

MIDLANDS STATE UNIVERSITY



FACULTY OF COMMERCE

DEPARTMENT OF BANKING AND FINANCE

A critique of the appropriateness of the investment lifecycle model in Zimbabwe.

FINAL DRAFT

BY

KUNAKA BS MUCHEMEDZI

STUDENT NUMBER: R0434756

SUPERVISOR: MR M SIBANDA

This dissertation is submitted in partial fulfilment of the requirements of the Bachelor of Commerce Banking and Finance Honours Degree in the Department of Banking and Finance at Midlands State University.

Gweru: Zimbabwe, October

RELEASE FORM

NAME OF STUDENT: Kunaka BS Muchemedzi

DISSERTATION TITLE: A critique of the appropriateness of the investment life cycle model in Zimbabwe.

DEGREE TITLE: Bachelor of Commerce Honours Degree in Banking and Finance.

YEAR THIS DEGREE GRANTED: 2012.

Permission is hereby granted to the Midlands State University Library to produce single copies of this dissertation and to lend or sell such copies for private, scholarly or scientific research purpose only. The author reserves other publication rights and neither the dissertation nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

PERMAMENT ADDRESS: 20 Cashel street east view Kadoma

SIGNED.....

DATE.....

DECLARATION

I, Kunaka BS Muchemedzi, do hereby declare that this study represents my own work, and that it has never been previously submitted for a degree at this or any other university.

.....

STUDENT `S SIGNATURE DATE

.....

SUPERVISOR`S SIGNATURE DATE

Acknowledgement

Acknowledgements of gratitude proceed from the Author of this research project to first and foremost the invisible Supreme Being, Jesus Christ, our living God of heaven who by virtue of His goodwill and abundant grace has preserved the existence of a life in the name of the Author to the time of the comprehension, preparation and completion of this research project. The author has also heart felt utterances of thanks to all the people correctly arranged by God on the way to attaining this milestone in this endeavour of a life of liberty, freedom and pursuit of happiness. Mr and Mrs SF Muchemedzi, my parents, they have been such an unmovable pillar of strength and their contribution is way beyond measurable. Mr M Sibanda, my cherished supervisor, Mr N Nkomazana, Mrs Chikoko, Mr Mabhonga and Mrs Santu who are my lecturers and sources of inspiration have completed their commission in delivering safely this enlightenment to me without any compromise. To them compliments of gratitude proceed for their commitment and selfless devotion cannot be over emphasised.

Dedication

This study is dedicated to my parents Mr and Mrs SF Muchemedzi and my cherished brother Tifumiswe, Sister Martha Muchemedzi and beloved fiancée Novish Noor.

Abbreviations and definitions

USA- United States of America

RSA- South Africa

GDP- Gross domestic product

GNP- gross national product

GFCF- gross fixed capital formation

UE- unemployment rate

TO- Trade openness

Abstract

The study seeks to investigate the compatibility of the generalisations of the investment life cycle model in Zimbabwe. In that it contrasts the economic condition of Zimbabwe with chosen benchmarks of efficient economies which are USA and RAS.

A comparative study of descriptive statistics is employed in carrying out this study with ratio analysis on selected macro-economic variables including inflation and economic output measures. Data will be collected from documents published by central banks, neutral bodies such as UN and IMF so as to complement country central records of the involved economies.

The descriptive statistics showed economic decline from 2000 to 2009, this is indicated by the inflationary rate of 241 million in 2009, a decline by 27.1% of the gross domestic output, the decline of the gross fixed capital formation from 10.6% to 4.3% and decline in other variables such as trade openness and financial market trends.

This gave a conclusion that the Zimbabwe had an irregular economic condition in the period mentioned that did not sustain investment and increased pressure on personal income through increased consumption expenditure. Capital preservation and appreciation was disabled due to uncertainty and absence of intelligible financial instruments on financial markets.

The economic condition the investment life cycle model assumes is to be achieved before it can be applicable to a country. This model can be used as an integral proxy to measurement of the standard of living for the general population in Zimbabwe and its generalisations can be used as objectives in economic reform strategies.

Table of Contents

Approval form	ii
Release form	iii
Acknowledgements.....	iv
Dedication	v
Abstract.....	vi
Abbreviations.....	vii
Chapter 1 Introduction.....	1
1.1 Introduction	1
1.2 Background to study	1
1.3 statement of the problem	3
1.4 purpose of the study.....	3
1.5 Objectives of the study	3
1.6 Research questions.....	3
1.7 Significance of the study.....	4
1.8 Assumptions	4
1.9 Scope of the study	4
1.9.1 Delimitations	4
1.9.2 Limitations.....	4
1.9.3 Conclusion.....	5
Chapter Two: Literature Review.....	6
2.1 introduction	6
2.2 Product and investment life cycles	7
2.3 Accumulation	11
2.4 Consolidation	11
2.5 Decumulation/Spending and Gifting Phases	13
2.6 Implicating Economic variables.....	15
2.6.1Employment.....	15
2.6.2 Inflation.....	16
2.6.3 GDP	17
2.6.4 Financial markets	17
2.7 Conclusion	18

Chapter 3 Research methodology	20
3.1 introduction	20
3.2 Research design	20
3.2.1 Advantages of comparative study	21
3.2.2 Disadvantages of comparative study.....	21
3.3 Statistical design	21
3.3.1 GDP components	21
3.3.2 Real GDP.....	22
3.3.4 GDP per capita	22
3.3.5 GNP per capita	23
3.4 Data collection Instruments.....	23
3.4.1 Documentary analysis.....	23
3.4.2 Strengths of documentary analysis.....	24
3.4.3 Weaknesses of documentary analysis	24
3.5 Validity and Reliability.....	24
3.6 Data presentation , interpretation and analysis.....	25
3.7 Summary	25
Chapter 4 Data presentation, interpretation and analysis.....	26
4.1 Introduction	26
4.2 Economic performance.....	26
4.3 inflation irregularities.....	26
4.4 Other economic indicators.....	29
4.4.1 Real gross domestic product.....	30
4.4.2 GDP per capita	31
4.4.3 Gross National product per capita.....	32
4.4.4 Gross fixed capital formation.....	33
4.4.5 Industrial index	35
4.4.6 Agricultural Index.....	36
4.4.7 Food production index.....	37
4.4.8 Trade openness.....	38
4.5 Employment.....	39
4.6 Financial markets	40
4.7 Summary	41

Chapter 5 Summary, Conclusion and Recommendations	43
5.1 Introduction	43
5.2 Summary of the study.....	43
5.3 Summary major findings	44
5.4 Conclusion.....	46
5.5 Recommendations	46
5.6 Further evaluation and replication of findings	47
5.7 Practical limitations.....	47
References.....	48

CHAPTER ONE: INTRODUCTION

1.1 Introduction

The study seeks to investigate the applicability of the investment life cycle model on the prevailing situation in Zimbabwean. This chapter enlightens on the problem under study and its setting. In this chapter, the background to the study, statement of the problem, the purpose and the objectives of the study will be highlighted. Research questions are mentioned along with the significance, scope and assumptions of the study in this chapter.

1.2 Background to the study

The Zimbabwean financial environment has been confronted with a decade long period of economic recession, declining banking facilities and hyper inflationary levels against the local currency which have undermined investment in Zimbabwe (RBZ 2012). During the time preceding the dollarization of the economy in February 2009 high inflationary rates caused skyrocketing of commodity prices such as cars and houses and other needs expected to have been satisfied under the generalisations of the model, hence procurement of such investments was difficult (RBZ 2009). A very high inflationary rate culminating in an unprecedented 231 million % in 2008, led to diminishing deposits in banks and treasury (IMF 2009). This had a very huge adverse impact on savings and the culture of investment in Zimbabwe. Consequently the standards prescribed by the investment life cycle model as the modest level of investment expected at different stages in the life of an individual may not apply in Zimbabwe. The investment life cycle assumes a sound and efficient economy in which there is a stable currency and a reputable central bank and a sound banking system that sustains investment (Shulman 2003). This, however, has not been the case with the Zimbabwean economy, particularly during the period 2002 to 2008. This period was characterized by very hush and torrent economic environment manifesting in the closure of many banks and building societies, acute price movements, lack of credit, high inflationary and interest rates which adversely affected savings and investment (RBZ 2009).

It is against this background the researcher attempts to prove the validity of the investment life cycle in Zimbabwe. The elementary aspects that constituted the overall economic recession in Zimbabwe led to low and uncertain return on investments and coupled with sizable erosion of the value individual earnings. Resultantly the effect of a hyper-inflationary

environment the stock prices, interest and exchange rates were grossly affected such that procurement of financial investments in Zimbabwe.

Furthermore with high inflation trends, a gross movement in commodity prices was registered. Due to large and unpredictable price movements procurement of commodities such as cars and houses, non-financial and financial assets became difficult. In this regard the Zimbabwean individuals were impoverished by the situation that was prevalent during the era (RBZ 2012).

The multi-currency era, led to a total collapse of the financial system (UN 2010). Confidence has not yet been fully restored as authorities struggle to contain systemic collapse of the financial markets.

Dwindling foreign currency shortages amplified by reduced economic and industrial activity caused the breakdown of financing towards utility services such as health, education, electricity and water supply amongst other factors. Government subsidies towards these fundamental concerns were terminated hence increasing pressure on individual income across the entire population. Government efforts were concentrated on satisfaction of these physiological needs thereby reducing attention on investment in Zimbabwe.

Due to collapse of the financial system in 2008 the investment prospect base was greatly reduced. Financial institutions closed down and those that remained had nothing to offer on medium to long term investments. The financial institutions did not offer vibrant financial instruments on the market that were lucrative, competitive and compatible with the economic environment for example inflation linked securities. The unavailability of financial instruments on the market limited the local individuals the capability to accumulate wealth. This is reflected by the fact that an estimated US\$ 2 billion is circulating outside the banking system (RBZ 2012). This amount is equivalent to 20% the country's GDP of US\$10 billion (RBZ 2012)

1.3 Statement of the problem.

The Zimbabwean economic environment has been very hostile and severely impacted individual savings and investments. Consequently investment levels prescribed by the investment life cycle model may not be appropriate on the Zimbabwean population.

1.4 Purpose of the study

The purpose of this study is to investigate the compatibility of the generalisations of the investment life cycle in the Zimbabwean scenario.

1.5 Objectives of the study

The objectives that guided this research study include:

1. To assess the irregularities of the Zimbabwean economy from 2000 to the current dollarized environment.
2. To evaluate the effect of the economic irregularities on investment.
3. To assess the applicability of the generalizations posed by the investment life cycle model under irregular economic condition.
4. To identify possible strategies that alleviate investment to match the investment life cycle guidelines in Zimbabwe.

1.6 Research questions

The research questions are as follows:

1. What are the generalisations presented by the investment life cycle as standard at each stage in the life of an investor or individual.
2. Are there any assumptions held by the investment life cycle in giving its guidelines and what economic conditions should be in place to sustain the investment life cycle generalizations.
3. What are the economic variables that indicate the irregularities of the Zimbabwean situation during the period.
4. To what extent does the economic environment affect investment such that the generalisations of the model do not apply.

1.7 Significance of the study

The researcher hopes that this study would give an insight into the challenges facing investment in Zimbabwe's economy and introduce to the body of knowledge the investment life cycle model as a proxy for measuring the standard of living in Zimbabwe. The study seeks to clarify the difference between the picture portrayed by the scholarly model as a standard transition an investor goes through as he grows and the realities apparent on the

Zimbabwean scenario by referring to economic indicators. This research study will also seek to add value to the current disclosure on effort towards the alleviation of the standard of living in Zimbabwe.

1.8 Assumptions

The following assumptions were made by the researcher:

1. The data bases of the information relevant in contrasting the Zimbabwean economic environment will be accessible to the researcher.
2. The researcher would be able to meet the costs of conducting the research
3. Statistical information on economic variables is conclusive and a true and fair reflection of the economies under study

1.9 Scope of the study

1.9.1 Delimitation

The study mainly depends on secondary data that is collected from secondary sources like published reports and statistical databases of multi-lateral institutions such as the United Nations, International Monetary Fund and country central banks including the Reserve Bank of Zimbabwe RBZ.

1.9.2 Limitations

1. Due to limited funds available to the researcher the study is limited geographically.
2. Resistance and negligence in the data collection process is anticipated because of a degree of privacy intrusion.

1.9.3 Conclusion

This chapter enlightens on the background to the study, its purpose and objectives, the statement of the problem and the research questions. The scope of the study which includes the delimitations and limitations to the study are also mentioned. All these serve to inform the reader on the reasons that justify the study, the problem it intends to give a recommendation to resolve, the cause of the study and its contribution to scholarly work conducted in Zimbabwe.

CHAPTER TWO: LITERATURE REVIEW

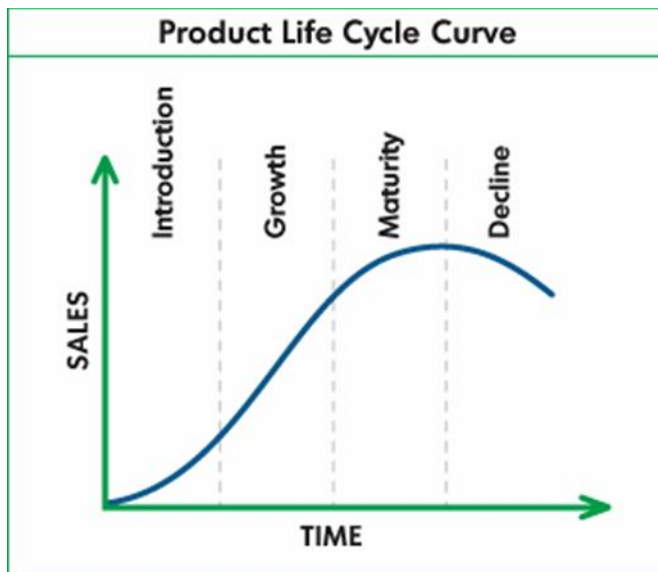
2.1 Introduction

The review of related literature covers the following aspects: the relationship between the product life cycle and the investment life cycle, which gives the need to look at the investors' life as to the life of a product (Modigliani and Miller 1958). Full description of the four distinct stages an investor goes through in life namely accumulation, consolidation, spending and gifting. The assumptions of the general behaviour of investors in the different stages and investor profiles and tendencies of different stage groups will be reviewed. Literature relating to employment, debt burden, assets, investment horizon, and investment style and risk tolerance will be reviewed for each stage (Modigliani and Miller 1958). In Zimbabwean context and terms, literature related to the implications of the behaviour of economic variables (inflation, credit, employment and financial markets background) to the different attributes of an investor such as investor profile, assets and employment status will be reviewed.

2.2 The Product and investment life cycles

According to Modigliani and Miller 1958, as the product life cycle, there are specific phases that every product inevitably goes through as it moves from introduction of the product to decline of the market. Changing levels are expected in the attributes that characterize the different stages for example business risk, financial risk, growth rate, market share, prominence or reputation and price earnings ratios (Bender and Ward 2009). Below is a diagrammatic presentation of the product life cycle

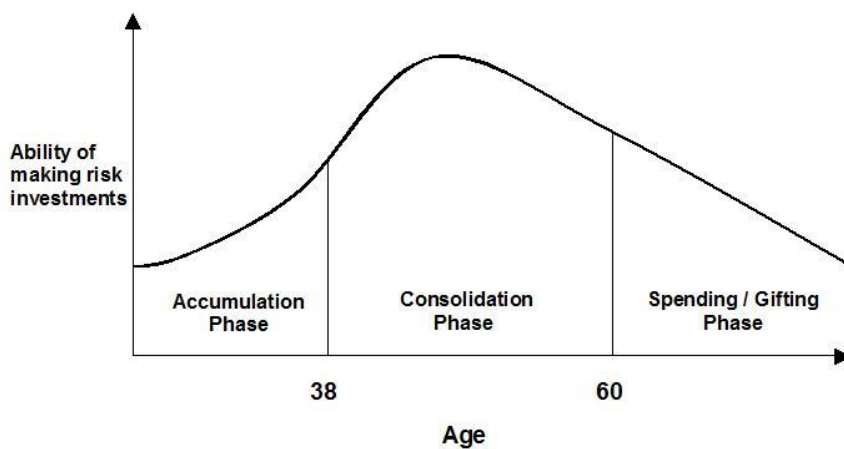
Figure 2.1 Product life cycle



Source: Bender and Ward (2009) p34

According to the traditional investment life cycle model by Modigliani and Miller (1958) Investors go through a similar process of inevitable stages. However, instead of it in terms of a product it is in reference to what happens with the assets in the investment accounts and assets acquired over time (Howrey and Hymans 1978). The phases of the investment life cycle are presented in this chapter, including a description of each phase. The figure below shows the phases of the investment life cycle relating two variables namely age and ability of making risk investments

Figure 2.2: Investment life cycle



Source: Shulman (2003) p163

The traditional theory of lifecycle investing documented by Modigliani and Miller (1958) asserts that each individual will go through various lifecycle stages, in which the investment needs and profile are different. First, when younger, there is the '**accumulation phase**' (age 20's and 30's), when the individual is able to invest in higher risk assets and follow an aggressive investment strategy. This generalization is considered too idealistic since many factors that are considered in making an investment strategy are assumed stable economic and social backgrounds though it's not always the case (Tanner 1979). Subsequently because the individual still has a long time horizon with potential growing streams of income, he/she can undertake a "high return, high risk capital gain oriented investment" (Shulman 2003 p162), designed to achieve maximum longer term growth.

Secondly follows the '**consolidation phase**', in mid-life (age 40's and 50's) in which the individual is in mid-career, has accumulated assets to cover the important needs like housing and living expenses and is now looking for opportunities to increase wealth generation (Howrey and Hyman 1978). In this phase, the individual would have more resources to devote to investment and at most potential to start own company, but might want to take a less risky approach. The third phase is the '**decumulation phase**' or **spending**, (age 60's and 70's) during which the individual is making solid retirement plans and is living on the income and capital accumulated in the first two phases. Furthermore, because of limited time at hand, the time horizon is of paramount consideration to these investors (Feldstein and Fane 1973).

Finally, there is the '**gifting**' phase, (age 80's and 90's), other authors such as Shulman (2003) argue that the two phase can be classified as just one class due to similarities in the way the two groups perceive risk and return options in respect to time (Shulman 2003). It is the phase in which individuals who have accumulated far more wealth than they will need for their own lifetimes, decide to pass some of their assets on to others perhaps as an inheritance, or charitable donations (Feldstein and Fane 1973). The model states that, as individuals move through these lifecycle phases, their investment needs and objectives change significantly and, while being able to hold mostly risk bearing assets when young (the theory relies on holding mostly equities, to maximise long term growth) and the individual needs to eliminate most investment risk as they grow old (Modigliani and Miller 1958).

The model differentiates the stages the investor goes through basing on basically five variables namely assets, debt burden (the two are financial status components), investment

style, investor profile, risk tolerance and investment horizon which generally are risk aversion characteristics (Shulman 2003). Furthermore these variables make up a platform on which an investor may structure a financial plan designed to achieve investment objectives intended which maybe long-term or short-term (Howrey and Hymans 1978). Moreover the investment objectives are related to the investor's age (Reilly and Brown 2012) and are structured basing on how oriented an investor is on the above variables.

The four distinct stages of the investment life cycle are explained in detail below;

2.3 Accumulation

According to Modigliani and Miller (1958) this is the early earning period where the investor has relatively few assets and is facing significant debt. Individuals in this phase are on average from the age of 24 to 38 years and their nature of investment is necessitated by needs on the ground. Generalizations of the model on what characterizes the life of an individual in this stage is uniform across what most authors documented.

These investors are focused on immediate needs or "high priority goals" (Reilly and Brown 2012 p38) for example the purchase of a new home and car and living expenses as well as longer term goals for example retirement pensions and insurance policies. Consequently the cost of sustaining life incurred through living expenses like utility bills, transportation, food and recreation consist much of the individual's income (Modigliani and Miller 1958). This happens to be the age most couples bear offspring, so the individuals in this stage have more physical and very present commitments to their income such that investment in the future is reduced (Shulman 2003).

Furthermore despite that the investors in the accumulation phase have a low net worth, they carry high amounts of debt, for example mortgage, loans from college, and other transitory intermediate loans that cover short term needs and concerns (Hobson 2003). Consequently the debt burden of the category of individuals in the accumulation stage is high due to the high cost of the assets needed to sustain his/her longevity and capital for expansion or attainment of investment objectives (Reilly and Brown 2012). High cost commodities like cars and houses are of importance to the life of an individual and procurement of such goods is necessitated by the need they satisfy (McLure 1980). At this stage it is expected to have individuals paying or procuring mortgage loans, car loans, loans from college as their debt profile (Reilly and Brown 2012).

The investment objectives documented by Shulman (2003) take four dimensions namely capital preservation, capital appreciation, current income optimization and total return optimization. Capital preservation and appreciation are both generally supported by a long time horizon though differ in that the later assumes more risk (Shulman 2003). The investors who aim for capital appreciation have a lesser risk aversion and their time horizon is less sensitive. Subsequently, due to how growth oriented young investors are, the investment profile of an investor in this stage of the investment lifecycle is very aggressive and objected towards mainly on accumulation of wealth and long term security (Feldstein and Fane 1973).

Furthermore there is the simple rule of the thumb which asserts that when younger, invest heavily in equities to build wealth for the long term, since you can then benefit from the extra returns over time (Tanner 1979). However the Prospect Theory which examines how people maximize value or utility in choosing among alternatives that involve risk, and is also one of the foundations of behaviour finance developed by Professor Daniel Kahneman reposes that when measuring utility under conditions of uncertainty investors are inclined towards incremental gains and losses (Elan 2010). The model however does not agree convincingly that investors in this stage only invest in equities only but can also invest in other instruments to do away with unnecessary risk and attend immediate objectives and constraints (Reilly and Brown 2012). Empirically there has traditionally been a much higher weighting in bonds at all stages of the lifecycle, in order to provide more security of income and capital protection in many countries around Europe (Elan 2010)

The investment style refers to how oriented investors are in respect of growth and wealth appreciation (Shulman 2003). Sophisticated risk-management systems are commonly used by large corporations (Reilly and Brown 2012), however such modern techniques can be widely used to help individual investors plan their portfolios over the life-cycle and most of them assert that relying only on equities expose one to more risk than necessary (Modigliani and Miller 1958). Furthermore the Market efficiency hypothesis asserts that a diversified portfolio, including inflation linked assets, hedge funds, venture capital, property, commodities and bonds, as well as straight equities and derivative products can be used as a tools for managing downside risk (Markowitz 1961). A diversified portfolio is regarded as ideal since it diversifies uncompensated risk and holds the market portfolio as the benchmark (Markowitz 1961). The attributes portrayed by the model suggest that individuals in this phase are characterized by a willingness to make relatively high-risk investments in the hope of making significant gains over time. In this regard the model holds that these individuals prefer to

pitch on any investments in hedge funds, real estate, international equities ,domestic equities ,mutual funds, government bonds or corporate bonds such that their aggregate can be quantified as that they are growth oriented (Modigliani and Miller 1958).

Risk tolerance is the degree of uncertainty that an investor can handle in regard to a negative change in the value of his or her portfolio. An investor's risk tolerance varies according to age, income requirements, financial goals and other variables(Reilly and Brown 2012). For example, a 70-year-old retired widow will generally have a lower risk tolerance than a single 30-year-old executive, who generally has a longer time frame to make up for any losses she may incur on her portfolio. For this stage however the model assets that the individuals have a high degree of risk tolerance since more time is on their side to cover up for any losses and are motivated by a higher return in the future(Shulman 2003).

Investment horizon refers to the period an investor is willing to hold on to a particular investment or financial asset assuming the prevailing circumstances (Waber 1970). The longer the period of investment the higher the risk, hence risk tolerance and investment horizon are directly related, if risk tolerance is low, the investment horizon is short as well.This attributeis quantifiable as short-term, medium-term and long term, investors in this stage prefer long term (Modigliani and Miller 1958).

2.4 Consolidation

This is the later earning period where the investors' income might comfortably exceed expenses and would have built a significant financial portfolio (Reilly and Brown 2012). These individuals are particularly through into the latter half of their careers. During this stage, the investor is now making solid plans for retirement by ensuring high or optimum returns from his investments (Howrey and Hymans 1978). His portfolio should be well diversified but the percentage allocated in high-risk instruments is gradually reduced. His investment goals will focus mainly on medium-term goals(Reilly and Brown 2012).

Individuals in this stage would have accumulatedsubstantial quantities of assets of different nature (Tobin and Dolde 1971). This includes fashionable modest cars, houses or farms, insurance policies;portfoliosvested with short to long term securities and will be having retirement funds in place (Modigliani and Miller 1958). There is less burden from living expenses and procurement of physical assets like cars and houses for own use, this means more ability to investment in financial assets which can be in any sector of the economy as

one may prefer (Reilly and Brown 2012). These can take the form of government and corporate bonds, real estate, domestic and international or offshore equities, safety deposit boxes with precious metals like gold, diamond or any indexed metal that store value, hedge funds, mutual funds derivatives and money market instruments (certificate of deposits or commercial paper and treasury bills). Generally these individuals have a broader capital base and net worth (Modigliani and Miller 1958).

At this stage the investor is expected to have laid off most of the major debts and has a financial record that renders him credit worthiness. In other words though having less debt to pay more credit lines are available to the individual (Feldstein and Fane 1973). However debt maybe required to finance growth and increase capacity for example investment property and renovation costs (Modigliani and Miller 1958).

The investor profile of the investor in this stage is rather moderate and the objectives will no longer be as aggressive as it was during the accumulation phase (Tanner 1979). However their portfolios will be well diversified but the percentage allocated in high-risk instruments is gradually reduced. His investment goals will focus mainly on medium-term goals (Modigliani and Miller 1958).

Capacity to make risky investment is very high, actually the model asserts that it is at this stage that an individual is at highest capacity to begin his/her own business (McLure 1980). Consequently investors in this stage may avail themselves of the developments in financial markets and products which allow individuals to benefit from modern techniques which use multi-period hedging, swaps and options, to identify more optimal portfolios to deliver consistent returns and build wealth more reliably over the life-cycle (McLure 1980). There has been movement from the traditional approaches held by the theory that give a rigid make-up of each style to investing, such as the Anglo-Saxon approach and the simple thumb-up rule that focus on basically equities and bonds for long term objectives (Modigliani and Miller 1958). A more flexible approach is held by the theory recently that just generalizes the broader perspective to the objectives of the investor and does not generalize the composite elements of their portfolios since in recent years portfolios can be so complex, being made up of different sophisticated securities (Shulman 2003).

Investors in this stage on the investment lifecycle have mixed objectives and have a rather balanced perception of risk (Ellen 2010). They have the capacity to contain higher degrees of risk and time is still on their side to recover from any consequences of a risky investment

(Ellen 2010). However due to nearing retirement, they have a balanced growth orientation, so they avoid too much risk since they do not aim for very high returns (Modigliani and Miller 1958). Much of the investor's objectives will be medium term hence the investment horizon preferable at this stage is short to medium term. The idea will be to maintain the returns on investment hedge a position the investor intends to protect. The investors hence participate in hedge instruments like options, swaps, treasury bills and government bonds over short to medium horizon (Reilly and Brown 2012).

2.5 Decumulation/Spending and Gifting phase

During these last two phases, the person will be having sufficient money in his retirement fund and will probably be retired (Shulman 2003). Other sources of income can be from his pension or an established passive income stream as well as from his investments (Modigliani and Miller 1958). His main concern during this period is to have sufficient income for living expenses and enough funds for his entire retirement period being able to finance all habits and affections for example passing over inheritance to grandchildren, tourism, political aspirations, charity and social contributions (Reilly and Brown 2012).

These are the post-retirement phases when the living expenses are financed mainly through investment and pension income. Consequently proceeds from investments and assets made during the prior two stages make up much of the income available to the individuals in these stages (Feldstein and Fane 1973). Intuitively these individuals have less appetite for risk and return as in the earlier stages of life so they prefer short term investments only as a way of preserving wealth made in the past two stages while sustaining day to day expenditure (Feldstein and Fane 1973). There is a reduced willingness to accept risk, because the prime earning years have passed, this is designed to preserve a slimmer margin for loss (Shulman 2003). However, younger retirees can expect to live at least 20 more years, therefore, they still have to think of long-term gains and income growth (Modigliani and Miller 1958). However if the investor happens to have not retired then the person will now be making solid plans for retirement by ensuring high or optimum returns from his investments (Howrey and Hymans 1978). His/ her portfolio will be well diversified but the percentage allocated in high-risk instruments will be gradually reduced. His investment goals will focus mainly on medium-term goals and the investment style will be very conservative and income calculated (Shulman 2003). The table below summarizes this.

Table 2.1 Summary of the attributes of the different stages

Life stage	Accumulation	Consolidation	Decumulation/ gifting/ spending
Age	20s and 30s	40s and 50s	55+
Employment	Employed	Employed	Retired
Debt burden	Loans from college, first home mortgage, car loan	Mortgage, renovation cost and investment property	Debt free
Assets	Few assets	Moderate -substantial fund	Substantial fund
Investment horizon	Long term	Medium term	Short term
Risk tolerance	High	Moderate	Low
Investment style	Growth	Balanced growth	Conservative (income based)
Investor profile	Aggressive	Moderate	Conservative

Source:<http://www.dividendduguy.com>

2.6 Implicating Economic variables.

The model however is not independent of the economic environment (Shulman 2003) actually its compliance is very much dependent on the economic performance in the country in focus. The macro-economic variables such as inflation, employment, economic productivity in the economy and financial markets have a detrimental effect on the aspects or attributes of investors under the model. The implication of each is briefly reviewed below.

2.6.1 Employment

Friedman's (1951) view has prevailed in much of modern macroeconomics which says full employment means the lowest level of unemployment that can be sustained given the structure of the economy. This is agreed by most economists to be equal to the Non-Accelerating Inflation Rate of Unemployment (NAIRU) (Tobin 1998). Furthermore the Phillips curve tells us also that there is no single unemployment number that one can single out as the "full employment" rate. Instead, there is a trade-off between unemployment and

inflation, a government might choose to attain a lower unemployment rate but would pay for it with higher inflation rates. Moreover Friedman(1951), leader of the monetarist school of economics, and Phelps E posited a unique full employment rate of unemployment in what they called the "natural" rate of unemployment. However this is seen not as a normative choice as much as something the world is stuck with, even if it is unknown. Rather than trying to attain full employment, Friedman argues that policy-makers should try to keep prices stable (a low or even a zero inflation rate). Consequently some economist historians asserted that if the above policy is sustained, the economy will gravitate to the "natural" rate of unemployment automatically(Pirenne 1936). So basically the optimum rate of employment is that which does not accelerate inflation, and for the purpose of this study the NAIRU will be used as a proxy of optimum employment that sustains population income capacity while not disturbing macro-economic factors such as inflation (Friedman 1951). Assuming all other factors constant employment is the main source of financing of individuals in a country.

2.6.2 Inflation

Sowell (2004) provides a basic introduction to inflation by focusing on two major drivers, the real economy (focused on the supply and demand for production output in the economy) and the monetary aggregates (supply of money). Prior to fiat currency, most transactions were tied to physical commodities such as gold which naturally had a limited supply (Sowell 2004). In these economies with limited money supplies, there are two common explanations for increasing prices which are demand-pullinflation and cost pushinflation (Baghestani and Abu AL-Foul 2010). However, in growing economies, increases in consumer demand may outpace available aggregate supply. Subsequently excess demand pulls prices higher as consumer's part with wages given their confidence in the labour market due to economic expansion and stability(Pirenne 1936). This is one of the underlying arguments used as the basis for the Phillips curve which illustrates an inverse relationship between inflation and unemployment. As more workers earn a wage, the additional demand created by consumption leads to demand-pull inflation (Pirenne 1936).

Money is the most common instrument in stocking of value in Zimbabwe (RBZ 2012); the use of financial instruments has not been practiced in Zimbabwe probably due to less education in the population about their viability and also less functionality of the financial markets in the country (RBZ 2012). "In this regard, all the key sectors of the economy are encouraged to embrace electronic payment mechanisms so as to limit the use of cash which is

inefficient, risky and costly to the country’’ (RBZ 2012 p37). In this the Reserve Bank Governor Dr G Gono outlines the traditional Zimbabwean culture of transacting with cash and stocking of sums of money to keep value. Consequently the Zimbabwean population is prone to having value eroded by the effects of inflation which reduce the purchasing power of any currency against time. The subject however is universal across all countries and all currencies have an inflationary rate that affects its value though the levels differ (Pirenne 1936). Zimbabwe being a money economy that has no substantial financial markets (RBZ 2012), it is likely that individuals have their income eroded by inflation than countries where financial markets are vibrant. Consequently income levels are exaggerated in the context of Zimbabwe due to inflation in the economy.

2.6.3 Gross Domestic Product (GDP)

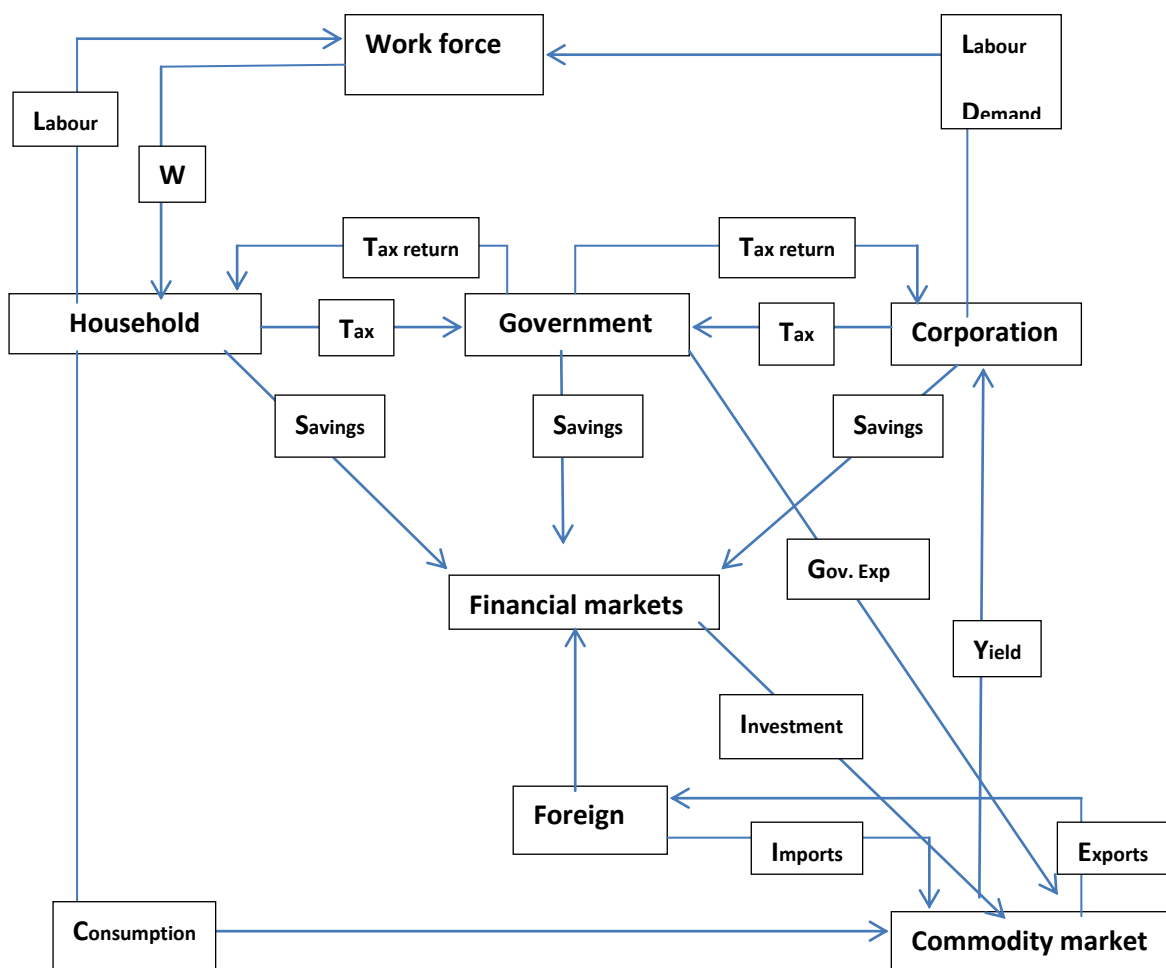
Gross domestic product (GDP) is the market value of goods and services produced by labour and capital in a country, regardless of nationality. This represents the general output an economy is operating at thereby giving how the economy is utilising resources available to it and how economically active it is (Friend and Hasbrouck 1982). The technique however gives the picture of the performance of an economy in a time series by the quantifying the economic activity in the country without an examination of the background of the input levels that contributed to the GDP output (Fama 1990). Hence this approach then lacks an important analytical technique that evaluates efficiency in the economy (Fama 1990). However it is the most widely used technique in measuring economic performance and growth, governments and most multi-lateral institutions use this technique to evaluate the performance of a country (Friend and Hasbrouck 1982). It is also very important in that it reflects the declines and increases in economic activity for a certain region which explains the direction an economy has taken during the time (Friend and Hasbrouck 1982).

2.6.4 Financial markets

Financial markets play a very important role in distribution of capital in the economy and provide a safer and more reliable way to save and invest funds available to an individual (Reilly and Brown 2012). Furthermore on a macroeconomic basis it also brings together savings from households, corporations, government and the foreign market thereby enhancing liquidity (RBZ 2011). A vibrant and efficient financial market system that has money and capital markets enriches the population by providing a means by which value can

be preserved through holding of securities (Merton 1969). Financial markets play a very important role for every economy in that it provides liquidity through foreign investment and helps to smoothen out imbalances of capital or credit in the sectors of the economy (Merton 1969). A good financial market should make available financial products like hedge funds, real estate, international equities, domestic equities, mutual funds, government bonds or corporate bonds, also derivatives like options, forward contracts, futures contracts. For example in Zimbabwe the later can be used to protect returns on agricultural produce from price fluctuations, thereby alleviating an agony of a great part of the Zimbabwean population (farmers). The diagram below shows the pivotal role played by financial markets in distributing capital.

Figure 2.3: Macro-economic circulation.



Source: Wikimedia Foundation Inc. (www.wikimedia.com)

2.7 Summary

This chapter has explained on the theoretical aspects of the model and the empirical aspects of economies in which the model can be set to be appropriate. The chapter enlightens on the economic variables that in a way contribute to the economic environment Zimbabwe faces, on which also the study sets to make a critique of the model. Case studies will be used on the different variables contrasting the Zimbabwean situation to give a clear picture of the inappropriateness of the model.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The chapter enlightens on the identification, description and discussion of the research methodology used in carrying out this study. In other words this chapter explains on how the research is planned structured and executed. The research is going to depend mainly on apragmaticstrategy of collecting data and the methodology will be presented under the components including research design which include the statistical design, data collection instruments , validity and reliability of the instruments, data collection procedure and data presentation, analysis and interpretation.

The researcher has opted to use this methodology to carry out this study because it is the most appropriate to distinguish out one economic situation from examples of efficient scenarios. In this the objective of the research is reached through comparison of the chosen scenarios. The data collection instruments are also appropriate because of the quantitative and descriptive nature of the data needed in carrying out the study,

3.2 Research Design

‘‘A research design is a program that guides the investigation into a process of collecting data, analysis and interpreting observations’’ (Nachmias and Nachmias 1982 p75). A comparative research design will be employed by the researcher in carrying out this research. This study is going to be conducted in such a way that a benchmarking of the variables under study will be made using the countries that have empirically performed well and are evidently experiencing a favorable condition in respect of the aspect. Against that a comparativeanalysis of the prevailing situation in Zimbabwe will be undertaken thereby contrasting the different environments. Commonly used statistics that describe economic condition, will be used for this comparativestudy. Mainly these will be gross macroeconomic margins that quantify the variables of an economy. This will involve use of measurement statistics like gross domestic product or output andinflationary rate scenarios. The explanatory aspect in this pragmatic research strategy will concern much of the history of transitions and gross economic turns undergone by all the case study economic scenarios including Zimbabwe USA and South Africa. The study sets to clearly bring out a contrast of the situation in Zimbabwe with that of developedcountries through measurement of economic determinants and reviewing of the economic history. United States of America and South

Africa against Zimbabwe will be the case studies to be observed only at targeted points in the economic conditions' movements.

3.2.1 Advantages of Comparative design

- It enables the researcher to gain information on a new area of interest
- It is flexible in that it leaves the subject of investigation open to adjustment as more information is discovered.
- It can be used as a yardstick to assess the feasibility of doing any further research on the subject
- A comparative design can be argued to be a good way of exploring existing theory and provide a source of hypothesis.

3.2.2 Disadvantages of comparative design

- It may not precisely determine the subject of the research which may be left open
- Internal and external validity is weak
- Comparative research design is prone to subjectivity

3.3 Statistical design

The research is modeled to achieve the objective of distinguishing among contrasting economic environments by quoting cross sectional scenarios of the benchmarking economic environments against that of Zimbabwe. However to achieve this macroeconomic determinates including the gross domestic product, employment, inflation and performance of financial markets. Therefore comparable statistics will be collected to contrast the scenarios under study. The study being a comparative study it will use identical statistical estimates to compare the contrasting economic environments between the two countries under study.

3.3.1 Gross Domestic Product Components.

This variable is made up of several component indicators that give a profound perspective of the performance of the country. These macroeconomic indicators give a general view of the performance of an economy which has a direct implication on the investment levels in the same economy. These component statistical indicators include; the real GDP, GDP per capita, GNP per capita, GDP growth rate, the gross fixed capital formation, food production index, Agricultural index and industrial Index. These will be abbreviated as tabulated below:

Table 3.1 economic indicators' abbreviations

GDP - Gross Domestic Product	GDP gth - Gross Domestic Product Growth rate
GDP p c - Gross domestic product per capita	GNP p c - Gross National Product per capita
GNP p c - Gross National Product per capita	GFCE - Gross Fixed Capital Formation
FP index - Food Production index	AP Index - Agricultural Production index
IP index - Industrial Production Index	UE rate - Unemployment rate
T.O –Trade Openness	

3.3.2 Real GDP

Gross Domestic Product (GDP) is defined as the value of all market and some nonmarket goods and services produced within a country's geographic borders (Friend 2004). This is the monetary value of all economic activity carried out in a country for a period of time usually a year. This includes all monetary valuation of the transactions by financial institutions, production by industries, agriculture, mining and other sectorial activities, expenditure by government and the corporate community and personal expenditure as well. However it has limitations, firstly not all economic activity is accounted for in its computation and some transactions included do not really represent economically productive activity. Secondly it is not an accurate measure in comparing performances of different economic environments because it ignores population aspect of the countries in comparison. This gives way to a better measure in this regard, which takes in to account the population of the country, the GDP per capita.

3.3.3 GDP per Capita

This measure overcomes the weakness of the Real GDP which ignores the population of the country. This gives economic output attributable to each individual in the country. It is calculated as follows

$$\text{GDP per capita} = \text{Real GDP} / \text{population}$$

It is usually converted to USA dollar using the purchasing power parity and it's the most common measure of the standard of living in the world today. However, this measure may have the following limitations: The total production of a country consists of many things that are not included in its GDP, and some items included may not contribute to a country's well-being. In addition, some countries experience significant in and outflows of income because of foreign investment, which may affect a country's prosperity (Friend 2004).

3.3.4 GDP growth rate (GDP gth)

This is the change in the gross domestic output expressed as a percentage of the preceding GDP over a period of time usually a year. It shows the rate at which the economic output is growing between two points in time. It is a quantitative measurement approach to assessing the well-being of an economy. Instabilities in the economic conditions can be noted by such a reflector, it is preferable in bigger margins.

3.3.5 Gross Fixed Capital Formation (GFCF)

Statistically it measures the value of acquisitions of new or existing fixed assets by the business sector, government and households (excluding unincorporated enterprises), less disposals of fixed assets. It is a component of the GDP expenditure that is invested in buying of fixed assets. It demonstrates the country's commitment to industrialization and technological vibrancy

3.4 Data collection instruments

These are tool the researcher is going to use to collect information or data needed to find solutions to problem under investigation. In this case much of the information required by the researcher to contrast the two economic environments in the comparative study will only be from published macroeconomic statistics from various market journals and

government statements in Zimbabwe, USA and South Africa. Only one research instrument will be employed in this research study, which is documentary analysis.

3.4.1 Documentary analysis

The descriptive statistics to be used by the study will include publications by the Reserve Bank of Zimbabwe, Liberty of Congress, Federal Research Divisions USA, Bureau of Labor Statistics, UN databases, IMF reports and other statutory bodies in the countries under study. Basically the main instrument of information is documentary Analysis which leads to the arising of the following advantages and disadvantages to the research study.

3.4.2 Strengths of documentary analysis

- Bias is removed to some extent because the researcher gets the information from the records and not from the subjects.
- The human interface present in interviews and questionnaires which is expensive and very restricting to the researcher is removed since the researcher only deals with information from archived records.
- Reliability and validity is easy to authenticate
- Its time serving and less restrictive

3.4.3 Weaknesses of documentary analysis

- There is danger of institutional and national bias which may have influenced the authors of the documents.
- Documents may be erratic lacking information on how it was actually collected, or sample characteristics, assumptions and operational definitions

3.5 Validity and reliability

This refers to the extent to which data collection methods accurately measures what it intends measuring (Saunders 2003). Reliability refers to the “degree to which data collection instruments produces equivalent results for repeated trials” (Bless and Achola 1997 p130). The validity and reliability of the interview and documentary analysis as data gathering instruments is imperative.

The questions guiding the interviews and documentary analysis were designed in such a way that they met construct validity, that is they closely link with the research questions that were

posed in the introduction. The interviews were administered invariably for the different homogeneous individuals. The idea was to make sure that all the important information pertaining to the challenges and opportunities of operating in Zimbabwe's economic environment. The interview structure was pre-tested in order to find out the questions are understandable to the respondents. The pre-test assisted in finding out the extent to which the questions could influence respondents to show themselves in a positive outlook and also anticipate what the researcher wanted to find out.

3.6 Data Presentation, interpretation and analysis

In presenting the data, tables, figures, graphs, percentages and other statistical techniques and direct or indirect quotations will be used. Basically key issues that have been taken of in critiquing the model are empirical macro-economic trends in the economic environments chosen to contrast the Zimbabwean scenario. The discussion will focus on the results obtained from the research in terms how the irregularities of the Zimbabwean economic environment has affected the investment culture, or how the condition has not been precipitant to a vibrant investment strategy feasible to an investor so as to sustain the generalizations of the model. Calculations of different measurement techniques will be applied in estimating the optimum and empirical levels of the concerned variables so as to effect a comparative evaluation of the performances of the variables under the concerned economic environments.

3.7 Summary

The chapter has focused on the researched design and methodology used to conduct this research study. It has outlined the instruments and techniques used to collect the data and analyze it to give relevant information to the study. Along with that was also posed the strengths and weaknesses of adopting the research design and instruments the researcher has rationally opted to use because of compatibility with the nature of this study. The strengths and weaknesses are the inherent enhancements and drawbacks to the progression of this study respectively.

CHAPTER FOUR: DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter presents the finding made by the researcher in carrying out this study, this will involve presentation of data collected, discussion and interpretation of the findings. The data presentation, analysis and interpretation will focus on the problems and sub-problems alluded to in the first chapter of this research study. Data presentation methods like tables, graphs, charts and other statistical methods will be applied in deriving the data into information relevant to this study.

4.2 Economic Performance

In critiquing the investment life cycle's applicability in Zimbabwe there is need to fully display the irregularities of the economy that renders it an environment that is not precipitant to investment. This is a very important aspect and concern of every country be it a first world or otherwise, the close monitoring of the matters concerning the subject cannot be over emphasized. In carrying out the study however economic performance was decomposed into specific economic indicators that measure specific variables of the economy. The research finding revealed that the following were detrimental to investment in any economy if not properly attended to; gross domestic product (all approaches), inflationary rates, credit and interest rates, employment rates and the performance of financial markets. Documentary analysis alluded to that there has been a very irregular economic environment in Zimbabwe that was so hostile to investment and personal savings.

4.3 Inflationary irregularities

The decade preceding the dollarization of the economy in 2009 was a hyperinflationary economic environment in Zimbabwe. This period was basically characterized of irregular and unprecedented economic conditions that alluded to erosion of the purchasing power of incomes, intense and widespread uncertainty that caused business or investment planning difficult, rampant speculative activities that diverted resources from productive activities. Fixed income earners like pensioners were much compromised and there was also a strain on the country's foreign exchange due to increased import demand. On the demand side, excessive money supply growth was the major cause of inflation. Empirical evidence for Zimbabwe has shown that excessive money supply growth, which is not matched by productive economic activity has adverse effects on inflation. Money supply growth

emanated from the actions of both the private sector and Government to the extent of their borrowing from the banking system. Moreover the Zimbabwean situation was further amplified by the global financial crisis towards 2009 in which the whole world was confronted with extraordinary hardships calling for unorthodoxy and extraordinary interventions (RBZ 2009). Hyperinflation in Zimbabwe began shortly after destruction of productive capacity in Zimbabwe's land reform programme which involved confiscation of white-owned farmland. Food output capacity consequently fell by 45%, manufacturing output by 29% in 2005, 26% in 2006 and 28% in 2007, and unemployment rose to 80%. During the height of inflation from 2008–09, it was difficult to accurately account and monitor for Zimbabwe's hyperinflation because the government of Zimbabwe had stopped filing official inflation statistics. This cessation in filing made it difficult to accurately observe how severe inflation was in the country. However, Zimbabwe's peak month of inflation is estimated at 6.5 sextillion per cent in mid-November 2008. In 2009 Zimbabwe then abandoned its currency and to present day in 2012 a new currency is yet to be introduced, so currencies from other countries are used. There was a rapid change in the customer price index from 2000 to 2009 which moved from 100 in 2000, 28349 in 2005 and 216, 019, 702, 007 in 2009. This implied intense pressure on consumption expenditure in the economy

However the post Zimbabwean dollar period is evidently, according to the research findings an era of steady inflationary growth that definitely has an impact on the purchasing power of the US dollar regardless of its stability behind Zimbabwean borders. According to the findings on inflationary statistics collected regarding the benchmarking economies and the Zimbabwean economy, there is a significantly notable difference that can safely suggest contrasting economic environments in comparison. The continued rising of international oil prices, the appreciation of the Rand, energy shortages and other supply bottlenecks have been said to have contributed significantly to the recent build-up of inflationary pressures in the economy. Also high utility charges, increased pressure on wages and salaries and so called ‘‘money illusions and psychological hangovers’’ (RBZ 2012 p7) in which traders of goods and services are taking time to appreciate the true value of hard currencies and hence escalate prices disproportionately are inflation drivers noted by the RBZ Governor in the 2012 Midterm Monetary policy statement. The table shows the steady growth of inflation on the US dollar in the Zimbabwean economy in contrast to the performance of the US dollar in the USA economy and the RSA rand.

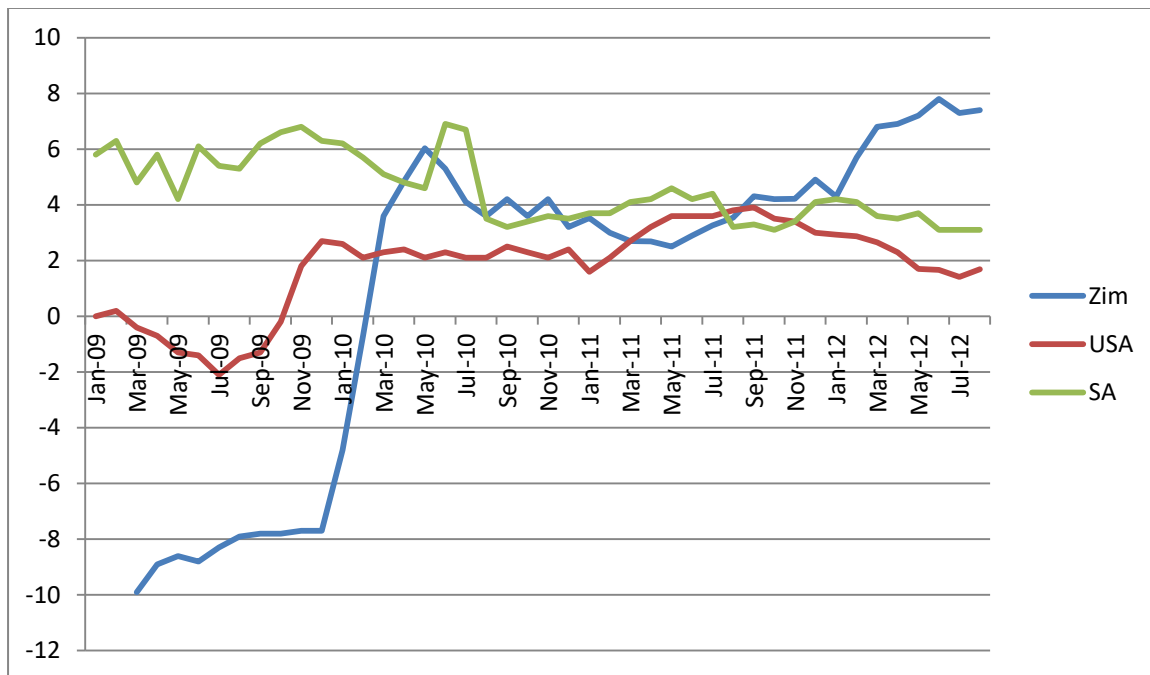
Table 4.1; monthly inflationary rates for 2009-2012, for Zimbabwe, USA and RSA

	2009			2010			2011			2012		
	Zim	USA	S A	Zim	USA	SA	Zim	USA	SA	Zim	USA	SA
January	na	0	5.8	-4.8	2.6	6.2	3.53	1.6	3.7	4.3	2.5	4.2
February	na	0.2	6.3	-0.7	2.1	5.7	3	2.1	3.7	5.7	2.7	4.1
March	-9.9	-0.4	4.8	3.6	2.3	5.1	2.7	2.7	4.1	6.8	2.6	3.6
April	-8.9	-0.7	5.8	4.8	2.4	4.8	2.6	3.2	4.2	6.9	2.3	3.5
May	-8.6	-1.3	4.2	6.3	2.1	4.6	2.5	3.6	4.6	7.2	1.7	3.7
June	-8.8	-1.4	6.1	5.3	2.3	6.9	2.8	3.6	4.2	7.8	1.6	3.1
July	-8.3	-2.1	5.4	4.1	2.1	6.7	3.2	3.6	4.4	7.3	1.4	3.1
August	-7.9	-1.5	5.3	3.6	2.1	3.5	3.5	3.8	3.2	7.4	1.6	3.1
September	-7.8	-1.3	6.2	4.2	2.5	3.2	4.3	3.9	3.3			
October	-7.8	-0.2	6.6	3.6	2.3	3.4	4.2	3.5	3.1			
November	-7.7	1.8	6.8	4.2	2.1	3.6	4.2	3.4	3.4			
December	-7.7	2.7	6.3	3.2	2.4	3.5	4.9	3	4.1			
Average	-8.34	-0.35	5.8	3.117	2.275	4.77	3.45	3.17	3.83	6.7	2.05	3.6

Source: Country Central Bank Websites

The average inflationary rates above still show inflationary growth in Zimbabwe since the end of the hyperinflationary environment in 2009. Zimbabwe recorded an inflationary growth from an average of -8.34% in 2009 to 3.12% in 2010, 3.45% in 2011 and 6.7% in 2012. This evinces unstable currency rate that is expected to increase with time if attention is not paid properly to detail. January and February 2009 are part of the hyperinflationary environment terminated by the dollarization of economy in February 2009. This steady inflationary growth that Zimbabwe experiences regardless of it using a hard currency shows the instability of the Zimbabwean economic environment. The graph below gives a cross sectional observation of the inflationary growth in Zimbabwe over the four years since the dollarization of the economy.

Figure 4.1: Monthly inflationary changes from 2009-2012 for Zimbabwe, USA and RSA



The graph above shows an acute increase in the inflationary rate in Zimbabwe compared to moderately constant inflationary rates of USA and RSA. The Zimbabwean inflationary rate recorded a sharp increase in 2010 as seen in the graph above; this exhibits how the economy is still vulnerable and instable even in this dollarized environment

4.4 Other Economic indicators

In examining the performance of the Zimbabwean economy, and probably give a background of the decade long recession, statistical reports published by the Bureau of Labor Statistics (BLS), Reserve Bank of Zimbabwe (RBZ) and Statistics South Africa (SSA) were analyzed to give a comparison of the movements in the GDPs of the three countries. The GDP is a very important statistic in measuring the performance of any economy. As such, it is the most comprehensive measure of a country's economic output that is generally estimated by statistical agencies. Quantitative data collected from analysis of statistical documents gave a summary of the components of the Gross domestic product of the three countries in comparison, between 2000 and 2009 which is the period Zimbabwe deteriorated. Zimbabwe by simple observation registered a deforming economic environment and the Gross domestic product was diminishing as shown in the table below, from US\$ 5627 million in 2000 to a staggering US\$ 4056 million in 2009.

Table 4.2: Economic indicators of the three countries for 2000, 2005, 2009

Country	ZIMUS\$			USA US\$			SAUS\$		
	2000	2005	2009	2000	2005	2009	2000	2005	2009
Year	million	Million	million	million	million	million	million	million	Million
GDP	5627	4690	4056	9898800	12579700	14119300	132878	247052	285983
GDP gth	7.7	4	4	4.2	3.1	2.6	4.2	5.3	1.8
GDP p.c	451.8	375.9	323.9	34389.7	41552.7	44871.8	2961.3	5139	5707.1
GNP p.c	437.7	370.1	322	34986.2	42136.7	44989.5	2890.5	5036.3	5581.1
FGCF %	10.6	4.3	17.1	20	19.5	14.7	14.9	16.8	22.4
IP Index	103	76	70	93	100	93	94	100	95
AP index	106	71	70	101	105	110	105	111	119
FP index	105	83	81	101	104	112	105	112	120
T O	2.4	17.98	31.01	4.4	3.4	3.86	9.4	2.34	3.46
UE rate	26.7	68.3	81.1	4	5.1	5.8	25.4	26.7	22.9

Source: UN Country profile database

Table 4.3 Country Index Base Years

Index	Country Base Years		
	Zim	USA	SA
Industrial	2000	2005	2005
Agricultural	2001	2001	2001
Food production	2001	2001	2001

Note: Data was produced using chain linked real output measures as recommended in the 1993 United Nations System of National Accounts (SNA93). Base years for the Industrial, Agricultural and Food production indices are as above.

4.4.1 Real Gross Domestic Product (GDP)

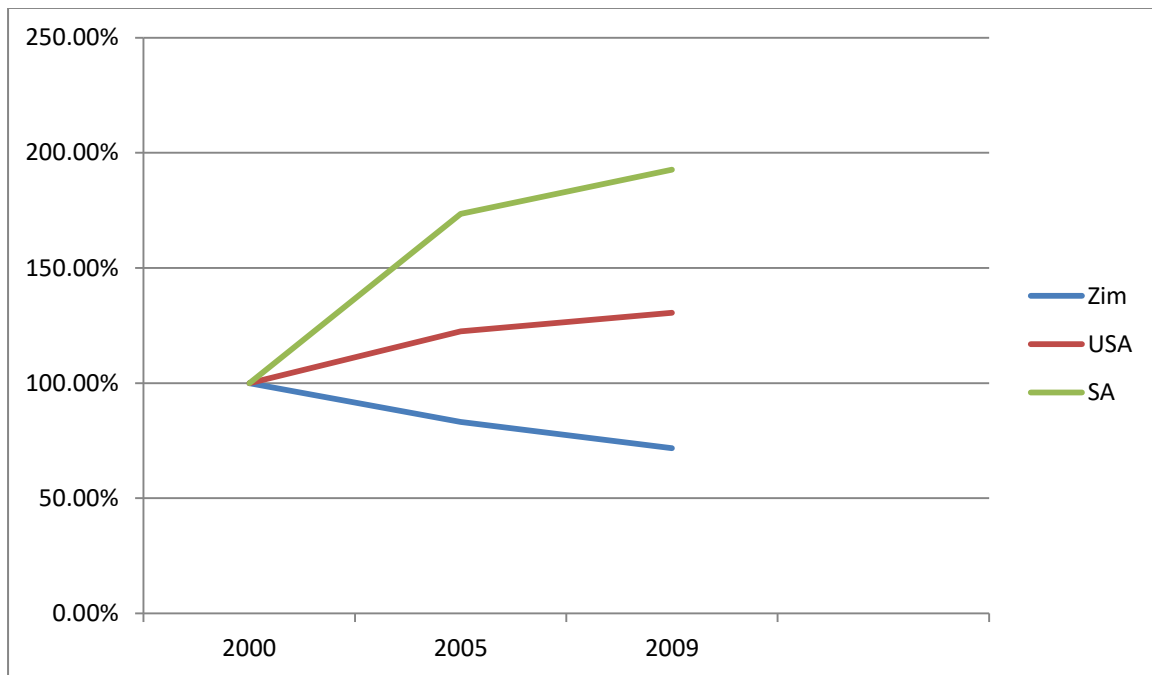
The real gross domestic product has been US\$ 5627 million in 2000 and decreased to US\$ 4690 million in 2005 which is a decline of 16.56%. It further decreased to US\$ 4056 million in 2009 which is a decline in economic activity by 13.51% from 2005 and 27.19% from 2000. In a judgmental approach in explaining the phenomenon Zimbabwe faced, the decrease can be attributed to a hyper inflationary economic condition that did not sustain business activity in the country. Mainly financial activity was affected since transacting in the local

currency caused uncertainty that resulted in loss of value (RBZ 2009). This is further amplified by the decline of the percentage growth rate from 7.7% in 2000 to only 4% in 2009. These indicators show how the economic output declined in Zimbabwe expressing that the economic condition was deteriorating since 2000. However in the contemporary time horizon USA and South Africa registered a growth in real GDP of 27.08% and 85.92% from 2000 to 2005 then 10.90% and 13.61% from 2005 to 2009 respectively. The US economy is estimated to have grown modestly by 2.6% in 2010 and further by 2.3% in 2011, supported by rising private consumption, increased investment in business equipment and software, rebounding profits, and normalizing financial conditions.

4.4.2 Gross Domestic Product per capita

The gross domestic product per capita has also been notably reducing during the period from 2000 to 2009 and this cannot be attributed to the increase in the Zimbabwean population since only a 2.1% increase was noted during the period but the decrease in the real GDP due to declining economic activity. The GDP per capita has reduced by 16.8% from US\$ 451.8 in 2000 to US\$ 375.9 in 2005, and then further decreased by 13.83% to 323.9 in 2009 reflecting a deteriorating economic environment in Zimbabwe at the period mentioned. This decrease also implies that financial activity including investment decreased severely during the period. This was also in contrast to the USA and RSA scenario in which they performed quite well and coming up with an increase of 30.48% and 48.11% respectively from 2000 to 2009. The graph below depicts the trend of the GDP per capita movements in the country in contrast to the movements in USA and South Africa expressed as a percentage of the 2000 GDP per capita.

Figure 4.1: GDP per Capita movements from 100% in 2000



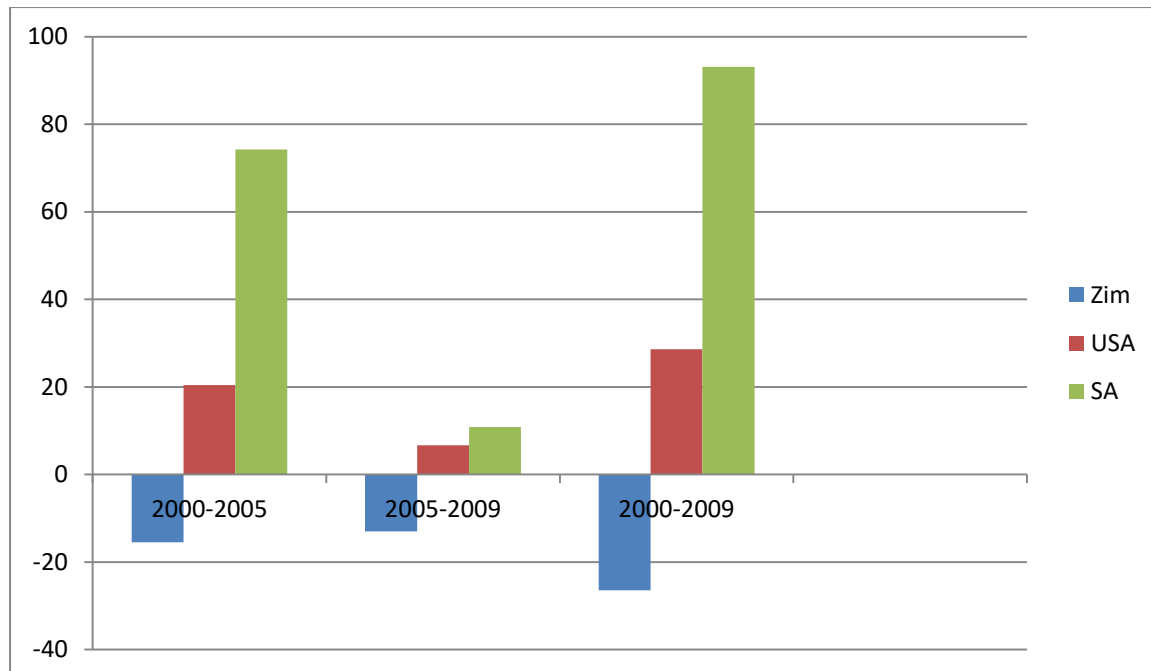
Source: UN Country Profile Database

4.4.3 Gross National Product per capita

Diminishing economic output is also noticed using this more accurate economic output measurement technique. From US\$ 437.7 in 2000, it falls by 15.44% to US\$ 370.1 in 2005. It also further decrease by 13% to US\$ 322 in 2009. This represents diminishing economic activity in Zimbabwe which means reduced industrial, agricultural and mining production, financial activity and foreign investment in the country. Due to these statistics definitely Zimbabwe had an international profile of not being a safe haven or a safe investment destination. However the benchmarking economies registered constant increase in the same regard. An increase of 20.44% from 2000's US\$ 34986.2 to US\$ 42136.7 was registered by the USA in 2005, it further increased to US\$ 44989.5 in 2009 which means a 6.7% increase in the half decade towards 2009 and 28.59% from 2000 to 2009. This evinces a sound and stable economy that has a strong economic production backup of its monetary system such that it can sustain other economic variables like the inflationary rate and employment at levels that support wealth growth over a period of time unlike Zimbabwe. This is also notable of Zimbabwe's neighbor RSA in which she improves by 74.24% to US\$ 5036.3 in 2005 from US\$ 2890.5 in 2000. It also further increases to US\$ 5581.1 which means a 10.82% from 2005 to 2009 and 93.08% from 2000 to 2009. This is an unprecedented growth rate for the

southern African country which renders it a stable and fairly predictable economic environment

Figure 4.2: Percentage changes in GNPs of the three countries 2000-2009



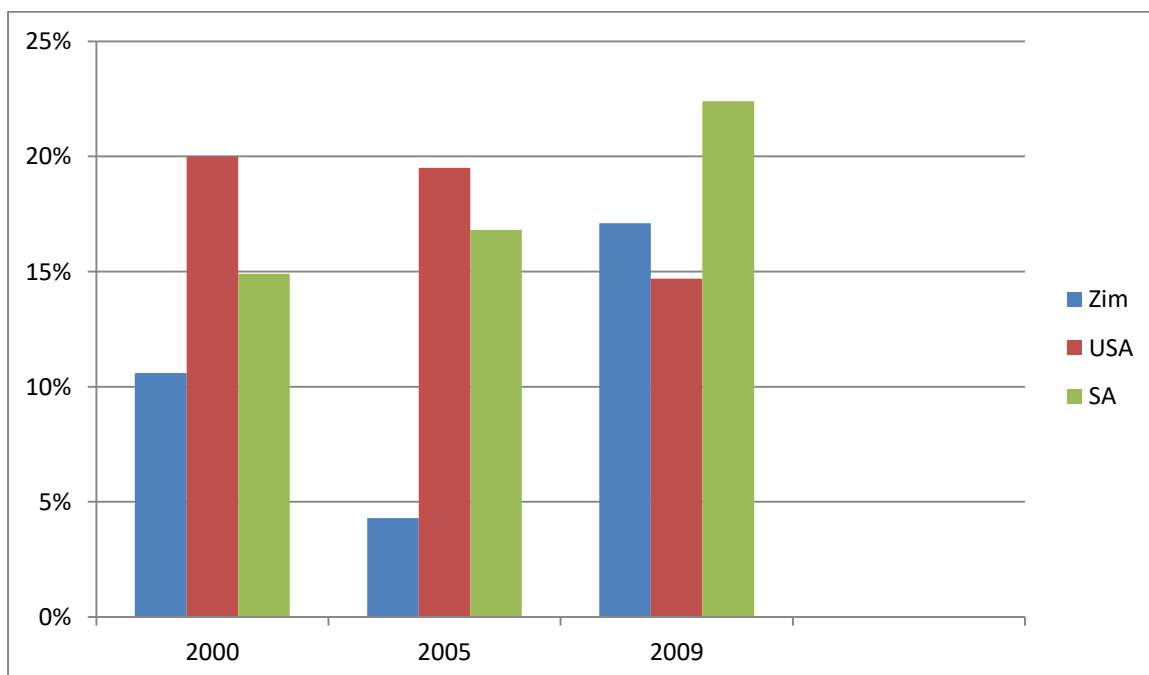
Source: UN Country Profile Database

4.4.4 Gross Fixed Capital Formation

Statistically it measures the value of acquisitions of new or existing fixed assets by the business sector, government and households (excluding unincorporated enterprises), less disposals of fixed assets. It is a component of the GDP expenditure that is invested in buying of fixed assets. It demonstrates the country's commitment to industrialization and technological vibrancy. It is favourable if high than low. However the measure does not make any adjustments to deduct the consumption of fixed capital through wear and tear effects such as depreciation of fixed assets from the investment figures (Friend and Hasbrouck 1982). The Net Fixed Capital Formation is a more accurate measure of the investment in fixed assets but it could not be calculated due to data limitations. In the case of Zimbabwe, data collected gave the following results: the GFCF reduced from 10.6% of GDP in 2000 to only 4.3% in 2005, this meant that investment in fixed capital reduced significantly in the period mentioned. This can be attributed to reduced investment in industry, telecommunications, financial sector and all the other sectors of the economy, also in government and household expenditure in respect to fixed capital greatly diminished. In financial more terms the

economy lacked investment through renovations and venture capital. The GFCF however increased to 17.1% at the end of 2009 which represents an improvement. This may also mean increased disposal of fixed capital in the country. USA on the other hand registered a decrease from 20% in 2000 to 19.5% in 2005 and to 14.7% in 2009. This can be explained by the extent of sophistication the economy has reached, such that the investment in fixed capital slowly starts to down turn (UN 2010). However the level it has reached is still viable and optimum for such an economy. RSA registered a constant increase in its GFCF from 14.9% in 2000 to 16.8% in 2005, then to 22.4% in 2009. This showed gradual increase in commitment of resources towards fixed assets by Zimbabwe's neighbour RSA. This has a positive impact on the industrial performance through benefits emanating from use new equipment and technological advancement among which are efficiency and reduced inflation through cost reduction emanating from production efficiencies. Zimbabwe's situation of 4.3% in 2005 reflects the economic meltdown in which the important aspect of investment in fixed assets was over looked to attend immediate issues that affected the country at the time (RBZ 2009). This reduction can also be attributed to consumption of fixed capital which can take the form of depreciation of equipment and becoming obsolete of old equipment in the industries. This indicator shows that Zimbabwe's investment in fixed capital or in more general terms investment in renovations and expansions was greatly reduced by the private sector, government and households meaning reduction in investment in general.

Figure 4.3: Gross Fixed Capital Formation changes in 2000, 2005 and 2009

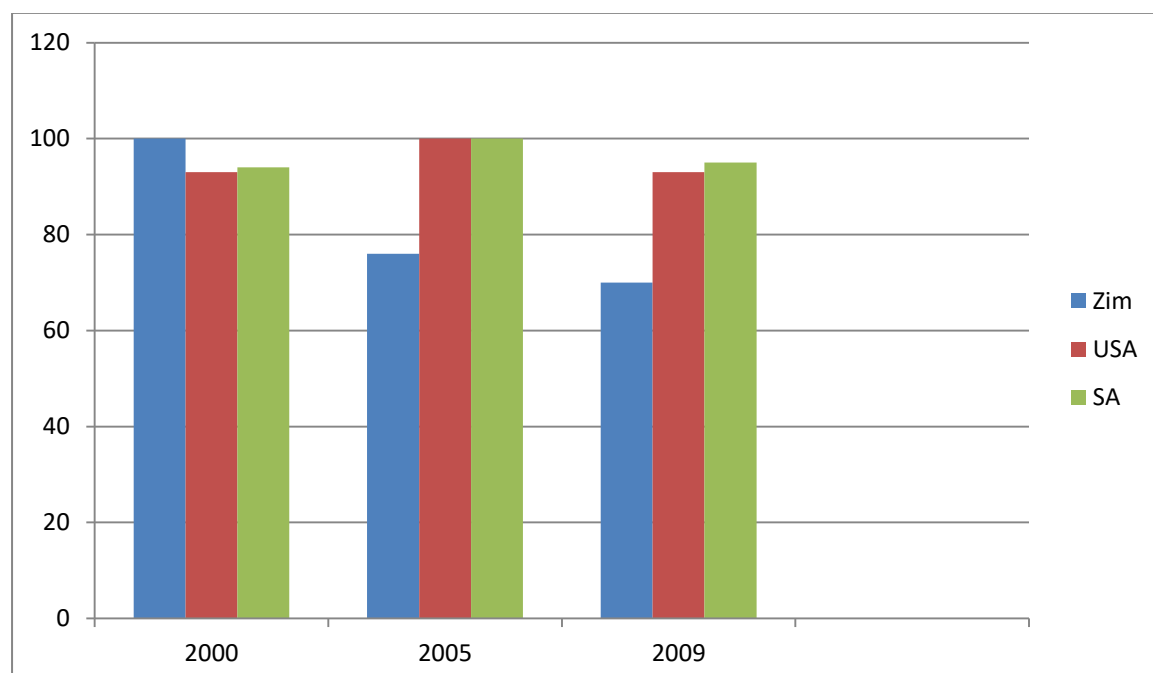


Source: UN Country Profile Database

4.4.5 Industrial Index

The industrial index details out the growth in the different sectors in an economy in respect to a predetermined base years. Sectors in Zimbabwe considered for the industrial index include the manufacturing, mining, tourism, retail/commodities and agriculture. A base year is given 100 points and it then benchmark the proceeding years. For Zimbabwe the base year was 2000 to which is given 100 points, it then dropped to 76 points in 2005, implying reduced growth in all the sectors of the economy in the five years to 2005. It then further dropped to 70 points in 2009, which reflects diminishing levels of industrial production in the country in the decade to 2009. This was not the case with USA whose base year was 2005 with 100 points. In 2000 it had a slightly lesser index with 93 points and it moved upward to 100 points in 2005, and then dropped back to 93 points in 2009. The trend shows movements in small margins which reflect stability of growth in the sectors of the economy of USA. This amplifies how irregular the Zimbabwean economy has been during the period. RSA has its base year as 2005 with 100 points of which it 94 points in 2000 and 95 points in 2009, which shows that the economy's sectors are a stable growth mode that guarantees future economic stability assuming other factors remain constant. The graph below shows how the industrial indices of three economies have changed from 2000 to 2005 and to 2009.

Figure 4.4 industrial index movements in 2000, 2005 and 2009



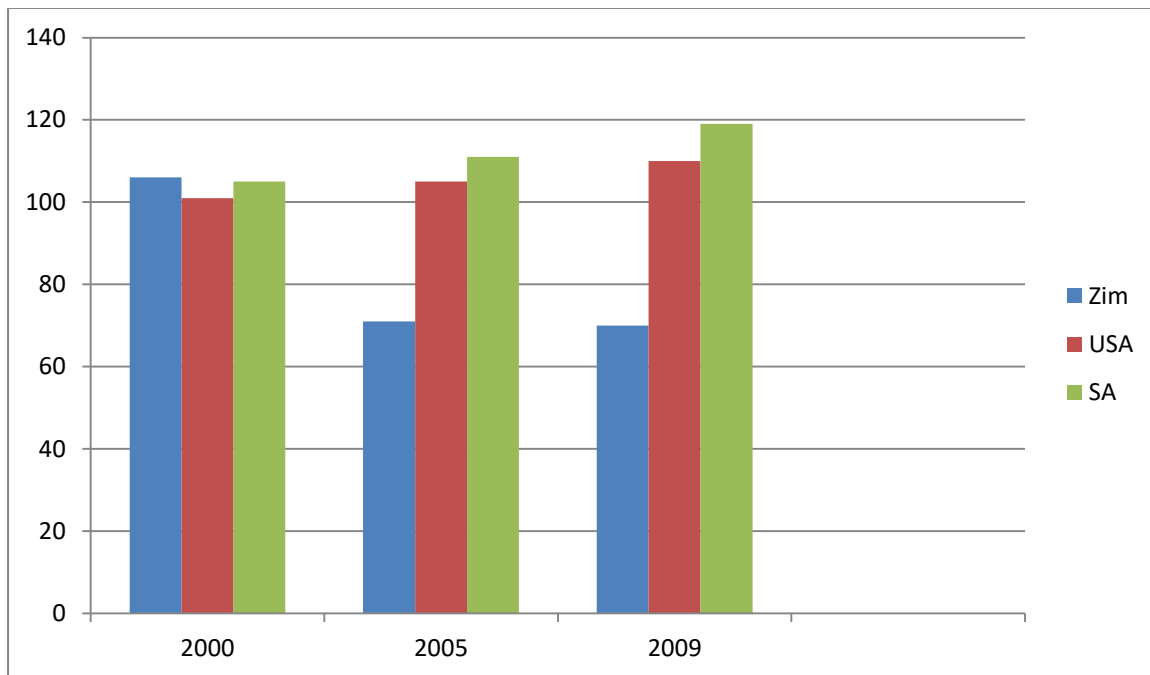
Source: UN Country Profile Database

The graph clearly shows that Zimbabwe registered bigger margin movements in the industrial index in 2005 and 2009.

4.4.6 Agricultural Index

This index shows the growth of the agricultural sector which is the backbone of the Zimbabwean economy. The base year for Zimbabwe is 2001 with 100 points, in 2000 the sector had 106 points which indicated that the sector was still performing very well, but this reduced to 76 points in 2005 and further decreased to 70 points in 2009. This reflected that the backbone sector of the Zimbabwean economy deteriorated in growth over the hyper-inflationary period. This can partly be attributable to land reform program that removed may white farmers from the productive farms. USA on the other hand had small margin movements in the contemporary period, the two have their base year as 2001 and had 101 in 2000 and increased to 105 points in 2005 and further increased to 110 points in 2009. RSA also registered increase from 105 points in 2000 which already was a good performance level. It moved to 111 points in 2005 and then to an impressive 119 points in 2009. This clearly shows that the Zimbabwean economic condition was deteriorating compared to the benchmarking economies of USA and South Africa. Reduced growth on the index implies reduced growth on the equities capitalizing the economic sector, hence investment in these equities was grossly affected as well. The graph below depicts the changes in the agricultural index of the three economies in comparison.

Figure 4.5 changes in the Agricultural index of the three countries



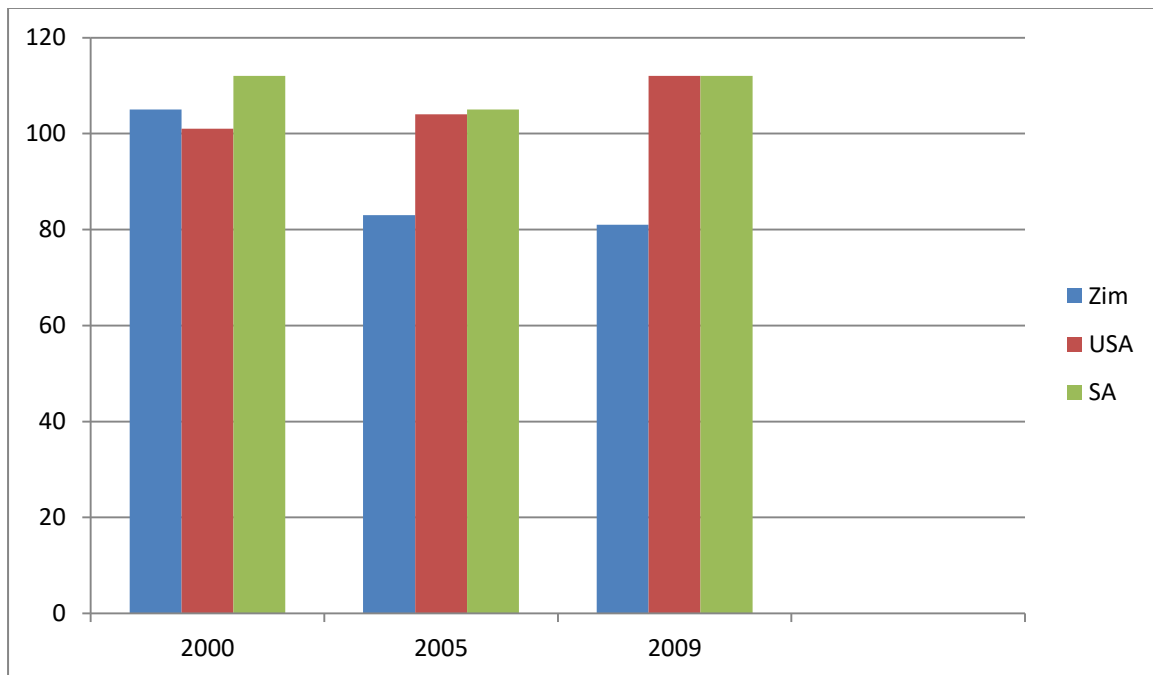
Source: UN Country Profile Database

The decrease in economic growth of the Zimbabwean situation is given by the decrease in the agricultural index as presented in the graph above, Zimbabwe's economy is agro-based hence this decrease dealt a huge blow to the Zimbabwean economic wellbeing and the index has shown instability in the sector.

4.4.7 The Food production index

The food production index of Zimbabwe fell as other indices looked at which means the country was facing capacity utilization problems in which it could not contain production it was capable of in the base year of 2001 with 100 points. The food production index reduced to 83 points in 2005 from 105 points in 2000, it further fell to 81 points in 2009. USA food production index in contrast increased from 101 points in 2000 to 104 points in 2005 and 112 points in 2009. Same as for South Africa which recorded an increase from 105 points in 2000 to 112 points in 2005 and 120 points in 2009. This also reflects the same conclusion presented by the other indices which is to say that Zimbabwe economic sectors have performed below optimum and have faced decline in the period mentioned. The graph below shows the changes in the food production index for the three economies under comparison.

Figure 4.6 Food production index for the three economies



Source: UN Country Profile Database

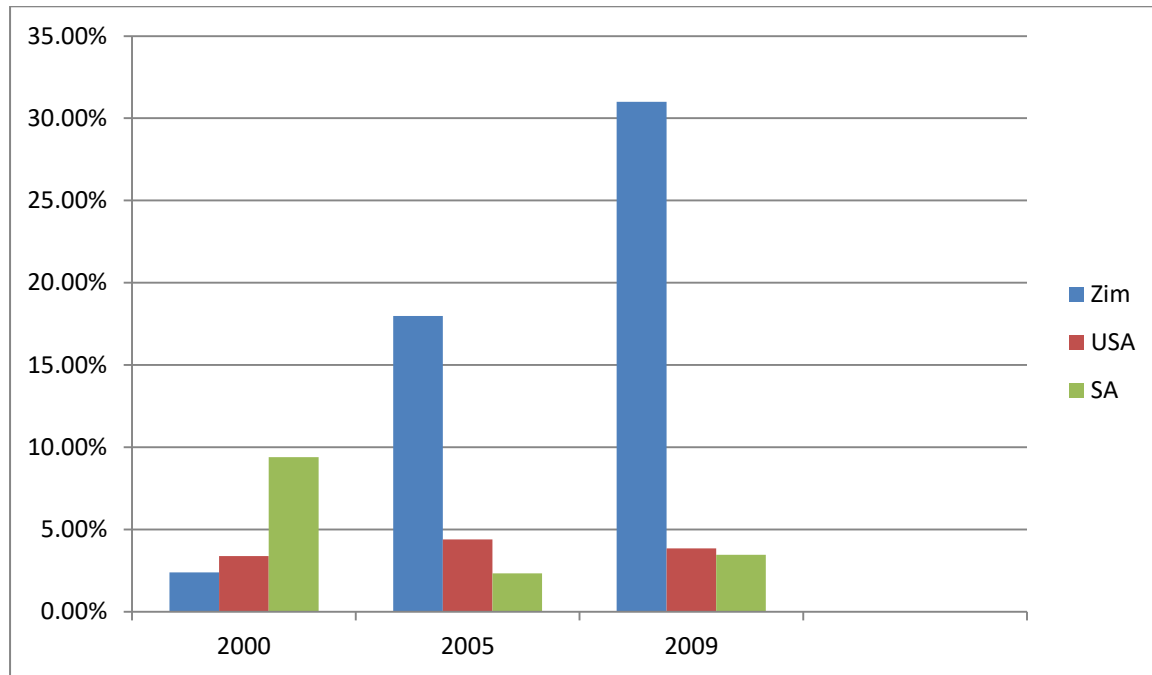
USA and RSA seem to have food production index excelling above the base year benchmarks yet the Zimbabwean food production seem to have been reducing significantly. This can be summed up to be an economic down turn during the hyper-inflationary period from 2000 to 2009.

4.4.8 Trade Openness

Trade openness measures how open an economy is to more trade exposure. It represents the trade gap between export and import margins in relation to the GDP of the same economy and it is kept low and constant for a vibrant economy. However Zimbabwe has witnessed increasing trade openness since 2000 representing increasing widening of economic activity gap in the economy. Zimbabwe's trade openness rose from 2.4% in 2000 to 17.98% in 2005 before further increasing to 31.01% in 2009. This shows that the gap between imports and exports widened gradually from 2000, meaning there were less exports from the country. Definitely this exposes how less functional the economy was during the hyperinflationary period to 2009. This was not the case for USA and RSA as well for the two registered a constant trade openness that fluctuated with very small margins. In USA trade openness reduced to 3.4% in 2005 from 4.4% in 2000 which alludes to increased exports and or reduced imports. This demonstrates to what extent an economy can sustain itself.

Tradeopenness then settled at 3.86% in 2009 which concludes stability of the economy due to small margins movements in its trade openness.RSA actually reduced from 9.4% in 2000 to 2.34% in 2005 and 3.46% in 2009 demonstrating an improving economy.

Figure 4.7: Trade openness movements from 2000 to 2009 of Zimbabwe, USA and RSA



Source: UN Country Profile Database

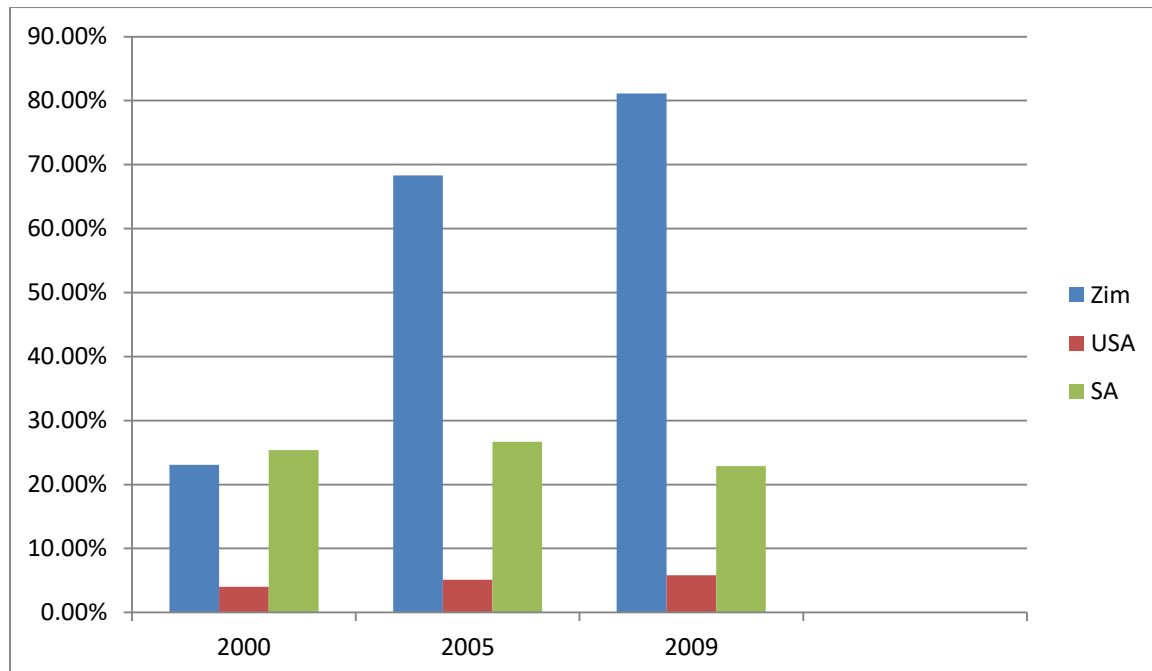
The graph shows how trade openness has been on the rise in Zimbabwe in contrast to the other benchmarking economies of USA and SA.

4.5 Unemployment rate

The unemployment rate in Zimbabwe has significantly risen since 2000 which grossly affected the income of the households in Zimbabwe. Hence a components of income namely investment and savings was also affected by this decline of employment. Unemployment rose from 23.1% in 2000 to 68.3% in 2005, it then further increased to 81.1% in 2009. Generally employment fall by 58.8% in 9 years from 2000 to 2009, meaning 58.8% of household income was compromised by this decline. USA still enjoyed a relatively low unemployment rate of 4% in 2000, 5.1% in 2005 and 5.8% in 2009. The trend over the decade shows stability in the employment rate of the country compared to the Zimbabwean situation. However, though RSA has generally a higher unemployment rate it has proved to be stable since it moved by very small margins from 25.4% in 2000 to 26.7% in 5 years to 2005 and

decreased to 22.9% in 2009. The graph below shows the unemployment movements of the three economies from 2000 to 2009.

Figure 4.8 Unemployment rate changes for Zimbabwe, USA and SA 2000-2009



Source: UN Country Profile Database

4.6 Financial Markets

Statistical documents were referred to in bringing out the performance of the financial markets in Zimbabwe and the benchmarking economies of the USA and South Africa so as to contrast the Zimbabwean situation. The findings denoted that Zimbabwe’s financial sector is relatively sophisticated, consisting of a Reserve Bank, discount houses, commercial banks (18), merchant banks(2), building societies(4), asset management companies (16), microfinance institutions (172) the Post Office Savings Bank, numerous insurance companies and pension funds and a stock exchange(RBZ 2012). Discount houses and finance houses where found to be none in Zimbabwe. The financial liberalization in 1991 can be attributed to the growth of the banking industry since then, this was expected to improve efficiency and lead to an expansion of a range of financial sector products available on the market (RBZ 2011).

Barriers to entry have been low which means that market differentiation is not made particularly on price but on customer segmentation. This has led to a tailoring of services

towards the relatively wealthy personal sector; high net worth individuals and the top end of the corporate markets. Whilst all of the commercial banks compete for the business of the transnational corporations there is relatively little servicing of the lower end of the corporate market and middle class individuals which make up a greater part of the Zimbabwean population. For example there is no venture capital house within the country that will consider funding start up situations. Financial instruments such as hedge funds, options, swaps, treasury bills and government bonds, inflation linked assets, venture capital and international assets are not available on the Zimbabwean financial market apparently. These instruments help investor to protect a position and hedge their interests from foreseeable changes in the market and their absence means limited investment options and opportunities for the investors. This compromised nature of investment in Zimbabwe.

This limitation of investment opportunities is further amplified by the introduction of stringent capital adequacy ratios introduced by the central bank which set the minimum requirement at US\$ 100 million from US\$ 12.5 million of which most commercial banks have already been struggling to comply with. This regulatory review will see the reduction of a number of institutions operational in the country's financial system. Through mergers and takeovers likely to emanate from the new capital requirement, competition in the banking system will greatly be reduced hence reduced product innovativeness and market development, thereby limiting chances of the introduction of other financial instruments currently unavailable.

The research findings pose that USA on the other hand has large asset markets which offer a great variety of asset types and they have a high degree of liquidity. This means that these asset markets are able to handle large inflows and outflows of funds with only a small impact on the price of the asset. Recent IMF estimates of the relative size of the asset markets in the advanced economies show that in 2010 the U.S. bond market had a total value of more than \$32 trillion (with government bonds accounting for about \$11 trillion of that) which is 28.8% of the global financial market, whereas the RSA had much smaller bond markets with a total value of about \$1.7 trillion. In addition, the U.S. stock market has an estimated capitalized value of about \$17 trillion, whereas the South Africa and Zimbabwe have US\$ 63 345 million and US\$ 3 872 million respectively. This shows how fragile and vulnerable the Zimbabwean financial system is in that it is less capitalized hence little ability to absorb shock and reduce severity of crises.

4.7 Summary

The chapter has provided data presentation, analysis and interpretation which highlighted the irregularities of the Zimbabwean economy since 2000 by comparing the macroeconomic indicators with those of the benchmarking economies which are of the USA and RSA. Presentations and discussions were done in respect to the findings on the research questions which include irregularities on the economic conditions reflected by the indicators selected such as GDP per capita, GNP per capita, gross fixed capital formation, industrial, agricultural and food production indices, trade openness and unemployment rate and their effect on investment such that the generalizations of the investment life cycle do not hold under such conditions

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The chapter focuses on the summarizing the research conclusions, recommendations, further evaluation and replication of findings as well as practical limitations to the study.

5.2 Summary of the study

The study sought to evaluate and critique the appropriateness of the Investment life cycle model in Zimbabwe.

The objectives of the study include among othersto assess the irregularities of the Zimbabwean economy from 2000 to the current dollarized environment. It also set to evaluate the effect of the economic irregularities on investment and to assess the applicability of the generalizations posed by the investment life cycle model under irregular economic conditions.

The research questions which had the essence of guiding the study included among others; what are the generalisations presented by the investment life cycle as standard at each stage in the life of an investor or individual, are there any assumptions held by the investment life cycle in giving its guidelines and what economic conditions should be in place to sustain the investment life cycle generalizations? What are the economic variables that indicate the irregularities of the Zimbabwean situation during the period?

The significance of the study rests in that it would give an insight into the challenges facing investment at individual level in Zimbabwe's economy and introduce to the body of knowledge the investment life cycle model as a proxy for measuring the standard of living in Zimbabwe. Significance of the study will also emanate from that it will also seeks to add value to the current disclosure on effort towards the alleviation of the standard of living in Zimbabwe.

Literature on the theoretical generalisations of the model was reviewed along with implications of the economic environment the aspects asserted by the model. The economic variables quantifiable by specific statistical indicators and their implication on investment were also reviewed. These in brief include inflationary rates, economic growth quantified by the movements in the components of the domestic output GDP (GDP per capita, GNP per

capita), Gross Fixed capital formation, unemployment rates and performance of the financial markets.

A comparative research design has been employed in carrying out this study because of the need to set a benchmark of vibrant economic performance which is then contrasted with the Zimbabwean profile and factor out irregularities. Documentary analysis is the only research instrument used in collecting data since macroeconomic indicators are fairly conclusive in fully depicting the economic environment of a country. And primary data on foreign countries from primary sources was impossible due to financial and time limitations to travel across the globe. However here emanates a limitation in which qualitative data explaining the economic conditions of the economic environments lacks to fully clarify the irregularities of the Zimbabwean economy

5.3 Summary of major finds

The major findings that proceed from this study include the following

- There was a hyperinflationary economic environment in the period 2000-2009 in which it climaxed at an unprecedented 241 million in January 2009 before the dollarization in February the same year.
- Inflationary growth is also noticed in the dollarized era in which a margin of 17.3% (7.4%-(-9.9%)) is register in 3 years from 2009, on the other hand the benchmarking economies observed only small magnitudes of 1.69% and 2.7%
- The real gross domestic output decreased from US\$ 5627 million in 2000 and declined to US\$ 4056 million in 2009 which is a decline in economic activity by 27.19% from 2000.
- The GDP per capita which in the effect of population changes also showed a decrease of 16.8% from US\$ 451.8 in 2000 to US\$ 375.9 in 2005, and then further decreased by 13.83% to 323.9 in 2009 compared to 30.48% and 48.11% increase of USA and RSA respectively from 2000 to 2009.
- The Gross fixed capital formation of Zimbabwe fell significantly from 10.6% of GDP in 2000 to only 4.3% in 2005, however increased to 17.1% at the end of 2009 which represents an improvement in investment in fixed capital or reduced disposal of fixed capital in the country. USA on the other hand registered a decrease form 20% in 2000

to 19.5% in 2005 and to 14.7% in 2009 and RSA registered a constant increase in its GFCF from 14.9% in 2000 to 16.8% in 2005, then to 22.4% in 2009.

- The industrial index fell as well during the same period from 100 points in 2000 to 76 points in 2005 and dropped to 70 points in 2009 compared to USA whose base year was 2005 with 100 points and had 93 points in 2000 and 93 points in 2009. RSA has its base year as 2005 with 100 points of which it had 94 points in 2000 and 95 points in 2009.
- Declines were also noticed in the Agricultural index whose base year was 2006, it was at 106 points in 2000 which reduced to 76 points in 2005 and further decreased to 70 points in 2009, of which the USA had base year as 2001 and had 101 points in 2000 and increased to 105 points in 2005 and further increased to 110 points in 2009. RSA also registered increase from 105 points in 2000 and moved to 111 points in 2005 and then to 119 points in 2009.
- The same was the trend with the Food production index in Zimbabwe fell from 100 points in 2000 (the base year) to 83 points in 2005 and 81 points in 2009 while the USA registered steady growth of 101 points in 2000 to 104 points in 2005 and 112 points in 2009. Same as for South Africa which recorded an increase from 105 points in 2000 to 112 points in 2005 and 120 points in 2009.
- Trade openness in Zimbabwe increased from 2.4% in 2000 to 17.98% in 2005 before further increasing to 31.01% in 2009 while USA trade openness reduced to 3.4% in 2005 from 4.4% in 2000 and then settled at 3.86% in 2009. RSA also reduced from 9.4% in 2000 to 2.34% in 2005 and 3.46% in 2009.
- Unemployment rate also increased in Zimbabwe from 23.1% in 2000 to 68.3% in 2005, it then further increased to 81.1% in 2009 which is a 58.8% decline in 9 years from 2000. Contemporarily USA unemployment rate only increased from 4% in 2000 to 5.1% in 2005 and 5.8% in 2009 and for RSA the rate moderately moved from 25.4% in 2000 to 26.7% in 2005 and decreased to 22.9% in 2009.
- Financial markets in Zimbabwe are not fully functional, they only offer deposit, equity and a few money market instruments. Absent is a great deal of financial instruments the Zimbabwean population can benefit from such as international equities, hedge funds, venture capital, junk or high risk bonds and derivatives including options and futures.

5.4 Conclusions

From the research findings above the following conclusions can be made that:

- The Zimbabwean encountered a hyperinflationary environment that had huge implication on individual ability to invest due erosion of value.
- Generally only less than 20% of the Zimbabwe's population is employed in the formal sector meaning more than 80% of the population does not have permanent income that sustains household consumption, savings and investment.
- Decrease in economic output by 27.19% concluded an economic down turn with much activity decline being in the financial sector and this had an effect on investment
- The investment assets accumulated by the population compromised by the economic environment in Zimbabwe does not match the generalizations of the model.
- The generalizations of the model assume a perfectly functional economy that is back by a sound financial sector with a depth of financial instruments and access.

5.5 Recommendations

In view of the conclusions drawn, the following recommendations are made:

- Zimbabwe has to implement a comprehensive financial strategy that reverses the irregular economic variables such as employment and financial access of the general population
- Authorities have to enhance availability of financial instruments through promoting the introduction of a diversity of markets such as options and other derivatives, venture capital, junk bonds, hedge funds and international equities.
- This model can be used as an instrument of measuring the general standard of living such that in policy making the generalizations can be used to benchmark policy implementation on poverty reduction in Zimbabwe.

5.6 Further evaluation and replication of findings

The study has revealed the economic irregularities in Zimbabwe and their implication on the generalizations of the investment life cycle. However the study has not established the extent the effect of each economic variable on the model hence further evaluation and is

recommended to be done to establish a priority list of the factors that need to be attended in alleviating the general population standard of living to match the model's generalizations.

The study has also left the gap of finding out on finding out the actual investment profile of a sample of investors in Zimbabwe to establish whether or not these profiles match the generalizations of the model.

5.7 Practical limitations

The practical limitations of the study included:

- The fact of that the country is under economic sanctions makes it practically difficult to measure the extent of the effect of economic conditions on the aspects of the model since this is not apparent in the economies Zimbabwe is being compared with.

Reference

- Reilly F and Brown K (2012), *investment analysis and portfolio management*, New York
- Shulman J (2000), *Portfolio management*, Babson College, FT Press
- Hobson R (2003), *Dividend investor*,Pros ware Inc. New York
- Henri Pirenne, (1936) *Economic and social history of medieval Europe.*:Routledge & Kegan Paul, London
- Modigliani and Merton Miller (1958),*Traditional Life cycle investing*, Collins College. Chicago
- Friedman M and Phelps E, Lerner A (1951), *Organization for Economic Co-operation and Development*, (OECD) New York
- Bender R and Ward K (2009), *Corporate financial strategy 3rd edition*, Elsevier, London
- Feldstein M and Fama E (1979), *Taxes, corporate dividend policy and personal savings*,Longman, London
- Markowitz H and Wiley J (1962) *Efficient Diversification of investment*, Yale University, New York.
- Waber (1970)*Portfolio selection Journal of finance* 1970a
- Sowell (2004), *Economic facts and fallacies*, Basic books, New York
- RBZ *Midterm Monetary Policy Statement*(2012)
- RBZ *Monetary policy statement* (2009)
- <http://www.dividentguy.com>
- <http://www.investopedia.com/terms>