism and innovation, and have been shown to be a key source of net job creation in OECD countries (Deakins and Freel, 2012:33). Despite intensified involvement of governments in the formation and growth of small-scale firms in developed nations, there is still a lot of controversy around the effectiveness of government support in developing and under-developed nations. For instance, in Africa one area of controversy is the lack of homogeneity among African small firms, making it difficult for public policies to be effective (Mboma, 2008). However this does not mean that government should not be involved, but rather it brings out the need for targeted policies when addressing small firms' concerns, instead of general public policies.

3.6.6　Necessity versus Opportunity Driven Entrepreneurship

The contribution of entrepreneurship to the economy is closely linked to the motivation behind the enterprise. Entrepreneurs are often driven by necessity or opportunity factors in their quest to establish a business. Some entrepreneurs are in business because of the absence of any work; these are known as necessity entrepreneurs. Others are in business because an attractive business opportunity availed, prompting them to become entrepreneurs. These entrepreneurs are known as opportunity entrepreneurs (Acs, 2008).

Necessity entrepreneurs venture into business because of survival needs arising as a result of loss of employment or structural changes in an economy. As the skills needed by a developing economy change, those individuals who are unable to acquire new skills can remain unemployed for a protracted period. Some of them may turn to necessity entrepreneurship by opening small businesses that can generate just enough revenue for their subsistence. Acs (2008: 97) defines necessity entrepreneurs as those individuals who "find themselves with no other options for work than self-employment". This type of entrepreneurship is a result of unemployment push and refugee or desperation effects (Thurik et al., 2008). The push effects could possibly come from commitments that come with pregnancy, loss of a breadwinner, loss of employment or poor prospects of employment (Acs, 2008).

On the other hand, opportunity entrepreneurs are driven by the existence of unexploited opportunities in the market or economy. These opportunities can be in the form of resources, or price differentials (Acs, 2008). Shane (2003: 16) defines an entrepreneurial opportunity as "a situation in which a person can create a new means-end framework for recombining resources that the entrepreneur believes will yield a profit". However, opportunities are not always profitable, causing some businesses to record a low life-span. This study will investigate if the state of the economy can also pose as an opportunity for entrepreneurs. One key feature about opportunistic entrepreneurs is that they voluntarily get into business. They also have sophisticated managerial skills, technical knowledge, and delegate authority, among other things (Williams, 2007).

The two groups of entrepreneurs, necessity entrepreneurs and opportunity entrepreneurs have different impacts on economic development and both exist in every economy (Acs, 2008). For economic development, a higher opportunity: necessity ratio is needed, and if the necessity ratio is higher than the opportunity ratio, then there will be little economic development (Acs, 2008: 98). The ratio of opportunity to necessity entrepreneurs is higher for high income countries and lower for low/medium income countries (GEM report, 2010). Acs (2008: 101) in his study on how entrepreneurship is good for economic growth, using data from the GEM 2004 global report, found a strong correlation between the opportunity: necessity ratio and the per capita income of different countries. His argument was that countries with a higher opportunity: necessity ratio have a positive correlation with per capita

income and other economic indicators, such as exports as a percentage of GDP and education spending, whilst those with a lower opportunity: necessity ratio are negatively, if not at all correlated with the above economic indicators. Based on this finding, it can be postulated that low income countries, which have not yet realised significant economic benefits from entrepreneurship, are dominated by necessity entrepreneurs. For this reason, as long as the opportunity: necessity ratio remains low, very little economic growth can be expected from the entrepreneurial activity.

Another distinguishing feature between necessity and opportunity entrepreneurship pertains to their survival rate once established. The 2013 GEM report, noted a significant relationship between prevailing start-up motives in a country and new business survival rates. Those countries dominated by opportunity-driven entrepreneurship have a lower rate of business failure in the early stage and those dominated by necessity entrepreneurship have a higher failure rate (GEM Report 2013). Is it possible then that the MSEs in Zimbabwe, that were formed during the meltdown period and are still operational, were opportunity driven or a combination of both necessity and opportunity driven? This question will be answered in this research. It is also the thrust of this study to unearth the driving force of entrepreneurial activity in Zimbabwe, especially during the meltdown period.

3.6.7 New Developments in the field of Entrepreneurship

In recent times, new dimensions to the field of entrepreneurship have emerged. There is more research on social entrepreneurship, corporate entrepreneurship and incubators, as tools for enhancing innovation and entrepreneurship. Social entrepreneurship is an entrepreneurial activity that fosters social benefits in areas where the public sector is not successful, like waste management, financing low-income business activities without a collateral as in the case of Grameen Bank, and the deployment of sanitation systems in rural areas, among others (Lumpkin, Moss, Gras, Kato and Amezcua, 2013). The major players in social entrepreneurial activity are non-profit organizations and welfare organisations, in which the focus is to empower poor and disadvantaged individuals whose needs cannot be adequately met by the private sector. Although there is increasing interest among researchers to define social entrepreneurship as well as address the antecedents and outcomes of social entrepreneurship, theoretical underpinnings are still being developed as there are no agreed variables that adequately measure all social changes without interfacing with private

expenditure flows (Austin, Stevenson and Wei-Skillern, 2006).

Corporate entrepreneurship is expanding fast. It is an entrepreneurial process that goes on inside an existing firm which leads to new business ventures, the development of new products, services or processes and the renewal of strategies and competitive postures (Ramachandran, Devarajan and Ray, 2006; Porter, 2008; Stead and Stead, 2014). Central to this type of entrepreneurship is the urge to identify sources of existing and emerging customer dissatisfaction and developing solutions from within the company to eliminate them and re-engineering process to enhance the marketing positioning of a form in the global environment (Ramachandran et. al, 2006). Studies have indicated that corporate entrepreneurship improves a company's growth, profitability and performance (Ramachandran et. al, 2006). Corporate entrepreneurship can take different forms. These include:

> *Internal corporate venturing/ intrapreneurship*- new businesses are created within the same organisation by having access to its core resources.
> *External corporate venturing*- creation of new businesses as a separate entity from the organisation with the assistance of venture or angel capital.
> *Strategic Renewal*- involves the renewal of key ideas, strategies or structures within the organisation to make it more competitive (Ramachandran et. al, 2006).

Barbero, Casillas, Wright and Garcia (2013) regard an incubator as an entity that provides new ventures with resources that improve their probability of foundation and survival and accelerate their development. The incubator provides services, like human capital, financing, technology, marketing support and entrepreneurial spirit. There are four main archetypes of incubators discussed in literature, namely basic research, university, economic development and private incubators (Barbero et. al, 2013). These incubators generate different types of innovation, ranging from products and technology to organizational structures. Most policy issues that are encouraging economic growth through entrepreneurship, target these incubators as sources of new research and development. These developments consolidate the Schumpeterian ideas on entrepreneurship and sources of new business opportunities.

Although these new developments are gaining prominence and important in both developed and developing countries, the above aspects of entrepreneurship were not considered in this study as it examines a meltdown environment where these conditions did not exist.

3.7 Determinants of Entrepreneurship

Discussions about the positive impact of entrepreneurship on economic growth and employment creation have taken centre stage worldwide, and emphasis has been placed on implementing policies that encourage especially the growth of small-scale entrepreneurship. This has also focussed research on investigating the determinants of entrepreneurship in a bid to identify the instruments that can be used when formulating policies encouraging entrepreneurship.

Dreher and Gassebner (2007) group the determinants of entrepreneurship into 3 classes, namely economic factors, social or personal characteristics and institutional attributes. The economic factors include GDP per capita, inflation, taxes, foreign direct investments, unemployment rate, provision of sound money and credit availability. The social and personal characteristics include education and age, female share in labour force, and society's tolerance for uncertainty and ambiguity. The main institutional characteristics identified in the literature as determinants of entrepreneurship are economic freedom, quality of legal system, restrictions on international trade and government corruption (Dreher and Gassebner, 2007).

Below are some of the studies that have looked at the impact of the different factors on growth in entrepreneurship in the *formal* sectors.

3.7.1 Economic factors

GDP per capita

Ovaska and Sobel (2005) looked at the relationship between the economic performance of different countries (former Soviet Republic and other Eastern European nations) and their rates of entrepreneurial activities. Using a sample of 10 countries and annual data from 1995-2000 they ran a panel random effects model on a number of economic indicators whose results are given in this section. They measured entrepreneurship in terms of the number of

new enterprises per 1000 inhabitants. Ovaska and Sobel (2005) found no significant impact of GDP per capita on the number of new enterprises per 1000 inhabitants.

On the contrary, Parker and Robson (2004) found a positive correlation between GDP per capita and entrepreneurship from the panel data analysis they carried out on 12 OECD countries using 1972-1996 data. In another study, van Stel, Wennekers, Thurik and de Wit (2003) aimed at explaining cross-country variations in nascent entrepreneurship using a sample of 36 countries from the GEM report of 2002. van Stel et al. (2003) found a negative relationship with respect to GDP per capita and a U-shaped relationship between nascent entrepreneurship and the square of GDP per capita.

Soundness of monetary policy is another factor that was studied to investigate its influence on entrepreneurial activity. Ovaska and Sobel (2005) found a negative relationship with respect to inflation and entrepreneurial activity in his study on entrepreneurship in 10 Baltic and Central-European economies (post-socialist economies). In their study, inflation was used as a proxy to measure the soundness of monetary policy in the country. They found a negative relationship between entrepreneurial activity and inflation. The opposite seems to have been happening in Zimbabwe during the period 1996 to 2010, as entrepreneurial activity was on the rise when the economy was melting down. In other words, there seems to be a positive relationship between entrepreneurial activity and inflation in Zimbabwe. This identifies a possible a gap in the literature as the direction of causality between entrepreneurship and inflation is definitely not clear.

Tax is the third economic factor studied. The effects of income tax on incentives for entrepreneurship have been documented in the literature as both positive and negative (Parker and Robson, 2004). The greater the opportunity for tax evasion, through self-employment, the more positive is the relationship between income tax and entrepreneurship. On the other hand, high tax rates tend to reduce the incentive to supply effort hence reduce the incentive to be an entrepreneur (Parker and Robson, 2004). Using annual data on 12 OECD countries, from 1972-1996, Parker and Robson (2004) employed a panel integration and cointegration technique to study the determinants of aggregate self-employment rates. They found a positive relationship between entrepreneurship and personal income tax rate. However, van Stel et al. (2003) failed to find a significant relationship between the two variables.

Foreign direct investment is another factor studied to investigate its influence on entrepreneurship. Foreign direct investment (FDI) is a proxy for the availability of financial capital and is expected to be positively related to entrepreneurial activity. Van Stel et al. (2003), Ovaska and Sobel (2005), and Parker and Robson (2004) all found no significant relationship between FDIs and entrepreneurship.

Unemployment rate is another variable that has been studied extensively by various researchers. The results of the relationship between unemployment and entrepreneurship are rather mixed. Wennekers and Thurik (1999) found no significant relationship between unemployment and entrepreneurship, but found a negative relationship between employment benefits and self-employment. On the contrary, Thurik et al. (2008) found the existence of both positive and negative relationships. They used panel data of unemployment and self-employment rates for 23 OECD countries from 1974-2002 to run a 2-equation VAR model. On one hand, an increase in unemployment rate leads to an increase in subsequent start-up activity among self-employed individuals. On the other hand, an increase in the rate of self-employment (increased entrepreneurial activity) leads to a decrease in unemployment in subsequent periods (Thurik et al., 2008).

Credit Availability is another variable that has been studied by researchers. One of the reasons why many new businesses have reported low life spans or a failure to expand was identified as a lack of access to financial resources. Ovaska and Sobel (2005) are researchers who have looked at the importance of credit availability on entrepreneurial activity and found a positive relationship between the two variables. Other studies that have modelled the relationship between credit and entrepreneurship were conducted in the form of a randomized experimental study. Fatchamps (2011) (in Chowdhury, Amin and Farha, 2012) used a random sample of microenterprises in Ghana. The microenterprises were given cash and in-kind grants. Positive treatment effects were picked in the form of profit differences. In-kind grants were more useful for women than men, whilst cash grants did not show any significant difference between men and women-owned enterprises.

The credit constraint has also been found to have a gender characteristic where women are identified as being more disadvantaged than males (Arenius and Minniti, 2005). Women are

perceived as small and inexperienced borrowers which increases their risk-factor. The same applies to the sector in which the business is operating, where a *formal* sector enterprise is more likely to receive credit than an informal sector business (Chowdhury et al., 2012).

Provision of sound money. From the same study that was done by Bjornskov and Foss (2008) provision of sound money was found to increase entrepreneurial activity. Financial capital has been identified as one of the factors that limit the establishment and growth of enterprises. Hence provision of money to the society will definitely encourage it, as much as increasing credit availability will do (Ovaska and Sobel, 2005; Bjornskov and Foss, 2008).

3.7.2 Social and Personal Characteristics

Education, Age and Gender are the three demographic variables that have been identified as influencing an individual's desire to be an entrepreneur. Grilo and Thurik (2005) used data from a 2004 survey data, from the 15 old EU member states and the United States to test the relationship between education and gender and entrepreneurial activity. They found that poorly educated men are more likely to be self-employed. A study at the macro level using 27 countries from the GEM found that a higher level of education in a country is accompanied by a lower self-employment rate (Uhlaner and Thurik, 2007).

Wildeman, Hofstede, Noorderhaven, Thurik, Verhoeven, and Wennekers (1999) found education and age-structure to be insignificant using country level data from 23 OECD countries. However, Uhlaner and Thurik (2007) found a negative relationship with secondary education, but positive with tertiary education. They did a comparative analysis of entrepreneurial activity in 27 countries in the 2002 GEM report. Using Ordinary Least Squares, post materialism (as a cultural attribute measuring changes in values in modern societies), per capita income, education rates (secondary and tertiary) and life satisfaction were regressed on the dependent variable of total entrepreneurial activity (comprised of nascent entrepreneurs and new formations). The finding was that education has no significant impact on total entrepreneurial activity.

Female share in labour force is another factor that has been studied in a bid to try and find its influence on entrepreneurial activity. A negative relationship between female share in the

labour force and entrepreneurship was found in the 12 OECD countries studied by Parker and Robson (2004). However, Uhlaner and Thurik (2007) found a positive relationship instead.

Society's tolerance for uncertainty and ambiguity as a measure of dissatisfaction with society, is another cultural factor that has been studied by researchers. Dissatisfaction with society and life as a whole was identified as a stronger push factor for self-employment compared to unemployment (Wildeman et al., 1999). Wildeman et al. (1999) used data from 23 OECD countries to test the relationship between dissatisfaction and self-employment. They used four variables to measure dissatisfaction namely; corruption, power distance, bureaucracy and uncertainty avoidance. Their main finding was a positive relationship between the rate of self-employment and an increase in dissatisfaction with society and life across the 23 OECD nations. However, the positive relationship could not be ascertained within the countries. They also found a stronger relationship between the dissatisfaction variable and entrepreneurial activity compared to economic variables like unemployment across the nations.

3.7.3 Institutional factors

Economic freedom. This variable measures factors such as sound legal institutions, low regulations and secure property rights. A study done by Ovaska and Sobel (2005) using data from countries in the former Soviet Union and East Europe found no significant relationship between economic freedom and entrepreneurship. However, Bjornskov and Foss (2008) found a negative relationship between size of government and entrepreneurial activity. Their study was an analysis of how economic policy and institutional design affect entrepreneurship across 29 countries from the 2001 GEM report. OLS models and robust regression techniques were run in this study.

Quality of legal system. According to Bjornskov and Foss (2008) the quality of the legal system does not have an impact on entrepreneurial activity in the 29 countries they studied.

The influence of *restrictions on international trade* on entrepreneurial activity has also been studied. This factor was found not to have an impact on entrepreneurial activity by Bjornskov and Foss (2008) and nor do import tariffs (Ovaska and Sobel, 2005). Bjornskov

and Foss (2008) found that most entrepreneurial activities depend on the local producers and suppliers and any regulations on trade will not impact on entrepreneurial activity.

Government corruption is a critical factor especially when one discusses African countries. Corruption has been used in other studies as a measure of dissatisfaction and was found to be positively related to self-employment (Wildeman et al., 1999). Ovaska and Sobel (2005) used corruption as a measure of soundness of governmental institutions and policies. This factor was found to impact more positively and significantly on smaller firm entrepreneurial activity, than larger firms (Ovaska and Sobel, 2005). A sound governmental institution protects larger firms from manipulating political processes to their advantage, jeopardising the creation of smaller firms (Ovaska and Sobel, 2005).

In as much as the findings from the studies reviewed in this section might have found significant relationships between the various factors and entrepreneurship, the direction of causality is still inconclusive. Another important observation is that most of these studies have been done in 'normal time', and no recent study seems to have been done to explain entrepreneurial growth in abnormal times in Africa, such as during an economic meltdown. Further, earlier studies did not examine the influence of N-Ach on the development of small-firm entrepreneurship decision making processes. This study takes these short comings into consideration and will make a positive contribution to the literature.

Bearing in mind that the thrust of this study is to investigate the economic determinants of entrepreneurship in a melting down economy, the key variables to be used in this study will be real GDP, inflation (or money supply) and unemployment in Zimbabwe over the period 1980-2010. One anticipates a positive relationship with respect to all the variables in order to justify the steep growth in entrepreneurship during the meltdown period.

3.8 Conclusion

This chapter has defined the key concepts that make the foundation of the study of entrepreneurship, and has also conceptualized them in the context of this study. This study uses the definition of entrepreneurship as self-employment. Two types of entrepreneurial activity; opportunistic and necessity entrepreneurship were defined, and also linked to their role in economic development. Although the role of entrepreneurship in economic growth is

not conclusive, the literature maintains that it depends on the country's stage of economic development and the type of entrepreneurship dominant in the specific country. In the same manner, factors that determine entrepreneurship differ from one country to another. The importance of N-Ach in business performance and its contribution in entrepreneurial decision making was also examined. Available evidence shows that N-Ach contributes to the performance of a business, and this study will now look at its importance in decisions relating to location of the enterprise in either the *formal* or informal sector.

CHAPTER 4:
MSEs AND THE INFORMAL SECTOR

4.1 Introduction

The previous chapter defined the entrepreneur as the owner of a business and also identified the role of entrepreneurship in the economy. This chapter will focus on the enterprise and will identify the different types of enterprises that exist in the economy. The chapter starts by discussing the different classifications of the businesses in terms of their size. The rest of the chapter focuses on understanding the operations and the importance of micro and small-scale enterprises (MSEs) in the two sector economy (*formal* and informal sectors), in the context of Zimbabwe.

4.2 Micro and Small-scale enterprises (MSEs)

4.2.1 How small is small?

The biggest challenge in defining small scale entrepreneurship has been finding a general definition of the word 'small' itself. How small is small? There are lots of ambiguities around the meaning of a small enterprise as it is generally used subjectively. For example, an independent car manufacturer, Aston Martin, who employs 700 people, is considered a small firm compared to BMW, and yet Manchester United with few staff is considered among the largest football clubs in the world (Deakins and Freel, 2012). Clearly smallness depends on the context in which it is being used. In trying to solve the ambiguity around this issue, the UK Committee of Inquiry on small firms (the Bolton Committee) has recognized that size is relative to sector; hence in some cases small firms can be defined by number of employees and in some cases by turnover or assets to complement the economic definition, as indicated in table 6 (Deakins and Freel, 2012:33).

Below is a summary of the Bolton Committee's report on the definition of small firms.

Table 6: Bolton Committee's definition of Small Firms

The 'statistical' definition	
Manufacturing	20 employees or less
Construction and mining and quarrying	25 employees or less
Retail and miscellaneous services	Turnover of $78,000 or less
Motor trades	Turnover of $157,000 or less
Wholesale trades	Turnover of $315,000 or less
Road transport	5 vehicles or less
Catering	All: excluding multiple and brewery managed houses
The 'economic' definition	
Small firms are those which:	
1. Have a relatively small share of their marketplace	
2. Are managed by owners or part-owners in a personalized way, and not through the medium of a formalized management structure	
3. Are independent, in the sense of not being part of a large enterprise	

Source: Deakins and Freel, (2012:34).

The European Commission revised the Bolton Committee's definition in 2005 and came up with a new definition, which disintegrates the SME sector into 3 categories; it then characterizes them as medium-sized, small and micro ventures, in terms of the number of employees, turnover and balance sheet total. The three subsets are shown in the table below:

Table 7: European Union definition of SMEs

Enterprise Category	Head count	Turnover	Balance Sheet total
Medium-sided	<250	≤50 million pounds	≤ 43 million pounds
Small	<50	≤10 million pounds	≤ 10 million pounds
Micro	<10	≤ 2 million pounds	≤ 2 million pounds

Source: Fedulova, 2013; Deakins and Freel, 2012: 35

In South Africa, The National Small Business Act of 1996 defines a 'small business' as a separate distinct business entity, including cooperative enterprises and non-governmental organisations, managed by one owner or more. A micro enterprise is defined as a business

with a turnover less than the VAT registration limit (that is, R150 000 per year). These enterprises usually lack formality in terms of registration. They include, for example, spaza shops, minibus taxis and household industries, and employ no more than 5 people. For a small enterprise the upper limit is 50 employees. Small enterprises are generally more established than micro enterprises and exhibit more complex business practices. Medium enterprises have a maximum number of employees equal to 100, or 200 for the mining, electricity, manufacturing and construction sectors. These enterprises are often characterised by the decentralisation of power to an additional management layer.

4.2.2   What is an MSE in Zimbabwe

The European Commission and the Bolton Committee's definition of small firms above, have become the building blocks for defining small-scale enterprises although country specifics are added to make it more applicable to the context in which it is intended to be used. Mostly the definition of small firms is based on, among other things, firm size, and number of employees, capital base and average income, and in some cases it is related to the context of the study (Mboma, 2008: 329).

According to the Zimbabwean Small Enterprises Development Corporation Act (Chapter 24:12), small enterprises are defined in terms of sector of economy, number of full-time paid employees, maximum total annual turnover and maximum gross value of assets excluding immovable property. The small enterprises are generally classified into 3 classes (micro, small and medium). Micro enterprises have a maximum of 5 paid employees and total annual turnover of $30,000 in all other sectors of the economy, except for construction, mining and quarrying and energy which require a maximum total annual turnover of $50,000 (see table 8 below). Small enterprises have a maximum of 40 paid employees in the mining and quarrying, construction, energy and transport sectors. All other sectors require that the maximum number of paid employees be 30. Medium enterprises require that the maximum number of paid employees is 75 in all sectors. Maximum annual turnover should be from $1,000,000 to $3,000,000.

Table 8: Classification of Micro, Small and Medium enterprises in Zimbabwe

Sector or sub-sector of Economy	Size or Class	Maximum total number of full-time paid employees	Maximum total annual turnover $	Maximum gross value of assets (excluding immovable property) $
Agriculture	Medium:	75	1,000,000	500,000
	Small:	30	500,000	250,000
	Micro:	5	30,000	10,000
Arts, Entertainment, Culture, Education and Sport	Medium:	75	1,000,000	500,000
	Small:	30	500,000	250,000
	Micro:	5	30,000	10,000
Mining and Quarrying	Medium:	75	3,000,000	2,000,000
	Small:	40	1,500,000	1,000,000
	Micro:	5	50,000	50,000
Manufacturing	Medium:	75	1,000,000	1,000,000
	Small:	40	500,000	500,000
	Micro:	5	30,000	30,000
Construction	Medium:	75	2,000,000	2,000,000
	Small:	40	1,000,000	1,000,000
	Micro:	5	50,000	50,000
Energy	Medium:	75	1,000,000	2,000,000
	Small:	40	500,000	1,000,000
	Micro:	5	50,000	10,000
Financial Services	Medium:	75	1,000,000	500,000
	Small:	30	500,000	250,000
	Micro:	5	30,000	10,000
Transport	Medium:	75	1,000,000	500,000
	Small:	40	500,000	250,000
	Micro:	5	30,000	10,000
Retail	Medium:	75	1,000,000	500,000
	Small:	30	500,000	250,000
	Micro:	5	30,000	10,000
Tourism and Hospitality	Medium:	75	1,000,000	500,000
	Small:	30	500,000	250,000
	Micro:	5	30,000	10,000
Services	Medium:	75	1,000,000	500,000
	Small:	30	500,000	250,000
	Micro:	5	30,000	10,000

Source: Fourth Schedule: Small Enterprises Development Corporation (Amendment) Bill, 2010 Memorandum

This study will define a small-scale enterprise as a firm that employs less than 40 employees whilst a micro-enterprise is regarded as one with less than 5 employees (including unpaid family members). These micro and small-scale enterprises are found in both *formal* and informal sectors. Those in the informal sector are usually not registered under the Companies Act or the Co-operative Companies Act and do not pay tax to the central government.

4.2.3   Nature and Scale of MSEs in Zimbabwe

Zimbabwe is an agro-based country and the MSEs that existed since independence until the late 1990s were mostly small-scale subsistence farmers concentrating on producing fresh horticultural products. These small-scale farmers were mainly based in the rural or marginalized areas. Most of these agricultural MSEs were family oriented and utilized a family owned piece of land. In 1998, there were an estimated 860,000 MSEs in Zimbabwe (agricultural and non-agricultural) with the majority being involved in the processing of agricultural commodities (USAID, 1998). Over the years, government support towards MSEs has been concentrated towards agricultural MSEs, with the motive of helping them grow from being subsistence farmers to small-scale commercial farmers (USAID, 1998).

Non-governmental organizations also supported the agro-based MSEs by providing financial assistance and through disbursements of actual inputs like seeds, fertilizers and chemicals. They also taught the MSEs sustainable methods of farming, and alternative ways of increasing their income, such as processing their produce. Private companies, like CAIRNS, Olivine Industries, Interfresh and Wholesale Fruiters engaged the MSEs in contract farming. In contract farming, the company will supply all the inputs required in growing a particular crop, and the farmer will use his/her land to grow the crop. After harvesting the farmer is mandated to sell all of his/her produce to that company at an agreed price. All these support networks contributed positively towards improving the quality of life of the mostly rural population in Zimbabwe (Proctor, Henson, Loader, Masakure, Brouder, Bhila, and Sigauke, 2000).

Unlike the agriculturally based ventures, the non-agricultural MSEs are mainly concentrated in the urban areas. There was a steep growth in urban MSEs following the structural reform that was implemented in 1991, which saw many bread winners being laid off from their jobs and the young generation migrating to the urban areas in search of 'greener pastures'. As

more and more people migrated into the urban areas, the labor markets failed to grow at the same rate as the growth in urban population, and many people ended up establishing their own MSEs as an alternative source of income. The most dominating activity among the urban MSEs has always been retailing followed by manufacturing and services (Kapoor et al., 1997).

The effects of the economic meltdown in Zimbabwe caused the number of urban MSEs to increase steeply. The biggest problem, among others during this difficult time, was availability of cash in hand. It was practically impossible to withdraw money from a bank account. Having a formal job was no guarantee that one would be able to buy a loaf of bread at the end of the month. This situation was worsened by the rising inflation which saw prices of commodities changing at least twice in the same day. The only way out, was to trade in anything as long as the medium of exchange was money. Commodities that dominated were mostly food, fuel and foreign currency. Most of these enterprises were one man businesses, being run from the boot of a car or from home, and would move around as they got on with their daily activities.

4.3 Importance of SMEs in today's Economy

As pointed out earlier, because of the huge role it plays in employment creation, increasing productivity and ultimately influencing economic growth, small scale entrepreneurship is a popular area of research. Elkan (1988) and Ubogu, Laah, Udemezue and Bako, (2011) are of the view that small-scale enterprises are important for African entrepreneurs as they have greater potential to survive, and they also have the potential to perform better than big enterprises. Rusten and Bryson (2007) are of the view that the small-scale enterprises can lift the economy out of backwardness. SMEs play a role in strengthening the industrial structure of the economy by facilitating "the tapping of resources for productive purposes with a minimum amount of capital investment, contributing greatly to the provision of employment opportunities, or fostering entrepreneurship" (Ubogu et al., 2011: 215). In Norway for example, SMEs account for 90% of all firms and contribute greatly to the economic growth of the country (Rusten and Bryson, 2007).

According to Ubogu et al. (2011) one of the possible reasons why large-scale enterprises in

Africa survive is due to biased government policies. The large businesses are not profitable except when supported by government, through subsidies and other public policies. If the governments removed or reduced its support of larger firms, this would not reduce economic growth but would render greater opportunities for smaller firms to grow and succeed. The small-scale firms have great potential to survive in developing countries, more so than the larger firms (Deakins and Freel, 2012).

In Africa, the *formal* sector is still dominated by large firms, and small enterprises are mostly found in the informal sector (Ubogu et al., 2011). The biased government policies push away most of the small-scale businesses into the informal sector where they are assumed to be operating as necessity entrepreneurs. A recent study done in England however, discovered the existence of both necessity and opportunity MSEs in the informal sector (Collin, 2007). According to Collin (2007), 77% of the study population, who happened to be small-scale entrepreneurs operating in the informal sector, were employed in *formal* employment and were setting up or running a business venture 'on the side' as a part-time activity. Their motive for starting the business in the informal sector was not purely necessity driven, but was a combination of both necessity and opportunity factors. For this reason it is important to incorporate informal enterprises into policy formulation, as they have more to offer than the destructive role they are often perceived to have.

4.4 MSEs in the informal sector

4.2.4 Defining the Informal Sector

The term 'informal sector' has been used for decades, but a universally agreed definition is yet to be established. Recent publications generally define it in terms of its characteristics and also in context to the study been carried out (Gerxhani, 2004; Collin, 2007). Hart (1973) first introduced it as referring to self-employment or small-scale industries or retail trades, or all forms of economic activities that are not recorded in the official statistics or do not comply with government regulations. Over the years, the definitions have expanded to include, scale of ownership, firm size (with an undefined degree of 'smallness' of the firm), capital base or average income (Mboma, 2008). Despite the various approaches to the definition, most scholars agree on the characteristics of the informal sector, which include family ownership,

ease of entry, labour intensive, and operating in unregulated but competitive markets, among other things (Ubogu et al., 2011).

According to Nattrass (1987) cited by Mahadea (2001:190), the informal sector is a temporary sector which is comprised "of all people outside *formal* wage employment in the officially recognised and regulated sector, as well as all enterprises which engage in survival activities and function outside government's rules and regulations, and which operate on a small scale using labour-intensive technology." Recent studies have shown that the informal sector has migrated from this traditional view to a modern view that acknowledges its permanency in the economy as well as its contribution to reducing poverty and promoting growth. Table 9 below, adapted from Chen (2007) summarises the old and the new views of the informal sector.

Table 9: Old and new views of the informal sector

The old view	The new view
The informal sector is the traditional economy that **will wither away and die** with modern, industrialized growth.	The informal economy is 'here to stay' and expanding with modern, industrial growth.
It **exists separately from the formal** economy	It is linked to the *formal* economy- it produces for, trades with, distributes for and provides services to the *formal* economy.
It is only marginally productive.	It is a major provider of employment, goods and services for lower-income groups. It contributes a significant share to GDP
It **represents a reserve pool of surplus labour**.	Much of the recent rise in informal employment is due to the decline in *formal* employment or to the informalisation of previously *formal* employment relationships.
It is **comprised of street traders and very small-scale producers**	It is made up of a wide range of *formal* occupations
Most of those in the sector are entrepreneurs who **run illegal and unregistered enterprises** in order to **avoid regulation and taxation**	It is made up of non-standard wage workers as well as entrepreneurs and self-employed persons producing legal goods and services.
Work in the informal economy is comprised **mostly of survival** activities and thus is **not a subject for economic policy**	Informal enterprises include not only survival activities but also stable, dynamic growing businesses and wage employment. All forms of informal employment are affected by most economic policies

Source: adopted from Chen, (2007:5).

In modern economics, the informal sector is an important part of the economy especially in developing countries and yet little is done to support activities in this sector. In Africa, as of 2004, the informal sector constituted 44% of the Gross National Product (GNP), in Middle and Eastern Europe about 20%, and in OECD countries about 12% (Gerxhani, 2004). In Sub-Saharan Africa the informal sector employs on average 50% of the work force (Onyenechere, 2011).

In this study, the informal enterprises will be defined as enterprises that are operating without a company registration certificate. Those operating in this sector do not declare taxes to the government and are not recognised for any support from the government. Only entrepreneurs venturing into 'legal' trades will be considered for this study. Illegal operations like drug trafficking and prostitution will not be considered.

Recession is believed to be the major cause of the development and growth of the informal sector in the developed nations as it causes stagnation, unemployment and depreciation of assets (Gerxhani, 2004: 278). According to Renooy (1990), cited in Gerxhani (2004: 278), the two groups of factors that influence the decision to operate in the informal sector are 'structural factors' and 'opportunity factors'. The structural factors include financial constraints, institutional constraints and socio-psychological pressures. These factors include poverty,[16] lack of employment opportunities, restrictive laws as well as prohibitive taxation. De Soto (1982) attributes the growth and development of the informal sector to the many government regulations in the *formal* sector.

The opportunity factors are sub-divided into individual backgrounds: education; skills; contacts; living situation; and non-individual factors: culture; values and standards; and environment (Gerxhani, 2004). Renooy (1990) cited by Gerxhani (2004) is of the view that the opportunity factors stated above greatly influence people's perceptions on taxes and their attitude towards their government. If the general opinion is that the public do not trust their government's expenditure, and also feel that the laws are too lenient on those who avoid

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[16] Poverty is defined as lack of basic needs, that is food, proper housing, access to health facilities.

paying their taxes, more people will choose to operate in the informal sector in order to avoid paying taxes.

4.2.5 The informal Sector in Urban Zimbabwe

The informal sector in Zimbabwe has always existed prior to the attainment of independence in 1980, but was closely monitored by strict laws and legislation (the Town and Country Planning Act (1946), the Vagrancy Act (1960), Urban Councils Act (1973), Vendors and Hawkers by-laws (1973) (Dhemba, 1999: 12). With the attainment of independence this sector has been growing, mainly due to urban migration as people move from rural poverty to urban areas in search of work and a way to alleviate poverty (Dhemba, 1999: 9). Further growth in this sector came as an aftermath to the introduction of ESAP in 1991, which brought about more suffering than solutions, especially for the urban population.

Informal sector policies that have been adopted over the last decade or so, in line with alleviating poverty in Zimbabwe, have not succeeded (Sichone, 2003). Statistics from the last Poverty Assessment carried out by the Zimbabwean government in 1995, showed that 62% of the population were living in poverty, 72% of the households in the rural areas were living below the poverty line compared to the 46% in the urban areas (Sichone, 2003). These figures are believed to have increased following the meltdown (1996 to 2008) and also because of the migration by the rural people as they flee from rural poverty. Accordingly, urban poverty has doubled. During the meltdown period the growth in *formal* labour markets was close to zero and the informal sector was the main survival platform for people moving from rural to urban areas, as well as school leavers and those who had been retrenched (Ishengoma and Kappel, 2005).

With government support being concentrated on the rural poor and side-lining the urban poor, it became more and more difficult for urban dwellers to make a living. The job market continued to shrink, absorbing less than a fifth of new graduates each year (Dhemba, 1999: 12). For those who were unemployed, the only way to make a living was to look for an alternative in the informal sector. Although it has been argued that MSEs did not contribute much to economic development, the presence of necessity entrepreneurship in the economy was an important social activity in the fight against urban poverty as it brought food to the tables of starving Zimbabweans during the melt-down period.

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Chikuezi (2010) is of the view that urban poverty can be fought if policies that are in line with labour markets are implemented, and the informal sector activities are also considered. In the previous years, emphasis has been put on the eradication of the informal sector. Alternatively, emphasis should be placed on utilizing the labour markets that are present in the informal sector. In as much as the Zimbabwean government wanted to do away with the informal sector, evidence from other countries show that the informal sector is an important part of an economy, posing some benefits for economic development (Newadi and Pietersen, 2008). The presence of MSEs in this sector plays a pivotal role in employment creation and income generation, and therefore should be prioritised.

Not much can be said without understanding why MSEs choose the informal sector as their area of preference and whether they are willing to move to the *formal* sector, and what their expectations are from the government. Acs (2008: 97) is of the view that the high percentage of informal self-employment worldwide is a result of bureaucratic barriers which hinder the creation of new *formal* businesses, or that the economy is creating less wage-earning job opportunities. The over-regulation of the market sector, through taxes, legislation on labour, quality of products and production limits makes it unfeasible for MSEs with small capital bases to operate in the *formal* sector (Gerxhani, 2004: 279; Chigwenya and Mudzengerere, 2013). This, to some extent, suggests that the government is to blame for the existence of the informal sector, and yet to operate in the informal sector is an individual's choice, having been driven by necessity or the availability of an opportunity. It is the aim of this study to carry out an analysis of the factors that drove the MSEs in Zimbabwe into the informal sector rather than the *formal* sector, and also analyse the factors that can possibly encourage them to formalise their informal businesses.

4.5 MSEs in the formal sector

The process of registering and licensing, which are requirements for any business operating in the *formal* sector, has always been blamed for the growth of the informal sector. Below are the stages one has to go through when forming a legal business in the *formal* sector in Zimbabwe.

Table 10: Company Registration process in Zimbabwe

First Stage: Company Registration

1. Company Search. Submit Form CR21 to the Chief Registrar of companies in order to conduct a name search to ensure that no other company has the same or similar name. Fee:…………..(to be advised)

2. Memorandum and Articles of Association the Registrar's office. This document states the type of business to be undertaken by the company, rules binding the shareholders and the directors. Four copies are required covered in special paper and each tied with a ribbon. Fee…………….(to be advised)

3. Certificate of Incorporation. This is issued on satisfactory submission of the above, provided there are no errors. Processing time…………...(to be advised)

4. Investment Certificate- Submit a project proposal to the Zimbabwe Investment Centre for registration, and attach company's certificate of incorporation. An investment certificate will then be issued…………..

5. Registrar- Notify the Registrar of the appointment of the company's directors and secretaries.

6. Tax Authorities- Particulars of the company, and of its employees, have to be submitted to the tax authorities. Businesses with an expected turnover of ….. or more per year have to have a sales tax registration number.

7. To Operate a Factory: Obtain a license from the Department of Occupational Health, Safety and Workers Compensation, at a fee……

Source: Kapoor et al., (1997:15).

This cumbersome process has however been shortened by the emergence of Company Traders who specialize in registering companies, and then selling registered companies to individuals. The Company Traders will process all the required documents as highlighted in table 10 above. After completing the registration, the Company Trader will then sell the company to a new entrepreneur. The main shortfall of buying a registered company will be that the entrepreneur will not have the privilege to decide on a name for their company, but will have to pay extra for change of name.

After registering, the next requirement will be to obtain an operating license from the municipality. This again is a cumbersome process which is time consuming and very disruptive.

Table 11: Licensing process for a company in Zimbabwe

Second Stage: Company Licensing

1. Pay a fee to get the forms.
2. Health and Safety Inspection Municipality officer will visit your business premises to inspect.
3. Post Adverts in the local newspaper on 3 different dates.
4. Pay for licenses.
5. Compile required documents, submit and wait for license.

Source: Author's own table

The last modality involves registering the company with the Zimbabwe Revenue Authority (ZIMRA) for a Tax Clearance Certificate.

Table 12: Tax and Customs' requirements for new businesses in Zimbabwe

Third Stage: ZIMRA registration

1. To register, you are required to have a bank account among other requirements.
2. Once you have a bank account, you can then approach ZIMRA for registration. You will be required to complete registration forms depending on the nature of your business operations. All clients will be required to complete the REV 1 form, which can be obtained from ZIMRA offices or can be downloaded from this website. Once registered, you will be issued with a Business Partner Number (BP) which acts as the business' identification number and is used for all transactions with ZIMRA, including remittances of tax.
3. After commencing operations, you are required to keep records of all your business operations and pay Provisional Tax on the stipulated dates (as shown below). The dates are referred to as Quarterly Payment Dates (QPDs). The Provisional Tax payable is based on the respective percentage of estimated annual tax due. The annual estimated tax due should be revised to update the estimate every quarter.
4. The form ITF 12B, which is a return for provisional tax payments, has to be completed in respect of these payments.
5. The payment dates and the percentage of tax due for each tax year are listed below:

QPD	Due Date (on or before)	Instalment Due (as a % of the annual tax payable)
1st QPD	25th March	10%
2nd QPD	25th June	25%
3rd QPD	25th September	30%
4th QPD	20th December	35%

6. Some businesses, operators are required to pay Presumptive Taxes and this includes operators of omnibuses, taxi-cabs, driving schools, goods vehicles, hairdressing salons, informal traders, operators of restaurants or bottle stores, small scale miners, cottage industry operators, operators of commercial waterborne vessels used for the carriage of passengers for profit and fishing rigs.

7. A tax return is required after the end of each tax year. The tax year runs from 1 January to 31 December of each year. Clients who have been specified in terms of Section 37A of the Income Tax Act [Chapter 23:06] as being on Self-Assessment are required to furnish Self-Assessment Returns in duplicate by 30th April of the following year.

8. Operators will also require a Tax Clearance Certificate - form ITF 263 which is issued by ZIMRA once you have met all the stipulated obligations which include submission of tax returns and remittances of tax due. If you do not have this clearance, anyone who pays you any amounts in excess of US$250.00 is required to withhold and remit to ZIMRA 10% of the amounts paid.

9. There is need to strictly observe the requirements in Section 80 of the Income Tax Act [Chapter 23:06]. It requires that all registered business taxpayers who enter into any contracts which result in an obligation to pay any amounts whose total or aggregate is US$250.00 or more to withhold 10% of each amount payable to payees who fail to furnish valid tax clearance certificates.

Source: ZIMRA web page, (2013).

Most of the MSEs that are found in the *formal* sector fall short of either one or two of the three requirements indicated above. However, due to the presence of the Company Traders,

anyone can easily buy a company and start trading using that name before licensing and registering with ZIMRA.

4.6 Formalising the Informal

The recognition of the informal sector as an important driver of national economy has fostered the need to revamp this sector and ensure that the informal enterprises are encouraged to formalize their businesses, and in so doing contribute fully to the economy. Many economies, especially in developed nations have already adopted policies that acknowledge the existence of these informal enterprises and help them grow and formalize their businesses (Deakins and Freel, 2012). The policies are crafted around the recognition that informal traders need to use appropriate trading venues and should abide with the regulatory laws as well as have access to all support networks necessary for their growth and success (van Rooyen and Antonites, 2007).

According to Welch (2005) the arguments for formalizing are, firstly formality contributes to job creation and hence contributes towards fighting national unemployment problems. Formality also broadens the tax base and in some instances may lower the tax rates. Traders in the *formal* sector have access to better information which promotes deal-making and increased investment. Stronger networks are found in the *formal* sector and there are higher chances of getting new jobs than in the informal sector. Another important feature of formality is that the rule of law exists. Traders can freely conduct their business knowing that they are protected by the law and their interests will always be protected.

Besides these favorable features of formalization, the literature identifies a number of factors which hinder formalization, and in so doing promotes informalisation. These factors are regulatory and administrative barriers, fees and financial requirements, absence of business services like *formal* entrepreneurial training, corruption, social-cultural factors which restrict females from engaging in other activities and criminality (Welch, 2005). These factors have also been identified as major constraints for the growth of the enterprises in both *formal* and informal sectors (Chikuezi, 2010; Kaburi, Mobegi, Kombo, Omari and Sewe, 2012).

As possible solutions, Welch recommends that the government officials should be educated on the needs of the business owners in the informal sector. Their empirical understanding of

the need to formalize has to be enhanced, and services that provide formalization incentives have to be used. This study will conduct an empirical analysis of the factors that are hindering the growth of enterprises in Zimbabwe, as well as investigating their role in the willingness of informal enterprises to formalize their business.

4.7 Conclusion

This chapter concentrated on defining MSEs in the *formal* and informal sectors and showing how enterprises in both sectors are important for the national economy. Zimbabwe's MSEs are mainly housed in the informal sector. However, their presence in this sector does not mean that they are unproductive. The following chapter will discuss the methodology that was used to test the relationship between the formal and informal sector as well as the relationship between the economic meltdown and entrepreneurial activity in Zimbabwe.

CHAPTER 5:
RESEARCH METHODOLOGY

5.1 Introduction

This chapter covers the research methodology and instruments used to collect data for the purpose of this study. The methodology is covered in 2 parts. The first section, presented as methodology I, discusses methods that were used to analyse the relationship between entrepreneurship and economic meltdown at a macro level using time series data covering the period 1980 - 2010. The second, captured as methodology II, discusses methods that were used to analyse the characteristics and growth constraints of MSEs in *formal* and informal sectors at micro level using survey data.

5.2 Theoretical Framework for Determinants of Entrepreneurship

Understanding how the state of the economy influences entrepreneurial activity in the formal and informal sectors, and vice versa, was one of the key objectives of this research. The state of the economy refers to whether there is economic growth, stagnation or economic collapse in the country. From previous research, a relationship has been ascertained between economic growth and entrepreneurial activity (GEM Report, 2013). However, a gap in knowledge still exists on the relationship between economic collapse or economic meltdown and entrepreneurial activity. The terms economic meltdown and economic growth are defined below.

Economic growth is defined as an increase in an economy's capacity to produce goods and services, measured by comparing real GDP or GNP (Gross National Product) over a period of time. ***Economic meltdown,*** also known as economic downfall, has no precise definition but the term is frequently used to describe adverse economic conditions, such as hyperinflation and high unemployment rates and a steep decline in population or prolonged depression (Capozzi, 2010).

When defining economic growth or meltdown, real GDP is the unit of measurement. The rise of the economy's total production will determine whether there is economic growth. A prolonged fall in GDP with rising unemployment and inflation rates will reflect a meltdown.

Figure 23: Linking Macro economy to the Micro economy

Macro Economy

Unemployment

Real GDP
- Economic Growth
- Economic Meltdown

Micro Economy

MSEs ENTREPRENEURIAL ACTIVITY
- Formal activity
- Informal activity

Inflation
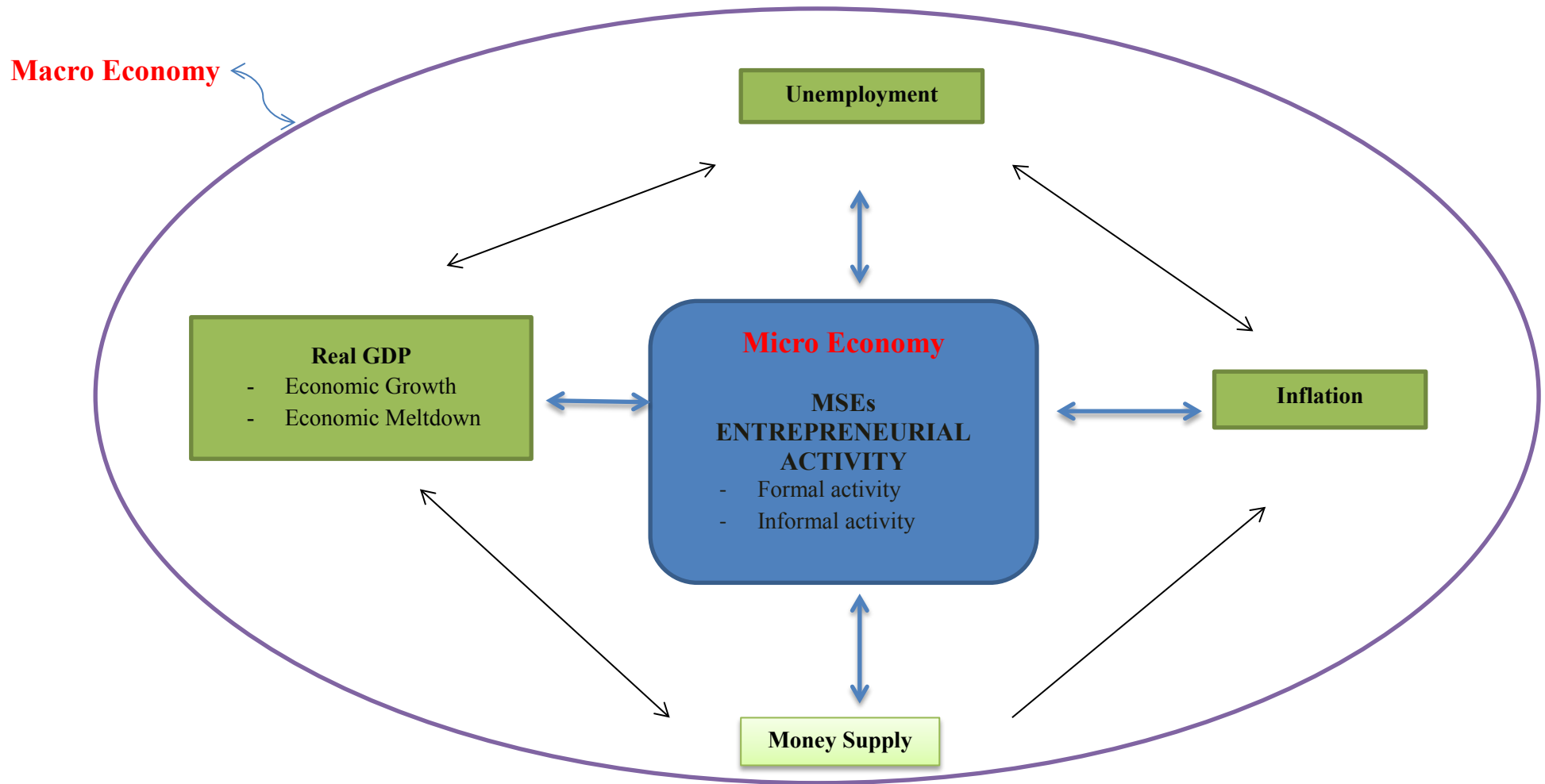
Money Supply

Source: Authors own compilation

From figure 23 above, the state of the macro economy is shown as being influenced by five factors, namely real GDP, unemployment, inflation, money supply and entrepreneurial activity. State of the economy refers to whether there is economic growth or economic meltdown and can be measured using any of the five economic indicators. There is also a forward-backward relationship between the macro-economic indicators and entrepreneurial activity in the formal and informal sectors of the micro economy. This relationship is core to this study.

From the theory of production, output is a function of capital (K), labor (L) and materials (M) (Perloff, 2012). Depending on the production function and the scale of the firm, an increase in the amount of inputs being used is likely to bring about an increase in output. Assuming all firms in the country recruit more people (causing the level of employment to increase and unemployment to decrease), the result will be an increase in total production and a rise in real GDP, which means economic growth. This relationship between unemployment and real GDP is described by Okun's Law.

Okun's law is a statistical relationship that relies on the regression of unemployment and economic growth (Lang and de Peretti, 2009). It is used to show by how much a country's real GDP will change following a change in the unemployment rate, above or below its natural rate; this relationship is not necessarily linear (Lang and de Peretti, 2009). Okun's law identifies a negative relationship between economic growth and unemployment (Faria, Cuestas and Mourelle, 2010). Thus, a positive real GDP in the economy means an expansion in real output, and more jobs are likely to be created. This will reduce unemployment levels. On the contrary, when there is an economic downfall, there is negative real growth. Many people lose their jobs as companies layoff some of their workers or shut down. Unemployment rate will increase. Some of the unemployed will resort to necessity entrepreneurship for survival. This relationship between unemployment and entrepreneurship will be discussed further below. On the positive side, unemployment rates decrease as the level of real GDP increases significantly with labour-absorbing economic growth.

Previous research has revealed that the relationship between economic growth and unemployment rate comes with a lag, and the size of the lag is not known a priori (Levine, 2013). Levine (2013) argues that when an economy experiences economic growth after a

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recession, employers will concentrate on fully utilizing the underutilized employees on their payroll first, instead of hiring new employees. This temporary increase in labour productivity will only last until output cannot grow faster than the rate of productivity growth, and at this point firms will start hiring, and unemployment rate will start decreasing. This lagged response was taken into consideration when deciding on the appropriate analytical method to use in the current study.

Besides real GDP, inflation also influences the level of unemployment in a country. The Phillips curve suggests an inverse short run trade-off between inflation and unemployment, assuming the natural unemployment rate and expected inflation remains the same (Parkins, 2010). If inflation increases, unemployment should decrease in accordance with the traditional Phillips curve. In the long run, expected inflation is equal to actual inflation (Dornbusch, Fischer and Startz, 2008). The long run relationship means a rise in inflation will not change unemployment rates (natural unemployment rate) and also a rise in unemployment will not change inflation rate. This relationship becomes problematic if both inflation and unemployment increases (a scenario which was evident in Zimbabwe during the economic meltdown from 1996 to 2008). This relationship between inflation and unemployment will be analysed in the VAR model.

When analysing the relationship between entrepreneurship and economic growth, additional variables such as, unemployment and inflation have been used by previous researchers (van Stel et al, 2003; Ovaska and Sobel, 2005; Thurik et al., 2008; GEM Report, 2011).[17] Also, in the literature, various economic variables have been identified to determine the level of entrepreneurial activity. These include unemployment, real GDP, credit availability, tax, inflation, provision of sound money, economic freedom and government corruption (Ovaska and Sobel, 2005; Acs, 2008; Thurik et al., 2008; Bjornskov and Foss, 2008). In this study, real GDP, unemployment and inflation will again be used to investigate the relationship between entrepreneurship and the opposite of economic growth, which is economic meltdown.

As an economy goes through repeated years of economic downfalls, its industries will

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[17] The relationships between these factors and entrepreneurship was discussed in Chapter 3, under Determinants of Entrepreneurship.

retrench some workers, or even go to the extreme of shutting down. Part of the labour force that loses jobs as a result of the economic downfall (or for other reasons), resort to other income generating activities, also known as entrepreneurial activities, to earn a living out of necessity. This type of entrepreneurial activity which is driven by the absence of *formal* employment is known as ***necessity entrepreneurship.***[18] Necessity entrepreneurship is characterised by people who are running a business as a coping mechanism, due to the need for survival and to create an income. Most of these people are found in the informal sector where no business registration or licenses are required to run a venture (Gerxhani, 2004; Collin, 2007; Mboma 2008; Ubogu et al., 2011). Necessity entrepreneurship may arise because of liquidity constraints or unavailability of money. In this context, money is defined as a unit of exchange. One of the characteristics of an economic meltdown is inadequate liquidity, which makes it difficult for most people to buy the basic commodities that they need for their day to day up-keep. Money supply and inflation will be used inter-changeably as a proxy to measure this liquidity constraint in this study.

On the other hand, an economic uplift can also encourage ***opportunity entrepreneurship.***[19] Opportunity entrepreneurship is a result of the presence of unexploited opportunities. When there are unidentified market gaps or unexploited resources available in the economy, such as start-up funds from the Government, these can be an opportunity for those alert individuals with entrepreneurial qualities to exploit and use to start their own businesses. The motive for opportunity-driven entrepreneurs is to generate income as well as to be independent (GEM Report, 2013).

According to Webb, Bruton, Tihanyi and Ireland (2012), the process of opportunity discovery, and opportunity exploitation resulting in entrepreneurial outcome is guided by three theories which also influence the choice between operating in the *formal* sector or informal sector, as shown in figure 24 below. These theories are the institutional theory, motivation-related theories, and resource allocation theory (Webb, Bruton, Tihanyi and Ireland, 2012). Of the three, institutional theory is perhaps the most critical in linking the choice of sector to operate in.

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[18] Necessity entrepreneurship has been defined in Chapter 3 from page 64.
[19] Opportunity entrepreneurship has been defined in Chapter 3 from page 64.

Figure 24: Theoretical Framework of the entrepreneurship process

FORMAL
ECONOMY

Represents region of theoretical overlap

Opportunity recognition in the formal economy

Opportunity exploitation in the formal economy

Entrepreneurial outcomes in the formal economy

Institutional Theory

Motivation-Related Theories

Motivation-Related Theories

Opportunity recognition in the Informal economy

Opportunity exploitation in the informal economy

Entrepreneurial outcomes in the informal economy

INFORMAL
ECONOMY

Resource Allocation Theory

Adapted from Webb, Bruton, Tihanyi and Ireland, (2012:602).

The institutional environment is the most critical element in choosing whether to operate in the *formal* or informal sector as it provides information on the attractiveness of the opportunity in one sector over the other. North (1990) in Webb et al. (2012) defined institutions in two categories. Firstly there are *formal* institutions which are laws and regulations. Secondly there are informal institutions which are societal norms, values and beliefs. These institutions define the socially acceptable behaviour. When there are differences in the *formal* and informal institutions' definitions of socially acceptable behaviour it gives an opportunity for entrepreneurship activity in the informal sector. For instance, if there are stringent policies or weak enforcement of *formal* institutions, space is created for informal entrepreneurship (Webb et al., 2012). Evidence from previous research shows that stringent policies are associated with access to finance and this encourages the growth of the informal sector (Gerxhani, 2004; Mboma, 2008).

The choice between operating in the informal or *formal* economy is also influenced by the economic and social considerations of each opportunity. As an opportunity avails itself, motivation-related theories will help explain why individuals can act outside the societal norms, rules and regulations and choose to operate in the informal sector instead of the *formal* sector. Economic motivation is associated with the costs, such as taxes, that are incurred when operating in the *formal* sector. Whenever the perceived costs of operating informally are minimal relative to institutional benefits, entrepreneurs are more likely to operate informally (Webb et al., 2012). Social motivations include financial strain, exclusion from *formal* economy, eagerness to gain higher social status, lack of access to legitimate means, and access to illegitimate means (Webb et al., 2012). Gurtoo and Williams (2009) in their study found that informal entrepreneurs are also both necessity and opportunity driven depending on whether informality is being used as a primary source of income or secondary source of income.

Motivation-related theory also recognise that actions outside societal norms can be constructive or destructive, implying that operations in the informal sector can have positive and negative effects (Webb et al., 2012). As much as most developing countries regard the informal economy as an underground economy, it is important that the positive effects from

this sector be utilised and help uplift the economy. Some of the positive aspects include the ability of the informal sector to provide a means of subsistence as an alternative for criminal acts (Webb et al., 2012). This is important especially to this study which aims at bringing out the role the informal sector can play in Zimbabwe's road to recovery from the effects of the economic meltdown. Zimbabwe's unemployment level is currently standing above 90% and the informal sector houses most of these unemployed individuals (Worldbank data, 2013). Instead of regarding the informal sector as an underground economy, the government needs to support it. The informal sector also provides jobs, goods and services and complements the *formal* sector as it acts as a training ground for small business. Some of the negative effects include loss of tax revenue and exploitation of rules and regulations (Webb, 2012). Although some revenue is lost through tax evasion, most of the revenue generated in the informal sector is spent in the *formal* sector, thereby bringing the money back into the *formal* economy (Schneider, 2002).

The third theory that can be used to explain the choice of sector to operate in is the resource allocation theory. Resource allocation theory explains how the entrepreneurs manoeuvre around their resource constraints. Financial resource constraints are one of the biggest challenges for many entrepreneurs who end up operating in the informal sector (Chikuezi, 2010; Kaburi, Mobegi, Kombo, Omari and Sewe, 2012). Many informal entrepreneurs finance their business using their family resources because they fail to meet the loan requirements from the financial institutions.

Having identified how the informal economy is formed, recent research has also shown that this sector has moved from being a temporary shadow economy to a permanent sector which is important in promoting growth and reducing poverty (Chen, 2007). The informal sector has become part of the economic chain providing goods and services to the *formal* sector. The link between the two sectors improves the competitiveness of the *formal* sector as money generated in the informal sector is spent in the *formal* sector. The permanency of the informal sector makes it crucial for the policy makers to promote inclusive policies that can foster the growth and expansion of enterprises in both sectors. A huge problem for MSEs worldwide has been the time taken, or the failure, to grow from being a small business into a medium or

large business (Deakins and Freel, 2012). Of late, more nations have embraced the role of small-scale businesses in promoting economic growth and are prioritising them more, although most of the support is only directed towards *formal* enterprises, side-lining the informal enterprises. Policies should address the needs of each sector without using one sector as the rule of thumb. This study further analysed the growth inhibiting factors in the two sectors in a bid to test whether common law is appropriate for the MSEs in Zimbabwe.

The literature identifies various factors that hinder growth of MSEs (Mahadea and Pillay, 2008; Kaburi, Mobegi, Kombo, Omari and Sewe, 2012). Based on previous research, a list of 21 growth inhibiting factors examined in this study is given below.

Table 13: Internal and External growth inhibiting factors

Internal growth inhibiting factors	External growth inhibiting factors
1. Access to finance 2. Lack of information or advice on how to start an enterprise 3. Access to business networks 4. Lack of entrepreneurial training 5. Access to business premises 6. Access to technology 7. Finding right employees 8. Lack of management skills	1. Problems with authorities 2. Gender discrimination 3. Late payment by creditors 4. Lack of profitable markets 5. Taxes 6. Interest rates 7. Business registration problems 8. Crime 9. Political instability 10. Corruption 11. Dollarization 12. Lack of clients 13. Excessive competition

Source: Mahadea and Pillay, (2008); Chikuezi, (2010); Kaburi, Mobegi, Kombo, Omari and Sewe, (2012).

This study will show that the problem in Zimbabwe is not the informal sector but the institutions which create opportunities for the informal sector to thrive in. The institutional

reforms that were put in place post the economic meltdown targeting the *formal* sector entrepreneurs, are actually needed more by the entrepreneurs in the informal sector. If these opportunities are also made available to the informal entrepreneurs, it might help speed up the recovery process. Correct institutions can help curb the destructive traits of the informal economy entrepreneurs and encourage them to formalise their business. This analysis was done through a comparison study of the entrepreneurs in the *formal* sector to those in the informal sector, by isolating the differences and the similarities in characteristics of the entrepreneurs operating in the two sectors.

5.3 Research Methods and Designs

5.3.1 Introduction

The importance of MSEs in economic growth has been widely studied but gaps still exist on how growth in entrepreneurial activity could be an indication or a result of an economic downfall during an abnormal period. One of the aims of this study is to investigate the contribution of the economic meltdown to MSE growth by testing the presence of the 'refugee effect'. As explained in Chapter 1 (page 2), the refugee effect shows the positive relationship between entrepreneurial activity and unemployment. The second objective is to do a comparative analysis of MSEs in the informal sector with those in the *formal* sector aiming to understand why the number of informal MSEs grew faster than the *formal* MSEs. Lastly, the study investigates the factors that are hindering the growth of MSEs in the two sectors, with the objective of making policy recommendations on how the MSEs can be assisted to grow and be part of the recovery plan in Zimbabwe.

The study uses both the qualitative and quantitative approaches in its investigation of the relationship between entrepreneurship and economic meltdown. Combining these two methods is helpful for this study because each approach compensates for the shortfalls of the other. The quantitative approach makes use of statistics and econometrics, and the qualitative approach gives the MSE's views and opinions with regard to the effects of the economic meltdown on their decision to start their business as well as factors hindering further growth of their business.

In order to address the above research questions, a combination of experimental and survey research designs were used. An experimental research design is a study design that tests cause-and-effect relationships between variables (Gujarati and Porter, 2009). Central to this study is investigating the relationship between economic meltdown in Zimbabwe and entrepreneurship. This was first done at country level using macro variables. Multivariate regression analysis was used to run a VECM, testing the relationship between growth of MSEs, real GDP, inflation rate, money supply (proxy for no liquidity), and unemployment rate covering the period 1980 to 2010 at macro level. This design was appropriate as it isolated the influence of the variables that define economic meltdown on growth of MSEs. The literature identifies a number of factors that determine entrepreneurial activity (see section 2.2.8) among which are real GDP, unemployment, provision of sound money and inflation (Ovaska and Sobel, 2005; Acs, 2008; Thurik et al., 2008). These variables are used as proxies for economic meltdown in this study. The previous studies in this field have also used an experimental design, and produced credible results. For this reason, the author decided to adopt this approach.

The second part analyses the MSEs at the micro level through a survey method. The survey design entails the use of a questionnaire and interviews a targeted population (Gujarati and Porter, 2009). Data on the individual MSEs operating in Zimbabwe was not readily available and the only way it could be sourced was through a survey. This approach was appropriate as it allowed the author not only to gather information relevant to the study but also interact and have a one-on-one moment with the entrepreneurs. The main objective of this analysis was to investigate whether 'common policies' work in Zimbabwe's entrepreneurial sector, given that these policies are formulated in line with the needs of the *formal* entrepreneurs without considering the informal sector which houses the majority of the micro entrepreneurs. Three sub-objectives underpinned this study. The first objective was to examine whether there are differences in entrepreneurial attributes between *formal* sector and informal sector firms and entrepreneurs using descriptive statistics and non-parametric t-tests. The second objective was to assess the nature of the growth constraints of existing MSEs (*formal* and informal) and how these can be addressed to ensure that these firms contribute to the recovery of the Zimbabwean economy post the meltdown. The constraints were examined from two sources:

internal and external. The methodology used in this case was principal component analysis. The third objective was to assess the contribution of the growth constraints to the willingness of informal entrepreneurs to formalise their businesses. This was investigated using logistic regression.

5.3.2 Data Collection

Data was collected from two sources: primary sources and secondary sources. Primary sources provide original information which has not been filtered through either interpretation or evaluation. These include interviews, letters, audio recordings, newspaper articles and survey research (Lind, Marchal and Mason, 2002; Hox and Boeije, 2005). The primary sources are used mainly to gather data from individual entrepreneurs. Secondary data sources are journal articles, scholarly books, web sites, bibliographies, dictionaries and magazines (Lind et al., 2002; Hox and Boeije, 2005). These sources were used to gather data that is used to analyse the relationship between entrepreneurship and the state of the Zimbabwean economy at macro level.

5.3.2.1 Secondary Sources

To analyse the relationship between entrepreneurship and economic meltdown, annual time series data on agricultural real GDP, unemployment and inflation rates, and the total number of MSEs in the *formal* sector were sourced from the World Bank website, CIA World Factbook website, Zimbabwe Central Statistics Office and Harare City Council. The data collected from Zimbabwe Central Statistics Office came from both published and unpublished sources.

Time series annual data from 1980 to 2010 for unemployment rate, entrepreneurship, inflation, money supply and real GDP was used to analyse the relationship between MSEs' growth and economic meltdown. Of interest to this study was how these variables interact with each other. Unemployment rate, inflation, money supply and real GDP are all measures of economic activity (growth or meltdown). These variables are explained below.

Entrepreneurship - This variable represents the total number of micro and small-scale firms in the *formal* sector with 50 employees or less in a specific year. The data excludes agricultural firms of large scale commercial farmers, and Agricultural and Rural Development Authority (ARDA). The data was sourced from both published and unpublished sources from the Central Statistics Office and the Economic Information Services for Zimbabwe Statistics website. The data was first log transformed to allow the coefficients in the model to be interpreted as elasticity. The variable names in the analysis are LMSE for levels data and DLMSE for 1st differenced data.

Unemployment - This variable captures the percentage of the labour force that was without jobs in a specific year. The unit of measurement is percentage (%). For this study the broad definition of unemployment was used. Accordingly, any person aged 15 and over and either without a job, or available for work, or looking for work over the previous 12 months was counted as unemployed. The data was sourced from Zimbabwe's Central Statistics Office and combined with that from CIA Factbook Africa website to come up with a time series of 30 years. The variable names used in the analysis are UNEMP for levels data and DUNEMP for 1st differenced data.

Inflation - This variable shows the annual consumer price index measured as a percentage. The data was sourced from the World Bank data website. The variable names in the analysis are INFL for levels data and DINFL for 1st differenced data.

Real GDP - This variable shows the total annual real GDP in constant US$ currency. The data was sourced from World Bank data website. The variable names in the analysis are LRGDP for levels data and DRGDP for 1st differenced data.

Money Supply - shows the total amount of bank notes and coins in circulation together with short-term and medium-term deposits (M2) in constant US$ currency. The variable name in the analysis is LMSUPPLY for levels data and DLMSUPPLY for 1st differenced data.

Meltdown Dummy - This dummy captures the meltdown period from 1999 to 2005 when inflation was above 50% but below 1000%. The meltdown dummy represents all other factors

that defined the economic meltdown but are not specified in the model. These factors include political instability, speculative activities, and black market for foreign currency. The variable name in the analysis is D1.

Chaos Dummy - This dummy captures the chaotic period when inflation was above 1000%. This represents the period from 2006 to 2008. The variable name in the analysis is D2.

Structural Break Dummy - this dummy captures the year when the Zimbabwean economy experienced a structural change in 1999. In 1999 the opposition party, Movement for Democratic Change (MDC) was formed, which marked the beginning of political unrest in the country. In the same year the first draft constitutional referendum was presented and its debate was politicised. Also, in the same year, inflation rose above 50% marking the commencement of the period of hyperinflation leading to the meltdown. The variable name for this structural break dummy in the analysis is S1.

5.3.2.2 Primary Sources

Primary data was collected by means of a questionnaire, guided by interviews. Both closed and open-ended questions are included in the questionnaire. Open-ended questions allow respondents to express feelings and opinions in their own words (Lewis-Beck, Bryman and Futing Liao, 2004). Closed-ended questions make it easier to capture responses for quantitative analysis (Lewis-Beck et al., 2004). Three fieldworkers were recruited and trained to assist with the administration of the questionnaires under the supervision of the researcher. This was important to ensure that sufficient information was collected in a short period, and the fieldwork completed within six weeks. The fieldworkers had to interview the entrepreneurial person that was responsible for operations in the business.

5.3.2.2.1.　　Study Area

Zimbabwe is a landlocked country in the southern hemisphere. It shares its borders with South Africa, Bostwana, Zambia and Mozambique. The capital city of Zimbabwe is Harare and it is also the largest city in the country. Zimbabwe has 8 provinces which are Manicaland, Mashonaland Central, Mashonaland East, Mashonaland West, Masvingo, Matabeleland North, Matabeleland South, Midlands and 2 provincial cities, namely Harare and

Bulawayo.The 2012 population of the country was estimated to be 12,619,600 housed on 390,757 km² of land (CIA, World Factbook, 2012). The agricultural sector used to be the main contributor to GDP until the late 90s when the land disputes disrupted the commercial farming sector. The service sector currently contributes the most to GDP, an estimated 54,7% as of 2011 (CIA World Factbook, 2012). The US$ currently stands as the official currency but the South African rand, Botswana pula, and Chinese renminbi are also acceptable at the official bank rate. The Zimbabwean dollar was suspended from operating in 2009 due to hyperinflation, and currently the US$ together with the South African rand and Botswana pula, are the currencies being used in Zimbabwe.

Harare is divided into 4 zones, namely high density areas, low density areas, industrial areas and the central business district (CBD) area. The low density areas house the rich few who own large houses on a big pieces of land and are situated in the north eastern part of Harare. The high density areas have a higher population density with many houses clustered together on smaller pieces of land. The high density areas are in the southern part of Harare. The CBD and industrial areas are in the middle of Harare. Most of the *formal* entrepreneurial activity is done in the low density, industrial and CBD areas (map of Harare is attached in appendix). Entrepreneurial activity in the high density areas is mostly informal and in the CBD area and low density area is mostly *formal*.

5.3.2.2.2. Profile of businesses in high density areas

The profiles given in this section are based on the authors' observations and assessments which were done as part of the study. Most of the informal businesses in the high density areas are run by one person. The owner is usually the only employee in his/her business. These businesses operate from unapproved structures which are erected along the main streets and near supermarkets. These structures are used as business premises. The premises are not permanent and can be moved depending on competition and clientele. Most of the businesses are not registered with the authorities and they do not pay any tax to the government. Some individuals operate from the gates of their homes and cited the rents for premises as being too high, making renting unprofitable.

Formal enterprises are found in shopping centres like *High Glen shopping centre* and *Machipisa shopping centre*. High Glen shopping centre is located on the periphery of Budiriro and Glen View high density suburbs. It was built alongside one of the busiest roads that link many high density suburbs. Machipisa shopping centre is one of the oldest shopping centres and is located in Highfield high density area. This shopping centre was formed during the colonial era and is a popular centre especially for the residents from the surrounding high density areas (Glen Norah, Lusaka, Canaan, Western Triangle, Jerusaleum, Geneva, Houghton Park, Glen View, Budiriro, Mufakose, Kuwadzana and Dzivarasekwa).

Machipisa Shopping Centre has grocery supermarkets (OK[20], TM, Spar, and smaller shops run by individuals), food courts for fast food, post office, medical surgeries and other medical services (clinic, pharmacies, dentists and radiologists), service stations, banks, rooms rented out for different business (like saloons, internet services, tailoring, bottle store, dry cleaner, hardware), an open space for selling vegetables, council stands rented out to herbalists, and open air vendors who operate from the pavements.

High Glen Shopping Centre is more structured with no pavement traders. Most entrepreneurs are renting business premises in the complex. There are two big supermarkets (TM and Farm and City), furniture shops, clothing shops, a medical centre, banks, saloons, pharmacy, bottle store and hardware. High Glen Shopping Centre has more *formal* entrepreneurs than Machipisa Shopping Centre.

5.3.2.2.3.   Profile of businesses in the industrial areas

There are two types of industries in Harare, namely heavy industries and light industries. Heavy industries are capital and labour intensive, have high barriers to entry and produce large quantities of goods. Examples of heavy industry in Zimbabwe are the automobile, petroleum and steel industries. The heavy industries of Zimbabwe are mainly made up of *formal* large scale entrepreneurs (Chigwenya and Mudzengerere, 2013). The light industries are less capital intensive but more labour intensive, for example, the clothing and textile

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[20] OK, TM, Farm and City and Spar are among the big grocery supermarkets and the government has shares in them. During the meltdown they were forced to enforce price controls on basic goods resulting in most shops operating with empty shelves as it was unprofitable to sells the goods at the controlled price rate.

manufacturing and food processing companies. Similar to the heavy industries, most of the entrepreneurs are *formal* large scale entrepreneurs. In the midst of these *formal* industries are some informal trading sites where micro and small-scale entrepreneurs are found. Some of the prominent and very functional informal trading sites found in the industrial area are Siyaso, Gazaland and Mupedza Nhamo.

Siyaso is found next to the light industries near the high density suburb called Mbare. It is an open ground enclosed by a precast concrete wall. Some individuals erected some wood and plastic platforms on their selling points. Merchandise found in this complex extends from building material, to electrical goods, and motor parts. Anything metal or made of wood can be found at Siyaso. The setup is informal and crowded. Outside the wall are vendors who sell all sorts of things.

Mupedza Nhamo is found in the same area as Siyaso. This place is also walled and has a big shaded area divided into smaller (2mX2m) sections. These sections are rented out to individuals who sell clothes. The clothes are both brand new, and sourced from neighbouring countries, or second hand and brought into the country in bales. Outside the wall are food vendors and some traders reselling clothes they would have bought inside the complex.

Gazaland is found next to the heavy industries and next to Highfield high density area. The set up at Gazaland is different from Siyaso and Mupedza Nhamo, in that there are a wide range of entrepreneurial activities and the place is not enclosed by a wall. The entrepreneurial activities found at this location include mechanical services, saloons, butchery, clothing shops, supermarket, motor parts retailers and vegetable vendors. It is a congested area with some people renting a 1m x 1m corner for as much as US$150 per month. Most of the entrepreneurial activity is informal and no taxes are paid to the government.

5.3.2.2.4.   Profile of businesses in the medium to low density areas

The businesses in the low density areas are structured in an orderly manner with well-built, well maintained and furnished premises. They are mostly in complexes where banks and big supermarkets are also located. The rentals for business premises are very high compared to

those of premises in high density and industrial areas. The targeted market is the wealthy residents in the medium to low density areas. Most of the businesses are *formal*, for example restaurants and food outlets, have the required registration and pay their monthly taxes. Some informal activity is also found in these medium and low density areas in the form of flea markets. Other informal traders are also found operating by the robots. The two medium to low density shopping centres that were used in the research are *Avondale shopping centre* in Avondale and *Sami Levi Village Park* in Borrowdale.

5.3.2.2.5. Profile of businesses in the CBD area

This area is mainly made up of office blocks, government buildings and large-scale registered *formal* enterprises. Most of the *formal* businesses have employees to assist. They have all the required documents (Certificates of Registration, Tax Clearance and Vendor Number) and pay taxes to the government. A very active informal sector also exists in the CBD area. Some of these informal enterprises operate from premises where they pay rent and others use pavements and street corners.

5.3.2.2.6. Sampling Frame

For this study, the targeted participants were MSEs, restricted to urban dwellers in different suburbs of the capital city of Harare, operating in both the *formal* and the informal sectors. The absence of an updated register of the MSEs who are operating in Harare posed some limitations when drawing up the sample for the study. A judgemental and purposive sampling technique combined with stratified random sampling was eventually used to select 150 MSEs from both the *formal* and informal sector. Judgemental sampling is a form of convenience sampling in which the elements are selected based on the judgement or expertise to choose elements that are representative of the population of interest in the study (Malhotra, 1999:335). This technique was also used by Newadi and Pietersen (2008) in their study on informal entrepreneurship in South Africa.

Initially, the study plan was to sample 400 MSEs through stratified random selection but owing to resource constraints, a smaller sample (150 firms) was considered. Stratification was to be based on the legal status of the business, and the location of the business (in light of the

areas discussed above). A pre-test of the questionnaire was done on a sample of 10 MSEs (5 *formal* and 5 informal MSEs) from each suburb and the results showed that this stratification would not give a representative sample since there are more informal MSEs compared to *formal* and some areas had only informal enterprises, for example *Siyaso and Mupedza Nhamo*. The stratifications were then adjusted to sector of business and location of business.

In order to ensure a representative sample, individuals running micro and small enterprises were selected from the 3 cluster areas, that is:

- a high density area;

- an industrial area, and

- the CBD and low density area.

The CBD and low density areas were clustered together because of the similarity in the profile of the two areas. From each cluster or location, 50 MSEs were sampled with the business venture having to be in one of the following three sectors: services, retail or manufacturing and construction. Another selection criterion is that the enterprise should have been operational for a period longer than 5 years to ensure that the enterprise was formed during the economic meltdown. Both female and male entrepreneurs were interviewed. A total of 88 enterprises were interviewed from the informal sector and 62 enterprises from the *formal* sector.

5.3.2.2.7.   Questionnaire Design

The instrument that was used for primary data collection was a questionnaire. The questionnaire consisted of 4 sections. (A copy of the questionnaire is attached in the appendix). The first section covered the respondents' demographic aspects. The questions in this section were intended to provide background information on the owner of the enterprise. Section 1 sought information on: the educational qualifications of the owners; their *formal* working experience (in years); age and marital status; as well as the reasons behind the formation of their business and whether the establishment of the business was necessity-driven or opportunity-driven. These two types of entrepreneurship, necessity and opportunity were defined in Chapter 2.

The second part of the questionnaire is more focused on the enterprise. Some of the questions sought data on when the business was established; whether the business is a family business or not; if the business premises were owned or rented; and whether the business is an informal venture or a *formal* sector firm.

The third section covers the entrepreneurial dynamics to determine whether the enterprise is growing or not. This is covered by three questions. The first one tracks the growth in employees from the time of formation to the current period, and a positive change would represent growth. This question was problematic in that most informal businesses are one-man businesses, hence failed to capture the growth factor. The second question tracks the change over time in average earnings and expenses per month. This question also proved not to be a good measure of growth, as most MSEs did not record their transactions and based the facts on what they could remember which was not reliable. The third question which was then adopted for further analysis was a yes/no question on whether the entrepreneur feels that his/her business was growing. There was a follow-up question to expand on their answer of yes or no, allowing them to define growth in their own way. Most entrepreneurs indicated growth or lack of it in terms of merchandise size, location of business (operating in the high density areas against operating in the CBD area). Some felt their businesses were growing, but slowly.

The growth inhibiting factors are covered by a set of 21 internal and external factors, using a Likert scale, and drawn from the literature. The Likert scale ranged from 1 to 5, with higher values indicating greater disagreement and lower values indicating greater agreement. For each factor, the respondent had to indicate, by ticking the scale, what best described their agreement or disagreement.

The fourth section examines the N-Ach of the respondents. N-Ach, as indicated in chapter 3, measures an individual's eagerness to succeed. N-Ach is an important attribute for business success and business growth. N-Ach is measured using the Mehrabian scale of the tendency to achieve, which consists of a set of 26 questions for males and 26 questions for female

respondents. It is measured on a nine-point Likert scale from +4 to − 4. The overall N-Ach score of each surveyed entrepreneur is obtained by adding up the scores from each question. A higher positive value indicates a greater N-Ach level, and the reverse is also true. This scale has been found to have a high reliability index (Elliot and Dweck, 2005).

5.3.2.2.8. Ethical Clearance

Ethical clearance was obtained from the UKZN Research Office before administering the questionnaires. This is to ensure that the study will not pose any threat to minors or the disadvantaged. Each respondent had to sign a form consenting to voluntary participation.

5.3.2.2.9. Practical and Ethical Limitations

- Willingness to participate by some respondents.
- Inaccuracy of data due to longer recall period as most of them had no documented records.
- Biased responses by some participants.
- Unethical practices like tax evasion and employee benefits evasion by formal entrepreneurs could not be clearly verified.

5.3.3 Hypothesis Formulation

According to Thurik, Carree, van Stel and Audretsch (2008) and Faria et al. (2010) the empirical relationship between unemployment and entrepreneurship is two way (positive and negative). Increased levels of unemployment can lead to an increase in entrepreneurial activity (refugee effect - positive relationship), and at the same time, the high entrepreneurial activity can lead to a reduction in the level of unemployment (entrepreneurial effect- negative relationship) (Acs, 2008). These two effects are further explained below.

A *refugee effect* refers to the act of using entrepreneurship as a survival platform because of an absence of other options or avenues to generate income (Acs, 2008). The refugee effect which is caused by the need for survival will come out as a positive relationship between

unemployment and entrepreneurship. Thus, as unemployment levels increase, refugee entrepreneurial activity will also increase.

An ***entrepreneurial/opportunity effect*** arises when entrepreneurship is driven by the presence of an opportunity and resources (Acs, 2008). The entrepreneurial effect will show as a negative relationship between unemployment and entrepreneurship. As opportunistic entrepreneurial activity increases, more jobs will be created by the new entrepreneurs causing the unemployment level to drop and generating economic growth.

In a melting down economy, the high unemployment rate created by the low real GDP is expected to increase refugee activities in subsequent periods. However, the collapse of the Zimbabwean economy was complemented with the collapse of the legal system. The absence of rule of law opened the doors for all sorts of activities to flourish, including the black market. It is a possibility that the unregulated economic environment provided an opportunity for the unemployed to make a living for themselves without fear of being penalised. In this case a negative relationship would be expected between unemployment and entrepreneurship. The following hypothesis will be tested.

NH$_1$: There is a negative and significant relationship between total number of MSEs and unemployment rate - opportunity entrepreneurial effect.

AH$_1$: There is a positive and significant relationship between total number of MSEs and unemployment rate – refugee effect.

A relationship also exists between inflation and entrepreneurial activity. Theory suggests a negative relationship between inflation and entrepreneurial activity (Ovaska and Sobel, 2005). According to Ovaska and Sobel (2005) high inflation rates do not foster new investments, but rather tend to reduce the creation of new firms. In this study, the relationship between inflation and entrepreneurial activity in a meltdown economy is expected to be positive. Entrepreneurial activity during the meltdown involved a lot of price speculation and that impacted acutely on the rate of inflation. As people speculated they caused a further increase in prices. These price increases eventually became a reality as there were constraints on the supply-side hindering production. On the demand-side, inflation was rising faster than

money supply, creating acute shortages of cash at hand. As an alternative way to source the cash, people resorted to entrepreneurial activity where they traded on a cash basis.

NH₂: There is a negative and significant relationship between total number of MSEs and inflation.

AH₂: There is a positive and significant relationship between total number of MSEs and inflation rate.

Most micro and small-scale businesses operate on a cash and carry transaction system with very minimal credit. For this reason, these businesses usually have cash at hand at all times. One of the challenges during the meltdown was accessing the hard currency (Zim$); the financial intermediaries could not meet the daily cash demands from the public. In as much as the Reserve Bank of Zimbabwe printed more cash, the supply could not match the demand triggered by the escalating inflation. There is a possibility that growth in MSEs occurred out of necessity, created by the shortage of currency, and entrepreneurship was used as an alternative means to fight the liquidity crisis. The following hypothesis will be tested:

NH₃: There is a negative and significant relationship between total number of MSEs and money supply.

AH₃: There is a positive and significant relationship between total number of MSEs and money supply.

Literature identifies a positive and statistically significant relationship between entrepreneurship and economic growth as measured by real GDP or income per capita (Ovaska and Sobel, 2005, Parker and Robson, 2004). The role of small businesses as vehicles for entrepreneurship has become more pronounced, especially in European countries, due to their contribution in curbing unemployment, and fostering economic growth. Policy makers embrace them more as instruments for supporting economic development. Audretsch, Carree, van Stel and Thurik (2002) argue that a country with low entrepreneurial activity will experience a cost that can manifest itself in the form of low economic growth.

Further research has revealed that this relationship also depends on the country's phase of economic development (GEM Report, 2013). It depends on whether the economy is factor-driven or efficiency-driven or innovation-driven[21] (GEM Report, 2013). Innovation-driven economies benefit more from entrepreneurial activities, than do factor driven economies (GEM Report, 2013). Most developing nations in Africa, Zimbabwe included, are factor-driven, and the necessity-driven entrepreneurship dominates in these economies (GEM Report, 2013). Necessity-driven entrepreneurship can be intensified by the economic conditions like insufficient supply of jobs and a low level of social security entitlement conditions which force people to look for other sources of income and resort to entrepreneurship. In such circumstances a positive relationship will be expected between entrepreneurship and economic conditions as measured by real GDP. The following hypothesis will thus be tested for Zimbabwe.

NH$_4$: There is a positive and significant relationship between total number of MSEs and real GDP.

AH$_4$: There is a negative and significant relationship between total number of MSEs and real GDP, that is, necessity driven entrepreneurship.

This macro-economic analysis does not give much information on the characteristics of the MSEs that were formed during the economic meltdown, and their relationship with the economic meltdown. Nor does it explain why most of these MSEs are operating in the unrecognised informal sector and not in the *formal* sector. If micro and small-scale entrepreneurship is to be used as part of the recovery plan, it is important to understand the characteristics and problems that the MSEs in Zimbabwe face, and what factors hinder the growth of their businesses and the willingness by informal sector entrepreneurs to formalise their businesses.

The following hypotheses were tested.

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[21] Factor-driven economies rely on unprocessed natural resources as a basis for their comparative advantage.
Efficiency-driven economies rely on the efficient production of more advanced goods and services as a basis for their comparative advantage.
Innovation-driven economies rely on their ability to produce innovative products using advanced methods as the basis of their comparative advantage.

NH₅: On average there are no differences between the *formal* sector business owners and informal sector business owners with respect to demographic aspects, average educational qualifications and pre-entrepreneurship employment experience.

AH₅: On average there are differences between the *formal* sector business owners and informal sector business owners with respect to demographic aspects, average educational qualifications and pre-entrepreneurship employment experience.

NH₆: Entrepreneurs running informal enterprises have on average the same N-Ach level as those running *formal* enterprises.

AH₆: Entrepreneurs running informal enterprises have on average a lower N-Ach level compared to those running *formal* enterprises.

NH₇: Factors that influence business growth in the *formal* sector are similar to those in the informal sector.

AH₇: Factors that influence business growth in the *formal* sector are different to those in the informal sector.

NH₈: There are no differences between internal and external factors with respect to their influence on *formal* sector businesses.

AH₈: Internal factors have a greater influence on the growth of *formal* businesses than external factors.

NH₉: There are no differences between internal and external factors with respect to their influence on informal sector businesses.

AH₉: External factors have a greater influence on the growth of informal businesses than do internal factors.

NH₁₀: The level of the entrepreneur's N-Ach has a positive impact on the formalisation propensity of the MSEs in the informal sector.

AH₁₀: The level of the entrepreneur's N-Ach has a negative impact on the formalisation propensity of MSEs in the informal sector.

NH₁₁: Improving the growth constraints will improve the odds of informal sector entrepreneurs formalising their businesses.

AH₁₁: Improving the growth constraints will not improve the odds of the informal sector entrepreneurs formalising their businesses.

5.3.4 Data Analysis

5.3.4.1 Direction of Causality and Model Specification for Macro Analysis

Recent empirical studies have revealed that the relationship between entrepreneurship and economic performance indicators is two-way, which is a migration from identifying one of the variables as exogenous and the other as endogenous (Hartog, Parker, van Stel and Thurik, 2010). The relationship between entrepreneurship and economic growth is argued to be twofold and the direction of causality is reversal. Entrepreneurship can assist economic growth, while economic growth can in turn assist the development of entrepreneurship (Acs, 2008; Hartog et al., 2010). If a country is experiencing economic growth, the output expansion in itself can generate entrepreneurial opportunities as the economy will have surplus resources that it can use to encourage entrepreneurial activities.

As was discussed earlier, the relationship between entrepreneurship and unemployment is also two way and includes a lag structure which can last up to 10 years (Acs, 2008; Fritsch and Noseleit, 2013). The high unemployment rate can be associated with high entrepreneurial activity due to refugee effects. On the other hand, good economic performance provides opportunities for entrepreneurship, causing entrepreneurial effects. Also these effects can be picked in lags which may last for a long time (Acs, 2008; Fritsch and Noseleit, 2013).

In order to avoid methodological flaws associated with imposing prior assumptions on the direction of causality, this study used a Vector Autoregressive Model (VAR model) to test the relationship between entrepreneurship and the state of the economy (as proxied by a number of macroeconomic indicators). The VAR model does not impose any prior assumptions on the endogeneity of any of the variables in the model and allows us to isolate the genuine relationship between entrepreneurship and the proxies of economic performance.

The main research questions that need to be answered from this analysis are:

- What was the contribution of the economic meltdown to growth in micro and small-scale entrepreneurial activity in Zimbabwe?
- Did the growth of entrepreneurial activity contribute to the economic meltdown?

The above two questions seek to address the issue of reversal causality in the relationship between micro and small-scale entrepreneurial activity and economic meltdown, and examine whether MSEs contributed to the meltdown and whether the meltdown contributed to the increase in MSEs. According to Gujarati (2009) an appropriate way of investigating the relationship between quantitative variables is through correlation or regression. Correlation is a statistical method used to show how strongly pairs of variables are related, and regression is a statistical method which uses one variable to predict the outcome of the other (Gujarati, 2009). The regression approach was used here. A simple regression model relating entrepreneurship to the other variables is represented in the equation below as follows

$$LMSE = \beta_0 + \beta_1 Unemp + \beta_2 RGDP + \beta_3 Infl + \beta_4 MSupply + \varepsilon \qquad \text{(equation 1)}$$

where:

LMSE represents log of total number of MSEs;

Unemp represents the unemployment rate;

RGDP represents the real Gross Domestic Product;

Infl represents inflation rate;

MSupply represents money supply;

ε is the error term.

Estimating this model using Ordinary Least Squares (OLS) is not ideal as it is likely to produce a spurious regression because the data is non-stationary. The only way the results can be regarded as sound is when one or more cointegrating vectors are present (Harris, 1994; Greene, 2008). *Cointegration* is a stochastic process approach in which two time series are individually integrated of order 1, but stationary if linearly combined (Greene, 2008). Thus, if

the error terms of the VAR equations are uncorrelated, then the estimates will be unbiased and efficient. The estimates will be showing a stable long run relationship. The test for cointegration is more appropriate when testing for relationships using a limited sample size compared to a large sample.

Assuming one adopts the simple OLS equation 1, it will answer the first question. To answer the question on the contribution of growth in MSEs to the economic meltdown, equation 1 will be re-arranged, and 4 other equations for each of the explanatory variables formulated with each variable being the independent variable. All in all, the present study will end up running 5 individual analyses, coupled with a test for cointegration in each equation before declaring the results sound. The analyses using OLS is likely to be cumbersome and might create some confusion. However, by running a Vector Autoregression (VAR) model, simultaneous equations will be combined in one model, overcoming the limitations of the OLS analysis (Sims, 1980; Hartog, 2010).

VAR models can be presented through:
1. Unrestricted VAR - is a reduced form whose output is interpretable unless some structural restrictions are imposed.
2. Impulse responses - measure the effects of different shocks on the variable under study.
3. Variance Decomposition - measures the relative importance of the different shocks to the variation in the different variables.
4. Vector Error Correction Model (VECM) - captures both long run and short run dynamics between the variables that are being studied. The error correction coefficient will give the speed of adjustment to the long run relationship (Bjornland, 2000; Mertler and Vanatta, 2002; Greene, 2008; Hartog, 2010).

From the theoretical framework, a number of relationships can be postulated for the five variables in equation 1 above, where either one or more of the explanatory variables becomes the dependent variable or entrepreneurship will be part of the explanatory variables. Previous researchers have also shown the presence of a lagged response when looking at the

relationship between unemployment and entrepreneurial activity (Thurik et al, 2008). For this reason, an appropriate model to analyse both the short run and long run dynamics of a number of simultaneous equations that include lags in a single model will be a VECM (Bjornland, 2000; Mertler and Vanatta, 2002). Unlike the traditional macro-econometric models that require restrictions classifying variables in the model as either endogenous or exogenous, VECM models treat all variables as endogenous (Bjornland, 2000).

A VECM model:

- Allows the combination of variables of different order of integration in the same model;
- Takes into consideration the possibility of reverse causality, as all variables are taken in as endogenous;
- Can be used in forecasting (Bjornland, 2000; Mertler and Vanatta, 2002; Musuna and Muchapondwa, 2008).

A VECM model makes it possible to analyse the reversal long run and short run relationship between all the variables in the model using levels data, to test for counteraction; to test for granger causality, and to study the effects of policy or shocks through impulse response characteristics (Greene, 2008: 587). *Granger causality* is a statistical test used to determine whether one time series is useful in forecasting the other time series. It predicts whether one thing happens before the other, but does not necessarily imply correlation, especially if Granger causality is in one direction (more precisely, if x Granger causes y, but y does not Granger cause x), (Sorensen, 2005).

The general form of the m-dimensional[22] VAR model of order p[23] is given by;

$$(Y_t - \gamma - \delta t) = \emptyset_1(Y_{t-1} - \gamma - \delta(t-1) + \cdots + \emptyset_j(Y_{t-j} - \gamma - \delta(t-p) + \in D_t + \varepsilon_t$$

(equation 2)

Where

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[22] M denotes the number of variables in the model, in this case m=4 since inflation and real GDP will be used interchangeably to avoid multicollinearity.
[23] P represents the maximum number of lags included in the model.

- Y_t is a vector containing *m* variables.

- Y_{t-j} denotes lagged values with corresponding *mxm* matrices of coefficients $\emptyset_j$ for j=1,…,p.

- γ denotes an *mx1* vector of intercepts.

- δ denotes an *mx1* vector of deterministic drifts.

- t is a time trend.

- D_t is a *dx1* vector containing dummies and/or other non-stochastic variables.

- $\in$ is an *mxd* parameter matrix.

- ε_t is the error term.

From the VAR model in equation 2, the reduced form VECM can be written as;

$$\Delta Y_t = \mu_0 + \lambda(\beta'Y_{t-1} - \mu_1 - \delta_1 t) + \sum_{j=1}^{p-1} \theta_j \Delta Y_{t-j} + \in D_t + \varepsilon_t$$

(equation 3)

Where

- $\beta'Y_{t-1}$ denotes the long-run equilibrium relations.

λ denotes the corresponding adjustment parameters that describe the speed of adjustment towards the long-run equilibrium if variables are out of equilibrium. The coefficient for λ should be negative and between 0 and 1. The closer the adjustment parameter is to 1, the faster the speed of adjustment (Engel and Granger, 1987).

- θ_j denotes parameter matrices of the short-run dynamics.

- μ_0 is a constant.

The VECM above (equation 3) was used to examine the long-run and short-run dynamics of entrepreneurial activity and the state of the Zimbabwean economy during the period 1980 to 2010. The VECM was run in STATA using the Johansen technique. Previously, Engel-Granger two-step approach was commonly used to estimate an Error Correction Model (ECM) (Engel and Granger, 1987; Harris, 1994)[24]. However, its failure to determine the

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[24] The Engel-Granger two step procedure: 1) Estimate the long run (equilibrium) equation. Then test for statonarity in the residual. If stationary exists then it implies cointegration.
2) Substitute the long run equation into the error correction equation and estimate the new equation to get the short run equilibrium and the adjustment coefficient.

cointegration rank if more than 1 rank exists is making it less popular. The Engel-Granger approach is now being replaced by the Johansen technique.

The Johansen technique consists of the following steps:

1. Testing the order of integration of each variable entering the multivariate model. Only I(1), that is those variables that become stationary after first differencing, can enter the model. In this study, three tests were run to test for stationarity, namely Augmented-Dickey-Fuller (ADF) unit root test, Phillips-Perron (PP) unit root test and the Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test for stationarity first with levels data and then with differenced data.

2. Testing the order of the VAR/VECM/ selecting the appropriate lag length (p) for the endogenous variables using information criteria. Three information criteria were used namely Akaike information Criteria (AIC), Hannan and Quinn information criteria (HQIC) and Schwarz's Bayesian information criterion (SBIC).

3. Run the unrestricted VAR and test for Granger Causality.

4. Determining the number of cointegrating vectors (*r*) in the VAR/VECM using the trace statistic and the max-eigenvalue test.

5. Testing for restrictions in the model. These restrictions are based on theory about the variables or the research questions in this study.

6. Run the Error Correction Model to determine the short run dynamics and long run dynamics.

7. Impulse response plots to show response to exogenous shocks (Mertler and Vanatta, 2002).

To avoid the possibility of multicollinearity between real GDP and inflation, the two were regressed separately in two VECMs. The first VECM had entrepreneurship, money supply, unemployment and real GDP as the dependent variables. The second VECM replaced real GDP with inflation. Thus, the second VECM had entrepreneurship, money supply, unemployment and inflation as the dependent variables.

Assuming the analysis reveals the presence of 4 cointegrating equations, the expected signs from the results output, based on theory will be as follows:

Table 14: Expected signs on the Explanatory Variables from running the VECM

Dependent Variable	Explanatory Variable	Expected Sign
Eqn 1:Entrepreneurship	Unemployment Rate	+ (refugee effect)
	Real GDP	-
	Inflation Rate	+
	Money supply	+ (necessity driven entr)
Eqn 2:Unemployment	Entrepreneurship	- (entrepreneurial effect)
	Money Supply	+
	Real GDP	-
	Inflation Rate	-
Eqn 3: Real GDP	Entrepreneurship	+
	Unemployment Rate	-
	Real GDP lags	+
	Inflation Rate	-
Eqn 4:Inflation Rate	Entrepreneurship	+
	Unemployment Rate	+
	Real GDP	-
	Inflation Rate lags	+

In the entrepreneurship equation (Eqn1 in table 14 above), positive relationships are expected with money supply, unemployment and inflation. This positive relationship is thought to be driven by the need for survival in the face of adversities. Hence, as inflation increases and unemployment increases as well as liquidity shortages arise, entrepreneurial activity is expected to increase. In Eqn 2 (from table 14 above), a negative relationship is expected between unemployment and entrepreneurship because of entrepreneurial effect. In equation 3, Real GDP is expected to have a positive relationship with entrepreneurship because of the ability of entrepreneurship to generate income for the economy. A negative relationship is expected with respect to unemployment and inflation in equation 3. In the inflation equation (equation 4) a positive relationship with entrepreneurship and lags of inflation is expected.

5.3.4.2 Descriptive Analysis and non-parametric t-test

In order to further understand and compare the MSEs operating in the *formal* and informal sectors of Zimbabwe, descriptive analysis is done using frequency tables, t-statistics and graphs. Descriptive analysis is helpful for this study because it summarises the collected data, aiding the drawing up of meaningful inferences and comparisons. Descriptive analysis is used to compare the characteristics of business owners and their businesses in the *formal* sector to those in the informal sector.

5.3.4.3 Principal Component Analysis

In order to obtain quantitative measures of the factors hindering the growth of the MSEs in both the *formal* and informal sectors, Principal Component Analysis, also known as factor analysis, was used (Lam, 1998). Factor analysis reduces data to groups with similar characteristics by minimizing variability within each group and maximizing variability across groups (Lam, 1998). In this study the growth hindering factors are analysed separately for the *formal* sector and informal sector MSEs. This analysis is important as it isolates and groups the main factors that are hindering the growth of MSEs in Zimbabwe into clusters. A similar approach has been used before by other researchers, although most have looked at *formal* sector firms only. However, the current study uses factor analysis to examine growth inhibiting constraints for both *formal* and informal firms, enabling one to establish where there are commonalities or differences between the two sectors, and also establish whether external factors have a greater bearing on hindering growth. Separate analysis of the *formal* and informal sectors provides policy makers with better information on how to boost entrepreneurial growth without using the blanket, or one-size-fits-all approach for the two sectors. This approach combined with the meltdown scenario makes the present study unique in certain respects.

5.3.4.4 Logistic Analysis of the willingness to formalize by informal entrepreneurs

As was discussed earlier, one of the challenges for the Zimbabwean economy post the economic meltdown has been formalising the informal enterprises. Literature identifies the reasons for informalisation as regulatory and administrative barriers, fees and financial requirements, absence of business services like *formal* training, corruption, and criminality, among others (Welch, 2005). These factors are closely linked to the growth inhibiting factors, and as such, the Zimbabwean government adopted a policy to improve access to financial assistance by informal traders through the formation of a Fund in 2010, in anticipation that it will encourage the traders to formalise their businesses. Formalisation of the informal enterprises will broaden the tax base for the economy, hence improve revenue generation. Four years down the line, it still remains a challenge and poses questions on the link between the growth constraints and the willingness to formalise by informal traders.

This part of the micro-level analysis involved running a logistic model that tested the relationship between the growth constraints clusters; generated from the principal component analysis, and the willingness of informal sector business owners to formalise their businesses. The dependent variable is a dichotomous variable, assuming a value 1, if the informal sector entrepreneur indicated that he/she is willing to formalise his/her business; 0 if not willing. The independent variables will be the principal component clusters generated from the factor analysis, described in chapter 7. Additional to these variables, N-Ach is also included as an independent variable. The logistic model as presented in equation (4) below, was estimated using SPSS.

The logit model is based on the logistic probability distribution:

$$\boldsymbol{Prob}(Y = 1|X_k) = F(\boldsymbol{\beta_0} + \boldsymbol{\beta_1 X_1} + \boldsymbol{\beta_2 X_2} + \cdots + \boldsymbol{\beta_k X_k}) + \boldsymbol{\vartheta N} - \boldsymbol{Ach_i} + \mu_i$$

$$= \frac{e^{(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \cdots + \beta_k X_k)}}{1 + e^{(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \cdots + \beta_k X_k)}} + \boldsymbol{\vartheta N} - \boldsymbol{Ach_i} + \mu_i$$

(equation 4)

Here the study estimates the log of the odds that Y = 1 (ratio of likelihood of event occurring (i.e. willing to formalise) to not occurring), βs are the effect of a unit change in the Xs on

$\ln\{odds(Y = 1)\}$.   Xs are growth constraint clusters generated through principal component analysis. N-Ach is a measure of the need to achieve and μ_i is the error term.

The logit model is a non-linear model, and estimated using Maximum Likelihood Estimation. When interpreting the β coefficients, the focus is more on the signs of the coefficients than on their magnitudes:

If $\beta > 0$: as X increases the probability of the event occurring $P(Y = 1)$ also increases,

If $\beta < 0$: as X increases, $P(Y = 1)$ decreases.

Some tests to evaluate the logistic model were also carried out. Firstly, the Wald test was carried out to test for the overall fitness of the logistic model. The Omnibus test and Hosmer and Lemeshow test were done to test the 'goodness of fit' of the model. The Pseudo R-squared statistics was measured using the Cox and Snell and the Nagelkerke R Square. Lastly a classification test was done to the accuracy of the predicted values compared to the observed values.

5.4 Conclusion

This chapter presented an overview of the research design methods. Data was collected from secondary (published) and primary (questionnaire) sources. The methodology was divided into two. The first section presents methods to analyse the relationship between MSE growth and economic meltdown at the macro level. The main instrument of analysis is a VECM model. The second section presents methods to analyse the characteristics and growth inhibiting factors of MSEs as well as the owners of these businesses, in the *formal* and informal sectors. This second part combines descriptive statistics, principal component analysis, and binary logistic regression model estimation. Results of these analyses are presented in the next two chapters.

CHAPTER 6:
LINKING MSE GROWTH TO ECONOMIC MELTDOWN IN ZIMBABWE[25]

6.1 Introduction

This chapter provides regression results and a discussion of the relationship between MSE growth and the economic meltdown, by testing for the presence of refugee effects. It presents the results of the first part of the methodology that utilises time series data from 1980 to 2010, to analyse the relationship between growth in MSEs and economic meltdown at macro-level. The relationship between growth in MSEs and four macroeconomic variables, used as proxies for economic meltdown, was examined using regression analysis. The macroeconomic variables used were unemployment, real GDP, inflation and no liquidity proxied by money supply. Due to the nature of the real GDP and inflation data, there was a high probability of the regression model failing to produce sound results because of multicollinerity. This problem was rectified by running two separate VECMs and then comparing the results. The first model (Model 1 with inflation) tested the relationship between growth in entrepreneurial activity and money supply, unemployment and inflation. The second model (Model 2 with RGDP) replaced inflation with real GDP. Further, the tests for stationarity and the test for cointegration were done on the data sets in order to define the VECM using the Johansen technique.

6.2 Developing the VECM

6.2.1   Testing the Order of Integration

Three methods were used to test for stationarity on the five variables (LMSE, UNEMP, INFL, LMSUPPLY and RGDP) that were intended to enter the VECM. These methods were Augmented Dickey-Fuller (ADF) unit root test, Phillips-Perron (PP) unit root test and the Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test for stationarity.[26] Of the three tests, KPSS works well with smaller data sets and was used as a decisive test in cases were ADF and PP

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[25] The findings of this chapter have been partly published as a journal article: S Mukorera and D Mahadea (2014), Linking entrepreneurial activity to economic meltdown in Zimbabwe, *Mediterranean Journal of Social Sciences*, vol 5(3), pg.42-50

[26] Dickey- Fuller test: H0 is a unit root, HA is stationarity

KPSS test: H0 is stationarity, HA is a unit root.

failed to be conclusive (Green, 2003). Results from the three tests of stationarity are shown in tables 15 and 16 below.

Table 15: PP and ADF test for unit root results

PP test for unit root					
	Test statistic	1% critical value	5% critical value	10% critical value	p-value for Z(t)
Levels LRGDP	2.261	-3.725	-2.986	-2624	0.9764
1st differenced DRGDP	**-4.258**	-3.730	-2.992	-2.626	0.0005
Levels INFL	5.656	-3.743	-2.997	-2.629	1.0000
1st differenced DINFL	-1.520	-3.750	-3.000	-2.630	0.5236
Levels LMSE	0.532	-3.736	-2.994	-2.628	0.9858
1st differenced LMSE	**-3.350**	-3.743	-2.997	-2.629	0.0128
Levels UNEMP	1.397	-3.730	-2.992	-2.626	0.9971
1st differenced DUNEMP	**-5.780**	-3.750	-3.000	-2.630	0.0000
Levels LMSUPPLY	-1.726	-3.716	-2.986	-2.624	0.4180
1st differenced DLMSUPPLY	**-4.442**	-3.723	-2.989	-2.625	0.0003
ADF test for unit root					

	t-statistics	1% critical value	5% critical value	10% critical value	p-value for Z(t)
Levels LRGDP	-1.253	-3.721	-2.976	-2.625	0.6325
1st differenced DRGDP	**-5.189**	-3.736	-2.994	-2.628	0.0000
Levels INFL	1.838	-3.743	-2.997	-2.629	0.9984
1st differenced DINFL	-2.329	-3.750	-3.000	-2.630	0.1627
Levels LMSE	0.939	-3.736	-2.994	-2.628	0.9936
1st differenced LMSE	**-3.345**	-3.743	-2.997	-2.629	0.0130
Levels UNEMP	1.022	-3.730	-2.992	-2.626	0.9945
1st differenced DUNEMP	**-5.203**	-3.750	-3.000	-2.630	0.0000
Levels LMSUPPLY	1.653	-3.730	-2.980	-2.620	0.5618
1st differenced DLMSUPPLY	**-3.985**	-3.745	-2.998	-2.640	0.0000

*Note: Numbers in bold show stationarity

Table 16: KPSS test for stationarity results

KPSS test for Stationarity		
	Levels t-statistics	1st differenced t-statistics
LRGDP	1.53	**0.584**
INFL	0.98	**0.403**
LMSE	1.26	**0.429**

UNEMP	2.72	**0.617**
LMSUPPLY	1.86	**0.412**

*Note: Numbers in bold show stationarity

1% Critical Value	5% Critical Value	10% Critical Value
0.739	0.463	0.347

Source: Author's own table reporting results analysed in STATA

All data sets detected a unit root in levels data and no unit root in their first differenced data. However, inflation data set was initially problematic as the first differenced data was coming out as non-stationary from the PP test and ADF test but stationary from the KPSS test. Visual inspection of the first differenced data of inflation showed the presence of outliers which were identified as the possible cause of the distortion (see fig 25 below). After removing the outliers in the years 2008 and 2007, and running the unit root test, the data sets emerged as I(1), thus differenced data was stationary. From KPSS test, the t-statistics for 1st differenced data sets for real GDP was 0.584, for inflation was 0.403, for MSE was 0.429, for money supply and for unemployment was 0.412 and 0.617 respectively (see table 16 above). All the t-statistics were smaller than the t-critical value of 0.739 at 1% level of significance, hence failed to reject the null hypothesis of stationarity, and concluded that the 5 series become stationary after 1st differencing.

Figure 25 : Scatter plot of the 1st differenced inflation data, 1980-2010
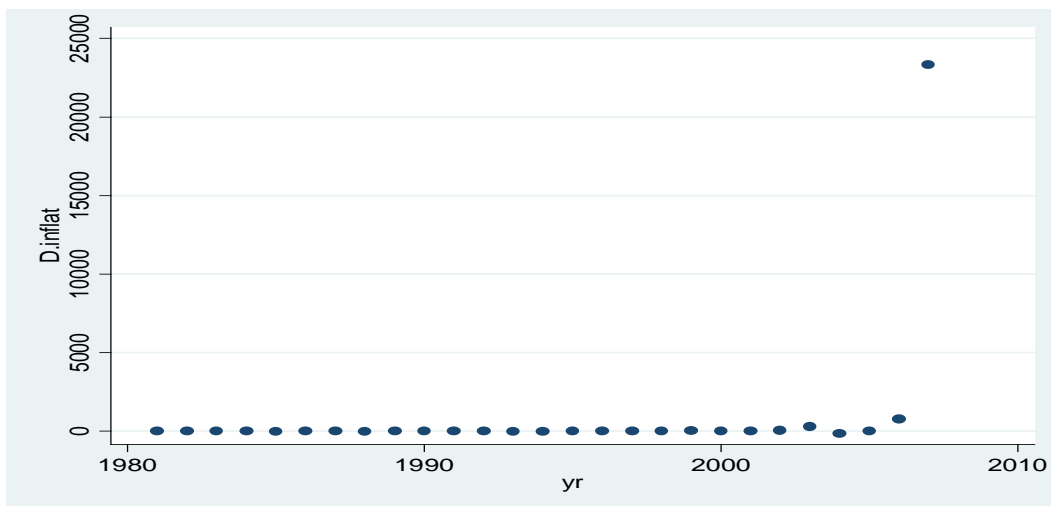
Source: Author's own graph using data from Worldbank, (2014).

Since all 5 data series were found to be I(1), they can be part of the VECM since only I(1) variables are allowed to be part of the long run equation in a VECM. The next step according to Johansen technique is to establish lag length or order of the VECM.

6.2.2 Lag length/ order of VECM selection

The second step in modelling a VECM is to determine the lag length (number of lags) of the VECM. The three information criteria that were used in determining the lag length were Akaike Information Criteria (AIC), Hannan and Quinn information criteria (HQIC) and Schwarz's Bayesian information criterion (SBIC). The SBIC and the HQIC are the more consistent estimators than the AIC because the AIC tends to overestimate in cases where the actual number of lags (p) is less or equal to the maximum number of lags (p_{max}) that is specified in the estimation (Green, 2003).[27] After trying for p_{max} equal to 2 and equal to 3, a conclusion was made that only 1 lag was to be included. Table 16 below shows the summary of the results. The full set of results is in the appendix.

Table 17: Results for test of the order of the VAR/VECM

p_{max}	Number of lags identified by AIC	Number of lags identified by HQIC	Number of lags identified by SIBC
2	2	1	1
3	1	1	1

Source: Author's own table reporting results analysed in STATA

The results in table 16 above have all the information criteria agreeing on an order of 1 for the VECM. Thus, no lags of all I(1) variables will be included in the analysis. Having ascertained the order of the VAR/VECM, the next step was to test for Granger causality and cointegration.

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[27] p_{max} refers to the maximum number of lags to be included in the test. The number is specified by the analyst.

6.2.3 Testing for Granger Causality
Table 18: Results for test for Granger Causality: Model 1 with inflation

Equation	Excluded Variable	Chi2	p-value
LMSE	Unemp	0.69682	0.404
LMSE	Inflat	.	.
LMSE	LMsupply	3.7606	0.052*
LMSE	All	4.4775	0.107
UNEMP	LMSE	2.4435	0.118
UNEMP	Inflat	2.051	0.152
UNEMP	LMsupply	0.10417	0.747
UNEMP	All	6.8356	0.077*
INFL	LMSE	0.01923	0.890
INFL	Unemp	0.04079	0.840
INFL	LMsupply	0.61381	0.433
INFL	All	0.90694	0.824
LMSUPPLY	LMSE	6.5139	0.011*
LMSUPPLY	Unemp	2.124	0.145
LMSUPPLY	Inflat	.	.
LMSUPPLY	All	6.9837	0.030*

Source: Author's own table reporting results analysed in STATA

*show significant p-values

The Granger causality test results reported in tables 18 and 19 shows the significance of the excluded variable in causing the test variable to vary. From Model 1 with inflation (table 18), the LMSE equations show that money supply (p-value is 0.052 showing 5% level of significance) is the only series that is useful in forecasting growth in MSEs, that is, money supply Granger causes growth in MSEs. This means that some variation in money supply can cause entrepreneurial activity to change. From the unemployment equation, none of the series Granger causes unemployment since all the p-values are greater than 10% (0.118 for LMSE, 0.152 for INFL and 0.747 for LMSUPPLY). This is also true for inflation, where none of the variables Granger causes inflation. With the money supply equation, it is only growth in MSEs that Granger causes it, with a p-value equal to 0.011.These results suggests the

possibility of 2 cointegrating equations and possibility of reversal causality between the two variables growth in MSEs and money supply. However, this can only be ascertained after running a test for cointegration.

Table 19: Results for test for Granger Causality: Model 2 with real GDP

Equation	Excluded Variable	Chi2	p-value
LMSE	Unemp	18.626	0.000*
LMSE	LRGDP	5.2839	0.022*
LMSE	LMsupply	1.9125	0.167
LMSE	All	21.888	0.000*
UNEMP	LMSE	8.3725	0.004*
UNEMP	LRGDP	6.0551	0.014*
UNEMP	LMsupply	0.0325	0.857
UNEMP	All	11.437	0.010*
LRGDP	LMSE	0.06762	0.795
LRGDP	Unemp	0.17763	0.673
LRGDP	LMsupply	2.5883	0.108
LRGDP	All	3.8166	0.282
LMSUPPLY	LMSE	5.182	0.023*
LMSUPPLY	Unemp	0.62849	0.428
LMSUPPLY	LRGDP	0.82629	0.363
LMSUPPLY	All	7.792	0.095*

Source: Author's own table reporting results analysed in STATA

*show significant p-values

From Model 2 (table 19) with real GDP, unemployment and real GDP Granger cause growth in MSEs (p-values are 0.000 and 0.022 respectively) and money supply does not Granger cause it (p-value is 0.167). However in the money supply equations, growth in MSEs (p-value is 0.023) is the only series that Granger cause it. In the unemployment equation, growth in MSEs and real GDP Granger causes unemployment (p-values are 0.004 and 0.014 respectively). With respect to real GDP none of the three series (growth in MSEs,

unemployment and money supply) Granger causes it as all the p-values are reported as statistically insignificant. The next step is to test for cointegration to ascertain if any of these relationships imply causality.

6.2.4 Testing for Cointegration

In time series analysis, running a multivariate model with non-stationary variables is unlikely to produce sound results unless there is evidence of cointegration. The presence of cointegration is a sign that there is long run equilibrium. To test for cointegration, the Johansen test was used. The test identified the presence of only 1 cointegrating vector for both models (full output of results is in the appendix pg. 212-213). With a trace statistic of 25.7233 (pg. 212) for model 1 and 25.5903 (pg. 213) for model 2, which are both less than the 5% critical value of 29.68, we failed to reject the null hypothesis of maximum rank of 1 or less for both models. The max-eigenvalue also indicated 1 cointegrating equation at the 5% level of significance for both models. The cointegrating equation was normalised on the entrepreneurial activity equation and the 2 VECM can be specified as follows.

Model 1: with inflation

$$\Delta LMSE_t = \alpha_0 + \delta_1 S1_t + \delta_2 D1_t + \delta_3 D2_t$$
$$+ \lambda_1[\beta_1 LMsupply_t + \beta_2 Unemp_t + \beta_3 Inflat_t - LMSE_t] + \varepsilon_{1t}$$

(equation 5)

Model 2: with real GDP

$$\Delta LMSE_t = \alpha_1 + \delta_4 S1_t + \delta_5 D1_t + \delta_6 D2_t$$
$$+ \lambda_2[\theta_1 LMsupply_t + \theta_2 Unemp_t + \theta_3 LRGDP_t - LMSE_t] + \varepsilon_{2t}$$

(equation 6)

6.3 Regression Results

Table 20: Results from the VECM

With 1 lag

Dependent Variable: LMSE (log MSE)

Variable	Model 1 with Inflation	Model 2 with RGDP
	Long-term	Long-term
UNEMP	0.0291**	0.049***
	−0,015	(0,007)
INFL	1.55e−09***	
	(9.36e−11)	
LMSUPPLY	0.944**	1.257***
	(0.433)	(0,267)
LRGDP		−1.43e−08***
		(0,000)
Constant (α_0)	0,024	0.6094***
	(0,036)	(0,141)
D1	−0,043	−0.4987***
	(0,074)	(0.201)
D2	0.3537***	−0.097
	(0,112)	(0.272)
S1	0,096	0.7381*
	(0,171)	(0.418)
λ	−0.0956***	−0.3352***
R-squared	89,83%	50,93%

*Note: *** 1% level of significance, ** 5% level of significance, * 10% level of significance.*
Numbers in () are standard deviations

Source: Author's own table reporting results analysed in STATA

The results reported in table 20 above are a simulation of MSE growth in the ***formal* sector** in Zimbabwe. Model 1 results show that there is a positive and statistically significant relationship between MSE growth (LMSE) and money supply (LMSUPPLY) (with a coefficient 0.944), inflation (INFL) (with a coefficient 1.55e-09), unemployment (UNEMP) (with a coefficient 0.0291) and the chaos period (D2) (with a coefficient 0.3537). A 1% increase in the shortage of liquidity (as proxied my money supply) tends to result in a 0.944% increase in the total number of MSEs, holding all other things constant. This relationship is statistically significant at 5% level of significance. A positive relationship was also found between MSE growth and unemployment and between MSE growth and inflation, although the magnitude is smaller. A 1% increase in unemployment tends to result in 0.029% increase

in MSEs. The chaos period (D2) also contributed significantly to the growth in MSEs accounting for about 42.43% (($e^{0.3537}$ -1) x100=42.43%)[28] of the change in MSEs. The positive relationship with the explanatory variables supports previous findings by other researchers of a refugee effect (Thurik et al., 2008; Ghavidel et al., 2011). However, in this case the refugee effect is emanating to a greater extent from the shortage of liquidity and to a lesser extent from unemployment. This model has a goodness of fit of 89.83% (table 20 above).

Although not significant, the meltdown period (D1) accounts for approximately 4.21% (($e^{-0.043}$ -1) x100=4.21%) of the variation in MSEs growth. An adjustment coefficient of -0.0956 implies that only 9.56% of the variation will be corrected in the first year, thus it will take about 10.46 (1/0.0956) years for the economy to adjust back to the long run equilibrium defined by Model 1 following a shock in the economy. A period of 10.46 years is perhaps too long for the adoption of any policy that employs variables used in this model as instruments.

Model 2 presents a slightly different picture. The positive relationship, which shows refugee effect, is again picked in this model between MSE growth and unemployment (with a coefficient 0.049) and money supply (with a coefficient 1.257). A 1% increase in the shortage of liquidity seems to result in 1.257% increase in the total number of MSEs, holding all other things constant. A 1% increase in unemployment seems to result in a 0.05% increase in the total number of MSEs, holding all other things constant. These two relationships are statistically significant at 5% level of significance. MSE growth is negatively related to real GDP with a coefficient of -1.43e-08. A 1% decrease in real GDP tends to result in a 0.0000000143% increase in MSEs, holding all other things constant. Although there is a significant relationship between real GDP and MSE growth, the coefficient is extremely small. The structural break (S1) is also statistically significant and explains about 109.19% (($e^{0.7381}$ -1) x 100=109.19%) change in MSE growth. The dummy for meltdown period (D1) is also statistically significant at 1% level and explains 39.27% (($e^{-0.4987}$ -1) x 100=39.27%) of the growth in the number of MSEs. The constant (0.6094) is statistically significant at 1% level of significance, suggesting that there are some variables that are not included in the

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[28] To interpret the coefficient on a dummy, the following formula is used, (e^{β} -1)x100.

model that can explain the variation in MSE growth. The adjustment period in this model is 2.98 years and this model explains about 50.93% of the variation in MSE growth.

A lot of ambiguity exists in the literature around the refugee effects from unemployment especially under circumstances of high unemployment. Some studies support the refugee effect and some studies picked a negative relationship between unemployment and entrepreneurship which is not consistent with the refugee effect (Audretsch et al., 2001; Baptista et al., 2006). To test for the impact of excessive unemployment, a squared unemployment variable was introduced to the model. The results are reported in table 21 below.

Table 21: MODEL 3 VECM results with squared unemployment variable

Dependent Variable: LMSE	
Variable	Model 3 with Inflation
	Long-term
UNEMP	0.0008
	(0.017)
UNEMP2	0.0004**
	(0.0002)
INFL	6.53e−10***
	(3.73e−11)
LMSUPPLY	0.3910**
	(0.181)
LRGDP	
Constant (α0)	0.0223
	(0.036)
D1	−0.182***
	(0.073)
D2	0.285***
	(0.110)
S1	0.1994
	(0.169)
λ	−0.2138***
R-squared	90.22%

*Note: *** 1% level of significance, ** 5% level of significance, * 10% level of significance. Numbers in () are standard deviations*
Source: Author's own table reporting results analysed in STATA

The introduction of the squared unemployment variable confirmed the initial findings of the presence of the refugee effect and improves the model's goodness of fit to 90.22%. The unemployed squared variable coefficient (UNEMP2) is positive (0.0004) and significant at 5% level of significance. The two unemployment variables both have positive coefficients although UNEMP (with a coefficient 0.0008) has a higher coefficient than UNEMP2 (with a coefficient 0.0004). The two unemployment variables show that as unemployment increases, MSEs increase and the positive relationship continues even with higher unemployment rates. The smaller coefficient on Unemp2 could be the reason that a higher unemployment level may imply a lower capital base, which reduces the chances of new enterprises being formed and surviving. In other words, greater unemployment stimulates start-up activity due to the need for survival, but most of them may not survive in the long run because of a poor initial capital base (Reynold, Miller and Makai, 1995).

Money supply (with a coefficient 0.3910) and inflation (with a coefficient 6.53e-10) still have the positive relationship with MSE growth. The meltdown period (D1) explains 16.64% $((e^{-0.182} -1) \times 100 = 16.64\%)$, whilst the chaos period (D2) explains approximately 32.98 % $((e^{0.285} -1) \times 100 = 109.19\%)$ of the growth in MSEs. An adjustment coefficient of -0.2138 means that it will take approximately 4.68 years (1/0.2138) to restore long run equilibrium defined by model 3, following any shock. This low speed of adjustment still makes it difficult to utilise any of the variables in the model as policy instruments.

6.4 Discussion of Results

A summary of the conclusions of the hypotheses which were being tested in this analysis is presented in table 22 below.

Table 22: Hypotheses test results

NH$_1$: There is a negative and significant relationship between total number of MSEs and unemployment rate - opportunity entrepreneurial effect. **AH$_1$:** There is a positive and significant relationship between total number of MSEs and unemployment rate – refugee effect.	Null hypotheses rejected and support for alternative

NH$_2$: There is a negative and significant relationship between total number of MSEs and inflation. **AH$_2$:** There is a positive and significant relationship between total number of MSEs and inflation rate.	Null hypotheses rejected and concluded for alternative
NH$_3$: There is a negative and significant relationship between total number of MSEs and money supply. **AH$_3$:** There is a positive and significant relationship between total number of MSEs and money supply.	Null hypotheses rejected and concluded for alternative
NH$_4$: There is a positive and significant relationship between total number of MSEs and real GDP. **AH$_4$:** There is a negative and significant relationship between total number of MSEs and real GDP, that is, necessity driven entrepreneurship.	Null hypotheses rejected and support for alternative

Source: Authors own compilation

All the 4 null hypotheses were rejected in favour of the alternatives which concluded for a positive and significant relationship between total number of MSEs and unemployment, inflation and money supply and a negative relationship with real GDP. Some of the results are consistent with what is in the literature except for inflation and money supply. Ovaska and Sobel (2005) found a negative relationship between entrepreneurial activity and inflation in 10 European Union countries with normal economies. The positive relationship picked in this study captures the abnormality of the Zimbabwean economy during the meltdown. The outcome on the inflation and money supply variables validates the importance of sound monetary policy on entrepreneurial growth. Also, the deviation might be from omitted institutional, social and personal factors (these factors were discussed in sub-section 3.7.2 and 3.7.3). These institutional, social and personal factors were not part of this study as it focused mainly on economic factors only.

In comparing Model 1 with Model 2, Model 1 has a better fit than Model 2 as shown by the R-squared of 89.83%. However, both models show that the growth in entrepreneurial activity

among the micro and small-scale entrepreneurs was mainly for survival from lack of *formal* employment and from money supply shortages. Entrepreneurship was used as an alternative means to a source of income and alternative source of cash in hand. The failure by the *formal* financial intermediaries to meet the individual daily demand for money drove people into other cash-generating activities that use paper money as a medium of exchange like entrepreneurship. Entrepreneurship was to a lesser extent used for its refugee effect from unemployment and to a greater extent to cater for the cash in hand necessity as shown by Model 3. The positive refugee effects from unemployment are consistent with the earlier findings by Thurik et al., (2008; Ghavidel, 2011).

The results show that higher levels of unemployment did not fully account for the sudden growth in new micro and small-scale businesses. However, not having enough money supply to meet transactionary demands, owing to hyperinflation, caused a liquidity constraint, and this pushed many people into micro and small-scale entrepreneurial activity as an alternative source of cash. The main finding from this part of the analysis is that refugee effects in entrepreneurship may not only come from unemployment but can also emanate from other factors depending on the state of the economy. In the case of Zimbabwe, micro and small scale entrepreneurial activity was a place of refuge from the liquidity constraints created by the economic meltdown.

As a whole, Models 1-3 explain a state of abnormality surrounding the sudden growth in micro and small-scale entrepreneurial activity in Zimbabwe. Of the three models that were tested in this study, the one that best describes entrepreneurial activity during economic meltdown in Zimbabwe is Model 3 with a goodness of fit of 90.22%. Model 3 has an adjustment period from short run to long run of 4.68 years (λ=-0.2138), which is deemed too long. This long period of adjustment reflects the instability that was in the economy due to the meltdown and can also be defined as a measure of the loss of confidence felt in the system as a whole during the meltdown period. Failure to quickly adjust to shocks in the system could be because of the entrepreneurs' choice to ignore the system, as they felt the government could not provide for their employment or basic needs. With this slow speed of adjustment, it means that even when the government implements policies directed towards boosting

entrepreneurial activity, the intended effects of the policy might not transmit fast enough into the economy.

Unless changes are made through improvements in incentive structures to the MSEs and improvements in the institutions, micro and small-scale entrepreneurial activity in Zimbabwe will mostly be used for immediate survival without much benefit to the country. It is apparent that these MSEs were an integral part of people's lives in Zimbabwe during the time of crisis. As the country now recovers from the effects of the meltdown, these MSEs can be used as tools in the recovery process. Policy makers should formulate incentive structures that encourage the growth of already existing MSEs so that they can move from being micro and small-scale to medium-scale businesses, and in so doing create employment and income opportunities for the country. It is possible that many jobs can be created by improving on already functioning enterprises rather than seeking to encourage the creation of new enterprises, which may take longer to become operational because of adjustment lags (λ), ranging from 4.68 to 10.4 years.

6.5 Conclusion

Entrepreneurial activity in the *formal* sector in Zimbabwe was to a greater extent driven by the absence of liquidity, as well as the absence of *formal* employment opportunities. During the meltdown period, financial institutions ran dry of cash and most people could not withdraw their income or savings from the banks. Failure by the financial intermediaries to supply a sufficient quantity of bank notes drove people into entrepreneurship, where they traded in hard currency such as the US dollar. The Zim dollar was useless, valueless and stopped operating as a medium of exchange. There was an entire loss of confidence in the local currency and stability of the system. Entrepreneurship was used as an alternative way of getting hard currency to pay for taxi fares and basic commodities in the informal sector. The positive relationship between squared unemployment and entrepreneurship shows the presence of the refugee effect, although it is minimal.

CHAPTER 7:
ENGAGING INFORMAL MSEs IN ZIMBABWE'S ECONOMY

7.1 Introduction

This chapter provides results of the descriptive and empirical analysis which was carried out on survey data from MSEs operating in the *formal* and informal sectors in Harare, Zimbabwe. The objective of this analysis was to ascertain the appropriateness of "common law" in a country where MSEs are mostly concentrated in the unrecognised informal sector. The results reported in this section are a comparative analysis of MSEs in the *formal* sector to those in the informal sector. Initially, these two are compared through descriptive analysis of the demographic factors of the entrepreneurs, and the entrepreneurial dynamics of the MSEs. Secondly, the descriptive and principal component analysis results of the internal and external constraints hindering the growth of the MSEs in the two sectors will be reported. Internal factors refer to those factors that the entrepreneur has control over, whilst external factors are socio-economic, political and technological factors that the entrepreneur has no control over (Mahadea and Pillay, 2008). Thirdly, results of a logistic regression analysis of the relationship between the growth constraint clusters generated from the principal component analysis, and willingness by informal entrepreneurs to formalise their businesses, will be reported.

7.2 Characteristics of MSEs in the formal and informal sectors.

As was mentioned in chapter 5, the sample consisted of 150 firms, 88 in the informal sector and 62 in the *formal* sector. Thus, 88 owners of informal MSEs were interviewed and an additional 62 from the *formal* sector. Of those in the informal sector, 52% were females. The majority of these informal MSE owners, were sole proprietors (95%), married (62%) and operating on rented premises (69%). As in the informal sector, most of the *formal* MSE owners were females (60%), married (81%) and had sole proprietorship (100%). The average age of the enterprises in the *formal* sector was 9 years and for the informal enterprises was 7.5 years. The means of years of operation in the two sectors are statistically significantly different from each other at 1% level of significance (t-statistic=2.559 and p-value=0.012), and most of the informal enterprises were formed during the meltdown period (see table 21 below).

From the survey, it also became apparent that formalisation is associated with the entrepreneur having previous *formal* employment. On average, *formal* sector entrepreneurs had 2-5 years *formal* employment experience prior to starting their own business, whilst the informal entrepreneurs had an average of l-2 years of *formal* work experience. These means are statistically and significantly different at 1% level of significance (t-statistic=-3,106), suggesting that *formal* entrepreneurs had a better prior work experience and perhaps a greater appreciation of the benefits of formalisation for them to start up their own businesses in the *formal* sector. Most of the *formal* sector entrepreneurs were previously employed in the private sector, whereas most of the informal MSE entrepreneurs had never been formally employed before; those who had been employed had worked in the government sector.

The education level of the *formal* sector operators differed significantly from those in the informal sector. Most of the *formal* MSE entrepreneurs had either diploma/certificate qualifications (42%) or a first degree (32%). On the other hand, most of the informal sector MSE entrepreneurs had an O level certificate (35%), or a Diploma/Certificate qualification (39%), as the highest education qualification. The formation of the MSEs in the informal sector was mostly driven by the need to survive financially (necessity driven) and yet about 65% of those in the *formal* sector were formed because an opportunity had presented itself.

The N-Ach level of the surveyed entrepreneurs ranged from 16 to 77. On average the *formal* MSE entrepreneurs recorded an average N-Ach level of 39, which is slightly higher than that of the informal sector MSE entrepreneurs (32). The mean N-Ach of the two groups is statistically significantly different at 10% level of significance (t-statistic=-1.873), thus *formal* sector entrepreneurs have a higher need for achievement compared to informal sector entrepreneurs. An interesting aspect pertains to the way the entrepreneurs viewed their business as either growing or not. Of the *formal* MSEs 63% reported their businesses as not growing and 58% of the informal MSEs reported the same, and yet these businesses were reported as the main source of their household income. This is to be expected as the Zimbabwean economy has experienced the effects of the economic downfall.

Table 23: Independent t-test for equality on mean

	Formal Mean	Informal Mean	t-statistic	Significance (2-tailed)
Highest level of education	Diploma/Cert.	A level	-6.094	0.000
Years of formal employment	2-5 years	1-2 years	-3.106	0.002
Opportunity/ necessity driven	Opportunity (coded 1)	Necessity (coded 2)	3.816	0.000
Age of business	9.3years	7.5 years	2.559	0.012
N-Ach	39	32	-1.873	0.063

Source: Author's own table reporting results from the survey

7.3 Descriptive analysis of the factors hindering growth of MSEs in the formal and informal sectors.

Various factors constrain the growth of *formal* and informal ventures. This section gives a comparative analysis of the internal and external factors that impact on the growth of both informal and *formal* enterprises. The growth-hindering factors of the *formal* sector firms are examined first.

7.3.1 Internal factors hindering growth of formal MSEs

The internal growth inhibiting factors in the surveyed *formal* sector ventures, as considered below, range from access to finance to management skills (figure 26).

Figure 26: Formal sector: Internal factors hindering growth in formal enterprises
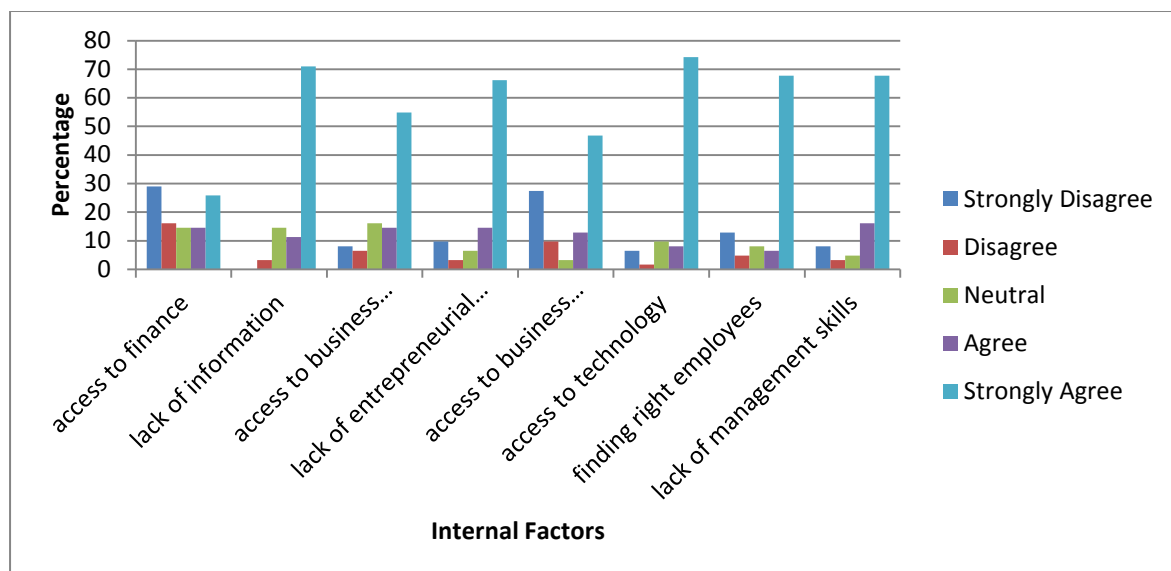
Source: Author's own figure reporting results from the survey

All of the surveyed enterprises acknowledged that the economic meltdown had impacted badly on the growth of their businesses. More than 80% of the surveyed *formal* enterprises either agreed or strongly agreed that the main internal factors that are hindering their growth are access to technology, access to marketing information, lack of entrepreneurial skills, and lack of management skills (figure 26 above). Most businesses were formed without any prior entrepreneurial training on the part of the founders, and the owners felt that this could be the reason for lack of growth in their businesses. This finding is consistent with previous findings which identified that human resource development and adaptation of modern technology are necessary for business growth and possessing the skill to initiate a business does not necessarily mean that one would be a good manager or entrepreneur (Mahadea and Pillay, 2008). Although previous studies (Clover and Darroch, 2005) identified access to finance as a critical factor for business success and growth, results from the current survey showed that access to finance was not a major problem to most of the *formal* sector entrepreneurs.

21st century technology utilises the internet in marketing, however most of the enterprises surveyed were still using cash boxes and old fashioned door signage which does not help with marketing their businesses. Von Broembsen, Wood, Herrington, Shay and Sheppers (2005) believe that adoption of the latest technology can trigger enormous growth, but many businesses fall short because the technology is inaccessible and expensive. In some instances, the entrepreneurs are not knowledgeable about modern technological approaches suitable for small businesses and how to use them. In the current study too, technology is was found to be one of the factors limiting growth in the formal sector.

There are other traits necessary for business growth, like N-Ach (Mahadea, 1994). In the current study, the entrepreneurs involved in the *formal* enterprises had on average a significantly higher N-Ach level (39), than those engaged in the informal enterprises, whose average N-Ach level was 32, as mentioned earlier. Overall, the results of the growth constraints of the formal sector firms in Zimbabwe are to a large extent similar to those in the study of Mahadea and Pillay (2008) in South Africa.

7.3.2 Internal factors hindering the growth of informal MSEs

Figure 27: Informal sector: Internal factors hindering growth
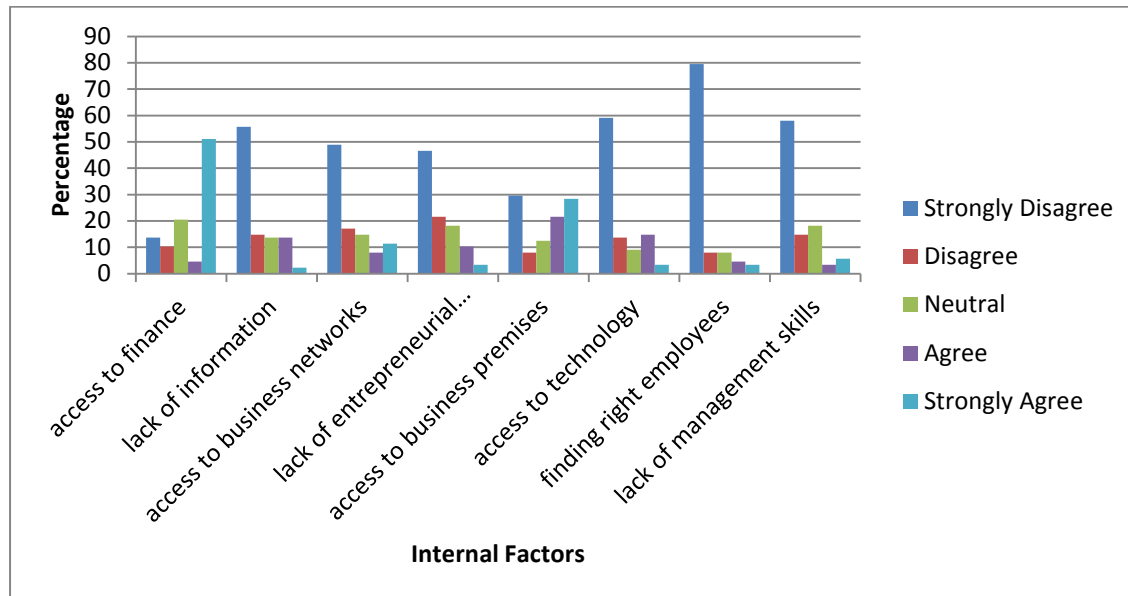
Source: Author's own figure reporting results from the survey

From the informal sector enterprises, about 50% of the respondents strongly agreed that access to finance and access to business premises are the main internal factors that have been hindering the growth of their businesses (see figure 27 above). Of the respondents, 20% were neutral about access to finance as a constraint, whilst about 12% strongly disagreed. Financing a business is ranked among the top five constraints to business development in sub-Saharan Africa, and most financial institutions do not finance them in the foundation stage as they lack collateral and a sound track record (Mahadea, 1997; Clover and Darroch, 2005). The surveyed informal enterprises lacked proper recordings of their daily transactions which also indicated poor financial management skills. With regard to business premises, some of the enterprises were operating from informal structures, and a few rented premises outside the CBD area. Unlike the *formal* entrepreneurs, more than 70% of the informal entrepreneurs disagreed or strongly disagreed that lack of entrepreneurial skills, lack of management skills and lack of access to technology are constraints to the growth of their businesses.

7.3.3 External factors hindering growth of formal MSEs

The external factors hindering the growth of *formal* ventures are considered below.

Figure 28: Formal Sector: External factors hindering growth
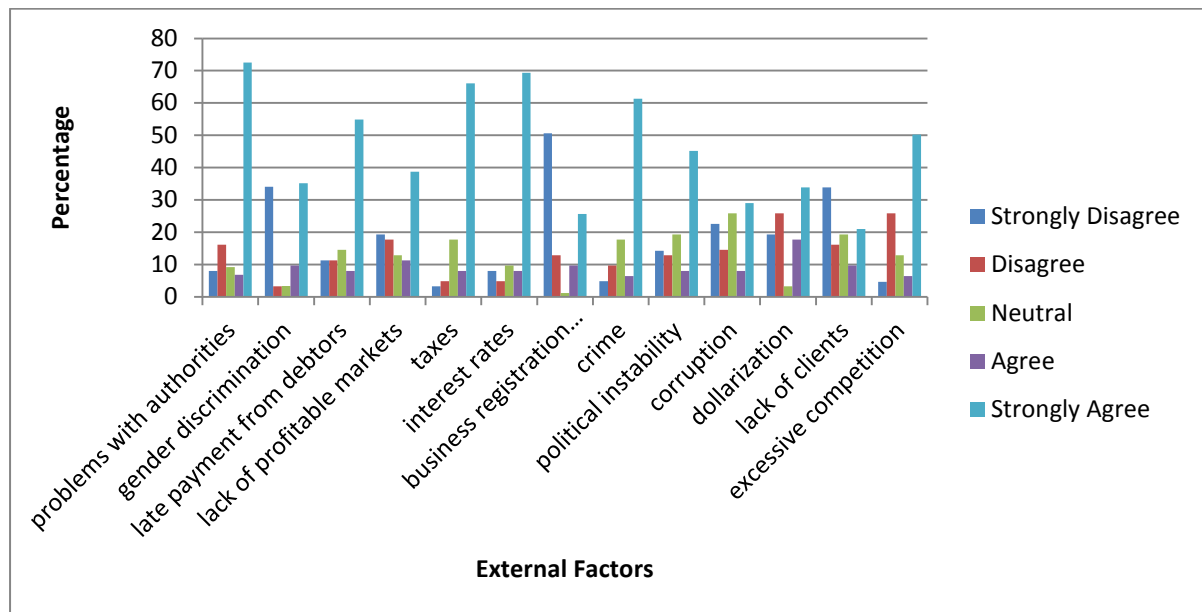
Source: Author's own figure reporting results from the survey

As presented in Fig 28, 80% of the surveyed respondents from the *formal* sector strongly agree that problems with the authorities are among the major external constraints to the growth of their business. There are a number of documents required for a formally registered business, like a shop license, which involves an expensive, time consuming and cumbersome process to acquire. Another 75% agree or strongly agree that high taxes and interest rates impact adversely on the growth of their businesses. Crime, political instability, excessive competition and late payment from debtors are also among the top possible reasons impeding growth of MSEs in the *formal* sector, and about 50% of the respondents agree to this. Lack of clients (42% strongly disagree) and business registration (50% strongly disagree) seem to be not much of a problem for the surveyed registered enterprises.

7.3.4   External factors hindering growth of informal MSEs
Figure 29: Informal sector: External factors hindering growth
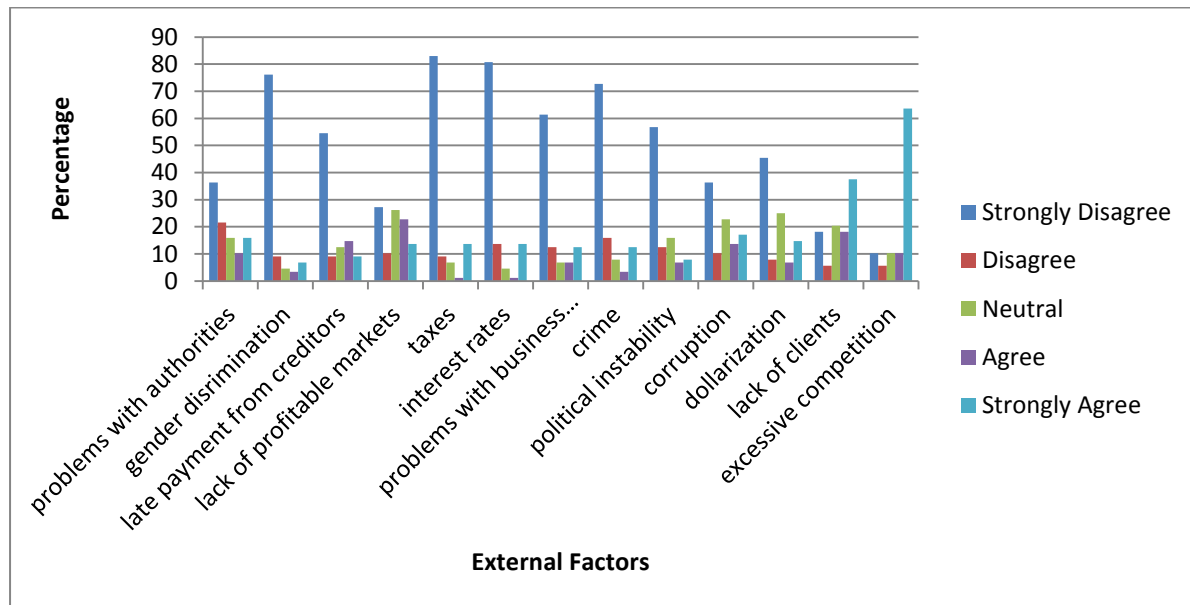
Source: Author's own figure reporting results from the survey

Contrary to the entrepreneurs in the *formal* sector, informal sector entrepreneurs indicated excessive competition and lack of clients as the two main external factors hindering the growth of their MSEs. About 70% of the surveyed informal entrepreneurs strongly agreed or agreed that excessive competition is encumbering the growth of their business (see figure 29 above). As informal sector entrepreneurs do not pay taxes, 90% agreed that taxes and interest rates are the least of their problems.[29] This finding on tax evasion is consistent with previous studies, which identify tax evasion as one of the reasons for informalisation (Gerxhani, 2004).

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[29] All businesses are required to pay the following 4 taxes:
   1. Provisional tax – 1st quarter 10%, 2nd quarter 25%, 3rd quarter 30% and 4th quarter 35%.
   2. Presumptive tax – some businesses pay it e.g. operators of omnibuses, driving schools, hairdressing salons, small scale miners.
   3. Value Added Tax
   4. PAYE

7.3.5 Discussion of the descriptive analysis results: internal and external factors hindering growth of formal and informal MSEs

Table 24 below gives a summary of the 3 hypotheses that were tested with regard to the similarity and differences between formal and informal MSEs.

Table 24: Hypotheses test results

NH$_5$: On average there are no differences between the *formal* sector business owners and informal sector business owners with respect to demographic aspects, average educational qualifications and pre-entrepreneurship employment experience. **AH$_5$:** On average there are differences between the *formal* sector business owners and informal sector business owners with respect to demographic aspects, average educational qualifications and pre-entrepreneurship employment experience.	Null hypotheses was rejected and concluded for alternative
NH$_6$: Entrepreneurs running informal enterprises have on average the same N-Ach level as those running *formal* enterprises. **AH$_6$**: Entrepreneurs running informal enterprises have on average a lower N-Ach level compared to those running *formal* enterprises.	Null hypotheses was rejected and concluded for alternative
NH$_7$: Factors that influence business growth in the *formal* sector are similar to those in the informal sector. **AH$_7$:** Factors that influence business growth in the *formal* sector are different to those in the informal sector.	Null hypotheses rejected and concluded for alternative

Source: Author's own compilation

Table 25: Dominant and least dominant internal and external factors

		Most influencing	Least influencing
Internal factors	Formal MSEs	- Access to technology - Access to market information - Lack of entrepreneurial skills - Lack of management skills	- Access to business premises - Access to finance
	Informal MSEs	- Access to finance - Access to business premises	- Finding right employees - Access to technology - Lack of management skills - Lack of market information
External factors	Formal MSEs	- Problems with authority - High taxes and interest rates - Crime - Late payment from debtors	- Business registration problems - Lack of clients - Gender discrimination - Corruption
	Informal MSEs	- Excessive competition - Lack of clients - Gender discrimination - Corruption	- High taxes and interest rates - Gender discrimination - Crime - Problems with business registration

Source: Author's own figure reporting results from the survey

In comparing the *formal* sector and informal sector MSEs, one can see that the most influencing factors in the *formal* sector were the least influencing in the informal sector and vice versa. Among the internal factors, the informal entrepreneurs consider access to finance and access to business premises as their main internal growth inhibiting factors. For the *formal* enterprises these are the least inhibiting factors (table 25). Skills development is more important for *formal* entrepreneurs. The same is also observed with external factors, where the most influencing factors for *formal* entrepreneurs are the least influencing for the informal entrepreneurs. The findings suggest that there are some growth inhibiting constraints which are the most influencing internal and external factors being faced by informal operators, and which can be easily addressed by formalizing a business. Further analysis of these growth inhibiting factors and their link to formalization follows in the next section.

7.4 Principal Component Analysis of the Factors hindering the growth of MSEs

7.4.1   Principal Component Analysis in the formal sector

From the descriptive analysis above, it is apparent that the factors that affect business growth in the *formal* sector are different from those in the informal sector. Also, within each sector, the internal and external factors do not impact with the same magnitude. Principal component analysis was thus used to reduce these factors into smaller manageable clusters to help make policy formulation easier, and also to show whether internal or external factors have a greater bearing.

Prior to undertaking the principal component factor analysis, the Kaiser-Meyer- Olkin (KMO) test of sampling adequacy was applied to determine the suitability of the data for factor analysis. As a rule of thumb, if the KMO test result is 0.5 or higher, then the data is suitable for factor analysis (Field, 2009). The Bartlett test of sphericity was also applied to investigate whether there are relationships between the variables affecting growth of the firms. The Bartlett test should be statistically significant at p-value less than 0.05 (Pallant, 2006).

In this study, the KMO measure of sampling adequacy for *formal* enterprise data was found to be 0.5820 and 0.548 for informal enterprise data. For both data sets, the Barlett test values were statistically significant with a p-value of 0.000 (full results in appendix pg. 219-226). These indicated that the data was suitable for factor analysis. Using Kaiser's criterion, only factors with an Eigenvalue of 1 or more are retained in the analysis.

According to Coakes and Steed (2003), a factor loading of 0.3 or greater makes a significant contribution to the component factor. In this study a cut off of 0.4 was used as the sample was small. A set of 6 components emerged in this study. The researcher used Cronbach's alpha to confirm the reliability of the measuring instrument. According to Field (2009), an alpha score above 0.75 is generally taken to be a good measure of reliability. In this study, the Cronbach's alpha values ranged between 0.933 and 0.7 for almost all factors.

Results of the total variance in growth inhibitors in the *formal* sector and the component matrix are reported in table 26 below. Further results are presented in appendix pg. 219-226.

Table 26: Growth inhibitors of the formal sector MSEs: Rotated Factor Loadings

Variables	Principal Components (Eigen Values and loading)					
	1 (8.330)	2 (2.722)	3 (2.405)	4 (1.603)	5 (1.258)	6(1.063)
Lack of management skills	0.897	0.039	0.091	0.102	0.046	-0.123
Lack of entrepreneurial training	0.894	0.168	0.046	0.058	0.206	0.182
Lack of information	0.876	0.176	-0.07	0.021	0.104	0.009
Access to technology	0.868	0.194	0.031	0.312	0.143	0.056
Finding right employees	0.846	0.12	0.067	-0.035	0.032	0.195
Business Registration Process	0.816	0.301	-0.012	0.208	0.218	0.180
Access to business networks	0.577	0.272	0.105	0.337	0.367	0.039
Political instability	0.065	0.84	0.31	0.031	-0.036	-0.062
Interest rates	0.372	0.773	-0.182	0.063	0.312	0.096
Taxes	0.495	0.717	-0.107	0.155	0.191	0.125
Corruption	0.005	0.643	0.32	-0.176	-0.312	0.466
Crime	0.493	0.618	0.107	0.073	-0.182	-0.253
Lack of clients	0.086	0.105	0.854	0.246	0.028	-0.074
Excess competition	-0.189	-0.023	0.829	0.02	-0.02	0.304
Lack of profitable markets	0.35	0.195	0.715	0.167	0.235	-0.234
Late payments by debtors	0.122	0.035	0.118	0.895	0.058	0.02
Dollarization	0.08	0.197	0.399	0.725	0.341	0.183
Gender discrimination	0.529	-0.03	0.111	0.592	-0.404	-0.158
Access to finance	0.366	0.15	0.141	-0.026	0.719	0.086
Access to business premises	0.165	-0.229	0.052	0.516	0.7	0.056
Problems with authorities	0.277	0.022	0.016	0.11	0.151	0.894
Variance Explained (Total=82.78%)	**39.7%**	**13.0%**	**11.5%**	**7.6%**	**6.0%**	**5.1%**
	Entrepreneurial and Managerial	Macroeconomic and Governance	Market	Money Supply	Financial	Regulation

Extraction Method: Principal Component Analysis

Source: Compiled by author based on results of Principal Component Analysis

The results in table 26 above show that there are 6 clusters which jointly explain 82.8% of the variation in growth constraints in the *formal* sector. The first cluster accounts for 39.7% of the total variation, whilst the second and third clusters explain 13.0% and 11.5% respectively. All 6 clusters have Eigen values greater than 1. The rotated component matrix was then used to eliminate the growth inhibiting questions that were not loading on each of the 6 components. The grey boxes in table 27 below show the questions that were loading under each component.

The first component is labelled "Entrepreneurial and Managerial skills" and is made up of seven internal constraints with loadings from 0.897 to 0.577 (see table 26 and 27). This cluster accounts for 39.7% of the variance in growth constraints. The factors in this classification are: lack of management skills with a loading of 0.897; lack of entrepreneurial training (0.894 loading); lack of marketing information (0.876 loading); finding right employees (0.846 loading); business registration process (0.816 loading); and access to business networks (0.577 loading). This cluster was tested for reliability and yielded a Cronbach's alpha value of 0.933.

The second set is labelled "Macroeconomic and Governance factors" and is made up of five external constraints namely political instability, high interest rates, high taxes, corruption and crime. Political instability had the highest loading (0.84) in this cluster. Interest rate and taxes are more of economic variables, but the fluctuations in taxes and interest rate can also be politically motivated especially in scenarios where the fiscal budget is used to finance political activities, as was the case in Zimbabwe during the meltdown (Matandirani, 2011). This cluster accounts for 13.0% of the variance (see table 26). Cronbach's alpha value for this cluster is 0.836.

The third cluster is labelled "Market factors" and is comprised of lack of clients (0.854 loading); excessive competition (0.829 loading); and lack of profitable markets (0.715 loading). This cluster accounts for 11.5% of the variance. The Cronbach's alpha for this cluster is 0.778, making it a reliable instrument. This cluster is made up of external constraints only.

Cluster 4 consists of 3 factors that jointly explained 7.6% of the variance in the growth constraints. Late payment by debtors had the largest loading (0.895) in this cluster. The other two factors in this cluster were dollarization and gender discrimination. This fourth cluster is labelled "Money Supply factors" since all three factors have an influence on cash at hand. Gender discrimination is not directly linked to money supply, however some of the interviewed entrepreneurs indicated that they felt discriminated against when they were trying to access financial assistance, as women were given preference over men. The Cronbach's alpha for this cluster is 0.735.

Table 27: Classification of Cluster groups in formal sector

Entrepreneurial and Managerial skills	
Lack of management skills	Internal
Lack of entrepreneurial training on start-ups	Internal
Lack of information	Internal
Access to technology	Internal
Finding right employees	Internal
Business registration process	External
Access to business networks	Internal
Macroeconomic and Governance factors	
Political Instability	External
High interest rates	External
High taxes	External
Corruption	External
Crime	External
Marketing Factors	
lack of clients	External
excessive competition	External
lack of profitable markets	External
Money Supply factors	
Late payment by debtors	Internal
Dollarization	External
Gender discrimination	External

Financial factors	
Access to Finance	External
Access to business premises	External
Regulatory factors	
Problems with authorities	External

Source: Compiled by author based on results of Principal Component Analysis

The fifth cluster is labelled "Financial factors" and has two external factors: access to finance with a loading of 0.719; and access to business premises with a loading of 0.7. Access to business premises is closely linked to the ability to either rent or buy premises, and this ability is measured in monetary or financial terms. This cluster explains 6.0% of the variation. The Cronbach's alpha coefficient for this cluster is 0.638, making it not a strongly reliable instrument. However, according to Coakes and Steed (2003), an alpha value lower than 0.7 is still acceptable. Cluster 6 is named as "Regulation factor", and it has one external factor, namely problems with authorities with a 0.894 loading. This cluster is also not strongly reliable with a Cronbach's alpha coefficient of 0.611. Nevertheless, the factors in this set were relevant to business development and hence were retained in the analysis.

7.4.2 Principal Component Analysis in the Informal Sector

This section looks at the growth inhibiting constraints in the informal sector. The results of total variance in growth constraints are summarised in table 28 below. Like the case of the *formal* sector, the results show that there are also 6 clusters which jointly explain 72.5% of the variation in growth constraints in the informal sector. The first cluster accounts for 22.4% of the total variation, whilst the second and third clusters explain 16.2% and 12.0% respectively. The forth cluster accounts for 8.7% of the variation, whilst the remaining two clusters account for 7.0% and 6.2% respectively. All 6 clusters have Eigen values greater than 1. The rotated component matrix was again used to eliminate the growth inhibiting questions that were not loading on each of the 6 components. The grey boxes in table 28 below show the constraints that were loading under each component.

Table 28: Growth inhibitors of the informal sector MSEs Rotated Factor Loading

Variables	Principal Components (Eigen Values and loading)					
	1 (4.707)	2 (3.395)	3 (2.516)	4 (1.825)	5 (1.477)	6(1.299)
Lack of clients	0.869	0.113	-0.016	-0.017	-0.097	-0.070
Excessive competition	0.831	-0.251	0.112	0.069	-0.015	0.135
Lack of profitable markets	0.646	-0.065	0.147	0.296	0.063	0.079
Access to business premises	0.578	-0.067	0.027	0.168	0.393	0.289
Access to finance	0.566	-0.234	0.290	0.175	0.174	0.081
High tax rates	-0.186	0.850	0.195	0.028	0.050	0.061
High interest rates	-0.207	0.816	0.276	0.107	0.082	0.169
Crime	0.061	0.747	-0.091	0.012	-0.054	0.106
Finding right employees	-0.247	0.517	0.415	0.354	0.288	0.123
Late payments by debtors	0.250	0.416	0.096	0.329	0.371	-0.270
Lack of information	0.189	0.004	0.847	0.057	0.049	0.066
Lack of entrepreneurial training	0.327	0.195	0.761	-0.146	0.015	-0.074
Lack of management skills	-0.006	0.227	0.721	0.183	-0.013	0.118
Access to business network	0.162	0.039	-0.024	0.863	0.291	0.028
Business registration process	0.115	0.150	-0.039	0.843	0.363	-0.072
Problems with authorities	0.217	0.021	0.189	0.678	-0.353	0.091
Gender discrimination	0.056	0.105	-0.017	0.124	0.866	-0.162
Access to	0.046	-0.028	0.037	0.143	0.856	0.289

	Marketing and Financial	Macroeconomic	Entrepreneurial and Managerial	Regulation	Technology	Governance
technology						
Corruption	0.264	0.141	-0.049	-0.187	0.035	0.836
Political instability	0.004	0.190	0.186	0.175	0.020	0.820
Variance Explained (Total=72.47%)	**22.4%**	**16.2%**	**12.0%**	**8.7%**	**7.0%**	**6.2%**
	Marketing and Financial	**Macroeconomic**	**Entrepreneurial and Managerial**	**Regulation**	**Technology**	**Governance**

Extraction Method: Principal Component Analysis

Source: Compiled by author based on results of Principal Component Analysis

The components for the informal sector are slightly different from those for the *formal* sector. The first set combined two clusters from the *formal* sector analysis and this component is labelled as "Market and Financial Factors". It is made up of five external questions with loadings ranging from 0.869 to 0.566 (table 28 and 29). This cluster accounts for 22.4% of the variation in growth constraints. The factors in this classification are: lack of clients, excessive competition, and lack of profitable markets, access to business premises and access to finance. This cluster was tested for reliability and yielded a Cronbach's alpha value of 0.810.

The second set is labelled "Macroeconomic factors" and is made up of three external factors and two internal factors. These factors are high taxes, high interest rates, crime, finding the right employees and late payment by debtors. Taxes have the highest loading (0.84) in this cluster, whilst late payment by debtors has the least loading of 0.416. This cluster accounts for 16.2% of the variance (table 28). Cronbach's alpha value for this cluster was 0.807 indicating that it is a reliable component.

The third cluster is labelled "Entrepreneurial and Managerial skills" and is comprised of lack of marketing information (0.847 loading); lack of entrepreneurial training (0.761 loading); and lack of management skills (0.721 loading). This cluster of internal factors accounted for 11.980% of the variance. The Cronbach's alpha for this cluster is 0.78 making it a reliable instrument.

Cluster 4 is labelled "Regulation", with a combination of external factors and an internal factor, explained 8.688% of the variation. Access to business networks has the largest loading (0.863) in this cluster. The other two factors in this cluster are business registration problems and problems with authorities. Since most of the informal enterprises could possibly not have all the necessary documentation required when formalising their business, they might need a connection through the business network to facilitate this process. The Cronbach's alpha for this cluster equalled 0.787, showing reliability.

Table 29: Classification of the principal components in the informal sector

Market and Financial factors	
Lack of clients	External
Excessive competition	External
Lack of profitable markets	External
Access to business premises	External
Access to Finance	External
Macroeconomic Factors	
High taxes	External
High interest rates	External
Crime	External
Finding right employees	Internal
Late payment by debtors	Internal
Entrepreneurial and Managerial Skills	
Lack of information	Internal
Lack of entrepreneurial training on start-ups	Internal
Lack of management skills	Internal
Regulation	
Access to business networks	Internal
Business registration process	External
Problems with authorities	External
Technology	
Gender discrimination	External
Access to technology	Internal

Governance	
Political Instability	External
Corruption	External

Source: Compiled by author based on results of Principal Component Analysis

The fifth cluster consists of one internal factor and one external factor. The factors are gender discrimination (0.866 loading) and access to technology (0.856 loading). Since these factors are not linked, technology and gender discrimination were called a hybrid net. This component is reliable with a Cronbach's alpha of 0.806. The two factors explain 7.035% of the variation. Cluster six is made up of two external factors namely political instability and corruption. The two explain 6.2% of the variation. Political instability has a loading of 0.836 whilst corruption has a loading of 0.820. This component is labelled "Governance" and is reliable as shown by the Cronbach's alpha coefficient of 0.695.

7.4.3   Discussion of the Principal Component Analysis results

From the analysis above it is apparent that the key growth inhibiting factors in the informal sector are different from those in the *formal* sector. This is consistent with the initial findings in the earlier section on descriptive analysis. In the *formal* sector, 'Entrepreneurial and Managerial skills' cluster and 'Macroeconomic factors' cluster are perceived as the most growth impeding factors is shown by their loading, whilst 'Market and Financial factors' and Regulatory factors' clusters are the least impeding. From the informal sector, the most impeding are perceived as 'Market and Financial factors' and the least impeding are 'Governance and Technology factors'. *Formal* MSEs believe that internal factors affect the growth of their businesses more than external factors and can benefit more from policies that target them as individuals. On the contrary, informal MSEs can benefit more from macro policies as they regard the external factors as constraining growth of their businesses more than the internal factors. The external factors pointed out by informal MSEs as key constraints are the least concern for the *formal* MSEs as they are automatically covered by formalisation. For example, a registered enterprise can easily access financial support and hence can afford to rent favourable business premises in profitable areas because they have official documents of operation.

Once the external factors are addressed the next perceived constraints for the informal MSEs are 'Macroeconomic factors' and 'Entrepreneurial and Managerial skills'. These are consistent with the first two constraints of the *formal* MSEs. One possible way to address the major constraints faced by MSEs in the informal sector is to encourage them to formalise as this is the only way they can get access to productive resources and also utilise the public services and infrastructure that is available to *formal* enterprises (Ishengoma and Kappel, 2006). Before engaging on this policy, it is ideal to have a perspective on the willingness of the MSEs in the informal sector to formalise, and analyse the extent to which the growth constraints they are facing impact on their willingness to formalise.

The two hypotheses (8 and 9) that tested the influence of internal and external factors on growth of formal and informal sectors were both rejected (see table 30 below)

Table 30: Hypotheses testing results

NH$_8$: There are no differences between internal and external factors with respect to their influence on growth of *formal* sector businesses. **AH$_8$:** Internal factors have a greater influence on the growth of *formal* businesses than external factors.	Null hypotheses rejected and concluded for alternative
NH$_9$: There are no differences between internal and external factors with respect to their influence on growth of informal sector businesses. **AH$_9$:** External factors have a greater influence on the growth of informal businesses than do internal factors.	Null hypotheses rejected and concluded for alternative

Source: Author's own compilation

7.5 Willingness to formalise by informal entrepreneurs

7.5.1 Logistic Regression Results

This section reports result of the logistic regression modelling the relationship between the willingness to formalise by informal MSEs and the 6 growth inhibiting clusters that were generated from the principal component analysis, ranging from market and financial to governance factors (see table 31). A component score for each principal component was automatically generated (by clicking on the following commands, score, save as variables, regression) from the factor analysis using SPSS (full data set in appendix after pg. 229). This

score is a predicted component score for each observation (total of 88) and is automatically saved for each observation in the main dataset.

The logistic model also included the N-Ach variable, which is an important factor for business growth and success, as discussed earlier in section 3.3.2. The dependent variable (willingness to formalise) is dichotomous, assuming value 1 if the entrepreneur is willing to formalise, or 0 if not willing to formalise. Of the sampled 88 entrepreneurs from the informal sector, 60.2% reported that they were not willing to formalise their business.

Table 31: Logistic regression output of willingness to Formalise by Informal MSEs

Predictor	*β*	SE *β*	Wald's χ2	df	*p*	*Exp (β)* odds ratio
Constant	2.071	1.028	4.061	1	0.044	N/A
Market and Financial	**-3.241**	0.922	**12.348**	1	0.000	**0.039**
Macroeconomic	-0.200	0.549	0.133	1	0.716	0.819
Entrepreneurial and Mang.	**-4.092**	1.286	**10.122**	1	0.001	**0.017**
Regulations	**2.373**	0.954	**6.187**	1	0.013	**10.729**
Technology	**2.736**	1.049	**6.804**	1	0.009	**15.433**
Governance	-0.542	0.500	1.175	1	0.278	0.581
N-Ach	**-0.115**	0.037	**9.433**	1	0.002	**0.892**

Test	χ2	df	*p*
Overall model evaluation			
Wald test	3.629	1	0.05
Goodness of fit			
Omnibus test	83.836	7	0.000
Hosmer and Lemshow	9.828	8	0.277

test	
Pseudo R-squared	
Cox and Snell	0.614
Nagelkerke	0.831
Sample size	88

Note:
N/A means not applicable
All statistics reported herein use 3 decimal places in order to maintain statistical precision.
Bolded values means statistically significant at 1% level of significance

Source: Compiled by author based on the output of the logistic model analysis

A direct logistic regression model was fitted to test the hypothesis that the likelihood of informal entrepreneurs formalising their business is positively related to the improvement in the growth constraints and N-Ach, as indicated below. The logistic analysis was carried out by the logistic procedure in IBM SPSS Statistics 22. The results showed that

Predicted log of (WILL FORMALISE) = 2.071 + (-3.241)* MKT and FINANCIAL + (-0.200) MACROECONOMIC + (-4.092)* ENTR. and MANG. SKILLS + 2.373* REGULATIONS + 2.736 TECHNOLOGY + (-0.542) GOVERNANCE + (-0.115) N-Ach

Note: * means statistically significant

According to the model, the odds of an informal entrepreneur willing to formalise his/her enterprise is positively and significantly related to Regulations (β=2.373) and Technology (β=2.736) clusters. Market and financial cluster (β=-3.241), entrepreneurial and managerial skills cluster (β=-4.092), and N-Ach (β=-0.115) are also significantly related to the willingness to business formalisation but the association is in a negative mode. Governance and Macroeconomic clusters are also negatively related to willingness to formalise although insignificant.

The logistic results seem to indicate that a 1% increase/ improvement in removal of the Regulation cluster (that is, access to business networks, improvement in business registration process and reduction in problems with authorities) may increase the odds of willing to formalise by informal entrepreneurs by 10.8% holding all other things constant. Improvement in the technology constraints is also associated with a positive impact as it increases the odd of formalising by 15.4% for a unit increase. The rest of the growth constraints as well as N-Ach do not increase the odds of formalising but rather cements their roots in the informal sector. Improvement in market and financial cluster variables, entrepreneurial and managerial skills cluster variables, and N-Ach will decrease the odds of willing to formalise by less than 1 unit for every unit improvement.

7.5.2 Evaluation of the Logistic Regression Model

The Wald test indicates that five composite variables in the model are significant predictors of the willingness to formalise outcome. These are market and financial cluster that has a Wald statistic (which has a chi-square distribution) of 12.348, entrepreneurial and managerial skills cluster (Wald statistic 10.122), regulations cluster (Wald statistic 6.187), technology cluster (Wald statistic 6.804) and N-Ach (Wald statistic 9.433) (see table 31 above). The Omnibus 'goodness of fit' test had a chi-square value of 83.836 with 7 degrees of freedom at 0.00 significance value. This implies that the model is better than the SPSS original guess that assumes that everyone would report not willing to formalise. The result is supported by the Hosmer and Lemeshow test which also shows that the model is a good fit (the significance value is greater than 0.05, in this model it is 0.277). The Pseudo R-squared statistics given by the Cox and Snell and the Nagelkerke R Square values show that between 61.4% and 83.1% of the variability is explained by the set of predictors in the model.

Table 32: The Observed and Predicted Frequencies for Willingness for formalize by Logistic Regression with the cutoff of 0.50

Observed	Predicted		% correct
	Yes	No	
Yes	32	3	91.4
No	4	49	92.5

Overall % correct	92.0
Note:	
Sensitivity= 32/(32+3)%= 91.4%	
Specificity = 49/(49+4)%= 92.5%	
False positive = 4/(4+32)%= 11.1%	
False negative = 3/(3+49)%= 5.8%	

An assessment of the predicted probability is shown in table 31 above. The table shows that, with the cut off set at 0.5, the prediction for informal entrepreneurs who are willing to formalise was 91.4% accurate and for those not willing to formalise was 92.5% accurate. These values are supported by both the sensitivity and specificity values[30]. The false positive and false negative measures of misspecification are below 12%. The overall correction prediction was 92%, an improvement from 60.2% in the null model which predicted everyone as not willing to formalise.

7.5.3   Discussion of the Logistic Regression Results

Table 32: Hypotheses test results

NH$_{10}$: The level of the entrepreneur's N-Ach has a positive impact on the formalisation propensity of the MSEs in the informal sector. **AH$_{10}$:** The level of the entrepreneur's N-Ach has a negative impact on the formalisation propensity of MSEs in the informal sector.	Fail to reject the null hypotheses
NH$_{11}$: Improving the growth constraints will improve the odds of informal sector entrepreneurs formalising their businesses. **AN$_{11}$:** Improving the growth constraints will not improve the odds of the informal sector entrepreneurs formalising their businesses.	Fail to reject the null hypotheses

Source: Author's own compilation

Logistic regression analysis was used to test null hypotheses 10 and 11 and based on the results reported above, we fail to reject the two hypotheses (see table 32 above). The main

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[30] Sensitivity measures the proportion of correctly classified events
Specificity measures the proportion of correctly classified non-events.

findings of the logistic analysis are that improvements in the business registration cluster constraints and technology cluster constraints can positively increase the odds of informal entrepreneurs' willingness to formalise their enterprises. This finding is consistent with what is already in the literature (Gerxhani, 2004; Newadi and Pietersen, 2008; Ishengoma and Kappel, 2006; Baloyi, 2010; Hove and Tarisai, 2013). The growth of the informal sector has been attributed to the bureaucracy that exists around the registration processes as well as the stringent requirements. Relaxing some of these requirements will increase the willingness by the informal entrepreneurs to formalise their businesses. Technology in the modern era is crucial for access to information and its absence was found to affect the growth and survival of micro and small businesses, hence drive entrepreneurs into the informal sector where the cost of information is minimal (Baloyi, 2010).

The improvements in other growth constraints like access to finance and entrepreneurial skills was found to reduce the odds of willingness to formalise, and this finding diverge from the initial findings in the literature. Lack of access to finance and lack of financial management skills are regarded as the key factors contributing to business failure as well as informalisation. The same result was found for N-Ach. This result suggests that as much as access to finance, improvement in entrepreneurial skills and improvement in N-Ach can trigger the growth of the MSEs, the same improvements will only encourage them to stay in the informal sector which does not bring a financial benefit the economy through taxation. This has been the case in Zimbabwe where a Fund was introduced in 2010, as indicated in Chapter 2, to help the informal entrepreneurs grow their businesses and encourage them to formalise. However, the country faces still a huge challenge of trying to eradicate the informal sector. Many businesses have been operating in the informal sector for years and still would rather remain there despite benefiting from the programs being administered by the government. The absence of the rule of law makes them unaccountable to anyone and the resistance to formalise could also be an indication of loss of confidence in the government. The results could possibly be improved further by including other factors like need for autonomy, need for power and market awareness. However these factors could not be included because of the absence of data and a reliable measuring instrument.

7.6 Conclusion

The aim of this chapter was to give a comparative analysis between the entrepreneurs and MSEs in the *formal* and the informal sectors. Demographic aspects show that *formal* sector entrepreneurs are more educated than informal entrepreneurs, and have more years of *formal* employment experience prior to opening their businesses. They also have a higher N-Ach making the formation of their business opportunity driven, whereas most of the informal enterprises were formed out of a necessity to survive. Business growth in the *formal* sector is mainly constrained by internal factors relating to entrepreneurial and management skills' development. Informal sector business growth is mainly constrained by external factors which are a combination of market and financial factors. Addressing these constraints in the two sectors is likely to boost business growth. Unwillingness to formalise by informal entrepreneurs is a result of the bureaucracy associated with the registration process as well as a lack of access to technology. Improving these two factors may increase the odds of the informal operators formalising their businesses.

CHAPTER 8:
CONCLUSION AND RECOMMENDATIONS

8.1 Introduction

This chapter summarises the study and provides conclusions and policy implications of the importance of *formal* and informal sector MSEs, in Zimbabwe's recovery from the effects of the economic meltdown experienced during the period 1997 to 2008. The chapter will start with a synthesis of the findings of the study followed by a section on recommendations. The next section will look at possible areas for further research and then close with a conclusion.

8.2 Synthesis

There were two main objectives for this study. The first was to establish the relationship between growth in MSEs and economic meltdown by identifying the sources of the refugee effect. Empirical evidence shows that there is ambiguity when measuring the refugee effect from unemployment, although there is strong evidence of entrepreneurship being used as a survival platform. This study tested the refugee effect using five macro-economic variables as proxies for economic meltdown. These variables were unemployment, inflation, real GDP, and real money supply. The relationship between growth in the number MSEs and the macro-economic variables was modelled in 2 Vector Error Correction Models (VECMs). Four hypotheses were tested and after running the VECMs the four null hypotheses were rejected and the study concluded for the alternative hypotheses (see hypotheses 1-4 on pages 104-106). This implies that there is support for a positive relationship between growth in MSEs and the macroeconomic variables associated with economic meltdown.

The second main objective of the study was to investigate how the existing MSEs in both the *formal* and informal sectors can be assisted to ensure that they contribute to the economic recovery of the Zimbabwean economy, post the meltdown and subsequently contribute to economic growth. Coming from a period of economic and political instability, the economy is not experiencing sufficient growth, not generating enough income and cannot generate sufficient *formal* work to accommodate the huge percentage of the labour force that is unemployed. To answer this second objective a comparative study of the enterprises in the *formal* sector to those in the informal sector was conducted. A comparative analysis of their perceived growth inhibiting factors was also done.

With many MSEs in Zimbabwe operating in the informal sector, the study investigated what these existing businesses (which have already survived through difficult times especially during the period 1997 to 2008) need to grow as well as factors influencing their willingness to formalise. Evidence from previous research identifies a link between the informal sector and *formal* sector, where the informal sector is used as a training ground into the *formal* sector (Newadi and Pietersen, 2008). As it is important for policies to be put in place to facilitate the transmission from the informal to *formal* sector, this study tested the impact of the perceived growth inhibiting factors on the willingness by the informal sector entrepreneurs to formalise their businesses.

To answer the first objective, a VECM was used to test the relationship between growth in MSEs and inflation, real GDP, real money supply and unemployment using time series data from 1980-2010. Inflation, real GDP, real money supply and unemployment were used as proxies for economic meltdown. A structural break dummy, a chaos period dummy and a melting down period dummy were also included in the model. The structural break dummy in 1999 was necessary as it captured the year when the opposition party MDC was formed, which began a period of political instability in the country. The first draft constitutional referendum was also presented in 1999, and this was also the year when inflation rose above 50%, commencing the period of hyperinflation, leading to the meltdown. In this study, 1999 was used as the official onset date of the economic meltdown.

The study focused on an abnormal situation when the Zimbabwean economy experienced economic meltdown. Most studies in the literature were done under normal economic conditions hence some of the findings of this study could not be supported by literature. The first results that were reported where on the findings of the regression analysis which showed that entrepreneurial growth in the *formal* sector of Zimbabwe can be best explained by inflation, real money supply and unemployment. Positive refugee effects were found with respect to unemployment, but a stronger relationship was found with money supply. Unemployment increased entrepreneurial activity and the positive relationship intensified as unemployment grew. The results from the regression analysis showed that the need for survival was emanating more from the need for hard currency (as shown by the money supply coefficient) than from unemployment. The collapse of the system and loss of confidence of the government to provide for its citizens pushed people into looking for alternative ways of

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making a living for themselves. With money being the medium of exchange in all trading activities, its shortage or absence was a huge blow as it meant people were not be able to purchase their basic needs, like food. The objective, post meltdown, is to restore the confidence of the people by ensuring that everyone has financial stability. Creating new jobs for the more than 90% of the population that is presently unemployed cannot be easily done, but the solution could be to utilize the already established *formal* and informal MSEs. The large adjustment to shock period of between 4 to 10 years was identified as a lag that represents a possible loss of confidence in the system by the entrepreneurs. Most of the entrepreneurs are reluctant to leave their businesses even if they are not growing as they are still not sure if the government will create jobs for them.

The study then did a survey of 150 formal and informal MSEs, using judgmental sampling, from 3 cluster areas in Harare, namely; a high density area, an industrial area and the CBD and a low density area. Although some informal entrepreneurial activity was found in each area, formal enterprises were mostly located in the CBD and low density areas. Informal MSEs were mostly located in the high density area. A questionnaire with both closed and open-ended questions was administered to the 88 informal and 62 *formal* sector MSEs. Data was analyzed using descriptive, principal component and logistic regression analyses.

A comparative analysis was done of the entrepreneurs and their businesses in the *formal* sector with those in the informal sector, firstly through descriptive analysis of their characteristics and secondly through principal component analysis of the factors hindering their growth (see hypotheses 5-9 on pages127-128). From the analysis, the null hypotheses 5-9 were all rejected and the study thus concluded for the alternative hypotheses. The results showed that the *formal* sector entrepreneurs have a comparative advantage over informal sector entrepreneurs. The *formal* entrepreneurs have a higher level of education (Diploma or certificate), on average had more years of *formal* employment experience (2-5 years) prior to starting their business and on average a higher eagerness to succeed (N-Ach=39) relative to their counterparts in the informal sector (N-Ach=32). These characteristics make the *formal* sector businesses appear more organized, so they can easily attract support from the government and other supporting bodies. In many African countries, policy makers use these *formal* sector businesses as benchmarks for all entrepreneurship policies (in the *formal* and informal sectors), and laws that cut across the board (common laws) have always been passed

based on information gathered from the *formal* enterprises. Characterizing the MSEs and entrepreneurs in the two sectors in Zimbabwe showed that they are not similar, hence their requirements will not necessarily be the same.

From the Principal Component analysis of the factors hindering the growth of businesses in the two sectors, the main finding was that the problems faced by *formal* entrepreneurs are different to those faced by informal sector entrepreneurs. 'Common laws' for the two sectors do not necessarily address the growth constraints faced by informal entrepreneurs. Informal entrepreneurs identified external factors as their main challenge, whilst *formal* entrepreneurs identified internal factors as their main growth constraint. For the *formal* sector, the 'Entrepreneurial and Managerial skills' cluster, that included factors such as, a lack of management skills (loading 0.897), lack of entrepreneurial training (loading 0.894) and access to technology (loading 0.868) were identified as the main growth constraints. On the other hand, 'Market and Financial' cluster with factors such as, lack of clients (loading 0.869), excessive competition (loading 0.831), access to business premises (loading 0.578), and access to finance (loading 0.566) were identified as the main growth constraints for informal sector entrepreneurs.

Following the economic meltdown, the Zimbabwean government introduced a new Ministry in 2010 that catered for MSEs from both the *formal* and informal sector. The Ministry also developed a Fund to cater for the financial needs of the MSEs. The long term goal of the Ministry is to develop and grow the MSEs and make them viable enough to contribute to the economic recovery process. The study then tested whether prioritizing improvements in access to finance for MSEs, for example, through the creation of a Fund, would encourage the informal entrepreneurs to formalize their businesses and contribute to the *formal* economy. To answer the question, the study examined the relationship between the growth constraint clusters generated through principal component analysis and the willingness by the informal sector entrepreneurs to formalize their businesses using a logistic regression model (see hypotheses 10-11 on page 129-130). The analysis showed that improving the 'Regulation cluster' (odds ratio 10.729) as well as 'technology cluster' (odds ratio 15.433) would increase the odds of the informal sector entrepreneur's willingness to formalize. These two composite clusters representing a stringent regulatory system and poor information technology also

represented the main reasons identified in the literature for informalisation (Ishengoma and Kappel, 2006; Newadi and Pietersen, 2008; Baloyi, 2010; Hove and Tarisai, 2013).

The other growth constraints ('market and financial' and 'entrepreneurial and managerial skills' constraints) showed a negative relationship with willingness to formalize and N-Ach, thus rejecting null hypothesis 10. Improving the other growth constraints and N-Ach will discourage the informal firms from formalising. The results showed that if the informal firms are helped in overcoming the financial and skill development constraints, their businesses may grow, and the odds of them willing to formalize may decrease. The recently formed Fund, which was developed to help MSEs financially might help the MSEs to grow but may discourage them from formalising their businesses, according to the results of the odds ratios. In order for the economy to benefit from the MSEs in the informal sector, there is a need to address factors that affect their willingness to formalize and once they have formalized, their growth constraints are likely to be similar to those who are already in the *formal* sector. Hence common laws around improving financial constraints, developing entrepreneurial and managerial skills and enhancing the N-Ach can be employed for all MSEs.

8.3 Recommendations

This study provided insights on the development and the relationship between MSEs in the informal sector and those in the *formal* sector in Zimbabwe. The findings show that growth in MSEs in the informal sector between 1980 and 2010, was closely related to the need for immediate survival. Before the economic meltdown, MSEs were growing at a steady rate but during the crisis they started growing steeply being escalated by the failure of money supply to match the ever increasing inflation which created a shortage of cash in the economy. Entrepreneurship was thus used as a money sourcing channel and provided a survival platform for many of the citizens who were out of formal work. It was a refugee survival mechanism. Following the economic meltdown, most of these MSEs are still operational, and most of them are located in the informal sector. As such the following policies are recommended.

Policy Recommendation 1: The meltdown as experienced in Zimbabwe should be avoided through prudent alignment of the monetary policy and controlling the growth of the money supply and inflation.

The macroeconomic analysis showed that entrepreneurial activity was partly a result of a shortage of liquidity for transactionary purposes during a period of high inflation when the local currency was not functioning effectively and there was a thriving black market and other hard currencies gradually supplementing the local currency. When the economy failed to provide adequate currency for its people, people engaged in income generating activities to meet their survival needs, hence an accelerated development of necessity entrepreneurship in the informal sector. Post the meltdown, these informal sector businesses are still thriving and the further growth of this sector can be controlled by ensuring that money supply is correctly aligned with inflation in an expanding economy.

Policy recommendation 2: Need to regain the confidence of the people of Zimbabwe by addressing their needs and follow up on any promises made by the government with regard to the growth of formal sectors businesses.

The second finding from the macro analysis was the huge response lag to a shock which was identified to contribute to a measure of loss of confidence by the entrepreneurs in the government and its institutions. Going forward, policy makers need to work on regaining the confidence of the entrepreneurs, especially the formal ones and ensuring that finance for the growth of their activities are available. Priority should be placed on changing the mind-set of these entrepreneurs through bringing in interventions and incentives which target their specific needs in their sectors of operation. These interventions include offering training and mentorship programs on entrepreneurial and managerial skills development. There is a need to show the formal entrepreneurs that the government listens to their problems, is committed to address them and it values the presence of MSEs in the country.

Policy Recommendation 3: Address the specific needs of the informal sector entrepreneurs and employ a differentiated strategy rather than a common-policy approach to both groups of firms.

As much as the Zimbabwean government recognises the existence of informal MSEs, unlike in pre-meltdown situation, there is a need to consider the differences in the characteristics, needs and priorities of the MSEs in the *formal* and informal sectors. From the micro level analysis, the study revealed that the formal sector entrepreneurs have different characteristics, growth constraints and entrepreneurial dynamics, from those of informal sector entrepreneurs. It is evident that a common approach will not work when addressing issues pertaining to micro and small-scale entrepreneurial development. Currently in Zimbabwe there is no distinction between an established company and a start-up company or a small firm and a big firm in the two sectors, in terms of regulatory requirements. For instance, there are no tax brackets and licensing and presumptive tax requirements are standard for every business. Also, all businesses operate under the same minimum wage requirement, without taking into consideration the size or age of the business. These are some of the issues around the regulatory framework which discourage informal MSEs from formalising, and should be addressed to make it more flexible to facilitate their transition to the formal sector. Deregulation or easing of regulations and greater access to information technology will assist the growth and development of informal entrepreneurs greatly.

An analysis of the willingness to formalise by the informal entrepreneurs revealed that there are factors which discourage the informal entrepreneurs from formalising and some which encourage them to. The policy maker's focus has to be on improving the registration and regulatory system which is presently too restrictive. As much as access to finance and technology and enhancing the operators' need achievement levels, are crucial for the growth of the informal entrepreneurs, priority has to be placed on creating a favourable environment that makes it easier for them to register their businesses without regulatory fears

8.4 Areas for further research

This study focused on identifying the role of micro and small-scale entrepreneurial activity in the Zimbabwean economy and how informal enterprises can be embraced into the formal sector. The main challenge for the study was lack of data hence a smaller sample was used. A nationwide study can improve the results with better pointers for policies. Further research is also needed on how to incentivise the informal entrepreneurs to formalise their businesses. It is critical for the country to prioritise and accelerate the formalisation process as many productive resources are being produced in the underground economy and not being properly

channelled into the economy. Informal enterprises constitute a greater percentage of the micro and small-scale enterprises and their contribution to the economy is yet to be realised.

8.5 Conclusion

Flourishing MSE entrepreneurship is critical for individual and national propensity in a society. This is more so in the case of Zimbabwe as it has experienced a meltdown in the past two decades, with disastrous conditions to people's welfare there. Living conditions can only improve when there is more growth, development, investment and employment creation in Zimbabwe. This turnaround cannot happen unless the micro and macro environments as well as political environment are stable and conducive for firms in the formal and informal sector to develop.

BIBLIOGRAPHY

Acs, Z. (2008). "How is Entrepreneurship Good for Economic Growth?" In *Global and Local Dynamics in African Businesses and Development: International Academy of African Business and Development*. Edited by Simon Sigue, pg. 97-107, Vol 9, University of Florida.

Acs, Z. (2010). Entrepreneurship and Economic development: the valley of backwardness, *Annals of Innovation and Entrepreneurship*, 1:5641.

African Development Bank. (2011). Infrastructure and Growth in Zimbabwe: An action plan for strengthened recovery. Zimbabwe Report, www.afdb.org/en/countries/southern-africa/zimbabwe/infrastructure-and-growth-in-zimbabwe-an-action-plan-for-strengthened-recovery/ ,accessed on 20/06/2011

African development Bank. (2013). Zimbabwe: Country Brief 2011-2013. www.afdb.org/fileadmin/uploads/afdd/Documents/Projects-and-Operations/Zimbabwe%20Country%20Brief%20June%202011.pdf , accessed on 20/06/2011

Anderson, A. R., Li, J. H., Harrison, R. T. and Robson, P. J. A. (2003). The Increasing Role of Small Business in the Chinese Economy. *Journal Of Small Business Management,* 41**,** 310-316.

Arenius, P. and Miriniti M. (2005). Perceptual Variables and Nascent Entrepreneurship, *Small Business Economics*, vol 24(3), pg. 233-247.

Audretsch, D.B., Carree M.A., van Stel A. S. and Thurik A.R. (2002). Impeded industrial restructuring: the growth penalty, *Kyklos* vol 55:1, pg. 81-97.

Audretsch, D. B. and Fritsch, M. (1994). The Geography of Firm Births in Germany. *Regional Studies,* 28(4), July, pg. 359-365.

Audretsch, D. and R. Thurik (2004). A model of the entrepreneurial economy, *International Journal of Entrepreneurship Education,* vol. 2(2), pg. 143-166.

Audretsch, D. B. and Thurik, A. R. **(2001)**. What is new about the new economy: Sources of growth in the managed an entrepreneurial economies. Industrial and Corporate Change, 19, pg. 795–821.

Austin J., Stevenson H., and Wei-Skillern J., (2006). Social and Commercial Entrepreneurship: Same, Different, or Both? *Entrepreneurship: Theory & Practice*, 30(1), pg. 1-22

Badal, S. (2010). Entrepreneurship and job creation: Leveraging the relationship. nifa.org.

Baptista, R., Escaria V. and Madruga P. (2008). Entrepreneurship, regional development and job creation: the case of Portugal. Small Business Economics vol 30, pg. 49-58.

Barbero, J.L., Casillas, J.C., Wright, M., and Garcia, A.R., (2013). "Do different types of incubators produce different types of innovations?" *The Journal of Technology Transfer,* vol. 39, pp. 151-168.

Barreira, J., Dhliwayo S., Luiz J., Naude W. and Urban B. (2008). *Frontiers in Entrepreneurship*. Heinemann Publishers, Johannesburg, South Africa.

Baumol, W.J. (1990). Entrepreneurship: Productive, Unproductive and Destructive, *Journal of Political Economy*, vol 98(5), pg. 893-921.

Baumol, W.J. (2010). *The Micro theory of Innovative Entrepreneurship*. Princeton, New Jersey, Princeton University Press.

Bjørnskov, C. and Foss, N. J. (2008). Economic Freedom and Entrepreneurial Activity: Some cross-country evidence. *Public Choice*, vol.134, pg. 307-328.

Blanchflower, D.G. (2000). Self-employment in OECD Countries, *Labour Economics*, vol.7, pg. 471-505.

Boschoff, A.B. and Hoole, C. (1998). Measuring Entrepreneurial Attitudes Interculturally- Is it possible? *South African Journal of Economic and Management Sciences*, vol.1(2): pg.234-53.

Caird, S. (1988). *A Review of Methods of Measuring Enterprising Attributes.* Durham, UK: Durham University Business School.

Capozzi, C. (2010). Define Economic Meltdown, eHow Contributor, updated June 27, 2010 http://www.ehow.com.

Carree, M. and Thurik, R. (2005). Understanding the role of Entrepreneurship for Economic Growth, prepared for "*The Handbook Entrepreneurship and Economic Growth*" (International Library of Entrepreneurship) of Edward Elgar Publishing Ltd.

Carree, M.A., van Stel, A.J., Thurik, A.R., and Wennekers, A.R.M. (2002). Economic Development and business ownership: an analysis using data of 23 OECD countries in the period 1979-1996, *Small business Economics*, vol 19, pg. 271-290.

Carree, M.A. and A.R. Thurik (2003). The impact of entrepreneurship on economic growth, in *Handbook of Entrepreneurship Research*, D.B. Audretsch and Z.J. Acs (eds), Boston/Dordrecht: Kluwer Academic Publishers, pg. 437-471.

Casson, M. (1982). *The Entrepreneur: An Economic Theory*. Second edition, Edward Elgar Publishing, Oxford.

Chen, M.A. (2007). Rethinking the informal economy: Linkages with the formal economy and the formal regulatory environment, *Economics and Social Affairs,* working paper no. 46.

Chikuezi, C.O. (2010). Urban Informal Sector and Unemployment in Third World Cities: The Situation in Nigeria. *Asian Social Science*, vol. 6(8).

Chiremba, S. and Master, W. (2003). The Experience of Resettled Farmers in Zimbabwe, *African Studies Quarterly* 7(2-3). http://connection.ebscohost.com/c/articles/59735537/experience-resettled-farmers-zimbabwe , accessed 05/03/2012

Chingwenya. and Mudzengerere, F.H. (2013). The Small and Medium Enterprises Policy in Zimbabwe: A narrative of strides taken to mainstream the informal sector activities in urban local authorities in Zimbabwe, *International Journal of Politics and Good Governance*, vol 4, no. 4.4 Quarter IV.

Chowdhury, M., Amin S. and Farhai T. (2012). Access to credit and women Entrepreneurship: Evidence from Bangladesh. A research proposal.

CIA Factbook. (2012). The World Factbook website, www.cia.gov. , accessed 15/03/2012

Clover, T.A. and Darroch, M. (2005). Owners Perception of factors that constrain the survival and growth of small and micro agribusinesses in KZN, Agrikon, vol 44(2).

Coakes, S. and Steed, L.K. (2003). SPSS without anguish, John Wiley, Queensland.

Coltart, D. 2008. A decade of suffering in Zimbabwe: Economic collapse and political repression under Robert Mugabe, *Centre for Global Liberty and Prosperity Development and Policy Analysis. No. 5.*

De Soto, H. (1982). *The Other Path: The Economic Answer to Terrorism*. New York.

Deakins, D., and Freel M. (2012). *Entrepreneurship and Small Firms*. McGraw-Hill Higher Education, Berkshire.

Delmar, F. and Davidson, P. (2000). Where do they come from? Prevalence and characteristics of nascent entrepreneurs, *Entrepreneurship and regional development* 12, 1-23.

Dhemba, J. (1999). Informal Sector Development: A Strategy for Alleviating Urban Poverty in Zimbabwe, *Journal of Social Development in Africa*, vol 14(2), pg.5-19.

Dornbusch, R., Fischer S. and Startz, R. (2008). *Macroeconomics*, McGraw Hill, International Edition, 10th edition.

Dreher, A. and Gassebner, M. (2007). Greasing the Wheels of Entrepreneurship. The Impact Of Regulations And Corruption On Firm Entry. *CESifo Working Paper no. 2013*.

Drucker, P. (2011). *Innovation and Entrepreneurship*. eNotes.com. Inc.

Elkan, W. (1988). Entrepreneurs and Entrepreneurship in Africa, *The World Bank Research Observer*, *Oxford Journals*, Vol 3, No. 2, pg. 171-188.

Elliot, A. and Dweck, C. (2005). *Handbook of Competence and Motivation*, Guilford Press, New York.

Engel and Granger. (1987). Cointegration and Error Correction: Representation, Estimation and Testing, *Econometrica*, vol 55 pg. 251-276.

Faria, J.R., Cuestas, J.C. and Mourelle, E. (2010). Entrepreneurship and Unemployment: A nonlinear bidirectional causality*? Economic Modelling* vol 27 pg. 1282-1291.

Fedulova I. (2013). What is the European Union definition of micro, small or medium-sized enterprise (SME), Erasmus for Young Entrepreneurs. http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/sme-definition/index-en.htm access date 20/03/2015

Field, A. (2009). *Discovering Statistics using SPSS*, London, Sage.

Finneman, S. (1977). The achievement motive construct and its measurement: where are we now? *British Journal of Psychology*, 68(1): 1-22.

Foti, R., Mlambo, N., Muringai, V., Mavunganidze, Z., Mapiye, C. (2007). Heterogeneity among Zimbabwe's Rural Micro-Enterprises and the Determinants of their Inclination to Agro-Dealership, *African Journal of Business Management....*, pg. 001-007.

Fritsch, M. and Noseleit, F. (2013). Investigating the anatomy of employment effect of new business formation, *Cambridge Journal of Economics*, vol 37(2), pg. 349-377.

Fritsch, M., and Mueller, P. (2004). The effects of new business formation on regional development over time. *Regional Studies*, 38, 961–975.

Fuduric, N. (2008). The Sources of Entrepreneurial Opportunities Individuals and the Environment. Aalborg University, PhD Research Paper.

Fuss, R. (2008). Chapter 4: Vector Autoregressive Models. Financial Data Analysis. Department of Empirical Research and Econometrics.

Games, D. (2002). The Zimbabwe Economy: how has it survived and how will it recover? *South African Institute of International Affairs*. Issue 30.

GEM Report. (2010). Kelley D.J., Bosma N., Amoros J.E. Global Entrepreneurship Research Association, London Business School, Regents park, London, NW1 4SA, UK.

GEM Report. (2011). Kelley, D.J., Singer, S., Herrington, M. Global Entrepreneurship Research Association, London Business School, Regents park, London, NW1 4SA, UK.

GEM Report. (2013). Global Entrepreneurship Monitor: Fifteen years of Assessing Entrepreneurship across the Globe, London Business School, Regents Park, London, NW1 4SA, UK.

Gerxhani, K. (2004). The Informal Sector In Develop and Less Developed Countries: A Literature Survey, Kluwer Academic Publishers, Netherlands, *Public Choice* 120, pg. 267-300.

Ghavidel, S., Farjadi, G. and Mohammadpour, A. (2011). The relationship between entrepreneurship and unemployment in developed and developing countries, *International Conference on Applied Economics*- ICOAE.

Gurtoo, A., Williams, C.C., (2009). Entrepreneurship and the informal sector: some lessons from India. *Entrepreneurship and Innovation* vol10, pg1–8.

Greene, W.H. (2008). *Econometric Analysis*. 5th edition. Prentice Hall, New Jersey.

Grilo, I. and Thurik, R. (2005). Latent and actual entrepreneurship in Europe and the US: some recent developments. *International Entrepreneurship and Management Journal,* 1, 441-459.

Gujarati, D.N. and Porter, D.C. (2009). *Basic Econometrics*, Boston: McGraw-Hill Irwill.

Harris, R.D. (1994). Cointegration Analysis using Johansen Technique: A Practitioner's Guide to the software. *The Economic Journal*, vol 104, No.426 pg. 1227-137.

Hart, K. (1973). Informal Income Opportunities and Urban Employment in Ghana. *Journal of Modern African Studies*, vol. 11, pg.61-89.

Hartog, C., **Parker, S., van Stel, A. and Thurik, R. (2010).** The two-way relationship between entrepreneurship and economic performance, Scales report H200822, Zoetemer: EIM.

Hebert, R. and Link, A. (2011). A History of Entrepreneurship, *The Journal of Entrepreneurship*, vol 20(1), pg.143-158.

Herrington, M. (2011). Entrepreneurship: How can Obstacles be Overcome? Advocates for Change, ed. Mbeki, M. Picador Africa, Johannesburg, pg. 115-136.

Hove, P. and Tarisai, C. (2013). Internal factors affecting the successful growth and survival of small and micro Agri-business firms in Alice communal area, *Journal of Economics*, vol 4(1): pg 57-67.

Hox J. and Boeije H. (2005). Data Collection, Primary vs. Secondary. *Encyclopaedia of Social Measurement*, vol 1.

IMF Report. (2012). Public Debt: Debt Sustainability Analysis; Zimbabwe Article IV Report, https://www.imf.org/external/pubs/ft/dsa/pdf/2012/dsacr12279.pdf , accessed on 13/03/2013.

Ishengoma, E. and Kappel, R. (2006). Economic Growth and Poverty: Does formalization of informal enterprise matter? *Working Paper no.20* German Institute of Global and Area Studies.

Ivashina, V. and Scharfstein, D. (2010). Bank lending during the financial crisis of 2008. *Journal of Financial Economics,* vol 97(3), pg. 303-488.

Jones, T. (2011). Uncovering Zimbabwe's Debt, the case for a democratic solution to the unjust debt burden, *Jubilee Debt Campaign*, London.

Kaburi, S.N., Mobegi, O.V., Kombo, A., Omari, A., and Sewe, T. (2012). Entrepreneurship Challenges in Developing economies: a case of Kenyan Economy.

Kapoor, K., Mugwara, D., Chidavaenzi, I. (1997). Empowering Small Enterprises in Zimbabwe, *World Bank Discussion Paper* no. 379.

Kelly, K. (2010). The Case for Legalising Capitalism (Auburn: The Ludwig von Mises Institute).

Kirzner, I.M. (1973). *Competition and Entrepreneurship*. Chicago: The University of Chicago Press.

Lam, W.F. (1998). Governing Irrigation Systems in Nepal: Institutions, Infrastructure, and Collective Action. Institute for Contemporary Studies, Oakland, CA.

Lang, D. and de Peretti, C. (2009). A strong hysteretic model of Okun's law: theory and preliminary investigation: International Review of Applied Economics, vol 23, issue 4, pg. 445-462.

Lewis-Beck, M.S., Bryman, A. and Futing Liao T. (2004). The SAGe Encyclopedia of Social Science Research Methods, *SAGE Research Methods*, SAGE Publications

Lind, D.A., Marchal, W.G, and Mason R.D. (2002). *Statistical techniques in business and economics*. Boston, McGraw-Hill.

Lucas, R.E. (1978). On the size distribution of business firms, *Bell Journal of Economics*, vol 9, pg. 508-523.

Luebker, M. (2008). Employment, unemployment and informality in Zimbabwe: concepts and data for coherent policy-making. ILO sub-regional office for Southern Africa. Issue paper no. 32.

Lumpkin, G.T., Moss, T.W., Gras, D.M., Kato, S. and Amezcua, A. (2013). Entrepreneurial Processes in Social Contexts: How are They Different, if at all? *Small*

Business Economics, 40: pg. 761-783 .

Magaisa, A.T. (2009). Zimbabwe: Sanctions, the economy and democratic process. NewZimbabwe.com. Published 11/12/2009.

Mahadea, D., and Pillay, M.K. (2008). Environmental conditions for SMME development in a South African province, *SAJEMS NS no. 4*, pg. 431-448.

Mahadea, D. (1994). Achievement Motivation and Small Business Success in Transkei, *Development Southern Africa*, vol. 11(1), pg. 90-98.

Mahadea, D. (1997). Financial Constraints on Small Business Entrepreneurs: a Transkei case study. *Acta Academia*, vol. 29(1). Pg. 70-89

Mahadea, D. (2001). Similarities and Differences between male and female entrepreneurial attributes in manufacturing firms in the Transkei, *Development Southern Africa*, 18(2): 189-200.

Makochekanwa, A. (2011). Impact of budget deficit on inflation in Zimbabwe, *The Economic Research Guardian*, vol 1(2), pg. 49-59.

Malholtra, N.K. (1999). Market Research: An applied orientation, Pearson, US Imports and Phipes. United States.

Matandirani, J. E. M. (2011). Zimbabwe in Retrospect, 10-12 years, www.zimpolitics.net/ziminretro.htm., accessed 10/05/2012

Mboma, M. (2008). "A Framework of Micro, Small and Medium Retail Enterprises Development in Developing country the case of Dar es Salaam". In Global and Local Dynamics in African Businesses and Development: *International Academy of African Business and Development*. Edited by Simon Sigue, pg. 329-337, Vol. 9.

McClelland, D. (1961). The Achievement Motive, Appleton-Century-Crofts, New York.

Mertler and Vanatta, (2002). Advanced and Multivariate Statistical Methods: Pratical Application and Interpretation. McNaughton and Gunn, Inc

Mises G. (2013). The importance of the state control of the money supply. The Ludwig von Mises Institute, www.facebook.com., accessed 13/06/2014

Moore, D. (2001). Is the Land the Economy and the Economy the Land? Primitive Accumulation in Zimbabwe, *Journal of Contemporary African Studies*, 19:2, 253-266.

Moss T. (2007). Zimbabwe's Meltdown: Anatomy of a Peacetime Economic Collapse, *The Fletcher Forum of World Affairs* vol.31(2), pg. 133-148

Moyo S., Rutherford B. and Amanor-Wilks, D. (2000). Land Reform and Changing Social relations for farm workers in Zimbabwe. *Review of African Political Economy*, no.84: pg.181-202.

Mueller, P., van Stel, A. J. and David, J. S. (2007). The effect of new firm formation on regional development over time: The case of Great Britain. Small Business Economics, present issue.

Musuna, S. and Muchapondwa, E. (2008). Will availing credit incentives to Zimbabwean farmers trigger maize output response? *Economic Research of Southern Africa; Working Paper number 100,* University of Cape Town.

Newadi, R. and Pietersen, J. (2008). "An Explanatory Study into Factors Influencing the Willingness of Informal Businesses to become Formalised- A case of Informal Businesses in a few selected Townships of Port Elizabeth". In Global and Local Dynamics in African Businesses and Development: *International Academy of African Business and Development*. Edited by Simon Sigue, vol. 9, pg. 315-322.

NewZimbabwe.com, 28/04/2014, Zim's struggle to formalize the informal, downloaded on 06/10/2014. http://www.newzimbabwe.com/news-15465-Zim's+struggle+to+formalise+the+informal/news.aspx

O'Neill, J. (2013). *The Growth Map*, Penguin, London.

Onyenechere, E.C. (2011). The Informal sector and environment in Nigerian towns: What we know and what we still need to know, *Research Journal of Environment and Earth Sciences*, vol 3(1), pg. 61-69.

Ovaska, T. and Sobel, R. S. (2005). Entrepreneurship in post-socialist economies. *Journal of Private Enterprise,* 21(1)**,** 8-28.

Oxford English Dictionary. (n.d.) *WordNet 3.0, Farlex clipart collection*. (2003-2008). Retrieved August 13, 2014
from http://www.thefreedictionary.com/Oxford+English+Dictionary

Pallant, J. (2006). *SPSS Survival Manual*, New York, McGraw-Hill.

Parker, S.C. (2009). *The Economics of Entrepreneurship*, Cambridge University Press, Cambridge.

Parker, S. C. and Robson, M. T. (2004). Explaining international variations in self-employment: evidence from a panel of OECD countries. *Southern Economic Journal,* 71**,** 287-301.

Parkin, M. (2010). *Economics*, Pearson Education South Africa, Cape Town, S.A.

Perloff, J.M. (2012). *Microeconomcs,* Pearson Education Limited, England.

Porter, M.E., (2008). The Five Competitive Forces that Shape Strategy. *Harvard Business Review* 86 (1), 78–93

Preston-Whyte, E. and Rogerson C. (Eds) (1991). *South Africa's Informal Economy*. Cape Town: Oxford University Press.

Proctor, S., Henson, S., Loader, R., Masakure, O., Brouder, A., Bhila, L. and Sigauke, N. (2000). Facilitating the effective production and marketing of processed food products by small-scale producers in Zimbabwe Output 1: Literature Review. Project R7485: Crop Post Harvest Programme.

Ramachandran K, Devarajan TP, Ray S (2006). Corporate Entrepreneurship: How? VIKALPA, 31(1): 85-97.

Robertson, J. (2006). *The Zimbabwean Economy: The current position and the way forward,* Zimbabwe's Turmoil, Chapter 3 pg. 41-59 www.issafrica.org/pubs/Monographs/No87/Chap3.pdf

Robertson, J. (2007). Economic Information services for Zimbabwean statistics, http://www.economic.co.zw/

Rotter, J.B. (1966). *Generalised expectancies for internal versus external control reinforcement,* Psychological Monographs, 80(9): 609.

Rukuni, M., Tawonezvi, P. and Eicher, C. (2006). *Zimbabwe's Agricultural Revolution Revisited,* University of Zimbabwe publications, Sable Press private limited, Harare.

Rusten, G. and Bryson, J. R. (2007). The production and consumption of industrial design expertise by small and medium size firms: some evidence from Norway. *Geografiska. Annaler,* 89B (S1), 75-87.

Sarasvathy, S. and Venkataraman, S. (2011). Entrepreneurship as Method, *Entrepreneurship Theory Practice*, vol. 30(5), pg. 113-135.

Scannell, E.D. and Allen C.L. (2000). The Mahrabian Achieving Tendency Scale (MATS): Reliability, Validity and Relationship to Demographic Characteristics, *Current Psychology*, Winter 2000/2001, vol. 19(4). pg. 301-311

Schumpeter, J.A. (1934). *The Theory of Economic Development: An Inquiry into Profits, Capital Credit, Interest and the Business Cycle*, Cambridge, MA, US: Harvard University Press.

Seidman, A. (1982). A development Strategy for Zimbabwe. *Zambezia* X(i), University of Zimbabwe.

Shane, S. (2003). *A General Theory of Entrepreneurship: The Individual-Opportunity Nexus*, Cheltenham, UK, Northampton, MA, USA.

Sichone, O. (2003). Zimbabwe's Economic Policies, 1980-2002. *DPMN Bulletin*: volX(2).

Small Enterprises Development Corporation (Amendment) Bill. 2010. Memorandum, Government of Zimbabwe.

Sorensen, B.E. (2005). Economics 7395, Spring www.uhedu/~bsorensen/gra_caus.pdf

Spletzer, J.R. (2000). The contribution of establishment births and deaths to employment growth. *Journal of Business and Economic Statistics*, 18, 113-126.

Stead, W. E., & Stead, J. (2014). *Sustainable Strategic Management*. Second Edition, London: M.E. Sharpe.

Stolyarov II G. (2005). The Rational Argumentator: Austrian Economics and Kirznerian Entrepreneurship. *A Journal for Western Man- Issue XLIII.*

Storey, D. (1995). *Understanding the Small Business*, Routledge, London

Thurik, R. and Wenneker, S. (2004). Entrepreneurship, small business and economic growth*, Journal of Small Business and Enterprise Development,* vol 11, no. 1, pg140-149.

Thurik, A., Carree M., van Stel A. and Audretsch, D. (2008). Does Self-Employment Reduce Unemployment, *Journal of Business Venturing*, Volume 23, Issue 6, pg 673-686

Ubogu, A., Laah, J., Udemezue, C. and Bako, A. (2011). Determinants of the Locational Decisions of Informal Sector Entrepreneurs in Urban Zaira. *Journal of Geography and Geology,* vol.3(1)

Uhlaner, L. and Thurik, R. (2007). Postmaterialism influencing total entrepreneurial activity across nations. *Journal of Evolutionary Economics,* vol.17**,** pg.161-185.

USAID (1998). *Potential for Small-Scale Food Processing in Zimbabwe.* Harare: USAID.

van Rooyen E.J and Antonites A.J. (2007). Formalising the informal sector: A case study on the city of Johannesburg, *Journal of Public Administration*, vol 42(3)

van Rooyen, P. (1990). The informal economy: meaning, measurement and social significance. Study No. 115, Geographical Studies, Amsterdam, Netherlands.

van Stel A., Carree M., Thurik R. (2005). The Effect of Entrepreneurial Activity on National Economic Growth. *Small Business Economics*, vol. 24, pg. 311-321.
van Stel, A., Wennekers, S., Thurik, R. and De Wit, G. (2003). Explaining nascent entrepreneurship across countries. *Scales Research Reports,* 200301.

 von Broembsen, Wood M., Herrington, Shay M., Sheppers R. (2005). Global Entrepreneurship Monitor, South African Report, GSB, UCT.

Webb J.W., Bruton G.D., Tihanyi L. and Ireland D.R. (2012). Research on Entrepreneurship in the informal economy: Framing a research agenda, *Journal of Business Venturing*, doi: 10.1016/j.jbusvent.2012.05.003

Wennekers, S. and Thurik, R. (1999). Linking entrepreneurship and economic growth. *Small Business Economics,* 13**,** pg. 27-56.

Wild, V. (1997). *Profit not for Profits sake: History and business culture of African entrepreneurs in Zimbabwe,* Baobab, Harare.

Wildeman, R. E., Hofstede, G., Noorderhaven, N. G., Thurik, A. R., Verhoeven, W. H. J., and Wennekers, A. R. M. (1999). Self-employment in 23 OECD countries. The role of cultural and economic factors, *Research Report*, 9811.

Williams, C. (2007). Entrepreneurs Operating in the Informal Economy: Necessity or Opportunity Driven? *Journal of Small Business and Entrepreneurship,* vol 20(3).

Worldbank Data (2013). Africa Development Indicators, www.worldbank.org, downloaded on 23/02/2012 and 17/03/2013

Zimbabwe Statistical Yearbook. 1997. *The Agricultural Sector of Zimbabwe, Statistical bulletin-2001*, Government printers, Harare

APPENDIX

Production levels of Key Crops

Year Yr	Maize Tonnes	Wheat Tonnes	Soyabeans Tonnes	Cotton Tonnes	Tobacco Tonnes
1980	1,548,739	154,593	97,853	161,753	120,107
1981	2,833,395	183,516	72,881	170,594	69,421
1982	1,812,639	191,880	91,596	135,041	89,197
1983	916,422	110,990	80,635	147,312	94,028
1984	1,189,220	83,807	89,875	227,104	117,227
1985	2,826,110	174,294	86,825	284,960	107,957
1986	2,545,600	-	73,560	257,031	116,256
1987	1,130,840	189,752	109,198	228,043	121,320
1988	2,341,209	214,495	121,357	295,591	114,736
1989	2,018,575	247,059	123,725	260,290	130,361
1990	1,993,929	274,019	113,262	202,603	131,014
1991	1,659,872	243,662	113,069	242,706	161,223
1992	278,223	77,761	48,766	69,409	181,939
1993	2,038,324	221,823	77,252	199,184	207,398
1994	1,829,231	238,578	108,974	172,089	176,705
1995	961,095	120,398	95,132	94,548	178,335

UNIVERSITY OF KWAZULU NATAL, PIETERMARITZBURG

SCHOOL OF ACCOUTING, ECONOMICS and FINANCE

Date:………………………………………..

Name of Interviewer:…………………………….

Questionnaire No.:……………………………….

Location:…………………………………………....

SECTION A: DEMOGRAPHIC ASPECTS

1. Age …………….

2. Gender …………….

3. Marital Status …………….

For questions 4-9 tick the relevant box

4. Are you the owner of the business?

1-Yes	
2- No	

5. Is this a family business or non-family?

1- Yes	
2- No	

6. Are you renting or owning business premises?

1-Yes	
2-No	

7. Was/Is the owner formally employed elsewhere?

1-Yes	
2-No	

8. If your answer to 7. above is yes, where?

Government	
Private	
NGOs	

9. What is your highest level of education attained?

	Tick
Never went to school	
Primary Education	
Secondary Education- up to O'Level	
Secondary Education- up to A'Level	
Diploma or Certificate	
1st Degree	
Honours degree	
Masters degree	
Doctoral degree	
Others (please specify)	

10. Is your educational background related to the business that you are doing?

1-Yes	
2-No	

11. How many years of formal working experience did you have prior to opening the business?

	Tick
Never worked	
Less than 1 year	
1-2 yrs	
2-5 yrs	
More than 5	

12. Is your working experience related to the type of business you are doing?

1-Yes	
2-No	

13. If you were formally employed, what were the reasons for leaving formal employment? (Can tick more than one).

	Tick
Laid off	
Business closed	
Contract ended	
Pay too low	
To be independent	
Retired	
Illness or injury	
Others (specify)	

14. Was the reason for starting your business opportunity or necessity drive?

1-Opportunity	

2-Necessity	

SECTION B: THE ENTERPRISE

15. When was your business established? (indicate year) ………………..

16. What type of business ownership do you have? Tick applicable

	Tick
Sole proprietorship (individual)	
Partnership	
Others (specify)	

17. What is the legal status of your enterprise? Tick applicable

1-Formal	
2-Informal	

18. Please explain why you choose to operate in the sector indicated above

………………………………………………………………………………………
………………………………………………………………………………………
………………………………………………………………………………………
………………………………………………………………………………………
……………………

19. What are the benefits of operating in this sector?

………………………………………………………………………………………
………………………………………………………………………………………
………………………………………………………………………………………
………………………………………………………………………………………
……………………

20. What are the constraints of operating in this sector?

………………………………………………………………………………………
………………………………………………………………………………………
………………………………………………………………………………………
…………………………………………………………………………………………
…………………

21. In the light of the constraints, what do you think the government should do to ensure smooth operation in this sector?

…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………
………………

22. If in the informal sector, are you willing to move to the formal sector?

	Tick
1- Yes	

195

2- No	

23. If your answer is yes, how soon are you willing to do that? (indicate time)

………………………………

24. What sector is your business in? Tick applicable

	Tick
Retail/ Manufacturing	
Service	
Construction	
Others (specify)	

25. Describe the specific activity of your business?

....
....
....
....

26. What was the size of your firm at launch? (number of employees including owner)

1-Female	
2-Male	

27. What is the current size of your firm? (number of employees including owner)

1-Female	
2-Male	

28. Indicate your current average earnings per month

………………

29. Indicate your current average expenses per month

………………

30. Is your business site permanent?

1-Yes	
2-No	

31. Indicate the reasons for starting your enterprise. (tick applicable)

	tick
1. Fired or laid off	
2. No other work	
3. To be independent	

4. Family tradition	
5. Complement family income	
6. Higher pay than salary	
7. Saw an opportunity	
8. To survive financially	
9. Self achievement	
10. Flexible hours	

32. What was your initial source of funds for the start-up business? (tick applicable)

	tick
Personal savings	
Family savings	
Loan from family/ friend	
Loan from bank	
Loan from informal institutions	
Government support	
Cooperative	
Others (specify)	

33. Was your initial capital enough?

1-Yes	
2-No	

34. If your answer to above is No, how did you manage to keep your business running during the meltdown period? (explain)……………………………………………………………………………… ………………………………………………………………………………………………… ………………………………………………………………………………………………… ………………………………………………………………………………………………… ………………………………………………………………………………………………… ………………………………

SECTION C: ENTREPRENEURIAL DYNAMICS

35. Is your business growing

1-Yes	
2-No	

36. If your answer to 35 above is yes, in what ways has it grown

………………………………………………………………………………………………… ………………………………………………………………………………………………… ………………………………………………………………………………………………… ……….

37. If your answer to 35 above is no, to what extent do you agree or disagree that the following factors have influenced the status of your business and are also hindering the growth of your enterprise.

5 – Point scale 1= strongly agree; 2 = agree; 3 = agree in some cases; 4 = do not agree; 5 = strongly disagree					
	1	**2**	**3**	**4**	**5**
1. Access to finance					
2. Lack of information / advice on how to start an enterprise					
3. Access to business networks					
4. Lack of entrepreneurial training					
5. Lack of profitable markets					
6. Gender discrimination (one gender is favoured)					
7. Access to business premises					
8. Access to technology					
9. Finding the right employees					
10. Lack of clients					
11. Lack of management skills					
12. Business registration process					
13. Problems with authorities (ZIMRA and municipality)					
14. Excessive competition					
15. Late payment if using credit facility					
16. The Dollarization					
17. Taxes					

18. Interest Rates					
19. Crime					
20. Political Instability					
Any other barriers to growth (please specify)					
	1	**2**	**3**	**4**	**5**

38. Do you think the government recognizes the existence of micro and small-scale enterprises?

1-Yes	
2-No	

39. Please explain the reason for your answer above

....
....
....
....
....

40. Do you know of any government programmes that support MSEs?

1-Yes	
2-No	

41. Have you benefited from any government programmes?

1-Yes	
2-No	

42. If your answer to above question is yes, in what way have you benefited? (tick applicable)

	Tick
Capital for business	
Business advice through mentoring programs	
Assistance with provision of premises	
Assistance with business plan	

Any   other   (please specify)………………………………………………………………………
…………………………………………………………………………………………………
…………………………………………………………………………………………………
…………

SECTION D: ENTEPRENEUR PROFILE

For the following questions, indicate for each item, the extent for owner's agreement or disagreement for that item by entering the appropriate numeral (+4 to -4) in space provided by each item. +4 = very strong agreement,+3 = strong agreement,+2 = moderate agreement,+1 = slight agreement,0 = neither agreement or disagreement,-1 = slight disagreement,-2 = moderate disagreement,-3 =strong disagreement,-4 = very strong disagreement.

A: MALE

1. I worry more about getting a bad grade than l think about getting a good grade (-)

   (………)

2. I would rather work on a task where I alone am responsible for the final product than one in which many people contribute to the final product(+)

   (………)

3. I more often attempt difficult tasks that am not sure l can do than easier task l believe l can do.(+)

   (………)

4. I would rather do something that I feel confident and relaxed that something, which is challenging and difficult. (-)

   (………)

5. If I am not good at something I would keep struggling to master it than move to something I may be good at. (+)

   (………)

6. I would rather have a job in which my role is clearly defined by others and my rewards could higher than average than a job in which my role is to be defined by me and my rewards are average. (-)

   (………)

7. I would prefer a well written informative book to a good movie. (+)

   (…….)

8. I would prefer a job, which is important, difficult, and involves 50% chance of failure to a job which is somewhat important but not difficult. (+)

(…
….)

9. I would rather learn fun games that most people know than learn unusual skill game, which only a few people would know. (-)

(…
….)

10. It very important to me to do my work as well as I can even if it means not getting along well with my co-workers. (+)

(…
…)

11. For me, the pain of getting turned down after a job interview is greater than the pleasure of getting hired. (-)

(…
….)

12. If am going to play cards l would rather play a fun game than a difficult thought game. (-)

(…
….)

13. I prefer competitive situations in which l have superior ability to those to which every involved is about equal in ability. (-)

(…
….)

14. I think more of the future than the present and past. (+)

(…
….)

15. I am more unhappy about doing something badly than I am about doing something well. (-)

(….
…)

16. In my spare time l would rather learn a game to develop skills than for recreation. (+)

(…
…)

17. I would rather run my own business and face 50% chance of bankruptcy than work for another firm. (+)

(…
….)

18. I would rather take a job in which the starting salary US$10,000 and could stay that way for some time than a job in which the starting salary is US$5,000 and there is a guarantee that within 5 years l will be earning more than US$10,000. (-)

(…
….)

19. I would rather play in a team game than compete with just one person. (-)

(…
….)

20. The thing that is most important for me about learning to play a musical instrument is being able to play it very well, rather than learning it to have a better time with my friends. (+)

(….
…)

21. I prefer multiple choice questions on exams than essay questions. (-)

(…
….)

22. I would rather work on commission which is somewhat risky but where I would have the possibility of making more than working on a fixed salary. (+)

(…
….)

23. I think I hate losing more than I love winning. (-)

(…
….)

24. I would rather wait one or two years and have my parents buy me one great gift than have them buy me several average gifts over the same period of time. (+)

(…
….)

25. If I were to learn one or two incomplete tasks l would rather return to the difficult than the easy one. (+)

(…
….)

26. I think more about my past accomplishment than about my future goals. (-)

(…
….)

B:FEMALES

1. I think more about getting a good grade than l worry about getting a bad grade (-)

(…
….)

2. I more often attempt difficult task that am not sure a can do than easier tasks I believe I can do. (+)

(…
….)

3. I would rather do something that l feel confident and relaxed that something, which is challenging and difficult. (-)

(…
….)

4. If I am not good at something I would keep struggling to master it than move to something I may be good at. (+)

(…
….)

5. I would rather have a job in which my job is clearly defined by others and my rewards could higher than average than a job in which my role is to be defined by me and my rewards are average. (-)

(…
….)

6. My strongest feelings are aroused more by fear of failure than by hope of success. (-)

(…
….)

7. I would prefer a well written informative book to a good movie. (+)

(…
….)

8. I would prefer a job which is important, difficult and involves 50% chance of failure to a job which is somewhat important but not difficult. (+)

(…
….)

9. I would rather learn fun games that most people know than unusual skill game, which only a few people would know. (-)

(…
….)

10. It very important to me to do my work as well as l can even if it means not getting along well with my co-workers. (+)

(…
….)

11. For me the pain of getting turned down after a job interview is greater than the pleasure of getting hired. (-)

(…
….)

12. If am going to play cards l would rather play a fun game than a difficult thought game (-)

(…
….)

13. I prefer competitive situations in which l have superior ability to those to which every involved is about equal in ability. (-)

(…
….)

14. I think more of the future than the present and past. (+)

(…
….)

15. I am more unhappy about doing something badly than I am about doing something well. (-)

(…
….)

16. I worry more about whether people will praise my work than I do about whether they will criticize it. (+)

(…
….)

17. If I had to spend my money myself I would rather have an exceptional meal out than spend less and prepare an exceptional meal at home. (-)

(…
….)

18. I would rather do a paper on my own than take a test. (+)

(…
….)

19. I would rather share in the decision making process of a group than take total responsibility for directing the group's activities. (-)

(…
….)

20. I would rather try to make new and interesting meals that may turn out badly than more familiar meals that frequently turn out well. (+)

(…
….)

21. I would rather do something I enjoy than do something do something that I think is worthwhile but not much fun. (-)

(…
….)

22. I would rather try to get two or three things done quickly than spend all my time working on one project. (-)

(…
….)

23. If I am ill and must stay home, I use time to relax and recuperate rather than try to read or work. (-)

(…
….)

24. If we are rooming with a number of girls and we decide to have a party, I would rather organize the party myself than have one of others organize it. (+)

(…
….)

25. I would rather cook for couple of gourmet eaters than for a couple who simply have huge appetites. (+)

(…
….)

26. I would rather have that our women's group be allowed to help organize city projects than be allowed to work on the projects after they have been organized. (+)

(…
….)

Testing for stationarity in INFLAT
. pperron inflat in 1/27

```
Phillips-Perron test for unit root                Number of obs   =      26
                                                  Newey-West lags =       2
```

	Test Statistic	--------- Interpolated Dickey-Fuller ---------		
		1% Critical Value	5% Critical Value	10% Critical Value
Z(rho)	29.273	-17.268	-12.532	-10.220
Z(t)	5.656	-3.743	-2.997	-2.629

MacKinnon approximate p-value for Z(t) = 1.0000

. pperron dinfl in 1/27

```
Phillips-Perron test for unit root                Number of obs   =      25
                                                  Newey-West lags =       2
```

	Test Statistic	--------- Interpolated Dickey-Fuller ---------		
		1% Critical Value	5% Critical Value	10% Critical Value
Z(rho)	-18.798	-17.200	-12.500	-10.200
Z(t)	-1.520	-3.750	-3.000	-2.630

MacKinnon approximate p-value for Z(t) = 0.5236

. dfuller inflat in 1/27, lags(0)

```
Dickey-Fuller test for unit root                  Number of obs   =      26
```

	Test Statistic	--------- Interpolated Dickey-Fuller ---------		
		1% Critical Value	5% Critical Value	10% Critical Value
Z(t)	1.838	-3.743	-2.997	-2.629

MacKinnon approximate p-value for Z(t) = 0.9984

. dfuller dinfl in 1/27, lags(0)

```
Dickey-Fuller test for unit root                  Number of obs   =      25
```

	Test Statistic	--------- Interpolated Dickey-Fuller ---------		
		1% Critical Value	5% Critical Value	10% Critical Value
Z(t)	-2.329	-3.750	-3.000	-2.630

MacKinnon approximate p-value for Z(t) = 0.1627

. kpss inflat in 1/27, notrend

KPSS test for inflat

Maxlag = 8 chosen by Schwert criterion
Autocovariances weighted by Bartlett kernel

Critical values for H0: inflat is level stationary

10%: 0.347   5% : 0.463   2.5%: 0.574   1% : 0.739

```
Lag order    Test statistic
    0            .978
    1            .732
    2            .598
    3            .501
    4            .449
    5            .418
    6            .398
    7            .385
    8            .376
```

```
. kpss dinfl in 1/27, notrend

KPSS test for dinfl

Maxlag = 8 chosen by Schwert criterion
Autocovariances weighted by Bartlett kernel

Critical values for H0: dinfl is level stationary

10%: 0.347  5% : 0.463  2.5%: 0.574  1% : 0.739

Lag order     Test statistic
    0             .403
    1             .418
    2             .487
    3             .443
    4             .409
    5             .389
    6             .378
    7             .369
    8             .363
```

Testing for stationarity in UNEMP

```
. pperron unemp

Phillips-Perron test for unit root              Number of obs   =        28
                                                Newey-West lags =         3

                             ---------- Interpolated Dickey-Fuller ---------
                  Test        1% Critical       5% Critical      10% Critical
                Statistic        Value             Value            Value
------------------------------------------------------------------------------
 Z(rho)          1.090          -17.404           -12.596          -10.260
 Z(t)            1.397           -3.730            -2.992           -2.626
------------------------------------------------------------------------------
MacKinnon approximate p-value for Z(t) = 0.9971


. pperron dunemp

Phillips-Perron test for unit root              Number of obs   =        25
                                                Newey-West lags =         2

                             ---------- Interpolated Dickey-Fuller ---------
                  Test        1% Critical       5% Critical      10% Critical
                Statistic        Value             Value            Value
------------------------------------------------------------------------------
 Z(rho)        -28.079          -17.200           -12.500          -10.200
 Z(t)           -5.203           -3.750            -3.000           -2.630
------------------------------------------------------------------------------
MacKinnon approximate p-value for Z(t) = 0.0000

. dfuller unemp in 1/29, lags(0)

Dickey-Fuller test for unit root                Number of obs   =        28

                             ---------- Interpolated Dickey-Fuller ---------
                  Test        1% Critical       5% Critical      10% Critical
                Statistic        Value             Value            Value
------------------------------------------------------------------------------
 Z(t)            1.022           -3.730            -2.992           -2.626
------------------------------------------------------------------------------
MacKinnon approximate p-value for Z(t) = 0.9945

. dfuller dunemp in 1/29, lags(0)

Dickey-Fuller test for unit root                Number of obs   =        25

                             ---------- Interpolated Dickey-Fuller ---------
                  Test        1% Critical       5% Critical      10% Critical
                Statistic        Value             Value            Value
------------------------------------------------------------------------------
 Z(t)           -5.203           -3.750            -3.000           -2.630
------------------------------------------------------------------------------
```

MacKinnon approximate p-value for Z(t) = 0.0000

. kpss unemp, notrend

KPSS test for unemp

Maxlag = 8 chosen by Schwert criterion
Autocovariances weighted by Bartlett kernel

Critical values for H0: unemp is level stationary

10%: 0.347   5% : 0.463   2.5%: 0.574   1% : 0.739

```
Lag order      Test statistic
     0             2.72
     1             1.42
     2             .983
     3             .766
     4             .637
     5             .554
     6             .496
     7             .455
     8             .425
```

. kpss dunemp, notrend

KPSS test for dunemp

Maxlag = 8 chosen by Schwert criterion
Autocovariances weighted by Bartlett kernel

Critical values for H0: dunemp is level stationary

10%: 0.347   5% : 0.463   2.5%: 0.574   1% : 0.739

```
Lag order      Test statistic
     0             .617
     1             .7
     2             .726
     3             .623
     4             .531
     5             .486
     6             .458
     7             .421
     8             .4
```

Testing for stationarity in GDP

. pperron gdp

Phillips-Perron test for unit root			Number of obs = 28
			Newey-West lags = 3

	Test Statistic	---------- Interpolated Dickey-Fuller ---------		
		1% Critical Value	5% Critical Value	10% Critical Value
Z(rho)	-26.175	-17.404	-12.596	-10.260
Z(t)	-4.258	-3.730	-2.992	-2.626

MacKinnon approximate p-value for Z(t) = 0.0005

. dfuller gdp, lags(0)

Dickey-Fuller test for unit root			Number of obs = 28

	Test Statistic	---------- Interpolated Dickey-Fuller ---------		
		1% Critical Value	5% Critical Value	10% Critical Value
Z(t)	-5.189	-3.736	-2.994	-2.628

MacKinnon approximate p-value for Z(t) = 0.0000

```
. kpss gdp, notrend

KPSS test for gdp

Maxlag = 8 chosen by Schwert criterion
Autocovariances weighted by Bartlett kernel

Critical values for H0: gdp is level stationary

10%: 0.347   5% : 0.463   2.5%: 0.574   1% : 0.739

Lag order      Test statistic
     0            .0843
     1            .105
     2            .219
     3            .316
     4            .299
     5            .286
     6            .326
     7            .351
     8            .37
```

Testing for stationarity in MSE

```
. pperron mse

Phillips-Perron test for unit root              Number of obs   =        27
                                                Newey-West lags =         2

                          ---------- Interpolated Dickey-Fuller ---------
              Test        1% Critical       5% Critical      10% Critical
            Statistic        Value            Value             Value
------------------------------------------------------------------------------
 Z(rho)       1.519         -17.336          -12.564           -10.240
 Z(t)         0.532          -3.736           -2.994            -2.628
------------------------------------------------------------------------------
MacKinnon approximate p-value for Z(t) = 0.9858

. pperron D.mse

Phillips-Perron test for unit root              Number of obs   =        26
                                                Newey-West lags =         2

                          ---------- Interpolated Dickey-Fuller ---------
              Test        1% Critical       5% Critical      10% Critical
            Statistic        Value            Value             Value
------------------------------------------------------------------------------
 Z(rho)     -19.092         -17.268          -12.532           -10.220
 Z(t)        -3.350          -3.743           -2.997            -2.629
------------------------------------------------------------------------------
MacKinnon approximate p-value for Z(t) = 0.0128


. dfuller mse in 1/28, lags(0)

Dickey-Fuller test for unit root                Number of obs   =        27

                          ---------- Interpolated Dickey-Fuller ---------
              Test        1% Critical       5% Critical      10% Critical
            Statistic        Value            Value             Value
------------------------------------------------------------------------------
 Z(t)         0.939          -3.736           -2.994            -2.628
------------------------------------------------------------------------------
MacKinnon approximate p-value for Z(t) = 0.9936

. dfuller D.mse in 1/28, lags(0)

Dickey-Fuller test for unit root                Number of obs   =        26

                          ---------- Interpolated Dickey-Fuller ---------
              Test        1% Critical       5% Critical      10% Critical
            Statistic        Value            Value             Value
```

```
--------------------------------------------------------------------------
 Z(t)                -3.345             -3.743             -2.997             -2.629
--------------------------------------------------------------------------
MacKinnon approximate p-value for Z(t) = 0.0130


. kpss mse in 1/28, notrend

KPSS test for lmse

Maxlag = 8 chosen by Schwert criterion
Autocovariances weighted by Bartlett kernel

Critical values for H0: mse is level stationary

10%: 0.347  5% : 0.463  2.5%: 0.574  1% : 0.739

Lag order    Test statistic
    0            1.26
    1            .743
    2            .564
    3            .476
    4            .426
    5            .399
    6            .386
    7            .38
    8            .379

. kpss dmse in 1/28, notrend

KPSS test for D.mse

Maxlag = 8 chosen by Schwert criterion
Autocovariances weighted by Bartlett kernel

Critical values for H0: D.mse is level stationary

10%: 0.347  5% : 0.463  2.5%: 0.574  1% : 0.739

Lag order    Test statistic
    0            .429
    1            .352
    2            .307
    3            .283
    4            .251
    5            .223
    6            .209
    7            .201
    8            .199
```

Testing the order of the VAR

```
.      varsoc lmse lmsupply unemp inflat, maxlag(2) exog(d1 d2 s1)

       Selection-order criteria
       Sample: 1982 - 2010                          Number of obs     =        29
       +--------------------------------------------------------------------------+
       lag    LL      LR      df    p     FPE      AIC      HQIC      SBIC
       ----+---------------------------------------------------------------------
       0  -824.916                         1.8e+20  57.9942  58.2305  58.7486
       1  -729.545  190.74   16  0.000  8.0e+17  52.5203  52.9929*  54.0291*
       2  -711.061  36.969*  16  0.002  7.9e+17*  52.349*  53.0578  54.6121
       +--------------------------------------------------------------------------+
       Endogenous: lmse lmsupply unemp inflat
       Exogenous:  d1 d2 s1  _cons

.      varsoc lmse lmsupply unemp inflat, maxlag(3) exog(d1 d2 s1)

       Selection-order criteria
       Sample: 1983 - 2010                          Number of obs     =        28
```

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```
          +---------------------------------------------------------------------+
          | lag     LL      LR       df     p     FPE      AIC      HQIC     SBIC  |
          |----+----------------------------------------------------------------- |
          | 0   -798.129                          2.1e+20  58.1521  58.3848  58.9133 |
          | 1   -702.994  190.27   16   0.000   7.9e+17  52.4996  52.965   54.0221* |
          | 2   -686.651  32.686   16   0.008   9.2e+17  52.4751  53.1732  54.7588 |
          | 3   -662.402  48.499*  16   0.000   7.5e+17* 51.8858* 52.8167* 54.9309 |
          +---------------------------------------------------------------------+
          Endogenous:  lmse lmsupply unemp inflat
          Exogenous:   d1 d2 s1  _cons

.      varsoc lmse lmsupply unemp rgdp, maxlag(2) exog(d1 d2 s1)

       Selection-order criteria
       Sample:  1982 - 2010                            Number of obs     =      29
          +---------------------------------------------------------------------+
          | lag     LL      LR       df     p     FPE      AIC      HQIC     SBIC  |
          |----+----------------------------------------------------------------- |
          | 0   -689.871                          1.6e+16  48.6807  48.917   49.4351 |
          | 1   -595.653  188.43   16   0.000   7.8e+13* 43.2864* 43.7589* 44.7952* |
          | 2   -581.53   28.246*  16   0.030   1.0e+14  43.4159  44.1246  45.679 |
          +---------------------------------------------------------------------+
          Endogenous:  lmse lmsupply unemp rgdp
          Exogenous:   d1 d2 s1  _cons

.      varsoc lmse lmsupply unemp rgdp, maxlag(3) exog(d1 d2 s1)

       Selection-order criteria
       Sample:  1983 - 2010                            Number of obs     =      28
          +---------------------------------------------------------------------+
          | lag     LL      LR       df     p     FPE      AIC      HQIC     SBIC  |
          |----+----------------------------------------------------------------- |
          | 0   -665.563                          1.6e+16  48.6831  48.9158  49.4443 |
          | 1   -575.87   179.39   16   0.000   9.0e+13  43.4193  43.8847  44.9418* |
          | 2   -562.396  26.947   16   0.042   1.3e+14  43.5997  44.2979  45.8835 |
          | 3   -529.207  66.378*  16   0.000   5.5e+13* 42.3719* 43.3028* 45.417 |
          +---------------------------------------------------------------------+
          Endogenous:  lmse lmsupply unemp rgdp
          Exogenous:   d1 d2 s1  _cons
```

Testing for cointegration

. vecrank lmse lmsupply inflat unemp, trend(constant) lags(1) sindicators(d1 d2 s1)

```
Johansen tests for cointegration
Trend: constant                                     Number of obs =      30
Sample:  1981 - 2010                                Lags =         1

                                                       5%
maximum                                    trace      critical
rank     parms      LL       eigenvalue  statistic    value
0        16    -810.82124        .        115.1161    47.21
1        23    -766.12485    0.94919      25.7233*    29.68
2        28    -756.81171    0.46253       7.0971     15.41
3        31    -753.30422    0.20851       0.0821      3.76
4        32    -753.26318    0.00273
```

. vecrank lmse lmsupply rgdp unemp, trend(constant) lags(1) sindicators(d1 d2 s1)

```
Johansen tests for cointegration
Trend: constant                                     Number of obs =      30
Sample:  1981 - 2010                                Lags =         1
```

```
5%
maximum                                             trace      critical
rank    parms       LL       eigenvalue   statistic    value
0        16     -643.32309        .         56.9394    47.21
1        23     -627.64853     0.64830      25.5903*   29.68
2        28     -621.67571     0.32846      13.6447    15.41
3        31     -616.10986     0.31000       2.5130     3.76
4        32     -614.85338     0.08035
```

VECM with inflation

```
. vec lmse lmsupply inflat unemp, trend(constant) lags(1) sindicators(d1 d2 s1)

Vector error-correction model

Sample: 1981 - 2010                        No. of obs     =          30
AIC           = 52.60832
Log likelihood = -766.1248                 HQIC           =    52.95199
Det(Sigma_ml) = 1.79e+17                   SBIC           =    53.68257


Equation            Parms    RMSE     R-sq     chi2      P>chi2

D_lmse                5     .158466   0.8983   220.8338   0.0000
D_lmsupply            5     .454423   0.0585   1.554373   0.9067
D_inflat              5     2.3e+09   0.6545   47.35755   0.0000
D_unemp               5     4.84928   0.3644   14.33573   0.0136




Coef.    Std. Err.      z    P>z     [95% Conf. Interval]

D_lmse
_ce1
L1.   -.0956335   .0072311   -13.23   0.000    -.1098061   -.0814609

d1    -.0431814   .0737871    -0.59   0.558    -.1878014    .1014387
d2     .3536915   .1120597     3.16   0.002     .1340585    .5733245
s1     .0963324   .1713313     0.56   0.574    -.2394708    .4321357
_cons   .0239799   .0363785     0.66   0.510    -.0473207    .0952804


D_lmsupply
_ce1
L1.   -.0068168   .0207361    -0.33   0.742    -.0474588    .0338252

d1     .0890302   .2115948     0.42   0.674    -.3256879    .5037483
d2     .0950453   .3213468     0.30   0.767    -.5347827    .7248734
s1    -.2932792   .4913163    -0.60   0.551    -1.256242    .6696831
_cons   .027409    .1043204     0.26   0.793    -.1770552    .2318733


D_inflat
_ce1
L1.    6.15e+08   1.06e+08     5.79   0.000     4.06e+08    8.23e+08

d1     8.64e+08   1.08e+09     0.80   0.425    -1.26e+09    2.99e+09
d2     4.78e+09   1.65e+09     2.90   0.004     1.55e+09    8.00e+09
s1    -6.46e+08   2.52e+09    -0.26   0.798    -5.58e+09    4.29e+09
_cons    -2.6956   5.34e+08    -0.00   1.000    -1.05e+09    1.05e+09


D_unemp
_ce1
L1.    .1188065   .2212809     0.54   0.591    -.3148961    .5525091

d1     2.031668   2.257988     0.90   0.368    -2.393906    6.457243
d2    -.645662    3.429182    -0.19   0.851    -7.366735    6.075411
```

```
s1    6.875212   5.242975     1.31   0.190   -3.400831    17.15125
_cons  2.135307   1.113233     1.92   0.055   -.0465888    4.317202


Cointegrating equations

Equation          Parms    chi2    P>chi2

_ce1                2    16.01349   0.0003


Identification:  beta is exactly identified

Johansen normalization restriction imposed

beta      Coef.    Std. Err.      z    P>z    [95% Conf. Interval]

_ce1
lmse          1          .        .      .          .           .
lmsupply  -.944935   .4329318   -2.18   0.029   -1.793466   -.0964042
inflat   -1.55e-09   9.36e-11  -16.58   0.000   -1.74e-09   -1.37e-09
unemp    -.0291059   .0145736   -2.00   0.046   -.0576698   -.0005421
_cons    11.51053          .        .      .          .           .
```

VECM with real GDP

```
. vec lmse lmsupply rgdp unemp, trend(constant) lags(1) sindicators(d1 d2 s1)

Vector error-correction model

Sample:  1981 - 2010                     No. of obs     =         30
AIC            =   43.37657
Log likelihood = -627.6485               HQIC           =   43.72023
Det(Sigma_ml)  =   1.75e+13              SBIC           =   44.45082


Equation          Parms    RMSE    R-sq    chi2    P>chi2

D_lmse              5     .34809   0.5093  25.94846  0.0001
D_lmsupply          5    .404276   0.2549   8.550631  0.1284
D_rgdp              5     1.1e+07  0.3880  15.85136  0.0073
D_unemp             5     4.87503  0.3577  13.92132  0.0161



         Coef.    Std. Err.      z    P>z    [95% Conf. Interval]

D_lmse
_ce1
L1.  -.3351616   .0826845   -4.05   0.000   -.4972203   -.1731029

d1   -.498657    .2008276   -2.48   0.013   -.8922719   -.105042
d2   -.0969741   .2718254   -0.36   0.721   -.6297422    .4357939
s1    .7380851   .4181951    1.76   0.078   -.0815623   1.557733
_cons  .6094112   .140989     4.32   0.000    .3330778    .8857447


D_lmsupply
_ce1
L1.   .2490012   .0960309    2.59   0.010    .0607841    .4372184

d1    .4481717   .2332439    1.92   0.055   -.008978     .9053214
d2    .4436243   .3157017    1.41   0.160   -.1751397   1.062388
s1   -.8518418   .4856975   -1.75   0.079   -1.803791    .1001077
_cons  -.3188448  .1637466   -1.95   0.052   -.6397822    .0020925
```

```
D_rgdp
_ce1
L1.     3693582    2586085     1.43    0.153     -1375052      8762216

d1   -1.16e+07    6281191    -1.84    0.065     -2.39e+07     723656.9
d2    1.09e+07    8501756     1.28    0.202     -5811288      2.75e+07
s1   -9478669    1.31e+07    -0.72    0.469     -3.51e+07     1.62e+07
_cons    -.000031    4409648    -0.00    1.000     -8642750      8642750


D_unemp
_ce1
L1.     .1711824   1.158004     0.15    0.882     -2.098463     2.440828

d1    2.245652    2.812607     0.80    0.425     -3.266957     7.758261
d2   -.4278555    3.806937    -0.11    0.911     -7.889315     7.033604
s1    6.620924    5.856856     1.13    0.258     -4.858303     18.10015
_cons    1.756622    1.974563     0.89    0.374     -2.11345      5.626693



Cointegrating equations

Equation          Parms    chi2     P>chi2

_ce1                 3    152.892   0.0000


Identification:  beta is exactly identified

Johansen normalization restriction imposed

beta      Coef.    Std. Err.     z     P>z     [95% Conf. Interval]

_ce1
lmse          1          .          .        .          .            .
lmsupply  -1.257284   .2671694    -4.71   0.000    -1.780926    -.7336417
rgdp      1.43e-08   5.38e-09     2.67   0.008     3.81e-09     2.49e-08
unemp      -.04864    .0074483    -6.53   0.000    -.0632384    -.0340415
_cons     19.07043         .          .        .          .            .
```

VECM with inflation and unemployment squared

```
. vec lmse lmsupply inflat unemp unemp2, trend(constant) lags(1) sindicators(d1   d2      s1)

Vector error-correction model

Sample:  1981 - 2010                        No. of obs     =          30
AIC            =  66.81501
Log likelihood = -973.2252                  HQIC           =  67.24833
Det(Sigma_ml) =  1.04e+22                    SBIC           =   68.1695

Equation          Parms    RMSE     R-sq     chi2     P>chi2

D_lmse              5    .155381   0.9022   230.6923   0.0000
D_lmsupply          5    .455138   0.0556   1.471089   0.9164
D_inflat            5    2.4e+09   0.6434   45.1072    0.0000
D_unemp             5    4.80884   0.3750   15.00006   0.0104
D_unemp2            5    621.214   0.2845   9.939079   0.0770




Coef.    Std. Err.     z     P>z     [95% Conf. Interval]

D_lmse
_ce1
L1.   -.213786    .0158067   -13.53   0.000    -.2447665    -.1828054
```

214

```
d1    -.1821504    .073341     -2.48    0.013    -.3258961    -.0384046
d2    .2845445     .1100551     2.59    0.010     .0688404     .5002485
s1    .1993747     .1685038     1.18    0.237    -.1308868     .5296361
_cons  .0223477    .0356927     0.63    0.531    -.0476088     .0923042


D_lmsupply
_ce1
L1.   -.0079283    .0463004    -0.17    0.864    -.0986755     .0828189

d1    .0847482     .2148283     0.39    0.693    -.3363075     .5058039
d2    .0930592     .3223701     0.29    0.773    -.5387746     .724893
s1    -.2928927    .4935763    -0.59    0.553    -1.260285     .6744991
_cons  .0310729    .1045501     0.30    0.766    -.1738415     .2359873


D_inflat
_ce1
L1.   1.35e+09     2.41e+08     5.63    0.000     8.82e+08     1.83e+09

d1    1.74e+09     1.12e+09     1.56    0.119    -4.46e+08     3.93e+09
d2    5.21e+09     1.67e+09     3.11    0.002     1.93e+09     8.49e+09
s1    -1.29e+09    2.56e+09    -0.50    0.615    -6.31e+09     3.74e+09
_cons  .2983696    5.43e+08     0.00    1.000    -1.06e+09     1.06e+09


D_unemp
_ce1
L1.   .4137559     .489196      0.85    0.398    -.5450507    1.372562

d1    2.318293     2.269809     1.02    0.307    -2.13045     6.767036
d2    -.5001184    3.406062    -0.15    0.883    -7.175877    6.17564
s1    6.60617      5.214973     1.27    0.205    -3.614989    16.82733
_cons  2.213951    1.104644     2.00    0.045     .0488896    4.379013


D_unemp2
_ce1
L1.   55.41933     63.19518     0.88    0.381    -68.44094    179.2796

d1    319.1328     293.2177     1.09    0.276    -255.5634    893.829
d2    58.30782     440.0009     0.13    0.895    -804.0781    920.6937
s1    374.2495     673.6791     0.56    0.579    -946.1373    1694.636
_cons  216.1571    142.6997     1.51    0.130    -63.52929    495.8434



Cointegrating equations

Equation          Parms    chi2     P>chi2

_ce1                3    82.70499   0.0000



Identification:  beta is exactly identified

Johansen normalization restriction imposed

beta      Coef.    Std. Err.     z     P>z     [95% Conf. Interval]


_ce1
lmse            1          .        .        .          .           .
lmsupply  -.3910223    .1806411    -2.16    0.030    -.7450723    -.0369723
inflat   -6.53e-10    3.73e-11   -17.50    0.000    -7.26e-10    -5.80e-10
unemp    -.0008137    .0166534    -0.05    0.961    -.0334539     .0318264
unemp2   -.0004139    .0002011    -2.06    0.040    -.000808     -.0000197
_cons    -.6407983          .        .        .          .           .
```

VECM with real GDP and unemployment squared

```
. vec lmse lmsupply rgdp unemp unemp2, trend(constant) lags(1) sindicators(d1 d2  s1)

Vector error-correction model

Sample:  1981 - 2010                         No. of obs      =        30
AIC            =   56.95098
Log likelihood = -825.2647                   HQIC            =  57.38429
Det(Sigma_ml) =  5.39e+17                     SBIC            =  58.30547


Equation           Parms     RMSE     R-sq     chi2      P>chi2

D_lmse                5    .441627   0.2102   6.652133   0.2478
D_lmsupply            5    .454652   0.0576   1.527721   0.9098
D_rgdp                5    1.1e+07   0.3390   12.82426   0.0251
D_unemp               5    4.11641   0.5420   29.58887   0.0000
D_unemp2              5    350.543   0.7722   84.72679   0.0000




           Coef.   Std. Err.      z    P>z     [95% Conf. Interval]

D_lmse
_ce1
L1.    -.1394355   .1621741   -0.86   0.390    -.4572908    .1784198

d1      -.176634   .2764638   -0.64   0.523     -.718493     .365225
d2       .340553   .3142267    1.08   0.278      -.27532    .9564259
s1     -.0139817   .4771496   -0.03   0.977    -.9491777    .9212143
_cons  -.7929135   1.081305   -0.73   0.463    -2.912232    1.326405


D_lmsupply
_ce1
L1.     .0480618    .166957    0.29   0.773    -.2791679    .3752915

d1      .1456335   .2846174    0.51   0.609    -.4122063    .7034732
d2      .1066071    .323494    0.33   0.742    -.5274294    .7406437
s1     -.2970386   .4912219   -0.60   0.545    -1.259816    .6657387
_cons   .3542881   1.113195    0.32   0.750    -1.827534    2.536111


D_rgdp
_ce1
L1.    -790901.1    4154836   -0.19   0.849    -8934231     7352429

d1     -1.78e+07    7082894   -2.51   0.012    -3.17e+07   -3906997
d2      5528619     8050365    0.69   0.492    -1.02e+07    2.13e+07
s1     -1355350     1.22e+07  -0.11   0.912    -2.53e+07    2.26e+07
_cons   8.00862     2.77e+07   0.00   1.000    -5.43e+07    5.43e+07


D_unemp
_ce1
L1.     4.802659   1.511627    3.18   0.001     1.839924    7.765393

d1      7.474609   2.576923    2.90   0.004     2.423933    12.52529
d2       .3682349  2.928912    0.13   0.900    -5.372327    6.108797
s1      7.339814   4.447519    1.65   0.099    -1.377163    16.05679
_cons   33.88818   10.07886    3.36   0.001     14.13398    53.64238


D_unemp2
_ce1
L1.     962.6802   128.7262    7.48   0.000     710.3816    1214.979

d1      1373.871   219.4439    6.26   0.000     943.7686    1803.973
d2      243.4433   249.4184    0.98   0.329    -245.4078    732.2943
```

```
s1      495.1149   378.7389      1.31    0.191    -247.1998    1237.43
_cons   6579.402   858.289       7.67    0.000     4897.186    8261.617


Cointegrating equations

Equation            Parms   chi2     P>chi2

_ce1                   4   268.0698   0.0000


Identification:  beta is exactly identified

Johansen normalization restriction imposed

beta       Coef.    Std. Err.     z     P>z     [95% Conf. Interval]

_ce1
lmse          1          .          .      .          .           .
lmsupply   .3777686   .1086928    3.48   0.001    .1647347    .5908025
rgdp      -2.42e-08   3.86e-09   -6.26   0.000   -3.18e-08   -1.66e-08
unemp      .1436506   .0184034    7.81   0.000    .1075807    .1797206
unemp2    -.0020672   .000222    -9.31   0.000   -.0025023   -.0016322
_cons    -23.58065        .          .      .          .           .
```

Factor Analysis Formal MSEs

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.582
Bartlett's Test of Sphericity	Approx. Chi-Square	1265.466
	df	210
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings	
	Total	% of Variance	Cumulative %	Total	% of Variance
1	8.330	39.669	39.669	8.330	39.669
2	2.722	12.963	52.632	2.722	12.963
3	2.405	11.455	64.086	2.405	11.455
4	1.603	7.634	71.720	1.603	7.634
5	1.258	5.991	77.712	1.258	5.991
6	1.063	5.064	82.776	1.063	5.064
7	.640	3.046	85.822		
8	.563	2.679	88.501		
9	.504	2.398	90.899		
10	.365	1.736	92.635		
11	.340	1.620	94.254		
12	.265	1.263	95.517		
13	.238	1.135	96.652		
14	.213	1.014	97.666		
15	.149	.710	98.376		
16	.101	.479	98.855		
17	.089	.425	99.280		
18	.067	.318	99.598		
19	.043	.203	99.801		
20	.031	.146	99.947		
21	.011	.053	100.000		

Extraction Method: Principal Component Analysis.

Scree Plot
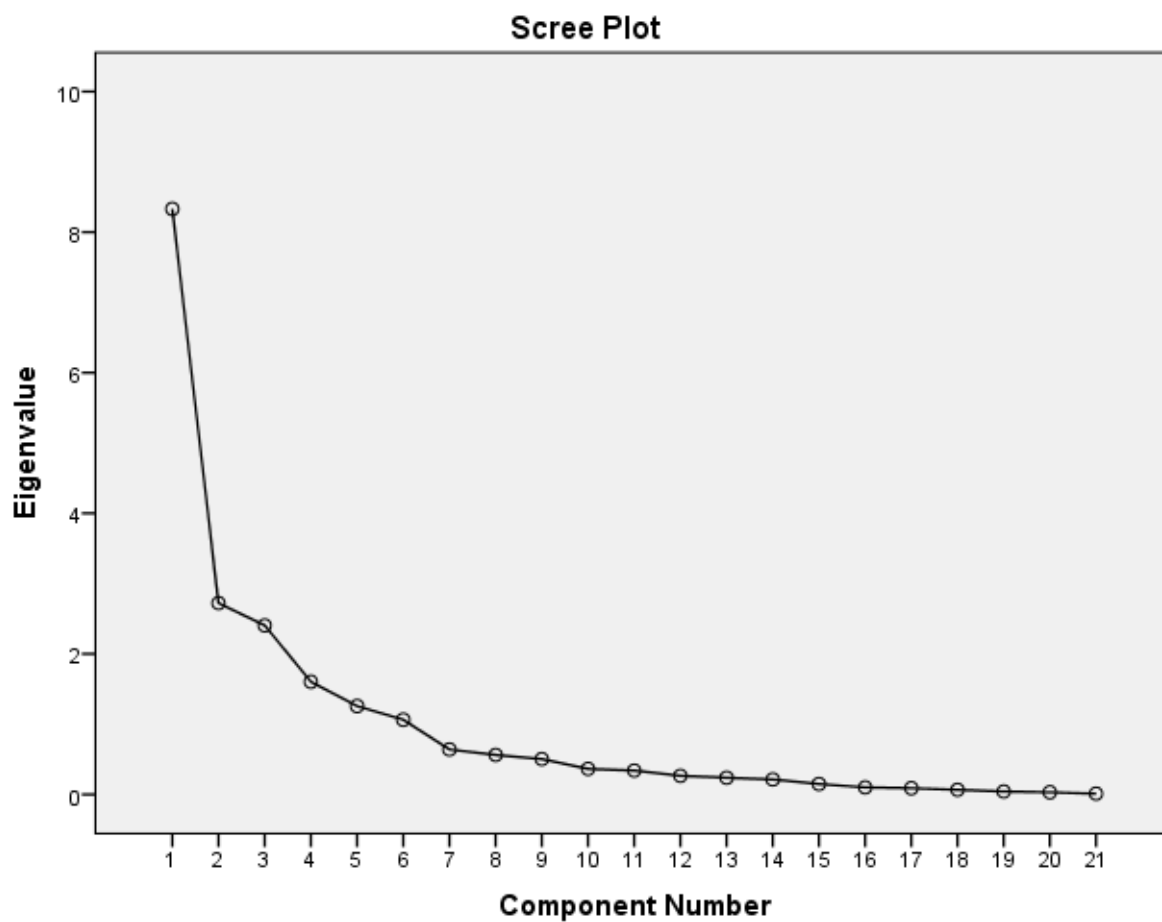
Rotated Component Matrix[a]

	Component					
	1	2	3	4	5	6
LakMngtSk	.897	.039	.091	.102	.046	-.123
LakEntreTran	.894	.168	.046	.058	.206	.182
LackInfo	.876	.176	-.070	.021	.104	.009
AcssTech	.868	.194	.031	.312	.143	.056
RitEmpl	.846	.120	.067	-.035	.032	.195
BizRegPros	.816	.301	-.012	.208	.218	.180
AcssBizNet	.577	.272	.105	.337	.367	.039
PolInstab	.065	.840	.310	.031	-.036	-.062
IntRates	.372	.773	-.182	.063	.312	.096
Taxes	.495	.717	-.107	.155	.191	.125
Corruptn	.005	.643	.320	-.176	-.312	.466
Crime	.493	.618	.107	.073	-.182	-.253
LakClients	.086	.105	.854	.246	.028	-.074
ExComp	-.189	-.023	.829	.020	-.020	.304

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LakProfMkts	.350	.195	.715	.167	.235	-.234
LatPayCred	.122	.035	.118	.895	.058	.020
Dollazn	.080	.197	.399	.725	.341	.183
GendDiscr	.529	-.030	.111	.592	-.404	-.158
AccFinac	.366	.150	.141	-.026	.719	.086
AcssBizPrem	.165	-.229	.052	.516	.700	.056
ProbAuth	.277	.022	.016	.110	.151	.894

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 9 iterations.

Component Transformation Matrix

Component	1	2	3	4	5	6
1	.812	.397	.165	.299	.236	.102
2	-.368	-.021	.788	.475	.126	.050
3	-.175	.770	.246	-.422	-.362	.082
4	-.235	.120	-.149	-.167	.622	.703
5	.340	-.484	.433	-.448	-.280	.429
6	-.056	.038	-.286	.528	-.577	.550

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Component Score Coefficient Matrix

	Component					
	1	2	3	4	5	6
AccFinac	.008	.007	.076	-.190	.451	-.052
LackInfo	.191	-.052	-.017	-.094	-.020	-.030
AcssBizNet	.034	.045	-.011	.070	.141	-.035
LakEntreTran	.184	-.077	.029	-.103	.020	.082
LakProfMkts	.054	-.014	.330	-.109	.137	-.245
GendDiscr	.122	-.083	-.020	.326	-.404	-.051
AcssBizPrem	-.055	-.095	-.034	.162	.366	-.016
AcssTech	.149	-.040	-.024	.062	-.044	.008
RitEmpl	.210	-.105	.058	-.132	-.082	.113
LakClients	.012	-.039	.375	-.018	-.012	-.090
LakMngtSk	.225	-.125	.069	-.080	-.061	-.116
BizRegPros	.118	.012	-.045	.013	.017	.082

ProbAuth	.026	-.083	-.037	.046	-.057	.643
ExComp	-.016	-.087	.389	-.097	-.033	.201
LatPayCred	-.089	.032	-.101	.500	-.115	.038
Dollazn	-.125	.072	.044	.323	.094	.095
Taxes	-.031	.267	-.139	.063	.058	.026
IntRates	-.077	.321	-.170	.020	.173	-.014
Crime	.051	.207	.006	.012	-.137	-.214
PolInstab	-.106	.348	.064	.003	-.003	-.106
Corruptn	-.044	.215	.101	-.060	-.227	.326

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Component Scores.

Component Score Covariance Matrix

Component	1	2	3	4	5	6
1	1.000	.000	.000	.000	.000	.000
2	.000	1.000	.000	.000	.000	.000
3	.000	.000	1.000	.000	.000	.000
4	.000	.000	.000	1.000	.000	.000
5	.000	.000	.000	.000	1.000	.000
6	.000	.000	.000	.000	.000	1.000

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Component Scores.

Factor Analysis Informal MSEs

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.548
Bartlett's Test of Sphericity	Approx. Chi-Square	1261.412
	df	210
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings	
	Total	% of Variance	Cumulative %	Total	% of Variance
1	4.707	22.415	22.415	3.198	15.228
2	3.395	16.168	38.583	2.825	13.454
3	2.516	11.980	50.562	2.586	12.312
4	1.825	8.688	59.251	2.514	11.971
5	1.477	7.035	66.286	2.343	11.159
6	1.299	6.186	72.472	1.753	8.348
7	.984	4.687	77.158		
8	.908	4.325	81.484		
9	.789	3.756	85.240		
10	.713	3.396	88.637		
11	.542	2.583	91.220		
12	.375	1.788	93.007		
13	.340	1.620	94.628		
14	.276	1.313	95.940		
15	.217	1.035	96.975		
16	.187	.891	97.866		
17	.182	.865	98.731		
18	.111	.526	99.257		
19	.076	.362	99.620		
20	.053	.251	99.871		
21	.027	.129	100.000		

Extraction Method: Principal Component Analysis.

Scree Plot

Component Number
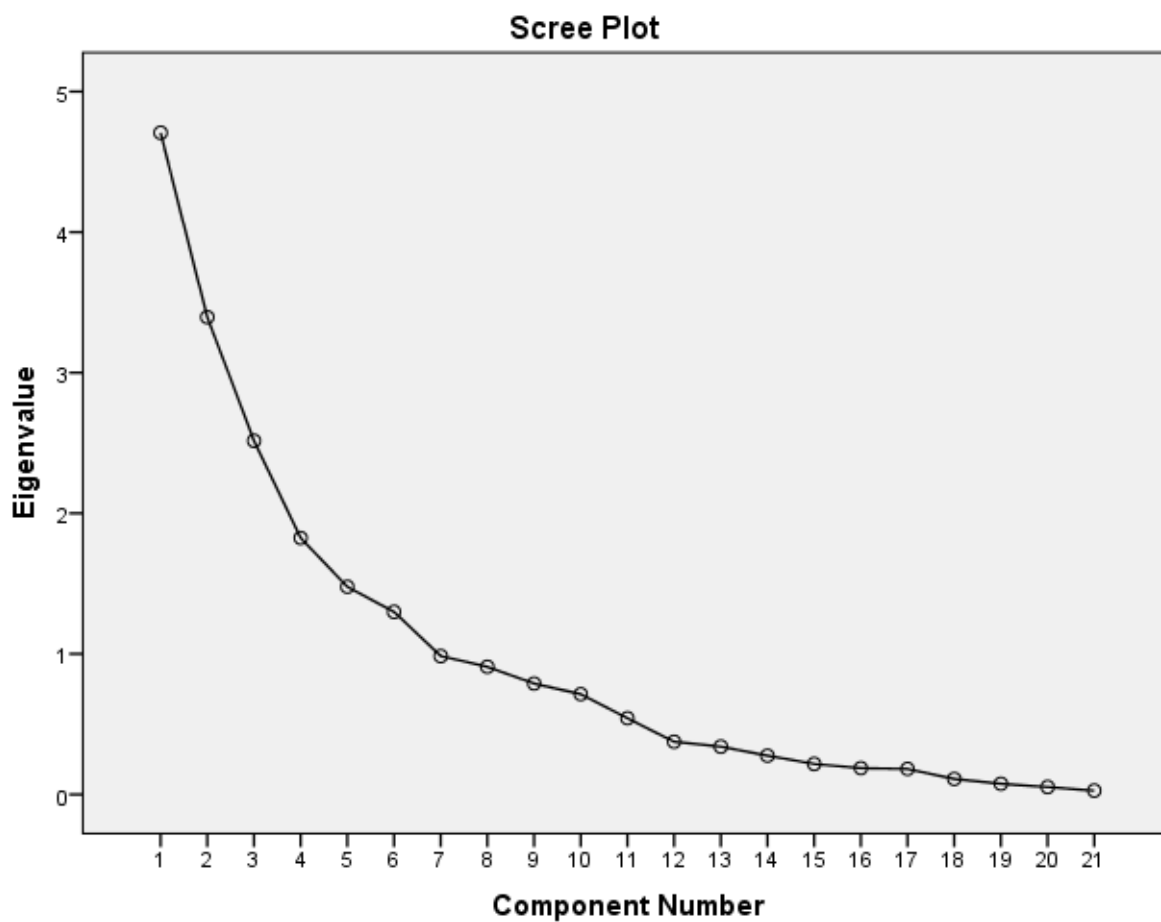
Rotated Component Matrix[a]

	Component					
	1	2	3	4	5	6
LakClients	.869	.113	-.016	-.017	-.097	-.070
ExComp	.831	-.251	.112	.069	-.015	.135
LakProfMkts	.646	-.065	.147	.296	.063	.079
AcssBizPrem	.578	-.067	.027	.168	.393	.289
AccFinac	.566	-.234	.290	.175	.174	.081
Taxes	-.186	.850	.195	.028	.050	.061
IntRates	-.207	.816	.276	.107	.082	.169
Crime	.061	.747	-.091	.012	-.054	.106
RitEmpl	-.247	.517	.415	.354	.288	.123
LackInfo	.189	.004	.847	.057	.049	.066
LakEntreTran	.327	.195	.761	-.146	.015	-.074
LakMngtSk	-.006	.227	.721	.183	-.013	.118
Dollazn	.442	.412	-.512	.126	.283	-.006
AcssBizNet	.162	.039	-.024	.863	.291	.028
BizRegPros	.115	.150	-.039	.843	.363	-.072
ProbAuth	.217	.021	.189	.678	-.353	.091

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GendDiscr	.056	.105	-.017	.124	.866	-.162
AcssTech	.046	-.028	.037	.143	.856	.289
LatPayCred	.199	.347	.128	.366	.376	-.235
Corruptn	.264	.141	-.049	-.187	.035	.836
PolInstab	.004	.190	.186	.175	.020	.820

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 8 iterations.

Component Transformation Matrix

Component	1	2	3	4	5	6
1	.474	.362	.360	.534	.426	.218
2	-.704	.682	.194	-.005	.029	.036
3	.184	-.007	.722	-.321	-.532	.242
4	.276	.385	-.473	-.422	-.018	.611
5	.258	.394	-.276	.365	-.669	-.346
6	.320	.317	.106	-.548	.294	-.631

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Component Score Coefficient Matrix

	Component					
	1	2	3	4	5	6
AccFinac	.141	-.103	.111	.009	.059	.006
LackInfo	.019	-.064	.349	-.043	.035	-.024
AcssBizNet	-.041	-.061	-.060	.382	-.006	.022
LakEntreTran	.129	.071	.309	-.174	.031	-.143
LakProfMkts	.187	-.013	.021	.077	-.041	-.003
GendDiscr	-.008	-.004	.015	-.101	.423	-.132
AcssBizPrem	.145	-.042	-.020	-.025	.147	.129
AcssTech	-.071	-.110	.022	-.065	.416	.162
RitEmpl	-.121	.101	.130	.099	.078	.032
LakClients	.349	.151	-.053	-.094	-.097	-.131
LakMngtSk	-.041	.011	.273	.043	-.030	.018
BizRegPros	-.039	-.011	-.064	.353	.031	-.048
ProbAuth	.013	-.026	.014	.381	-.307	.055
ExComp	.261	-.052	.020	-.028	-.042	.029

LatPayCred	.068	.123	.024	.062	.110	-.202
Dollazn	.202	.233	-.270	-.035	.057	-.056
Taxes	-.004	.318	.018	-.055	-.024	-.037
IntRates	-.039	.275	.047	-.015	-.017	.034
Crime	.093	.327	-.113	-.045	-.092	-.003
PolInstab	-.082	-.027	.008	.088	-.045	.491
Corruptn	.056	.026	-.081	-.113	.006	.482

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Component Scores.

Component Score Covariance Matrix

Component	1	2	3	4	5	6
1	1.000	.000	.000	.000	.000	.000
2	.000	1.000	.000	.000	.000	.000
3	.000	.000	1.000	.000	.000	.000
4	.000	.000	.000	1.000	.000	.000
5	.000	.000	.000	.000	1.000	.000
6	.000	.000	.000	.000	.000	1.000

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Component Scores.

Logistic Regression

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	88	100.0
	Missing Cases	0	.0
	Total	88	100.0
Unselected Cases		0	.0
Total		88	100.0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
0	0
1	1

Iteration History[a,b,c]

		-2 Log likelihood	Coefficients
Iteration			Constant
Step 0	1	118.287	-.409
	2	118.286	-.415
	3	118.286	-.415

a. Constant is included in the model.

b. Initial -2 Log Likelihood: 118.286

c. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

Classification Table[a,b]

			Predicted		
			WilFormal		Percentage
	Observed		0	1	Correct
Step 0	WilFormal	0	53	0	100.0
		1	35	0	.0
	Overall Percentage				60.2

a. Constant is included in the model.

b. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-.415	.218	3.629	1	.057	.660

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	FAC1_1	12.777	1	.000
		FAC2_1	6.619	1	.010
		FAC3_1	9.855	1	.002
		FAC4_1	10.959	1	.001
		FAC5_1	7.391	1	.007
		FAC6_1	.140	1	.708
		nach	.325	1	.569
	Overall Statistics		54.324	7	.000

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	83.836	7	.000
	Block	83.836	7	.000
	Model	83.836	7	.000

Model Summary

Step	-2 Log likelihood	Cox and Snell R Square	Nagelkerke R Square
1	34.450[a]	.614	.831

a. Estimation terminated at iteration number 8 because

parameter estimates changed by less than .001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	9.828	8	.277

Classification Table[a]

		Predicted		
		WilFormal		Percentage
	Observed	0	1	Correct
Step 1	WilFormal 0	49	4	92.5
	1	3	32	91.4
	Overall Percentage			92.0

a. The cut value is .500

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
FAC1_1	-3.241	.922	12.348	1	.000	.039	.006	.239
FAC2_1	-.200	.549	.133	1	.716	.819	.279	2.403
FAC3_1	-4.092	1.286	10.122	1	.001	.017	.001	.208
FAC4_1	2.373	.954	6.187	1	.013	10.729	1.654	69.600
FAC5_1	2.736	1.049	6.804	1	.009	15.433	1.974	120.631
FAC6_1	-.542	.500	1.175	1	.278	.581	.218	1.550
nach	-.115	.037	9.433	1	.002	.892	.829	.959
Constant	2.071	1.028	4.061	1	.044	7.935		

a. Variable(s) entered on step 1: FAC1_1, FAC2_1, FAC3_1, FAC4_1, FAC5_1, FAC6_1, nach.

Casewise List[b]

	Selected	Observed			Temporary Variable	
Case	Status[a]	WilFormal	Predicted	Predicted Group	Resid	ZResid
2	S	1**	.017	0	.983	7.535
17	S	1**	.159	0	.841	2.304
25	S	0**	.763	1	-.763	-1.793
54	S	1**	.163	0	.837	2.263

a. S = Selected, U = Unselected cases, and ** = Misclassified cases.

b. Cases with studentized residuals greater than 2.000 are listed.

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