

**THE EFFECTIVENESS OF TAX INCENTIVES IN ATTRACTING FOREIGN  
DIRECT INVESTMENT: THE CASE OF THE SOUTHERN AFRICAN  
DEVELOPMENT COMMUNITY**

by

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## **DECLARATION**

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I declare that **THE EFFECTIVENESS OF TAX INCENTIVES IN ATTRACTING FOREIGN DIRECT INVESTMENT: THE CASE OF THE SOUTHERN AFRICAN DEVELOPMENT COMMUNITY** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

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## **ABSTRACT**

The problem of low domestic savings is inherent in most Southern African Development Community (SADC) countries. This has motivated most of the SADC countries to institute policies that seek to attract foreign capital to cover the investment deficit that arises from low domestic savings rates. This study gives robust conclusions on the effectiveness of individual tax incentives commonly used by SADC countries in attracting foreign mobile capital. This study has broadened the dimensions research can take in analysing the contribution of tax incentives to Foreign Direct Investment (FDI) inflows into developing countries. In separating individual tax incentives mainly used in the SADC region the study gives a robust analysis on the impact of each tax incentive on FDI inflows into SADC countries. The tax incentives used in this study are: tax holidays, corporate income tax (CIT), reduced CIT in specific sectors and losses carried forward.

The study also derives data indices for governance, infrastructure and economic policy variables which gives the study clean and reliable data for efficient regression results. These macroeconomic data derivations assist in giving the FDI attraction analysis more variables and well behaved data in drawing conclusions.

Through an analysis and comparison of trends in FDI inflows and stock data in different African regions the study draws important conclusions on the impact of the socio-economic environment in FDI attraction. The study, in consultation with data from the period 2004 to 2013 separates the SADC countries into four panels based on resource richness. Panel 1 includes the resources-rich countries, Panel 2 the resources-poor countries, Panel 3 all SADC countries, except South Africa and Panel 4 all the SADC countries. Each of the estimate models in this study, use individual tax incentives variables to avoid the effects of collinearity between different tax incentives variables and to improve the predictive power of the panel data models. This study derived tax incentives data for individual SADC countries, from Ernst and Young's worldwide tax data. Regular tax incentives in the SADC are derived from tax holidays, corporate income tax (CIT); losses carried forward and reduced CIT in specific sectors.

This study seeks to achieve two major objectives: firstly, to establish the effectiveness of tax incentives in attracting FDI inflows into SADC countries, and, secondly, to establish other variables that influence FDI inflows into SADC countries. The study estimated four panels for SADC countries, separated according to resource richness. This was done because different

types of FDI are dependent on the available resources in developing countries and thus factors that influence the FDI inflows differ according to resource richness. Resource-seeking FDI moves to resources-rich economies, market-seeking FDI goes to economies that have access to larger markets and efficiency-seeking and strategic-asset-seeking FDI move to economies that ensure efficient use of their capital resources. Thus, as expected, factors that attract FDI to countries in the separate panels differ in direction of causality and magnitude of impact.

The study adopts a system Generalised Method of Moments (SYS GMM) methodology to address the problem of endogeneity associated with dynamic panel data models. The estimated results established that tax holidays positively explain FDI inflows in Panel 2. CIT was found to negatively affect FDI inflows into all SADC countries despite their particular category of resource-richness. Losses carried forward are insignificant in all panels and reduced CIT in specific sectors negatively influences FDI inflows in Panel 1 and surprisingly positively influences FDI inflows in Panel 2. The lagged FDI variable shows a positive relationship with current year FDI inflows. The governance index is significant and positively affects FDI inflows in panels 1, 3 and 4. Panel 2 shows a negative relationship between governance and FDI inflows.

Market potential measured by GDP growth rate is insignificantly different from zero in all the four panels in the study and negatively signed, except in models A and C of Panel 2. The stock of infrastructure is significant and negatively signed in all the panels. The log natural resources variable though insignificant in some models, mainly, exhibit a significant and negative effect in most models of the study's panel estimations. The trade openness variable is positively related to FDI inflows in Panel 1. Panel 2 show negative effects of trade openness to FDI inflows. Financial globalisation significantly impacts positive FDI inflows in all the four panels. The economic policy variable is insignificant in all the four panels of the study, except, in model B of Panel 1 where it is weakly significant at 10% level and negatively signed.

The study concludes that tax incentives are important in FDI attraction in the SADC countries; therefore, an effective tax mix that ensures efficient use of tax incentives is important to ensure sustainable FDI inflows into the region. Good governance is important in the region for FDI inflows to increase. Increasing government rents from natural resources reduces FDI inflows in the SADC.

Previous year flows of FDI are positively related to current year inflows, thus consistent FDI attraction policies in the SADC are important. Infrastructure in the SADC should be

consistently improved to ensure suitability with the dynamic nature of foreign investment. Financial markets should be developed to ensure effective flow of capital and growth in economies through more investment.

**Key words:** tax incentives, system Generalised Methods of Moments, panel data, infrastructure, governance, economic policy, market size, openness to trade, corporate income tax (CIT), tax holidays, losses carried forward, reduced CIT in specific sectors and panel data models.

## **DEDICATION**

To Shallone, Kayla and Janelle Munongo

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## TABLE OF CONTENTS

DECLARATION .....	ii
ABSTRACT.....	iii
DEDICATION.....	vi
ACKNOWLEDGEMENTS .....	vii
LIST OF FIGURES .....	xv
ACRONYMS.....	xvii
CHAPTER 1 .....	1
INTRODUCTION AND BACKGROUND.....	1
1.1    Introduction.....	1
1.1.1    Background .....	2
1.2    Problem statement.....	2
1.3    Justification for the study .....	3
1.4    Objectives of the study.....	4
1.5    Methodology .....	5
1.5.1    Hypotheses, data derivations and econometric methodology .....	5
1.5.2    The story of the importance of FDI in explaining economic growth in the SADC .....	7
1.5.3    Factors that explain FDI flows: evidence from theory and empirical analysis .....	7
1.6    Outline of the study.....	8
CHAPTER 2 .....	10
RATIONALE FOR SEEKING FOREIGN INVESTMENT AND FDI FLOWS INTO DEVELOPING COUNTRIES .....	10
2.1    Introduction.....	10
2.2    Early theoretical foundations on the importance of FDI.....	12
2.3    Modern theories on why firms undertake foreign investments.....	13
2.3.1    The market imperfections theory .....	13
2.3.2    International production theory.....	14
2.3.3    Portfolio theory .....	15
2.3.4    The product-cycle theory .....	15
2.3.5    Five stage theories.....	16
2.3.6    The eclectic paradigm .....	17
2.4    Rationale for seeking foreign investment .....	19
2.5    Empirical literature on FDI contribution to the economy .....	21



2.6 FDI flows in developing countries.....	26
2.7 FDI flows in the SADC region .....	31
2.8 Summary and conclusion.....	34
CHAPTER 3 .....	36
DETERMINANTS OF FOREIGN INVESTMENT FLOWS TO DEVELOPING COUNTRIES .....	36
3.1 Introduction.....	36
3.2 Analysing the fundamental theories behind foreign investment flows .....	37
3.2.1 Background to the theory of FDI .....	37
3.2.2 Classical and neoclassical models.....	38
3.2.3 Ownership advantage theory.....	41
3.2.4 Industrial organisation theory .....	42
3.2.5 The Nordic internationalisation model.....	42
3.2.6 The behavioural theory of the firm .....	43
3.2.7 International strategic management .....	44
3.2.8 Industrial network theory .....	45
3.2.9 Proximity–Concentration Hypothesis .....	46
3.2.10 Synthesis .....	46
3.3 Theoretical determinants of FDI based on host country’s characteristics .....	48
3.3.1 Policy variables as determinants of FDI .....	49
3.3.2 Host country determinants .....	50
3.3.3 Host country market and input-related determinants .....	51
3.3.4 External trade-related determinants .....	51
3.3.5 Capital movement-related determinants .....	51
3.3.6 Gravity approach.....	52
3.3.7 Synthesis .....	52
3.4 Strategic motives of FDI.....	53
3.4.1 Market-seeking FDI.....	54
3.4.2 Resource-seeking FDI.....	56
3.4.3 Efficiency-seeking FDI.....	57
3.4.4 Strategic-assets-seeking FDI.....	58
3.4.5 Other strategic motives for FDI .....	59
3.4.6 Synthesis .....	60
3.5 Summary and conclusions .....	61

CHAPTER 4 .....	66
NON-TAX INCENTIVES IN THE SADC REGION .....	66
4.1 Introduction.....	66
4.2 Non-tax incentives in the SADC.....	68
4.2.1 Public institutions and access to credit.....	69
4.2.2 Infrastructure and access to electricity .....	70
4.2.3 Protecting investors.....	70
4.2.4 Macroeconomic policies .....	70
4.3 Socio-economic and political conditions in the SADC.....	71
4.4 FDI attraction strategies in the SADC member states .....	72
4.4.1 Angola.....	72
4.4.1.1 Policies to attract FDI in Angola.....	73
4.4.2 Botswana.....	76
4.4.2.1 Policies adopted by Botswana to attract FDI .....	76
4.4.3 The Democratic Republic of Congo (DRC) .....	79
4.4.3.1 Policies adopted by the DRC to attract FDI.....	79
4.4.4 Lesotho.....	82
4.4.4.1 Policies adopted by Lesotho to attract FDI .....	82
4.4.5 Madagascar .....	84
4.4.5.1 Policies adopted by Madagascar to attract FDI.....	85
4.4.6 Malawi .....	86
4.4.6.1 Policies adopted by Malawi to attract FDI.....	86
4.4.7 Mauritius .....	88
4.4.7.1 Policies adopted by Mauritius to attract FDI .....	88
4.4.8 Mozambique .....	90
4.4.8.1 Policies adopted by Mozambique to attract FDI.....	91
4.4.9 Namibia.....	92
4.4.9.1 Policies adopted in Namibia to attract FDI .....	92
4.4.10 Seychelles .....	93
4.4.10.1 Policies to attract FDI in Seychelles .....	94
4.4.11 South Africa .....	95
4.4.11.1 Policies to attract FDI in South Africa.....	96
4.4.12 Swaziland.....	98

4.4.13 Tanzania.....	100
4.4.13.1 Policies to attract FDI in Tanzania.....	100
4.4.14 Zambia .....	102
4.4.14.1 Policies to attract FDI in Zambia .....	102
4.4.15 Zimbabwe .....	103
4.4.15.1 Policies to attract FDI in Zimbabwe .....	104
4.5 Summary and conclusions .....	105
CHAPTER 5 .....	113
DO TAX INCENTIVES MATTER FOR INVESTMENT? THEORY AND EMPIRICAL EVIDENCE .....	113
5.1 Introduction.....	113
5.2 Rationale for introducing tax incentives .....	114
5.3 Theoretical arguments for introducing tax incentives.....	116
5.3.1 Early theoretical arguments for introduction of tax incentives .....	116
5.3.2 Modern theoretical arguments for tax incentives.....	118
5.4 Merits and demerits of tax incentives .....	120
5.4.1 Merits of tax incentives.....	120
5.4.2 Demerits of tax incentives.....	121
5.5 Tax competition and harmonisation.....	122
5.5.1 Theories of tax competition .....	123
5.5.2 Wasteful tax competition .....	127
5.5.3 Tax harmonisation.....	127
5.6 Empirical analyses on the effectiveness of tax incentives in attracting FDI.....	128
5.6.1 Country-specific empirical studies.....	129
5.6.2 Global empirical studies.....	130
5.6.3 Regional empirical studies .....	131
5.6.4 Methodological issues in regional studies.....	132
5.7 Summary and conclusion.....	135
CHAPTER 6 .....	137
TAX INCENTIVES FOR INVESTMENT IN THE SADC .....	137
6.1 Introduction.....	137
6.2 Tax incentives used across the world.....	138
6.2.1 Tax holidays.....	138

6.2.2 Reduction on CIT rate to specific sectors .....	140
6.2.3 Exemption of CIT for export companies .....	141
6.2.4 Accelerated capital (investment) allowances .....	141
6.2.5 Investment tax credits .....	142
6.2.6 Losses carried forward .....	143
6.2.7 Enhanced deduction and accelerated depreciation.....	143
6.2.8 Preferential treatment of long-term capital gains.....	144
6.2.9 Deductions for qualifying expenses .....	145
6.2.10 Zero or reduced tariffs.....	145
6.2.11 Employment-based deductions .....	146
6.2.12 Tax credits for value addition .....	146
6.2.13 Tax reductions/credits for foreign hard currency earnings .....	146
6.3 Tax incentives in the SADC .....	147
6.3.1 Tax holidays and exemptions.....	147
6.3.2 Reduction in CIT, royalties and VAT rate to specific sectors .....	151
6.3.3 Tax allowances, tax credits or similar incentives.....	155
6.3.4 Accelerated depreciation and tax loss relief.....	159
6.4 Challenges faced by SADC countries in operating tax incentives.....	164
6.5 Summary and conclusions .....	171
CHAPTER 7 .....	173
THEORETICAL FRAMEWORK, METHODOLOGY AND DATA ANALYSIS.....	173
7.1 Introduction.....	173
7.2 Theoretical framework.....	173
7.3 Econometric methodology .....	176
7.3.1 Panel data econometrics technique .....	177
7.3.3 Justification of techniques.....	182
7.3.4 Diagnostic property: Endogeneity.....	188
7.3.5 Diagnostic property: One-step versus two-step estimation.....	188
7.3.6 Diagnostic property: Unit root tests .....	189
7.3.7 Diagnostic property: Cointegration test .....	192
7.3.8 Diagnostic property: First order serial correlation test [AR (1)] and second order serial correlation test [AR (2)].....	193
7.4 Data Analysis .....	194

7.4.1 Dependent variable .....	194
7.4.2 Explanatory variables.....	195
7.5 Summary and conclusions .....	204
CHAPTER 8 .....	205
EMPIRICAL RESULTS AND ANALYSIS .....	205
8.1 Introduction.....	205
8.2 Descriptive statistics .....	205
8.3 Unit root tests results .....	206
8.3.1 IPS tests.....	207
8.3.2 LLC tests .....	209
8.4. System GMM estimation .....	211
8.4.1 Diagnostic tests .....	212
8.4.2 Estimated empirical models .....	215
8.5 Summary and conclusions .....	238
CHAPTER 9 .....	241
CONCLUSIONS, POLICY IMPLICATIONS AND FUTURE RESEARCH .....	241
9.1 Introduction.....	241
9.2 Summary of the study .....	241
9.3 Thesis findings .....	242
9.4 Study's contribution.....	251
9.5 Policy recommendations .....	251
9.6 Recommendations for future study .....	253
References.....	254
Appendix A.....	289
Appendix C Descriptive statistics .....	297
Appendix D Interpretation of time dummies .....	300

## LIST OF TABLES

Table 1: Summaries of empirical studies on FDI growth Nexus .....	23
Table 2: Summary of the major theories of FDI flows based on supply and demand approaches to FDI .....	62
Table 3: Summary of non-tax FDI attraction strategies by SADC countries.....	107
Table 4: Summary of empirical findings on tax incentives and investment and analysis of effectiveness of methodologies used .....	133
Table 5: Tax holidays and exemptions .....	148
Table 6: Reduced CIT, royalties and VAT rate to specific sectors.....	152
Table 7: Tax allowances, tax credits or similar incentives .....	156
Table 8: Accelerated depreciation and tax loss relief .....	160
Table 9: Individual SADC country challenges in implementing tax incentives .....	165
Table 10: Construction of infrastructure index .....	200
Table 11: Construction of economic policy index using eigenvectors .....	203
Table 12: Summary of IPS unit root tests results.....	207
Table 13: Summary of LLC unit root tests results.....	209
Table 14: Panel 1 tests .....	212
Table 15: Panel 2 tests .....	213
Table 16: Panel 3 tests .....	213
Table 17: Panel 4 tests .....	214
Table 18: Estimated empirical results of the SYS GMM Panel 1.....	216
Table 19: Estimated empirical results of the SYS GMM Panel 2.....	222
Table 20: Estimated Empirical Results of the SYS GMM Panel 3.....	227
Table 21: Estimated Empirical Results of the SYS GMM Panel 4.....	232
Table 22: B1 Derivation of Economic Policy Index.....	296
Table 23: B2 Derivation of infrastructure index .....	297
Table 24: Descriptive statistics for Panel 1.....	297
Table 25: Descriptive statistics for Panel 2.....	298

Table 26: Descriptive statistics from Panel 3.....	299
Table 27: Descriptive statistics from Panel 4.....	300

## LIST OF FIGURES

Figure 1: FDI inward stock per region from 1990-2014 (in USD millions) .....	27
Figure 2: FDI inward stock in African regions from 1990-2014 (in USD millions) .....	28
Figure 3: FDI inflow to African regions from 1990-2014 (in USD millions) .....	30
Figure 4: FDI inflow per region from 1990-2014(in USD millions) .....	31
Figure 5: FDI inflows per country in low resources-endowed SADC countries from 1990-2014 (in USD millions) .....	32
Figure 6: FDI inflows per country in the SADC resource-rich countries from 1990-2014 (in USD millions) .....	33
Figure 7: A1 Dependent variable: net FDI inflow as a % of GDP .....	289
Figure 8: A2 Tax holidays .....	290
Figure 9: A3 Reduced CIT in specific sectors .....	290
Figure 10: A4 CIT .....	291
Figure 11: A5 Losses carried forward .....	291
Figure 12: A6 Trade openness .....	292
Figure 13: A7 Natural resources .....	292
Figure 14: A8 Market potential .....	293
Figure 15: A9 Governance .....	293
Figure 16: A10 Financial globalisation .....	294
Figure 17: A11 Economic Policy .....	294
Figure 18: A12 Infrastructure .....	295



## **ACRONYMS**

AETR- Average Effective Tax Rate

ADF- Augmented Dickey Fuller

AfDB- African Development Bank

AFRODAD- African Forum and Network for Debt and Development

AGOA- African Growth and Opportunity Act

AMU- Arab Maghreb Union

ANIP- Angola National Private Investment Agency

ANSA- Alternatives to Neoliberalism in Southern Africa

AsgiSA- Accelerated and Shared Growth Initiative for South Africa

BEDIA- Botswana Export Development and Investment Agency

BEE- Black Economic Empowerment

BIPPA- Botswana Institute for Development Policy Analysis

BPI- Baseline Profitability Index

CIT- Corporate Income Tax

CMA- Common Monetary Area

COMESA- Common Market for Eastern and Southern Africa

DC- Developed countries

DIF GMM- Difference Generalised Method of Moments

DRC- Democratic Republic of Congo

ECOWAS- Economic Community of Western Africa States

EDD- Economic Diversification Drive

EPZ- Export Processing Zone

EU- European Union

FAO- Food and Agriculture Organisation

FDI- Foreign Direct Investment

G-15- Group of Fifteen

GCI- Global Competitive Index

GDP- Gross Domestic Product

GEAR- Growth, Employment and Redistribution

GTZ- German Technical Corporation Agency

HDT- Human Development Trust

HIPC- Highly Indebted and Poor Country

ICT- Information Communications Technology

IDZ- Industrial Development Zone

IMF- International Monetary Fund

IMTT- Inter-Ministerial Task Team

IPS- Im, Pesaran and Shin

IRM- Investment Road Map

LDCs- Less Developed Countries

LHWP- Lesotho Highlands Water Project

LLC- Levin, Lui and Chu

LNDC- Lesotho National Development Corporation

MENA- Middle East and North Africa

METR- Marginal Effective Tax Rate

MFEZ- Multi- Facility Economic Zone

MIPA- Malawi Investment Promotion Agency

MNCs- Multinational Corporations

MNEs- Multinational Enterprises

MOU- Memorandum of Understanding

MTEF- Medium-Term Expenditure Framework

NDP- National Development Plan

NDS- National Development Strategy

NEG- New Economic Geography

NEPAD- New Partnership for Africa's Development

NESPS- National Energy Sector Policy Strategy

NIEs- Newly Industrialised Economies

NTSA- National Treasury of South Africa

OECD- Organisation for Economic Cooperation and Development

OHADA- Organisation for the Harmonisation of Basic Law in Africa

OLI- Ownership, Location, Internalisation

OLS- Ordinary Least Squares

PCA- Principal Component Analysis

PII- Physical Infrastructure Index

R&D- Research and Development

RBZ- Reserve Bank of Zimbabwe

RDP- Reconstruction and Development Programme

REFIT- Renewable Energy Feed-in Tariffs

SA- South Africa

SACU- Southern African Currency Union

SADC- Southern African Development Community

SADCC- Southern African Development Coordination Conference

SAPs- Structural Adjustment Programmes

SMEs- Small-to Medium-Enterprises

SOEs- State-Owned Enterprise

SSA- Sub-Saharan Africa

SYS GMM- System Generalised Method of Moments

TFP- Total Factor Productivity

TNCs- Transnational Companies

Tsh- Tanzanian Shilling

UEA- United Arab Emirates

UK- United Kingdom

UN- United Nations

UNCTAD- United Nations Conference on Trade and Development

US- United States

USD- United States Dollar

VAT- Value Added Tax

WB- World Bank

WEF- World Economic Forum

WGI- World Governance Index

WTO- World Trade Organisation

ZDA- Zambian Development Agency

ZEFRAZA- Zanzibar Free Economic Zone Authority

ZESCO- Zambian Electricity Supply Company

ZIC- Zimbabwe Investment Centre

ZIMRA- Zimbabwe Revenue Authority

Z-M- Zodrow- Mieszkowski

ZRA- Zambia Revenue Authority

## CHAPTER 1

### INTRODUCTION AND BACKGROUND

#### 1.1 Introduction

Economic growth and development is a goal pursued by all African countries. However, realisation of growth and development remains a dream if there are no meaningful investments in an economy. Africa has a problem of low savings projected to be 18% of gross domestic product (GDP) in Sub-Saharan Africa in 2005 (World Bank 2004), due to low incomes which create perennial deficits of investment funds. Therefore all regions in Africa, including the Southern African Development Community (SADC) rely heavily on foreign capital to cover the investment-savings gap and ensure sustainable growth and development in their economies.

Lack of investment in a country creates socio-economic problems mainly centred on unemployment and poverty. These two socio-economic problems have existed in Africa and indeed in the SADC since time immemorial. Akrami (2008) advised that, given the nature of capital that is required by developing countries to efficiently and effectively utilise the natural resources they have, it is important for them to source foreign capital. Therefore, African economies need to ensure suitable socio-economic environments that lure foreign mobile capital across their borders.

There are two broad types of foreign investments that are crucial to developing countries to ensure growth and development: portfolio or indirect investment and foreign direct investment (FDI). Portfolio investment involves the purchase of a stake in an enterprise by a foreign equity investor. FDI is the acquisition and control of the productive operations of a firm in a foreign country (Muradzikwa 2002). Both investment types have received attention from policy makers. Most developing countries seek policies that lure portfolio investments in a bid to improve their financial deepening and innovation which are crucial to growth. However the most dominant investment type in the SADC is FDI which involves fixed capital formation due to dominance of the natural resources sectors in the region. Therefore, the focus of this thesis will be on FDI.

Given the fierce competition nations face in luring foreign mobile capital into their economies, most SADC countries opened their economies to trade and foreign direct investment (FDI) in

the 1990s in a bid to attract more investment. Taxes through the setting up of export processing zones (EPZs) became one of the important policies used in the region to attract foreign capital. This study thus seeks to establish the effectiveness of the most commonly used tax incentives such as tax holidays, corporate income tax (CIT), losses carried forward and reduced CIT in specific sectors in the region in FDI attraction.

### **1.1.1 Background**

Klemm and Van Parys (2009), in a study of developing countries including some SADC countries, concluded that developing countries actively use tax incentives as a foreign capital attraction policy. In 2004, SADC countries established the SADC protocol on investment and finance aimed at creating a favourable environment for FDI attraction. The protocol had many objectives, one of which sought to establish common tax policies in the region to ensure regional competitiveness through tax cooperation.

Robinson (2005) concludes that tax cooperation in the SADC might be the best route to ensure the region's competitiveness as an investment destination given the integration efforts of countries in the region. It is against this background, that this study seeks to probe the importance of independent fiscal policy decisions taken by the SADC member states with their different resource endowments, in implementing tax incentives for improving their economies' attractiveness to FDI inflows.

In the year 2000, the SADC states established a tax subcommittee established under the National Treasury of South Africa (NTSA) with a mandate to 'coordinate tax policies to the extent necessary to improve efficiency in tax collection, safeguard regional tax bases and reduce obstacles to intra-SADC trade and investment'. The committee has met its major shortcoming in establishing common policy in the area of tax incentives especially those aimed at luring FDI into individual SADC countries (Robinson 2005). Thus, it is imperative that an inquest be made into the effectiveness of tax incentives in attracting foreign mobile capital.

## **1.2 Problem statement**

The use of tax incentives as an FDI attraction tool is widespread in developing, transitional and developed countries despite cautions given by the International Monetary Fund (IMF) and

World Bank (WB) on their negative impact on competition and innovation which discourages economic growth. However, given the recent developments in regional and global economic cooperation, the use of tax incentives has been one major stumbling block to effective tax harmonisation that promotes uniform tax policies for better economic integration.

In keeping with regional economic growth, the SADC established the SADC memorandum of understanding (MOU) in 2002 which sought to achieve cooperation in taxation issues. It required that countries design their tax incentives with set requirements. The requirements include avoiding harmful tax competition, avoiding policies that prejudice another member state's economic policies, activities or the regional mobility of goods, services, capital or labour (SADC 2002). However, in 2006 the SADC formulated the SADC Protocol on Finance and Investment, with a vision to foster deeper integration in the region to promote industrialisation and attract FDI (SADC 2006). Given the fact that tax incentives are a key tool for attracting FDI, SADC policy makers are faced with conflicting choices between the use of tax incentives to attract FDI and fulfil the SADC Protocol on Finance and Investment goals or abolishing tax incentives and avoiding harmful tax competition based on the 2002 MOU.

UNCTAD (2015) data used in figures 5 and 6 shows that South Africa and Angola receive the highest FDI inflows in the SADC region. This is due to their vast mineral resource deposits. However, despite various efforts to lure investment most SADC countries continue to receive low FDI inflows. Therefore, policy makers in the region are faced with the task of designing effective policy mix including tax incentives to ensure regional competitiveness and to increase FDI inflows throughout the SADC region.

### **1.3 Justification for the study**

Bolnick (2004) concludes that the SADC has a huge poverty level due to lack of investment in the region. The investment deficiencies emanate from low domestic savings thus the SADC needs to attract internationally mobile capital in order to develop its economies. This study seeks to test the Dunning (1977) eclectic paradigm which predicts that tax incentives, by lowering the cost of doing business improve the locational advantage of an economy and thus can be expected to attract FDI inflows. The study also seeks to establish why tax incentives yield different results in SADC countries.



The study gives a new dimension to the FDI attraction debate by testing the effects of various tax incentives such as: tax holidays, CIT, reduced CIT and losses carried forward variables to help policy makers in their choice of tax incentive mixes to attract FDI. The study also, by estimating each tax incentive in its own model, gives a robust and conclusive analysis on the effectiveness of tax incentives in FDI attraction.

The study, by separating SADC countries into four panels based on resource richness and levels of development, establishes why tax incentives work better in some countries than in others. Thus, the study is critical to SADC policy makers in bringing a new dimension to FDI attraction.

There have been various studies on the effectiveness of tax incentives in FDI attraction in developing countries; including some SADC countries [see Bolnick (2004); Klemm & Van Parys (2009) and Calitz, Wallace & Burrows (2013)]. However, most of these studies for example Calitz et al. (2013) and Klemm & Van Parys (2009) only focus on a few SADC countries. This study seeks to give an analysis of all the SADC countries. Bolnick (2004) gives a detailed analysis on the effectiveness of tax incentives in FDI attraction using Marginal Effective Tax Rates (METR) and Average Effective Tax Rates (AETR); these methods do not separate individual tax incentives' effectiveness in FDI attraction. This study seeks to fill that gap by identifying commonly used tax incentives in the SADC and establishing their individual effects on FDI inflows into the region.

#### **1.4 Objectives of the study**

Given the profound changes in the economic, social and political environment in the SADC region, the traditional areas of cooperation such as tax harmonisation take on a totally new dimension. The need to establish the nature of contribution tax incentives have, in bringing the much needed FDI is important in the tax design strategies of SADC economies.

In this study tax incentives will be analysed on their individual capacities in giving answers to each tax incentive's importance in luring internationally mobile capital. SADC countries are separated into four groups according to resource richness, thereby bringing together those countries with similar characteristics. This helps in giving robust conclusions on the first major objective of the study which seeks to establish the effectiveness of tax incentives in attracting FDI into SADC countries.

The second objective seeks to establish other socio-economic and political variables that contribute to final decisions by foreign investors on where to locate in SADC economies.

## **1.5 Methodology**

This study uses the dynamic panel econometric technique of system Generalised Method of Moments (SYS GMM) to rigorously generate empirical evidence on the factors that determine FDI inflows into SADC countries. Data for individual tax incentives is derived from Ernst and Young's worldwide tax data. Economic policy and infrastructure data are derived using the principal component analysis (PCA) method, and the governance index is calculated from the World Governance Index (WGI) data. The other variables are picked from the World Bank database.

### **1.5.1 Hypotheses, data derivations and econometric methodology**

The methodology used in this study is discussed in Chapter 7. The first section describes data that incorporates the theoretical hypothesis into the story of FDI attraction into the SADC countries. The hypotheses are:

- 1) Tax holidays do not explain FDI inflows into the SADC countries.
- 2) Corporate income taxes (CITs) are not important in attracting FDI inflows into the SADC.
- 3) Losses carried forward do not determine FDI location decisions of investors in the SADC.
- 4) Reduced CIT in specific sectors does not encourage the location of foreign capital into the SADC countries.
- 5) Previous FDI inflows are not related to current FDI flows into the SADC economies.
- 6) Socio-economic conditions of a nation are not important in making them attractive to FDI in the SADC.
- 7) Market-seeking FDI is not prevalent in the SADC countries.

- 8) Resource endowments are not important in explaining FDI inflows into the SADC countries.
- 9) Infrastructure development is not significant in explaining FDI inflows into the SADC countries.
- 10) Trade openness does not encourage the establishment of foreign capital in the SADC countries.
- 11) Financial growth and development does not affect FDI inflows into the SADC.
- 12) Economic policy is not an important factor in determining FDI location by investors in the SADC economies.

Two SADC countries the Democratic Republic of Congo and Swaziland were dropped from the analyses due to unavailability of data. The data used in this study is obtained from the World Bank Databank, African development indicators, Ernst & Young's global tax data and Worldwide Governance Indicators. The data covers the period between 2004 and 2013 for thirteen SADC countries because recent tax incentives data from Ernst & Young captures this period. The data is derived from individual country tax statutes and from the reports which record consistent and similar tax structures for the SADC countries. All data is expressed in natural logarithms except for data with negative values.

In line with the Dunning eclectic paradigm theoretical framework the study established four panels for the SADC countries. Thus, four equations were estimated for each model: Panel 1 includes six highest resource-rich SADC countries using the World Bank natural resource indicators, Panel 2 has the seven least resource-rich countries, Panel 3 will consists of all the SADC countries except South Africa which is an outlier in resource richness and growth, and Panel 4 has all the SADC countries.

The study chose the SYS GMM method to overcome the problem of endogeneity. This method was used because it also incorporates extra moment conditions from the equation in levels and the method is popular in a finite sample with small time series models.

### **1.5.2 The story of the importance of FDI in explaining economic growth in the SADC**

This thesis is structured into nine chapters. Following a general introduction and background to the study in Chapter 1, Chapter 2 of the thesis moves to establishing the importance of FDI to the growth of developing countries, with a particular interest in the SADC countries.

The story of the FDI growth nexus in the SADC is told through a chronological framework with three methods. The first method involves analysis and synthesis of theoretical arguments for and against relying on FDI as a growth strategy for developing countries. The second method involves an empirical studies analysis and synthesis where the study analyses the types of FDI into the SADC and other developing countries and establishes their importance to economic growth.

The third method looks at the trend analysis of FDI into developing countries, with particular interest in African regions. The flow of FDI is compared to the socio-economic performance of these regions to draw conclusions on the importance of FDI inflows to the socio-economic status of developing countries.

### **1.5.3 Factors that explain FDI flows: evidence from theory and empirical analysis**

Chapters 3, 4, 5 and 6 build on cementing the study's hypotheses. The chapters, using different approaches and methods, establish the important factors that determine the locational decisions of investors, with special focus on the effectiveness of tax incentives in attracting FDI.

In drawing conclusions on determinants of FDI inflows and motives for investment by foreign investors, Chapter 3 conducts an in-depth theoretical analysis and synthesis. Chapter 4 uses evidence from countries' reports to discuss non-tax efforts of the SADC countries to increase their attractiveness to foreign capital. Chapter 5 analyses theory and empirical evidence on the effectiveness of tax incentives in attracting FDI. Chapter 6 uses the SADC tax database and individual SADC country's databases to establish the type of tax incentives used in the SADC countries.

## **1.6 Outline of the study**

The thesis is structured as follows: Chapter 2 comprises an in-depth theoretical and empirical analysis of the role of FDI in the development process of developing economies from early classical propositions which conclude that low capital in an economy is a major hindrance to the development process, to the modern theories of foreign capital importance in economic growth of countries. Here, theoretical foundations for the justification of luring foreign capital are analysed. The chapter then moves to an overview of FDI flows into various countries at different stages of development, before, a comparative analysis is conducted on FDI inflows into the SADC relative to other African regions.

Chapter 3 moves to an in-depth analysis and synthesis of the factors that determine the locational decisions of foreign capital in developing countries with specific focus on the SADC countries. This chapter develops the thesis research problem on a different level by giving theoretical underpinnings that determine factors considered by investors in making locational decisions. Here, factors that are internal to firms and location specific factors are considered in order to understand the dynamism of the process investors take in moving into foreign markets.

Chapter 4 narrows the discussion down to the non-tax efforts that attract FDI to those pursued by the SADC countries. In this chapter, once the factors that attract FDI have been established, an analysis of the SADC countries' efforts in establishing environments conducive to FDI is done. This chapter establishes the non-tax efforts of SADC countries to attract FDI. These are used as control variables in this study's econometric estimations.

Chapter 5 contains the theoretical and empirical findings on the effectiveness of tax incentives in attracting FDI. Here, the theoretical foundations which justify the use of tax incentives are analysed. The chapter then moves to analysing other studies that include effectiveness of tax incentives in FDI attraction with special focus on methodologies adopted and their effectiveness in giving robust answers. This chapter cements the research gap for this study. It establishes that there are no studies for the SADC that answer how effective individual tax variables are given different resource availability levels in the SADC countries.

Chapter 6 moves on to discuss the use of tax incentives in the SADC. This chapter establishes the prevalence of tax incentives in SADC countries by referring to a recent SADC database. Chapter 7 shifts towards determining the locational advantages that are central in attracting FDI

into the SADC with special interest in the role tax incentives play in creating these advantages. Here, the emphasis is on the construction of econometric models to provide reliable data. Chapter 8 then displays the estimations and presents conclusions on the effectiveness of tax incentives in FDI attraction in the SADC region. Also in this chapter answers to other factors that impact FDI inflows are given. Finally, Chapter 9 closes the thesis with findings, thesis contribution and policy recommendations.

## CHAPTER 2

### RATIONALE FOR SEEKING FOREIGN INVESTMENT AND FDI FLOWS INTO DEVELOPING COUNTRIES

#### 2.1 Introduction

Developing countries, including African countries, have low domestic savings. The low domestic savings and low incomes in most developing countries, including African countries, means that it is difficult, if not impossible, to raise indigenous local capital to finance investment. Yet growth and development theorists Lewis (1954) and Domar (1946) conclude that rapid capital accumulation is important for economic growth and development. As a result, most developing countries seek foreign private investors to help them finance investment to foster accelerated growth and development (Mkenda & Mkenda 2004).

The lack of capacity by developing countries including the SADC countries to meet their own investment needs has motivated most countries to use tax incentives in a bid to lure FDI. Tax incentives in developing countries have primarily been used to lure FDI and portfolio investments. This is based on the argument that there is insufficient domestic capital to meet desired levels of economic development (Zhang 2005). Therefore, before analysing the efficacy of tax incentives to attract FDI, it is important to explore the importance of FDI to an economy in the first place.

Lui and Gerlach (2010) in a Food and Agriculture Organisation (FAO) commodity and trade policy research working paper did a review of country case studies in West Africa on resource-seeking foreign direct investment in the African agricultural sector. They conclude that the main benefits for the host country are economic benefits such as employment creation, higher productivity, improved access to finance and markets for smallholders, technology transfer and enforcement of production standards.

The benefits of FDI also originate from the Asian success story where the experience of a small number of fast-growing East Asian newly industrialized economies (NIEs), and recently China, demonstrate that attracting FDI is key to bridging the savings-investment gap in developing countries [United Nations (UN) 2005]. The accumulation of FDI in an economy further reduces

the debt burden, thus solving the problem of underdevelopment. This is based on the fact that on top of bringing stable capital inflows, FDI also brings greater technological know-how, higher-paying jobs, entrepreneurial and workplace skills, and new export opportunities to the developing world (Prasad, Roggoff, Wei & Kose 2007).

However, some studies find that FDI has not generated the expected benefits in Africa. A case in point are studies in Madagascar and Mali by The German Technical Cooperation Agency (GTZ) (2009a and GTZ 2009b) which conclude that investment projects by foreign multinational corporations (MNCs) remove income and investment opportunities for local entrepreneurs. This is caused by unfair competition that these large firms pose to growing local small to medium enterprises (SMEs). The large MNCs have in some economies created monopolies which negatively affect the welfare of the populace and the establishment of local firms. These MNCs claim the biggest market share and attract all the local expertise and competent staff to their ranks causing local firms to struggle in competing against them.

The studies by GTZ (2009) observe that the legal framework and procedures governing land acquisition, land registration, land-use and the rights of smallholder farmers are generally unclear and lack transparency in most West African countries. The granting of land without undertaking the relevant cost benefit analyses (CBA) and public consultations to ensure the social, environmental and economic feasibility of an investment project were deemed to have a negative impact on community development and to reduce their benefits from FDI inflows.

However, domestic investment by African countries and official development assistance are clearly insufficient to reduce the investment crises that have led to food shortages and poverty across Africa. Therefore countries should seek to maximize the positive impacts of international investment while minimizing the risks. Governments should verify that the existing policies, regulations and institutions are adequate, as well as undertake preliminary studies and consultations with all stakeholders. Thus policy makers, especially in Africa, need to evaluate FDI projects to ensure that they become a complementary component of a wider package of development measures to raise growth; create jobs and diversify into more dynamic economic activities.

This chapter looks at the importance of FDI in developing countries and also the general trend in FDI flows into the SADC region compared to other developing and developed countries. The



next section focuses on the early theoretical foundations and the importance of FDI. This is followed by the modern theories on the importance of FDI inflows into economies. The study then moves on to a discussion of the rationale for seeking foreign investment. Next is an analysis of the empirical literature on the FDI-growth nexus will follow. The chapter ends with an analysis of the FDI flows into developing countries and the SADC region in particular.

## **2.2 Early theoretical foundations on the importance of FDI**

Theoretical literature dating back to the classicists has given rise to important writings on the contribution of foreign direct investment (FDI) to economic growth. The argument is that capital and national savings are scarce in countries with an under developed economy. Since saving determines the availability of funds for investment. Therefore domestic investment is low due to scarcity of funds which creates a high price on investment funds due to scarcity and therefore a low rate of economic growth and development. As a consequence, foreign investment is required to complement domestic investment and to raise the rate of economic growth, thus speeding up the process of economic development (Akrami 2008).

The classicists were followed by the neo-classicists who proposed competitive and open free markets all over the world. Adelman in Akrami (2008) argues that, “a deficiency in capital is the fundamental cause of underdevelopment. This was the basic principle underlying the Bretton Woods institutions policy advice to developing countries in the 1990s, as well as bilateral foreign assistance programs” (Adelman 2001).

According to the neoclassical theory, capital movement which necessitates external financing is articulated in the relationship between national income analysis and balance-of-payments analysis. For example, if there is an internal macroeconomic imbalance between national expenditure and national saving, then there will be an external imbalance in the balance-of-payments (Meier 1995). This, in recent years, has been the major factor behind exchange rate crises in many African economies Zimbabwe and Zambia for example. In the case of Zimbabwe, the failure to attract FDI over a long period led to a huge external imbalance (2000-2008). As a result, the productive sectors of the economy collapsed and the overvalued Zimbabwean dollar under a fixed exchange rate regime became unmanageable which led to its demise in December 2008.

The early foundations on the importance of FDI to economic growth are cemented by Keynes (1936) who suggests a direct relationship between investment and employment. Baldwin (1995) concludes that the debate focuses on three key areas, the extent to which FDI substitutes for domestic investment, the extent to which FDI stimulates increases of exports of capital goods and whether FDI involves the construction of new plants. If the FDI is export-oriented, it will stabilise the nation's foreign currency reserves and thus enhance the economy's ability to administer demand management policies in the Keynesian framework which will foster growth and development.

## **2.3 Modern theories on why firms undertake foreign investments**

### **2.3.1 The market imperfections theory**

The first formalisations of FDI tended to model it as capital, in other words as a production factor moving across countries. This idea was a logical extension of the traditional theory of investment responding to differences in the expected rates of return on capital. This view, therefore, predicted that FDI would go from capital abundant countries where its return was low to capital scarce countries where its return was high (Mundell 1957 and MacDougall 1960). Thus in this model FDI is expected to move from developed countries to the less developed world. Countries are thus encouraged to put in place measures that will ensure that capital invested within their boundaries earns more than it does elsewhere. Holland and Vann (1998) argue that regional development is also a common objective of tax incentives. This idea is central to the idea of regional tax competition termed 'race to the bottom'.

The market imperfections theory states that firms constantly seek market opportunities and their decision to invest overseas is explained as a strategy to capitalise on certain capabilities not shared by competitors in foreign countries (Hymer 1976). The capabilities or advantages of firms are explained by market imperfections for products and factors of production. That is, the theory of perfect competition dictates that firms produce homogeneous products and enjoy the same level of access to factors of production. However, the reality of imperfect competition, which is reflected in industrial organisation theory (Porter 2003), determines that firms gain different types of competitive advantages and each to varying degrees. Nonetheless, market

imperfections theory does not explain why foreign production is considered the most desirable means of harnessing the firm's advantage. However, the major advantage would be exploring new markets and resources.

The market imperfections theory suggests that the bulk of FDI flows originates in and is directed to developed economies, which should be capital abundant [Navaretti & Venables 2004, chapter 1; Markusen 2002; United Nations Conference on Trade and Development (UNCTAD)]. However, recent investment trends from UNCTAD show increases in the share of investment going to developing countries as other countries such as China increase their presence in the developing world adding to the traditional sources of FDI United States (US) and United Kingdom (UK) in developing economies (Van der Lugt & Hamblin 2011).

### **2.3.2 International production theory**

International production theory, developed by Buckley and Casson (1976), suggests that the propensity of a firm to initiate foreign production will depend on the specific attractions of its home country compared with resource implications and advantages of locating in another country. This theory makes it explicit that not only do resource differentials and the advantages of the firm play a part in determining overseas investment activities, but foreign government actions may significantly influence the piecemeal attractiveness and entry conditions for firms. This theory has been central in influencing policy change in favour of FDI attraction incentives in Africa.

A related aspect of this foreign investment theory is the concept of internalisation which has been extensively investigated by Buckley (1982, 1988) and Buckley and Casson (1976). Internalisation theory centres on the notion that firms aspire to develop their own internal markets whenever transactions can be made at lower cost within the firm. Thus, internalisation involves a form of vertical integration bringing new operations and activities, formerly carried out by intermediate markets, under the ownership and governance of the firm. This comprehensive treatment of vertical and horizontal FDI is possible in so much as, "the vertically integrated firm internalises a market for an intermediate product, just as the horizontal MNE internalises markets for proprietary assets" (Caves 1996:13). As internalisation occurs, MNEs will grow only as far as the benefits, including those associated with the barriers to new entrants, are not outweighed by the costs of communication, co-ordination and control,

and by the 'foreignness' inevitably associated with vertical and horizontal integrated firms. Rugman (1980, 1986) goes as far as to claim that this made internalisation the general theory of FDI.

Buckley and Casson (1976) list several markets where internalisation is very likely to happen such as perishable agricultural products, intermediate products in capital-intensive manufacturing processes, and geographically concentrated raw materials. However, these are secondary in the analysis.

According to Dunning (1988) who uses the internationalisation theory in his five stage theory, the major shortcoming of the international production theory is that it explains only part of FDI flows.

### **2.3.3 Portfolio theory**

In the 1960s and 1970s some economists worked on the empirical relationship between FDI, the rate of return and risk (Agarwal 1980). The so called portfolio theory predicts a positive relation of FDI with respect to the rate of return and a negative one with respect to risk. Portfolio diversification may help to reduce the total risk involved, that is, a firm can reduce risks by undertaking projects in more than one country. However, the portfolio theory is an extension of a vision of FDI as capital movements (Jones 1996).

The shortcoming of the theory is that the phenomenon does not have a major perceived economic impact. This is because it does not have a significant impact on employment and distribution since it is merely a movement of monetary assets as opposed to the desired setting up of physical capital.

### **2.3.4 The product-cycle theory**

This theory gave useful explanations for the expansion of US multinational enterprises (MNEs) after World War II. It explains FDI as a reaction to the threat of losing markets as a product matures, and as a search for cheaper factor costs to face competition in the imitation gap hypothesis (Vernon 1966). Its essence is that most products follow a similar life cycle. In the first stage, the product appears as an innovation which is sold locally in the same country where

it is produced. This is so in order to facilitate satisfying local demand while having an efficient coordination between research, development and production units. In a second stage, the product begins to be exported.

In a third stage, some competitors arise and if conditions are favourable the firm will establish foreign subsidiaries there to face the increased competition and it may also establish subsidiaries in less developed countries to have access to cheaper labour costs to enhance its competitiveness. This imitation gap hypothesis has been used to explain the dominance of Japan in the automobile industry which was initiated in the US. Thus, in this theory FDI is seen as a disadvantage to the source country as it will lose comparative advantage in the production of a product it innovated.

The shortcomings of the product cycle theory were first stated by Clegg (1987:24) who claims that, “the product cycle is not, in itself, a complete theory of FDI as it does not explain the ownership of production”, not least because the competitive advantage of firms is frequently associated with country-specific advantages (Dunning 1993). Clegg (1987:26) adds that, “the product cycle is primarily a theory of new FDI, and it has little to say on the extensions of existing investments by a mature foreign-investing nation”.

### **2.3.5 Five stage theories**

The stages have their roots in the Dunning (1988) view, which states that the role of FDI can be seen to exploit the home country’s comparative advantages in intermediate inputs. These intermediate goods are influential in the final production of a product and thus give an economy comparative advantage in the production of a commodity.

In Stage 1 countries have low incoming FDI, but foreign companies are beginning to discover the advantages of the country and there is no outgoing FDI, that is, there are no specific advantages owned by the domestic firms.

In Stage 2 there is a growth in incoming FDI due to the advantages of the country especially the low labour costs. The standards of living are rising which is drawing more foreign companies to the country to enhance the local market.

In Stage 3 there is still strong incoming FDI, but their nature is changing due to the rising wages. The outgoing FDI are taking off as domestic companies are getting stronger and develop their competitive advantages. This has been the major reason developing countries have in past years legislated investor favourable labour laws.

Stage 4 has strong outgoing FDI seeking advantages abroad where there are low labour costs.

In Stage 5 the investment decisions are based on the strategies of transnational corporations (TNCs) and the flows of outgoing and incoming FDI come into equilibrium.

The major shortcoming of this theory is that not all countries seem to grow in this manner or, some countries have insignificant outgoing FDI.

### **2.3.6 The eclectic paradigm**

According to Dunning (1979), the eclectic paradigm resulted from his dissatisfaction with existing theory of international production: the Hymer-Kindleberger approach, the product-cycle theory, and the internalisation theory. The three were considered to be partial explanations of international production. Hence, he proposed an alternative line of development which tried to integrate the existing theories in a general and 'eclectic' model in which, "the subject to be explained is the extent and pattern of international production." (Dunning 1979:124).

Dunning (1979) suggests that a firm engages in FDI if three conditions are satisfied: firstly, possession of net ownership advantage vis-à-vis firms from other countries; secondly, internalisation advantages rather than to use the market to pass them to foreign firms; and thirdly, location advantages in using the firm's ownership advantage in a foreign location rather than at home.

The OLI framework proposed that MNEs' investment decisions are based on three important broad factors namely organisational specific ownership advantage (O), host market internal locational advantages (L) and internalisation (I) advantages. From this eclectic theory, Dunning (1993) also comes up with the four strategic motives TNCs consider when setting up

their foreign enterprises. The motives are classified as resource-seeking FDI, market-seeking FDI, efficiency-seeking FDI and strategic-asset or capability-seeking FDI.

Dunning (1980) suggests that resource-seeking FDI targets natural endowments of host countries. Nations with abundant natural resources attract these investors. Therefore, resource-rich nations receive this kind of FDI. Market-seeking foreign firms pursue adjacent domestic or regional markets in which to invest. Densely populated regions thus attract more of this kind of investment and this is primarily why nations strive for regional economic integration to enhance their market bases. Efficiency-seeking FDI considers the rationalisation and expansion of economic activities of an organisation in a bid to maximise exploitation of economies of scale, scope and specialisation. In this case, the product or process specialisation and firms that advanced in technological innovation exploit this type of investment. Capability-seeking FDI seeks to maximise the use of organisational assets created in the foreign markets. The strategic assets include the business networks created by acquiring assets abroad which encompass technological and organisational capabilities (Dunning 1996).

Dunning (1988) concludes that the OLI advantages are affected by many factors which vary from the nature of the market to the level of economic development, size of market and level of industrialisation and reach to the nature of the industry the investor operates in such as the technology, the competition and the size and age of the firm. Similarly, Caves (1996) in an earlier study illustrates that the organisational culture of a firm affects expansion. This includes research and development (R&D) efforts, product promotional activities, stage of product development and brand development. This is basically the reason behind many governments' support for R&D through fiscal incentives.

One of the main criticisms of the eclectic paradigm is that it includes so many variables that it loses its relevance (Dadzie 2012). Dunning (1991) partially accepts it, although he sees it as an inevitable consequence of trying to integrate the rather different motivations behind FDI into one general theory.

## **2.4 Rationale for seeking foreign investment**

A salient feature of developing countries is the relative shortage of capital for modernising agriculture, establishing industries, creating infrastructure, providing services like banking and telecommunications and, in general, meeting the financial needs for developing the economy (G-15 report 2010). An important way to overcome such a capital constraint is through foreign direct investment (FDI) which, while bridging the financial gap, also brings diversified investment into the economy.

Capital formation is a national phenomenon in the first place. However, many developing countries rely on foreign capital to overcome their domestic capital shortages. According to UNCTAD (2003) studies from many African and indeed other developing countries indicate that the FDI strategy can only be enhanced based on domestic investment. FDI is superior to other types of capital inflows in some respects, particularly because of its risk sharing properties, though not necessarily in all respects. The nexus between FDI and overall investment as well as economic growth in host countries is neither self-evident nor straightforward, but remains insufficiently explored territory. The research that follows will thus seek to examine studies that made conclusions on the importance of FDI to host countries.

Sustainable economic growth and stability in developing nations is harnessed by the ability of a nation to maintain a healthy national savings rate and improve domestic investment source (De Mello 1997). However, FDI remains a very important form of investment in developing countries to the extent that even harsh critics of comprehensive capital account liberalisation dismiss the option of complete isolation from international capital markets and argue in favour of opening up towards FDI (Stiglitz 2000).

Stiglitz (2000) attacks what he terms ‘the Washington consensus’ that sought to liberalise African and Latin American economies with the view to fostering capital account liberalisation to enhance growth. Though his ideas have been adopted by some developing nations, most remained open to FDI attraction policies. Policy makers in most emerging and developing economies are increasingly conscious of the role of FDI in boosting productivity, industrialisation and income growth. It can bridge the savings-investment gap, introduce modern capital goods and state-of-the-art management practices, sustain and drive to reform



host economies' economic policies and create global vertical production networks within which multinational firms locate input processing in their foreign affiliates (Akrami 2008).

FDI is considered less prone to crisis because direct investors typically have a longer-term perspective when engaging in a host country. In addition to the risk-sharing properties of FDI, it is widely believed that FDI provides a stronger stimulus to economic growth in host countries than other types of capital inflows. The underlying argument is that FDI is more than just capital, as it offers access to internationally available technologies and management know-how (The Economist 2001).

FDI also addresses the problem of low incentives to invest in developing economies or a high level of incentives to invest in developed economies as it offers balance through trade and capital movement. It helps developing economies to grow beyond their capacity (Salvadori 2003).

FDI inflows are also related to the increase in social infrastructure and the development of human resources (Salehi-Isfahani 2005). This does not stimulate the economy in the short run, but is a management and social requirement which will favourably influence the economy in the long run (Yusef & Stiglitz 2004). In fact, social foundations should facilitate the creative part of the economy. Beyond an increase in the quantity of productive factors, it is necessary to improve the quality of the people as economic agents, and to continue to facilitate productive activities (Meier 1995).

However, these benefits cannot be expected to occur automatically. They will depend to a large extent on the investment contract, the type of business model and the institutional framework in place in the host country. Further, various organisations have raised concerns about the possible adverse impacts on host countries of the new forms of international investment, in particular large-scale land acquisitions. These transactions have attracted the interest of policy-makers, development agencies, intergovernmental organisations and the media due to the economic, social, political and environmental issues they raise. They certainly raise complex challenges in terms of local participation, social equity, food security, poverty reduction, rural development and access to natural resources.

## **2.5 Empirical literature on FDI contribution to the economy**

There is vast empirical literature on the impact of FDI on various economic sectors and indicators. The empirical literature, however, finds mixed evidence on the existence of positive productivity externalities in the host country generated by foreign multinational companies.

De Mello (1997) made a landmark inquiry on the impact of FDI on capital accumulation, output and total factor productivity (TFP) on the FDI recipient Organisation for Economic Cooperation and Development (OECD) countries and non-OECD countries using data from 1970-1990. The research concludes that although FDI increases output due to technological upgrading and knowledge spill over, the complementarities between FDI and local domestic investment are critical. This sensitivity analysis along the lines of Levine and Renelt (1992) shows a robust relationship between economic growth, FDI and human capital.

Borensztein, De Gregorio and Lee (1997) tested the effects of foreign direct investment (FDI) on economic growth in a cross-country regression framework, utilising data on FDI flows from industrial countries to 69 developing countries over the last two decades. Their results suggest that FDI is an important vehicle for the transfer of technology, contributing relatively more to growth than domestic investment. However, they argue that higher productivity of FDI holds only when the host country has a minimum threshold stock of human capital. Thus, FDI contributes to economic growth only when a sufficient absorptive capability of the advanced technologies is available in the host economy.

De Gregorio (1992) shows, in a panel data study of 12 Latin American countries, that FDI is about three times more efficient than domestic investment. Blomstrom, Lipsey and Zejen (1992) also found a strong effect of FDI on economic growth in LDCs. It is more probable that a foreign firm that decides to invest in another country enjoys lower costs than its domestic competitors derive from higher productive efficiency. The higher efficiency may be due in part to the combination of foreign advanced management skills with domestic labour and inputs.

Alfaro, Chanda, Kalemli-Ozcan and Sayek (2006), Durham (2004), and Hermes and Lensink (2003) bring a new perspective on the FDI effectiveness to economic growth by arguing that

only countries with well-developed financial markets gain significantly from FDI in terms of their growth rates.

Ng (2006) examined the linkage between foreign direct investment and productivity in eight East Asian economies – China, Hong Kong SAR, Indonesia, Malaysia, Republic of Korea, Singapore, Taiwan and Thailand. The Granger causality test and the Toda-Yamamoto version of the Granger causality test were used to test if inflows of foreign direct investment “cause” productivity growth. The results showed that only two countries revealed evidence of a one-way causality between inflows of foreign direct investment and total factor productivity growth. Similarly, there was also little evidence that inflows of foreign direct investment cause technical change or efficiency change in the sample economies.

FDI is seen as an important channel for transmitting technology to many developing countries. Findlay (1978) suggests that FDI can increase the productivity of the host country as the more advanced management techniques and technologies of foreign firms spread to local firms. Multinational firms are usually at the technological frontier and have access to the latest and most advanced technologies. It is expected that as they invest in plants in developing countries they will, at the same time, transfer these high-level technologies. It is also hoped that the technology that is embedded in plants of multinational firms will spread to other plants in the countries. However, based on data from developed countries, Van Pottelsberghe and Lichtenberg (2001) show that FDI in the form of technology transfer is only possible if the companies that invest in foreign countries intensively engaged in research and development (R&D). Inward FDI from R&D-intensive countries does not seem to increase productivity. This suggests that foreign firms invest abroad in order to exploit their technological advantage rather than to diffuse their technology.

Carkovic and Levine (2002), who used macro-level data, find little support for the importance of FDI in stimulating growth. They argue that previous studies, which show the benefits of FDI to economic growth, have not fully taken into account the endogeneity problem. Countries with a good economic performance tend to attract more FDI. Therefore, if the endogeneity problem is not taken into account, it is unclear whether FDI drives economic growth, or vice versa. Once the endogeneity problem was considered, it was concluded that growth drives FDI and not the other way around.

**Table 1: Summaries of empirical studies on FDI growth Nexus**

Author	Research summary	Conclusions
Farkas (2012)	This study focuses on the relationships between FDI and different growth determinants. The findings show that the contribution of FDI to economic growth is positive and significant depending on the level of human capital and the development of financial markets, but its presence in developing countries must complement rather than substitute a set of other growth determinants.	FDI is effective given a financially sound local market.
Blomstrom, Lipsey, and Zejan (1992)	Shows that FDI has a significant impact on growth and positive spill over effects from FDI depend on the income level of the host economy.	FDI leads to growth depending on the level of income of the host country.
Gorg and Girma (2005)	FDI interacts with absorptive capacity. They show that there is a U-shaped relationship between this interaction term and TFP growth, suggesting that improvements in absorptive capacity at the firm level allow the firm to enhance the spill over effects of FDI.	FDI depends on national technological growth.

Sethi and Sucharita (2010)	Tests the effect of FDI on economic growth in Bangladesh and India respectively by using the data for the period 1974-2009. The regression results indicate that FDI is positively correlated to the economic growth of Bangladesh but it has not yet been established as a significant determining factor for the economic growth. On the other hand, the result indicates that FDI is negatively correlated to the economic growth in India and it has not yet been established as a significant determining factor for the economic growth. They conclude that the effect of FDI on economic growth is ambiguous for both India and Bangladesh.	FDI contribution is ambiguous.
Hansen and Rand (2004)	Analyse the causal relationship between FDI and GDP in a sample of 31 developing countries. Using estimators for heterogeneous panel data, they found a unidirectional causality	FDI and GDP have unidirectional effects.

	between FDI to GDP ratio implying that FDI causes growth.	
Alfaro, Chanda, Kalemli-Ozcan and Sayek (2004)	They examine the various links among foreign direct investment (FDI), financial markets, and economic growth. They explore whether countries with better financial systems could exploit FDI more efficiently. Empirical analysis, using cross-country data between 1975 and 1995, shows that FDI alone plays an ambiguous role in contributing to economic growth. However, countries with well-developed financial markets gain significantly from FDI. The results are robust to different measures of financial market development, the inclusion of other determinants of economic growth, and consideration of endogeneity.	FDI effectiveness depends on financial market growth.
World Bank's (2001) report	Identifies the importance of 'absorptive capacities' and the success of FDI. Absorptive capacities here include macroeconomic management (as captured by	Countries with low absorptive capacities, such as Morocco, Uruguay and Venezuela (the last based on Aitken & Harrison 1999), fail to reap spill overs, whereas

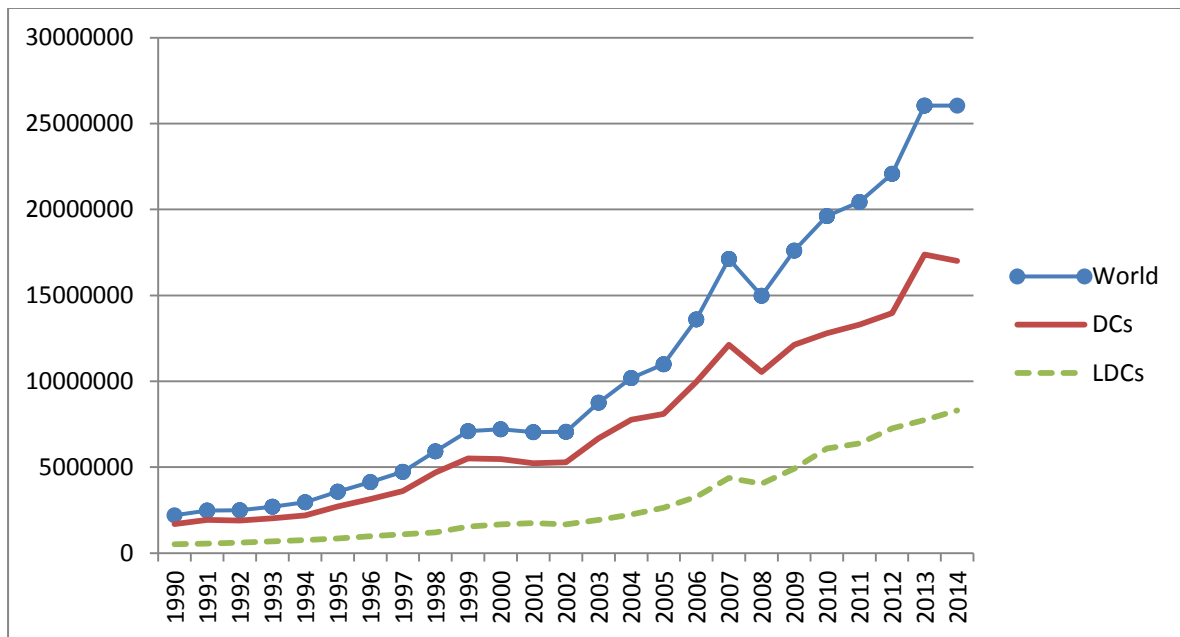
	inflation and trade openness), infrastructure (telephone lines and paved roads), and human capital (share of labour force with secondary education and percentage of population with access to sanitation).	Malaysia and Taiwan fare well with higher absorptive capacities.
Aitken and Harrison (1999)	Point out that the net effect of FDI on productivity is quite small. FDI raises productivity within plants that receive the investment but lowers that of domestically owned plants thus seriously putting in doubt the ‘spill over’ theory.	FDI crowds out domestic investment.

Table 1 shows a summary of divergent findings on the effects of FDI on economic growth. While most studies support the view that FDI leads to growth and development, Table 1 above shows different empirical findings on FDI importance. Some results are insignificant; others inconclusive, while others show that FDI is important for growth given certain economic conditions in the host country.

## **2.6 FDI flows in developing countries**

This section studies the trend in FDI inward stock and FDI inflows into various economic regions of the world using UNCTAD data (2014).

**Figure 1: FDI inward stock per region from 1990-2014 (in USD millions)**



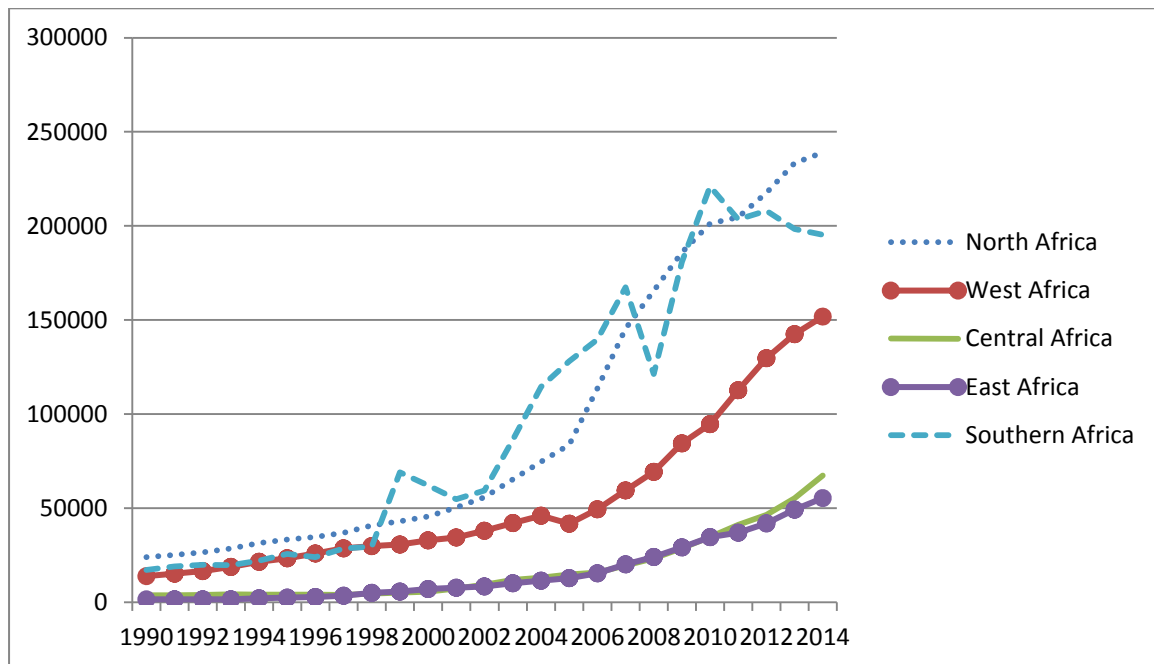
**Source: Author's drawings from UNCTAD data**

The world FDI stock has increased over time as shown by the line graph in Figure 1 drawn from UNCTAD (2015) estimates on world FDI stock. Though FDI inward stock is considered to be generally stable over time which is also indicated by an increasing trend in all the three economic categories in Figure 1, there are periods when FDI inward stock fluctuates. There is a significant fall in FDI inward stock for the world and DC trends in the period 2006 to 2008. This was due to the effects of the global financial crisis indicating that the economic climate of the host economy is important in attracting FDI. The effect of the financial and economic crisis on developed countries (DC) was more substantial than the subsequent impact on less developed countries (LDC).

The stock of FDI in LDCs, however, has increased rapidly in recent years since 2008 as shown by the steep slope of the LDC FDI stock line (see Figure 1). The surge in FDI inward stock in LDCs reached its peak in 2013, and 2014 shows a fall in the FDI inward stock. The growth in FDI in LDCs is attributed to policy reforms and growth in these economies (Van der Lugt & Hamblin 2011). Recently the policy focus in most LDCs has focused on attracting FDI to complement domestic savings in boosting investment.



**Figure 2: FDI inward stock in African regions from 1990-2014 (in USD millions)**



**Source: Author's drawings from UNCTAD data**

Figure 2 shows that FDI inward stock in Africa rose between 1990 and 2014 which means a general increase in FDI inward stock in all the African regions. This contradicts the view of the 1980s that Africa was frequently considered to be on the side-lines when it came to participating in globalisation in general, and attracting FDI in particular. North Africa dominates inward stock of FDI in Africa due mainly to the rich resources in the region such as oil in the Arab countries like Libya. The flow of FDI since 1990 has been high in Southern Africa therefore the SADC block has been working hard in promoting inward FDI inflows into the region. The FDI inward stock in the region has fallen steeply since 2008 due to political problems in Zimbabwe. However, the FDI stock in Southern Africa increased steeply from 2009 and reached its peak in 2010 before it started to fall steadily until 2014.

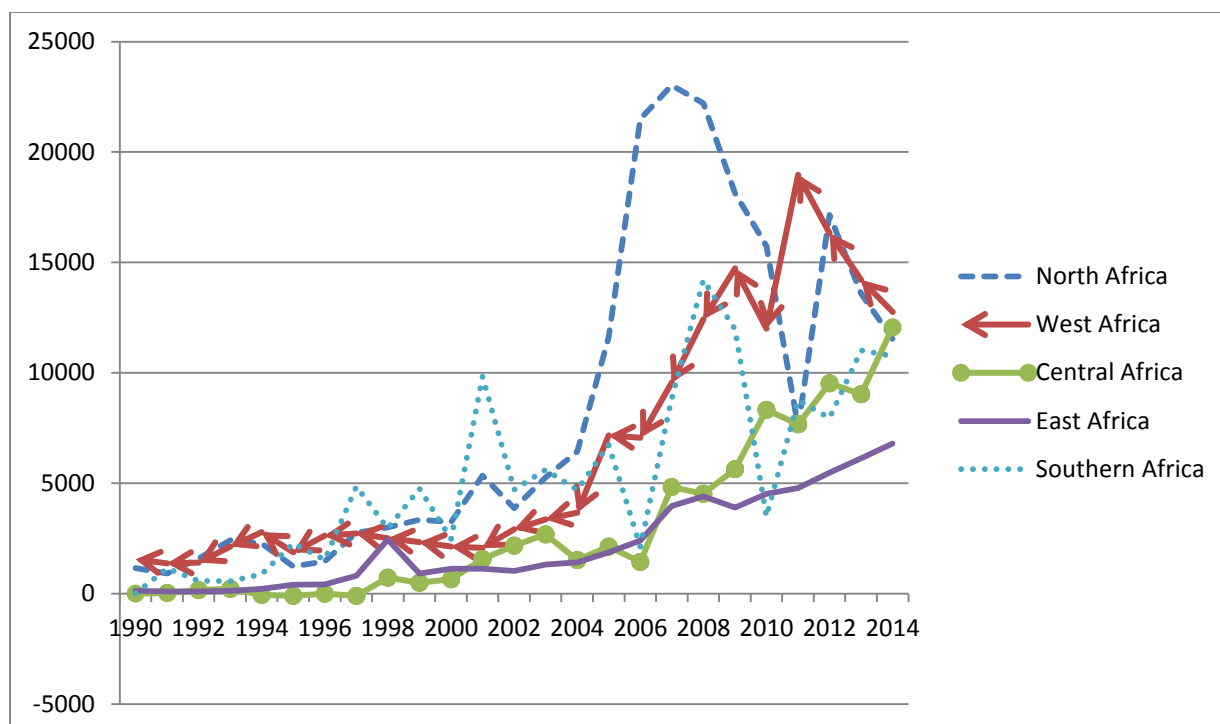
Some countries in the SADC, however, are not defined as Southern African countries in the UNCTAD data. North Africa includes Algeria, Egypt, Libya, Morocco, South Sudan, Sudan and Tunisia. Central Africa is comprised of Burundi, Cameroon, Central African Republic, Chad, Congo, Democratic Republic of Congo, Equatorial Guinea, Gabon, Rwanda, Sao Tome and Principe; while West Africa comprises Benin, Burkina Faso, Carpe Verde, and Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Saint Helena, Senegal, Sierra Leone and Togo. East Africa has the following countries:

Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Mauritius, Mayotte, Seychelles, Somalia, Uganda and United Republic of Tanzania. Southern African countries are Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe.

FDI flows in North Africa rose steeply from 2006 to 2009 and fell sharply from 2010 due to the political unrest in most of the North African countries. The uprisings in the Arab world that started in Tunisia and spread to Algeria, Lebanon, Egypt and Libya led to a dramatic fall in FDI in the region. North Africa has traditionally been the recipient of about one third of inward FDI to the continent.

West Africa is the third highest FDI inward stock recipient in Africa and it shows steadily increasing FDI inward stock from 1990 to 2004. The trend changed slightly from 2004 to 2005 due to political instability in some countries in the region, mainly Côte d'Ivoire and Guinea. The flows then increased steeply from 2005 to 2014. This can be attributed to the integration efforts by ECOWAS and the regional bloc's stance against political coups in the region which has brought a period of relative political calm to the region. Central and East Africa receive the least FDI in Africa as shown in Figure 2. The trends for the two regions are similar from 1990 to 2011. From 2011 to 2014 Central Africa's FDI inward stock increased more than that of East Africa.

**Figure 3: FDI inflow to African regions from 1990-2014 (in USD millions)**



**Source: Author's drawings from UNCTAD data**

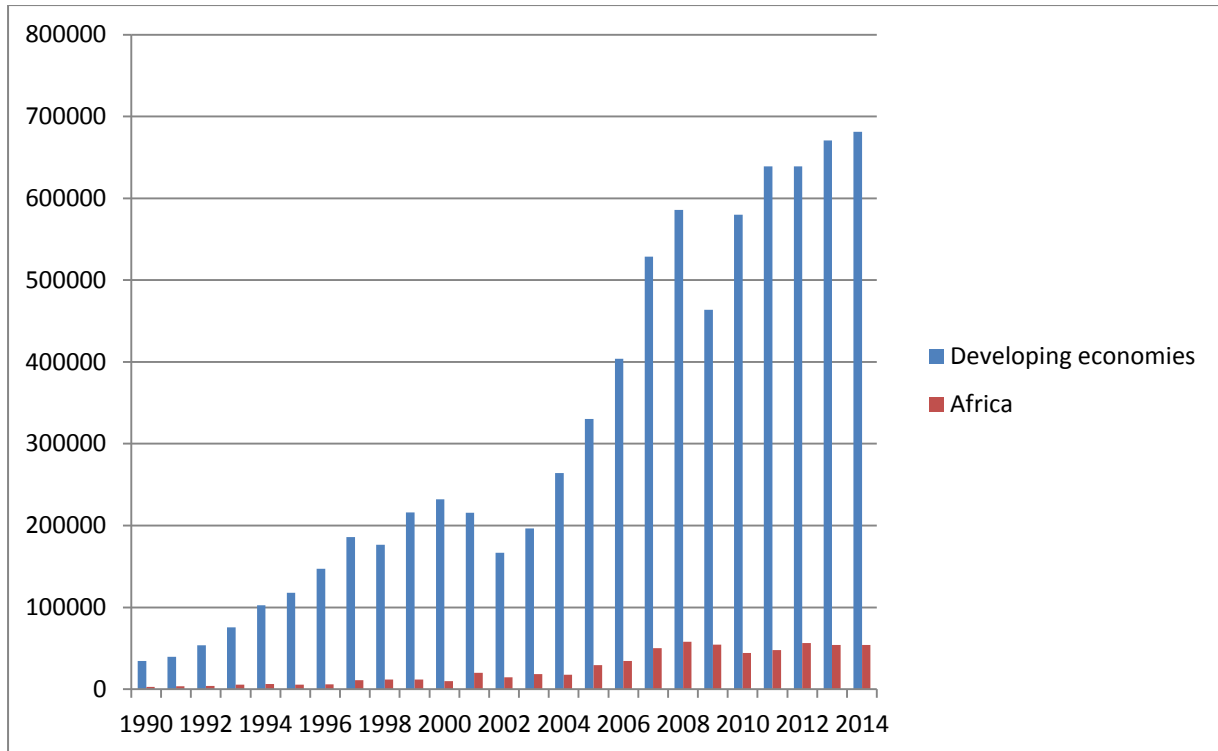
Whilst the FDI inward stock shown in Figure 2 shows less fluctuation in the African regions, Figure 3 which represents FDI inflows in the regions shows huge fluctuation in the line graph movement. North Africa is the highest recipient of FDI inflows in most years; however, due to political unrest in the region the inflows fell drastically from their peak in 2006 until 2011 due to political unrest in the region. The trend steeply increased from 2011 to 2012 and started to fall again until 2014.

Southern Africa shows huge fluctuations in FDI inflows indicating that FDI inflows are highly volatile in the region. This can be explained by the fact that most FDI inflows in the region target natural resources. The FDI flows in Southern Africa have increased steadily since 2010 due to discoveries of minerals in most countries in the region, for example diamonds in Zimbabwe, and new discoveries of large-scale gas reserves in Mozambique.

West Africa shows steadily increasing FDI inflows from 1990 to 2009. From 2009 the inflows fell steeply until 2010, and then increased steeply from 2010 to reach their peak in 2011 before falling steeply until 2014. These fluctuations from 2009 are due to civil and political unrest in

the regions with notable problems being Boko Haram insurgents in Nigeria, civil war in Mali, political problems in Togo and a military coup in Mauritania during the period.

**Figure 4: FDI inflow per region from 1990-2014(in USD millions)**



**Source: Author’s drawings from UNCTAD data**

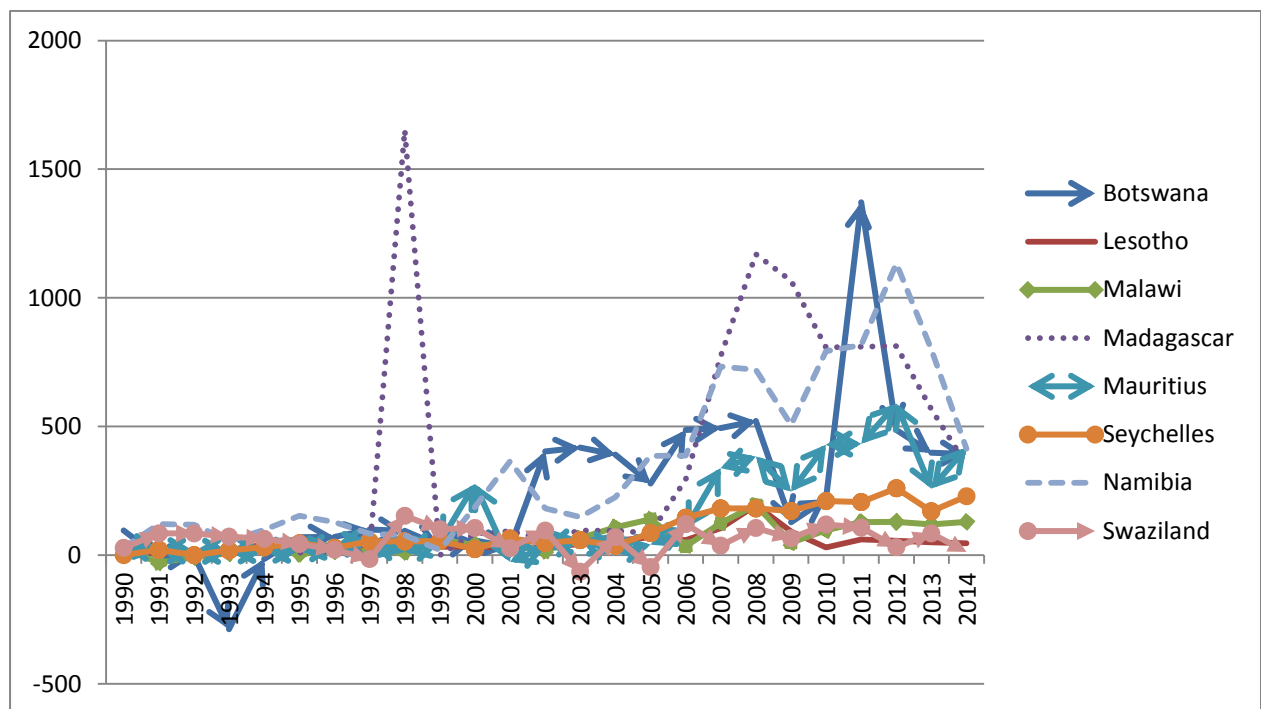
Figure 4 displays an analysis of Africa’s share of FDI inflows in the developing world. Africa shows significant contribution to the FDI inflows to LDCs from 1990 to 2014. The visible FDI inflows in the region show that Africa is a significant economic region in the LDC community. FDI inflows in the LDCs increase rapidly from 1990 to 2014 showing success in LDC efforts to lure investment.

### **2.7 FDI flows in the SADC region**

Most of the FDI in Southern Africa and indeed in Africa is based on primary resource exploitation. IMF staff estimates of 2001 concluded that France, Japan, the United Kingdom and the United States of America hold approximately three quarters of FDI stock in Africa with Nigeria and Angola being the largest recipients since they are oil exporting. 75% of FDI in Africa goes to oil exporting countries (World Investment Report 2001).

FDI in SADC in some cases is export-related with the host country used as an export platform. Export Processing Zones for example, were a success story in Mauritius with special export opportunities in EU countries and South Africa. Macroeconomic policies such as massive privatisation in Mozambique and South Africa have also played an important role in influencing FDI flows in the SADC region.

**Figure 5: FDI inflows per country in low resources-endowed SADC countries from 1990-2014 (in USD millions)**



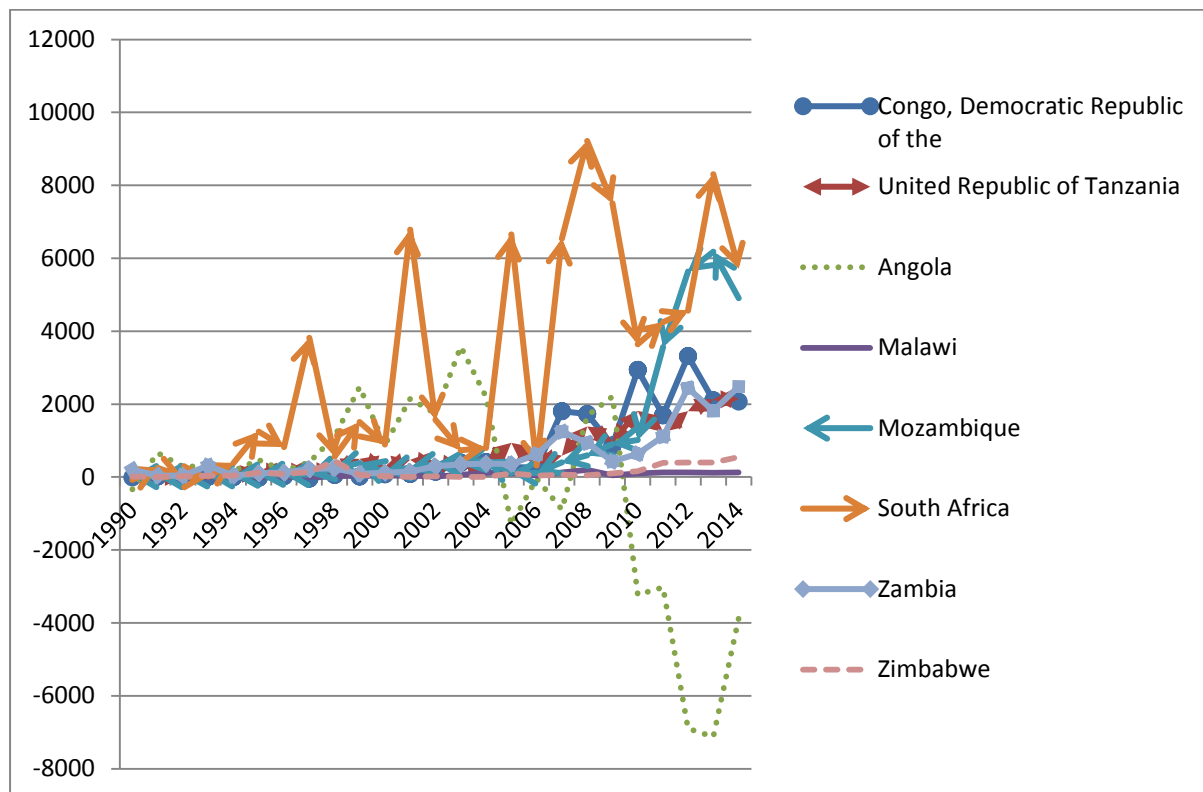
**Source: Author's drawings from UNCTAD data**

The SADC region has countries with diverse and different investment opportunities. Figure 5 shows FDI inflow into the SADC's low resource ranked countries; Lesotho the mountainous and natural resource poor country has the lowest FDI inflow in the period 1990-2014.

Malawi, Mauritius and Seychelles also receive the least FDI in the region due to their size and low resource endowments. Madagascar, Namibia and Botswana have greater FDI inflows recipients in the panel due to tourism growth in Madagascar and political stability in Namibia and Botswana. Madagascar, Namibia and Botswana have more FDI inflows than other countries ranked higher than them on resource endowment such as Zimbabwe and the DRC. This raises the argument that in the SADC region there are factors other than resources that attract FDI in the region. However, the economies in Figure 5 show huge fluctuations in FDI

inflows. Notably, Madagascar had steeply rising inflows from 1997 to 1998 but the trend fell steeply from 1998 to 1999. The FDI inflows in Madagascar rose steadily again in 2005 until 2009 and began to fall until 2014. The recent fall in FDI inflow in the country is due to political instability.

**Figure 6: FDI inflows per country in the SADC resource-rich countries from 1990-2014 (in USD millions)**



**Source: Author's drawings from UNCTAD data**

The evolution of FDI inflows in the resources-rich SADC countries shows South African hegemony. South Africa is the greatest recipient of FDI in the region as seen by high FDI inflows in Figure 6. South Africa's economic hegemony in the region is clearly due to its advanced economic environment, rich resource endowments and political stability ( all factors which work to its advantage).

Angola has the second highest FDI inward stock in the SADC region due to its unique resource endowment as the only oil exporting country in the region. However, due to political instability the FDI inflows into Angola show huge fluctuations. FDI inflows fell drastically from 2004 to 2013 and started rising slowly again in 2014. Zimbabwe and Mozambique have received high

FDI inflow in recent years which can be attributed to the discovery of new resources such as natural gas in Mozambique and diamonds in Zimbabwe. In Mozambique FDI inflows rose drastically from 2010 to 2014 while in Zimbabwe FDI inflows rose slightly between 2010 and 2014.

## **2.8 Summary and conclusion**

This chapter looked extensively at the importance of FDI to the host nations. It provides a thorough background to the theoretical importance of investment to economies. Despite certain empirical findings to the contrary, the majority of the findings suggest that FDI is crucial for economic growth.

The chapter looked at the theoretical arguments that influence economic policy on the need to attract FDI in developing and developed countries. Both classical and neoclassical economists' contributions indicate the importance of capital investment to achieve sustainable growth and development. Theoretically FDI is seen to augment the domestic capital shortfalls and is thus a critical factor, especially in the developing world where incomes are too low to sustain the required savings for investment.

Keynesian theorists, who are essentially demand-management-oriented, view FDI as important in unlocking the production constraint in the local productive sector. As the economy seeks to achieve full employment, the FDI provides the much needed capital for development. Modern theorists are mainly concerned about the micro-firm investment perspective. The main focus is on the individual MNE's prospects in the foreign market. John Dunning, the major theorist of 20<sup>th</sup> century, argues that the host country's economic environment is most critical for FDI attraction and firms seek to achieve greater results and profits from foreign production.

Although most empirical findings suggest that it is important for the host country to rely more on domestic capital the consensus view seems to be that FDI is important to the growth of economies. The data for FDI stock suggests that the developing countries receive the greatest share of world FDI. It is, however, clear that the developed world's share of FDI flows has increased in the recent years.

An analysis of the movement of FDI in the African countries shows that resource-rich (especially oil-producing) countries are the greatest recipients of FDI. However, political

stability is of great importance to FDI inflows to Africa as viewed by a sharp decrease in FDI flows to North Africa from the start of the ‘Arab spring’ crisis that led to political unrest in Libya, Tunisia and Egypt. In the SADC it can be concluded that the regional economic differences affect FDI flows, with the South African economic hegemony clearly visible from high FDI flows into the country compared to other SADC countries.

Therefore it can be concluded that FDI in Africa is a prerequisite for achieving sustainable economic growth. African governments should thus focus on policies that promote high FDI attractions; this is the main thrust of Chapter 3 which will look at various attraction strategies employed by countries to lure more investors.



## **CHAPTER 3**

### **DETERMINANTS OF FOREIGN INVESTMENT FLOWS TO DEVELOPING COUNTRIES**

#### **3.1 Introduction**

Botrić and Škuflić (2005) argue that investors' motives are changing in view of various objectives they seek to achieve in their foreign investments and advise nations to seek new ways of attracting foreign direct investment (FDI). Cost differences, well developed infrastructure and efficient institutions that enhance the ease of doing business are some factors cited in the World Bank (2013) Doing Business Report for attracting greater attention from investors.

The Southern Africa Development Community (SADC) member countries have over the years failed to attract enough investment to warrant capital formation for sustainable economic growth and development. Various reasons can be attributed to this dismal investment performance such as the small size of domestic and regional markets, property rights, political instability and macroeconomic instability (Muradzikwa 2002). The low investment flow into the SADC region is despite most countries' tax incentive efforts. Therefore it is important to explore various factors that determine the location of FDI and understand whether these factors complement or substitute the importance of tax incentives.

In this chapter the study seeks to distinguish between traditional determinants for foreign investment by firms and country-specific determinants for FDI with special focus on the SADC region. This chapter will explore the literature on determinants for both indirect and direct foreign investment flows to developing countries. The chapter is divided into three sections. The next section, 3.2, will analyse the fundamental theories behind foreign investment flows based on the investors' motive to invest and factors that firms consider when choosing investment destinations. Section 3.3 will deal with theoretical determinants of FDI based on the host country's characteristics dealing with conditions that attract foreign investment to developing countries with special focus on the SADC member countries. The chapter will end with a section on the strategic motives for foreign direct investment.

## **3.2 Analysing the fundamental theories behind foreign investment flows**

### **3.2.1 Background to the theory of FDI**

It is not only important to understand the various factors investors consider when choosing their final investment destination, but also the differences in FDI attraction performances among countries. Inward FDI flow favours destinations where advantage can be taken of ownership especially new innovation. Given multinational companies' operational advantages combined with the host nation's locational advantages, large MNCs strive for the best returns from their investments [United Nations Council on Trade and Development (UNCTAD) 1998].

Faeth (2009) established that the first theory on international capital movements that led to FDI is rooted in the Heckscher-Ohlin neoclassical trade theory. Historical developments on the study of FDI attraction factor determinants were premised on descriptive analysis in the early 1930s to 1960s with leading studies by MacDougall (1960) and Kemp (1964). Econometric analysis which followed the advance in tools of economic analysis was extended to studies on FDI movement by Dunning and Buckley (1977). These studies gave better and more conclusive results on the factors that attracted FDI. The introduction of econometric analysis gave theoretical propositions more solid empirical support. Sethi, Guisinger, Phelan and Berg (2003) studied the trend of the FDI movement focusing on United States' investors. Their findings concurred with those of Marinova and Marinov (2003a) in that given the riskiness of foreign investments; host countries' expected locational advantages are handy in attracting foreign investment. The factors that affect the locational advantages are political, economic, commercial and financial conditions which allow investors to exploit low operational costs in new markets. Therefore, investors are concerned about the returns they get from the risk-taking investments in foreign markets.

Faeth (2009), in one of the most recent studies on FDI attraction factors concludes that the subject matter on the theory of FDI has grown to include a number of different theories and perspectives on how international firms choose to locate their production activities. Thus, an effective inquiry into the determinants of inward FDI flows must be grounded on a comprehensive understanding and analysis of the various theories that have been used over the years to explain foreign investment flows in the world. The theories embrace considerations

that range from models such as investor advantage and agglomeration economics to the effects of large markets and consumer preferences, cost differences, transport infrastructure, investor protection and macroeconomic policy variables. It is clear that a combination of factors determine the final destination decision of an investor.

From the investor's perspective the major motive for investing in the foreign country is to increase profits. Thus, the major factors that attract investors are those that increase the ease of doing business and allow investors to harness the maximum possible returns from an investment (World Bank Report 2001). The theory of FDI movements between countries can thus be grouped into two: firstly, there are those that are internal to the investor and, secondly, there are country specific characteristics that attract investment. The Baseline Profitability Index (BPI), published by the Foreign Policy Magazine, ranked Rwanda among the top 10 good investment destination in the world for 2010 with Botswana ranked second. Included in the elements cited as important to the two countries' good performance is the fact that no sector is barred from foreign investment, tax incentives and massive networking sessions (World Bank 2011).

### **3.2.2 Classical and neoclassical models**

Classical theorists developed their models during the era of economic nationalism. The period was dominated by the mercantilists' view of balanced trade. Thus, the classicists base their arguments on the assumption of internationally immobile factors of production. This assumption limits their role in giving meaningful conclusions to the determinants of FDI flows amongst countries. Although the early neoclassical theory made efforts to explain international capital movements led by the Heckscher-Ohlin model framework (Heckscher & Ohlin 1991), they were constrained by the perfect competition assumption. It is more favourable to undertake foreign investment when the investor possesses resource endowments which are better than those available to the host country's firms. Therefore, in perfectly competitive models of early neoclassical trade theory, foreign investment could not be undertaken by firms who sought profitable investments (Hirsch 1976).

The breakthrough in the neoclassical analysis of the FDI movement came with later models that dropped the assumption of immobile capital under perfect competition pioneered by Coase (1937). The Coasean analysis drops the assumption of factor immobility and introduces goods

immobility and includes information asymmetric framework analysis. Coase concludes that movement of factors responds to differentials in resource endowments amongst countries. Thus, factors of production are seen to favour where they get the highest earnings.

The ideas of Coase were formally integrated into Mundell's (1957) factor price equalisation model. However, the factor price equalisation model assumes perfect competition, and so fails to give a convincing analysis of the determinants of FDI but rather helps in explaining portfolio investment. The Mundell (1957) model discerned the effects of trade barriers imposed by governments in distorting the movement of factors in search of higher earnings. These governments imposed distortions such that trade tariffs affect FDI movement as investors seek to reduce operational costs, *ceteris paribus*, capital would move to where the trade barriers are minimal and cheaper. Faeth (2005) concluded that FDI decisions by foreign firms require guaranteed positive returns to the investor. Therefore, the neoclassical theories can be criticised for their failure to explain the advantages of firm ownership in FDI movement.

The explanation of movement of international capital under the neoclassical theory was premised on neoclassical financial theory of portfolio flows. According to the theory, capital was assumed to be transacted between independent buyers and sellers. This was heavily criticised by Dunning (1998) as its major flaw in explaining FDI movement as it ignored the role of MNCs. Yet the major contributors of the flow of capital between countries are the MNCs who seek to grow beyond their home countries' capacity.

Neoclassical macroeconomists were worried about goods market equilibrium where saving should equal investment. An imbalance would affect the money market equilibrium leading to inflation. Therefore, FDI and international capital flows were necessary to close the savings-investment gap in developing countries (Bond & Samuelson 1986). The goods market disequilibrium is common in capital poor countries, thus capital is expected to move from where it is available in abundance to regions where there are capital deficiencies. These were also the assumptions of the Heckscher-Ohlin model. Capital from the capital abundant region will help in improving the capital formation in the developing world by creating employment and helping to reduce poverty.

The Heckscher-Ohlin model offers the first theoretical explanations of the flow of FDI. The model is a neoclassical model that views FDI as international capital trade. "The Heckscher-

Ohlin model is a 2x2x2 general equilibrium model. The major assumption of the model is that there are only two countries (home and host), two factors of production (capital and labour) and two goods. The model also assumes perfect competition in the goods and factor markets, with identical constant returns to scale production functions, no transport costs and there are natural factor endowments that exclude specialisation between countries” (Faeth 2005:37).

Faeth (2009) argues that the general economic explanation given by the Heckscher-Ohlin trade theory is based on the additional assumption that countries have different resource endowments that create different factor prices. Therefore, due to different relative factor intensities needed in the production of different goods there will always be differing comparative advantages between nations. For example, a country with relative capital abundance, normally the home country, is expected to export a product that requires capital-intensive production to a host country. If there is no commodity trade, then capital will migrate to the foreign market where it will receive higher returns than labour. The movement continues until factor prices are equalised.

International trade theorists, like the neoclassical theorists base their theory on international trade in an open economy model. They have dominated international economics since the 1950s after the death of Keynesian macroeconomics that dominated the world order in the 1940s. These international trade theorists’ theories make an effort to explain the distribution of commodity production activities based on factor endowments of the host countries and ignore the determinants of FDI location based on the individual firm’s ownership advantage (Hannula 2005).

Aliber (1970) expands the view of Heckscher and Ohlin that capital moves in search of higher returns. Aliber’s model incorporates the concept of exchange rates and states that capital moves due to differences in capital endowments and currency risks. The model shows that, due to risks in currency movements, traders impose a premium above the prevailing interest rate. Thus, firms from nations with a stronger currency are seen borrowing capital from weaker currency markets at a lower interest rate than in their own markets due to the reduced risk of the currency’s depreciation. FDI is stimulated when foreign firms have a better expected stream of returns than host nations’ firms due to their easy access to stable stronger currencies. The basic premise is that firms invest in countries with a relatively low capital endowment and high capital costs. FDI serves as international capital arbitrage. In this case, foreign firms earn a

currency premium by utilising the interest differential between hard currency and weak currency countries (Faeth 2009). It can thus be concluded that foreign firms take advantage of scarcity in their currency and earn a premium in host nations.

### **3.2.3 Ownership advantage theory**

The theory was developed as a critique to the neoclassical theory and is also called the 'monopolistic advantage theory'. Hymer (1960) and Kindleberger (1969) pioneered the idea that the foreign firm had to have some competitive advantage to take to the foreign market as an advantage such as: the economies of scale, product differentiation, technology and finance or intangible assets such as marketing, innovatory and managerial skills or famous trademarks and brands. The foreign firms, according to Caves (1996) would need these monopolistic advantages for their competitiveness against local firms who take advantage of their knowledge of the local business environment and have better networks. Hence they concluded that monopolistic market structures needed attention for the neoclassical theory to be more realistic.

Hymer (1960) reckons that FDI takes place because MNEs choose markets or industries in which they possess higher competitive advantages, such as technological knowledge, which are not available to other operating firms in a host country. Firm-specific (also known as ownership-specific) advantages are also referred to as 'competitive advantages' (Shenkar 2007). Knickerbocker (1973) extends Hymer's view by looking at oligopolistic market structures and surmises that foreign investments by MNEs favour regions with imperfect competition. Most MNEs seek to maximise their returns and so adopt a 'follow-the-leader' strategy to minimise losses.

This theory shows that firms always follow a cautious approach in moving capital to international markets. The advantages intrinsic to the firm that help them in amassing the maximum possible returns are paramount in the investment decision. According to this theory the need for government effort in guaranteeing protection of the firm's ownership advantage is critical in attracting FDI.

### **3.2.4 Industrial organisation theory**

Pioneered by the works of Mason (1939), the theory has been actively used to explain the location of manufacturing firms. The theory identifies the importance of managerial capabilities and argues that a firm that seeks maximum profits must seek ways to increase its market share. Williamson (1996) concludes that managers' decisions are vital to the growth of a firm's market share and power. They must have accurate knowledge of the available resources, organisational culture and objectives for them to be able to make optimal decisions. Penrose (1959) suggests that, as management tries to make the best use of available resources, a truly dynamic interacting process occurs. This process encourages continuous growth but limits the rate of growth. Therefore, the conclusion was that firms move to foreign markets in a quest to increase their market share.

According to Penrose (1959), the growth and experimentation of the firm, is reliant on its ability to retain experienced managers. Thus the Penrose effect states that, "if a firm deliberately or inadvertently expands its organisation more rapidly than the workers in the organisation, it cannot obtain the experience within the firm that is necessary for the effective operation of the group, the efficiency of the firm will suffer and a period of stagnation may follow" Penrose (1959:47-8). Since the services from inherited managerial resources control the amount of new managerial resources that can be absorbed, they create a fundamental and inescapable limit to the amount of expansion a firm can undertake at any time. Therefore, the Penrose effect suggests that the managerial advantage of a large firm makes it more competitive in the international market.

### **3.2.5 The Nordic internationalisation model**

Johanson and Vahlne (1977) and Luostarinen (1979) developed this model in response to their studies on individual firm expansion behaviour. Also known as the Uppsala model, the model argues that the rationale for firms to establish in foreign markets is due to their quest to gain experience and knowledge on how to grow their spheres of influence. The model describes foreign investment by investors as an internationalisation process that takes firm production

activities into new markets as firms take risks meant for continued expansion and growth of their revenue and business experience.

Buckley and Casson (1976) develop the Coasean (1937) theory into a more integrated theory of the MNE location. Coase identifies the problem of transaction costs as a market failure in international trade. The major source of these costs that Coase identifies was information asymmetry between agents, thus MNEs started internalising the costs through setting up of subsidiaries in various countries.

Buckley and Casson (1976) in line with the Coasean hypothesis find that imperfect information and bargaining costs brings about high risk and uncertainty in the trade of intermediate products, such as physical production, product promotion, management capabilities and services. Thus, given industry specific characteristics, the decision to locate to markets abroad to minimise MNEs cost at various stages of production becomes important. The theory concludes that nature and type of industry and locational characteristics affect internationalisation of production. Industry characteristics include market structure, scale economies and specialisation, while locational characteristics are political and financial risks.

Helleiner (1989:472) commented on the model that:

“FDI occurs in consequence of transaction costs, risks and uncertainties in arm's-length markets, and the potential for increased control, improved deployment of market power, reduced uncertainty, and scale and scope economies. Also advantageous transfer pricing in internalised systems leads to FDI. Internationalisation is a means of overcoming market imperfections generated by national boundaries, informational deficiencies, and the like and, via the creation of internal markets, contributes to worldwide efficiency.”

### **3.2.6 The behavioural theory of the firm**

This theory was pioneered by Cyert and March (1963), with the main emphasis on firm culture and objectives that formulate its behaviour as the major influence in investment decisions as opposed to profit maximisation in previous theories. This theory, however, has not been useful in explaining the major trends in FDI movement between economies because influence of firm culture and objectives is not a characteristic of MNEs but mainly of family businesses which have not been seen to have active influence on FDI.



Cyert and March questioned the major assumptions of the firm that existed before their theory that firms seek profit maximisation and act with perfect information. Cyert and March (1963) state that the industrial dynamics can only be understood through a study of industrial microeconomics and organisational culture which determines the firm's strategic objectives.

The authors of the theory reckon that firms' operational behaviour in investment is determined by organisational goals, organisational expectations, organisational choice and organisational control. The goals deal with what firms seek to achieve and these goals change over time and expectations depend on the information available to the firm and on the ambitions of the leaders. The organisational choices depend on the preference orderings of the firm and control depends on the power given to managers by the shareholders and the objectives of managers differ from those of owners.

### **3.2.7 International strategic management**

The theory is based on business policy and strategic management which have been developed from organisation behaviour, marketing, economics and psychology (Wilska 2002). Porter (1990) developed the theory based on the argument that firm success depends on its strategic decision formulation and strategic management. Porter, in his diamond model, identifies the four major locational attributes of a nation which give them a competitive advantage over others.

The four attributes are: pool of inputs, perceived opportunities, skills and knowledge. According to Porter (1991), the environment via the diamond model affects the firm's initial conditions and managerial decisions. Firms, on the other hand have the ability to influence the environment. Generally firms relocate their production resources and thus FDI when they fail to influence the environment to their competitive advantage (Porter 1991). This has been the main type of FDI from China into Africa where low quality production and fewer competitive firms are seen operating in the African market while competitive firms operate in Asia with markets in Europe and the United States.

### **3.2.8 Industrial network theory**

Johanson and Mattsson (1988) propose that FDI develops as part of relationship marketing and establishment. Their argument is that as firms continue to trade with their counterparts in the foreign land they develop mutual trust and commitment to each other. These relationships are seen as motivating internationalisation of business and thus FDI.

This theory is rooted in the transaction cost approach initiated by Coase (1937) and developed in the well-known works of Williamson (1975). Firms operating in an imperfect market face informational asymmetry on the nature and value of products or transaction costs arising from enforcing contracts with partners and monitoring the quality of intermediate products. Internationalisation is thus likely to be an important strategy by which a market-making firm can guarantee the quality of the final products it offers to customers. The idea of establishing branches internationally arose as firms sought to break the transaction cost bubble created by information asymmetry.

Johanson and Mattsson (1988) identify three sets of issues that may affect market transactions between MNEs and local producers in host economies. The first one arises due to incomplete contracts where there is mistrust between international partners in doing business. Thus, parties in these transactions might wish to renegotiate the terms of the contract ex-post, and if the investment is specific to the relationship, then the supplier's bargaining position is weak. Due to incomplete contracts foreign investors normally do not get fair share on their investment from local business partners. The suboptimal investment will give the investor the motive to establish a vibrant subsidiary and reduce the loss arising from incomplete contracts.

The second one is based on protection of innovation and patent rights. Local partners may acquire the firm's technology at minimal cost and use it to their own advantage by becoming in future. Moreover, they could dissipate MNE's reputation by producing low quality products under high-quality brands. In both cases, the risk of dissipation is lower if the firm carries out the activities with its own subsidiaries. The third issue concerns the principal-agency relationship between MNEs and local firms. In this case, the relationship can be affected by problems of hidden action or hidden information about the local market. The local agents could have an interest in reporting that the market is worse than it actually is to justify their poor

performance. This adverse selection of information encourages MNEs to form affiliates in the host nation.

### **3.2.9 Proximity–Concentration Hypothesis**

This theory is based on the works of Brainard (1993) cited in Faeth (2005:49)-the theory is premised on industrial economics models extending from industrial organisation theory, firm internalisation and the OLI theory. Inspired by the microeconomic models of Hymer, Kindleberger and Caves, the trade theory combines firm ownership advantages with country locational advantages factoring in the effects of technological innovation to explain the movement of FDI.

Brainard (1993) studied the behaviour of industries in different countries looking at how economic policy affects the strength of currency, tax, trade liberalisation, tariffs and freight safety. The study looked at the determinants of plant scale economies by considering the affiliate sales between US firms and other markets used to proxy FDI. The Proximity-Concentration Hypothesis concluded that the trade between US firms increased with markets that had fewer barriers to trade and those that had low costs of transport thus closeness of the market affected trade and FDI. This study thus echoed the stance of the neoclassical theorists that factors that lower the returns on investment discourage investment in those markets.

The proximity-concentration hypothesis is a robust model which suggests that resource endowments are not important in FDI location but cites transport costs, market size and barriers to trade as affecting FDI location. This supports the earlier propositions by Dunning (1980) that MNEs' ownership advantage is more important in foreign investment decisions.

### **3.2.10 Synthesis**

The theories on FDI movement between countries have grown significantly over time and many theories have emerged since the inception of the subject in the classical era. Though the classical and neoclassical theorists' conclusions are limited by their respective assumptions of capital controls and perfect competition, their conclusions are still relevant in today's policy formulation in many countries. The issue of capital controls has limited the flow of FDI into many developing countries prompting policy change in most countries towards free capital

flows in many sectors. In Zambia, the government loosened the repatriation of profits policies which improved their doing business index, moving it from 90 in 2009 to 76 in 2010 (World Bank 2011).

Neoclassical theory supposes that capital moves from capital abundant regions to capital poor regions in search of higher returns. It considers the locational advantages in FDI destinations ignoring economic conditions and ownership advantage which has limited its influence in the movement of capital in recent years. Most capital into developing countries has been motivated by the economic fortunes of the host nations. This was evident in Zimbabwe from 2000 to date where the economic meltdown saw investment in the country fall significantly. The Heckscher-Ohlin model (the main model in neoclassical synthesis) argues that capital moves because of comparative advantages between countries and firms produce a commodity they view as dominating world production in that region. This argument is now not so critical since firms have established various strategic reasons for foreign investment that might ignore the comparative advantages.

Aliber's extension of the neoclassical arguments regarding FDI flows includes currency premiums where firms from stronger currency countries are seen making speculative investments in weaker currency regions and gaining from the arbitrage. This argument explains why most developing countries are creating favourable borrowing rules to investors since they gain from borrowing cheap capital from countries with weaker currencies than that of their home countries. Angola has responded in this regard by reducing interest rates to foreigners in sectors that create employment. The Angolan government also offers grants for setting up or transferring businesses, with a view to supporting infrastructure-related public works, usually up to a maximum of 30% of total investment (UNCTAD 2003).

The analytical shortcomings of the classical and neoclassical analyses prompted the emergence of the ownership advantage theory by Hymer (1960). The theory is more realistic since it examines the behaviour of MNEs and includes the monopolistic model. Most MNEs seek market dominance to enhance their profits. This has seen the Anglo-American group dominating the mining activities in SADC countries. Countries that have tried to diffuse the MNE's monopolistic power have lost out on significant investment, for example in Zimbabwe after the introduction of the indigenisation legislation in 2008 that sought to give indigenous people a greater role in economic activities (UNCTAD 2012).

The emergence of the industrial organisation theory was premised on the idea that firms seek to have a greater market share for their products. Firms were seen giving a greater role to managerial capabilities, thus most MNEs placed expatriate managers in host nations to take advantage of managerial experience that would then diffuse to their local recruits.

The international strategic management theory of Porter (1991) and the international network theory by Johanson and Mattsson (1988) suggest that firms establish themselves in foreign markets based on relationships of trust with foreign firms. Governments are now more open to foreign investors and most governments will now allow foreigners to compete for government tenders.

### **3.3 Theoretical determinants of FDI based on host country's characteristics**

The characteristics of a host country that determine the attraction of FDI are normally grouped into three broad categories, namely: policy framework for the FDI, economic conditions and business facilitations (Botrić & Škuflić 2005). The nature of FDI inflows into less developed countries is essentially vertical in nature and inspired by the firm's need to expand and grow. This is mainly so because developing countries take time to produce products initiated in the developed countries. In the case of vertical FDI, firms re-locate part of their production process and some stages of production are left in the parent nation. Vertical FDI is inspired by the neoclassical arguments for MNCs to locate to foreign markets because factor endowments differ in nations and returns to factors of production also differ across borders (Mariotti, Mutinelli & Piscitello 2003). Thus, firms should expect to increase their efficiency and earnings by locating to other markets outside their home market.

Markusen (1997) conducted a more robust analysis on the nature of horizontal and vertical MNEs. Horizontal Multinational Enterprises (MNEs) produce the same goods and services in each of several locations. The horizontal FDI is mainly driven by the existence of trade costs such as transport costs, trade tariffs and quotas. Horizontal MNEs occur because of trade costs and differences in factor endowments. However, vertical FDI occurs due to internationalisation, where firms seek to transfer knowledge internally in order to maintain the value of assets and prevent asset dissipation (Markusen 2002).

### 3.3.1 Policy variables as determinants of FDI

Botrić and Škuflić (2005) present determinants of FDI flows from a game theoretic perspective between the investor and the host nation or a number of destinations competing for FDI. The investor's choice between undertaking vertical or horizontal FDI is highly dependent on the nature of attraction policies and the incentive structure presented by the host nation. Government's treatment of foreign investment influences the investor's decisions on whether to establish production affiliates; acquire licensing or embark on FDI.

The investor's choice to locate from one region to a specific location is also determined by government policies. Faeth (2009) suggests that a firm's choice between establishing production factories, embarking on mergers or acquiring stake after investing, hinge on the host government's friendliness. Therefore, foreign investment decisions are complex. Countries competing for FDI ought to be aware of the factors which influence investor decisions.

Bond and Samuelson (1986) show how governments can lure FDI by establishing incentive structures that include fiscal incentives such as tax holidays. These incentives are meant to signal the quality of resources in the host countries. Incentives are used to bridge the information gap between the players in FDI, which include the host nation and the investors. Incentives are also meant to deal with information asymmetry where firms do not have adequate information about the nature and availability of inputs and markets when choosing investment destinations.

Barros and Cabral (2000) add the possibility of relocation by firms after a certain period of time. An examination of the firm equilibrium efficiency properties led them to discover that some firms use the tax holidays and other incentives to maximise profits before relocating when the incentives end. They suggested that governments introduce a non-exit clause in the investment contract in order to protect countries' resources from unfair exploitation by MNEs. This was also meant to prevent investors' abuse of fiscal incentives.

Black and Hoyt (1989) studied the nature of competition between cities bidding for FDI in a federal government situation. Their model concluded that firms 'voted with their feet' and located in the cities where the cost of doing business was lowest. Haaparanta (1996) extended

Black and Hoyt's (1989) model to regional countries competing for FDI using a principal-agent model.

Haaparanta (1996) shows that given the assumption that investors have perfect information countries with low labour costs manage to lure more investors than those with high labour costs assuming countries do not use subsidies to attract investors. However, with the help of subsidies high labour cost countries can attract more FDI where subsidies cover the increased labour costs. This deduction suggests that foreign investors are worried about increasing their profits and do not care about improving the welfare of the host nation's citizens. There is therefore a need for contractual non-exit clauses to ensure long-term existence of an investment in the host nation which benefits locals in terms of increased employment.

### **3.3.2 Host country determinants**

A wide range of government policies affect national advantage in some industry or group of industries. Education policy, tax policy, healthcare policy, anti-trust policy, regulatory policy, environmental policy, fiscal and monetary policy and many others are all relevant. However, most governments are concerned about establishing their authority in the economy and thus end up compromising their competitiveness to attract FDI (Proksch 2004). UNCTAD (1998) notes that FDI is a complex economic phenomenon that is affected by a host of factors whose relative importance changes as the economic environment evolves over time; it is possible that, as the economy of the host country changes and the international environment evolves, then the FDI factors may also change.

Hannula (2005) concludes that firms consider a lot of factors before deciding on the final investment destination. Firms are guided by strategic objectives, available resources and the nature of the industry. Key to all these investment decisions is the host country's characteristics and advantages. Wilska (2002) divides the determinants into primary determinants comprising the host country's market and input-related factors and secondary determinants which included external trade, capital movement determinants and background conditions.

### **3.3.3 Host country market and input-related determinants**

Market size and growth are major determinants of FDI attraction in developing countries since most FDI is profit-seeking and thus seeks to increase sales. According to the world investment report [World Bank (WB) 2004], China is the top investor attraction country due to its huge population and market. Transport infrastructure and distribution systems are also important to investors as they seek potential destinations. The quantity and quality of labour is important in attracting FDI.

Natural resources and land have been key factors affecting FDI attraction since 2007 and 2008 due to the food crisis. The spike in food prices prompted countries that are heavily dependent on food imports to invest in other countries where land and other natural resources are abundant with a view to securing food supply [Food and Agriculture Organisation (FAO) 2010]. Capital, production related infrastructure, linkages and competition are the other home country market factors that influence FDI movement.

### **3.3.4 External trade-related determinants**

Wilska (2002) argues that government policies towards liberalising external trade and foreign investment are central to attracting FDI. This has also been cited by the World Bank (2011) as one of the major contributors to the Rwandese success story in attracting FDI. Economic integration, exchange rate policy, promotional policies and geographical distance are the other factors that Wilska found to be important.

Liberalising investment which includes giving equal treatment to local and foreign firms and removing restrictive measures on profit remittances was also seen to be the major determinant of an increase in FDI in Mauritius (UNCTAD 1997).

### **3.3.5 Capital movement-related determinants**

The degree of openness towards foreign investment is one of the most important country determinants of investment flows. FDI depends on the long-term expansion plans of the MNCs. The investor's perceptions of the host nation's macroeconomic vulnerability are also an



important determinant (Lall 1997). Economies that are vulnerable to macroeconomic shocks are thus likely to attract less FDI than relatively stable economies.

### **3.3.6 Gravity approach**

According to the gravity approach to FDI (Hannula 2005), the closer two countries are geographically, economically or culturally the higher the FDI flows between these countries will be. Cultural distance is also important in lowering the information asymmetry and costs of operating in a new market. The gravity model has been helpful in explaining some investment flows in Africa due to the difficulties firms face in doing risk-rating studies and evaluations in the region. South Africa is the only country subject to regular ratings, with some coverage of Mauritius and Botswana (UNCTAD 2003).

An important background condition to attracting FDI is domestic investment; public investment is used to proxy physical and human infrastructure. The argument is that better infrastructure ensures high profitable investments. Coughlin, Terza and Arromdee (1991) also suggest that investment in transportation infrastructure has a positive impact on FDI attraction.

### **3.3.7 Synthesis**

The proponents of government intervention as a major determinant of FDI attraction divided the host country characteristics into policy framework, economic conditions and business facilitation. Policy variables were taken as a strategic game between government and investors. Due to information asymmetry the game is typically a zero sum game where all parties seek to harness the maximum returns from the contract given the behaviour of the other party.

The governments use the policy attraction incentives to signal the potential of the market given the limited information at the disposal of investors. However, due to competition amongst countries, firms are using these fiscal incentives to increase their economic rent at the expense of the host nations. Thus, in order to overcome exploitation, countries introduced no-exit clauses and also imposed capital control to encourage reinvestments of profits, guarantee continued growth and employment creation leading to better income distribution from FDI.

The host country characteristics that influence FDI flows have also changed over time. The size of the market is fast losing its importance due to increased regional economic integration in the

African states such as SADC, ECOWAS and COMESA. Trade has thus increased the market size of most countries. The invention of faster and better transportation facilities has also helped to create regional markets for investors. Investors are now focusing on issues such as cost differences as locational advantages, so regions should introduce incentive structures to reduce the establishment costs. The creation of regional markets has also prompted most nations to change the legal structures that hamper doing business with ease such as stringent registration rules for foreign firms.

However, even in the face of growing regional markets domestic demand still remains an important factor in attracting investment. The developing nations must thus seek to develop their economies and improve the living standards of their citizens so as to increase their incomes and buying potential. Investment in education is also important in raising the quality of labour in host nations. Education also increases the capabilities of individuals in doing competitive business. Educated citizens will attract firms that seek to learn from host nations.

African nations like Mauritius and Rwanda which embrace openness to international trade do well in attracting investors. Openness to trade, apart from creating broader markets, also opens up access of local firms to foreign markets. This is expected to create international networks that give the firm potential to expand its establishments in other countries.

Capital movement has, however, been a tricky issue for host nations. Primary resources in developing nations are exploited at the cost of other sectors. The gravity model is important in explaining regional capital movement; this helps regions to compete for investment as a combined unit. Once a firm establishes itself in a region it will easily expand to other nations in the same region since it has the benefit of reduced transport costs and knowledge of indigenous language and preferences.

### **3.4 Strategic motives of FDI**

Dunning (1993) advanced the study on the motives that prompt firms to invest in the foreign markets. Behrman (1972) cited in a recent study by Dunning and Lundan (2008) which identifies four major categories that distinguish foreign investors based on the motive for investment. The classification sees firms divided into natural resource-seekers, market-seekers, efficiency-seekers and strategic-asset or capability-seekers.

FDI, while benefitting the host nation by creating employment, increasing revenue from taxes and the royalties and transfer of technology and skills, also aids the growth of the investor. The decision on the final destination of FDI is thus of interest to countries that desire investment and the investors and their competitors. The investors may strategically locate their subsidiaries in such a way that profitability may be hinged on the location of a particular affiliate firm (Benito & Gripsrud 1995). Dunning points out that the study on FDI trends and movement should establish motive. Firms make strategic decisions about whether investment should protect the market or venture into new ones. Investors are seen to react to government decisions or competitors or, in some instances, to take the lead in investment initiatives. Hence, firms will be actively looking for risky avenues to expand their market share.

Dunning and Lundan (2008) found out that MNEs engage in foreign investments to improve the welfare of their stakeholders who include employees, managers and shareholders, rather than for the benefits of the societies in which they operate. They further noted that most MNEs today invest abroad based on two or more of the strategic motives of FDI.

### **3.4.1 Market-seeking FDI**

Dunning and Lundan (2008) conclude that market-seekers seek to serve local and regional markets previously served by the supplier now seeking to reduce costs by locating in that market. A classic example is FDI in the South African automobiles sector seeking to serve Africa and the huge South African market. Market-seeking FDI is normally horizontal in nature and involves replication of production facilities in the host country. Lower operational costs through tariff avoidance and export-substitution encourage this type of FDI.

Dunning and Lundan (2008) state that market-seeking FDI is motivated by MNCs' desire to maintain dominance in the world markets, thus they seek to sustain and protect existing markets as well as to access new untapped markets. Firms seek effective demand to their products so generally the favourable markets will be those that are densely populated with high per capita incomes. Market-seeking FDI does not only look at the market for final products but also for input. Firms may need to locate to foreign markets in order to retain their business should their main suppliers move their production abroad.

Shepherd, Silberston and Strange (1985) conducted an empirical study on the motives underlying UK outward FDI. They found that most firms establish abroad in order to keep in close proximity with their customers. A similar study by Shaukat and Hafiz (1996) on UK outward FDI in Central Europe also concluded that staying close to customers was among the most important strategic motivations for FDI.

Market-seeking FDI is also encouraged by the need to establish consumer loyalty for products through advertising and promotions which need market knowledge on host country market characteristics. Knowledge of the market can only be achieved through presence in the market in the form of established investment. Due to competition with local firms a foreign investor who is not well acquainted with the host country's specific characteristics such as language, laws and business customs may find it difficult to compete in specialised industries such as petrochemicals and forestry products, financial and professional services (Dunning & Lundan 2008).

“The market-seeking firm also locates in foreign market because of the reason that the production and transaction costs of serving a local market from an adjacent facility may be lower than when supplying that market from a distance. The investment is highly activity and product determined. The production of what is relatively costly to transport and can be produced economically in small quantities is more likely to be located near the main centres of consumption than are those that cost relatively little to transport and yield substantial economies of scale in their production” (Dunning & Lundan 2008:70).

Dunning and Lundan (2008) see FDI as a possible tool for a global strategy where MNCs might find it helpful to position themselves close to their competitors. This has led to the formation of fierce oligopolistic competition in most sectors dominated by large MNEs. Cases in point are the oil and pharmaceuticals that operate production units in each of the host markets and engage in massive R&D.

According to Randoy (2004) in Dadzie (2012) market seekers treat each production plant as an independent unit separate from the other units. Thus, each plant will be responsive to the market requirements in which they operate. However, the products of the affiliate firms will be similar to those produced by the parent firm. The products of affiliate firms, though mainly meant for the local market, may be sold in other adjacent markets.

### **3.4.2 Resource-seeking FDI**

This is when firms invest abroad aiming to capitalise on the availability of specific resources they cannot find in their home countries which include minerals, land, raw materials and low-cost labour. Resource-seeking firms in some cases target specific resources which they will seek to exploit at a lower cost than they can in their home country if the resource is available at home (Dunning & Lundan 2008).

Dunning and Lundan (2008) conclude that resource seekers aim at improving the profitability of their enterprises by exploiting resources abroad and the outputs of affiliates are mainly exported to developing countries. Resource-seeking is the most dominant inward FDI flow in Africa where UNCTAD data over the years has shown that resource rich-countries, especially oil producing countries, receive the biggest share of FDI. Factor-cost considerations become important particularly in the manufacturing sector, where multinationals invest directly in order to export.

In contrast to market-seeking FDI which is horizontal FDI, resource-seeking FDI is vertical or export-oriented FDI. Vertical FDI involves relocating parts of the production chain to the host country. Availability of low-cost labour is a prime driver for export-oriented FDI. Naturally, FDI in the resource sector, such as oil and natural gas, is attracted to countries with plentiful natural endowments.

These types of FDI, whilst targeting mainly the primary sectors in Africa seek to secure raw materials for parent firms in the home country with the view to reducing production costs. This in most cases shows the operation of the ‘invisible hand’ in the allocation of factors of production, where factors move to where they produce at the least cost. Resource-seeking FDI is highly export-oriented and are thus independent of the host country’s market characteristics (Anderson & Svensson 1994). This is evident in Africa’s mining sector where value addition is minimal and most of the resources are then exported as ore.

Locational advantages are the key attraction to resource-seeking FDI, where investors are lured by the specific resources with which that the location is endowed (Dadzie 2012).

Therefore most MNEs benefit from the mix of ownership advantages (that local firms do not have) with the locational advantages of the host countries and increase potential economic rent.

Dunning and Lundan (2008) identify three types of resource-seeking FDI. The first type of resources-seeking FDI targets minerals, raw materials and agricultural products. These MNEs include primary products, producers or manufacturers mainly driven by the desire to minimise costs or to establish guaranteed raw material supplies.

The second type of resource-seeking FDI seeks human resources in the form of unskilled or semi-skilled labour. This type of investment is classical in the establishment of the imitation gap hypothesis where large MNEs copy productions developed elsewhere in markets with cheap labour. They are then able to produce the commodity at cheaper and more competitive prices. In their quest to attract this form of investment, the SADC countries liberalised labour laws and set up free trade or export processing zones.

The third type of resource-seeking FDI describes nations that invest in skills training and development since it targets technological capacity, management or marketing expertise and organisational skills (Dunning & Lundan 2008). This is mainly carried out in the R&D of specialised products whose resources requirements are in foreign markets.

### **3.4.3 Efficiency-seeking FDI**

Efficiency-seeking FDI is common in firms that seek to exploit economies of scale and scope by positioning themselves in many different locations. While it can be resource-seeking or market-seeking, this form of FDI plans and strategically rationalises investments in a way that achieves efficiency. The major aim is to benefit from diversification of risk, economies of scope and scale from established managerial styles in different regions and markets (Dunning & Lundan 2008).

Behrman (1981:31) argues that firms undertaking efficiency-seeking FDI are, “looking for the economic sources of production to serve a multi-country standardised market”. The firms will benefit from establishing themselves in many unique markets and in most cases minimise the risk of market shocks. Efficiency-seeking FDI as defined by Dunning (1997) are, therefore,

undertaken primarily to capture, advance and utilise a firm's transaction cost minimising advantages by locating in many markets.

Due to the differences in the factor endowments and markets in different nations, efficiency-seeking FDI's main objective is to strategically locate its resources in order to exploit economies of scale and scope (Robson 1993). The efficiency-seeking investments differ from resource-seeking FDI in that resource-seeking FDI only concentrates on cost saving but efficiency-seeking exploits economies of scale and scope in different locations to achieve economic efficiency. Efficiency-seeking FDI benefits from geographically dispersed economic activities in maximising returns from the economic potential of each region.

Efficiency-seeking FDI takes advantage of differences in the markets which affect the demand and business operations of commodities such as culture, caste, politics and institutions. Efficiency-seeking investment can also be spread in countries with similar economic structures and income levels intending to take advantage of the economies of scale and scope (Dunning & Lundan 2008).

Kim and Whang (1994) argue that regional integrations can create geographical business concentration that initiate regional and scope economies and leads to a larger product base that encourages firms to establish FDI. Taking advantage of regional markets makes it easy for firms to exploit economies of scale and scope. The firms simply have to rationalise and restructure their production units in different regions for maximum benefits. The efficiency benefits have been influential in motivating firms to locate the manufacturing units in nations where cost of production are lowest (Kim et al. 1994).

Dunning (1993) observes that in efficiency-seeking FDI products factor endowments do not matter. The major aim of firms is exploitation of economies of scale and scope.

#### **3.4.4 Strategic-assets-seeking FDI**

Dunning and Lundan (2008) identified the strategic-asset-seeking FDI as the type of investment that seeks to advance and sustain a firm's international competitiveness. It is undertaken strategically by firms in a quest to establish influence in new markets. The motive of foreign investment is mainly to increase the asset worth of a firm. Investors under the strategic-assets-

seeking FDI are normally large established MNCs seeking to consolidate their world market dominance and new investors seeking to grow their potential (Dunning 1993).

Shan and Song (1997) conclude that firms do not seek exploitation of ownership advantages only but also use FDI to develop firm specific advantages or to acquire necessary strategic assets in a host country. In line with Dunning's (1993) research, Shan and Song (1997) also suggest that the firm's firm-specific advantages arise from the firm's ability to coordinate acquisition and operation of assets from other firms in the host nation.

The firm-specific advantages emerge from the acquisition of assets in foreign markets that advance the firm's competitiveness and weaken the competitors' potential (Dunning 1993) Mergers also form an integral part of strategic objectives for FDI where firms seek to form an international strategic cooperation (Marinova & Marinov 2003b).

Dunning (1993) reckons that strategic-asset-seeking FDI is becoming the most vibrant form of international capital movement. Investors are seeking strategic assets abroad as a long-term strategy for dealing with lack of opportunities in their home markets. Strategic-asset-seeking FDI differs from the other forms of FDI in that it does not exploit the firm's existing ownership advantage but rather it seeks to establish that firm's specific advantages by ensuring expansion in the global market. In some cases the strategic-asset-seekers may aim to reduce the competitors' competitiveness through FDI in strategic assets and markets (Dunning 1993).

### **3.4.5 Other strategic motives for FDI**

Dunning and Lundan (2008) identify a further three motives for MNEs' foreign establishments. The three categories are: escape investments, support investments and passive investments.

#### **3.4.5.1 Escape investments**

The trend of FDI movement in some cases has been to escape restrictive legislation or macro-organisational policies of the home country (Dunning & Lundan 2008). This form of FDI normally originates from nations that institute policies that are friendly to the business community. The classic example of escape investments is round tripping of investments



between China and Hong Kong in a quest to exploit incentives by host countries (Dunning & Lundan 2008).

#### **3.4.5.2 Support investments**

Dunning and Lundan (2008) view this motive for FDI as a means of supporting the activities of the whole enterprise across the globe. The established affiliates may not make a direct profit themselves but their activities will benefit the whole enterprise. These activities include the sale of sophisticated intermediate products which might need after sales servicing and maintenance that might require expert attention and the establishment of spare parts warehousing.

#### **3.4.5.3 Passive investments**

These include investments in which investors do not seek managerial control of the affiliates (Dunning & Lundan 2008). The first type of passive investment is identified as investment in real estate including land and hotels which investors expect to increase in future value. The second type is seen to be undertaken by small firms in real estate with the aim of foreign ownership of holiday or second homes. This has been used to explain the boom in real estate in leading world cities and emerging tourist centres (Dunning & Lundan 2008).

#### **3.4.6 Synthesis**

Dunning (1993) provides a more comprehensive theory of FDI that has dominated the analysis of FDI flows since its proposition. The OLI theory coupled with the various motives of FDI location have given policy makers greater insight into what investors seek in foreign markets. According to this view, SADC countries have intensified their integration in order to attract FDI into the region in the face of competition from other regions. The removal of human travel control systems in the SADC has been used to create a larger market and give the region locational advantages. The ownership advantage that investors use to enhance their competitive advantages has seen many developing countries introducing patent rights to protect MNEs' innovations and technological advances. Internalisation has been used by investors to maintain quality control over their products. Most FDI in developing countries is seen as being vertical in nature with part of the productions being initiated in the home countries. Thus, countries that offer incentives on raw materials are likely to receive higher FDI of this nature.

Strategic motives have been central to the theory of the FDI movement since Dunning's proposition in 1993. The motives broadly give governments the greatest role in ensuring that they attract international firms and retain investors. The market-seeking FDI requires governments to ensure a solid domestic demand for the international products which might be mass-produced as firms seek to benefit from the early stages of a product in the new markets. The market-seeking FDI is the major contributor to FDI in South Africa which enjoys a regional economic hegemony that has created a high rating of its product in the SADC region. Products from South Africa thus dominate the regional market.

Resource-seeking FDI requires governments that are open to international trade and allows repatriation of profits. Resource seekers are the major investors in Africa and they favour socio-economic stability for their continued existence. Without stringent government legislation to allow reinvestments of the profits, resource-seeking FDI does not develop other sectors of the economy since it is mainly concentrated in the primary industries such as mining and agriculture.

Efficiency-seeking and strategic asset seeking FDI is common in the developed world where firms seek to establish dominance.

### **3.5 Summary and conclusions**

The study of FDI flows has grown over time as shown in this chapter. Various theories have emerged and helped policy makers in creating favourable policies to attract investment. The early theorists base their arguments on the supply side of FDI with the focus on the critical areas MNEs need to consider before investing abroad. However, as theory continued to grow the determinants shifted to a cooperative game between governments and investors, thus host country characteristics became an important demand side characteristic to attract investment. Strategic motives for investment required a combined analysis that looked at both the supply and demand side characteristics of FDI flows. Below is Table 2 that summarises the major propositions of FDI theory. Over the years government policy makers in the SADC region have endeavoured to institute policies that make the region competitive in attracting FDI. It is thus important to mention the areas of FDI attraction that depend on demand side (government initiatives) and supply side (investors' motives) so as to clarify effective policy areas.

**Table 2: Summary of the major theories of FDI flows based on supply and demand approaches to FDI**

Theory	Proponents	Supply side	Demand side
Neoclassical	Hirsch (1976) and Coase (1937)	Firms seek profitable investments and capital moves where earnings are high.	Governments should reduce distortions that reduce returns from investments.
	Aliber (1970)	Firms use arbitrage to make profitable investments.	n/a.
Ownership advantage	Hymer (1960) and Kindleberger (1969)	MNEs seek market power through foreign investments.	Governments should protect firms' ownership advantage to attract FDI.
Industrial organisation	Mason(1939)	Firms seek market power through a bigger market share to increase profits.	n/a.
Eclectic paradigm	Dunning (1993)	Ownership advantage requires that firms seek to use competitive advantage over local firms to make profits.	Locational advantages require that governments set up favourable policies. Internationalisation of ownership advantage requires that government protects patent rights

			and quality control.
Nordic internationalisation model	Johansson and Vahlne (1977) and Luostarinen (1979)	Firms seek to gain experience in international markets.	n/a.
Behavioural theory	Cyert and March (1963)	Firms' behaviour rather than profits prompt FDI	n/a.
International strategic management	Porter (1990)	Firms' strategy, structure and rivalry encourage FDI.	Four main environmental attribute that encourage FDI. The factors are specialised training, education, information, research, and technical support
Industrial network	Johansson and Mattsson (1988)	Business relationships and incomplete transactions with local firms encourage formation of subsidiaries.	n/a.
Proximity concentration hypothesis	Brainard (1997)	n/a.	Market size, transaction costs and trade policies affect FDI location.
Policy variables	Botrić and Škuflić (2005), Bond and Samuelson (1986)	n/a.	Government institutes incentive structures to attract

			investment.
Host country determinants	Proksch (2004)	n/a.	Education policy, health care policy, anti-trust policy, environmental policy, fiscal and monetary policy are important for investment.
External trade	Wilska (2002)	n/a.	Openness to trade and foreign investment is central to FDI attraction.
Capital movement	Lall (1997)	n/a.	Risk perceptions and macroeconomic vulnerability affect FDI attraction.
Gravity approach	Coughlin, Terza and Arrondee (1991)	n/a.	Transportation infrastructure increases FDI.
Market-seeking FDI	Dunning (1993)	Firms seek to sustain and protect existing markets and access new markets.	n/a.
Resource-seeking	Dunning (1993)	Investors are attracted by natural resources, raw materials and low labour costs.	Investors are attracted by free trade zones or export processing zones.
Efficiency-seeking	Dunning (1993)	Firms seek to benefit from economies of	n/a.

		scale and risk diversification.	
Strategic-asset-seeking	Dunning (1993)	Firms seek to buy competitive strength in unfamiliar markets.	n/a.

## CHAPTER 4

### NON-TAX INCENTIVES IN THE SADC REGION

#### 4.1 Introduction

James (2010) suggests that a good investment climate is the prerequisite for the effectiveness of tax incentives in FDI attraction. Although lower tax rates attract foreign mobile capital, they must be supported by a good investment climate for them to be more effective. The investment climate is shaped by a combination of non-tax incentives used by governments to lure foreign mobile capital. World Bank in James (2010) concludes that non tax factors are important for the effectiveness of tax incentives. Changes in the marginal tax rates of countries in the top half of the World Bank's Doing Business Indicators had eight times more impact than for those countries in the bottom half<sup>1</sup>.

The United Nations Conference for Trade and Development (UNCTAD) (2005) suggests that the low levels of FDI flows into Africa are caused by the continent's failure to integrate into the family of nations. The macroeconomic developments in Africa such as high inflation and weak currencies are cited by UNCTAD as the major hindrance to the region's competitiveness. These macroeconomic ills affect the investment climate which is critical for business growth and viability. Entry of FDI is also discouraged by the high production costs, distorted incentives and a history of misguided policy inconsistencies (UNCTAD 2005). Therefore, African countries have to ensure implementation of policies that increase productivity within their boundaries and increase the potential for greater returns to investors for them to be able to attract more internationally mobile capital.

South-to-South FDI flows are also becoming increasingly significant in Africa; in 2004 the World Bank estimated that South-to-South FDI flows contributed 30-36% of total FDI into developing countries. South-South flows have been important in explaining FDI movement in the SADC where South Africa accounts for more than 50% of all FDI flows into Botswana, Democratic Republic of Congo, Lesotho, Malawi and Swaziland (UNCTAD 2006). Therefore, with more advanced integration in the African economies the flow of South-to-South FDI is set to increase.

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<sup>1</sup> There is however limited empirical studies on the effectiveness non-tax incentives in FDI attraction in the SADC region.

UNCTAD (2003) notes government attitude towards FDI has been changing around the globe over the years. Since the move by many African economies towards economic liberalisation in the early 1980s, FDI has taken a leading role in the economic growth and development strategies of most African states. This has led to a paradigm shift in FDI discussions from whether FDI is or is not necessary to academics and policy makers now being concerned about finding solutions on how countries can attract more FDI for sustainable development.

Africa is faced with a problem of low per capita GDP and thus a small market. In the past, FDI in Africa was mainly concentrated in the primary production sector, particularly mineral extraction. Kazembe and Namizinga (2007) notes that FDI attraction in Africa is determined by uncontrollable factors and resource-poor nations such as Malawi, Lesotho and Swaziland attract little FDI regardless of the policies they pursue. However, recent UNCTAD data in Figure 5 shows that these countries are receiving substantial FDI inflows; Malawi in particular is receiving significant FDI inflows, which can only be attributed to good investment incentives.

FDI attraction incentives are generally those policies used by governments to attract internationally mobile capital. In the SADC region for example, the EPZs in many of the countries have established a vast number of incentive policies such as tax holidays and exemptions on import and export duties and special treatments, and reduced workers' rights to lure foreign investment. Mozambique, Tanzania and Zambia are examples of countries in the SADC which have ensured that privatisation is also important in ensuring competition that attracts investors.

The Southern African Development Community (SADC) is made up of fifteen voluntary member states in the southern part of Africa. The grouping has the aim of achieving economic growth for its member states through increased cooperation and economic integration premised on democratic principles, and equitable and sustainable development (SADC 2006).

Various SADC economic and policy reports in the past have encouraged nations to promote foreign direct investment (FDI) attraction. In 2006 the SADC formulated the SADC Protocol on Finance and Investment, with a vision to foster deeper integration in the region to promote industrialisation and to attract FDI (SADC 2006). To cement the body's commitment to



regional international competitiveness in FDI attraction, the regional block was founded on fundamental principles of human rights, democratic principles and the rule of law. In the quest to achieve transparency the region had until 2010 a SADC tribunal to show international investors the region's commitment to protection of property rights. SADC member states' country reports by the International Monetary Fund (IMF) show that policy makers in the region are aware of the importance of regional cooperation in attraction of FDI.

It is noted in the Southern African Development Community European Community Regional Strategy Paper and Regional Indicative Programme (2008) for the period 2002-2007 that:

“The recent drive by regional leaders to promote better access to individual country markets and the region is likely going to encourage intra-regional trade. With well-established statutes on the conduct of tariff and non-tariff barriers the regional block seeks to focus on the effects of market segmentation due to domestic policies on health, safety, competition policies, business licensing and certification”.

Therefore, like all regional blocks in Africa and beyond, the SADC seeks to improve individual nations' international attractiveness. The benefits of cooperation are an increase in market size, product diversification and competition which improves the citizens' quality of life and in turn attracts more investment.

This chapter is organised as follows: In section 4.2 we look at the non-tax incentives that are important to the SADC given the various stages of SADC economic development. Section 4.3 deals with the socio-economic conditions in the SADC region before proceeding to section 4.4 which will deal with individual SADC countries' efforts in trying to meet the basic non-tax incentives that promote efficiency in the market to attract FDI. Section 4.5 has the conclusion which summarises the key non-tax policies of each SADC country.

## **4.2 Non-tax incentives in the SADC**

The competitiveness of any economy in the world is based on its ability to ensure greater productivity (World Bank 2013). Governments the world over have been working on ensuring a business environment that facilitates greater productivity in order to attract mobile foreign capital into their borders. These factors form the non-tax incentive structures that governments

have used to enhance their attractiveness. These non-tax incentives are important for the efficacy of tax incentives in attracting FDI.

Although the SADC has been working as a bloc to attract investment into the region, individual member states have been pursuing their own set of incentives to make themselves more attractive to investors than their neighbours in the region. Therefore, it is imperative that this study explore individual SADC country efforts in attracting FDI. To give a comparative analysis on SADC countries non-tax efforts in attracting FDI, the study used indicators provided by the World Bank (WB) in the Global Competitiveness Index and Ease of Doing Business Report. The differences in the SADC countries classified by the World Economic Forum (WEF) on the Global Competitiveness Index (GCI) were incorporated.

The study combines related factors from the Ease of Doing Business Report and the African Competitiveness Report which the governments can influence in a bid to attract FDI. Taxes will be dealt with in the next chapters. The factors are: public institutions and access to credit; infrastructure and access to electricity; protecting investors; macroeconomic policies; market size and trade across borders.

#### **4.2.1 Public institutions and access to credit**

Public institutions are critical to the competitiveness of factor driven economies. What follows is a list of the economies in the Global Competitiveness Index stage 1 of development whose competitiveness hinges on their natural resources endowments and abundance of cheap labour (African Competitiveness Report 2013). Most of the SADC countries are classified as being in this stage of development, namely: Lesotho, Madagascar, Malawi, Mozambique, Tanzania, Zambia, Zimbabwe and Botswana are classified in the transition stage from stage 1 to stage 2. Angola and DRC are in stage 1 as all resource-rich countries are classified as being in this stage [World Economic Forum (WEF) 2012]. A strong public institutional base ensures that investors have easy access to the market by minimising regulations in permit application and setting up businesses.

The WB Doing Business Reports since their inception in 2003 have valued access to credit as a means of facilitating new business in an economy. The access to credit rating in the Doing Business Report covers the viability of institutions that offer credit, availability of information

to both borrowers and lenders and the strength of the legal institutions in promoting fairness in the credit market (Doing Business Report 2013).

#### **4.2.2 Infrastructure and access to electricity**

A well-developed infrastructural system is important for productivity and the increased returns to investors especially to countries in the GCI stage 1 of development (WEF 2013). A well-developed quality infrastructure ensures easy access to the country's remote areas where untapped natural resources are abundant.

The electricity infrastructure is also important and removal of red tape to ensure easy access to electricity is equally important in increasing ease of doing business that promotes increased returns to investors (WB 2013). The time it takes for a new business establishment to get a reliable permanent electricity supply is critical in attracting investors.

#### **4.2.3 Protecting investors**

Investors are reluctant to invest in economies that do not have adequate laws to guarantee their protection (WB 2013). Investors thus require that their properties are protected from nationalisation and compulsory acquisitions. Regulations that ensure good protection of investments require disclosure of company information, and participation of shareholders in company critical decisions and procedures (WB 2013).

#### **4.2.4 Macroeconomic policies**

A stable macro-economy is good for business development and profits. Macroeconomic policies that ensure low inflation, a stable growth rate and efficient allocation of resources attract efficiency-seeking FDI. The African Competitiveness Report (2013) acknowledges that foreign investors seek a market that ensures growth and efficiency.

#### **4.2.5 Market size and trade across borders**

This is important for the countries in the GCI stage 2 of development. In the SADC there are five countries in GCI stage 2 and they are: Mauritius, Namibia, South Africa, Swaziland and

Seychelles. Seychelles is also classified as being in the transition stage from stage 2 to stage 3 of development (WEF 2013). These are efficiency driven economies that require large markets and normally attract market-seeking FDI. The 2013 Doing Business Report notes that making it easy to trade across borders is important in attracting investment as it lowers the cost of doing business. Easy customs laws and adequate infrastructure increases the market for local producers as they can move their products easily to other markets.

### **4.3 Socio-economic and political conditions in the SADC**

The SADC regional grouping was established in 1992 after the Southern African Development Coordination Conference (SADCC). The SADCC took place in 1980 at the request of the Frontline States whose mandate was to fight apartheid in the region. The objective of the SADCC was to cultivate a culture of confidence and cooperation among member states (SADC profile 1980). SADC's major objectives on inception were to improve the lives of the people in the region through poverty alleviation, economic growth and development. These objectives were set to be achieved through increased regional integration, built on democratic principles and equitable and sustainable development (SADC 2006). Since then the region has grown and strengthened its ties with greater integration and the possibility of a currency union in the future.

UNCTAD statistics (2010) estimated the total population of SADC's fifteen member states to total 253 million with a per capita income of USD2230. The region's economic activities are dominated by South Africa which contributes two thirds of the SADC's Gross Domestic Product (GDP).

Alternatives to neoliberalism in Southern Africa (ANSA) (2007) used World Bank data to show that on the basis of trade volumes, both imports and exports intra SADC trade are high and reached 11% in 2010 compared to COMESA's 6% and the Arab-Maghreb Union's (AMU) 5% in the same period. Therefore, the SADC region is more integrated than most African regional blocs indicating that the regional bloc is effective in the development of individual countries. The success of the region's integration has, among many factors, been attributed to the formation of the SADC Protocol on Finance and Investment by the regional leaders whose

mandate is to advise on strategy to attract FDI in the face of fierce competition the region faces from other regional blocs in Africa (SADC 2006).

In the 1990s most SADC countries adopted the Structural Adjustment Programmes (SAPs) recommended by the International Monetary Fund (IMF) and the World Bank (WB). These policies such as privatisation and foreign exchange liberalisation had a bias towards free trade and openness to FDI and shunned protectionism. These policies have affected the FDI operations in the region to date. During this era, export processing zones (EPZs) were established; these gave preferential treatment to the export sector thus encouraging investors to move into the export sector. The EPZs were established in Madagascar, Malawi, Namibia, Tanzania, Zimbabwe, Swaziland, Lesotho, Botswana and South Africa.

The SAPs were, however, a monumental failure in the SADC due to lack of political will to implement the recommendations of the policies, hence the region has attracted less FDI in recent years as shown by IMF 2012 data. Kamidza, Matlosa and Mwanza (2002) conclude that the region has not been the most preferred destination of FDI; this is largely so because FDI flows are a function of the relationships between the host countries and the investors' home country. Most countries in the region, however, have experienced cold diplomatic relations with the developed countries. Zimbabwe, Zambia, Malawi and most recently Swaziland and Madagascar have adopted policies that are deemed to be against human rights conventions. This situation is further exacerbated by the continued political instability in the region, where DRC, Mozambique and Angola have civil war problems while Zimbabwe has the perennial problem of questionable elections. A coup was staged in Madagascar in 2009 and Swaziland is resisting the operation of democratic institutions. Individual SADC countries' problems reduce FDI flows into the region. However, incentive structures can be used to counter these negative factors and improve FDI into the SADC region.

#### **4.4 FDI attraction strategies in the SADC member states**

##### **4.4.1 Angola**

The United Nations Council on Trade and Development (UNCTAD) (2012) noted that Angola's FDI competitiveness rose after 1998 due to increased exploitation of offshore oil. The total investment into Angola was maintained at around US\$5 billion from 2003 to 2008. In

2009 UNCTAD data showed that Angola attracted over US\$11 billion in FDI (UNCTAD 2012). The World Bank (WB) Doing Business Report (2013) ranked Angola number 172 out of 185 countries on the ease of doing business index.

The Angolan economy started its recovery in 2002. After the civil war, the government made an effort to resuscitate public infrastructure. In recent years the Angolan government has increased its public investment rising by 14% between 2011 and 2012 (WB 2013). Public expenditure predicted to increase and the modernisation of infrastructure should attract valuable FDI.

#### **4.4.1.1 Policies to attract FDI in Angola**

##### **Public institutions and access to credit**

The government of Angola constituted a law that established the Angolan National Private Investment Agency (ANIP) in 2003. The institution was established with the aim of bringing easy facilitation to FDI location in the country. The agency facilitates and ensures that there is fair treatment of investors, it creates fiscal incentives and is meant to reduce red tape in investment. Angola is rated very low on access to credit in the Doing Business Report of 2013. However, Angola adopted new laws for credit bureaus that provide openness and availability of information to borrowers and thus increase access to less risky credit (WB 2013).

WB (2013) noted that the financial regulations in Angola coupled with increased investment have expanded the banking sector. Access to credit is still greatly constrained, though, hence its reduced economic efficiency and growth. After the 2002 ceasefire which brought an end to over three decades of civil war, the Angolan government launched financial liberalisation policies. The policies saw an increase in banks from 9 to 23 and the total financial assets grew from less than US\$3 billion in 2003 to over US\$57 billion in 2011 (WB 2013). The World Bank (2013) thus concluded that, “Angolan firms are now enjoying a greatly expanded access to the financial system, but the system is not yet capable of evaluating them accurately on their merits as borrowers.”

## **Infrastructure and access to electricity**

Angola is fast improving its infrastructure and it has one of the fastest growing information technology industries. It launched its 4G services in 2012. Mobile phone operation is growing rapidly reaching 52% of the population in 2013, and internet services reaching 12% (WB 2013).

The major infrastructural challenge in Angola is electricity with only 25% of the population connected by 2007. Angola is ranked lowest in electricity availability in the SADC. It has two electricity utility companies (WB 2013). According to the doing business report (2013) Angola has eliminated the customer requirements for accessing electricity.

The government of Angola established the National Energy Security Policy Strategy (NESPS) meant to bring about reforms in the energy sector and to increase access to electricity for new investors (SADC 2012). The policy gives the guidelines for the operation of the energy sector with the view to exploiting local resources and increasing energy generation.

## **Protecting investors**

Investor protection encourages companies to source more capital for growth, innovation, diversification and competition (WB 2013). Angola is ranked just above the regional average on protecting investors with an index of 70. According to the WB Doing Business Report (2013) Angola is ranked 5<sup>th</sup> in the region on the strength of investor protection.

ANIP (2014) reported that Angola has a number of measures in place to protect foreign investment: effective defence, easy access to courts of law, monetary restitution to foreign businesses in cases of expropriation, guaranteed investor rights in case of nationalisation of businesses, and reciprocal protection of businesses under bilateral agreements.

## **Macroeconomic policies**

Angola being an oil producing country attracts ever increasing revenue due to the high demand for oil. Its fiscal and external balance has thus been positive over the years (African Development Bank (AfDB) 2008). The AfDB (2008) stated that Angola has large oil reserves estimated at 13.5 billion barrels making it the second largest producer in sub-Saharan Africa. GDP growth in Angola stagnated from 2009-2011 due to a fall in oil prices but rose sharply to 8.1% in 2012 from 3.4% in 2011 (WB 2013). According to The World Bank (2013), the Angolan economy is growing rapidly due to its strong fiscal and external balance which has led to a stable exchange rate and low inflation.

Angola is one of the natural resource-rich countries in the SADC with oil and substantial deposits of natural gas. The monetary economy of Angola is dollarised with a parallel local kwanza. The monetary policy has been active since 2007 due to a decline in dollarisation and an increase in local kwanza deposits (AfDB 2008). The decline in dollarisation and subsequent increased effectiveness of monetary policy increases the investor confidence in the ability of the economy to resist external macroeconomic shocks.

## **Market size and trade across borders**

Angola has a reasonably dense population of just over 17 million and thus a large market. Given its growing per capita income from increased oil sales and production Angola has a considerably high local demand which has attracted foreign retailers such as the Teixeira Duarte Group (from Portugal). The location of foreign retailers in Angola increased the commercial sector activities by 9.3% in 2012 (WB 2013).

In her quest to increase market size Angola is a member of the Common Market for Eastern and Southern Africa (COMESA), the Southern Africa Development Community (SADC) and the WTO. Angola is also a member of various international treaties that encourages free trade such as AGOA and the Cotonou Agreement for the renegotiation of the trade partnership agreement between African, Caribbean and Pacific countries with the EU (IMF 2012).



#### **4.4.2 Botswana**

Botswana is regarded as a model economy in Southern Africa and is rated highly by various world research institutions. It was ranked as one of the best democracies in the SADSC by the World Bank in the 2010 Doing Business Report. Botswana was rated as the best African economy in dealing with corruption by the Transparency International's anti-corruption index in 2012. The WB Doing Business Report of 2012 rated Botswana as one of the best performing African states, coming fourth after Mauritius, South Africa and Rwanda (WB 2012).

Botswana made an effort to improve its skills and education way back in 1994 through the Revised Education Policy. More recently the government of Botswana diversified the training and education of its young workforce to meet the demands of the changing labour market through the National Youth Policy (Botswana Institute for Development Policy Analysis (BIDPA) 2006). The Vocational Education and Training Policy of 1998 sought to equip school leavers with the skills needed in the working environment and also to promote self-employment (Botswana Federation of Trade Unions 2007).

##### **4.4.2.1 Policies adopted by Botswana to attract FDI**

###### **Public institutions and access to credit**

Tabengwa (2011) notes that Botswana has good institutions that offer credit and the World Competitiveness Report of 2010 rated it amongst top 50 countries with stable institutions. In an effort to improve competitiveness Botswana has embarked on various programmes including "hubs" that seek to improve agricultural production, innovation in the diamond industry, health, education and transport. The Botswana government also set up a private institution, the Botswana Export Development and Investment Agency (BEDIA), which administers foreign business establishments and this has reduced the cumbersome red tape in setting up business in Botswana (BEDIA 2013).

Business registration in Botswana is rigorous and is ranked low in the SADC with an index of 10 only above Swaziland. Sixty-one days are required to start a business but computerisation of the registry has resulted in greater efficiency and substantial time reduction (WB 2013).

The Doing Business Report (2014) noted that Botswana eliminated the stringent environmental assessment demands on construction permits hence reducing the cost of erecting new business structures.

### **Infrastructure and access to electricity**

The infrastructure development in Botswana has been poor and the world competitiveness report ranked it 92 out of 142 with notable poor performances in ports, electricity and air transport (Tabengwa 2011). However, there are efforts by the government to improve roads, airline transport and railways. This is expected to improve the infrastructure index of Botswana. Botswana has policies that ensure ease of access to electricity for new business and is ranked third in the SADC on the least steps required to accessing electricity (WB 2013).

The government of Botswana acknowledges the pivotal role played by electricity supply in industrialisation (SADC 2012). Therefore the government embarked on massive electricity infrastructural investment with the Morupule B project which was initiated in 2008. The SADC report of 2012 also commended Botswana for the Renewable Energy Feed-In Tariffs (REFIT) study of 2011 which aimed at establishing effective tariffs and improving on taxation methods in the energy sector.

### **Protecting investors**

Botswana strengthened investor protection by requiring that related-party transactions be approved by the shareholders<sup>7</sup>, and by allowing shareholders to sue directors and obtain the payment of damages if successful (WB 2013).

## **Macroeconomic policies**

Botswana's economy is highly dependent on diamond exports and due to the good diamond price on the world market the economy has experienced budget surpluses over the years. The Government of Botswana has vision 2016 aimed at reducing poverty and growing the operations of the private sector (Government of Botswana 2007). The economic blueprint for Botswana has been the National Development Plan (NDP); the strategic thrust of the NDP is to accelerate diversification and competitiveness through: harnessing productive and knowledgeable human resources, focusing on environmentally sustainable growth, enhancing wellbeing and social protection, improving safety and security, and maintaining transparency and good governance (AfDB 2009).

Not only is the government of Botswana is fostering policies aimed at diversifying the economy such as the National Strategy on Economic Diversification Drive (EDD) 2011-2016, it is also increasing its competitiveness in its main economic activity, the diamond trade. AfDB (2012) sees the initiative by Botswana to sign an agreement with De Beers to move their diamond trade from London to Gaborone by 2013 as a move that will put Botswana at the centre of the world diamond trade. The diamond trade in Botswana was inaugurated in 2013.

The current fiscal policy strategy which aims to attain a budget balance in 2012/13 will also bring about an improvement in the macroeconomic environment pillar (Government of Botswana 2011).

## **Market size and trade across borders**

Botswana has a low population density and thus relies on its neighbours for markets. It has various trade agreements in this regard. Botswana has free trade bilateral agreements with Malawi and Zimbabwe and is a member of the SADC and the SACU where it benefits from customs agreements which promote trade. In its quest to increase market size, the SACU is making efforts to open free trade with China and India.

### **4.4.3 The Democratic Republic of Congo (DRC)**

The DRC has experienced and continues to experience tribal clashes that culminate in civil wars. This has compromised infrastructural development and hence the poor state of the nation's roads, airports and water supplies. The poor infrastructure coupled with the high political risk has reduced investment in the country but the government continues in its attempt to increase the country's competitiveness.

#### **4.4.3.1 Policies adopted by the DRC to attract FDI**

##### **Public institutions and access to credit**

The DRC has strong financial institutions and in 2012 only two small banks failed to meet the required minimum central bank capital requirement of US\$10 million, which was raised from US\$5 million in 2010 meaning most financial institutions have a sound capital base (IMF 2012). The 20 commercial banks operating in the DRC exceeded the capital adequacy ratios in terms of risk-weighted assets which were pegged at 33% in June 2012. The banking sector improved its risk rating in the market as evidenced by the fall in non-performing loans to 8.3% of total loans in June 2012 (down from 17% in 2009). Due to high operational costs in the DRC's financial sector, though, profit margins are very low. Returns on bank assets at the end of 2011 stood at 0.5% which is lower than other markets in the region, thus reducing the DRC's competitiveness (IMF 2012).

The Democratic Republic of Congo in 2013 made the access to credit by investors easier by adopting the OHADA (Organisation for the Harmonisation of Business Law in Africa) Uniform Act on Secured Transactions (WB 2014). The law helps to increase the range of assets that can be used as collateral and hence broadens the investors' ability to access credit. The new assets encompass futures, secured obligations and security interest from proceeds of the original asset (WB Doing Business Report 2014).

## **Infrastructure and access to electricity**

Kadiayi (2013) reports a number of partnerships the DRC government has entered into to further develop its electricity sector. The energy potential of the DRC is over 100 000 Mega Watts (MW). To reach this potential the government entered into a number of partnerships to develop electricity infrastructure. The Bank of China is working on the Zongo 2 hydro power station with a capacity of 150 MW. Indian partners entered into a partnership with the DRC government to construct the Katende hydro power plant with a capacity of 63 MW. The World Bank and the DRC government entered an agreement to rehabilitate the Inga 1 power plant.

The African Infrastructure Country Diagnostic (ICD) (2010) declared the DRC to have the most damaged infrastructure in the SADC as a result of conflict and civil war in that country since 2005. The DRC was estimated to require USD 53 billion a year (which constitutes 70% of its GDP) to reconstruct its delapidated infrastructure. However, the DRC was only spending 700 000 million (which adds up to 10% of its GDP) a year on infrastructure in 2010. The ICD (2010) did however highlight that the DRC has advanced communication signals at a reasonable cost, Port Matadi which services Kinshasa and a rapidly expanding access to latrines.

## **Protecting investors**

To protect investors and increase investor confidence the DRC government adopted the OHADA Uniform Act on Commercial Companies and Economic Interest Group in 2013. The Act requires disclosure in transactions and reduces the problem of moral hazard in business transactions (WB Doing Business Report 2014).

The Democratic Republic of Congo eased business start-up costs by eliminating procedures, including the company registration requirements (WB 2013).

## **Macroeconomic policies**

The DRC macro economy started to perform well after 2006 with economic growth increasing by 3% between 2005 and 2006. This growth was mainly fuelled by increases in production of copper, cement, wood, beverages and electricity production (AfDB 2007).

The AfDB (2007) declared the DRC to have vast mineral resources and that mining contributed to 8.8% of the DRC's GDP for the year 2005 with a potential for growth. The DRC has vast mineral wealth which includes uranium, copper, zinc, silver and accounts for 34% of world coltan. This has made the DRC one of the SADC's resources-rich countries with vast mineral resources.

The fiscal balance in the DRC improved from 2005 to 2006 due to large inflows of foreign grants and budgetary support. The grants accounted for 5.2% of GDP and external aid was also high accounting for 57% of government revenue in 2006. Tax revenue performance in the DRC is also good and is attributed to the revival of the productive sectors of the economy (IMF 2012). This increases investor confidence in the economy.

The operation of monetary policy in the DRC is compromised by the high level of dollarisation with 99% of time deposits and savings deposits being in foreign currency. However, external stability has been strengthened through Highly Indebted and Poor Country (HIPC) debt relief and a build-up of international reserves (IMF 2012). Dollarisation can on the other hand increase portfolio investments since it reduces exchange rate risk on foreign investments.

## **Market size and trade across borders**

The WTO (2010) reported that the DRC under the auspices of the WTO had opened its economy to international trade. The DRC economy has been growing at an average rate of 5.5% per annum since 2001. The DRC has a number of bilateral and multilateral agreements which increase its accessibility to the international markets. It is a signatory to the New York convention on the recognition and enforcement of foreign arbitral awards under the auspices of the UN and the Washington convention which established the International Centre for

Settlement of Investment Disputes. The DRC is also a member of the Seoul Convention of 1985 which established a multilateral investment guarantee agency which was set up to guarantee non-commercial business risks.

To guarantee investor rights, the DRC is a signatory in the OHADA treaty. The DRC has access to foreign markets due to its membership of COMESA, the SADC, the Cotonou agreement, AGOA, the Economic Community of Central African States (ECCAS), and WTO.

#### **4.4.4 Lesotho**

##### **4.4.4.1 Policies adopted by Lesotho to attract FDI**

###### **Public institutions and access to credit**

The government of Lesotho in its quest to increase and maintain FDI set up an Inter-Ministerial Task Team (IMTT) (Government of Lesotho 2013). The team is made up of private and public sector representatives and its main task is to reduce bureaucratic channels in setting up investment projects. In 2007 the IMTT initiated a one-stop shop for registration and processing of foreign documents in setting up business or seeking employment (Government of Lesotho 2013).

Lesotho encourages foreign investors to form joint ventures with locals especially in doing business with government where government tender procedures require local participation. The government of Lesotho reduced red tape and bureaucracy by empowering the Ministry of Trade and Industry to offer a one-stop shop for licences and government permits to foreigners. There is also the Lesotho National Development Corporation which facilitates easy access to information and markets to foreign investors (Government of Lesotho 2013).

###### **Infrastructure and access to electricity**

Lesotho is undertaking a massive hydro power generation project under the Lesotho Highlands Water Project (LHWP) which was initiated in 1986 and resumed in 2013. On its completion it is going to double electricity generation in Lesotho. However, despite the efforts the national

infrastructure in Lesotho remains one of the poorest in the region. The transport sector is characterised by poor road networks thus the quality of road networks linking Lesotho and its major trading partner, South Africa, needs to improve (SADC 2012).

### **Macroeconomic policies**

The main trading partner to Lesotho is South Africa which supplies around 80% of imported goods and services, and acquires over a quarter of Lesotho's exports (IMF 2012). The economy is based on the mining industry especially diamond mining which constitutes the biggest FDI attraction. The 4.2% growth in Lesotho for the year 2011 was due to the 14.5% growth in mining (SADC 2012).

On the monetary front the Lesotho economy is aided by its membership of the Southern Africa Currency Union. The Common Monetary Area (CMA) comprises Botswana, Lesotho, Namibia, South Africa and Swaziland. The economy operates a fixed exchange rate system with the Lesotho local currency, the Loti, fixed to the South African Rand. IMF (2012) noted that due to Lesotho's membership of the CMA, monetary and exchange rate policies are imported from South Africa. This helps to boost investor confidence in the macroeconomic policy's consistency and effectiveness.

The economic blueprint of Lesotho is the Poverty Reduction and Growth Facility prepared in partnership with the IMF whose main focus is improving the business environment for private sector growth, infrastructural development, economic diversification and improvement of investment climate (Odhiambo & Mahembe 2012).

Lesotho is ranked 105 out of 133 in the World Doing Business Report on labour development. Lesotho has one of the highest literacy levels (85%) in the SADC thus it has an abundance of skilled labour. Unemployment is very high and technical efficiency is limited due to a mismatch between skills and labour market requirements (IMF 2012).



## **Protecting investors**

The US (2014) reported that in Lesotho foreign investors are treated in the same way as their local counterparts but Lesotho has limited bilateral and multilateral treaties to protect investors. The government of Lesotho established the commercial court in 2010 to address commercial cases, thus increasing investor protection. The Doing Business Report (2012) states that Lesotho instituted a law to protect investors from exploitation by company directors by setting out duties of care, diligence and the skills required of directors.

## **Market size and trade across borders**

The Lesotho census of 2006 showed that the national population stands at around 1.88 million. The low population density coupled with the low per capita income in the nation mean that the economy has a low effective demand which discourages investment. Lesotho adopted a growth strategy to address this. The strategy seeks to exploit international markets, predominantly in labour-intensive export industries (IMF 2012). Lesotho's membership of the SACU helps its fiscal revenue and its membership of the SADC increases its trade potential in the region.

### **4.4.5 Madagascar**

Madagascar is considerably integrated into the world economy. It is a member of various regional and international groupings which include the SADC, the Indian Ocean Commission and COMESA. It is a member of global trade agreements such as AGOA. The Madagascar government has Economic Priority Zones. The Economic Priority Zones have received incentives that have increased industrial productivity and attracted foreign capital over the years. Madagascar has in recent years suffered political instability after the March 2009 coup d'état and thus its competitiveness has fallen to position 142 out of 183 (World Bank 2013).

#### **4.4.5.1 Policies adopted by Madagascar to attract FDI**

##### **Public institutions and access to credit**

The IMF (2015) reported that Madagascar is politically unstable and thus the establishment of strong public institutions is compromised. Financial services comprise 11 banks, 5 financial establishments, 30 micro-finance institutions (MFIs), and 5 insurance companies. New banks are also being established thus the financial base is expected to grow in the future (IMF 2015).

##### **Infrastructure and access to electricity**

In 2007 Madagascar in partnership with the AfDB embarked on a major hydroelectric power project worth 6 million British pounds. The Sahanivotry Hydroelectric Power Station, a 30 year project on completion, will increase power generation, and will bring about the construction of new access road infrastructure and bridges (AfDB 2007).

##### **Protecting investors**

Since 1998 the Madagascan government has liberalised its foreign exchange market to eliminate the exchange rate risk for investors. This allows foreigners to operate in foreign currency and also gives investors the right to operate foreign currency accounts (Bureau of Economic and Business Affairs 2013). Madagascar is open to FDI in all sectors and has passed friendly laws to encourage an influx of FDI. The laws allow full foreign ownership of business enterprises (Bureau of Economic and Business Affairs 2013).

##### **Macroeconomic policies**

The macro-economy of Madagascar has been affected by the poor political environment in recent years with the 2012 World Bank economic report pointing to a stalled economy, an inflation rate of 8.5% and a growth rate of 2.5% (Bureau of Economic and Business Affairs 2013).

## **Market size and trade across borders**

Madagascar has a small market and therefore the government has a number of agreements with other countries to boost trade relations. The government of Madagascar has concluded bilateral investment agreements with Belgium, Canada, China, France, Germany, Mauritius, Norway, Sweden, Switzerland, and Thailand. Madagascar has also signed double taxation treaties with France and Mauritius (Bureau of Economic and Business Affairs 2013).

Madagascar facilitated cross border trading and allowed exporters easy access to foreign markets by introducing online connections linking government departments and agencies to trade operations (WB Doing Business Report 2014).

### **4.4.6 Malawi**

Landlocked Malawi is one of the SADC's resources-poor countries. The GDP in Malawi is low and the poverty levels are high, hence low effective demand. This has made the country less attractive to FDI over the years since most foreign investors focus on local markets for their products. Therefore, it is important for the government to intervene in order to attract possible investors to the country given the competition for FDI in the region.

Malawi has many factors that make it attractive to investors, the chief one being a low crime rate. Countries with high crime rates do not guarantee security of private property. Malawi is thus an attractive destination since it has a low crime rate compared to most SADC countries (UNCTAD 2003).

#### **4.4.6.1 Policies adopted by Malawi to attract FDI**

##### **Public institutions and access to credit**

The Malawian government has made efforts to improve its competitiveness by setting up institutions for promoting investment including the Malawi Investment Promotion Agency (MIPA) which promotes, facilitates and encourages FDI. This agency is meant to reduce

bureaucracy in setting up investment and acts as a one stop investment centre. The agency was constituted in the Investment Promotion Act of 1991 (Kubalasa 2003).

### **Infrastructure and access to electricity**

Malawi's government is making efforts to ensure national self-sufficiency in energy production by increasing capacity hence it increased energy tariffs by 63.52% in 2011 to raise revenue for the capacity building programme (SADC 2012).

### **Macroeconomic policies**

The Malawian economy is highly dependent on donor funding. It is one of the African countries that adopted the Highly Indebted Poor Countries' (HIPC) initiative. The initiative encouraged multilateral institutions to cancel Malawi's external debt which brought some level of economic stability to encourage investment (Kubalasa 2003).

Malawi's privatisation initiative which started in 1996 attracted investors by stimulating competition in most sectors of the economy. The privatisation drive saw 66 state owned enterprises (SOEs) being privatised and 44 enterprises given to local Malawians (UNCTAD 2005).

### **Protecting investors**

The US Department of State (2014) reported that due to Malawi's political stability it has a low risk of violence. Malawi has laws that are effective in protecting the rights of foreign investors. Malawi repealed the Forfeiture Act in 1992, and since then expropriation of foreign assets has become difficult (US Department of State 2014). Malawi is also a member of the International Center for Settlement of Investment Disputes (ICSID), which allows international arbitration in case of disputes with foreign investors. In addition, Malawi is a signatory to international conventions that promote protection of foreign investment which includes the World Intellectual Property Organisation (WIPO), the Berne Convention, and the Universal Copyright Convention (KPMG 2012).

## **Market size and trade across borders**

Malawi has bilateral and multilateral agreements that promote free trade. It is a member of the COMESA free trade area (KPMG 2012). Malawi is also a member of the SADC which has a potential of 258 million people and a combined GDP of US\$471.1 billion (KPMG 2012). It is also a member of AGOA and has bilateral trade agreements with Zimbabwe, South Africa and Mozambique.

### **4.4.7 Mauritius**

Mauritius is amongst the most competitive economies in attracting FDI in Africa due to its economic liberalisation and trade openness. The World Bank's 2011 Ease of Doing Business Report ranked it 23 out of 175 countries due to good governance and political stability amongst many other factors (WB 2011). Mauritius was ranked first in Africa on economic freedom and 9<sup>th</sup> in the world (out of 141 surveyed countries) by an internationally reputable organisation, the Fraser Institute's Economic Freedom (Bank of Mauritius 2013).

#### **4.4.7.1 Policies adopted by Mauritius to attract FDI**

### **Public institutions and access to credit**

Mauritius has a liberalised banking system whereby the existing 21 banks can trade in a currency of their choice including the local currency, the Mauritian rupee. There are also many other non-bank financial institutions which can conduct foreign exchange transactions (Bank of Mauritius 2013). This reduces the exchange rate risk and investors are assured of returns in a currency of their choice. The banking sector in Mauritius is dominated by the two local banks that hold 65% of the total banking assets. There are also a number of foreign banks and multinational banks mainly for trade financing such as Standard Chartered and Standard Bank (Bank of Mauritius 2013).

The Doing Business Report of 2014 noted that Mauritius widened the scope of credit information available to investors in a bid to reduce credit risk in the market and to attract investors. This was achieved by increasing the available data coverage from 2 to 3 years.

The Bank of Mauritius (2013) pointed out that since 2005 the Mauritian government has sanctioned policies that encourage FDI. The Business Facilitation Act of 2006 was constituted with the view to streamlining the procedures for setting up business in the country. Work permits for entrepreneurs and professionals were reduced to a combined single work permit called an occupation permit, which takes three days to process. Mauritius also has the Board of Investment which acts as a one-stop shop for business registration.

The Mauritian Central Statistics Office (2010) reported that the economy has managed to diversify operations and move from FDI concentration in EPZs as in the 1980s. FDI is now concentrated in the tourism and export sectors. Macroeconomic stability has made it possible for government to use fiscal incentives in FDI attraction and so broaden operations.

Mauritius has opened nearly all sectors to foreign investment. The World Bank (2011) reported that 32 of 33 surveyed sectors in the WB Investing across Borders Report were open to FDI. Mauritius has an act of parliament that seeks to facilitate investment. Under the Business Facilitation Act (2006) investors are allowed to open shop three days after incorporation, while occupation permits for professionals take only three days to process.

Mauritius is regarded as one of the success stories of the SAPs because in the early 1970s it established the EPZs. Under the EPZs businesses were given various fiscal incentives, product marketing support and easy access to capital (UNCTAD 2002).

### **Macroeconomic policies**

The government of Mauritius abolished foreign exchange controls in 1994 to reduce exchange rate risk for foreign investors (Bank of Mauritius 2013). Therefore, repatriation of profits and dividends by foreign investors does not require government approval. Foreign exchange is traded on the open market with minimal government intervention and most business transactions by foreigners are done in foreign exchange.

The Mauritian success story can be explained by the strategic economic reforms embarked on since 2005. These programmes promoted free trade, opened the economy to FDI in all sectors and facilitated business (Bank of Mauritius 2013). Mauritius has also moved from the manufacturing industries into the services industries (African Competitiveness Report 2013). Mauritius has hence been ranked the best nation in Africa for the past five years and the World Bank's 2013 Doing Business Report also ranked it the top African economy (Bank of Mauritius 2013).

Mauritius benefits largely from its educated population and the adult literacy stood at 87% in 2009. The nation is also bilingual with English and French used as official languages in the country thus it has managed to attract significant human resources-seeking FDI over the years (Bank of Mauritius 2013).

#### **Market size and trade across borders**

The UNCTAD Investment Policy Review (2012) noted that Mauritius has a wide and diversified market due to regional trade agreements within the regional blocs wherein it participates, mainly the SADC and the Common Market for Eastern and Southern Africa (COMESA). This has led to growth in its services sector as investors seek wider markets.

#### **4.4.8 Mozambique**

Mozambique enacted a unique investment law in 1984, to encourage FDI in the economy after recognising the increasing foreign competition in FDI attraction (UNCTAD 2013). In 1993 a new law was introduced by the Mozambique parliament which sought to "favour greater participation, complementarities and equality of treatment of national and foreign investments" (UNCTAD 2013).

#### **4.4.8.1 Policies adopted by Mozambique to attract FDI**

##### **Public institutions and access to credit**

The Investment Promotion Centre (CPI) (2012) reported that Mozambique has a stable growing financial sector with over 40 banks and several microfinance institutions. The Mozambique Financial Sector Development Strategy, 2012-21, which was approved in April 2013, paved the way for the establishment of legal reforms and a private credit registry bureau (AfDB 2014). The bureau established a collateral registry, and a new Anti-Money Laundering/Combating the Financing of Terrorism law (AfDB 2014).

##### **Infrastructure and access to electricity**

Mozambique increased electricity and water production by 1% in 2011 through construction of new transportation and distribution infrastructure (SADC 2012). This improved the availability of water and electricity to businesses and thus encourages investment.

The government of Mozambique has made infrastructural rehabilitation its core objective since the end of the civil war. The major source of financing has been the donor community. Government expenditures on infrastructure have been around 10% of GDP annually since 2001 (UNCTAD 2013).

##### **Macroeconomic policies**

Despite a gradual decline in poverty in Mozambique and rapid, continued growth with significant rise in GDP per capita to US\$571 today, Mozambique has 54.7% of its population living on much less than \$1.25 a day (UNCTAD 2013). Therefore Mozambique has been party to international agreements to increase its market for the benefit of its investors.



## **Protecting investors**

Mozambique is committed to protecting foreign investment, thus it has legislation that guarantees protection of property rights. It allows free transfer of dividends abroad and allows international arbitration in investment disputes (CPI 2012).

## **Market size and trade across borders**

Mozambique is strategically located, and thus supplies of raw materials are easily accessible. The 2014 Doing Business Report lauded the Mozambican government for improving trade across borders through the introduction of an electronic single-window system (WB 2014).

As a SADC member Mozambique benefits from free trade agreements in the region to increase its market.

### **4.4.9 Namibia**

#### **4.4.9.1 Policies adopted in Namibia to attract FDI**

### **Public institutions and access to credit**

The World Bank (2005) reported that it is difficult to launch business in Namibia because it takes 85 days as opposed to an average 63 days in other SADC countries.

The government of Namibia passed the Foreign Investment Act of 1990 which gives foreign firms the right to repatriate their profits to their mother countries. The Bank of Namibia (2006) stated that, apart from the 10% Non-Resident Shareholders' Tax on dividends, capital movement is governed by common market agreements which are liberalised.

## **Infrastructure and access to electricity**

Namibia has seen an increase of 190.2% growth in its energy sector since 2011 due to significant water flows into the Kunene River at the Ruacana Hydro Power Station, and a further 130.6% increase by 2012 (SADC 2012).

## **Macroeconomic policies**

The IMF (2013) noted that to stabilise its economy the Namibian government introduced a three year fiscal policy in 2011 in order to improve its infrastructure and create employment. Its purpose was also to create a national buffer against external shocks.

## **Protecting investors**

Namibia has legislation that protects foreign investment under the Foreign Investment Act. The act prevents expropriation. The act also guarantees international arbitration in disputes (Asian Business Forum 2014).

## **Market size and trade across borders**

Namibia has vast areas of desert land which are uninhabitable and thus its population is small. This has encouraged the government to seek foreign markets in a bid to attract investors; Namibia is thus a member of the SADC and the SACU where it enjoys free trade agreements.

#### **4.4.10 Seychelles**

Seychelles relies heavily on tourism for its economic growth and development. It is a nation comprising 10 islands and is a middle income country (WB 2012).

##### **4.4.10.1 Policies to attract FDI in Seychelles**

###### **Public institutions and access to credit**

Seychelles has a stable public enterprise favourable for investors and in 2012 the World Bank's Worldwide Governance Indicators (WGI) ranked Seychelles above the 50<sup>th</sup> percentile for most dimensions of governance, including political stability, government effectiveness, and control of corruption (WB 2013).

Access to credit for business development is constrained in Seychelles; however, the government in partnership with the AfDB and the World Bank is working on developing the financial environment including capitalising the Development Bank of Seychelles (IMF 2013).

###### **Infrastructure and access to electricity**

Seychelles increased power generation through installation of new fuel oil generators in 2011. There is also a significant increase in green energy production through the biomass project and the Seychelles government signed an agreement with Masdar from the United Arab Emirates (UAE), a renewable energy company, to implement a wind farm project (SADC 2012). The Seychelles government in partnership with the AfDB is working on an infrastructural development plan for 2013 with the view to creating competitive environment for business operations (IMF 2013).

The World Bank (2012) reported that the government of Seychelles values a skilled labour force, thus secondary education is free and tertiary education is subsidised. The state also provides free health care and hence investors are guaranteed a healthy workforce. The IMF

(2013) noted that the establishment of the University of Seychelles and other tourism training programmes help in improving skills in the country.

### **Macroeconomic policies**

The macro-economy of Seychelles has had a number of reforms in recent years with the view to attracting FDI, since FDI and tourism are central to the development of the country. The major reforms have been liberalisation of the exchange rate, privatisation and debt restructuring (WB 2012).

The IMF (2013) noted that the reforms in Seychelles are paying off and in 2013 according to the Doing Business Report it was ranked 74th on the starting business indicator. This was achieved through partnership with the World Bank in improving online business to government interactions, improving the company act to meet world standards and improving protection of property rights.

### **Protecting Investors**

Seychelles founded the Investment Protection Act in 2010 which assured foreign investors equal protection with local investment (Government of Seychelles 2010).

### **Market size and trade across borders**

The 2013 WB Doing Business Report noted that Seychelles made trading across borders easy by adopting electronic customs operations.

#### **4.4.11 South Africa**

##### **4.4.11.1 Policies to attract FDI in South Africa**

###### **Public institutions and access to credit**

The US commercial Services (2011) reported that South Africa has advanced infrastructure that matches the developed world. The financial system is sophisticated with advanced financial instruments and services and the Johannesburg Stock Exchange (JSE) is ranked among the world's top markets. Thus access to credit is advanced.

###### **Infrastructure and access to electricity**

The South African economy has a growing industrial sector which demands more electrical power. Coupled with the government rural electrification drive, the demand for electricity is projected to increase by more than double by 2030 (South African Yearbook 2012). The government of South Africa has been under-investing in the energy sector thus Eskom, the country's utility provider, is failing to meet the current demand which has seen massive power shortages in the country (South African Yearbook 2012).

To counter the electricity shortages the government of South Africa since 2013 (through Eskom) is building new electricity plants, namely Medupi in Limpopo which was planned to be completed in 2013 and Kusile earmarked for completion by year end in 2014 (South African Year Book 2012).

The South African government has developed an energy scrutiny plan to increase access to electricity. It seeks to increase efficiency in the energy sector to ensure accelerated access to cleaner fuel (SADC 2012).

The world competitiveness report of 2013 concluded that South Africa is one of the economies with a well-developed infrastructural development programme. The government of South Africa has a running infrastructural budget of 3.2 trillion South African rand (R), where electricity and energy development take prominence and 60% of the funding is towards energy programmes (WB 2013).

## **Protecting investors**

South Africa, being a signatory to the New York Convention of 1958 enforces international arbitration awards on investment disputes (US Commercial Services 2011). South Africa enforces property rights and contractual rights through an independent and objective court system. The South African Government implements decisions of the International Chamber of Commerce, which supervises the resolution of transnational disputes (US Commercial Services 2011).

## **Macroeconomic policies**

The government of South Africa has adopted developmental policies since independence in 1994 where the Reconstruction and Development Programmes (RDP) were launched with a focus on long-term development and growth (Government of South Africa 2011). The RDP was replaced by the Growth, Employment and Redistribution (GEAR) framework in 1996. The GEAR framework sought to increase employment and increase GDP through liberal policies in trade and investment aimed at reducing poverty (UN 2011).

GEAR, though it brought a sound financial services sector, was, however, not successful in achieving employment as sought by the South African government (UN 2011). The government of South Africa thus in 2006 introduced a new policy framework called the Accelerated and Shared Growth Initiative for South Africa (AsgiSA). AsgiSA aimed at bringing accelerated growth and improving the living standards of the ordinary South African (Government of South Africa 2006).

The government of South Africa also has a long-term growth plan, the National Development Plan (NDP), with a life-span that ends in 2030. This plan seeks to increase the nation's competitiveness and ensure stable macroeconomic growth and development (Government of South Africa 2011).

The WB Doing Business Report (2013) noted that South Africa improved the conditions for establishing new business through a new company law that removes the need to reserve a company name and offers simpler incorporation documents.

## **Market size and access to foreign markets**

South Africa had an estimated population of 50 million people in 2009, with a high gross domestic product (GDP) of \$287.2 billion in 2009 (US Commercial Services 2011). The South African market is well integrated into the foreign market through its membership of the SADC and the SACU. As a signatory to the African Growth and Opportunity Act (AGOA) South Africa has access to the U.S. market duty free (US Commercial Services 2011).

### **4.4.12 Swaziland**

COMESA (2012) noted that Swaziland launched the revised Investor Road Map (IRM) aimed at ensuring ease of doing business in the nation. The IRM has seventeen objectives chief among them being improvement of the key areas that attract internationally mobile capital such as infrastructure, access to credit, education and the macroeconomic environment.

#### **4.4.12.1 Policies to attract FDI in Swaziland**

##### **Public Institutions and access to credit**

KPMG (2014) reported that Swaziland established the Swaziland Industrial Development Company that extends funding to private sector investments. The economy has a stable banking sector constituted with big South African Bank subsidiaries which are FNB, Standard Bank and Nedbank.

##### **Infrastructure and access to electricity**

Swaziland relies on electricity, coal, petroleum products and renewable waste for its energy supply. The government of Swaziland also has a partnership programme with the European Union (EU) for its energy policy with the aim of achieving increased access to local businesses and improved employment and livelihoods of the local population (SADC 2012).

## **Macroeconomic policies**

The Swaziland government set up a long-term development plan in 1997, the National Development Strategy (NDS), which ends in 2022. The plan has the target of moving Swaziland into a medium human development group of countries based on social justice, political stability and sustainable economic development (Government of Swaziland 1999).

Mahembe and Odhiambo (2013) noted that Swaziland has a key investment policy, the Swaziland Investment Policy of 2009. The goals of the investment policy, among others, are to: increase the levels of investment, which would increase economic growth; increase employment opportunities; encourage higher levels of productivity in the economy; export development; increase levels of management skills; promote new technology; and encourage the growth of small enterprises.

Swaziland shortened the administrative processes in starting new business and limited the processing period for new business licences (WB 2014). Swaziland also improved investor confidence through increasing their protection through corporate disclosure requirements and information disclosure to investors thus reducing information asymmetry between managers and investors (WB 2013).

## **Protecting investors**

Expropriation and nationalisation are prohibited in Swaziland and there is no report of any company that was either nationalised or expropriated (KPMG 2014).

## **Market size and trade across borders**

Swaziland made trading across borders easier by streamlining the process for obtaining a certificate of origin (WB 2014). The WB Doing Business Report (2013) also commended Swaziland for making trade across borders faster by implementing an electronic data interchange system for customs at its border posts.



To circumvent its land-locked nature, its small domestic market and erosion in trade preferences, Swaziland needs to develop a new strategy to increase exports. The country benefits from the EU, the Africa Growth Opportunity Act (AGOA) and other regional preferential trade arrangements. It is actively involved in the SACU, the Southern African Development Community (SADC) and the Common Market for Southern and Eastern Africa (COMESA).

#### **4.4.13 Tanzania**

##### **4.4.13.1 Policies to attract FDI in Tanzania**

###### **Public institutions and access to credit**

The major policy that attracted substantial FDI in Tanzania was the mineral code of 1998. The code was a joint project between the government and the World Bank. It facilitated 100% foreign ownership of capital, removed the possibility of nationalisation and removed capital controls on repatriation of profits (World Bank 2005). This was meant to improve the locational advantage of Tanzania as compared to other countries with similar endowments in the region.

Tanzania reduced credit risk in the market by reducing information asymmetry embodied in new regulations that require credit bureaus to be licensed and defined the operations of the credit reference data bank (WB 2014). The financial system in Tanzania is sound and the banking sector has a sound capital adequacy ratio which is above the minimum 10% for most banks (AfDB 2012).

The Tanzanian government is also developing a vibrant work-force through improving the education system and access to education. According to a report by the AfDB (2012) there is a marked improvement in primary school completion levels which in 2010 increased by 9.3% from the 2009 figure. Enrolment in secondary schools also increased from 30.8% in 2010 to 34.5% in 2011.

## **Infrastructure and access to electricity**

The Africa Competitiveness Report (2013) points out that the Tanzanian government prioritises infrastructural growth and in the 2012/13 budget it allocated 498.9 billion Tanzania shillings (TSH) for electricity, TSh 1,382.9 billion for transportation, and TSh 4 billion for ICTs. There is also a partnership project with the Chinese to construct a gas pipeline worth US\$ 1.225 billion from Mtwara to Dar es Salaam.

The World Doing Business Report (2013) noted the effort by Tanzania to make starting a business easy by removing health, town and land officials' inspections before business establishment (WB, 2013).

## **Macroeconomic policies**

Tanzania's macroeconomic policies are approved by the IMF thus giving confidence to external investors (Human Development Trust (HDT) 2009). The government of Tanzania in pursuit of FDI concentrates on expansionary macroeconomics. The macroeconomic framework used MKUKUTA 2 to target poverty alleviation and improve the general welfare of the citizens (HDT 2009).

## **Market size and trade across borders**

Tanzania made trading across borders faster by implementing the pre-arrival declaration system and electronic submission of customs declaration (WB 2013).

The importance of a strong domestic market to enhance FDI attraction is important to the Tanzanian government hence they adopted an economic policy, MKUKUTA II, to reduce poverty and increase income (AfDB 2012). In addition, Tanzania is a member of many regional groupings (SADC, COMESA and the East African Community) where free trade agreements expand its market base for greater FDI inflows.

#### **4.4.14 Zambia**

##### **4.4.14.1 Policies to attract FDI in Zambia**

###### **Public institutions and access to credit**

The Zambian government amended the investment act in 2006 in the Zambia Development Agency Act of 2006. The Zambia Development Agency (ZDA) was then constituted with the mandate to help private sector investment in the economy (UNCTAD 2011).

###### **Infrastructure and access to electricity**

The Zambian government has promoted the construction of new hydro-power stations due to increased demand for electricity. Thus there is an extension of the Kariba North Bank and also massive rehabilitation of small hydro-power stations around the country (SADC 2012). The government is also working on building infrastructure to expand the petroleum industry and recapitalising the Indeni Oil Refinery.

The African Competitiveness Report (2013) noted that the Zambian government is making efforts to improve the railway transport infrastructure for better linkages with its neighbouring markets, firstly by improving the operation of Zambia Railways and secondly the government is working on improving railways linking Zambia with other regions such as: the TAZARA railway to Dar es Salaam in Tanzania and from Kapiri and Mposhi in Zambia. Plans are also underway to create a new railway linking Zambia and Botswana via the Kazungula Bridge.

###### **Macroeconomic policies**

The Africa Competitiveness Report (2013) revealed that the Zambian 2013 budget prioritised infrastructural development, mainly roads, rail, and power generation. Zambia is also making efforts to create fiscal space through local resource mobilisation to improve human and physical capital development and improve public service delivery. The Zambian government

issued a US\$750 million Eurobond to raise funds for infrastructural development to be distributed as follows: energy infrastructure (US\$255 million or 34.0%) and road and rail transport infrastructure US\$430 million or 57.3% (World Bank 2013).

The Zambian government embarked on liberal policies in 1990 with the view to boosting FDI flows into the country and achieving sustainable economic growth. These policies were supported by developmental policies adopted in the new millennium such as the National Action Plan; the Public Investment Programmes of 2000-2002 and 2001-2003; the Zambia Poverty Reduction Strategy Paper 2002- 2004; the Five-year Institutional Strategic Plans; the Sectorial Investment Programmes; and the three-year rolling Medium-Term Expenditure Framework (MTEF) (Mwanawina 2007).

#### **Market size and trade across borders**

The World Bank (2010) in its report on investing across borders concluded that Zambia is open to foreign investment and resource ownership. The surveys conclude that all the 33 active sectors in Zambia are fully open to foreign ownership.

#### **4.4.15 Zimbabwe**

Zimbabwe has been commended for making significant progress in economic stabilisation since 2009 after the hyperinflation era of 2000-2008 (IMF 2013). However the reliance of the economy on diamonds affected growth in 2012 after a fall in revenue from diamonds which affected the fiscal space.

The UNCTAD (1999) survey on investment promotions in Africa presented a damning report on Zimbabwe labelling it the worst business-friendly environment with the situation predicted to continue until 2003. Zimbabwe's ratings on FDI attraction in recent years have been equally low due to unclear indigenisation policies which threaten property rights of foreign businesses especially in mining and agriculture. The 2013 World Bank Doing Business Report thus rated Zimbabwe number 172 out of 183 surveyed countries on ease of starting a business, only better than the DRC in the SADC (WB 2013).

#### **4.4.15.1 Policies to attract FDI in Zimbabwe**

##### **Public institutions and access to credit**

The government of Zimbabwe is working on a COMESA assisted investment climate reform agenda (COMESA 2013). The reform agenda is aimed at initiating institutional reforms in information communications technology (ICT), business monitoring and ensuring ease of doing business in the country.

The government of Zimbabwe is making an effort to stabilise the financial services sector and improve investors' access to credit. The ministry of finance recently introduced policies to recapitalise the central bank with the view to returning its lender of last resort status (2014 Government Budget Statement).

In 2012 the Reserve Bank of Zimbabwe (RBZ) through its moral persuasion initiatives made an agreement with lending institutions to improve access to business funding. The agreement required that lenders set lending interest rates of not more than 12.5% and reduce handling fees (World Bank Country Report 2013).

The RBZ (2009) reported that in 1989 the government established the Zimbabwe Investment Centre (ZIC) to act as a one-stop shop for foreign direct investment (FDI). The ZIC approves and registers all investments with foreign holdings. The ZIC has also managed to reduce the number of steps in setting up business in Zimbabwe. Though Zimbabwe is ranked one of SADC's most difficult economies in which to start a business, it has in recent years reduced registration fees and improved the speed of company and tax registration to improve ease of business start-ups (WB 2013).

##### **Infrastructure and access to electricity**

The Zimbabwean government has import arrangements with Hydroelectrica de Cahora Bassa (HCB) of Mozambique, ZESCO of Zambia and Eskom of South Africa due to electricity

generation shortages locally. The government allowed mining firms to have their own direct power importation agreements to improve the electricity supply to mines (SADC 2012).

### **Macroeconomic policies**

Zimbabwe adopted a multi-currency regime in 2009 in a bid to reduce inflation and improve external competitiveness and thus the economic prospects of the country (SADC 2012). The multicurrency system has limited the central bank's ability to influence monetary development in the country which is now determined by the economy's external performance. Zimbabwe also significantly reduced its external debt in a bid to create fiscal space and improve infrastructure and lure investment (SADC 2012).

### **Market size and trade across borders**

Zimbabwe has low effective demand due to high levels of poverty. The 2011-2012 PICES Survey by ZimStat (2013) in the World Bank report classified 72.3% of Zimbabweans as being poor. The majority of the poor population is located in rural areas, where 84.3% of the population is poor. More than half of households are deemed 'poor' with household poverty standing at 62.6% of households and 16.2% of the households are 'extremely poor' (WB 2013). The Zimbabwean government seeks to expand its market through bilateral agreements with China, India, and UAE to alleviate this problem of demand. Zimbabwe is also a member of the SADC and COMESA where it enjoys cross-border agreements that seek to create new markets.

## **4.5 Summary and conclusions**

Most countries in the SADC (except Zimbabwe) seek to establish property rights to encourage FDI. There are also great efforts to ensure political stability and high economic standards to attract FDI. The SADC countries have also established various strategic legislative acts to attract FDI; most of the legislation seeks to reduce red tape in business establishments by foreign firms.

Though most SADC governments fancy indigenous participation in business enterprises, they have authorised moderate indigenisation policies to attract foreign capital. Zimbabwe is the only country that has adopted a hard stance by demanding 51% local ownership in mining and agricultural sectors; this has, however, affected its ratings on the WB Doing Business Report and is rated ‘the most unfriendly business environment’ in the SADC. This shows that investors’ value of protection of property rights is high and thus assurances against nationalisation of capital is important in attracting investment.

Infrastructural development is the engine of investment attraction in countries such as South Africa, Botswana and Mauritius which have advanced infrastructural establishment rated highly in the African Competitiveness Report of 2013. Countries in the SADC region have thus adopted various policies to develop infrastructure especially in the energy sector.

Macroeconomic stability and poverty alleviation policies have also been used in the SADC region to attract FDI through development of a vibrant local market. Stable economies such as South Africa, Botswana and Mauritius perform better on the competitiveness index while countries prone to macroeconomic shocks such as Zimbabwe, Malawi and Madagascar perform poorly. On the monetary front, most SADC economies realise the importance of a stable currency, thus South Africa, Botswana, Namibia, Lesotho and Swaziland formed a currency union, SACU, with the view to maintaining stable currencies and reducing the foreign exchange risk in order to attract investors. Zimbabwe, Mozambique, Angola and the DRC chose to adopt highly dollarised economies where businesses are allowed to transact in currencies of their choice.

Establishing wider markets for raw materials and final products is also important in attracting FDI. SADC countries are thus forming alliances and signing treaties with individual countries and economic blocks to establish these markets. Most the SADC countries are members of more than one bloc, for example Tanzania is a member of the East African Community, COMESA and SADC. These regional blocs have free trade agreements that help in increasing markets.

Below is Table 3 that summarises the efforts by each of the SADC countries to meet the basic competitiveness factors in trying to attract FDI.

**Table 3: Summary of non-tax FDI attraction strategies by SADC countries**

Country	Public institutions and access to credit	Infrastructure and access to electricity	Protecting investors	Macroeconomic policies	Market and trade across borders
Angola	Introduced credit bureaus to reduce information asymmetry in the credit market.	Mobile phone access at 52% in 2012 and through the NESPS Angola is attracting new investors into the energy sector.	Ranked 5 <sup>th</sup> in the region on investor protection due to effective defence and monetary restitution to foreign businesses in cases of expropriation.	Dollarisation reduced exchange rate risk in the economy.	Benefits from free trade agreements in SADC and COMESA.
Botswana	BEDIA was set to facilitate easy establishment of FDI	Moropule B was completed in 2012 and increased electricity supply.	Set up law that required shareholders to approve all major business transactions.	Introduced EDD to diversify the economy away from diamond industry reliance. The diamond industry introduced its first sale in Gaborone in 2012 in partnership	Formed partnerships with India and China to increase access to their large markets.



				with De Beers.	
DRC	Adopted the OHADA Uniform Act which increases assets used as collateral.	Entered into a number of partnerships aimed at developing the electricity sector.	Adopted the OHADA Uniform Act on Commercial Companies and Economic Interest Group which require information disclosure to protect investors.	Declared the economy an HIPC which increased donor contribution to the budget and Balance of Payments support improving economic performance.	DRC is a signatory to a number of conventions and is also a member of the SADC, ECCAS, COMESA and WTO free trade areas.
Lesotho	Set up the IMTT in 2013 which reduces bureaucratic challenges in setting up FDI.	Embarked on a massive LHWP from 2013 meant to double electricity production on its completion.	A member of the SACU thus has a consistent monetary policy.	Working on vision 2020 with the IMF in order to guarantee economic diversification and improve investment environment.	A member of SACU and the SADC.
Madagascar	Attracting new banks into the market to grow the financial sector.	In partnership with the AfDB is working on a large-scale hydro-electrical	Liberalised exchange rate market to reduce exchange rate risk and allows full foreign	Affected by political instability since 2009 thus experiencing high inflation rates.	Introduced online service linking trades with government departments and agencies

		project.	business ownership.		in trade.
Malawi	Introduced MIPA to facilitate and encourage FDI.	Increased tariffs in energy sector by 63.52% to raise revenue for infrastructural development.	A member of ICSD which allows international business dispute arbitration.	Adopted the HIPC initiative which increased donor participation in the economy and stabilised the economy.	A member of the SADC, AGOA and is a signatory to bilateral trade agreements with South Africa, Zimbabwe and Mozambique.
Mauritius	Liberalised the banking sector to allow easy access to foreign currency for investors.	N/A	N/A	Moved the economy from manufacturing dominance to services sector dominance increasing investors' choices.	N/A
Mozambique	Established a credit registry bureau to monitor financial services.	Construction of new electricity transportation and distribution increase	Allows free transfer of dividends to investor home country.	N/A	Introduced a single window border electronic system to increase easy

		supply.			trade.
Namibia	Constituted the Foreign Investment Act of 1990 to promote FDI establishment .	Has grown the energy sector by 190.2% since 2011 at the Ruacana Hydro Electricity station.	Guarantees international arbitration of disputes.	Fiscal policy since 2011 designed to create a national buffer against external shocks.	A member of the SADC and the SACU.
Seychelles	In partnership with the AfDB and WB the government is capitalising on the Development Bank of Seychelles to increase credit.	Working with AfDB to increase electricity infrastructure.	Passed the Investment Protection Act in 2010.	Liberalisation of exchange rate and debt restructuring has made the Seychelles' macro-economy attractive.	Introduced an electronics customs operation.
South Africa	Has an advanced financial services sector with the JSE ranked highly in the world.	Introduced an energy scrutiny plan to implement improvements in energy production.	Signatory to New York convention and implements decisions of the International Chamber of	Introduced the NDP to last until 2030 in order to grow the economy.	A member of Brazil, Russia, India, China and South Africa (BRICS) bloc, SADC, SACU and AGOA.

			Commerce.		
Swaziland	Host big South African Banks.	Has a partnership with EU to increase accessibility of electricity in the country.	Prohibits nationalisation of foreign capital.	Introduced the NDS to last until 2022 aimed at achieving sustainable economic growth.	Streamlined the process of getting certificate of origin thus reducing cost of establishing business in the country.
Tanzania	Reduced credit risk through new regulations that govern credit bureau information disclosures.	Allocated a huge fiscal budget for electricity development projects in 2012/2013.	N/A	Economic blue print MKUKUTA aims at poverty alleviation.	Introduced pre-arrival declaration on borders and electronics customs clearances to ease border operations.

Zambia	Constituted the Zambia Development Agency that assists and lures foreign investors into the country.	Extended the Kariba North power station to increase electricity generation.	N/A	The 2013 budget mainly targeted infrastructural development especially road, rail and power generation.	A member of the SADC.
Zimbabwe	Working in partnership with COMESA on ICT development. The government also issued a 5-year bond meant to recapitalise the central bank and stabilise the financial sector	N/A	N/A	Adopted a multi-currency system which reduced inflation and exchange rate risk.	A member of the SADC and COMESA.

## CHAPTER 5

### DO TAX INCENTIVES MATTER FOR INVESTMENT? THEORY AND EMPIRICAL EVIDENCE

#### 5.1 Introduction

The effectiveness of tax incentives in attracting FDI remains one of the unsettled concepts in public finance. The importance of tax incentives in attraction of internationally mobile capital differs with the jurisdiction of the study and the methodology used in drawing conclusions. Feld and Heckemeyer (2009) argue that the impact of tax differentials on multinational locational decisions remains insufficiently analysed. They conclude that qualitative survey analysis gives less convincing results hence most economists have resorted to econometric analysis. The methodology of the study is thus critical in the analysis of empirical studies.

In this chapter the study seeks to make an inquest into the underlying theory on tax incentives' effectiveness in attracting FDI, with special interest in theory that is used to justify the use of tax incentives. The empirical findings of the studies on tax incentives for FDI attraction will also be explored with the view to establishing conclusions on the importance of tax incentives and also building the basis of the model this study is going to use.

Tax incentives have various definitions; Bolnick (2004) defines tax incentives as fiscal measures used by governments to attract investment domestically and internationally in certain key sectors of the economy. Zee et al. (2002) defines tax incentives in statutory and effective terms. A statutory tax incentive is a special tax provision granted to qualifying investment projects and this provision would not be applied to other investment projects outside the selected qualifying categories. An effective tax incentive is a special tax provision granted to qualifying investment projects with the goal of reducing the effective tax burden.

A thorough review of the literature on the economics of tax incentives, tax competition and harmonisation will help in understanding, firstly, whether tax incentives are or are not the most important factor in attraction of foreign investment; secondly, what kind of foreign investors are likely to be most responsive to changes in tax policy and which methodology gives more convincing results since these areas have retained the attention of many researchers over the

years [(see Yelapaala 1985; Rendon-Garza 2006 and Sato 2012)]. The chapter will highlight the major ideas from international research to help the study to identify the gaps that still need to be filled in the SADC region.

The rest of the chapter is organised as follows: section 5.2 will briefly deal with the rationale for introducing tax incentives, section 5.3 will look at theoretical arguments for introducing tax incentives, section 5.4 will discuss the case for and against tax incentives, section 5.5 will deal with tax competition and harmonisation, section 5.6 moves to the empirical analysis of findings on the effectiveness of tax incentives before the chapter conclusion in section 5.7.

## **5.2 Rationale for introducing tax incentives**

Zee, Stotsky and Ley (2001) define tax incentives in terms of their effect on reducing the effective tax burden for a specific project. Standard international tax policy endorses caution against the use of tax incentives for attracting Foreign Direct Investment (FDI) (Klemm 2009). However, tax incentives have remained a popular policy tool for attracting FDI in developed, transitional and developing countries. Wilson (1999) argues that given the assumption of perfectly mobile capital, when a given government raises its tax rate, net return on capital located there falls and capital chooses to relocate elsewhere. Wilson's (1999) conclusions therefore support the use of tax incentives in reducing tax rates and attracting FDI.

Tiebout (1956) in Onyeiwu and Shrestha (2005) conclude that the effectiveness of tax incentives in attracting FDI depends on the tax incentives and public goods provision mix in the host nation. Typically FDI location favours nations with the highest public goods provision and lowest tax burden mix. This conclusion takes a balanced budget approach in analysing the effectiveness of a tax system where taxes are assumed to be the key source of government revenue in public goods provision. Reduction in tax revenue through introduction of tax incentives might compromise public goods provision thus the government should seek to optimise the trade-off between public goods provision and loss in revenue due to tax incentives.

The Organisation for Economic Cooperation and Development (OECD) (2001) notes that governments employ taxation for various political and policy objectives; however, it should be mentioned that the major objectives of tax reforms and restructuring have been more similar in many economies. The tax systems across the world have been designed to achieve a stable

revenue base, to better income distribution and to improve national resource allocation. Tax incentives fall in the broad category of governments tax systems, thus they are expected to achieve similar objectives, apart from attracting internationally mobile capital. Developing countries offer tax incentives for a variety of reasons, chief amongst them being to counter the negative effects of a bad tax system (Holland & Vann 1998). Most developing countries have poor tax administration structures which inconvenience businesses and also lead to massive revenue losses due to tax evasion and tax avoidance.

Tax incentives are also used to counterweight the effects of poor macroeconomics, poor infrastructure and a lack of effective institutions in developing nations, which increase the cost of doing business. Thus reducing tax rates will help to cover the losses made by investors. The effectiveness of tax incentives in attracting FDI is a highly debatable issue with a number of studies finding non-tax factors more effective than tax incentives [Onyeiwu & Shrestha (2005), Bolnick (2004) and Sudsawasd (2008)], and others view fiscal incentives as central to FDI attraction [Hassett & Hubbard (2002) and Sato (2012)]. However, governments over the years have made wide use of tax incentives to compete for internationally mobile capital.

James (2010) points out that policy makers employ both tax and non-tax incentives to lure investment across their borders. He also concludes that the economy's investment climate is critical to the effectiveness of tax incentives. James (2010) defines tax incentives as those tax reduction treatments offered to foreign investments and not to domestic investments with the view to attracting FDI. Tax incentives increase the after-tax profits on investments and generally an investor will prefer a location with a lower tax liability in cases where locations have similar resource characteristics (Owens 2004). Thus, tax competition has dominated the justification for use of tax incentives over the years where neighbouring nations seek to out-do one another in FDI attraction through lowering tax rates.

Tax incentives are also used to signal ease of doing business in a country as they reduce barriers to FDI location and indicate the host nation's level of acceptance of foreign players in markets where incentives are instituted. The major theoretical foundation for this chapter is that all fiscal incentives will have an impact on the cost of capital, effective tax rates and, ultimately, on where FDI locates. Holland and Vann (1998) argue that regional development is also a common objective for the use of tax incentives. Thus, this chapter will also explain how regional blocks use taxes and tax harmonisation to bring development to their regions.



## **5.3 Theoretical arguments for introducing tax incentives**

### **5.3.1 Early theoretical arguments for introduction of tax incentives**

Early economic development theorists of the neoclassical era established the importance of capital formation on economic growth [Jorgenson (1963), Fei & Ranis (1961)]. Neoclassical theorists in their quest to reincarnate classical economics were the earliest theorists to explain the link between (tax) incentives and the attraction of internationally mobile capital. This section will discuss the theories that support the use of tax incentives to attract capital.

#### **5.3.1.1 The capital arbitrage theory**

The capital arbitrage theory of international capital movement which originated from the neoclassical international trade theory argues that capital movement responds to the differentials in rates of return (Yelpaala 1985). Hence the theory identifies a strong causal link between tax incentives and FDI location. The theory established that capital will move from capital-rich countries to capital-scarce countries in search of higher returns and the process will continue until the returns on capital are equalised between jurisdictions.

The owners of internationally mobile capital act as arbitragers and move their capital in pursuit of highest returns given the risk associated with the investment. The capital arbitrage theory is used to explain the location of Multinational Corporations (MNCs) in developing countries where capital is scarce. Normally capital-scarce locations have high unemployment rates and thus provide cheap labour which further enhances the profits from locating capital in such regions.

#### **5.3.1.2 The neoclassical investment theory**

Jorgenson (1963) introduced the neoclassical investment theory which suggests that firms will continue to accumulate capital as long as the costs of doing so are less than the benefits. Since firms experience decreasing returns from additional capital, they will stop when the present value of returns from capital equals the present value of costs.

Since the before-tax rate of return on capital is viewed as a cost of capital, lower tax rates reduce the cost of capital and increase the investment in more capital stock (Van Parys & James 2010). The neoclassical investment theory thus suggests that tax incentives encourage growth of established firms through reinvestments and also lures new investments since it reduces the cost of capital.

### **5.3.1.3 The neoclassical OLI theory**

Dunning (1988) developed the OLI theory also termed the ‘eclectic paradigm of investment’. The theory explains how firms choose foreign markets to establish their businesses. The study concludes that firms choose locational destinations based on three factors: ownership (O), location (L) and internalisation (I).

Tavares-Lehmann, Coelho and Lehmann (2012) classify tax incentives under the locational advantages of a host nation in attraction of FDI. Hence tax incentives increase the host country’s attractiveness to investment if they lower tax rates below the investor’s home country tax rates or if they lower tax rates below those of other competing destinations.

Devereux (2006) in Tavares-Lehmann et al. (2012) conducted a study on the analysis of empirical evidence on the effects of taxation on investment location decisions of MNEs and concludes that taxation plays a role in affecting MNEs’ choices; however, taxes were found not to be equally important in all MNEs’ locational decisions. Efficiency-seeking FDI was found to be more responsive to tax incentives than resource-seeking FDI.

### **5.3.1.4 Intangible assets theory**

Hirsch (1976) in Yelapaala (1985) argues that the costs of the business operation are vital in FDI location decisions. The major conclusion of the theory is that FDI takes place as long as there are positive gains from investing in intangible assets in a host country after factoring in all the costs of operation. Tax incentives lower the operational costs of firms and thus encourage foreign investors to invest in more capital.

### **5.3.2 Modern theoretical arguments for tax incentives**

Earlier theories on the justification of tax incentives were probed and the conclusions deemed the arguments to be inappropriate (Yelpaala 1985). However, tax incentives remain a key policy tool used by governments to lure investment and policy makers have based their justifications on factors that are different from the earlier theories. The new arguments will form the modern theoretical arguments which will be discussed in this section.

#### **5.3.2.1 New economic geography (NEG) theory**

The NEG theory was built on the neoclassical investment theory which concludes that there is a direct positive relationship between lowered tax rates and increased investment (Van Parys & James 2010). The model introduces the concept of core-periphery. This concept suggests that business concentration reinforces itself and thus the world is left with a core region that attracts the most FDI.

NEG models emphasise the role of business concentration that is self-reinforcing leaving the world with a core region. Devereux, Griffith and Simpson (2007) support the theory with their findings that lower tax rates are more effective in regions that already have more investment.

This model has however, also been used to discourage FDI attraction through lowering tax rates in regions outside the core region. This is because FDI will locate in regions where they find many other firms even if those regions have higher tax rates.

#### **5.3.2.2 Policy arguments**

As noted by the OECD (2001) report entitled ‘Corporate tax incentives for FDI’, tax incentives are introduced by many developed, transitional and developing countries with the aim of achieving international competitiveness, addressing market failures, boosting regional development and improving income distribution. Low corporate taxes increase FDI flows by attracting new investors, retaining existing investors and encouraging reinvestments of returns accrued by existing enterprises (Onyeiwu & Shrestha 2005).

International competitiveness tax incentives are regarded as a strong factor in attracting internationally mobile capital, encouraging research and development initiatives by multinational companies and improving the competitiveness of the export sector of the host nation (OECD 2001). Thus, tax incentives are viewed as critical in the locational decisions of the multinational companies. Tax incentives act as a relief to locational costs of foreign business and increase the competitiveness of an economy against other neighbouring jurisdictions with similar locational factors.

The market mechanism is inherently socially suboptimal, thus tax incentives are also used in instances where socially optimal investment has not been achieved by the market system (OECD 2001). In this case, tax incentives are used as government intervention mechanisms in achieving socially acceptable investment levels. Due to the positive externalities characterising investment, the private sector normally under-produces investment, hence the socially desirable level of investment is established through government intervention in the form of subsidies and tax incentives. Tax incentives are also used by economic regional groupings to address the regional unemployment and poverty problems. OECD (2001) notes that tax incentives are also important in improving the host nation's macro-economy. By moving investment into their countries, nations reduce the problems of cyclical unemployment, balance-of-payments (BOP) deficits and, in some cases, help to control inflation.

### **5.3.2.3 Economic arguments**

The use of tax incentives has grown since the 1990s due to a number of world economic changes such as globalisation and the creation of common markets (Owens 2004). The process of globalisation has increased competition and establishment of production units in different locations has increased the amount of internationally mobile capital which can be lured into different locations through the use of tax incentives (Owens 2004). The creation of common markets through economic integration has reduced the difference between market-oriented and export-oriented FDI. Reduced tariffs have reduced the costs of importing and exporting (Owens 2004). This has created a situation where foreign investment chooses a single location. Thus, tax incentives can lure the investors to a preferred destination and supply to markets that do not offer investment incentives but share a common market and common tariffs with the preferred location.

## **5.4 Merits and demerits of tax incentives**

Easson and Zolt (2002) conclude that it is common knowledge that tax incentives for FDI are both bad in theory and in practice. Theoretically they find tax incentives bad since they distort investment decisions. Practically, tax incentives are deemed to be ineffective and prone to corruption thus the conclusion that they are bad (Easson & Zolt 2002). However, almost all countries continue to use them for a number of reasons thus in this section the study will explore the merits and demerits of tax incentives. Bird (1993) suggests that, “Tax incentives improve economic performance only if government officials are better able to decide the best types and means of production for an economy than private investors.”

### **5.4.1 Merits of tax incentives**

#### **5.4.1.1 Correcting market failure**

Bird (1993) argues that governments have a role to play in achieving a socially desirable socio-economic environment using a variety of tools including taxation. Taxes are used by governments for redistribution of income, efficient allocation of resources and to raise revenue for government operations. Most taxes distort the economic conditions; income taxes reduce returns on factors of production; import taxes distort the level of imports and exports and consumption taxes distort expenditure (Easson et al. 2002).

Governments use taxes to correct market failures. For example, tax incentives are used to correct under-production of investment activities by the private sector and thus generate positive externalities (Easson et al. 2002). Governments will seek to correct investment decisions of the private sector using tax incentives and harness investment that would have not occurred without tax incentives. This is because governments want the economy to enjoy the benefits of foreign capital which include technological transfer, skills transfer, employment creation and economic growth and development.

#### **5.4.1.2 Externalities**

There are investments that create positive externalities which benefit the overall economy and governments need to support such activities. These activities include new technology

investments, infrastructural development, and environmentally friendly technology (James 2009). New technology development in production opens opportunities for other firms in the same industry to adopt the same new ways of production which improves the economy's overall performance. Infrastructural development has a positive spill-over effect due to the public good nature of infrastructure, thus investment in infrastructure benefits the whole economy. Environmentally friendly investments which create a clean environment have positive externalities due to the public good nature of a clean environment which is non-excludable to all citizens of an economy.

Investments which bear positive externalities thus benefit the overall economy and should be encouraged through tax incentives.

#### **5.4.1.3 Tax competition**

Tax incentives may be used by countries to increase their revenue base by improving their competitiveness (Klemm 2009). This is useful in countries that wish to attract mobile capital but face revenue constraints. Countries will offer tax incentives to mobile capital and attract investment while getting revenue by taxing existing capital and immobile capital.

#### **5.4.2 Demerits of tax incentives**

##### **5.4.2.1 Revenue loss**

Easson et al. (2002) identify two sources of revenue loss due to tax incentives. Firstly, tax incentives discourage other investments in favour of the incentive-receiving projects hence revenue is lost from the foregone projects. Secondly, revenue is lost since businesses will improperly claim incentives and in some instances shift income from taxable activities to those that fall under tax incentives thereby avoiding tax.

##### **5.4.2.2 Misallocation of resources**

The success of tax incentive policies means that investment will increase in regions and nations within the successful incentive structures thus reducing investment in those that do not have the

incentives (Bird 1993). This increase in investment due to tax incentives in some cases will correct market failures while in most instances it may lead to too much investment in activities that have incentives and reduced investment in those activities without incentives, thereby leading to misallocation of resources.

#### **5.4.2.3 Enforcement and compliance challenges**

Government tax provision comes with associated costs in enforcing the tax laws and ensuring that parties comply. Easson et al. (2002) suggest that tax incentives are difficult to administer and enforce which leads to huge losses in revenue to governments that operate them.

#### **5.4.2.4 Encourages corruption**

Tax incentives give bureaucrats the opportunity to engage in corrupt and rent-seeking activities (Easson et al. 2002). This is prevalent in cases where tax incentives give the authorities discretion to determine which projects qualify for incentives and which do not. Tanzi (1998) suggests that corruption is high with tax incentives, due to direct links between investors and government authorities who use their discretion in implementing tax incentives.

The empirical findings by Zelekha and Sharabi (2012) show that tax incentives lead to significant corruption. The study employed a large cross-section of European countries and two-stage least square analysis to reach the conclusion.

### **5.5 Tax competition and harmonisation**

Alfano (2001) defines tax competition as actions by countries in reducing their tax bases in response to other countries' reduction in tax bases. Wilson and Wildasin (2004) define tax competition as a non-cooperative game, in which countries set tax rate policies in a bid to influence the location of internationally mobile capital. Tax competition can thus be considered as government's deliberate reduction in the domestic tax rates for specific economic activities by foreigners with the sole purpose of attracting foreign mobile capital and to boost economic activity (Rendon-Garza 2006).

Tax competition can be categorised as regional or global competition. Regional tax competition is competition amongst countries in close geographical proximity and global tax competition extends to competition for capital that can locate anywhere in the world (Rendon-Garza 2006). Where nations discover that the overall welfare of their nationals is being compromised due to tax competition, they collaborate in setting tax systems and uniform tax rates; this is tax harmonisation and it is common in most regional states.

### **5.5.1 Theories of tax competition**

#### **5.5.1.1 Tiebout, Oates and the standard Zodrow-Mieszkowski model**

The earliest work on tax competition was coined by Tiebout (1956) and Oates (1972). The model was formally modelled by Zodrow and Mieszkowski (1986) and Wilson (1986). The theory's main thrust is that tax competition amongst regional countries leads to inefficiencies in government expenditure and taxation.

The origin of the theory of tax competition comes from Tiebout's (1956) theory of federalism and is also termed the 'theory of efficient tax competition'. The theory is rooted in the competition amongst jurisdictions for households given efficient provision of public goods (Rendon-Garza 2006). Tiebout's (1956) model identifies the fact that with households voting with their feet and locating where there is an efficient trade-off between public goods provision and taxation, jurisdictions end up with inefficient taxation mixes in their quest to attract more households. This model was then extended to the location of firms by White (1975), Fischel (1975) and Wellisch (2000) with similar conclusions to the original Tiebout (1956) model that firms favour locating to where there are lower tax rates.

The Tiebout (1956) model's extension to mobile firms' locational decisions was formulated in the same way as that for mobile residents. The model assumes that firms are in infinite elastic supply to each country and each country supplies firms with public inputs into their production functions. Each firm is taxed using the marginality principle where marginal tax should equal the marginal cost of providing the firm with public inputs which constitutes public goods (Wilson 1986). Therefore, the models found that under the Pareto efficiency principle, tax



competition leads to efficiency since marginal benefits from public goods provision is equalised to the marginal cost of paying taxes.

Rendon-Garza (2006) points out that the effectiveness of the Tiebout model in explaining FDI location is highly constrained by its simplifying assumptions. The first restrictive assumption is that government can institute a fair tax on each individual which is equal to the cost of providing the individual with his/her preferred public good. The assumption is unrealistic in the attraction of investing firms since they favour taxes which give them competitive advantage over existing local firms. This is because foreign firms find it difficult to compete with local firms which have easy access to their local markets for inputs and sales; thus they require lower production costs in the form of lower taxes.

The second assumption of the classical Tiebout model is that there are no economies of scale in public goods production and the third is that there are a large number of jurisdictional authorities or countries meant to achieve an efficient sorting of individuals. The second assumption contradicts economic theory which has identified that provision of public good requires a large capital set-up which in the long-run creates economies of scale. The third assumption makes the model difficult to apply to the concept of FDI location competition since most regional economies are made up of a small number of countries.

The fact that the location of internationally mobile capital requires taxation that favours certain activities over others makes the analysis of tax competition more relevant in the analysis of FDI locational decision. The departure from the principles that lead to efficient tax setting in the Tiebout model means that tax competition in FDI attraction leads to fiscal externalities amongst competing economies (Rendon-Garza 2006). The effect of these externalities is the basis of the modern analysis of tax competition.

Oates (1972) extends the Tiebout (1956) model but concludes that the use of tax competition can lead to inefficient provision of public goods. This emanates from the fact that in a bid to attract investment authorities will keep tax rates at low levels. This low taxation may lead to authorities providing inefficient levels of public services due to funds constraints.

Oates (1972) argues that if the business offered a low tax rate does not confer social benefits, the social inefficiency of tax incentives will be large. This is because tax competition leads to

low wages; low employment; capital losses on homes and reduced tax base (Oates 1972). The conclusion of welfare loss due to taxation in Oates' (1972) theory emanates from the fact that, when all governments lower their tax rates in a bid to attract internationally mobile capital, no one benefits from the competitive advantage and thus the resultant resource allocation will be sub-optimal (Wilson 1999).

Thus, the origin of the modern race-to-the-bottom theory in tax competition is that tax competition lowers government spending and tax revenues to inefficient levels (Rendon-Garza 2006). The empirical support for the theory was pioneered by Wilson (1986) and Zodrow and Mieszkowski (1986) through theoretical model formulations based on Oates's (1972) tax competition theory.

The Zodrow-Mieszkowski (1986) model also termed the 'standard Z-M model of tax competition' has a number of simplistic assumptions. Firstly, the model assumes a fixed number of homogeneous regions; secondly, it assumes that each region has an immobile factor of production labour and a mobile factor capital. The immobile capital is supplied by residents of the region and is inelastic in supply. The assumption of perfectly mobile capital implies that residents can choose to locate their capital wherever they want. The residents of each region have a fixed capital endowment. The model also assumes perfect competition in production and constant returns to scale technology. Due to fixed capital endowments in each region, adding the capital in all regions gives a fixed supply of capital in the world economy (Rendon-Garza 2006).

The Z-M model further assumes that the government seeks to achieve socially optimal mixes of public goods and taxation. The major conclusion of the model is that, given the fixed world economy capital, a rise in the capital tax rate in one region will increase the outflow of capital in that region due to the reduced returns on capital. The capital moving from the region with higher tax rates will move to the regions with lower tax rates and this is the basis of tax competition where regions compete for the limited world capital stock (Rendon-Garza 2006).

Zodrow and Mieszkowski (1986) show that within a large number of jurisdictions competition leads to abandonment of property tax in all jurisdictions, thus all jurisdictions will rely on head taxes. As the number of jurisdictions increase it becomes difficult for a jurisdiction to influence the after-tax returns of investors. Eventually the Z-M model concludes that the tax competition

will shift the tax burden to immobile factors of production. Thus, any tax on mobile capital will be shifted to the immobile factor of production labour.

#### **5.5.1.2 Extensions of the standard Tax Competition Z-M Model**

Most of the models based on the standard tax competition Z-M model are based on relaxing the basic assumptions of the original model.

Bucovetsky (1991) and Wilson (1991) were the initial theorists to extend the Z-M model. They argued that in real situations tax competition is among countries of different sizes so they relaxed the assumption on the size of the jurisdiction. Their conclusion was that given two countries with different sizes and equal per capita endowments, the smaller country is likely to lower tax rates to attract a greater proportion of internationally mobile capital and achieve a higher per capita utility level than the larger country.

Haufler and Wooton (1997, 1999) also relaxed the size of jurisdiction assumption and obtained different results from the Bucovetsky (1991) and Wilson (1991). Wilson (1991) shows that given a large difference in the country sizes, tax competition is more preferable to a smaller nation since it reduces head taxes on individuals. Haufler and Wooton's model extends the Z-M model and analyses tax competition between two countries of different sizes but adds trade costs and multiple tax instruments. They consider two taxes; profit-tax and consumption-tax. They conclude that, when regional countries have only a lump sum profit-tax at their disposal and face equal transport costs for imports, then both countries will always subsidise the business and the subsidy will be larger in the larger region than in the smaller region (Rendon-Garza 2006). The equilibrium outcome will be that firms locate to the larger markets paying profit-tax at an increasing rate with the market size. This illustrates that while tax competition may be generally bad it may benefit other countries.

Kennan and Riezman (1988) analyse tax competition between countries in a model of tariff war between two countries. They model their analysis using Nash's equilibrium in tariff rates and conclude that given large size differences between nations the large countries benefit more from tax competition. This is because the introduction of tariffs will change the terms of trade from the other country in an unfavourable way. Thus, this has its roots in the inter-regional

externalities which will create favourable changes in terms of trade to large jurisdictions than to smaller ones (Wilson 1999).

### **5.5.1.3 Trade and tax competition**

Wilson (1987) launched the concept of trade in tax competition by introducing many countries in the analysis of tax competition. The model introduced two private goods, a capital intensive and a labour intensive good. Due to the concept of comparative advantage, the eventual effect of trade is that low tax rate regions will end up producing capital intensive goods and the high tax regions will produce labour intensive goods.

This distorts the original comparative advantages structure between jurisdictions before the introduction of tax incentives which reduces the overall welfare of the trading partners, because production in capital intensive sectors is shifted to inefficient producers owing to lower tax rates.

### **5.5.2 Wasteful tax competition**

Harmful tax competition originates from diverting from the Tiebout (1956) model of efficient tax competition. This occurs when the actions of one nation in lowering tax rates to increase the welfare of its citizens lead to a fiscal externality in the form of reduction in welfare in other nations (Wildasin 1989). The process occurs when a region lowers its tax rate to attract internationally mobile capital; its attraction of capital away from other regions lowers their tax bases and tax revenues.

### **5.5.3 Tax harmonisation**

Tax harmonisation emerged to counter the effects of harmful tax competition (Gagné & Riou 2004). Tax harmonisation is defined as a process by which countries in the same economic region equalise their corporate income tax rates and standardise corporate tax bases (Bond, Chennells, Devereux, Gammie & Troup 2000). When countries do not adopt tax harmonisation strategies this leads to suboptimal taxation (Gagné et al. 2004). However, tax harmonisation

removes the autonomy of a nation's tax system and thus nations will be constrained in their use of fiscal policy to deal with economic shocks (Fourcans & Warin 2001).

Tax competition like every competitive market will lead to efficient tax systems which competing countries can use to better their tax administrations (Boss 1999). Harmonisation can lead to an increase in the tax rates in a region and discourage innovation and growth in the tax system which may reduce FDI flows into a region. Lack of tax harmonisation has the following negative impact on economies:

#### **5.5.3.1 Loss in revenue**

Tax incentives lead to loss in revenue through two channels. Firstly, tax competition lowers tax rates and thus reduces revenue and, secondly, companies in their tax planning strategies will seek to exploit opportunities presented by tax incentives to lower their tax burden through tax avoidance (Bond, Chennells, Devereux, Gammie & Troup 2000).

#### **5.5.3.2 Change of economic behaviour**

The structure and operation of corporate income taxes can affect the operational decisions of firms on location, production, pricing and market conduct (Bond, Chennells, Devereux, Gammie & Troup 2000). Efficiency in production and economic integration and trade requires that production should take place in locations where an activity has comparative advantage over other locations. Thus use of taxes to influence location can lead to overall inefficiencies in production in the region.

### **5.6 Empirical analyses on the effectiveness of tax incentives in attracting FDI**

The theoretical analyses of tax incentives have opened a debate on whether tax incentives should be central in policies meant to attract FDI in the SADC. It is now important that the study turns to empirical findings on the effectiveness of tax incentives in achieving their objectives in attracting FDI and improving the economy's competitiveness.

Zee, Stotsky, and Ley (2002) argue that there is little evidence of the effectiveness of tax incentives in attracting FDI especially in developing countries. They questioned the importance

of tax incentives in attracting FDI compared to non-tax factors that increase the attractiveness of an economy to FDI. Beyer (2002) also finds no relationship between tax concessions and FDI attraction in transitional economies. While other studies such as Klemm and Van Parys (2012) find tax incentives to be vital to attracting FDI in low income countries. Van Parys and James (2010) also find tax concessions to have a positive impact in the Caribbean islands.

### **5.6.1 Country-specific empirical studies**

Bolnick (2004) in a SADC technical report suggests that evidence from other developing nations including those in the SADC show that tax incentives are not enough to convince foreign investors to choose their locations. The study cites Mauritius, Costa Rica, Ireland and Malaysia as economies that have successfully used non-tax incentives to lure FDI. These countries implemented successful economic reforms, ensured political stability, educated their work-force, built good infrastructure and instituted investment promotions to increase their appeal to investors.

Kransdorff (2010) in a study on the effectiveness of tax incentives on FDI attraction in South Africa concludes that taxation is important in attracting efficiency-seeking FDI. In the study Kransdorff reckons that given the effectiveness of taxation in attracting FDI, the low FDI flows in South Africa are due to a poor tax incentive structure. The study thus recommends that there is need for tax incentive regime reform in South Africa if the economy wishes to attract meaningful FDI. However, the study is qualitative and lacks quantitative proof to substantiate the arguments. It would be difficult to rely on Kransdorff's study for policy reform so this is where the present study looks forward to filling in the quantitative gaps.

Tax incentives were also found to be effective in improving firm performance in Uganda (Mayende 2013). Using firm level data in the manufacturing sector, the study concludes that tax incentives improve the firm's ability to increase gross sales and value addition. The study thus recommends that tax incentives be used to increase firm performance. This positive impact of tax incentives on firm performance can be observed in the increase in the number of investors in an economy. However, the Tax Justice Network Africa & Action Aid International (2012) concludes that tax incentives in Uganda have led to harmful revenue losses. Tax Justice Network Africa & Action Aid International thus recommends that the Ugandan government

remove tax incentives, especially tax holidays since they have led to harmful tax competition in the East African region.

Miller, Webster and Yanti (2013) in a study on the effects of indirect taxes on US inward FDI state that taxes are one of the determinants of FDI attraction in the US. Their study used a large sample of industries using gross operating surplus as a measure of indirect taxes. Using this unique tax measure the study analysed the composition of inward FDI in the US. The study concludes that the coefficient for indirect tax is both statistically significant and negative, indicating that higher indirect taxes reduce FDI flows into the US.

### **5.6.2 Global empirical studies**

Klemm and Van Parys (2009) sought to establish the effectiveness of tax incentives in attracting FDI and whether tax incentives are used in competing for FDI. They used data on tax incentives from 40 Latin American, Caribbean and African countries for the period 1985–2004. They applied panel econometric techniques in their study and concluded that lower tax rates are important in FDI attraction. Their use of spatial panel econometrics aided their second finding that tax holidays as well as lower corporate taxes are used in tax competition for FDI.

Biggs (2007) surveyed twenty-one developing countries from across the world. The study concludes that given a well-structured tax policy, tax incentives can be effective in attracting foreign mobile capital. The study probes the fiscal regimes in developing countries and concludes that developing countries use the wrong tax incentives like tax holidays and accelerated depreciation which does not work in their economies. The study also recommends that policy makers focus their incentives on small domestic corporate players which are more responsive to incentives than large multinational corporations which require other non-tax incentives.

Djankov, Ganser, McLiesh, Ramalho and Shleifer (2009) in partnership with Pricewaterhouse Coopers conducted a survey of 85 countries. The survey used effective corporate rates which were applied in 2004 for the sampled countries. It emerged that corporate tax rates have an adverse impact on gross investment, FDI and entrepreneurship. Corporate taxes were found to attract investment in the manufacturing sector but not in the services sector.

These studies took data from countries across the globe which do not belong to a specific region. The conclusions show divergent views on the effectiveness of tax incentives on FDI attraction. This shows that effectiveness of tax incentives depends on the sampled economies.

### **5.6.3 Regional empirical studies**

Chai and Goyal (2008) in a study to compare the benefits and the costs of tax concessions reckon that the cost of tax incentives is larger than the benefits. They used data from small island states in the Eastern Caribbean Currency Union. By comparing the costs of tax concessions (also termed tax incentives in terms of revenue lost and the benefits in the form of FDI attracted) they concluded that the region needed to move away from using tax concessions since they were found to be costly.

Šimović and Žaja (2010) performed a review of tax incentives used in Western Balkan countries, that is, in Slovenia, Croatia, Serbia, Montenegro, Macedonia and Albania. The survey-based study concluded that like other transitional economies, the Western Balkan countries use tax incentives in under developed regions to attract investment and to develop the regions.

Kinda (2014) used firm-level data from 30 Sub-Saharan Africa (SSA) countries. The review revealed that infrastructure, human capital, and institutions, are influential in attracting FDI and taxes are not. Taxes were found to be ineffective in attracting both vertical FDI (that is export sector FDI) and horizontal FDI (where foreign firms will be producing for the host market).

Van Parys et al. (2010) did an enquiry into the effectiveness of tax incentives in twelve Western and Central African countries over the period 1994-2006. Using panel data econometrics, controlling for fixed effects, they found no robust positive relationship between tax holidays and investment attraction.

Bellak and Leibrecht (2005) in a study on Central and East European Countries found that corporate tax rates were lowered in the region in a quest to attract international capital. Using panel data econometrics of 35 bilateral country relationships in the period 1995-2002 the study revealed that the semi-elasticity tax rates on capital movement between trading countries was - 2.93. This shows that lowering tax rates has been successful in attracting FDI in the region.



These studies in different economic regions show that there is no solid conclusion on the effectiveness of tax incentives and results differ according to the regions and methodology used in the study. It is thus important that the SADC region's data set be put to the test and results on the effectiveness of tax incentives in attraction of FDI in the region be produced to help policy makers.

#### **5.6.4 Methodological issues in regional studies**

Methodological issues have been significant in the kind of conclusions reached in the study of tax incentives for FDI (Sato 2012). Country-specific studies are less effective since tax issues are mostly regional and most regions either use taxes for competition or for harmonisation. Regional studies which employ panel data econometrics apart from considering many economies in one model also have the theoretical power to separate effects of specific actions from more general policies (Hsiao 2003). Thus the effects of tax incentives and other incentive policies can be separated and bold conclusions can be drawn.

Feld and Heckemeyer (2009) state that most economists have resorted to empirical studies to draw conclusions on the effectiveness of tax incentives on FDI attraction. They looked at the problem of heterogeneity in the study of taxation, especially the effects of factors such as public spending that may moderate the impact of tax differentials. The outcome of their study of European countries was that taxation is important in FDI locational decisions.

It is thus imperative that every study that seeks to give instructive results affords careful consideration of the methodology to be used. Below is a summary of studies that looked at tax incentives for FDI attraction with a focus on regional studies. Emphasis will be on the effectiveness of the methodologies that were used.

**Table 4: Summary of empirical findings on tax incentives and investment and analysis of effectiveness of methodologies used**

Author	Finding	Analysis
Hassett and Hubbard (2002)	Using microeconomic data from firms they concluded that a 1% increase in user cost of capital lowers investment by between 0.5% - 1%. Thus since taxes increase the user cost of capital, tax incentives lower the cost of capital and thus increase investment	The use of microeconomic data limited the study from including other locational characteristics which attract FDI such as macroeconomic environment, infrastructure and institutions. Thus, the result cannot be relied on for policy formulation.
Sato (2012)	Main conclusion was that current investment is influenced by previous year investment and taxes were found to negatively affect investment thus incentives help increase investment.	The study used a panel of 30 OECD countries over the period 1985-2007. The study used the Generalised Method of Moments (GMM) estimation of panel method recognising that current investments are affected by previous year investments and concentrated on macroeconomic variables as other determinants, ignoring effects of infrastructure and institutions. A long-panel series is also spurious thus panel unit roots could have improved the reliability of estimators. Testing for unit roots in panel data is important for assessing whether the first-differenced GMM estimator is identified or other estimators need to be considered

		(Baltagi & Kao 2000).
Bolnick (2004)	The study concludes that the costs of tax incentives are larger than benefits in the SADC. Tax incentives were also found to be more effective in some SADC countries than in others. Non-tax factors were found to be more effective than tax factors in FDI attraction in the SADC.	The study does not use quantitative econometrics analysis to draw conclusions on the effectiveness of non-tax incentives. Conclusions on tax incentives' effectiveness were drawn using the marginal effective tax rate (METR) formula which does not capture fully the complexity of tax systems and the effect of non-tax factors. Onyeiwu and Shrestha (2005) argue that due to a variety of factors that influence FDI it is not practical to make deductions from a model that has tax incentives and FDI as the only variables. This study fills this gap by applying panel data econometric models which captures all theoretical factors that influence FDI in developing countries and addresses individual country's tax effects.
Sudsawasd (2008)	The findings indicate that corporate income tax rates of East Asian countries do not have a significant impact on the level of FDI inflows from the 30 OECD countries.	The analysis used the gravity model of investment between home and host nation and is limited in giving reliable conclusions on tax incentives since it relates tax systems between countries and ignores the impact of lowered tax rates on an individual firm's decision to invest.
Onyeiwu and Shrestha (2005)	They conclude that tax incentives influence FDI flows into Middle Eastern and North African (MENA) countries and also found	The study employed a fixed effects model. The model included important factors that improve the economic competitiveness of a country cited in various World Development Reports. The model has the shortcoming of ignoring the use of Generalised Method of Moments (GMM), which works in a similar

	<p>infrastructure, macroeconomic variables, institutional variables and government expenditures to be effective in FDI attraction.</p>	<p>way to the Two Stage least squares in overcoming problems of endogeneity (Baltagi &amp; Kao 2000). However, most of the variables were used in this study's model since the SADC region has similar growth characteristics to the MENA region.</p>
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As noted by Klemm (2009) studies on the effectiveness of tax incentives in attracting FDI are limited especially in developing countries. The little work that exists is basically descriptive and qualitative in nature and based mainly on small sector case studies and thus is not reliable to use in policy formulation. This study's econometric study of tax incentives and FDI attraction in the SADC thus goes a long way in establishing bold conclusions about the impact of taxation on investment in the broader developing world.

### 5.7 Summary and conclusion

The chapter discussed the impact of tax incentives in attracting foreign mobile capital. Theoretical and empirical evidence shows that there is no clear conclusion on the effectiveness of tax incentives on FDI location; however, the results differ within the delimitation of the study.

Most of the empirical studies that this study explored concluded that though tax incentives might be important in attracting FDI they are more effective when combined with other non-tax factors. Macroeconomic conditions, infrastructure and strong institutions were found to be important non-tax factors that improve the attractiveness of an economy to FDI. Recent empirical work found tax incentives to be effective in FDI attraction, given that with massive globalisation; locations are becoming more and more similar (Šimović & Žaja 2010). Regional integration has necessitated harmonisation and coordination of economic policies in regional groupings such as the SADC, the European Union, ECOWAS and the African Union. The convergence in economic policies and economic growth has made regional countries perfect

substitutes for investors, thus fiscal incentives are becoming increasingly important in competing for investment.

The major weaknesses of using taxes in attracting FDI were discussed using the tax competition and tax harmonisation framework. Here it was noted that the use of tax incentives to attract FDI might improve the welfare of individuals in the jurisdiction that apply the incentives, but have external cost implications for residents in other competing jurisdictions that do not adopt tax incentives. Thus, tax incentives were seen to reduce the overall welfare of residents in a region. Tax harmonisation has thus dominated the order in regional integration economics, where regions seek to collectively lure internationally mobile capital.

This study thus sought to find answers for the SADC economies on if and how tax incentives help in attracting FDI. The study also sought to use panel econometrics to find the factors that influence FDI flow into the SADC by including tax and non-tax factors in the model. Panel data was able to include all stylised factors that impact FDI flows into developing countries. This reduced the size of the error term in model estimation and at the same time established a number of factors that impact or do not impact FDI flows in the SADC.

## CHAPTER 6

### TAX INCENTIVES FOR INVESTMENT IN THE SADC

#### 6.1 Introduction

Bird (2008) argues that for one to assess the effectiveness of a tax system and give meaningful suggestions for improving a national tax process it is important to study the environment in which it operates and the institutional and legal systems that govern the tax process. There are three important factors that determine the success of a tax system. These are political will in tax administration, a clear strategy of achieving results and enough resources to administer the tax process (Bird 2008).

Šimović and Žaja (2010) state that although a significant number of studies have concluded that tax incentives are not important in attracting investment, the importance of effective tax systems cannot be over-emphasised and thus countries should seek to institute good tax systems if they wish to attract investment. The importance of tax systems is highlighted by the effects of globalisation which indicate that investment locations are becoming more similar and competitive.

Tuomi (2011) argues that empirical evidence shows greater economic growth in East Asian economies that are open to FDI than in Latin American countries that run protected economies. This evidence has caused a paradigm shift in economic policies towards more open FDI initiatives in most economies. It has also prompted the establishment of investment promotion agencies in most countries that run a variety of incentives that seek to attract investors, chief amongst them being tax incentives (Tuomi 2011).

This chapter provides an overview of investment tax incentives throughout the SADC region, based on country-specific information from the SADC tax database, IMF staff reports and other up to date sources. There are a number of tax incentives that countries can use which are: value-added tax, corporate income tax, property-tax, royalty payments, import-tariffs, sales-taxes, tax-holidays, grants, depreciation allowances, enhanced deduction and special

investment allowance (Boura, Koumanakos & Georgopoulos 2006). Thus, this chapter will also conduct an analysis of the incentive structure employed by each SADC country.

Šimović and Žaja (2010) state that there are many tax incentives used across the world implemented within the framework of different tax reforms. Public sector economists refer to lowering corporate income taxes (CIT) as tax incentives. Šimović and Žaja (2010) give three broad classes of tax incentives, namely: tax holidays, reduced CIT and investment incentives. Investment incentives include commonly used incentives such as accelerated depreciation, investment allowances and investment tax credits.

The rest of the chapter will be structured as follows: section 6.2 will discuss various tax incentives used across the world economies, section 6.3 will look at those tax incentives used in the SADC economies and how they are implemented in these countries and section 6.4 will look at the major factors that have affected effective implementation of tax incentives in the SADC. Section 6.5 will present the conclusions from the chapter analysis.

## **6.2 Tax incentives used across the world<sup>2</sup>**

Governments across the world have used various types of tax instruments to reduce the effective tax rates faced by investors in a bid to attract investment [United Nations Conference on Trade and Development (UNCTAD) 2000].

### **6.2.1 Tax holidays**

Tax holidays are the most widely used tax incentive in the developing world, including the SADC region. (UNCTAD 2000) defines tax holidays as an incentive whereby governments exempt new foreign establishments from paying CIT for a specified period of time, in most cases for five years. The tax holiday provision may be applied to other tax liabilities the firm faces, for example VAT and import duties on raw materials. Exemptions on tax holidays are temporary and in most cases the firms' tax administration is waived during the period of the holiday (James 2009). Governments can also issue partial holidays with reduced obligation rather than full exemption.

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<sup>2</sup> This section instructs policy makers in the SADC on alternative tax incentives to explore in cases where current tax incentives are not viable.

The advantages of tax holidays are that they are simple to administer, have low compliance costs and reduce the tax liability (Clark, Cebreiro & Böhmer 2007). Tax holidays also give the business a chance to minimise interaction with the government. Interaction with the government increases the cost of doing business especially if the public employees are corrupt (Fletcher 2002). However, the tax holiday may signal to investors that the government's tax administration is corrupt (Keen & Mansour 2009).

Tax holidays, however, have the disadvantages of discriminating new investments from old investments and they also allow for tax planning where firms can shift capital from old investments into new investments which have the tax holiday treatment (Clark, Cebreiro & Böhmer 2007). Fletcher (2002) notes that tax holidays encourage short-term investments and give an unfair competitive advantage to new establishments over existing firms.

Tax holidays described as the worst tax incentive in terms of benefits to the host nation are only attractive if they are long-term, otherwise they attract footloose industries (Keen & Mansour 2009). Tax holidays have a big revenue-reducing effect since they promote transfer pricing and other financial arrangements, where firms shift taxable income to where it is not taxed (Keen & Mansour 2009). For their optimal effectiveness, tax holidays require double tax agreements between the host nation and investors' home nation to avoid double taxation, otherwise tax holidays will shift revenues from the host nation to the investors' home nation (Keen & Mansour 2009). Tax holidays also have the major disadvantage of exempting profit tax without considering the size of the profit. Governments may suffer huge revenue loss as businesses with high returns which encourages production even without a tax holiday will be exempted from paying tax (Easson & Zolt 2002).

Tax holidays are attractive only in their initial years otherwise towards the end they are not attractive. They also signal the untrustworthiness of a government and firms with long-term investment intentions that extend beyond the holiday offer prefer a constant low CIT over a longer period to a tax holiday (Keen & Mansour 2009). Tax holidays that target specific sectors or regions such as Export Processing Zones (EPZs), may cause huge revenue losses especially if targeted areas have existing businesses (Clark 2000).



### **6.2.2 Reduction on CIT rate to specific sectors**

Under this tax incentive governments levy lower tax rates in specific sectors or regions with the view to attracting FDI into those economic sectors or regions (UNCTAD 2000). Reduced CITs are used in Hong Kong, China, Indonesia, Ireland, the Lao People's Democratic Republic, Cambodia and Estonia. The incentive may also be used to reward foreign investors who meet certain set criteria. Its use in Malaysia in the 1980s however, was unsuccessful (UNCTAD 2000).

Reduction in CIT in selected sectors has the advantage of reducing the rate of tax on profits. The other advantage of this tax incentive is that it benefits large firms who invest in large businesses that make a profit even without tax incentives (Fletcher 2002). The disadvantages include discriminating against other businesses and increasing the after-tax cost of debt financing on government (Clark, Cebreiro & Böhmer 2007). It also has the disadvantage of encouraging tax avoidance by investors shifting tax on profits to low taxed investments (Fletcher 2002).

The other advantage of reducing CIT in selected activities is that when properly planned by tax administrators it acts as a preventative measure to financial planning and repatriation behaviour by investors which reduces the host country's tax base (Clark 2000). Lowering CIT in specific regions is common in the SADC and other Sub-Saharan African regions in the form of Export Processing Zones (EPZs) which have the advantage of providing quality internationally competitive infrastructure for the export sector (Keen & Mansour 2009).

EPZs also reduce challenges faced by exporters in obtaining permits and also Value Added Tax (VAT) refunds. However, EPZ companies when offered a number of incentives encourage pressure groups in other sectors to press government for similar incentives thus affecting the revenue collection base (Keen & Mansour 2009). Lowering CIT in specific sectors has also been found to be problematic in terms of tax administration and compliance especially if the income targeted is a subset of activities or foreign investment (Clark 2000).

There is also the disadvantage of leaking untaxed goods into the economy. This reduces the tax base in the economy, therefore lowering CIT in specific sectors that have high revenue loss effects (Fletcher 2002).

### **6.2.3 Exemption of CIT for export companies**

This is a common tax incentive in developing countries as they seek to promote their export sectors and improve their external balance. Under this incentive firms producing an export product are exempted from paying CIT. Countries such as Mauritius give greater preference if the firm produces a product that was formally imported by the country (SADC 2014).

This form of tax incentive has the advantage of encouraging investors in a host nation to seek new markets and improve the host country's external balance (Clark, Cebreiro & Böhmer 2007). However, this tax incentive is against the World Trade Organisation (WTO) protocol which seeks to ensure fair competition on the international market. It has the disadvantage of discriminating against non-exporters who also have an important role in the economy's growth and development.

### **6.2.4 Accelerated capital (investment) allowances**

These are deductions offered in the first year of operation to lower the cost of capital hence they help to ease the liquidity challenges of an investor (Clark, Cebreiro & Böhmer 2007). Its major advantage is that of encouraging industrial growth and investment in new equipment but in some cases it has been seen to cause excessive investment in fixed capital leading to 'white elephants' or unutilised buildings (UNCTAD 2000).

Investment allowances normally lead to revenue losses which are directly related to the amount of investment into the economy (Easson & Zolt 2002). Therefore, governments have the flexibility to not set minimum investment funds thresholds for qualifying capital.

The disadvantages of this tax incentive is that it distorts the choice of capital in favour of short lived capital at the expense of long-term investments which are more beneficial to the economy in achieving sustainable growth (Klemm 2010). Capital allowances also favour capital intensive investment which compromises employment creation in the economy (Easson & Zolt

2002). Investors will also be biased in their choice for physical capital rather than financial. Where there are no refunds the incentive is only attractive to highly profitable investments (Klemm 2010).

### **6.2.5 Investment tax credits**

Investment tax credits can operate in two ways flat and incremental (UNCTAD 2000). A flat investment tax credit is applied in the form of a fixed percentage on expenditures incurred by new investments in a year. In contrast, an incremental investment tax credit has a moving average base which is the minimum amount that is not eligible for tax exemption and tax exemption is applied to the amount in excess of the base amount as a fixed percentage.

The rationale behind incremental tax credit is to award a tax exemption to additional expenditure by the investor that they would have incurred without the tax relief (UNCTAD 2000). An investor's unused tax credits can be carried forward. Most developing countries only allow firms to carry forward credits for one year. In some cases the tax credits can be converted into cash claims instead of carrying them forward for future tax relief.

The use of tax credits on new investment has the advantage of reducing the marginal effective tax rate on new investment by reducing the cost of buying new capital. The reduction in the marginal effective tax rate occurs at a minimum loss of tax revenue to government which is technically termed "bang-for-the-buck" (Clark 2000). Tax credits benefit both new and old capital because they increase the present value of the future income flows from the invested capital and so increase the share value of investments (Clark 2000). Investment tax credits have the major plus of not favouring businesses that earn quick profits after set-up (as is the case with tax holidays) thanks to the facility for firms to carry forwards tax credits (Easson & Zolt 2002).

Tax credits also allow tax authorities to have flexibility in targeting specific economic areas (Clark, Cebreiro & Böhmer 2007). Tax credits as up front tax incentives help to ease the cash flow challenges of investors in their early stages of establishment in the host market (Clark 2000). Fletcher (2002) argues that tax credits are used in areas that have the highest spill-over benefits to the economy.

Tax credits have disadvantages which include discriminating between old and new investment and have a greater impact on short-lived assets which can offset a larger percentage of tax revenues on a given stream of earnings. Tax credits are also subject to abuse by investors in cases where earned credits may be converted into monetary earnings (UNCTAD 2000). Investors will concentrate on short-lived investments since credits will be given on new equipment. Investments that do not qualify may cheat the system by reselling equipment and making multiple claims (Fletcher 2002).

#### **6.2.6 Losses carried forward**

This is one of the methods used by governments whose focus is on reducing the corporate tax burden on investors. The mechanism gives investors the opportunity to carry forward or backward the losses incurred for the purpose of tax accounting for a given number of years (normally five years) (UNCTAD 2000). The government under this arrangement will only allow a fixed ratio of losses to be carried forward or backwards to discourage inefficiency and incompetence on the part of investors.

Loss carried forward tax incentive is given on the assumption that in most cases investors incur losses in the initial years due to high set-up costs and market penetration costs thus they need tax relief (UNCTAD 2000). Investors then have the advantage of sustaining new investments in their early years of establishment where they face challenges and high market penetration costs.

However, this mechanism is at risk of promoting inefficiencies as businesses that make losses are rewarded with a subsidy to cover the losses in the form of the tax incentive. This behaviour discourages vigorous innovation and strategic behaviour in firm growth culture thus affecting growth and development that is inherent in firms that fear loss making.

#### **6.2.7 Enhanced deduction and accelerated depreciation**

Enhanced deductions involve governments deducting from the taxable income an amount based on some percentage of the new investment, also called depreciation (UNCTAD 2000). The eventual price to the investor investing in new capital will be lowered through the arrangement. Enhanced deductions are applied to the tax base thus the benefit to an investor depends on the

ratio of CIT to tax base. If the tax rate to tax base ratio is higher, then tax relief due to investment allowances will also be higher.

Enhanced deductions have the advantage of providing firms with a faster and larger write-off on qualifying capital (UNCTAD 2000). Enhanced deductions have the disadvantage of allowing firms to claim deductions on qualifying capital which are multiples of the actual cost. For example the claim can be twice the cost (UNCTAD 2000).

Accelerated depreciation involves a situation where firms are allowed to write-off capital costs in a shorter period than the length of the capital's useful economic life (UNCTAD 2000). This is the accounting basis for the depreciating costs. The effect of this tax incentive is that, while it does not change the value of the depreciating cost of capital, it increases the present value of the claim by shifting the claim to the time of the investment, while actual capital depreciation occurs during the production process.

The advantage of accelerated depreciation is that it does not discriminate against long-lived assets (Fletcher 2002). It moves CIT towards consumption taxes thereby reducing distortions that are inherent in regular CIT. The revenue loss under accelerated depreciation is very low since it is only the timing of the tax payment and not the amount of tax that changes (Easson & Zolt 2002).

Since the depreciation costs are claimed on the inception of the investment project before the actual depreciation occurs, it has the disadvantage of allowing firms to make a cost claim that is above the actual costs they will face with capital depreciation (UNCTAD 2000). The benefits of accelerated depreciation are reduced by inflation (Fletcher 2002). They are therefore not effective in developing countries that have high average annual inflation rates.

### **6.2.8 Preferential treatment of long-term capital gains**

This form of tax incentive occurs when the host country offers preferential tax treatment to capital held by investors for a specific period of time say six months (UNCTAD 2000). Here long-term capital gains will be taxed normally on a half rate compared to short-term capital gains. The intention here is to encourage long-term investments which increase the benefits to

the host nation, since long-term capital investments promote employment creation and sustainable growth.

The preferential treatment of long-term capital has the effect of lowering costs for this form of capital, creating economies of scale for the firm who move early into the host nation's industries that require long-term capital. These economies of scale act as a barrier to entry for other new competitors in the long-run. The disadvantage is that early movers will enjoy a powerful monopoly in the industries that demand long-term capital. The later can have a negative impact on the welfare of that society.

### **6.2.9 Deductions for qualifying expenses**

Once investment is established in a country, governments try to maximise the benefits from the investment, hence they try to influence the behaviour of the investors through manipulation of the tax system (UNCTAD 2000). This involves reducing the tax burden on activities that confer positive externalities to the economy such as research and development (R&D), job training expenses and export marketing expenses.

The advantage of this tax incentive is that it promotes innovation through R&D and job training and also encourages firms to seek new markets which promote further investments from established firms. The disadvantage, however, is that the classification of activities under this incentive are too broad and hence subject to manipulation by corrupt public employees.

### **6.2.10 Zero or reduced tariffs**

Governments can use preferential tariff application to attract investment (UNCTAD 2000). This comes in two forms. The first one is when governments reduce or remove tariffs on imported capital equipment and spare parts for selected investments. This reduces the cost of investment thus encouraging increased investment in selected sectors. Secondly, governments can increase tariffs on certain products to protect local infant industries from foreign competitions (UNCTAD 2000). In many countries, however, tariff protection has been found to encourage inefficiency in protected industries.

### **6.2.11 Employment-based deductions**

Employment-based deductions are mainly used by governments seeking investment in certain geographic areas where the social security contributions of investors are reduced and their overall tax burden lowered (UNCTAD 2000). Bulgaria extended this deduction to employers who engage the disabled in an attempt to increase their participation in the economy.

The advantage of this tax incentive is that if employers extend the benefit to their employees it increases domestic demand and benefits the overall economy. However, when it is only targeted at certain regions, it disadvantages the growth of regions that do not benefit from the tax incentive.

### **6.2.12 Tax credits for value addition**

Most developing countries discourage the export of raw material products and they seek to encourage value addition (UNCTAD 2000). Governments offer tax deductions on value addition processing with a view to creating capacity for value addition.

The advantage of promoting value addition is that it increases the export earnings and thus improves the economy's external balance. The tax credits have the disadvantage of discriminating against businesses that fail to add value to their products, pushing them out of the market, leading to job losses.

### **6.2.13 Tax reductions/credits for foreign hard currency earnings**

Governments encourage inflows of foreign currency in their economies so they may offer incentives to firms on earned foreign currency (UNCTAD 2000). The advantage of this tax incentive is that it encourages businesses to channel their earned foreign currency through the formal market which benefits the growth of the whole economy. The disadvantage is that it discriminates against businesses that transact in local currency or that trade with countries with weaker currencies.

### **6.3 Tax incentives in the SADC**

Section 6.2 described the number of tax incentives used in different economies in order to lure foreign investment. These can, however, be categorised into similar incentive structures for easy analysis (Šimović & Žaja 2010). For SADC countries this study used four broad categories. The first was tax holidays and exemptions, the second category comprised reduced CIT in specific sectors, the third tax allowances and tax credits and the fourth accelerated depreciation and tax loss relief. These are the incentives familiar to most of the SADC countries. A few countries do indeed offer some special incentives.

Based on recent statistical data from the SADC tax database and other recent sources over the past 10 years, this section discusses how various tax incentives are used in the SADC. Due to the dynamic nature of tax legislation in developing countries it is important to rely on the most recent information about SADC countries' tax developments, thus the key source will be the SADC tax database. The following section has aims to reach solid conclusions about the use of tax incentives in the SADC. It will look at the similarities or differences in application and the areas that receive tax incentive treatments and those that do not. To achieve this chapter's objectives the study will present its findings in the form of tables for easy comparison of the tax incentive used in the SADC.

The SADC tax database, the main source of data on cooperation in taxation and related issues, was instituted in the Memorandum of Understanding (MOU) between fourteen member states excepting Madagascar. Article 2 of the understanding constituted the tax database with requirements that every year every member state submit any changes in tax laws for purposes of updating the database. Thus the SADC tax database is the most reliable source of recent developments in tax incentive issues in the region since section (b) of article 2 of the MOU requires that all member states provide data on all tax incentives offered, including implementation dates and conditions imposed (SADC 2002).

#### **6.3.1 Tax holidays and exemptions**

Despite criticism, tax holidays remain the most dominant tax incentive, in the SADC due to lack of alternative incentives to lure investment, especially non-tax incentives. As we saw in



Chapter 2 most foreign investments in the SADC, are in the primary resources sector which receives medium to long-term investments, thus tax holidays are useful in the initial stages of establishment.

Tax holidays are tax exemptions to specific sectors in a given period of time so the study analysed them together with other tax exemptions which might not be limited over time. The analysis of tax holidays was made difficult mainly because of their similarity with other tax incentives that lower CIT (Šimović & Žaja 2010). Thus, combining them with other tax exemptions reduced the difficulty.

**Table 5: Tax holidays and exemptions**

<b>Country</b>	<b>Type of tax holiday, exemptions and similar incentive</b>
<b>Angola</b>	<p>Tax holidays: investment in agriculture, health, education and transformative industries enjoy a tax holiday of up to 20 years (NexiaSAB&amp;T 2014). There are exemptions from import duty for investments in industrial development (SADC 2014).</p> <p>Special zones: these get total exemption from CIT for 5 years (NexiaSAB&amp;T 2014).</p>
<b>Botswana</b>	<p>Companies that acquire a development order showing that they are critical to economic development enjoy tax holidays (Collins Newsman &amp; Company 2013).</p>
<b>Democratic Republic of Congo (DRC)</b>	<p>Special zones: the DRC government has three categories of investment zones with different tax holidays which have a total exemption from paying CIT. Zone A covers the city of Kinshasa with a maximum of a 3-year holiday; Zone B includes the province of Bas-Congo and the towns of Lubumbashi, Kolwezi and Likasi and has a maximum 4-year holiday; Zone C is constituted with all the other areas which are not categorised in Zones A and B and investments in these regions enjoy a tax holiday of up to 5 years (SADC 2014).</p> <p>Export incentives: the DRC in seeking to create a favourable Balance of Trade (BOT) offers export duties and tax exemptions to companies that export semi-finished or finished</p>

	products (SADC 2014).
<b>Lesotho</b>	No tax holidays (SADC 2014).
<b>Madagascar</b>	Export Processing Zones (EPZ): companies under EPZ classification enjoy import duty and VAT exemptions for 15 years (IMF 2007).
<b>Malawi</b>	No tax holidays (SADC 2014).
<b>Mauritius</b>	The Mauritian government offers tax-free dividends to investors and there are no capital gains taxes. Investors are also exempted from paying customs duty and levies on imported raw materials (IMF 2013). Companies registered under the Mauritian Board of Investment enjoy a 5-year tax holiday if engaged in health services (Imara Trust 2013).
<b>Mozambique</b>	Industrial Zones: to foster industrialisation Mozambique offers a tax holiday of 10 years to firms in the industrial zone and a 60% reduction in income tax (SADC 2014).
<b>Namibia</b>	Export Processing Zone (EPZ): industries classified under EPZ are exempted from paying taxes and levies in Namibia. Manufacturing: enjoys 50% abatement on taxable income for 5 years, and a linear phasing out of abatement over the following 10 years (SADC 2014).
<b>Seychelles</b>	No tax holidays in Seychelles (SADC 2014).
<b>South Africa</b>	No tax holidays in South Africa (SADC 2014).
<b>Swaziland</b>	Tax holiday: the Minister of Finance is mandated to approve tax holidays to new investments in the manufacturing sector. These industries must be non-existent in Swaziland and a dominant exporter to the economy. Under the tax holiday 150% of the tax written down value of fixed assets owned and employed by such business at the year-end will be removed from CIT (SADC 2014). Development enterprises: these are entitled to a tax incentive

	for 10 years which comprises exemption from withholding tax on dividends on approved developmental businesses in manufacturing, mining, the export sector and tourism (SADC 2014).
<b>Tanzania</b>	Special Zones: Export Processing Zone (EPZ) and the Zanzibar Free Economic Zones Authority (ZAFREZA), established to promote the export sector. The EPZ and the ZAFREZA were established to diversify the Zanzibar economy and thus it is dominated by manufacturing industries. It offers a 10-year tax holiday followed by a 25% reduction in CIT thereafter. There is also exemption from withholding tax and import duty on machinery for 10 years. Sales tax/ Value Added Tax (VAT) laws do not apply in these zones. They are also exempted from paying local authorities levies and taxes (SADC 2014).
<b>Zambia</b>	Special priority investments: investments of more than US\$ 10 million and no less than US\$500,000 in the Multi Facility Economic Zones (MFEZ) under the Zambian Development Agency (ZDA) Act are given a tax holiday. The holiday constitutes a zero per cent import duty, no tax on dividends and a zero per cent profit tax for 5 years. There is also a deferment of VAT (SADC 2014). Small enterprises: these are entitled to a 3-year holiday if the investment is in an urban area and a 5-year tax holiday for rural investments (SADC 2014). Agriculture: dividends paid to investors are exempt from tax for 5 years (SADC 2014).
<b>Zimbabwe</b>	Export sector: investments in the export industry are entitled to a 5-year tax holiday of zero CIT while a 15% tax rate will be applied to the investors' CIT over following 5 years (SADC 2014). Export Processing Zone (EPZ): holders of the EPZ licence receive a 5-year income tax exemption, and 15% will be

	<p>applied to all taxable income over the following 5 years. They are also exempted from capital gains tax. There are duty-free import and VAT refunds for EPZ industries (SADC 2014).</p>
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Source: prepared by author from various sources cited.

Tax holidays are widely used in the SADC except in Lesotho, Malawi and Seychelles. Most SADC countries use tax holidays in special investment zones, mainly EPZs. The DRC has gone a step further and uses tax holidays to attract investments to those regions that are remote or under-developed. Zambia also extends holidays in order to develop small to medium enterprises (SMEs). Tax holidays in the SADC range from 3 to 20 years. Angola offers the longest holiday 20 years to the social services sectors including education and health. The 20-year tax holiday in Angola also extends to the agricultural sector. The trend in tax holiday applications in the SADC clearly shows that governments fight to avoid abuse of this tax incentive facility. Tax holidays are thus dominant in the export sector where economies seek to benefit in improving the external balance. The health sectors in Mauritius and Angola are also incentivised with tax holidays.

Industrialisation is also an important consideration to most SADC countries offering tax incentives. Thus, tax holidays are offered for the development of the manufacturing sector in countries such as Botswana, Mozambique and Namibia. Zambia offers tax holidays in the agricultural sector to improve food security and increase economic diversification after years of reliance on copper mining.

### **6.3.2 Reduction in CIT, royalties and VAT rate to specific sectors**

Reducing CIT, royalties and VAT in strategic sectors is common in developing countries, especially in sectors that have positive economic externalities to other sectors of the economy. Due to similarities in the resource endowments (see Chapter 2) of most countries in the SADC a reduction in CIT would attract investment away from neighbouring competitors. Reduced CIT has long-term benefits and is favourable to investments that last for a long period especially in the primary resources sector which constitutes common investments in the SADC.

The SADC region has vast mineral resources and thus most investments would benefit from reduced CIT, royalties and VAT in the mining sector.

**Table 6: Reduced CIT, royalties and VAT rate to specific sectors**

Country	CIT rates in specific sectors
<b>Angola</b>	Industrial tax rate: Angola grants a 50% reduction in industrial tax for 5 years, applied at the beginning of the financial year following the inception of the operation of the investment (SADC 2014).
<b>Botswana</b>	<p>Manufacturing rate: Botswana government established the manufacturing development approval order in 1995 which sought to develop manufacturing through low CIT. Under the scheme companies defined as manufacturing firms are taxed at a rate of 15% of all taxable income (SADC 2014).</p> <p>General CIT rates: Botswana in a bid to develop its private sector, levies low tax rates, which is meant to encourage reinvestment by established firms. For example, companies classified under the International Financial Services Centre are taxed at a rate of 15% of their worldwide income and are exempted from withholding tax distribution (SADC 2014).</p>
<b>Democratic Republic of Congo</b>	<p>Mining tax rate: DRC has lowered tax rates in mining and dividends paid to shareholders of a mine are taxed at a rate of 10%, instead of the rate of 20% applicable in common right. Taxes on profits from mining are taxed at a rate of 30%, instead of the rate of 40% applicable in common right (SADC 2014).</p> <p>Income tax: income earned from the new investments is exempted from business tax (SADC 2014).</p>
<b>Lesotho</b>	<p>Manufacturing tax rate: manufacturing activities are exempted from withholding tax on dividends (SADC 2014).</p> <p>Agriculture: agricultural activities have a concessional tax rate of</p>

	15% which is also extended to manufacturing activities (SADC 2014).
<b>Madagascar</b>	EPZ companies enjoy a reduced statutory tax rate of 15% (IMF 2007).
<b>Malawi</b>	Export Processing Zone: Malawi offers a 0% CIT for industries in the EPZ, 100% duty free imports on raw materials is also extended. EPZ companies also do not pay dividend tax and surtax (SADC 2014). Industrial sites: enjoy a 15% investment allowance (SADC 2014).
<b>Mauritius</b>	Mauritius gives foreign businesses an option of a lowered CIT of 15% instead of the standard 25%. This was constituted to start in the sector after the termination of the tax holidays law in June 2008 (Bolnick 2004).
<b>Mozambique</b>	New technologies: investments into new technologies enjoy an income tax rebate of up to 15% (SADC 2014).
<b>Namibia</b>	Manufacturing: registered manufacturing industries are taxed at 18% (SADC 2014).
<b>Seychelles</b>	Agricultural and Marine Resources Investment, industrial and manufacturing investment, professional services investment, small scale industrial development and tourism industry are taxed at 15% in excess of 24, 000 Seychelles Rupee (SADC 2014).
<b>South Africa</b>	Small to medium enterprises development: these enjoy an establishment grant payable for three years, worth 10.5% of qualifying assets; profit/output incentive, calculated at 25% of profit before tax, payable for an additional year; an additional two-year profit/output incentive provided the industrialist can meet or exceed the human resource remuneration to value-added ratio of 55% measured in the fourth financial year. EPZ: industries under EPZ classification are exempted from VAT on inputs of Industrial Development Zone (IDZ) companies sourced from the domestic economy and for export processing purposes.

	They are also exempted from property tax and have unrestricted duty free inputs (SADC 2014).
<b>Swaziland</b>	Development companies: a tax concession on corporate tax at the maximum rate of 10% (SADC 2014).
<b>Tanzania</b>	<p>Agricultural development: there is a VAT exemption, reduced CIT, taxed at a rate of 30%; withholding tax on interest on foreign sourced loan is 0% (SADC 2014).</p> <p>Mining: VAT exemption and 30% CIT; mines do not pay capital gains tax and diamond mines pay a royalty of 3% instead of the standard 5% (SADC 2014).</p> <p>Economic infrastructure and tourism: import duty is zero and VAT is deferred (not paid); Corporation tax is 30% (standard rate); Capital allowance is 100%; withholding tax on interest on a foreign sourced loan is 0%; withholding tax on dividends is 10% (SADC 2014).</p> <p>Petroleum gas: a tax exemption on all petroleum investment expenditure (SADC 2014).</p>
<b>Zambia</b>	<p>Agriculture: enjoys a VAT deferment on equipment imports, income is taxed at a reduced rate of 15%. Import duty on irrigation equipment is 0%. Customs duty for vitamin additives for animal feeds is 5% (SADC 2014).</p> <p>Manufacturing: income from chemical manufacturing of fertilizers is taxed at a reduced rate of 15%. Income from fertilizer manufacturing is taxed at 15%. Import duty on various textile products is 0%. Import duty on the equipment used in assembling motor vehicles, trailers, motorcycles and bicycles is reduced (SADC 2014).</p> <p>Mining: any mining company which holds a large-scale mining licence to mine base metals is taxed at 30%, whilst other mining companies are taxed at 35%. Dividends paid by a company in large scale mining of base metal are not taxed (SADC 2014).</p> <p>General: registered businesses are allowed to re-claim 20 per cent of input VAT paid on petrol. Income from non-traditional exports is taxed at a reduced rate of 15% (SADC 2014).</p> <p>Tourism: no VAT payment for accommodation in Livingstone and</p>

	all tour packages in the country. VAT refunds to tourist on selected items (SADC 2014).
<b>Zimbabwe</b>	Industrial park developer: The CIT rate of tax on such operations is zero for the first five years of operation and is 15% thereafter (SADC 2014).

Source: prepared by author from various sources cited.

The SADC database and other recent sources testify to all the SADC countries offering reduced CIT, royalties and VAT in specific sectors. The reduction of tax in specific sectors is preferred in the SADC because countries seek to attract long-term investments that last beyond the standard tax holiday period of 5 years.

SADC countries offer reduced CIT, royalties and VAT with the view to developing the mining and manufacturing sectors in particular. These are sectors that have greater benefits to developing economies in terms of employment creation and economic growth. South Africa also uses the incentive to develop the SMEs' sector.

Tanzania and Seychelles also use lowered CIT in agricultural development with Seychelles concentrating on developing marine agriculture. Zambia encourages tourism development using the reduced CIT incentive while Botswana extends the tax incentive to the financial development sector.

Royalties are charges by the host nation's government to compensate for the depletion of natural resources. The mining sector in the SADC region charges royalties. The standard rate of royalties on minerals in the SADC is 5%, while Tanzania charges a royalty fee of 3% on minerals as an incentive to the industry.

### **6.3.3 Tax allowances, tax credits or similar incentives**

Tax allowances and tax credits are incentives that target selected investments (Šimović & Žaja 2010). However, since they are costly to administer they are more common in developed countries than in developing countries. Thus, tax holidays and reduced CIT are the more dominant tax incentives in developing countries. However, some aspects of these tax incentives



are used in the SADC. Table 7 below describes how some SADC countries apply these incentives.

**Table 7: Tax allowances, tax credits or similar incentives**

<b>Country</b>	<b>Type of tax allowances, tax credits or similar incentives</b>
<b>Angola</b>	Taxes incurred abroad enjoy tax credits in Angola (NexiaSAB&T 2014).
<b>Botswana</b>	Industrial development: Botswana offers a tax allowance of 25% for construction or purchase of any new industrial building. The allowance is also extended to any improvements or repairs to an existing industrial building (SADC 2014).  Employment deductions: to encourage on-the-job training Botswana allows 200% deduction on companies' training expenses (SADC 2014).
<b>DRC</b>	Investment promotion: an investment promotion tax is used in DRC to promote foreign investment; it provides credits and credit facilities to businesses (SADC 2014).  Research and Development (R&D) allowances: R&D expenditures are allowed tax concessions which are redeemable after two years; however, they are actualised on the day of R&D initiation. The allowance involves a provision for tax credit on an amount not exceeding 5% of taxable income which has a provision of use in 5 years (SADC 2014).  Employment credits: holders of mining rights have an employment credit on expatriate staff whose earnings are taxed at a rate of 10% instead of 33% applied on common right. Firms under small to medium enterprises (SMEs) are allowed to deduct from their taxable income expenditures incurred in undertaking on-the-job training (SADC 2014).
<b>Lesotho</b>	Start-up costs: an amortisation deduction is allowed for expenditure incurred in starting up a business to produce income subject to tax as if it were incurred for a depreciable asset (SADC 2014).

	<p>Research and experimental costs: a deduction is allowed for research and development expenditure (SADC 2014).</p> <p>Approved training expenditure: a deduction of 125% incurred for training or tertiary education is allowable (SADC 2014).</p> <p>Investment incentives: a dividend paid by a resident company shall not be included in the gross income of a resident shareholder.</p> <p>Expatriate taxpayers: are not taxed on property income derived from a foreign source or from disposal of an investment asset generating foreign-source income (SADC 2014).</p>
<b>Madagascar</b>	New investments are granted a tax credit of 75% (IMF 2007).
<b>Malawi</b>	<p>Manufacturing development: manufacturing exporters under bond enjoy a transport tax allowance of 25% on all international transport costs (SADC 2014).</p> <p>Capital costs are deducted from taxable income on manufacturing investment in the first year of operation (Nsiku 2013).</p> <p>100 % investment allowance is granted to manufacturing companies deducted from operation costs for initial 25 months (Nsiku 2013).</p>
<b>Mauritius</b>	Tax allowances include annual allowances and investment allowances (Ocroworldwide 2014). Manufacturing companies are offered additional allowances for acquiring new technology equipment (SADC 2014).
<b>Mozambique</b>	<p>A tax credit on investments of 5% is offered for 5 financial years until the investment becomes competitive. Investments in new technologies are given a tax rebate of 15% of the tax base (SADC 2014).</p> <p>Purchase of fixed assets: to register a sale or purchase of fixed assets for industrial development, an agro-industrial establishment or the hotel industry a 50% reduction is given on transfer duty in the first 3 years of the start of an investment (SADC 2014).</p>
<b>Namibia</b>	<p>Namibia allows tax deductions on EPZ industries expenditure in international trade costs (SADC 2014).</p> <p>Manufacturing firms: enjoy a 25% tax deduction of training expenses and wages and an 80% allowance on taxable income derived from export manufacturing. A manufacturer earning income from its</p>

	<p>product abroad is entitled to an additional 25% tax relief (NexiaSAB&amp;T 2014).</p> <p>Tax allowance is given to buildings used for trade and manufacturing at the rate of 20% per annum (NexiaSAB&amp;T 2014).</p> <p>Special building allowance: tax on building expenditure is written off at 20% in the first year and the balance at 8% for 10 years (SADC 2014).</p>
<b>Seychelles</b>	Has no tax concessions for FDI but has export incentives (Goyal & Chai 2008).
<b>South Africa</b>	<p>Industrial development: South African government awards a tax allowance on new investments up to a maximum of R900 million. There is also a training allowance up to a maximum of R30 million per project. The allowances are deducted from taxable income (SADC 2014).</p>
<b>Swaziland</b>	<p>Industrial development: there is an annual allowance of 4% of the total cost of renovating or constructing an industrial building deducted from the total taxable income per annum. The 4% is in addition to the initial allowance of 50% allowed on newly constructed buildings or improvements, provided the building is for an industrial setup (SADC 2014).</p> <p>Hotels: enjoy an annual allowance of 4% on capital expenditure. This is in addition to the initial allowance of 50% on a new set-up.</p> <p>Employee housing: an initial 20% allowance can be claimed on building employee dwellings and an additional 10% for 8 years.</p> <p>Exporters: can claim deductions of up to 150% for expenditures on export products (SADC 2014).</p>
<b>Tanzania</b>	<p>Agriculture: capital allowance is 100%; withholding tax on interest on foreign sourced loans is 0%; withholding tax on dividends is 10%.</p> <p>Mining: capital allowance is 100% and residential and non-residential withholding tax on technical services is 3% (SADC 2014).</p> <p>An initial tax allowance of 50% is granted to businesses in farming, mining and tourism (NexiaSAB&amp;T 2014).</p>
<b>Zambia</b>	Industrial development: capital allowances on industrial buildings

	<p>used for the purposes of manufacturing shall be entitled to a deduction of 10% in case of low-cost housing and 5% for other industrial buildings, calculated on the cost of the building capital expenditure.</p> <p>Capital expenditure on an industrial building is entitled to an investment allowance at 10% of such expenditure in the first year used for manufacturing purposes (SADC 2014).</p> <p>Tourism: capital allowances at 50% of the cost of plant and machinery. Investment allowance at 10% of the cost of an extension to a hotel (being an industrial building). 10% initial allowance on an extension to a hotel (being an industrial building) in the year the building is first brought into use (SADC 2014).</p>
<b>Zimbabwe</b>	Tax-payer carrying trades at growth points enjoy a tax deduction of 15 % (SADC 2014).

Source: prepared by author from various cited sources.

Tax allowances and tax credits are used extensively in all SADC countries except Seychelles which only extends the incentive to the export sectors (as shown in Table 7). This is so because they may be easily applied to selected investments. Tax allowances are mainly extended to the industrial sectors of the SADC, because they are more effective than tax holidays in lowering the effective tax rate over a longer period.

Botswana and the DRC extend tax allowances to employment creation while Swaziland has tax allowances for employee housing. Thus, these tax incentives are for the social benefits of the population. In Zambia and Swaziland tax allowances are used in the tourism sector with emphasis on hotel construction, thus they are mainly capital allowances. SADC (2004) suggested that tax credits in the region be used to fulfil the double taxation treaties.

#### **6.3.4 Accelerated depreciation and tax loss relief**

Accelerated depreciation is calculated in accordance with the standard accounting procedures (Šimović & Žaja 2010). Thus, tax loss relief is more dominant in developing countries than the accelerated depreciation which is complex to operate. Bolnick (2004) suggests that the pattern and depreciation rate is not known and arbitrary. However, the straight line method is

commonly used on assets over a long period of time. Bolnick (2004) proposes the use of the declining balance model as the standard in their tax code and conclude that a write-off which is faster than the declining balance model can be considered as a tax incentive.

**Table 8: Accelerated depreciation and tax loss relief**

Country	Accelerated depreciation & method	Tax loss relief
Angola	Depreciation of fixed assets for tax reduction is done using the straight line method (NexiaSAB&T 2014).	Losses incurred are carried forward for tax purposes for 3 years (NexiaSAB&T 2014).
Botswana	To cushion companies whose business is capital intensive, 100% of the mining capital expenditure made in the year in which such expenditure was incurred is allowed as a deduction from the assessable income of the business (SADC 2014).  Agriculture: with regard to farming, any works of a capital nature that are incurred in the development of farming business is claimable in the year in which that expenditure is incurred (SADC 2014).	Unlimited carry forwards of losses (SADC 2014).
DRC	The holder of mining rights is allowed to apply an accelerated depreciation method where 60% of the cost prices of permanent assets are deducted, from the first year, on condition, however, that it was about tied-up capital whose service life is at least 4 years and at most 20 years (SADC 2014).  Investments in socio-economic infrastructure such as schools, hospitals, sports installations and roads, made in addition to the approved projects, are depreciable using the sliding scale method	

	(SADC 2014).	
Lesotho	<p>The depreciation is applied as follows:</p> <p>25% on automobiles, taxis, light general purpose trucks, tractors for use-over the road, special tools and devices.</p> <p>20% on office furniture, fixtures and equipment; computers and peripheral equipment and data handling equipment buses; heavy general purpose trucks; trailers and trailer mounted containers; construction equipment.</p> <p>10% on any depreciable asset not included in another group.</p> <p>5% on railroad cars and locomotives and railroad equipment; vessels, barges, tugs and similar water transportation equipment; industrial buildings; engines and turbines; public utility plants (SADC 2014).</p>	
Madagascar	Offers various deductions and allowances under accelerated depreciation (Deloitte 2014).	Losses are carried forward for five years (Deloitte 2014)
Malawi	Accelerated depreciation is done as an outright deduction of certain capital costs (SADC 2014).	Losses carried forward up to seven years (Nsiku 2013).
Mauritius	Accelerated depreciation is on acquisition of new plant and machinery in industrial growth and development. 100% accelerated depreciation rate in the first year for aircraft companies (Ocroworldwide 2014)	Losses are carried forward for 5 years (Deloitte 2014).
Mozambique	New buildings enjoy accelerated depreciation as tax benefits for investment (SADC 2014).	Resident companies are allowed to carry forward capital losses for 5 years (NexiaSAB&T 2014).

Namibia	No depreciation is allowed for taxation in Namibia (Hills 2013).	
Seychelles	<p>Accelerated depreciation on new investment is applied as follows:</p> <p>Industrial and manufacturing, small scale industries and tourism development, year 1 is 45%, year 2 is 40%, year 3 is 30%, year 4 is 25% and year 5 is 10%.</p> <p>Agricultural and marine resources investment and professional services, year 1 is 45%, year 2 is 40%, year 3 is 20% year 4 is 15% and year 5 is 5% (SADC 2014).</p>	
South Africa	EPZ: Companies under EPZ enjoy accelerated depreciation allowances (SADC 2014).	Losses are carried forward to the next year in the trade industry (NexiaSAB&T 2014).
Swaziland	<p>A 50% allowance is given on the cost of machinery used in manufacturing in addition to deductions of wear and tear; this is also extended to infrastructural development (SADC 2014).</p> <p>The other accelerated depreciation is under tax holidays for new investments in the manufacturing sector where 150% of the tax written down value of fixed assets at the year-end owned and employed by such business is removed from CIT (SADC 2014).</p>	
Tanzania	<p>Wear and tear: this applies to capital used for business and the accelerated depreciation applies as follows:</p> <p>Class I: Heavy, self-propelled machinery calculated at 37.5% per annum.</p> <p>Class II: Light, self-propelled machinery</p>	<p>Agriculture: losses are carried forward for 5 years.</p> <p>Mining: losses are carried forward for an unrestricted period.</p>

	including aircraft is calculated at 25% per annum.  Class III: Non self-propelled machinery including ships is calculated at 12.5% per annum (SADC 2014).	Economic infrastructure: losses are carried forward for 5 years (SADC 2014).
Zambia	Normal wear and tear deductions apply (SADC 2014).	
Zimbabwe		Export development expenditure gets a 15% deduction during exploration. Losses in manufacturing are carried forward to the following year (NexiaSAB&T 2014).

Source: Prepared by author from various sources cited.

Table 8 shows that accelerated depreciation is more widely used in the SADC region than tax loss relief. The period allowed for losses to be carried forward ranges from one year to an unlimited period. Botswana and Tanzania offer mining sector investments unlimited time to carry losses incurred forward. Zimbabwe and South Africa's trade industry have one-year losses carried forwards while Madagascar, Mozambique and Tanzania in their agriculture and financial infrastructure have five-year losses carried forward. Losses carried forward are common in the mining sector which attracts huge capital in the initial set-up period thus government should allow losses carried forward to be offset by future profits (SADC 2004).

Namibia and Zimbabwe do not have accelerated depreciation while many sectors in Lesotho, Tanzania and Seychelles do, in order to attract FDI.



#### **6.4 Challenges faced by SADC countries in operating tax incentives**

Tax policies across the world are an important for ensuring fiscal stability. Tax incentives fall into the tax policy category and thus their design and implementation are constrained by the need to achieve best tax policy practices by nations. Zee, Stotsky and Ley (2002) argue that the increased use of tax incentives in developing countries reduces tax revenue; this has affected effective implementation of tax incentives especially in the SADC. This is so because in most SADC countries corporate income tax is a major source of revenue in the wake of high unemployment rates in the region.

The other major challenge in SADC member states in tax incentives design and implementation is the need to achieve cooperation in economic policy operation in the region including tax cooperation and macroeconomic convergence (Chipeta & Schade 2007). The SADC memorandum of understanding (MOU) of 2002 sought to achieve cooperation in taxation issues. It requires that countries design their tax incentives with set requirements. The requirements include avoiding harmful tax competition, avoiding policies that prejudice another member state's economic policies, activities or the regional mobility of goods, services, capital or labour (SADC 2002). Thus, the need to achieve tax cooperation in the region has limited the application of tax incentives by member states. This has been successful especially in the mining sector where tax incentives in the SADC countries are in the same range showing that there is no competition for foreign capital (Mthega & Oshokoya 2011).

The implementation of most tax incentives in the SADC has been affected by the lack of political will which is largely the result of earlier attempts to use tax incentives in FDI attraction to EPZ areas. The Development Policy Research Unit (2000) reports that most SADC countries sought to attract FDI to the export sector using the EPZ concept which was a monumental failure in all countries except Mauritius.

Governments in the SADC have also been under pressure from their citizens to give priority to local businesses over foreign businesses. In Zimbabwe, the indigenisation law has made the application of tax incentives to FDI difficult as it requires locals to own 51% shares in all investments that exploit natural resources. In Zambia, the state participation in the mining sector is huge which affects the entry of foreign firms to the industry. In South Africa and

Namibia there are Black Economic Empowerment (BEE) policies which encourage increased participation of the indigenous black majority in economic activities.

We have seen that the SADC countries face challenges in administering and implementing tax incentive policies effectively. Table 9 below will discuss implementation challenges individual SADC countries face in operating tax incentives laws. Information on these challenges is not publicly available but the facts in Table 9 indicate the extent of the challenges.

Zee, Stotsky and Levy (2002) identify three pillars that guide the successful use and implementation of tax incentives which are: their objectives, cost effectiveness and transparency. An analysis of these challenges will be conducted according to the conditions countries face in operating the tax incentives which limit the ability to achieve these conditions especially transparency in administration of tax incentives and cost effectiveness. The aforementioned pillars assist governments in amassing the maximum benefits from tax incentives in terms of minimising loss in revenue by lowering tax rates and at the same time attracting more investment.

**Table 9: Individual SADC country challenges in implementing tax incentives**

<b>Country</b>	<b>Bottlenecks in implementation of tax incentives</b>
<b>Angola</b>	<p>Conflicting objectives: whilst the Angolan government prioritises incentives that attract FDI, the need to increase no-oil revenue has affected the implementation of tax incentives (Fjeldstad, Jensen &amp; Orre 2012). Furthermore, the tax base is under developed and there is an over reliance on tax revenue by government (Anderson 2013).</p> <p>Procedure: the effectiveness of tax incentives in Angola is affected by the cumbersome procedures of obtaining licences which lead to red tape and corruption (Fjeldstad, Jensen &amp; Orre 2012). Angola is rated 172 out of 185 in the 2013 Doing Business Report (World Bank 2013), indicating</p>

	<p>that starting business operations in Angola is a challenge.</p> <p>The Angolan National Agency for Private Investment (ANIP): the agency has the discretion to offer tax incentives to investments that are considered to have high economic and social impact (United States Department of State 2014). This exposes the process to corruption since those with the discretion to offer incentives can demand bribes before they process the benefits.</p>
<b>Botswana</b>	<p>Botswana is a success story in tax incentive administration with the lowest tax rate of 19.5% in Sub-Saharan Africa where the average was 68% in 2012 (AfDB 2012). The implemented tax incentives in Botswana are: a lowered CIT rate of 15% on profit; tax exemption on withholding tax on interest, VAT, capital gains tax, dividends, management fees and royalties paid to a non-resident, and a 200% tax training rebate (AfDB 2012). Botswana is one of the SADC countries that has strong institutions and has implemented tax incentives successfully (KPMG International 2012).</p> <p>Corruption in Botswana is very low due to restrictive legislation and also government employees are paid on time and a living wage. This helps in maintaining efficient administration and the implementation of tax incentives (KPMG international 2012).</p>
<b>DRC</b>	<p>The major challenge in the DRC is a shortage of institutions to govern tax incentives (Fossat &amp; Bua 2013). Investors who wish to benefit from tax incentives apply to the National Agency for Investment Promotion (ANAPI) who then submits the application to the Ministry of Finance and Planning (KPMG 2014). This creates red tape in tax incentive applications and thus investors will not easily benefit. The DRC also has a weak public sector tax monitoring and design unit which renders the tax system complex and opaque (AfDB 2013).</p>

<b>Lesotho</b>	Lesotho is one of the SADC countries that has well organised structures for FDI attraction. The Lesotho National Development Corporation (LNDC) is responsible for designing policies to attract investment. The US Department of State (2010) reports that public sector corruption, including bribery of public officials, remains a minor challenge for US firms operating in Lesotho. The strong anti-corruption legislation has helped the efficient operation of tax policies. However, Lesotho has institutional constraints in the management of fiscal issues (AfDB 2008).
<b>Madagascar</b>	Madagascar is reported to have a weak tax administration which affects revenue collection and incentives implementation (IMF 2007). Corruption is high in Madagascar and tax administration is one of the areas with high corruption which limits the effectiveness of tax incentive implementation (US Department of State, 2014).
<b>Malawi</b>	The implementing agents of tax incentives in Malawi are ministries that administer the sectors (Nsiku 2013). This creates red tape and corruption in tax administration and there is a need to centralise the system for uniformity in tax incentives application. The US Department of State (2014) notes that tax incentives in Malawi which are based on the principle of spending first and claiming later are hardly beneficial due to an inefficient public service and corruption in tax administration.
<b>Mauritius</b>	Investments enjoy a lowered CIT rate in Mauritius and firms with a Global Business Licence are exempt from taxation to avoid double taxation (Moore Stephens International 2014). Mauritius has vibrant institutions to manage foreign investments and is one of Africa's success stories in FDI attraction using EPZs (Moore Stephens International 2014). The Doing Business Report ranks Mauritius 1 <sup>st</sup> in Africa and 20 <sup>th</sup> in the world on ease of doing business (World Bank

	2014).
<b>Mozambique</b>	There are accountability challenges in the management of tax incentives which limit their effectiveness (Fjeldstad and Heggstad 2011). Institutional capacity to implement tax incentive policies is constrained and the multiplicity of investment agencies with overlapping roles also present a challenge (OECD 2013).
<b>Namibia</b>	The implementation of tax incentives is affected by the government objective to broaden the tax base (IMF 2013). Tax incentives in Namibia are constrained by the fact that tax revenue is the main source of revenue to the government (AfDB 2014). Thus, Namibia has one of the highest corporate tax rates (over 30%) in the SADC (AfDB 2014). The public administration in Namibia has skills shortages and there is excessive bureaucracy which affects policy implementation and administration (Odhiambo & Honde 2014).
<b>Seychelles</b>	Seychelles is one of the SADC countries with strong institutions to allow FDI into the country. The US Department of State (2014) notes that Seychelles investment policies encourage development of infrastructure and exploitation of natural resources in an environmentally friendly manner. The Seychelles economy depends heavily on fisheries and tourism and the tax incentive structures in these sectors are well designed under the Fisheries Incentives Act and the Tourism Incentives Act (US Department of State 2014).
<b>Swaziland</b>	Swaziland is beset with the problem of fiscal imbalances which has over the years constrained the nation's fiscal space hence the need to improve the revenue base (Basdevant, Forrest & Mircheva 2013). This affects the wide application of tax incentives. High levels of corruption in Swaziland also impact on their overall investment

	<p>performance (KPMG 2012). The performance and implementation of tax incentives is ineffective with a corrupt bureaucracy (OECD 2011).</p>
<b>South Africa</b>	<p>There is a heavy tax burden on investors hence low FDI in South Africa (Kransdorff 2010). The problems in implementing tax incentives are caused by a confusing large number of implementing agents which include: National Treasury, Department of Trade and Industry, South African Revenue Services and a number of semi-autonomous government agencies such as Khula, Industrial Development Corporation, National Research Foundation and International Trade Administration Commission (Kransdorff 2010).</p> <p>The Black Economic Empowerment Act (2003, 2007) which seeks to improve black population participation in the economy also reduces the effective implementation of FDI attraction incentives (Tuomi 2011).</p> <p>Bureaucracy and lack of political will to implement policy changes are just some of the factors investors identified as affecting the South African tax system (Tuomi 2011).</p>
<b>Tanzania</b>	<p>Tanzania offers many tax incentives but faces challenges in establishing administration and evaluation institutions (Ndunguru 2012). Tanzania also has an agreement in the East African Block to prevent the problem of ‘race to the bottom’. Their tax incentive implementation is thus constrained by the dictates of the agreement. Tax incentives are also awarded using discretion which promotes corruption (Ndunguru 2012). However, there are efforts to ensure simplicity of tax incentive application to avoid the abuse of the system (UNCTAD 2011).</p> <p>Tax incentives are also poorly managed and in 2010, tax incentives were estimated to account for 6% of GDP (Fjeldstad &amp; Heggstad 2011). This has exposed the tax</p>

	<p>system to manipulation by large organisations who benefit from tax incentives for which they do not qualify.</p>
<b>Zambia</b>	<p>The Zambian Development Agency (ZDA) Act provides for the formulation and implementation of tax incentives in Zambia thus there has been relative success in their use (NEPAD/OECD, 2011). However, Zambia in its annual budget presentations shows that there are substantial revenue losses emanating from tax incentives implementation (NEPAD/OECD 2011). Companies which have investment licences go through cumbersome procedures to be granted the tax incentives. There is also lack of coordination between the ZDA and the Zambian Revenue Authority (ZRA) in tax incentives administration which makes their implementation difficult (NEPAD/OECD 2011). Tax administration is weak in Zambia due to breakdown in authority which weakens their efficiency (Fjeldstad and Heggstad 2011).</p> <p>The ZDA Act provides for a lengthy bureaucratic process which includes two tedious steps to firms that qualify for tax incentives (OECD 2011).</p>
<b>Zimbabwe</b>	<p>The major drawback in tax incentive implementation in Zimbabwe is its investment policy that requires 51% local ownership of business investments by locals. The Zimbabwean tax implementing agent, the Zimbabwe Revenue Authority (ZIMRA), is weak and there is corruption in its operations (African Forum and Network on Debt and Development (AFRODAD) 2011).</p> <p>Zimbabwe has experienced a long period of economic meltdown since the late 1990s. This has affected the modernisation of ZIMRA hence its inefficiency. There are also widespread tax distortions in the use of tax incentives (Kramarenko, Engstrom, Verdier, Fernandez, Oppers &amp; Hughes 2010).</p>

Table 9 shows that the major problem faced by SADC countries in implementing tax incentives emanates from the poor institutional set-up. Therefore, there is need for institutional reforms in tax administration if the full benefits of lowering the tax rate are to be enjoyed.

The conflicting objectives of increasing tax revenue and offering tax incentives is also a major challenge in the region. This requires governments to seek ways of increasing their tax bases so that they will be able to implement tax incentives without losing revenue.

## **6.5 Summary and conclusions**

The chapter has shown that there are many tax incentives available to countries who wish to attract FDI. The incentives range from the commonly used tax holidays in developing countries to complicated accelerated depreciation and enhanced deductions used in industrialised countries. Tax allowances and tax credit are also widely used tax incentives to target sectors that face revenues losses. Reduced CIT in specific sectors is favoured due to its simplicity in application. There are also a large number of incentives common to developing countries such as exemptions from VAT payment, import duties and withholding taxes. Some incentives are specific to an economic sector such as, exemption of taxes on the export sector such as the EPZ industry, and tax exemptions on foreign currency earning. This study has shown that most of the tax incentives occur in sectors of the economy that have trickle-down effects to many sectors of the economy. Government thus deems these sectors as strategic for economic development.

SADC countries use many forms of tax incentives to attract of FDI as evidenced by the most recent tax statistics from the SADC database and other institutions reviewed. Although it is standard practice for tax holidays to dominate in developing countries, most of the SADC countries still offer the different tax incentive mixes with accelerated depreciation and tax credits and allowances used in most countries.

Though tax incentives in the SADC are used in the bid for FDI attraction, their application faces a number of challenges. Most of the challenges are concentrated around the implementation of tax incentives due to issues such as: corruption, lack of resources to administer taxes, skills shortages and bureaucratic procedures in claiming the benefits.



Government intervention in the form of government mines and indigenisation policies in the SADC mining sector also hampers the effective application of tax incentives to lure foreign capital. The Cooperation in the mining sector has also reduced its use of tax incentives.

Therefore, given the wide use of tax incentives in the SADC it is important that this study empirically establish their usefulness in attracting FDI.

## CHAPTER 7

### THEORETICAL FRAMEWORK, METHODOLOGY AND DATA ANALYSIS

#### 7.1 Introduction

This chapter provides an analysis of the theoretical framework, methodology and data used in arriving at conclusions on tax incentive effects in attracting FDI. The theoretical foundations of the model used in this study are described in section 7.2. Section 7.3 describes econometric methods employed in the study and their justifications. Data analysis is done in section 7.4 where derived variables that were employed in the study are discussed and section 7.5 concludes the chapter.

#### 7.2 Theoretical framework

The main objectives of this study are to establish the importance of tax incentives in determining the locational decisions of FDI in the SADC region and to establish other factors important in attracting FDI into SADC. The model includes all factors important in determining the final locational decision of foreign capital.

Most studies on FDI attraction in the host countries conclude that government policies are a major factor in FDI attraction (see Klemm et al. 2009; Shrestha & Onyeiwu 2005). The argument is that the instituted policies meant to attract FDI will ease the cost of doing business to investors and thus encourage their establishment in the host nation.

Theoretical and empirical literature on the determinants of FDI inflows in developing and developed countries points to policy and non-policy factors<sup>3</sup> (Mateev 2008). Policy variables are those that the government can influence directly such as: tax incentives, labour market regulations, trade policies, and infrastructure and governance policies. Non-policy variables are market size, political and economic stability and natural resource endowments.

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<sup>3</sup> The theoretical chapters 2, 3, 4, 5 and 6 give greater detail on these policies.

The study on factors that influence the locational decisions of MNEs using panel data has attracted various methodologies based on different theoretical underpinnings. The most prominent models are the gravity and Dunning's (1993) OLI models (Mateev 2008).

The theoretical model adopted in this study is the eclectic paradigm initiated by Dunning (1977, 1993). The model offers a conceptual framework for micro and macro level factors that influence an investor's decision on the final investment destination (Anyanwu 2011). The model suggests that firms invest abroad based on three types of advantages: ownership (O), location (L) and internalisation (I) thus it is also called the OLI paradigm.

The ownership advantage entails that a firm investing in a foreign market expects to compete with local firms in taking advantage of its peculiar benefits such as patent rights, expertise and intangible assets. The ownership advantage inspires the investors to exploit foreign markets and resources, overcoming the competitive disadvantage they face from local firms who enjoy better market knowledge (Dunning & Lundan 2008).

The locational advantages are those attributes the host nations have that makes it more attractive to investors than other destinations (Anyanwu 2011). The locational advantages include the macroeconomic environment of the host nation, government policies that enhance ease of doing business in an economy and the protection of property rights.

Internalisation arises from exploitation of international market imperfections by reducing uncertainties and transaction costs (Anyanwu 2011). Internalisation of costs generates knowledge efficiently there-by reducing government created costs such as exchange controls, trade tariffs and taxes. Dunning and Lundan (2008) further develop the OLI theory by identifying four broad motives that encourage multinational companies' foreign production.

The categories are natural resource-seeking FDI, market-seeking, efficiency-seeking and strategic asset-seeking FDI. Resource-seeking FDI is motivated by raw materials, physical infrastructure and labour force availability in the host nation (Anyanwu 2011). Market-seeking FDI looks at the host nation's market potential and seeks to expand its market influence by locating abroad. Efficiency-seeking FDI takes advantage of low labour costs in host markets to lower production costs and increase profits. Strategic asset-seeking FDI looks at gaining advanced technology, innovation and better production methods by establishing itself abroad.

An attempt to modify and improve the OLI paradigm was made by Guisinger (2001) in his evolved eclectic paradigm. The model makes two important improvements on the OLI model. Firstly, it added the 'M' factors to replace the 'I' factor in the OLI model; the 'M' factors represent the mode of entry. This action provoked research on various factors that influence the mode of entry investors choose to enter foreign markets (Stefanović 2008). Secondly, Guisinger (2001) added another group of factors, the 'A' group representing the firm's adaptation to operating in the international market. These 'A' factors consider the home country and the host country's institutional factors which determine the suitability of the investment environment.

In combining the tenets of this OLI theory Fedderke and Romm (2006) identify policy and non-policy factors that determine the locational decisions of MNCs. Policy factors are identified as those that governments can influence such as: tax rates, tax incentives, trade barriers, infrastructure, openness, product regulation and labour market regulations. Non-policy factors are identified amongst other factors, as: market size, and political and economic stability.

The OLI has largely been used to explain the locational decisions by firms and its analysis varies across regions, countries, industry and firms. This study has concentrated on the regional perspective, looking at locational FDI pull and push factors to establish policy factors that can help SADC countries in attracting FDI.

Dunning (1988) concludes that the locational advantages in FDI motivation determines where production must take place and is of paramount importance in this study. The locational advantages identify the peculiar characteristics of a location which makes it attractive such as: natural resources, market size, infrastructure, governance, legislation that support FDI, tax policies, exchange control policies, patent rights laws and licencing legislation.

Stefanović (2008) argues that most of the locational advantages that host nations have are economic factors, though in international business theory, political factors (focused centrally on institutional determinants) are gaining greater prominence. The focus on natural resources is shifting to man-made resources such as knowledge based assets, infrastructure and institutions of the host country.

The economic factors that have been prominent in attracting FDI are labour costs, natural resource availability, market size and growth, macroeconomic stability and openness to FDI and trade (Stefanović 2008).

Against this theoretical background, the study specifies the following theoretical models:

Model A

$$FDI = f(\text{hol}, \text{gov}, \text{mrkt}, \text{infr}, \text{natr}, \text{open}, \text{finG}, \text{EP}).$$

Model B

$$FDI = f(\text{CIT}, \text{gov}, \text{mrkt}, \text{infr}, \text{natr}, \text{open}, \text{finG}, \text{EP}).$$

Model C

$$FDI = f(\text{Lossescf}, \text{gov}, \text{mrkt}, \text{infr}, \text{natr}, \text{open}, \text{finG}, \text{EP}).$$

Model D

$$FDI = f(\text{RedcdCIT}, \text{gov}, \text{mrkt}, \text{infr}, \text{natr}, \text{open}, \text{finG}, \text{EP}).$$

*FDI* is the foreign investment component, *hol* are tax holidays, *CIT* is corporate income tax, *lossescf* are losses carried forward, *redcdCIT* is reduced CIT in specific sectors, *gov* is governance, *mrkt* represents market potential, *infr* is infrastructure index, *natr* are natural resource endowments, *open* is trade openness, *finG* is financial globalisation and *EP* is an index for economic policy.

Since tax incentive variables are highly correlated, for example, some of the incentives such as lower CIT, losses carried forward and investment allowances; they may be part of the package which falls under tax holidays. Therefore, the effects of each tax incentive are estimated in independent models. Model A will estimate tax holidays, model B - CIT, model C - losses carried forward and model D will estimate reduced CIT in specific sectors.

### **7.3 Econometric methodology**

The study estimates four panel data equations for each model, Panel 1 has the six highest resource-rich SADC countries according to the World Bank natural resource indicators, Panel 2 includes seven least resource-rich countries, Panel 3 consists of all the SADC countries except South Africa (which is an outlier in resource richness and growth) and Panel 4 includes all the SADC countries.

### 7.3.1 Panel data econometrics technique

This study adopts the panel data econometric technique. Hsiao (2005) defines panel data or longitudinal data as data containing time series observations recorded for a number of individuals. Frees (2004) states that panel data is a group of individual units surveyed repeatedly over time. Thus, the panel data series involve two dimensions: the cross-sectional component shown by the  $i$ -subscript and the time series dimension indicated by the  $t$ -subscript. The choice of panel data econometrics in giving robust conclusions on effects of tax incentives in attracting FDI for this study was inspired by the number of advantages the methodology poses.

The existence of two data measurement components in panel data econometrics (the time and cross-sectional dimensions) has led to several advantages for the method over time series and cross-sectional data analyses (Hsiao 2005). Panel data gives more accurate inferences of model parameters. This is due to the fact that panel data allows for more degrees of freedom and reduced variables multicollinearity. Baltagi (2005) argues that panel data also gives more information and is more efficient.

Panel data models thus enjoy the advantages of both time series and cross-sectional data models. Panel data models have the ability of the time series data to solve dynamic models. However, because time series data generally requires at least thirty observations to make reliable inferences, using the same model to draw conclusions of about an economic system is not reliable (Frees 2004). Panel data models overcome this by repeated time series observations from many individual units.

Panel data econometric techniques control for individual heterogeneity. Baltagi (2005) argues that panel data methods cater for the fact that individuals, firms or countries have heterogenous characteristics. Time series and cross-sectional data assumes individuals are homogenous and thus run a risk of giving biased results. Panel data models use observations of different subjects. In the case of this study, countries were modeled over time. The countries are heterogenous thus panel data is modeled differently from cross-sectional and time series data to cater for the heterogeneity (Frees 2004). This can be illustrated using this study's general model:

$$FDI_{it} = FDI_{i,t-1} + \alpha X_{it} + \beta Y_{it} + \lambda_i + \delta_t + v_{it} \dots \dots \dots 1$$

Where  $FDI_{it}$  is the foreign investment,  $X_{it}$  is a vector of tax incentive variables,  $Y_{it}$  is the vector of macroeconomic and social variables,  $\lambda_i$  captures any country-specific effects that are time-invariant,  $\delta_t$  captures specific year effects and  $v_{it}$  is the disturbance term, with  $i$  denoting countries (cross-country dimension), and  $t$  denoting years (time-series dimension). Thus  $\lambda_i$  is a subject specific parameter that controls for country heterogeneity. The panel data technique thus yields efficient results for a study on SADC countries with different characteristics.

Dynamic adjustment of economic variables is easy to study using panel data (Baltagi 2005). It helps to explain changes on long panel data models of economic states such as inflation, unemployment and economic growth. Panel data surveys, unlike time series and cross-sectional data surveys, yield data changes on individuals and households (Deaton 1995). Thus, this study benefits from these attributes due to the dynamic nature of tax incentive variables. The model allows us to see which economies benefit from tax incentives and how.

Panel data yields efficient estimators in omitted variable models (Wooldridge 2002). Panel data is useful in improving estimation results in models with misspecified, misused, mismeasured or unobservable variables which are correlated to the explanatory variables (Hsiao 2003). Panel data, in utilising the micro dynamics of a model and the individual effects of independent entities in the model, has a natural power to overcome the missing variable problem. This can be illustrated using a simple model:

$$FDI_{it} = \theta + \alpha' X_{it} + \beta' Y_{it} + \mu_{it}$$

Where  $FDI_{it}$  is the foreign investment,  $X_{it}$  and  $Y_{it}$  are  $k_1 \times 1$  and  $k_2 \times 1$  vectors of exogenous variables,  $\theta$ ,  $\alpha$  and  $\beta$  are  $1 \times 1$ ,  $k_1 \times 1$  and  $k_2 \times 1$  vectors of constants respectively. The error term  $\mu_{it}$  is independently and identically distributed with a zero mean and constant variance. The least squares regression of  $FDI_{it}$  on  $X_{it}$  and  $Y_{it}$  yields efficient estimators for,  $\theta$ ,  $\alpha$  and  $\beta$ . However, suppose that  $Y_{it}$  variables are unobservable and their correlation with  $X_{it}$  is nonzero. Then least square estimates of  $FDI_{it}$  on  $X_{it}$  are biased but repeated observations of the variables in a panel data model allows for the elimination of the effects of  $Y_{it}$ .

### 7.3.2 System GMM estimation

This study's panels have a small number of years (2004-2013), therefore efficient estimators are found using the Blundell and Bond (1998) SYS GMM estimator. Baltagi (2005) reports that there is a need to utilise the initial conditions in generating efficient estimators when using dynamic panel data estimation, given the small time series in the data. The estimation of dynamic panel data models, specified below in equations A-D, poses two major challenges using macroeconomic data (Okodua 2011). The first one is the existence of endogenous and predetermined covariates. The is that, there is a problem of autocorrelation and heteroskedasticity in dynamic panel data models due to the use of lagged dependent variable as an explanatory variable.

Due to the complicated nature of tax laws especially the complicated nature of formulating and implementing statutes, there is difficulty in changing tax laws. Thus tax rates and laws run for a long period before they are changed. Current tax law affect investment decisions and portfolio choice in an economy. This may in turn affect future tax law formulation which leads to dynamic endogeneity in the data. Thus, the observed cross-sectional differences in the countries' data are due to unobserved heterogeneity and country tax law history. Efficient estimators must therefore cater for country endogeneity to produce accurate estimators, hence the choice of the SYS GMM method.

Endogeneity in panel data analysis is solved by the choice of SYS GMM Estimator (Okodua 2011). Thus to estimate the relationship between tax incentives and FDI the study employs the SYS GMM Estimator to overcome the endogeneity problem.

The models took the form:

Model A

$$FDI_{it} = \phi FDI_{i,t-1} + \alpha_i hol + \beta_1 In\_gov + \beta_2 mrkt + \beta_3 inf\ r + \beta_4 In\_natr + \beta_5 In\_open + \beta_6 In\_finG + \beta_7 EP + \lambda_i + \delta_t + v_{it}$$

Model B

$$FDI_{it} = \phi FDI_{i,t-1} + \alpha_i In\_CIT + \beta_1 In\_gov + \beta_2 mrkt + \beta_3 inf\ r + \beta_4 In\_natr + \beta_5 In\_open + \beta_6 In\_finG + \beta_7 EP + \lambda_i + \delta_t + v_{it}$$

Model C





The focus is on initial conditions therefore it is assumed that  $\lambda_i$  and  $v_{it}$  are independently distributed across  $i$  and with the familiar error components structure in which:

$$E(\lambda_i) = 0, E(v_{it}) = 0 \text{ and } E(\lambda_i v_{it}) = 0 \text{ for } i = 1, \dots, N \text{ and } t = 2, \dots, T \dots\dots\dots 3$$

$$\text{Here } E(v_{it} v_{is}) = 0 \text{ for } i = 1, \dots, N \text{ and } \forall t \neq s \dots\dots\dots 4$$

$$\text{In addition, there is the standard assumption concerning the initial conditions } FDI_{i1}, E(FDI_{i1} v_{it}) = 0 \text{ for } i = 1, \dots, N \text{ and } t = 2, \dots, T \dots\dots\dots 5$$

Conditions 3, 4 and 5 imply that moment restrictions are sufficient to identify and estimate  $\phi$  for  $T \geq 3$ .

The SYS GMM estimator proposed by Blundell and Bond (1998) is considered to utilise all moment ( $m_d$ ) conditions for the difference (DIF) GMM estimator and a non-redundant subset of the moment conditions for the level equation (Sun & Ashley 2014). In the absence of further restrictions, the autoregressive model in equations 2-5 implies that  $m_d = 0.5(T-1)(T-2)$ , being orthogonality conditions linear in the parameter  $\phi$  with a condition that:

$$E(FDI_{i,t-s} \Delta v_{it}) = 0, \text{ for } t = 3, \dots, T \text{ and } s \geq 2 \dots\dots\dots 6$$

Where  $v_{it} = v_{it} - v_{it-1}$ , here the model assumes that there is no serial correlation in the time varying error term  $v_{it}$ . Combined with the model restriction in equation 5, the moment restriction in equation 6 can be expressed as  $E(Z_i' \bar{u}_i) = 0$ . Here  $Z_i$  is the  $(T-2)m_d$  matrix given by omitting the  $i$  subscripts.

$$Z_i = \begin{bmatrix} FDI_1 & 0 & 0 & \dots & 0 & \dots & 0 \\ 0 & FDI_1 & FDI_2 & \dots & 0 & \dots & 0 \\ \cdot & \cdot & \cdot & \dots & \cdot & \dots & \cdot \\ 0 & 0 & 0 & \dots & FDI_1 & \dots & FDI_{T-2} \end{bmatrix}$$

$\bar{u}_i$ , is the  $(T-2)$  vector  $(\Delta v_{i3}, \Delta v_{i4}, \dots, \Delta v_{it})'$ .

The GMM estimator constructed from the moment conditions above minimises the quadratic distance  $(\bar{u}' Z' A_N Z' \bar{u})$  for some metric  $A_N$ , where  $Z'$  is the  $m \times N(T-2)$  matrix  $(Z'_1, Z'_2, \dots, Z'_N)$  and  $\bar{u}'$  is the  $N(T-2)$  vector  $(\bar{u}'_1, \bar{u}'_2, \dots, \bar{u}'_N)$ . This gives the GMM estimator for  $\phi$  as:

$$\phi_{dif} = (\overline{FDI}'_{-1} Z' A_N Z' \overline{FDI}_{-1})^{-1} \overline{FDI}'_{-1} Z' \overline{FDI}_{-1} \dots \dots \dots 7$$

Where  $\overline{FDI}'_i$  is the  $(T-2)$  vector  $(\Delta FDI_{i3}, \Delta FDI_{i4}, \dots, \Delta FDI_{iT})$ ,  $\overline{FDI}'_{i,-1}$  is the  $(T-2)$  vector  $(\Delta FDI_{i3}, \Delta FDI_{i4}, \dots, \Delta FDI_{iT-1})$ , and  $\overline{FDI}$  and  $\overline{FDI}_{-1}$  are stacked across individuals in the same way as  $\bar{u}$ .

Alternative choices for the weights  $A_N$  give rise to a set of GMM estimators based on the moment conditions in equation 6, all of which are consistent for large  $N$  and finite  $T$ , but which differ in their asymptotic efficiency. In general the optimal weights are given by:

$$A_N = \left( N^{-1} \sum_{i=1}^N Z'_i \hat{u}_i \hat{u}'_i Z_i \right)^{-1}, \text{ where } \hat{u}_i \text{ are residuals from an initial consistent estimator. This is}$$

referred to as the two-step GMM estimator. In the absence of any additional knowledge about the process for the initial conditions, this estimator is asymptotically efficient in the class of estimators based on the linear moment conditions.

Using STATA 12 software the results are derived from the one-step with Windmeijer (2005) corrections (Roodman 2009). The post estimation Sargan test is used to determine the validity of instruments.

### 7.3.3 Justification of techniques

This section justifies the use of the SYS GMM estimator adopted by this study to solve the possible endogeneity problem that could arise in a dynamic panel data model. In order to justify the methods used, all possible panel econometric methods and their shortcomings are analysed. There are basically five panel econometric estimators that can be used to estimate the models used in this study, namely: pooled ordinary least squares (OLS) estimation, fixed and random effects, DIF GMM, level GMM and SYS GMM estimators.

### 7.3.3.1 Pooled OLS estimation

The model is of the basic form  $FDI_{it} = \alpha_{pool} X_{it} + \beta_{pool} Y_{it} + \mu_{it}$ .....8

Where  $FDI_{it} = (FDI_{i1}, \dots, FDI_{it})'$ ;  $X_{it} = (FDI_{i,t-1}, X_{1t}, \dots, X_{kt})$ ;

$Y_{it} = (Y_{1t}, \dots, Y_{kt})$ ;  $\alpha_{pool} = (\alpha_1', \dots, \alpha_k')$ ;  $\beta_{pool} = (\beta_1', \dots, \beta_k')$  and  $\mu_{it} = (\mu_{i1}, \dots, \mu_{it})$

The estimates of coefficients  $\alpha_s$  and  $\beta_s$  are obtained using pooled OLS regression which makes the following orthogonality assumptions:  $E(X_i \mu_i) = 0$ ;  $E(Y_i \mu_i) = 0$

Therefore  $E[X_i'(FDI_i - X_i \alpha_{pool})] = 0$ ;  $E(X_i' X_i) \alpha_{pool} = E(X_i' FDI_i)$ ;  $\alpha_{pool} = E[X_i' X_i]^{-1} E(X_i' FDI_i)$ .

The pooled OLS estimator is calculated as:  $\hat{\alpha}_{pool} = \left( N^{-1} \sum_{i=1}^N X_i' X_i \right)^{-1} \left( N^{-1} \sum_{i=1}^N X_i' FDI_i \right)$ .....9

In estimation of dynamic panel data models the pooled OLS estimator faces two major shortcomings (Chen 2014). Firstly, the model suffers an inconsistency problem in dealing with dynamic models due to correlations between explanatory variables and the errors:

$p \lim \alpha_{pool} = \alpha_{pool} + \text{cov}(X_i \mu_i) / \text{var}(X_i)$  ; If  $\text{cov}(X_i \mu_i) \neq 0$  then the endogeneity problem emerges, with probability limits failing to approach the true value that is  $p \lim \hat{\alpha}_{pool} - \alpha_{pool} \longrightarrow 0$ .

Secondly, there is the problem of asymptotic bias in pooled OLS estimation (Baltagi 2005).

That is:  $p \lim \left( \hat{\alpha}_{pool} - \alpha_{pool} \right) = (1 - \alpha) \frac{\delta_\eta^2 / \delta_v}{\delta_\eta^2 / \delta_v^2 + k}$ , with  $\frac{1 - \alpha}{1 + \alpha}$ ,  $\delta_\eta^2 = E(\eta_i^2)$ ; therefore the estimator

becomes biased upwards, with  $\alpha < p \lim \left( \hat{\alpha}_{pool} \right) < 1$ .

### 7.3.3.2 Fixed and random effects estimations

These allow for individual specific effects to be captured (Cameron & Trivedi 2005). The model takes the form  $FDI_{it} = \tau_i + X_{it}' \alpha + Y_{it}' \beta + \mu_{it}$ .....10.

Where  $\mu_{it} \sim IID$  over  $i$  and  $t$ ;  $\tau_i$  are random variables which shows unobserved heterogeneity.

When  $\tau_i$  is treated as a random variable potentially correlated with the regressors, then the model is a fixed effects model. Alternatively, when  $\tau_i$  are random variables independently distributed from the regressors then the model is a random effects model with the following additional assumptions:  $\tau_i \sim [\tau, \delta_\tau^2]$  and  $\mu_{it} \sim [0, \delta_\mu^2]$ .

The fixed effects estimator  $\delta_{FE}$  can be performed using the least square dummy variables method. The model, however, suffers similar shortcoming to the pooled OLS estimator when dealing with dynamic panel models (Chen 2014). According to Arellano and Bond (1991) it is the endogeneity problem that leads to inconsistencies in estimators.

There is also the problem of asymptotic bias (Arellano & Bond 1991) shown by:

$$p \lim \left( \hat{\delta}_{FE} - \delta_{FE} \right) = - \frac{\frac{1 + \delta_{FE}}{T-1} \left[ 1 - \frac{1}{T} \frac{1 - \delta_{FE}^T}{1 - \delta_{FE}} \right]}{1 - \frac{2\delta_{FE}}{(1 - \delta_{FE})T - 1} \left[ 1 - \frac{1}{T} \frac{1 - \delta_{FE}^T}{1 - \delta_{FE}} \right]}; \text{ Therefore when } \delta_{FE} > 0, p \lim \delta_{FE} < \delta_{FE} .$$

### 7.3.3.3 Difference (DIF) GMM estimation

Arellano and Bond (1991) pioneered the model with an argument that additional instruments can be obtained in dynamic panel data models by utilising the orthogonality properties that exist between lagged values of the dependent variable  $FDI_{it}$  and the error term  $v_{it}$ . To illustrate this Baltagi (2005) autoregressive model without regressors is adopted. The model takes the form:  $FDI_{it} = \phi FDI_{it-1} + \mu_{it} \dots\dots\dots 11. i = 1, \dots\dots\dots, N; t = 1, \dots\dots\dots, T .$

Where  $\mu_{it} = \lambda_i + v_{it}$  with  $\lambda_i \sim IID(0, \delta_\lambda^2) \dots\dots\dots 11.1.$

To obtain consistent estimates of  $\phi$  as  $N \rightarrow \infty$  with  $T$  fixed Arellano and Bond (1991) proposed first differencing to eliminate individual effects.

$$FDI_{it} - FDI_{i,t-1} = \phi(FDI_{i,t-1} - FDI_{i,t-2}) + \mu_{it} - \mu_{i,t-1} \dots\dots\dots 12$$

The model assumes that  $\mu_{it}$  components have the familiar assumptions that:

$$E(\lambda_i) = 0, E(v_{it}) = 0, E(\lambda_i v_{it}) = 0 \text{ for } i = 1, \dots\dots\dots, N \text{ and } t = 2, \dots\dots\dots, T \dots\dots 12.1$$

$$\text{And } E(v_{it} v_{is}) = 0 \text{ for } i = 1, \dots\dots\dots, N \text{ and } \forall t \neq s \dots\dots\dots 12.2$$

There is a further assumption regarding the initial conditions of the dependent variable that  $E(FDI_{it}v_{it})=0$  for  $i=1, \dots, N$  and  $t=2, \dots, T$  .....12.3

The conditions (12.1), (12.2) and (12.3) ensure that the model estimates  $\phi$  for  $T \geq 3$ .

Without any further restrictions on the conditions determining the initial conditions, the autoregressive component model (11)-(12.3) imply orthogonality condition  $m_d = 0.5(T-1)(T-2)$  linear in  $\phi$  (Blundell, Bond & Windmeijer 2012).

$$E(FDI_{i,t-s}\Delta\mu_{it})=0. \text{ For } t=3, \dots, T \text{ and } 2 \leq s \leq t-1 \dots\dots\dots 13$$

Where  $\Delta\mu_{it} = \mu_{it} - \mu_{it-1}$ . Here the model assumes the absence of serial correlation in the time varying disturbance term  $v_{it}$ , together with the restriction (12.3). The moment restriction (13) can be expressed as  $E(Z'_{di}\Delta u_i)=0$ , where  $Z_{di}$  is the  $(T-2) \times m_d$  matrix given by

$$Z_{di} = \begin{bmatrix} FDI_{i1} & 0 & 0 & \dots & 0 & \dots & 0 \\ 0 & FDI_{i1} & FDI_{i2} & \dots & 0 & \dots & 0 \\ \cdot & 0 & 0 & \dots & 0 & \dots & 0 \\ 0 & 0 & 0 & \dots & FDI_{i1} & \dots & FDI_{iT-2} \end{bmatrix}, \text{ And } u_i \text{ is the } (T-2) \text{ vector of}$$

$(\Delta u_{i3}, \Delta u_{i4}, \dots, \Delta u_{iT})'$ . The GMM estimator based on the conditions above minimises the quadratic distance  $\Delta u' Z_d W_N Z_d' \Delta u$  for some metric  $W_N$ , where  $Z_d'$  is the  $m_d \times N(T-2)$  matrix  $(Z'_{d1}, Z'_{d2}, \dots, Z'_{dN})$  and  $\Delta u'$  is the  $N(T-2)$  vector  $(\Delta u'_1, \Delta u'_2, \dots, \Delta u'_N)$ . Thus the model calculates the GMM estimator for  $\phi$  as:

$$\hat{\phi}_d = (\Delta FDI'_{-1} Z_d W_N Z_d' FDI_{-1}) \Delta FDI'_{-1} Z_d W_N Z_d' FDI_{-1}, \text{ where } \Delta FDI'_i \text{ is the } (T-2) \text{ vector } (\Delta FDI_{i3}, FDI_{i4}, \dots, FDI_{iT}), \Delta FDI'_{i,-1} \text{ is the } (T-2) \text{ vector } (\Delta FDI_{i3}, FDI_{i4}, \dots, FDI_{iT-1}),$$

in addition  $\Delta FDI$  and  $\Delta FDI_{-1}$  are stacked across individual cross-sections the same way as  $\Delta u$  (Blundell, Bond & Windmeijer 2012).

The DIF GMM estimator may yield a large bias and poor precision in simulation and empirical work (Chen 2014). Blundell and Bond (1998) point out that the bias in DIF GMM estimator emanates from the fact that lagged levels of variable series provide weak instruments in the first differenced variables under the following conditions. First, the value of  $\phi$  the autoregressive parameter increases towards one and second, when the variance of the

individual effect  $\eta_i$  increases relative to the variance of the error term  $\nu_{it}$ . These shortcomings in the estimators thus led to the introduction by Blundell and Bond (1998) of the SYS GMM estimator.

The existence of weak instruments in the difference-GMM estimator prompted us to choose the SYS GMM estimator. This is because weak instruments cause an increase in variance of estimates asymptotically which leads to small sample bias (Vieira & MacDonald 2012). The system GMM estimator developed by Arellano and Bover (1995) and Blundell and Bond (1998) is meant to counter the weaknesses of the DIF GMM by Arellano and Bond (1991). The SYS GMM model is a system of regression in differences and in levels. The SYS GMM model uses lagged levels of explanatory variables as instruments for the regression model in differences and lagged differences of explanatory variables as instruments for the model in levels (Vieira & MacDonald 2012). The instruments are efficient under the assumptions of the model though there may be existence of correlation between levels of explanatory variables and cross-section specific effects, with no correlation of the explanatory variables and the cross-section specific effects in differences (Vieira & MacDonald 2012).

#### **7.3.3.4 SYS GMM estimation**

As described above, the SYS GMM estimator has a number of advantages which are discussed in this section.

Dynamic panel data econometric methodology is the method most suited to this model since it has the lagged dependent variable as one of the explanatory variables. This methodology is important in solving models where unobserved variables affect both the dependent variable and the independent variables and also where some independent variables depend on the past values of the dependent variables (Baltagi 2005).

The dynamic panel data model has three estimation techniques. The first one is the Arellano and Bond (1991) first difference GMM, the second one is the Arellano and Bover (1995) level GMM estimator and, finally, the third is the SYS GMM estimator pioneered by Blundell and Bond (1998). The SYS GMM estimator combines the moment conditions of the first two estimators thus it is the most efficient estimator (Youssef, El-sheikh & Abonazel 2014).

Estimation of dynamic panel data models proposed by Arellano and Bond (1991) is based on first differencing the model to remove unobserved heterogeneity and to make use of the moment conditions in situations where endogenous differences of variables are instrumented by their lagged level (Sun & Ashley 2014). This became the widely used Arellano-Bond estimator or first difference (DIF) GMM estimator.

The DIF GMM estimator, however, was identified by Ahn and Schmidt (1995) as having a number of shortcomings. Firstly, its inability to utilise all available moment conditions was found to be a weakness in its ability to produce reliable results. Secondly, it has poor finite sample properties in highly autoregressive models that have a small time series component, as in this study's model (Blundell & Bond 1998). To overcome the weaknesses of the DIF GMM estimator, the SYS GMM estimator was proposed by Blundell and Bond (1998). This method incorporates extra moment conditions from the equation in levels. This method is popular in a finite sample with small time series models and so this method was chosen for this research.

The SYS GMM estimator also allows for more explanatory variables to be used without worries about the endogeneity problem (Chen 2014). The SYS GMM estimator removes the bias caused by weakened instruments in DIF GMM estimation. The bias in the DIF GMM estimator emanates from variations in data and is corrected through getting the level data back into the regression system in the SYS GMM estimator (Chen 2014). Blundell and Bond (1998) conclude that finite sample bias in DIF GMM estimator is corrected using the SYS GMM estimator.

The use of SYS GMM estimator in dynamic models is also empirically supported by Klemm and Van Parys (2009) in a study that estimates four panel data model types namely: Ordinary Least Squares (OLS), within groups, DIF GMM and SYS GMM. The results show that SYS GMM is the model that produces consistent results. This is also confirmation that dynamic panel models lead to upward bias and downward bias for OLS and fixed effects models respectively. Therefore, this study will use the SYS GMM estimation method which gives consistent results for the model.



#### **7.3.4 Diagnostic property: Endogeneity**

Endogeneity refers to the inconsistencies in estimators due to the existence of correlations between explanatory variables and error terms (Chen 2014). The problem of endogeneity is central to the choice of the SYS GMM method for this study. Thus, this section addresses the issue in detail and helps to justify the choice of the SYS GMM estimator in this study.

The existence of endogenous explanatory variables is a problem in most empirical studies that use panel data methods, including regional determinants of FDI studies which are similar to this study. The main focus of this study is to detect the effects of tax incentive variables on FDI location. Thus, to get reliable results the problem of endogeneity has to be controlled on non-tax variables and on tax incentive variables.

Walsh and Yu (2010) state that the problem of endogeneity is common in regression models of FDI as the dependent variable and macroeconomic variables such as GDP per capita, GDP growth and openness as explanatory variables are mostly correlated.

The SYS GMM estimator removes the problem of endogeneity since it uses variables in levels as instruments to first differences of the individual specific effects (Chen 2014). The choice of the system GMM estimator in this study is also inspired by its ability to produce an efficient estimator given a small cross-section (N).

#### **7.3.5 Diagnostic property: One-step versus two-step estimation**

Soto (2009) concludes that in small samples the SYS GMM estimator, given some persistency in the model, has the lowest estimation bias and greatest efficiency of all the alternative estimators (including its predecessor the DIF GMM estimator). The one-step estimation in small sample GMM estimation was also found to have the same accuracy and efficiency as the two-step estimation technique in a model comparative study by Soto (2009). Thus, this study adopted the one-step GMM estimation procedure to reduce the omitted variable bias common in the two-step estimation method.

### 7.3.6 Diagnostic property: Unit root tests

The use of macroeconomic data in the model requires that the study considers a possible random walk data property. The chosen test method considers a test that renders more efficient results given a short time series in the panel model. The study employs two unit root testing techniques, the Im-Pesaran-Shin (IPS) test (2003) and the Levin, Lin and Chu (LLC) test (2002).

#### 7.3.6.1 Im-Pesaran-Shin test (IPS)

The analysis uses the Im-Pesaran-Shin test (IPS). Hall and Mairesse (2001) conclude that the IPS method is the best for handling short time series panel data because it considers the panel data as a system of N individual regressions and conducts N individual Dickey-Fuller tests for these panels, where N is the number of cross-sections in the model. Hall and Mairesse (2002) add that the IPS model also ensures that the trend and the serial correlation coefficient differ across cross-sections as do the mean and variance.

The IPS method put forward by Im, Pesaran and Shin (2003) allows for more heterogeneity and the heterogeneous model takes the form:

$$\Delta y_{it} = \rho_i y_{i,t-1} + \sum_{l=1}^{\rho_i} \theta_{i,l} \Delta y_{i,t-l} + \alpha_i d_{it} + \varepsilon_{it}$$

In the model  $d_{it}$  is the deterministic part. If  $\rho_i = 0$  then the  $y$  processes contain a unit root for  $i$ , and if  $\rho_i < 0$  then there is a stationary  $y$  process.

The IPS model combines information from the time series dimension and the cross-section dimension in testing for unit roots thus its testing power does not diminish due to a small time series dimension (Im, Pesaran & Shin 2003).

Hall and Mairesse (2002) note that the IPS model performs unit root tests for each individual cross-section separately. The results are then averaged across the cross-sections using the Augmented Dickey-Fuller (ADF) tests. The average t-statistic for  $\rho_i$  from the individual cross-section ADF tests is given by:

$$\bar{t}_{NT} = \frac{1}{N} \sum_{i=1}^N t_{iT}(\rho_i \alpha_i)$$

The standardised  $t$ -bar suggested by IPS (1997) converges to a normal distribution as  $N$  and  $T \rightarrow \infty$  thus it performs better when  $N$  and  $T$  are small.

### 7.3.6.2 Levin, Lin and Chu test (LLC)

The LLC test has an assumption of a common auto-regressive (AR) process, thus it is a homogeneous process. LLC (2002) noted that small samples encounter problems when individual unit root tests have limited power over the alternative hypothesis in the presence of deviations from the steady state.

The null hypotheses in the LLC test is that each time series is not stationary against the alternative hypothesis that each time series does not contain a unit root. The hypotheses mean that:

$$\Delta y_{it} = \rho y_{i,t-1} + \sum_{L=1}^{p_i} \theta_{iL} \Delta y_{i,t-L} + \alpha_{mi} d_{mt} + \varepsilon_{it} \dots \dots *$$

Where  $m=1,2,3$ ;  $d_{mt}$  is a vector containing deterministic variables and  $\alpha_{mi}$  is a vector of coefficients in the model  $m=1,2,3$ . Particularly,  $d_{1t} = \{empty\}$   $d_{2t} = \{1\}$  and  $d_{3t} = \{1, t\}$ . Given that the lag order of  $\rho_i$  is not known, the LLC uses three steps in testing for unit roots (Baltagi 2005).

The first step performs augmented Dickey-Fuller (ADF) tests for each cross-section independently;

$$\Delta y_{it} = \rho y_{i,t-1} + \sum_{L=1}^{p_i} \theta_{iL} \Delta y_{i,t-L} + \alpha_{mi} d_{mt} + \varepsilon_{it} \quad m=1,2,3$$

Lag  $\rho_i$  is permitted to vary across individual cross-sections. Given any  $T$  the model selects the maximum lag order  $\rho_{max}$  and utilising the t-statistic of  $\hat{\theta}_{iL}$  the estimation determines whether the smaller lag order is more preferable.

After establishing the preferred lag order, two regressions are performed to obtain orthogonalised residuals:

Equation 1 runs  $\Delta y_{it}$  on  $\Delta y_{i,t-L}$  ( $L=1, \dots, \rho_i$ ) and  $d_{mt}$  to get residuals  $\hat{e}_{it}$ .

Equation 2 runs  $\Delta y_{i,t-1}$  on  $\Delta y_{i,t-L}$  ( $L=1, \dots, \rho_i$ ) and  $d_{mt}$  to get residuals  $\hat{v}_{i,t-1}$ .

To control for different variances across the cross-sections the residuals are standardised;

$\tilde{e}_{it} = \hat{e}_{it} / \hat{\delta}_{\hat{e}_{it}}$  and  $\tilde{v}_{i,t-1} = \hat{v}_{i,t-1} / \hat{\delta}_{\hat{v}_{i,t-1}}$ , where  $\hat{\delta}_{\hat{e}_{it}}$  is the standard error for each ADF regression for the cross-sections.

The second step estimates the long-run to short-run deviations. With the null hypothesis of non-stationarity the long-run variance of equation \* is given by:

$$\hat{\delta}_{\tilde{y}_i}^2 = \frac{1}{T-1} \sum_{t=2}^T \Delta y_{it}^2 + 2 \sum_{L=1}^{\bar{K}} \omega_{\bar{K}L} \left[ \frac{1}{T-1} \sum_{t=2+L}^T \Delta y_{it} \Delta y_{i,t-L} \right]$$

Here  $\bar{K}$  is a truncation lag that can be data dependent and must be calculated using methods that guarantee consistency in  $\hat{\delta}_{\tilde{y}_i}^2$  estimates.

The third step estimates the panel test statistic. This is obtained through running a pooled regression:

$$\tilde{e} = \rho \tilde{v}_{i,t-1} + \tilde{\varepsilon}_{it}$$

The model is based on  $N\tilde{T}$  observations, given  $\tilde{T} = T - \bar{\rho} - 1$ , that is  $\tilde{T}$  shows the mean number of observations per each cross-section in the panel and  $\bar{\rho} = \sum_{i=1}^N \rho_i / N$ .  $\bar{\rho}$  measures the lag order of the ADF regression for each cross-section. The t-statistic for:

$$H_0 : \rho = 0 \text{ is } t_\rho = \frac{\hat{\rho}}{\hat{\sigma}(\hat{\rho})}, \text{ where:}$$

$$\hat{\rho} = \frac{\sum_{i=1}^N \sum_{t=2+\rho_i}^T \tilde{v}_{i,t-1} \tilde{e}_{it}}{\sum_{i=1}^N \sum_{t=2+\rho_i}^T \tilde{v}_{i,t-1}^2}$$

$$\hat{\sigma}_{\hat{\rho}} = \hat{\sigma}_{\tilde{\varepsilon}} / \left[ \sum_{i=1}^N \sum_{t=2+\rho_i}^T \tilde{v}_{i,t-1}^2 \right]^{1/2} \text{ and } \hat{\sigma}_{\tilde{\varepsilon}}^2 = \frac{1}{NT} \sum_{i=1}^N \sum_{t=2+\rho_i}^T \left( \tilde{e}_{it} - \hat{\rho} \tilde{v}_{i,t-1} \right)^2 \text{ is the variance of } \tilde{\varepsilon}_{it}$$

LLC (2002) declare their model to be most efficient in moderate size panels, with cross-sections between 10 and 250. Baltagi (2005) argues that the panel unit root test in the LLC model improves the estimation power of the model over the model that estimates separate unit root tests for each cross-section. However, the model cannot be applied in cases where cross-sections are correlated.

### 7.3.7 Diagnostic property: Cointegration test

Karaman (2009) defines cointegration as the long-run relationship between non-stationary variables. The concept was coined by Engle and Granger in 1987, based on the argument that if variables are integrated then their linear combination can be integrated of a lower order. For example, if the K-dimensional process  $z_t$  are integrated of order one and the linear combination of components of  $z_t$  are stationary then the variables are cointegrated.

Panel cointegration techniques were pioneered by the research of Pedroni (1997) and McCoskey and Kao (1998), and the field has grown enormously in recent economic research (Karaman 2009). Kao (1999) and Pedroni (1997) introduced the panel cointegration test under the null hypothesis of no cointegration. Pedroni (1997) proposed two test statistics with the earlier testing cointegration in the homogeneous panel and the later extended to heterogeneous models. Kao (1999) tests concentrated on homogenous models.

The tests for panel cointegration therefore, are also like unit root tests which are still concentrated on finding a more powerful test.

#### 7.3.7.1 Kao test

Introduced by Kao (1999), the test has two types: the Dickey-Fuller (DF) and the Augmented Dickey-Fuller (ADF) tests. Using the panel data model:

$$FDI_{it} = X_{it}'\alpha + Y_{it}'\beta + v_{it}$$

Where  $FDI_{it}$  and  $X_{it}$  are integrated of order 1 and not cointegrated. When  $Y_{it} = \{\mu_i\}$ , Kao suggested DF and ADF unit root tests for  $v_{it}$  as the test for a no cointegration null hypothesis.

### 7.3.7.2 Pedroni tests

The Pedroni (1997) tests consider heterogeneous panel models. The models propose several tests for a cointegration null hypothesis. Pedroni uses the model:

$$FDI_{it} = \alpha_i + \delta_i t + Y_{it}'\beta + v_{it}$$

Where  $FDI_{it}$  and  $Y_{it}$  variables take values  $i = 1, \dots, N$  over time periods  $t = 1, \dots, T$ .  $Y_{it}$  in an m-column vector for each member  $i$  and  $\beta_i$  is an m-dimensional column vector for each value  $i$ .  $FDI_{it}$  and  $Y_{it}$  are assumed to be integrated of order 1. Under the null of no cointegration  $v_{it}$  will also be I(1),  $\alpha_i$  and  $\delta_i$  to allow for individual effects and time trend respectively. The DF and ADF test are then performed from the fixed effects residuals.

### 7.3.8 Diagnostic property: First order serial correlation test [AR (1)] and second order serial correlation test [AR (2)]

The dynamic panel model suffers a problem of autocorrelation caused by the lagged dependent variable (Okodua 2011). The AR (1) test for the model of equation;  $FDI_{it} = FDI_{i,t-1} + \alpha X_{it} + \beta Y_{it} + \lambda_i + \delta_i + v_{it}$  is mean-stationary. Thus, the first differences  $\Delta FDI_{it}$  will not be correlated to individual country effects  $\lambda_i$ . Therefore, in the absence of first order serial correlation  $\Delta FDI_{i,t-1}$  can be used as a suitable instrument for the level equation (Blundell and Bond 1998). AR (1) and AR (2) tests are used to show the consistency of GMM estimators. The null hypothesis for the Arellano-Bond autocorrelation (AR) test is no autocorrelation. The presence of autocorrelation indicates that lags in the dependent variable are exogenous and thus form bad instruments.

## 7.4 Data Analysis<sup>4</sup>

This section looks at the variables that are employed in the estimations and the type and source of data used. However, due to unavailability of data two SADC countries the Democratic Republic of Congo (DRC) and Swaziland were dropped from the analyses. The data used in this study has been obtained from World Bank Databank, African development indicators, Ernst & Young's global tax data and Worldwide Governance Indicators. The data covers thirteen SADC countries over the period 2004 to 2013. The study chose this time period since the recent tax incentive data from Ernst & Young captures this period. The data is derived from individual country tax statutes and from reports which recorded consistent and similar tax structures for SADC countries. All data is expressed in natural logarithms<sup>5</sup> except for data with negative values.

### 7.4.1 Dependent variable

The study uses net FDI inflows as a % of GDP as the dependent variable; this is a measure of FDI as a share of GDP. Since the study seeks to establish the factors that affect the attractiveness of a destination in enticing new foreign investment and retaining it, net FDI inflows as a % of GDP are found to be the most appropriate measure. FDI by established investors has two important components that host nations seek to attract; firstly, there is new capital stock also known as green field investment and, secondly, expansionary investments which come from the reinvestment of profits (Bellak & Leibrecht 2005). Thus, outflows of these investments show deterioration in the competitiveness of a destination.

Bellak and Leibrecht (2005) argue that using FDI flows as a measure of real capital overestimates or in some cases underestimates the true measure. This is because overvalued services or debt may be viewed as reinvestments in FDI flows and underestimation may emanate from the fact that internal financing by the investors is excluded from measures of FDI flows.

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<sup>4</sup> Data trends analyses is in Appendix A and descriptive statistics in Appendix C. The data does not show any structural breaks in 2002 and 2006 where major investment protocols were signed in SADC this is due to policy lags in policy implementation which affected the policies immediate effects. Hence their effects were gradual.

<sup>5</sup> Log transformation of the data in time series data analysis is important to stabilise the variance. However because there are no logarithms for negative values log transformation of data with negative values will cause loss of data points.

The use of tax incentives in attracting FDI in the SADC region is mainly targeted at bringing long-term capital that brings sustainable growth to the economies. Therefore, the net FDI flows will give credible conclusions as to the role of taxes in attracting foreign investment and retaining it. The incentives in the SADC countries are also extended to the local investors to reduce investment outflows. Thus, the ability of tax incentives to attract investment and prevent capital from moving out is of paramount importance to policy makers, hence the choice of net FDI flows as a % of GDP as the dependent variable.

#### **7.4.2 Explanatory variables**

The study seeks to explain the locational advantages which attract internationally mobile capital in the SADC region. The explanatory variables are grouped into tax incentive variables and non-tax variables which SADC countries use to attract FDI.

##### **7.4.2.1 Tax incentives variables<sup>6</sup>**

Tax incentive data is not readily available since it is contained in statutory instruments which are not standardised (Klemm & Van Parys 2009). Therefore, in defining variables the study standardised the data and established a trend of how each tax incentive was applied in each year throughout the study period. The main source of tax incentive data were the Ernst & Young's worldwide corporate tax guides published between 2004 and 2014. The summaries give similar detailed tax data on individual countries and thus important tax incentive data was drawn from these summaries. Data for most SADC countries is available in the tax guides (except for the DRC and Swaziland which were dropped from panel econometric analysis).

###### **7.4.2.1.1 Tax holidays**

To measure tax holidays the study follows the lead of Klemm and Van Parys (2009) in using the maximum tax holiday given to investors in the economy in a given year. The length of a tax holiday is important in attracting FDI as longer holidays ensure longer periods of a lighter tax burden on the investor.

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<sup>6</sup> The study measures individual tax incentives to help policy makers in choosing the actual tax incentives to use in FDI attraction. This adds to literature on SADC countries (see Calitz (2013) and Bolnick (2004) that have used METR and AETR which lumps all tax incentives together and fails to separate each tax incentive's contribution to FDI attraction.



Tax holidays are derived from various tax relief measures given to investors. They are predominantly found under corporate tax rates. The study uses the maximum period offered to an investor as tax relief in a given year; it could be a full exemption, reduced rates or other allowances offered by the country.

The study chose the longest tax holidays offered in a year because tax holidays indicate how much an economy is willing to accommodate foreign capital. Thus, a country that offers tax holidays in its strategic sectors is probably going to offer incentives in other sectors since most economic sectors have linkages.

#### **7.4.2.1.2 Corporate income tax rate (CIT)**

The statutory CIT rate was used as a measure for this variable. Shrestha and Onyeiwu (2005) conclude that the CIT rate measures the extent to which corporations are taxed and measures tax on income, profits and capital gains. A low CIT rate is expected to attract and retain foreign investment as it increases returns.

There are various rates of corporate taxes recorded in the Ernst & Young's worldwide corporate tax guides offered in different sectors. This study used the ordinary industrial tax rate as it is the rate that covers more sectors and has a bigger influence in determining investment decisions.

#### **7.4.2.1.3 Losses carried forward**

The variable is recorded as relief for losses in the Ernst & Young's worldwide corporate tax guides. It measures the number of years a company is allowed to carry forward tax losses.

In cases where multiple rates exist in different sectors, the study used the least carried forward years used in the manufacturing sector. For the sake of consistency in this study, where the carried forward years are unlimited, it has declared 10 to be the maximum number of years for the claim to be valid.

#### **7.4.2.1.4 Reduced CIT in specific sectors**

The lowest tax rate offered to specific sectors was used to measure this variable. This follows the lead of Klemm et al. (2009) in measuring investment allowances which are similar to reduced CIT in specific sectors.

This variable is derived from the tax rate offered in different sectors and the lowest rate offered in the sectors covered by this study. This shows how an economy treats strategic sectors which it wants to grow for the benefit of the whole economy. This measure is used as a proxy to indicate how the policy makers treat strategic sectors.

#### **7.4.2.2 Non-tax factors that attract FDI<sup>7</sup>**

As we saw in chapter 3 and Chapter 5, these are factors that have been theoretically and empirically considered to be important in attracting FDI in other regions. The data source for these variables is the World Bank's World Development Indicators and World Governance Indicators.

##### **7.4.2.2.1 Governance**

Kaufmann, Kraay and Matstruzzi (2010) discuss the origin of the worldwide governance indicators (WGI) that have been adopted in this study. In 1996, the WGI (which embraces 200 countries and measures six governance indicators) was initiated. The indicators are: Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption (Kaufmann et al. 2010). The six indicators are important in ensuring ease of doing business and are thus likely to affect the investor's decision to invest in a location. The data is obtained from 31 different data sources including governance perceptions by survey respondents, non-governmental organisations, commercial business information providers, and public sector organisations worldwide.

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<sup>7</sup> These are control variables in the study on the efficacy of tax incentives to attract FDI. They were carefully chosen to avoid the omitted variable bias in the models which affects reliability of results (Woodridge 2002).

Kaufmann et al. (2010) define 'governance' as "the traditions and institutions by which authority in a country is exercised. This includes (a) the process by which governments are selected, monitored and replaced; (b) the capacity of the government to effectively formulate and implement sound policies; and (c) the respect of citizens and the state for the institutions that govern economic and social interactions among them." These processes, if they are implemented positively in a country, give investors property rights and security in their investments and thus attract further investment.

The first measures which cover the process by which countries conduct their public choice mechanisms have two indicators (i) voice and accountability and (ii) political stability and absence of terrorism. This captures how interviewed experts view the extent to which a country's citizens contribute to choosing their government, the freedoms citizens enjoy in association, expression and media freedom. The measure also includes how constitutionally elected governments are safe from violent dethronements. Political freedom and peace in a country is important to FDI attraction as evidenced by FDI flows in North Africa which rose steeply after 2006 and then fell sharply after 2010 due to the political unrest in most of the North African countries. The uprisings in the Arab world that started in Egypt and spread to Tunisia and Libya led to a dramatic fall in FDI in the region (World Bank Report 2012). The SADC region has, however, been relatively peaceful compared to other regions with civil war problems such as Angola, the DRC and Mozambique. Thus, most political challenges emanate from the violation of human rights by state security organs.

Secondly, there are measures that probe the effectiveness of a government in policy formulation and implementation. These measures are centred on the quality of public employees. The two indicators in this category are government effectiveness and regulation quality.

Thirdly, there are measures that cover the respect state institutions give to the citizens they govern. These are measured by the rule of law and corruption. Corruption and public employees' red tape increases the cost of doing business and the time required to establish operations (World Bank Doing Business Report 2013).

Following the lead of Akanbi (2015) the study measures governance in a broad sense by averaging the six measure in the WGI.

#### **7.4.2.2 Market potential**

Dadzie (2012) argues that market-seeking FDI strongly considers market potential in its locational decision. A growing market attracts more investors as it seeks physical presence in the economy to increase its competitive advantage (Porter 1990). According to Shrestha and Onyeiwu (2005) nearly all studies on FDI attraction have found a positive relationship between market potential measured by economic growth and FDI flows. This is attributed to the fact that high growth economies implement effective macroeconomic policies which enhance better earnings from investments.

As with most studies, market potential was measured by Gross Domestic Product (GDP) growth rate.

#### **7.4.2.3 Infrastructure**

Infrastructure such as road networks, telephone connections, electricity, water and internet services help to ease the cost of doing business. Countries with a good infrastructure network attract more investors since good infrastructure increases the return on investment and lowers the cost of transacting (Shrestha & Onyeiwu 2005).

Measuring infrastructure is multi-dimensional with availability and quality of the infrastructure being important to growth (Calderón & Servén 2010). Most studies on determinants of FDI have captured a single dimension measure of infrastructure, mainly the availability measure proxied by telephone lines per 100 people in the country. The availability of telephone lines indicates a good road network and information delivery through internet services since they are related in their operations.

The study's efforts in seeking robust conclusions on the factors that determine investors' locational decisions in the SADC, adopts the Calderón and Servén (2010) principal component analysis (PCA). This measure produces a synthesis index which captures both the quality and quantity dimensions of infrastructure measurement. The index built from the analysis combines information from the three basic infrastructure measures: telecommunication, power and roads (Calderón & Servén 2010). This removes the problem of multicollinearity in using the variables separately in the model.

This method (also adopted by Akanbi (2015)) develops a model for the study that measures both the quality and quantity of infrastructure. The model will construct an infrastructure model for the SADC using the PCA method. Following the lead of Akanbi (2013), the study will represent infrastructure stock through a composite index, the physical infrastructure index (PII). Calderón and Servén (2004) state that the stock of physical infrastructure varies across nations based on demographic and geographic factors.

The PCA process involves converting high-dimension groups of indicators into new indices that incorporate information on a different dimension which makes them mutually uncorrelated. Due to the unavailability of data, telephone lines per 100 people is used to proxy road networks. Internet user per 100 people shows the effectiveness of telecommunication networks. Electric power consumption which measures the production of power plants and combined heat and power plants less transmission, distribution, and transformation losses and own use by heat and power plants is used to measure the electricity infrastructure stock. Due to the absence of data on the electricity stock for individual countries, the study uses the measure of output for poor countries to represent SADC countries that do not have data since they all fall into that category.

The aggregate infrastructure stocks index is derived by using the first eigenvectors from the PCA as the weights to establish a linear combination:

$$PII = a_1X_1 + a_2X_2 + a_3X_3 \text{ where } a_1, a_2 \text{ and } a_3 \text{ are eigenvectors from the PCA and } X_1, X_2 \text{ and } X_3 \text{ are the three infrastructure stocks.}$$

**Table 10: Construction of infrastructure index**

<b>Method of construction variables</b>	<b>PCA Component 1</b>	<b>PCA Component 2</b>	<b>PCA Component 3</b>
<b>Telephone</b>	0.6797	-0.2423	0.6923
<b>Electricity</b>	0.2264	0.9671	0.1161
<b>Internet</b>	0.6976	-0.0778	-0.7122

Notes: The table values were constructed using the eigenvalue transformation.

The infrastructure index was constructed from the principal component eigenvalue (Table 10 above). Using the stata command “predict pc1 pc2 pc3” the principal components are generated from the equations:

$$\begin{aligned}PC1 &= (0.6797 * telephone) + (0.2264 * electricity) + (0.6976 * internet) \\PC2 &= -(0.2423 * telephone) + (0.9671 * electricity) - (0.0778 * internet) \\PC3 &= (0.6923 * telephone) + (0.1161 * electricity) - (0.7122 * internet)\end{aligned}$$

PC1, PC2 and PC3 are the principal components 1, 2 and 3 respectively.

The infrastructure index was obtained by summing the principal components as infrastructure index = PC1+PC2+PC3.

#### **7.4.2.2.4 Natural resource endowments**

The analysis of FDI flows in Africa in Chapter 2 showed that natural resource endowments are central in the attraction of FDI to developing countries. UNCTAD (2012) data shows that the oil rich African countries, Angola and Nigeria, receive relatively high FDI inflows despite political instability. In this study, total natural resources rents as a % of GDP was used to measure natural resource availability.

Most SADC countries rely on their natural resources to raise revenue, thus government rents from the natural resources indicates the availability of resources in a country. This is preferred to the use of natural resources reserves as a measure of natural resources due to continuous discovery of new natural resources in the region in recent years, for example gas in Mozambique in 2010, and diamonds in Zimbabwe in 2008.

#### **7.4.2.2.5 Trade openness**

Many of the developing countries, including those in the SADC, adopted Structural Adjustment Programmes (SAPs) in the 1990s which sought to open economies to trade and FDI inflows. Onyeiwu (2005) argues that trade openness attracts export-oriented FDI; this form of investment is highly favored by SADC countries for improving their external balances. This variable was measured as trade as a % of GDP. Calculated in World Bank statistics as the sum of exports and imports of goods and services measured as a share of gross domestic product.

#### **7.4.2.2.6 Financial globalisation**

Financial services are important for investment since they provide a medium for access to investment funds. FDI thrives in economies that are financially open to foreign players. Financial openness involves reducing capital controls and capital flow restrictions (Stoianov 2007). The neoclassical theory suggests that financial globalisation encourages the flow of capital from capital rich countries to capital poor countries in anticipation of higher returns (Stoianov 2007).

Theoretically, financial globalisation leads to financial market development, institutional development, better governance in the financial sector and macroeconomic discipline (Stoianov 2007). However, this view may be affected by other factors that support investment such as institutions that support FDI establishment. Thus this study seeks to establish to what extent financial globalisation influences investors' decisions in the SADC.

The measure 'financial openness' has two important dimensions, the first one is legal or de jure factors based on elements that restrict or allow capital flows in and out of an economy (Stoianov 2007). The second set of measures are de facto indicators which show the extent of trade volumes, capital flows in the economy and the amount of capital foreigners hold in an economy, accessibility of financial services, amongst many others. The two measures are highly correlated; the legal measures indicate government policy towards capital flows and the de facto indicators show the results of the policy and thus a choice should be made as to which indicators to use (Stoianov 2007).

Financial globalisation is estimated using the de facto measure which looks at access to financial services in the economy. The study uses the number of commercial banks per 100,000 adults in the economy, as a measure of financial globalisation.

#### **7.4.2.2.7 Economic policy**

Ojeaga (2012) argues that investors strongly consider government economic policy when taking investment decisions. The government economic policies are important in ensuring a stable investment climate that attracts FDI. This study adopts Ojeaga's (2012) single index measure for economic policy. The government's economic policies are regulations set by

government to achieve its economic goals and are thus in most cases correlated with each other. Therefore, there is a need for a single index that represents the policies, since using one proxy variable normally gives biased estimates. In this study economic policy was captured using government consumption expenditure and inflation and a single index was developed using principal component analysis (PCA). Government policies are the various fiscal and monetary policies aimed at macroeconomic stability and inflation and government expenditure covers these policies effectively. The PCA model is flexible and has been used to create other indices such as infrastructure index ( see Akanbi 2015).

Ojeaga (2012) in his creation of a single index for economic policy uses trade openness, government expenditure and inflation. In this study, trade openness was used independently because FDI attraction theory argues that trade openness affects FDI inflows independently (Dadzie 2012). Niskanen (1971) argues that bureaucrats seek to maximise their own personal benefits by demanding a huge budget from their sponsors, thus bureaucracy is cited as a major cause of growth in government expenditure. Increasing government expenditure, therefore, indicates a country’s self-serving bureaucracy, which in turn indicates red tape and corruption tendencies amongst public employees. The uncontrolled increase in government expenditure can crowd out private investment.

The PCA is a statistical tool that is used in creating a single index for a measure with many dimensions. The model was constructed using the STATA command for PCA “pca inflation government expenditure”. Inflation is the rate of change in prices which shows monetary policy and government expenditure reflects government fiscal discipline.

**Table 11: Construction of economic policy index using eigenvectors**

Method of construction Variables	PCA Component 1	PCA Component 2
Government expenditure	-0.7071	0.7071
Inflation	0.7071	0.7071

Source: Generated by author using eigenvalue transformation, using the command “pca government inflation”.

The economic policy index is constructed from the principal component eigenvalue Table 11 above. Using the stata command “predict pc4 pc5” principal components are generated from the equations:



$$PC4 = -(0.7071 * gvtexp) + (0.7071 * inf l)$$

$$PC5 = (0.7071 * gvtexp) + (0.7071 * inf l)$$

Where *gvtexp* is government expenditure and *infl* is inflation. PC4 and PC5 are the principal components 1 and 2 respectively.

The economic policy index is obtained by summing the principal components as economic policy index = PC4+PC5.

## **7.5 Summary and conclusions**

The chapter looked at the theoretical foundation of the models used in this study to answer the major research questions of the research. The research's theoretical underpinnings are based on the Dunning (1977) OLI theory. The theory explains why international capital ends up in the destinations where they are located. The research's choice of econometric method is the SYS GMM estimator since it best addresses the estimation problems associated with dynamic panel data models. The shortcomings of other panel models are found in their failure to address the endogeneity problem due to the existence of a lagged dependent variable as one of the regressors and an asymptotic problem in efficient estimation.

The data sources for tax variables are the Ernst & Young's worldwide tax summaries and the macroeconomic variables are found in the World Bank Databank, African Development Indicators and Worldwide Governance Indicators. The problem of unit roots in macroeconomic data was addressed using the IPS unit root test and the LLC tests. The study also established that if the data is found to be non-stationary then cointegration tests must be conducted to establish the long-run relationships of variables. The Pedroni and Kao cointegration tests were considered most suitable for the study.

Data on infrastructure and economic policy was derived using the PCA model which helps in delivering clean data for the variables. This method improves the quality of data. The governance data was derived from the World Governance Index.

## CHAPTER 8

### EMPIRICAL RESULTS AND ANALYSIS

#### 8.1 Introduction

The estimations involve a total of thirteen SADC countries since Swaziland and the DRC were dropped from the panels due to a lack of tax data for the countries. Panel 1 includes the seven highest resource-rich countries using the World Bank natural resource indicators, which are total natural resources rents as % of GDP. Panel 2 has the six least resource-rich countries, Panel 3 consists of twelve SADC countries in the study (the panel excludes South Africa which is an outlier in resource richness and growth) and Panel 4 includes all thirteen of the SADC countries in the study.

Using the total natural resources rents as a % of GDP data, Panel 1 consists of Angola, Malawi, Mozambique, South Africa, Tanzania, Zambia and Zimbabwe, and Panel 2 consists of Botswana, Lesotho, Madagascar, Mauritius, Namibia and Seychelles. Panel 3 consists of Angola, Botswana, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, Tanzania, Zambia and Zimbabwe, and Panel 4 includes Angola, Botswana, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Tanzania, Zambia and Zimbabwe.

The chapter is structured as follows: section 8.2 analyses the descriptive statistics, section 8.3 moves to unit roots tests, section 8.4 gives the system GMM test results and interpretation before the chapter is concluded in section 8.5.

#### 8.2 Descriptive statistics

The descriptive statistics displayed in Appendix C Tables 24, 25, 26 and 27 for Panels 1 to 4 show huge differences between Panel 1 and 2 where there are different resource categories for SADC countries. Net FDI inflows as a % of GDP have a minimum of -5.98 in Panel 1 and 0.22 in Panel 2. The difference in the maximum values is also huge for the two panels with Panel 1 having a maximum of 42.11 and Panel 2, a maximum of 19.81. Panels 3 and 4 have a minimum

value of -5.98 and a maximum value of 42.11. The dispersion for FDI in Panels 1 and 2 also reveals huge differences with Panel 1 demonstrating a huge data dispersion shown by a standard deviation of 8.06 compared to a standard deviation of 4.76 in Panel 2.

Tax holidays have significant differences in the mean and standard deviation values in the four panels. Panel 1 has the highest mean and standard deviation of 6.26 and 6.42 respectively and Panel 2 has the least mean and standard deviation values of 4.33 and 4.91 respectively. Losses carried forward have the highest mean in Panel 2 and least in Panel 3. CIT data displays descriptive statistics that are different from other tax variables, with Panel 2 having the least mean and highest standard deviation and Panel 1 having the highest mean and least data dispersion.

Macroeconomic variables show interesting variations as shown in Appendix Table 27 which combines all thirteen countries in the analysis contained in Panel 4. The governance index ranges from -1.58 to 0.83 and a standard deviation of 0.63 indicates that the values are close to the mean. Market potential measured by GDP growth rate, indicates huge differences in the regional economies' growth rates with a minimum value of -17.95 and a maximum of 18.51. Infrastructure index ranges from -1.53 to 4.73 and has a mean value of 0.01. The Economic policy index ranges from -2.64 to 10.17. The SADC economies exhibit significant differences in natural resource availability shown by log natural resources variables which range from -5.75 to 4.27.

Log trade openness has the least standard deviation value among macroeconomic variables of 0.31. This shows that the trade policies of the SADC countries are similar. Financial globalisation data shows different levels of financial development in SADC countries demonstrated by a minimum value of -0.076 and a maximum of 3.90 on log financial globalisation.

### **8.3 Unit root tests results<sup>8</sup>**

Testing for panel unit roots is important in applied research (Baltagi & Kao 2000). Regression panel data models with non-stationary data are found to have misleading results (Entorf 1997).

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<sup>8</sup> Hall & Mairesse (2002) and Blundell & Bond (1998) pointed out that use of non-stationary data in GMM estimations invalidates model specifications.

Entorf (1997) found out that in fixed effects models, spurious regression gives misleading t-values with high  $R^2$  values. In GMM estimation the presence of unit root invalidates the model specification (Hall & Mairesse 2002). This study adopts the IPS and LLC unit root tests because they give best results in small cross-sections (Sen, Senturk & Ozkan 2012). The LLC considers the unit root for all cross-sections at once, as opposed to the IPS model test unit root process for each cross-section.

### 8.3.1 IPS tests

The IPS panel unit root tests test the null hypothesis -  $H_0$  that the series is non stationary against the alternative hypothesis of stationarity. The tests are based on the assumption that  $\rho_i$  takes a particular state for each cross-section (Sen et al. 2012). The model estimations for the IPS test include panel means and time trends.

**Table 12: Summary of IPS unit root tests results**

Variable	Order of integration			
	Panel 1	Panel 2	Panel 3	Panel 4
FDI	I(0) [-3.1899] (0.0105)**	I(0) [-2.1195] (0.0578)*	I(0) [-2.7589] (0.0225)**	I(0) [-2.7805] (0.0128)**
Tax holidays	I(0) [-4.0734] (0.0065)***	I(0) [-4.2691] (0.0000)***	I(0) [-5.3447] (0.0000)***	I(0) [-5.4970] (0.0000)***
Log CIT	I(0) [-1.8973] (0.0787)*	I(2) [-1.4484] (0.3936)	I(1) [-1.5676] (0.2213)	I(1) [-1.6310 ] (0.1822)

Log losses	I(0)	I(0)	I(1)	I(0)
carried forward	[-8.9681] (0.0017)***	[ -2.2394] (0.0364)**	[-1.7118] (0.1065)	[-2.9273] (0.0099)***
Reduced CIT	I(0)	I(0)	I(0)	I(0)
	[-2.6025] (0.0164)**	[-2.4010] (0.0848)*	[-2.4355 ] (0.0099)***	[-2.4652 ] (0.0066)***
Governance	I(2)	I(1)	I(1)	I(1)
	[-1.7986 ] (0.5615)	[-1.7637] (0.1415)	[-1.9193] (0.1426)	[-1.8980] (0.1224)
Market potential	I(0)	I(0)	I(0)	I(0)
	[-2.5144] (0.0087)***	[-3.7825] (0.0020)***	[-2.8097] (0.0002)***	[-2.8387 ] (0.0001)***
Infrastructure	Non-stationary <sup>9</sup>	I(0)	I(0)	I(0)
Index	[-1.6380] (0.2516)	[-2.5273] (0.0093)***	[-2.5551] (0.0021)***	[-3.0773] (0.0006)***
Log natural	I(0)	I(0)	I(0)	I(0)
Resources	[-2.2032] (0.0642)*	[-2.2348] (0.0455)**	[-2.2024] (0.0169)**	[-2.2750] (0.0086)***
Log trade	I(0)	Non-stationary	I(0)	I(0)
Openness	[-2.0726] (0.0630)*	[-2.0684] (0.1072)	[-2.2729 ] (0.0253)**	[-2.1973] (0.0226)**

<sup>9</sup> Variables indicated non-stationary, fail to be stationary until the time series data points becomes insufficient for IPS test.

Log financial	I(0)	I(0)	I(0)	I(0)
Globalisation	[-2.8858] (0.0024)***	[ -2.5174] (0.0220)**	[-3.0644 ] (0.0002)***	[-3.5242] (0.0010)***
Economic Policy	I(0)	I(0)	I(0)	I(0)
Index	[-2.7040] (0.0025)***	[-2.6064] (0.0075)***	[-2.5524] (0.0003)***	[-3.1941] (0.0001)***

Source: Author's calculations using stata 12. P-values are in parentheses () and t-statistic [], unit root hypothesis is rejected at \*\*\*1%, \*\*5% and \* 10% levels of significance. The estimation includes the trend.

Table 12 shows the unit root results using the IPS method. Most variables are I (0) thus stationary in levels in all panels. These include: FDI, tax holidays, reduced CIT, market potential, natural resources, financial globalisation and economic policy index. Infrastructure index, trade openness and losses carried forward are integrated of order zero in three panels each. CIT and governance show I (0) result in one panel each. Therefore, most of our variables are I (0) using the IPS test. The final conclusions on stationarity of variables combine the findings of the IPS and LLC test.

### 8.3.2 LLC tests

The LLC panel unit root tests test the null hypothesis  $H_0$  that the series results are non-stationary against the alternative hypothesis of stationarity. The tests are based on the assumption that  $\rho_i$  is that same parameter for all cross-sections (Sen et al. 2012). The results of the LLC test offer the least distortions in small panels (Hlouskova & Wagner 2005).

**Table 13: Summary of LLC unit root tests results**

Variable	Order of integration			
	Panel 1	Panel 2	Panel 3	Panel 4

FDI	I(0) [-5.0859] (0.0000)***	I(0) [-3.3150] (0.0005)***	I(0) [-7.0279] (0.0000)***	I(0) [-7.0072] (0.0000)***
Tax holidays	I(0) [-6.0271] (0.0000)***	I(0) [-2.3451] (0.0095)***	I(0) [-21.6465] (0.0000)***	I(0) [-23.6154] (0.0000)***
Log CIT	I(0) [-16.4584] (0.0000)***	I(0) [-2.4996] (0.0062)***	I(0) [-26.5265] (0.0000)***	I(0) [-25.9188] (0.0000)***
Log Losses carried forward	I(0) [-17.8769] (0.0000)***	I(0) [-2.7889] (0.0026)***	I(0) [-1.2e+02] (0.0000)***	I(0) [-1.4e+02] (0.0000)***
Reduced CIT	I(0) [-16.4584] (0.0000)***	I(0) [-7.7002] (0.0000)***	I(0) [-16.2225] (0.0000)***	I(0) [-15.2987] (0.0000)***
Governance	I(0) [-7.3746] (0.0000)***	I(0) [-7.7860] (0.0000)***	I(0) [-10.4855] (0.0000)	I(0) [-10.1376] (0.0000)***
Market potential	I(0) [-6.1938] (0.0000)***	I(0) [-2.1707] (0.0150)**	I(0) [-9.0229] (0.0000)***	I(0) [-8.4529] (0.0000)***
Infrastructure	I(0)	I(0)	I(0)	I(0)

Index	[-3.3429] (0.0004)***	[-2.4051] (0.0081)***	[-3.2407] (0.0006)***	[-4.9329] (0.0000)***
Log Natural Resources	I(0) [-3.2143] (0.0007)***	I(0) [-9.7277] (0.0000)***	I(0) [-11.0277] (0.0000)***	I(0) [-11.0013] (0.0000)***
Log Trade Openness	I(0) [-2.9974] (0.0000)***	I(0) [-3.7547] (0.0001)***	I(0) [-6.5702] (0.0032)***	I(0) [-6.5595] (0.0000)***
Log Financial Globalisation	I(0) [-6.8246] (0.0014)***	I(0) [-25.5131] (0.0000)***	I(0) [-4.5162] (0.0000)***	I(0) [-5.4169] (0.0000)***
Economic policy Index	I(0) [-4.4094] (0.0000)***	I(0) [-4.7763] (0.0000)***	I(0) [-5.4894] (0.0000)***	I(0) [-6.1998] (0.0000)***

Source: Author's calculations using stata 12. P-values are in parentheses () and adjusted t-value [], unit root hypothesis is rejected at \*\*\*1%, \*\*5% and \* 10% levels of significance. The estimation includes the trend.

Table 13 above indicates that using the LLC test, all variables are stationary in levels for all the panels. Thus, the variables are I (0) at 1% level. The study therefore concludes that all the variables are stationary in level based on the IPS and LLC results. Therefore, since all the variables are I (0) the model does not indicate long-term relationships in the variables, thus the cointegration tests will not be carried out.

#### 8.4. System GMM estimation



In modelling system GMM models there is a bias constraint in estimation emanating from too many instruments (Mehrhoff 2009). The estimators produce efficient results if the lagged levels and lagged differences in a SYS GMM model are valid instruments for the lagged variable by being independent from the transformed error term.

There are two methods of reducing an instrument count in the SYS GMM model; the first one is by constraining the lag depth and the second one is by collapsing the instrument set (Mehrhoff 2009). This study adopts the instrument collapsing method in determining the efficient instrument count level.

The system GMM estimation used in this study has the individual year effects to increase instruments in estimation and improve the efficiency of estimates<sup>10</sup>.

#### 8.4.1 Diagnostic tests

Tables 14 to 17 contain diagnostic results from a system GMM estimation of Panels 1 to 4. The estimation results from the four panels were gained from using one-step GMM estimation with constants as specified in econometric models A to D. The model also contains individual year specific effects. These additional ten-year dummy variables are included to increase the instruments and thus improve the efficiency of estimates (Stoinov 2007).

**Table 14: Panel 1 tests**

<b>Test</b>	<b>Model A</b>	<b>Model B</b>	<b>Model C</b>	<b>Model D</b>
<b>Instrument Count</b>	58	58	58	58
<b>F(stat) Wald</b> $\chi^2$	321.10	315.90	313.21	335.96
<b>F(stat) p-value</b>	0.0000	0.0000	0.0000	0.0000

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<sup>10</sup> The ten year dummies are used to increase the instrument count given the small samples.

<b>Sargan test</b>	(0.4380)	(0.5113)	(0.5315)	(0.5641)
<b>p-values</b>				
<b>AR(1)</b>	(0.1335)	(0.1539)	(0.1276)	(0.0697)
<b>AR(2)</b>	(0.1363)	(0.1432)	(0.1234)	(0.0897)

**Table 15: Panel 2 tests**

<b>Test</b>	<b>Model A</b>	<b>Model B</b>	<b>Model C</b>	<b>Model D</b>
<b>Instrument</b>	55	55	55	55
<b>Count</b>				
<b>F(stat) Wald</b> $\chi^2$	165.06	171.17	173.54	179.21
<b>F(stat) p-value</b>	0.0000	0.0000	0.0000	0.0000
<b>Sargan test</b>	(0.7158)	(0.6907)	(0.6406)	(0.7271)
<b>p-values</b>				
<b>AR(1)</b>	(0.0937)	(0.0763)	(0.0827)	(0.0761)
<b>AR(2)</b>	(0.0983)	(0.0765)	(0.0926)	(0.0973)

**Table 16: Panel 3 tests**

<b>Test</b>	<b>Model A</b>	<b>Model B</b>	<b>Model C</b>	<b>Model D</b>
<b>Instrument</b>	60	167	163	166
<b>Count</b>				
<b>F(stat) Wald</b> $\chi^2$	323.35	862.35	810.53	837.35
<b>F(stat) p-value</b>	0.0000	0.0000	0.0000	0.0000

<b>Sargan test</b>	(0.4508)	(0.2648)	(0.3954)	(0.2438)
<b>p-values</b>				
<b>AR(1)</b>	(0.1230)	(0.1342)	(0.1209)	(0.1386)
<b>AR(2)</b>	(0.1264)	(0.1437)	(0.1318)	(0.1425)

**Table 17: Panel 4 tests**

<b>Test</b>	<b>Model A</b>	<b>Model B</b>	<b>Model C</b>	<b>Model D</b>
<b>Instrument</b>	174	175	172	175
<b>Count</b>				
<b>F(stat) Wald</b> $\chi^2$	853.31	890.50	831.67	876.58
<b>F(stat) p-value</b>	0.0000	0.0000	0.0000	0.0000
<b>Sargan test</b>	(0.3074)	(0.1654)	(0.2775)	(0.1415)
<b>p-values</b>				
<b>AR(1)</b>	(0.1672)	(0.1549)	(0.1452)	(0.1673)
<b>AR(2)</b>	(0.1724)	(0.1690)	(0.1524)	(0.1739)

The diagnostic results analysis begins with the model specification test shown by the F-statistic which is highly significant for all four panels at 1% level as shown by the p-values. This indicates that the regressors in the four panels jointly explain the significant variation in the FDI inflows across the selected SADC countries in each panel.

The next important estimation test is the post-estimation Sargan test which tests for over-identifying restriction in the panels. The Sargan test compares the number of instruments used and the parameters in the model. In one-step estimation the Sargan test is considered superior to

the alternative Hansen J-test (Okodua 2011). In cases where the model fails the Sargan test it indicates a misspecification error (Chavali 2014). This is because it minimises the value of the GMM one-step model. The null hypothesis for the Sargan test is that over-identifying restrictions are valid. The Sargan test rejects the validity of instruments when the probability p-value is less than 0.05 (Chavali 2014).

Thus, the Sargan test in all the four panels using p-values does not reject over identifying restrictions since all four panels have p-values above 0.05. The diagnostic result, therefore, concludes that the instruments' over-identification restrictions set in each panel are valid.

The models used two differenced lags as instruments to address the problem of short time periods and small cross-sections in the models. The reported AR (1) and AR (2) tests show p-values above 5% in the one-step estimations. Therefore, we accept the null hypothesis of no autocorrelation at 5% level of significance. Therefore, the instruments are not endogenous and estimates are consistent.

#### **8.4.2 Estimated empirical models<sup>11</sup>**

Table 18 shows the estimation results from the four estimated models of Panel 1 using one-step GMM estimation with constants as specified in econometric models A to D in Chapter 7. The model also contains individual year dummies for the ten years in the model to increase the instrument count and improve results efficiency<sup>12</sup>. The results show the effects of tax incentives and other control variables on FDI inflows into the SADC's resources-rich countries in Panel 1.

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11 The models contain a combination of linear-linear and linear-log relationships. For linear-linear relationships a unit change in the independent variable leads to a change in the dependent variable which is equal to the coefficient of the independent variable. For linear-log models one unit increase of log independent variable leads to a change in the dependent variable by the value of the coefficient of the independent variable. Thus a 1% increase in the independent variable changes the dependent variable by 0.01 times the coefficient of the independent variable. Since the dependent variable is measured as a % of GDP the interpretations of the variables for linear-log models have to consider the variables measurement.

12 Year dummies are reported in the Appendix D

**Table 18: Estimated empirical results of the SYS GMM Panel 1**

Dependent variable: FDI as a % of GDP

<b>Independent Variable</b>	<b>Model A</b>	<b>Model B</b>	<b>Model C</b>	<b>Model D</b>
<b>FDI (-1)</b>	0.7508288 (0.000)***	0.7813831 (0.000 )***	0.7313236 (0.000)***	0.69201174 (0.000 )***
<b>Tax holidays</b>	-0.0453303 (0.819 )			
<b>Log CIT</b>		-0.32456 (0.006)***		
<b>Losses Carried Forward</b>			-6.457257 (0.259)	
<b>Reduced CIT</b>				-0.257379 (0.040 )**
<b>Governance</b>	11.37773 (0.076 )*	9.958844 (0.101)	8.679832 (0.029 )**	5.945349 (0.008 )***
<b>Market</b>	-0.1198403	-0.0899106	-0.1302812	-0.1598241

<b>potential</b>	(0.262 )	(0.430 )	(0.171)	(0.139)
<b>Infrastructure</b>	-4.434885 (0.005)***	-3.327424 (0.065)*	-3.412898 (0.058)*	-5.075188 (0.004)***
<b>Log Natural Resources</b>	-1.345016 (0.000)***	-1.36202 (0.000)***	-1.451677 (0.000)***	-1.306214 (0.000)***
<b>Log Trade Openness</b>	1.543197 (0.0056)***	1.518772 (0.010)**	1.593977 (0.007)***	2.07522 (0.001)***
<b>Log Financial Globalisation</b>	1.432874 (0.059)*	1.451487 (0.504)	0.1210353 (0.962)	2.471988 (0.032)**
<b>Economic Policy</b>	-0.1802605 (0.517)	-0.2629364 (0.085)*	-0.1752989 (0.582)	-0.0794149 (0.815)
<b>Yr2004</b>	Dropped due To collinearity	Dropped due To collinearity	Dropped due To collinearity	Dropped due To collinearity
<b>Yr2005</b>	Dropped due To collinearity	Dropped due To collinearity	Dropped due To collinearity	Dropped due To collinearity
<b>Yr2006</b>	1.975048 (0.351)	2.305721 (0.284)	1.539036 (0.474)	1.978067 (0.339)
<b>Yr2007</b>	7.414866 (0.000)***	8.235579 (0.000)***	7.450592 (0.000)***	7.341992 (0.000)***
<b>Yr2008</b>	6.744843 (0.009)***	7.225766 (0.006)***	6.788771 (0.009)***	5.498714 (0.034)**

<b>Yr2009</b>	3.661675 (0.110)	4.453325 (0.065)*	3.808071 (0.100)	3.039139 (0.181)
<b>Yr2010</b>	5.672091 (0.021)**	6.460128 (0.012)**	6.190999 (0.014)**	4.328481 (0.083)*
<b>Yr2011</b>	3.911199 (0.109)	5.077059 (0.056)*	4.591577 (0.069)*	2.522045 (0.312)
<b>Yr2012</b>	3.742166 (0.180)	4.859294 (0.101)	4.390719 (0.126)	2.560895 (0.361)
<b>Yr2013</b>	1.755233 (0.549)	2.837567 (0.359)	2.586305 (0.396)	0.5466028 (0.852)
<b>Constant</b>	-43.01757 (0.045)**	-85.97198 (0.059)*	-27.81898 (0.264)	-62.53391 (0.007)***
<b>Observations</b>	63	63	63	63
<b>Number of Groups</b>	7	7	7	7

Source: Author's calculation from stata 12 output

Note: p-values are in brackets and \*\*\*indicates significant at 1% level, \*\*indicates significant at 5% level and \*indicates significant at 10% level.

Tax holidays in Model A are statistically insignificant, meaning they do not explain FDI inflows into resources-rich SADC countries. However, the negative sign on the variable indicate that tax holidays give a negative signal about an economy to investors and discourage

their location in economies that use tax holidays. A 1% increase in tax holidays reduces FDI inflows by 0.045%.

CIT is significant at 1% level as shown in Model B and is negatively signed indicating that an increase in CIT will lead to reduced FDI inflows to the SADC resources-rich countries. This supports the findings of Klemm and van Parys (2009) that lower income tax rates attract more FDI inflow into developing countries. Precisely a 1% increase in CIT reduces FDI inflows by 0.325%. This supports the theoretical findings in Chapter 3 which argued that investors seek low operating costs which are long-term. Therefore, tax holidays are not preferred as much lower CIT in attracting FDI.

Losses carried forward are insignificantly different from zero as shown in Model C. The insignificant values for the variable support the argument that investors are interested in incentives that are long-term. The variable has a p-value of 0.259 showing that it is insignificantly different from zero. Reduced CIT in specific sectors produced interesting results shown in Model D above; the variable has a negative effect at 1% level. Since the study uses the lowest rate offered in specific investment sectors in each SADC country to measure this variable, the sign indicates that high tax rates in key sectors reduces FDI inflows. Specifically in Panel 1, reduced CIT shows that a 1% reduction in CIT will translate into a 0.25% increase in FDI inflows. This supports the neoclassical investment theory which argues that low costs attract investment since they enhance profits.

The lagged FDI variable shows similar results for all four models estimated using Panel 1 countries' data. The variable is significant at 1% and is positively signed in all the models A to D. This indicates that the flow of FDI into SADC countries responds to previous year inflows; therefore, most investments in the region flow to areas where other investors are established. Thus, most investors use the follow-the-leader approach, where new investments are inspired by the performance of earlier investors. The results also support the New Economic Geography theory which argues that investment flows to the core region where economic activity is already high. This is typically true in developing countries where most FDIs are resources-seeking and thus discovery of primary resources by early movers attracts new entrants. The effects of previous year FDI inflows in Panel 1 show coefficients that are almost equal. In Model A, a 1% increase in previous year FDI inflows increases FDI net inflows in the current



year by 0.75%. For models B, C and D a 1% increase in previous year FDI inflows increases FDI net inflows in the current year by 0.78%, 0.73% and 0.69% respectively.

The governance index in the model shows the socio-economic status of a country. Panel 1 results for models A, C and D show that FDI net inflows are positively related to a stable socio-economic status of a country at 10%, 5% and 1% significant levels respectively. These results support the findings of Akanbi (2012) which conclude that investment spending in a country increases when the socio-economic environment is good. These results and the magnitudes of the coefficients indicate that the institutional stability and effectiveness in the SADC region are important in attracting foreign investment. For instance, in Model A, a one index point increase (improvement) in governance will lead to about an 11% increase in FDI inflow to the region.

Market potential measured by GDP growth rate, is insignificantly different from zero in all the four models of Panel 1. This shows that the globalisation wave has removed the effects of market size since foreign markets are now easier to access due to technological improvement in information communications technology. The SADC countries' integration has also widened the market for investors in the region thus market-seeking FDI to individual countries is insignificant. Though insignificant, the market potential variable is surprisingly negative in all four panels. For example, in Model A, a 1% increase in market potential reduces FDI inflows by 0.12%. This is contrary to the expected positive effect that market potential should have. This might be because of the nature of investment in the SADC resource-rich countries which is resources-seeking FDI. Thus, increases in the GDP growth rate indicate high incomes for the local nationals which might pose competition for foreign capital. High incomes also signal potentially strong pressure groups for indigenous participation in sectors that involve natural resources extraction which threatens the existence of foreign investment in those sectors.

The stock of infrastructure variable has interesting results in all four models, which is surprisingly negatively signed. The coefficients are significant at 1% level in Models A and D and at 10% in models B and C. The coefficients have high values of -4.4 for model A, -3.3 for Model B, -3.4 for Model C and -5.1 for Model D. Theoretically, increases in stock of infrastructure is expected to positively impact foreign capital. However, the results in Panel 1 for all the models A to D indicate that increase in infrastructure negatively affects inward FDI attraction. This conclusion supports the findings of Devarajan, Swaroop and Zou (1996) that

excessive productive expenditure by governments can be unproductive and that developing countries misallocate expenditure in favour of capital expenditure at the expense of recurrent expenditure. The negative relationship between infrastructure and FDI inflows can also be attributed to poor infrastructure regulatory frameworks. Following the recommendations of the World Bank in the 1990s most SADC countries privatised their state-owned enterprises in the infrastructural sector which created private companies in the industry. This move increased the cost of infrastructure and hence their positive attraction to FDI collapsed. Kirkpatrick, Parker and Zhang (2006) conclude that though developments in the communications sector have encouraged competition, the sector has characteristics that allow firms to retain a monopoly which might encourage them to exploit their power in pursuit of supernormal profit.

The log natural resources variable also exhibits interesting results. Panel 1 shows that the natural resources variable (measured as natural resources rents as % of a GDP) has a negative relationship with FDI inflows and are significant at 1% level in all four models. This indicates that FDI in SADC is resources-seeking and when countries impose high royalties in mining and other taxes on foreign investment, FDI inflows fall. For instance, in Model B a 1% increase in natural resources rent as a % of GDP reduces FDI inflows by 1.36%.

Trade openness measured as trade % of GDP is significant in all four models of Panel 1. The variable is positively signed indicating that openness to trade attracts FDI inflows into SADC resources-rich countries. The result supports the theoretical arguments that openness to trade reduces the costs of doing business to foreign firms and thus attracts foreign capital. The variable is highly significant at 1% level in models A, C and D and at 5% in Model B. Model D has the highest coefficient which shows that a 1% increase in trade as a % of GDP will lead to an increase in FDI net inflows by 2.075%. The coefficients for models A, B and C are also high taking values of 1.54; 1.51 and 1.59 respectively.

Financial globalisation positively impacts FDI inflows in all four models of Panel 1. However, the variable is only significant in models A and D at 10% and 5% levels respectively. Model A shows the 1% increase in financial globalisation explains a 1.43% increase in net FDI inflows and in Model D, a 1% increase in financial globalisation accounts for a 2.47% increase in net FDI inflows.

The economic policy variable is insignificantly different from zero in models A, C and D of Panel 1. It is, however, significant at 10% level in Model B and negatively signed. Thus, an increase in inflation and government expenditure in the index reduces net FDI inflows into SADC resources-rich countries. A 1% increase in economic policy index reduces net FDI inflows by 0.26%.

**Table 19: Estimated empirical results of the SYS GMM Panel 2**

Dependent variable: FDI as a % of GDP

<b>Independent Variable</b>	<b>Model A</b>	<b>Model B</b>	<b>Model C</b>	<b>Model D</b>
<b>FDI (-1)</b>	0.1817723 (0.000 )***	0.1769628 (0.000 )***	0.1517319 (0.000)***	0.1682598 (0.000 )***
<b>Tax holidays</b>	0.0335549 (0.002)***			
<b>Log CIT</b>		-0.02603 (0.006)***		
<b>Losses Carried Forward</b>			0.8545623 (0.690)	
<b>Reduced CIT</b>				0.0891729 (0.093 )*

<b>Governance</b>	-2.617819 (0.078 )*	-2.300087 (0.063 )*	-3.0867 (0.164 )	-1.869469 (0.085 )*
<b>Market potential</b>	0.1808723 (0.016 )**	0.1805173 (0.112 )	0.1913209 (0.097 )*	0.1569562 (0.157)
<b>Infrastructure</b>	-4.638513 (0.002 )***	-4.702356 (0.002 )***	-4.774561 (0.002 )***	-4.91995 (0.001 )***
<b>Log Natural Resources</b>	-0.8224798 (0.244)	-0.9648517 (0.033)**	-0.7644326 (0.252)	-0.6970618 (0.274)
<b>Log Trade Openness</b>	-0.0731741 (0.978)	-0.79119 (0.772)	-0.3125475 (0.908)	-2.5307442 (0.074)*
<b>Log Financial Globalisation</b>	3.960395 (0.039)**	3.512697 (0.075)*	4.154748 (0.025)**	3.912717 (0.033)**
<b>Economic Policy</b>	0.255267 (0.427)	0.1704575 (0.609)	0.1703265 (0.588)	-0.0887271 (0.789)
<b>Yr2004</b>	Dropped due To collinearity	Dropped due To collinearity	Dropped due To collinearity	Dropped due to collinearity

<b>Yr2005</b>	-4.181803 (0.002)***	-4.497011 (0.001)***	-4.460478 (0.004)***	-1.238662 (0.313)
<b>Yr2006</b>	-2.476348 (0.031)**	-2.685077 (0.020)**	-2.753415 (0.070)*	Dropped due to collinearity
<b>Yr2007</b>	Dropped due To collinearity	Dropped due To collinearity	-0.3645437 (0.807)	2.529052 (0.023)**
<b>Yr2008</b>	0.4285573 (0.702)	0.8141012 (0.508)	0.3192226 (0.786)	3.434598 (0.005)***
<b>Yr2009</b>	0.0264707 (0.985)	0.333031 (0.821)	Dropped due To collinearity	2.698731 (0.061)*
<b>Yr2010</b>	-2.684225 (0.009)***	-2.384177 (0.033)**	-2.894136 (0.029)**	0.5085404 (0.682)
<b>Yr2011</b>	-1.843181 (0.081)*	-1.447129 (0.218)	-2.096105 (0.096)*	1.368191 (0.287)
<b>Yr2012</b>	-2.626588 (0.024)**	-2.169428 (0.109)	-2.859258 (0.028)**	0.3558411 (0.778)
<b>Yr2013</b>	-4.307746 (0.000)***	-3.757873 (0.009)***	-4.525393 (0.001)***	-1.3313991 (0.298)
<b>Constant</b>	2.266665 (0.868)	-0.5028798 (0.970)	4.965254 (0.693)	-2.531855 (0.834)
<b>Observations</b>	54	54	54	54
<b>Number of</b>	6	6	6	6

<b>Groups</b>				
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Source: Author's calculation from stata 12 output

Note: p-values are in brackets and \*\*\*indicates significant at 1% level, \*\*indicates significant at 5% level and \*indicates significant at 10% level.

Table 19 shows the results from a system GMM estimation of Panel 2 models A to D, using stata 12 econometric software. Table 19 shows the estimation results from the four estimated models using one-step GMM estimation with constants as specified in the econometric models A to D in Chapter 7. The model also contains individual year dummies for the ten years in the model.

The tax incentives variables in the panel significantly explain FDI inflows into resources-poor SADC countries except losses carried forward. Tax holidays are significant at 1% and are positively signed. The results show that a 1% increase in tax holidays leads to an increase of 0.034% in net FDI inflows into SADC resources-poorer countries listed in Panel 2. This is in support of the findings by Klemm et al. (2009) that in developing countries tax holidays are important in luring foreign capital. Tax holidays in the SADC resources-poorer countries reduce costs to the investor thus encouraging investment in less attractive sectors.

CIT is significant at 1% level and negatively signed. Precisely a 1% increase in CIT reduces net FDI inflows by 0.026%. This supports the theory which argues that increases in CIT increase the cost of doing business and thus push away investment. This finding is similar to those in Panel 1. Reduced CIT in specific sectors, though weakly significant at 10% level, is surprisingly positively signed in Panel 2 (shown in Table 19). The results show that increasing taxes in specific sectors increases FDI inflows into resources-poorer SADC countries. A 1% increase in least tax rate in specific sectors increase FDI inflows by 0.089%. Possibly this is because of the preferential treatment given to specific sectors over other sectors; thus in countries with limited resources investors prefer equal treatment in all sectors to ensure easier diversification of operations.

The lagged FDI variable shows similar results for all four models A to D in Panel 2 estimation. The variable has a positive effect on net FDI inflows and is significant at 1% level in all four

models. The variable, however, has lower coefficients than Panel 1 estimations. Thus, the impact of previous year FDI inflows has a lower effect in lower-resourced SADC countries than in resources-rich SADC countries. In models A, B, C and D a 1% increase in previous year net FDI inflows leads to a 0.18%, 0.18%, 0.15% and 0.17% increase in current year net FDI inflows in models A, B, C and D respectively.

The governance index is significant in models A, B and D at the 10% level and insignificant in Model C. Surprisingly; unlike in Panel 1, in Panel 2 the governance index is negatively signed. In models A, B and D a 1 unit increase in governance performance reduces FDI inflows into low-resources SADC countries by 2.62%, 2.3% and 1.87% respectively. This could be due to the fact that strong governance structures that ensure accountability in operations do not encourage FDI in resource-poor environments because they increase the cost of doing business.

Market potential measured by GDP growth rate is weakly significantly different from zero in models A and C of Panel 2 and insignificant in models B and D. Contrary to its effects in Panel 1, estimations of the market potential variable has a positive impact on net FDI inflows. Thus, in lower-resourced SADC countries market-seeking FDI inflows are significant. Precisely a 1% increase in GDP growth rate increases net FDI inflows by 0.18% in Model A and by 0.19% in Model C. This result is expected since theory suggests that FDI moves to markets that are stronger and thus can find demand for their products. Importantly, this shows that less resources-rich SADC countries attract FDI in sectors other than the primary resources sector.

The stock of infrastructure variable has interesting results in all four models in Panel 2. Just as in Panel 1, the results are surprisingly negatively signed. The coefficients are significant at 1% in models A to D. A 1% increase in infrastructure stock reduces FDI inflows by 4.64%, 4.70%, 4.77% and 4.92% in models A to D respectively. This result reinforces those findings in Panel 1.

The log natural resources variables support the results in Panel 1. The variable is significant at 5% in Model B of Panel 2. Thus, Panel 1's result that taxing natural resources more in SADC countries discourages foreign investment is reinforced. Panel 2 Model B shows that a 1% increase in the natural resources variable reduces net FDI inflows by 0.96%.

The trade openness variable in Panel 2 shows a different result to that of Panel 1. The result is negatively signed though it is significant in Model D only at 10% level. In Model D a 1% increase in the trade openness variable reduces net FDI inflows by 2.53%. This indicates that in resources-poor SADC countries, foreign capital is in sectors that require protection against foreign produced products entering the market. Thus the SADC resources-poor countries have not improved their economic environments to ensure competitive production of other goods and services outside the primary resources sector.

Financial globalisation significantly impacts positive FDI inflows in all four models of Panel 2 at 5% level in models A, C and D, with 10% in Model B. This result complements the findings of Panel 1; however, the coefficients in Panel 2 are higher than those in Panel 1. A 1% increase in financial globalisation increases net FDI inflows by 3.96%, 3.51%, 4.15% and 3.91% in models A, B, C and D respectively. This result suggests that financial development is important to foreign investment in other service sectors in the SADC countries with scarce natural resources.

The economic policy variable is insignificant in all four models of Panel 2. Unlike in Panel 1 the variable is positively signed in models A, B and C. This might be because government expenditure crowds in FDI inflows and moderate to low inflations do not discourage investment.

**Table 20: Estimated Empirical Results of the SYS GMM Panel 3**

Dependent variable: FDI as a % of GDP

<b>Independent Variable</b>	<b>Model A</b>	<b>Model B</b>	<b>Model C</b>	<b>Model D</b>
<b>FDI (-1)</b>	0.9189012 (0.000)***	0.892344 (0.000)***	0.9245603 (0.000)***	0.9154076 (0.000)***
<b>Tax holidays</b>	0.0780323			



	(0.295 )			
<b>Log CIT</b>		-0.721275 (0.001)***		
<b>Losses Carried Forward</b>			0.9337763 (0.448)	
<b>Reduced CIT</b>				-0.0325512 (0.394 )
<b>Governance</b>	0.4258281 (0.023)**	0.8436805 (0.021)**	0.7751284 (0.005)***	1.102428 (0.004)***
<b>Market potential</b>	-0.0616652 (0.343)	-0.02511873 (0.695)	-0.056254 (0.396)	-0.04884783 (0.449)
<b>Infrastructure</b>	-1.908309 (0.034)**	-1.4194 (0.000)***	-2.172851 (0.015)**	-2.196754 (0.014)**
<b>Log Natural Resources</b>	-0.5296842 (0.089)*	-0.7130618 (0.039)**	-0.4579656 (0.148)	-0.5793247 (0.057)*
<b>Log Trade</b>	-1.083133	-0.9571666	-0.9074215	-0.6550741

<b>Openness</b>	(0.500)	(0.543)	(0.571)	(0.674)
<b>Log Financial</b>	1.542521	0.6371277	1.967879	1.513586
<b>Globalisation</b>	(0.051)*	(0.009)***	(0.021)**	(0.072)*
<b>Economic</b>	-0.1248531	-0.1817259	-0.1418776	-0.1362478
<b>Policy</b>	(0.480)	(0.300)	(0.424)	(0.446)
<b>Yr2004</b>	Dropped due to collinearity	Dropped due to collinearity	Dropped due To collinearity	Dropped due To collinearity
<b>Yr2005</b>	-0.4003894 (0.778)	-9.248697 (0.347)	-0.585162 (0.935)	1.14612 (0.866)
<b>Yr2006</b>	0.2765428 (0.839)	-8.857821 (0.364)	-0.3687737 (0.959)	1.554275 (0.820)
<b>Yr2007</b>	3.616528 (0.009)***	-5.747985 (0.552)	2.530101 (0.725)	4.414547 (0.519)
<b>Yr2008</b>	1.68104 (0.152)	-6.92987 (0.471)	0.7324856 (0.920)	2.745105 (0.693)
<b>Yr2009</b>	Dropped due To collinearity	-8.500497 (0.367)	-0.7294905 (0.918)	1.317356 (0.845)
<b>Yr2010</b>	1.330272 (0.322)	-7.125888 (0.449)	0.4928031 (0.945)	2.388776 (0.724)
<b>Yr2011</b>	2.009716	-6.924801	0.7924337	2.521793

	(0.128)	(0.465)	(0.913)	(0.714)
<b>Yr2012</b>	1.731301	-7.068726	0.1712367	2.1683
	(0.223)	(0.452)	(0.981)	(0.754)
<b>Yr2013</b>	0.5196761	-8.436732	-1.474243	0.599894
	(0.732)	(0.370)	(0.840)	(0.754)
<b>Constant</b>	20.29752	-8.436732	-3.12545	24.1454
	(0.159)	(0.370)	(0.612)	(0.986)
<b>Observations</b>	108	108	108	108
<b>Number of Groups</b>	12	12	12	12

Source: Author's calculation from stata output

Note: p-values are in brackets and \*\*\*indicates significant at 1% level, \*\*indicates significant at 5% level and \*indicates significant at 10% level.

Table 20 shows the results from a system GMM for Panel 3 models A to D using stata 12 software. The estimation results were obtained using the one-step GMM estimation with constants as specified in the econometric models A to D. The model also contains individual year specific effects.

The tax incentive variables indicate that only CIT is statistically different from zero and the other three incentives (tax holidays, losses carried forward and reduced CIT in specific sectors) are insignificantly different from zero. Tax holidays, however, show a positive sign which supports the findings of Panel 2 that increasing tax holidays' years attracts more foreign capital.

CIT shows results similar to those in panels 1 and 2 which is a significant negatively signed effect on FDI net inflows. Statistically, a 1% increase in the statutory CIT rate will reduce net

FDI inflows into twelve SADC countries in Panel 3 by 0.72%. This supports the theory and findings in panels 1 and 2 that FDI into the SADC is attracted by low tax rates which enhance increased profits.

Losses carried forward are insignificant but positively signed, thus the effect is consistent with expected results. This is because FDI faces high set-up costs and thus benefits from losses carried forwards in initial years of establishment. The longer the years' losses can be carried forward for tax purposes, the more attractive the destination.

Reduced CIT unlike in panels 1 and 2 is insignificant but the negative effect is similar to the variable impact in Panel 1.

The lagged FDI variable has similar effects to those in panels 1 and 2 which are highly significant at 1% level positively signed effect. The positive coefficients in the panel show that previous year FDI inflows positively affect current year inflows. The effects have higher coefficients than those in Panel 2 which shows that the previous year FDI inflows impact the combined SADC countries minus South Africa more than they do the resources-poor group. Statistically, a 1% increase in previous year net FDI inflows increases current year net FDI inflows by 0.92%, 0.89%, 0.92% and 0.92% in models A, B C and D respectively.

The governance index is significant in all four models of Panel 3, at 5% level in models A and B and at 1% in models C and D. Similar to the findings of Panel 1, the variable is positively signed showing that SADC countries with high governance scores attract more foreign capital. Thus, in the SADC countries forming Panel 3 of the study, FDI favours countries with socio-economic stability. In Panel 3, a 1 unit increase in governance performance increases net FDI inflows in SADC countries by 0.43%, 0.84%, 0.78% and 1.1% in models A, B, C and D respectively.

Market potential measured by GDP growth rate is insignificantly different from zero in all four models of Panel 3. Surprisingly, however, just as in Panel 1 it is negatively signed. This finding is contrary to theory suggesting that high incomes discourage foreign capital due to possible competitiveness of local businesses (indicated by high incomes).

The stock of infrastructure variable is significant in all four models of Panel 3 at 5% in models A, C and D and at 1% in model B. The coefficients just as in panels 1 and 2, are negatively signed. The coefficients indicate that a 1% increase in infrastructure stock explains a reduction in net FDI inflows by 1.91%, 1.42%, 2.17% and 2.2% in models A to D respectively. This result reinforces those findings in panels 1 and 2.

The log natural resources variables support the results in panels 1 and 2. The variable is significant in models A, B and D at 10%, 5% and 10% levels respectively. Thus, the results in panels 1 and 2 reinforce that taxing natural resources more in SADC countries discourages foreign investment. For Panel 3, models A, B, and D show that a 1% increase in the natural resources variable reduces net FDI inflows by 0.53%, 0.71%, and 0.58% respectively.

The trade openness variable in Panel 3 shows that the variable is insignificantly different from zero in all four models. The result is negatively signed as in Panel 2. The sign is contrary to theory and means that FDI into SADC countries prefers protected economies which are not open to trade.

Financial globalisation has a significantly positive impact on FDI inflows in all four models of Panel 3 at 10% level in models A and D, 1% in model B and at 5% in model C. This result complements the findings of panels 1 and 2. A 1% increase in financial globalisation increases net FDI inflows by 1.54%, 0.64%, 1.97% and 1.51% in models A, B, C and D respectively. This result suggests that financial development is important to foreign investment in the SADC.

The economic policy variable is insignificant in all four models of Panel 3. Similar to Panel 1, the variable is negatively signed in all the models. This is because government expenditure crowds out foreign investment and inflation levels in the SADC are too high which affects business viability.

**Table 21: Estimated Empirical Results of the SYS GMM Panel 4**

Dependent variable: FDI as a % of GDP

<b>Independent Variable</b>	<b>Model A</b>	<b>Model B</b>	<b>Model C</b>	<b>Model D</b>

<b>FDI (-1)</b>	0.9119658 (0.000)***	0.8842055 (0.000 )***	0.9181124 (0.000)***	0.9045428 (0.000 )***
<b>Tax holidays</b>	-0.1001436 (0.155 )			
<b>Log CIT</b>		-0.0452 (0.009)***		
<b>Losses Carried Forward</b>			0.9052408 (0.449)	
<b>Reduced CIT</b>				-0.0099738 (0.784)
<b>Governance</b>	0.2175242 (0.087 )*	0.4763533 (0.554)	0.1638223 (0.031 )**	0.4213011 (0.046 )**
<b>Market potential</b>	-0.0474351 (0.454)	-0.0087058 (0.889)	-0.0456667 (0.479)	-0.03126 (0.618)
<b>Infrastructure</b>	-0.685311 (0.068)*	-0.3688582 (0.054)*	-0.7936212 (0.060)*	-0.5234846 (0.002)***

<b>Log Natural Resources</b>	-0.3291234 (0.227)	-0.6035176 (0.057)*	-0.2077596 (0.426)	-0.2305557 (0.384)
<b>Log Trade Openness</b>	-1.351099 (0.382 )	-1.012735 (0.501 )	-1.145398 (0.449)	-0.7036566 (0.640)
<b>Log Financial Globalisation</b>	0.8308491 (0.031)**	-0.2300842 (0.767)	1.217181 (0.018)**	0.5815253 (0.012)**
<b>Economic Policy</b>	-0.1307242 (0.443)	-0.202619 (0.231)	-0.1486099 (0.385)	-0.1582274 (0.359)
<b>Yr2004</b>	Dropped due To collinearity	Dropped due To collinearity	Dropped due To collinearity	Dropped due to collinearity
<b>Yr2005</b>	5.899724 (0.371)	-11.64383 (0.230)	1.954367 (0.773)	2.825582 (0.665)
<b>Yr2006</b>	5.750351 (0.384)	-11.52865 (0.231)	1.719719 (0.800)	2.719137 (0.679)
<b>Yr2007</b>	8.675983 (0.192)	-8.280672 (0.386)	4.835564 (0.479)	5.655541 (0.390)
<b>Yr2008</b>	7.226081 (0.283)	-9.163584 (0.335)	3.304517 (0.632)	4.348277 (0.515)
<b>Yr2009</b>	5.622282	-10.6495	1.80938	2.961434

	(0.283)	(0.252)	(0.787)	(0.646)
<b>Yr2010</b>	6.714986	-9.487239	2.762216	3.885741
	(0.303)	(0.306)	(0.682)	(0.547)
<b>Yr2011</b>	7.121997	-9.229978	3.203507	4.050767
	(0.283)	(0.323)	(0.640)	(0.538)
<b>Yr2012</b>	6.91114	-8.97133	2.947802	4.083123
	(0.298)	(0.332)	(0.667)	(0.535)
<b>Yr2013</b>	5.61058	-10.15462	1.608993	2.779936
	(0.401)	(0.273)	(0.815)	(0.675)
<b>Constant</b>	5.64238	-4.13543	0.064523	2.468545
	(0.465)	(0.564)	(0.456)	(0.956)
<b>Observations</b>	117	117	117	117
<b>Number of Groups</b>	13	13	13	13

Source: Author's calculation from stata 12 output

Note: p-values are in brackets and \*\*\*indicates significant at 1% level, \*\*indicates significant at 5% level and \*indicates significant at 10% level.

Table 21 shows the results from a system GMM for Panel 4 models A to D using stata 12 software. The estimation results were obtained using the one-step GMM estimation with constants as specified in econometric models A to D. The model also contains individual year specific effects.



The tax incentive variables indicate that only CIT is statistically different from zero and the other three incentives (tax holidays, losses carried forward and reduced CIT in specific sectors) are insignificantly different from zero. Tax holidays surprisingly show a negative effect contrary to the panel 2 and 3 estimations but similar to Panel 1. The possible reason for this is the addition of South Africa in Panel 4 which adds to the number of SADC countries that have abolished tax holidays. This negative effect is thus a consequence of that South Africa being the highest recipient of FDI inflows in the SADC.

CIT shows results similar to those in panels 1, 2 and 3 which is a significant negatively signed effect on FDI net inflows. Statistically, a 1% increase in the statutory CIT rate will reduce net FDI inflows into thirteen SADC countries in Panel 4 by 0.05%. This supports theory and findings in panels 1, 2 and 3 that FDI into the SADC is attracted by low tax rates which enhance increased profits. The coefficient in Panel 4 is smaller than that in Panel 3, showing that adding South Africa to the model in Panel 3 reduces the effects of CIT. This is because South Africa is moving away from using tax incentives as an FDI attraction strategy.

Losses carried forward are insignificant but positively signed as in earlier panels, thus the effect is consistent with expected results. This is because FDI faces high set-up costs and thus benefits from losses carried forward in the initial years of establishment and the longer the years' losses can be carried forward for tax purposes, the more attractive the destination.

Reduced CIT in Panel 4 is insignificant and negatively signed. The negative effect supports theory that low taxes attract more investments.

The lagged FDI variable has similar effects to those in panels 1, 2 and 3 which is a highly significant at 1% level positively signed effect. The positive coefficients in the panel show that previous year FDI inflows positively affect current year inflows. Statistically, a 1% increase in previous year net FDI inflows increases current year net FDI inflows by 0.91%, 0.88%, 0.92% and 0.90% in models A, B, C and D respectively.

The governance index is significant in models A, C and D of Panel 4 at 5% level in models C and D and at 10% in models A. Similar to the findings of panels 1 and 3, the variable is positively signed showing that SADC countries with high governance scores attract more

foreign capital. Thus, the thirteen SADC countries forming Panel 4 of the study show that FDI favours countries with high socio-economic stability. In Panel 4, a 1 unit increase in governance performance increases net FDI inflows into SADC countries by 0.22%, 0.16% and 0.42% in models A, C and D respectively.

Market potential measured by the GDP growth rate is insignificantly different from zero in all four models of Panel 4. Surprisingly, however, just as in panels 1 and 3 the variable is negatively signed. This finding is contrary to theory which suggests that high incomes discourage foreign capital due to possible competitiveness of local businesses (indicated by high incomes).

The stock of infrastructure variable is significant in all four models of Panel 4 at 1% in Model D and at 10% in models A, B and C. The coefficients, just as in panels 1, 2 and 3, are negatively signed. The coefficients indicate that a 1% increase in infrastructure stock explains reduction in net FDI inflows by 0.69%, 0.37%, 0.79% and 0.52% in models A to D respectively. This result reinforces those findings in panels 1, 2 and 3.

The log natural resources variable, unlike the results of panels 1, 2 and 3, is significant only in Model B at 10% level. Thus, adding South Africa to the panel of SADC countries reduces the impact of natural resources rents. This is because of the dominance of South Africa in terms of resource richness and FDI inflows compared to other SADC countries. Therefore, even though South Africa receives high rents from its natural resources, it continues to attract high investment inflows due to other advantages it has, such as high economic development. For Panel 4 Model B, a 1% increase in the natural resources variable reduces net FDI inflows by 0.60%.

The trade openness variable in Panel 4 shows that the variable is insignificantly different from zero in all four models. The result is negatively signed as in panels 2 and 3. The sign is contrary to theory and means that FDI into SADC countries prefers protected economies which are not open to trade, even after adding South Africa to the model.

Financial globalisation has a significantly positive impact on FDI inflows in three models of Panel 4 at 5% level. This result complements the findings of panels 1, 2 and 3. A 1% increase in financial globalisation increases net FDI inflows by 0.83%, 1.22% and 0.58% in models A,

C and D respectively. This result suggests that financial development is important to foreign investment in the SADC.

The economic policy variable is insignificant in all four models of Panel 4. Similar to panels 1 and 3, the variable is negatively signed in all the models. This reinforces the argument that government expenditure crowds out foreign investment and inflation levels in the SADC are too high which affects business viability.

## **8.5 Summary and conclusions**

The chapter analysed the estimation and results of the study and answered the study's major research questions. Firstly, how effective are tax incentives in attracting foreign mobile capital? Secondly, what are the other determinants of FDI attraction into SADC countries? The study's estimation choice was the SYS GMM estimator since it best addresses the estimation problems of endogeneity associated with dynamic panel data models.

The data source for tax variables was the Ernst & Young's worldwide tax summaries and the macroeconomic variables were found in the World Bank's World Development Indicators. The problem of unit roots in macroeconomic data was addressed by using the IPS and LLC unit roots test. Here, variables that failed to become stationary until the time series variable became incompatible with the IPS test. However, the combined results of the IPS and LLC tests concluded that all the variables are stationary in levels. The unit root tests result thus removed the need for cointegration tests in the study.

The SYS GMM estimations in section 8.4 produced interesting results on the effectiveness of tax incentives in FDI attraction in the SADC region. Macroeconomic control variables also had interesting, and in some cases surprising relationships, with net FDI inflows into the SADC countries. The estimations were done using the one-step GMM estimation with constants as specified in econometric models A to D in Chapter 7.

The tax incentive variables indicate that only CIT is statistically different from zero in the entire four panels estimated in the study and it constituted Model B. Consistent with theory, the CIT variable renders results which are negatively signed. Thus, it can be concluded that in SADC countries, increasing statutory CIT, reduces the attractiveness of a country to foreign

capital. Tax holidays had mixed and interesting results in all four panels. The variable significantly explains variations in FDI inflows only in Panel 2 which comprises the resources-poorer SADC countries. The effect of the variable is positive in Panel 2, thus for the resources-poorer SADC countries, increasing tax holidays attracts more foreign capital. Though insignificant in Panel 3, the variable has a positive effect, but surprisingly in panels 1 and 4, tax holidays show a negative effect. This indicates that adding South Africa to the set of all SADC countries listed in the study, changes the effect of tax holidays. This then shows that for transitional economies in the group (including South Africa) tax holidays discourage foreign capital.

Losses carried forward are insignificant but positively signed in panels 2, 3 and 4 and negatively signed in Panel 1 of the study. The positive sign indicates that FDI in the SADC prefers longer losses carried forward. Reduced CIT shows a significant negative effect in Panel 1. This indicates that increasing taxes in specific sectors affects overall FDI inflows in the SADC. Contrary to Panel 1, Panel 2 shows reduced CIT to be significantly positive for explaining FDI inflows into SADC resources-poorer countries. The variable, though insignificant in panels 3 and 4, has a negative sign.

The lagged FDI variable has similar results in all four panels and their particular models which are highly significant at a 1% level positively signed effect. The positive coefficients in the panel show that previous year FDI inflows positively affect current year inflows.

The governance index has significantly positive effects in panels 1, 3 and 4. This shows that improving the socio-economic status of an economy attracts more foreign capital in the panels. However, results in Panel 2 displays a negative effect of governance on FDI inflows. Therefore, for the SADC resources-poorer countries, improving the socio-economic environment renders negative FDI inflows.

Market potential measured by GDP growth rate is insignificantly different from zero in all four panels in the study except in models A and C of Panel 2, where it is significant at 5% and 10% respectively. Surprisingly, however, it is negatively signed in panels 1, 3 and 4 and only consistent with theory in Panel 2 where it is positively signed.

The stock of infrastructure variable is significant and negatively signed in all four panels of the study. Thus, high stock of infrastructure renders negative FDI inflows in the SADC region. This is contrary to theory and can be explained by the nature of the FDI attracted to the SADC. The FDI in the SADC is mainly resources-seeking thus good infrastructure (constructed mostly by MNCs) might indicate over-exploitation and exhaustion of primary resources, making it a less attractive destination for resources-seeking investors.

The log natural resources variable is significant and negatively signed in Panels 1, Model B of Panel 2, models A, B and D of Panel 3 and Model B of Panel 4. The effectiveness of the resources variable is weakened by adding South Africa. The trade openness variable is consistent with theory only in Panel 1 where it is positively signed and significant, showing that for resources-rich SADC countries opening trade attracts more investors. Contrary to theory, Panel 2, though only weakly significant in Model D, shows negative effects of trade openness to FDI inflows. This insignificantly negative result is also evident in panels 3 and 4.

Financial globalisation has a significantly positive impact on FDI inflows in all four panels. This result suggests that financial development is important to foreign investment in the SADC.

The economic policy variable is insignificant in all four panels in the study, except in Model B of Panel 1 where it is weakly significant at 10% level. The negative sign of the variable in the panels puts forward the argument that government expenditure crowds out foreign investment. It also means that inflation levels in the SADC are too high which affects business viability.

## CHAPTER 9

### CONCLUSIONS, POLICY IMPLICATIONS AND FUTURE RESEARCH

#### 9.1 Introduction

This chapter discusses the findings and conclusions of the study and points out areas for future research. The chapter is structured as follows: section 9.2 highlights the study summary and section 9.3 discusses the findings. In section 9.4 the study's contribution to the body of knowledge is discussed and section 9.5 proffers policy recommendations. Section 9.6 provides recommendations for further study in the area.

#### 9.2 Summary of the study

Tax incentives are important in FDI attraction in the SADC countries, therefore an effective tax mix that ensures efficient use of tax incentives is important to ensure sustainable FDI inflows in the region. Good governance in the region is important for FDI inflows to increase. Increasing government rents from natural resources reduces FDI inflows in the SADC.

Previous year flows of FDI are positively related to current year inflows, thus consistent FDI attraction policies in the SADC are important. Infrastructure in the SADC should be consistently improved to ensure compatibility with the dynamic nature of foreign investment. Financial markets should be developed to ensure effective flow of capital and economic growth through more investment.

The conclusions are drawn from the preceding eight chapters of the study; in Chapter 2 conclusions were drawn from a literature review and data trend analysis. The third chapter gave conclusions on the FDI patterns in the SADC and discussed the determinants of FDI based on theory and empirical findings. Chapter 4 made an inquiry into non tax factors employed by the SADC economies in attracting foreign capital. Theory and empirical literature, in Chapter 5 produced conclusions on the importance of tax incentives in attracting FDI. A thorough inquiry into literature followed in Chapter 6 which gave conclusions on the use of tax incentives as a tool to attract FDI in the SADC. The model choice analysis and conclusions were made in

Chapter 7 given the theoretical foundations and the nature of the data. Decisions about the most efficient methodology for the study were made after a review of the literature. Chapter 8 presents the study's empirical results and analysis.

### **9.3 Thesis findings**

The discussion of the study findings starts with the general findings and conclusions of Chapter 2. The chapter, after an in-depth theoretical and empirical analysis from early classical propositions of the role of FDI in developing economies concludes that low capital in an economy is a major hindrance to the development process. The views of earlier theorists like Lewis (1954) for example, to the modern findings by the UN (2005) and Lui and Gerlach (2010) conclude that key economic benefits from FDI inflows are positive employment creation effects, higher production possibilities, greater access to financial resources for local firms, and a reduction in the national debt burden.

However, findings in small economies suggest that the unfair competitive advantages inherent in large MNCs can have detrimental effects on infant host country firms' growth thus reducing welfare benefits in the economy. So Stiglitz (2000), in his main critique of developing economies opening their markets to foreign capital advocates for a sustainable growth in the local industries to guarantee long-term economic growth. Contrary to this view, Meier (1995) argues that the positive contribution of FDI to economic progress is slow. Therefore, institutions that ensure long-term existence of FDI in a developing economy are crucial to the full realisation of foreign capital benefits.

The UNCTAD data on FDI flows across the world lends interesting conclusions to the study. It shows that the developed world receives the largest FDI inflow share demonstrating that the level of economic growth encourages FDI inflows. This finding is also supported by the SADC FDI inflow data which shows South Africa as receiving the largest share of FDI due to its hegemony in the region in terms of development. Economic crises are detrimental to FDI inflow attraction as witnessed by the fall in FDI inflow in developed countries in 2007 and 2008 at the height of the global financial crisis.

Natural resource endowments, especially oil-rich North African regions, received the highest FDI inflows in Africa between 1990 and 2012. There were also higher FDI inflows into Angola compared to other SADC countries. UNCTAD data shows Angola as being second to South

Africa in FDI inflow attraction. Political and social unrest negatively affect FDI inflows as evidenced by the fall in FDI inflows in the oil-rich Arab states of Libya, Tunisia and Egypt at the height of the Arab spring that caused civil wars across the Arab region. Political unrest also affected FDI inflows in Zimbabwe and Madagascar in 2008.

After establishing the important role FDI has to play in developing countries and the trend in FDI flows in the global economy, the study moved to an analysis and synthesis of the factors that determine the locational decisions of foreign capital in developing countries with specific focus on the SADC countries in Chapter 3. With the focus on theoretical and empirical literature, the chapter made a number of interesting findings.

The general agreement of theoretical and empirical studies in this chapter is that the costs and risks of establishing business in foreign economies are too high. This gave rise to the consensus arguments that host markets have to seek peculiar characteristics that increase ease of doing business and enhance investors' earnings if they wish to attract meaningful FDI. Investors were seen to follow the risk-return analysis in seeking high returns when risking foreign establishment.

World Bank (2001 and 2011) reports identify that investors are mainly concerned about the profitability of their foreign establishments. The reports thus grouped factors that attract FDI into firm-specific and country-specific contexts.

The earliest theory on FDI attraction determinants was the neoclassical theory based on the Heckscher-Ohlin trade theory. Here, Coase (1937) makes the solid conclusion that capital moves to resource-rich regions in pursuit of higher rents. Mundell (1957) then expands the argument to include government policy variables centered mainly on trade policies. Thus investors are seen to favour economies that allow them to trade cheaply with other markets. In line with Mundell's argument, Aliber (1970) extends the model to include exchange rates and argues that firms in countries with firm currencies take advantage of their strong currencies to earn economic rent in countries with weaker currencies.

The neoclassical theory critique develops the first firm-specific effects theory the ownership advantage theory. The theory suggests that the peculiar advantages of an MNC encourage it to embark on foreign investment. These advantages include economies of scale and scope and technological know-how. Mason (1939) cements the firm-specific advantages theory with his



industrial organisation theory. Mason concludes that the firms' managerial capabilities and thirst for growth are central in decisions to locate abroad.

In combining the firm-specific and locational advantages factors that encourage foreign capital locational decisions, Dunning John (1977) pioneers the central theory in factors that determine FDI inflows in developing countries. The theory suggests that firms' decisions to invest abroad are inspired by ownership, locational and internalisation factors. Ownership and internalisation factors are firm-specific while locational factors focus on host market factors that make it attractive to investment. This theory led to the elaboration of the motives for foreign investment being: resources-seeking; market-seeking, efficiency-seeking and strategic-asset-seeking. Resources and market seekers consider locational factors such as the kind of natural resources and markets. Where efficiency-seeking investors specifically consider managerial initiatives in making resources more productive through foreign location and so do strategic-resources-seeking investors consider managerial capabilities in their quest to dominate foreign markets.

The Uppsala model that followed the OLI paradigm has a different view on why firms locate in foreign markets. The model concludes that firms choose to locate in foreign markets as a way of learning to navigate in new environments. Buckley and Casson (1976) build on this theory by suggesting that businesses choose to locate in foreign markets in the hope of reducing transaction costs, information asymmetry and the uncertainties associated with dealing with agents in foreign markets without their physical presence.

The industrial network theory argues that foreign capital follows previous market experience and investment success. This theory supports the use of a dynamic model in FDI determinants analysis, as previous investments are believed to affect future prospects of receiving foreign capital. Thus, policy variables that seek to create a rapport with investors are important from this model's perspective. These policies include: property rights, patent and tax policies.

The proximity concentration model which builds on the industrial organisation theory, adds technological innovation to the firm-specific factors that enhance FDI viability in foreign markets. The model, in analysing locational factors that attract FDI, surprisingly disregards the contribution of natural resources as a factor in luring FDI. Rather, the theory suggests that policies that reduce operational costs of business are central in FDI attraction. Thus, the ability of an economy to embrace and encourage technological progress as is also considered a key factor in FDI attraction.

The chapter then moved to host nation locational factors that attract foreign investment. In this section both theory and empirical literature unanimously point to policy variables as a key driver in FDI attraction. The policies cited include: educational, tax, health care, anti-trust, regional, environmental, fiscal and monetary policies. The section also identified market size and economic growth as factors that positively affect FDI inflows.

Natural resources, contrary to the proximity concentration hypothesis, were also considered to be an important input variable in FDI attraction. External trade policies were also indicated as FDI attraction policies. The gravity factors such as: language, distance, cultures, geographical location and economic closeness were viewed as factors that explain the phenomenon of South African investors' 'dominance in Mauritius and Botswana'. Thus, this chapter inspired the next chapter which sought to establish the non-tax factors in FDI attraction with a view to identify the factors relevant to the empirical model to reduce the size of the error term.

In Chapter 4 we established the non-tax efforts that attract FDI to the SADC countries. UNCTAD reports on the weak efforts of African countries to implement sound macroeconomic policies to curb inflation and establish strong currencies that encourage business establishment. UNCTAD (2005) also points to high production costs and policy mistrust emanating from inconsistencies in policy implementation as being rife in Africa and hence low FDI inflows. Low GDP per capita rates and thus small markets also discourage foreign capital from moving into Africa.

The SADC has been making good progress in promoting regional integration to grow individual member states' markets and attract regional FDI. The regional bloc established the SADC protocol on finance and investment with the view to fostering deeper integration and attracting FDI to industrialise the region. The region's countries have favourable property rights' protection laws except for Zimbabwe which, through its indigenisation policy, has discouraged FDI into the country. South Africa, Botswana and Mauritius are rated highly in infrastructural development and the SADC countries are working on erecting infrastructure that increases ease of doing business. Currency stability and sound macroeconomic policies are also positively pursued in SADC with the view to luring FDI.

Chapter 5 honed in on a theoretical and empirical analysis on the effectiveness of tax incentives in FDI attraction. Tiebout (1956) coined the first theory on effectiveness of tax incentives and concluded that tax incentives work best in economies with supportive public goods provision to produce an attractive public goods mix. Holland and Vann (1998) identify key factors that

affect effective use of tax incentives in developing countries. Developing countries are viewed as using tax incentives to counter bad tax systems and poor macroeconomic policies.

The capital arbitrage theory which argues that capital moves from capital-rich economies to capital-poor economies where there is cheap labour and favourable policy for higher returns is the basis of all theoretical arguments in support of the use of tax incentives in developing countries. The neoclassical investment theory concludes that tax incentives encourage reinvestments from established investors as they lower the user cost of capital.

Dunning's OLI theory also supports the use of tax incentives as they increase the locational advantages of an economy and increase FDI attraction. The intangible assets theory concludes that tax incentives lower operational costs and thus lure foreign capital. Therefore, the traditional theories of FDI movement support the use of tax incentives in FDI attraction.

The modern theories start with the NEG theory which suggests that world economic activities are centered in certain regions. These regions form the core of economic activities, and countries outside the core region form the periphery. This theory states that tax incentives work best in countries in the core region for which capital has a high affinity. It thus discourages the use of tax incentives in peripheral regions. This theory discourages tax incentives in developing countries where economic activities are low, as they only lead to revenue losses with little gains in economic activity.

Tax incentives are also used as a policy variable in addressing market failure, regional development and increased income distribution. Advantages of tax incentives are: correcting market failure, encouraging activities that confer positive externalities, new technology growth, encouraging infrastructural FDI, attracting environmentally friendly technology, increasing competitiveness of an economy to foreign capital and increasing the revenue base. The disadvantages of tax incentives are identified as: revenue loss, misallocation of resources, compliance and enforcement costs and increased corruption.

The chapter then moved to the analysis of tax competition and tax harmonisation which are important in the decision whether to grant tax incentives or not. Tax competition based on the original Tiebout (1956) model concludes that tax competition increases efficiency as it leads to the equi-marginal principle in public goods provision. Oates (1972), however, has a different view of tax competition and suggests that it leads to low wages, low employment, capital losses

and reduced tax bases. Hence, the modern race-to-the-bottom theory that states that tax competition leads to suboptimal resource allocation in regions.

The Z-M model concludes that the basis of tax competition is that capital moves to where it is taxed less. This model reckons that taxes move from mobile factors to immobile factors of production. The extensions of the Z-M model saw smaller countries receiving greater benefits from low taxes than the richer, larger economies. Factoring trade into the Z-M model, the conclusions are that tax competition leads to inefficient resource allocation as production shifts to low taxed sectors.

Harmful tax competition is countered by tax harmonisation which seeks to equalise the corporate tax rate in the region and standardise tax policies. This, however, weakens the use of fiscal policy in individual member states.

Empirical findings have divergent views on the effectiveness of tax incentives given the methodologies used in how taxes were measured and the delimitation of the studies. Van Parys and Klemm (2009) in a landmark study used tax incentive variables and concluded that developing countries use tax incentives successfully in attracting FDI. Most other studies have used marginal effective tax rates (METR) and average effective tax rates (AETR) to draw their conclusions.

After an analysis of theory and empirical evidence on the effectiveness of tax incentives in FDI attraction, the study moved to establishing the use of tax incentives in the SADC. The chapter (mainly based on 2014 SADC data) showed that tax incentives are actively used in the SADC to attract FDI. Tax holidays are slowly being phased out in the SADC with countries such as Mauritius, Lesotho, South Africa and Seychelles having abolished them by 2014. In the DRC, tax holidays are used to develop special zones which are under-developed. Madagascar, Namibia, Tanzania and Zimbabwe use tax holidays to promote the export sector in EPZs. Mozambique uses tax holidays in industrial development.

Reduced CIT, royalties and VAT rates in specific sectors are used in all fifteen SADC member states. They are used in the industrialisation drive in the SADC. Zimbabwe and Angola grant reduced CIT rates in the industrial development sector. Zambia utilises these incentives in mining, manufacturing and agriculture. Tanzania uses reduced rates in tourism. Malawi. South Africa and Madagascar grant reduced CIT rates in the EPZs. Lesotho, the DRC and Botswana

offers reduced rates in agriculture, mining and manufacturing respectively. The Seychelles grants reduced CIT rates in marine resources.

Tax allowances, tax credits and similar incentives are widely used in industrial development in all the SADC countries. Accelerated depreciation and losses carried forward are also actively used incentives in the SADC.

The end of the chapter took a look at the factors that constrain the use of tax incentives in the SADC. These factors were identified as: losses in tax bases, tax cooperation and the need for macroeconomic convergence in the region, lack of political will and the need to increase indigenous people participation in business.

Chapter 7 sought to establish the methods of achieving the main objective of the study which is: to establish the locational advantages that are central to attracting FDI into the SADC, with special interest in the role tax incentives play in creating these advantages. The study chose the Dunning (1980) OLI paradigm as the theoretical framework for achieving this objective. The 'L' factors identified by the OLI paradigm as key in establishing a competitive FDI attractive economy form most of our variables in the model.

The study, in its quest to also draw conclusions on the nature of investment in the SADC such as resources-seeking, market-seeking, efficiency-seeking or strategic-resources-seeking also included variables that assist in coming to such conclusions. In line with the OLI framework, Fedderke and Romm (2006), establish policy and non-policy factors that attract FDI in developing countries. Collectively, factors identified as key in FDI attraction are: natural resources, market size, infrastructure, good governance issues, investment favourable legislation, tax policy, exchange policy, patent rights and licencing policies.

The study formulated the model according to the key factors that affect FDI in developing countries. The model thus chose to use: tax incentives, governance, market potential, infrastructure, natural resources, trade openness, financial globalisation and economic policy, as model independent variables. The data for the variables was derived from Ernst & Young's worldwide tax summaries and the macroeconomic variables were found in the World Bank's World Development Indicators. The study grouped SADC countries into four panels. Panel 1 included the seven highest resource-rich countries according to the World Bank natural resource indicators, which are total natural resources rents as % of GDP. Panel 2 had the six least resource-rich countries, Panel 3 consisted of twelve SADC countries in the study (the

panel excluded South Africa which is an outlier in resource richness and growth) and Panel 4 had all thirteen SADC countries in the study. Therefore, using the total natural resources rents as a % of GDP data, Panel 1 consisted of Angola, Malawi, Mozambique, South Africa, Tanzania, Zambia and Zimbabwe, and Panel 2 included Botswana, Lesotho, Madagascar, Mauritius, Namibia and Seychelles. Panel 3 consisted of Angola, Botswana, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, Tanzania, Zambia and Zimbabwe, and finally, Panel 4 had Angola, Botswana, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Tanzania, Zambia and Zimbabwe.

Chapter 8 then did the estimations and gave conclusions on the effectiveness of tax incentives in FDI attraction in the SADC region. The chapter analysed the estimations and results of the study and achieved the main objectives of the study which were: firstly, to establish the effectiveness of tax incentives in attracting FDI and, secondly, establishing the other determinants of FDI attraction into SADC countries. The study used a one-step SYS GMM estimator which efficiently dealt with the endogeneity problems associated with dynamic panel models and tax incentives data as noted in Chapter 7.

The diagnostic tests started with the unit root tests. Using the LLC and IPS tests, the study concluded that the variables are stationary in level, thus there was no need for cointegration tests. The F-test for all the estimations showed highly significant values at 1% level and therefore the study concluded that the variables used in the estimation jointly explain the variation in FDI inflows into SADC countries.

The independent variable analysis concluded that generally tax incentives have significant mixed effects on FDI attraction in the four different panels of the study. CIT was found to have a significantly negative effect on net FDI inflows into all four panels of the study. Therefore, increasing CIT in the SADC hinders FDI inflows. Tax holidays had mixed results in all four panels. In the resources-poorer SADC countries listed in Panel 2, tax holidays were found to positively explain FDI inflows into the SADC countries. Therefore, for resources-poorer SADC countries increasing tax holidays attracts more foreign capital. Though insignificant, in Panel 3, the variable has a positive effect but surprisingly in panels 1 and 4 tax holidays show a negative effect. This indicates that in resources-rich countries of the SADC, tax holidays discourage investors from investing in the region. The different results for tax incentives in SADC

countries according to resources richness, implies that tax cooperation in tax incentive administration is difficult in the region since there is no convergence in tax incentive effectiveness.

Losses carried forward are insignificant but positively signed in panels 2, 3 and 4 and negatively signed in Panel 1. The positive sign indicates that FDI in the SADC prefers longer losses carried forward. Reduced CIT shows a negative significant effect in Panel 1 and negative insignificant effects in panels 3 and 4. This indicates that increasing taxes in specific sectors affects overall FDI inflows in the SADC. Contrary to Panel 1, Panel 2 shows reduced CIT significantly explaining positive FDI inflows into the SADC resources-poorer countries.

The lagged FDI variable has similar results in all four panels and their particular models which are highly significant at 1% level positively signed effect. The positive coefficients in the panel show that previous year FDI inflows positively affect current year inflows.

The governance index shows a significant positive effect in panels 1, 3 and 4. This shows that improving the socio-economic status of an economy attracts more foreign capital into SADC countries. However, the panel for resources-poor SADC countries shows a negative relationship between governance and FDI inflows. Therefore, for the SADC's resources-poorer countries improving the socio-economic environment does not increase FDI inflows.

Market potential, measured by GDP growth rate, is insignificantly different from zero and negatively signed in most models of the four panels in the study. The stock of infrastructure variable is significant and negatively signed in all four panels of the study. Thus, high stock of infrastructure explains negative FDI inflows in the SADC region. The log natural resources variable is significant and negatively signed in the study. The effectiveness of the resources variable is weakened by adding South Africa to the panels. The trade openness variable is positively related to FDI inflows in Panel 1, showing that for the resources-richer SADC countries, opening trade attracts more investors. Contrary to the Panel 1 results, Panel 2 displayed negative effects of trade openness to FDI inflows.

Financial globalisation significantly impacts positive FDI inflows in all four panels. Thus, developing financial markets in the SADC attract more foreign investors. The economic policy

variable is insignificant in most models of the four panels in the study. The negative sign of the variable in the panels suggests that government expenditure crowds out foreign investment and inflation levels in the SADC are too high which affects business viability.

#### **9.4 Study's contribution**

This study makes far reaching contributions to the FDI attraction strategies' debate in many dimensions. Firstly, to the researcher's knowledge this is the first study to focus on FDI attraction factors that include tax incentive variables for SADC countries. The inclusion of derived tax holidays, CIT, reduced CIT and losses carried forward variables, offers credible results to policy makers in their choice of a tax incentive mix to attract FDI.

Secondly, the derivation of indices in governance, infrastructure and economic policy variables gives the study clean and reliable data for efficient regression results. This macroeconomic data derivation will assist the FDI attraction debate with its inclusion of more variables and well behaved data in drawing conclusions. If such data is applied to more regions, more interesting and convincing results on factors that attract FDI will be found.

Thirdly, in Chapter 2 an analysis and comparison of trends in FDI data in different African regions drew important conclusions on the impact of the socio-economic environment in FDI attraction. Fourthly, the classification of SADC countries according to resource richness developed a strong comparative analysis of its own kind.

Fifthly, the use of individual tax incentives variables in each model precludes the effects of collinearity between tax variables and improves results efficiency. This will help in refining the debate on the tax incentive contribution to FDI attraction to individual tax incentive variables.

#### **9.5 Policy recommendations**

The study makes a number of policy recommendations for the SADC economies. Chapter 2 recommended that the SADC governments strive to enhance economic advancement in their countries since developed parts of the world receive substantially higher FDI inflows. Political stability is also a key factor in achieving socio-economic stability and attracting more foreign capital. The SADC countries are thus encouraged to maintain consistent constitutions, strong



law enforcement institutions, impartial legal systems and smooth political change systems which reduce chances of political unrest. The latter would encourage capital investment and hence economic growth.

Chapter 3 of the study recommends that generally SADC countries should pursue policies that encourage new investment. This can be achieved by low operational costs, since this would encourage FDI inflows. These policies should include: exchange rate stabilising policies, educational policies that create a more productive work force, policies that encourage technological innovation, anti-trust, regional, environmental, fiscal and monetary policies that guarantee property rights and patents, health care and tax policies.

Chapter 8 recommends that the SADC pursue policies that increase domestic effective demand and ensure a stable market for products, in order to lure more FDI inflows. The chapter gave the policy recommendations based on empirical findings specific to the SADC. Firstly, the chapter recommends that SADC countries administer low CIT to encourage FDI inflows. Secondly, for resources-rich countries tax holidays should not be granted as they discourage FDI inflows; however, resources-poor countries can implement tax holidays as they attract investment in the countries.

Thirdly, lowering taxes in specific sectors that are important to economic growth should be pursued by the SADC governments as this encourages FDI inflows. Fourthly, the SADC countries should establish policies that ensure openness to FDI since flows of FDI into SADC countries are related to previous year FDI inflows. Fifthly, good governance is crucial in the SADC as it encourages new investments and reinvestments by existing investors. The next point is that, infrastructure should be consistently improved to suit all types of investment. This demands that the SADC countries move away from improving infrastructure that only favours primary resource investment. This is because natural resources are non-renewable and once depleted, will no longer attract FDI.

Lastly, SADC countries should improve its nationals' accessibility to financial resources as this will attract more investors.

## **9.6 Recommendations for future study**

This study's focus on the SADC countries contained the number of countries in the analysis; this creates problems in estimation of panel data models (Baltagi 2005). Therefore, future research on effectiveness of tax incentives using this study's approach can achieve improved results if it can add more countries. For example, all African countries would, increase the number of countries in each panel. More countries would ensure more data points and thus more robust conclusions.

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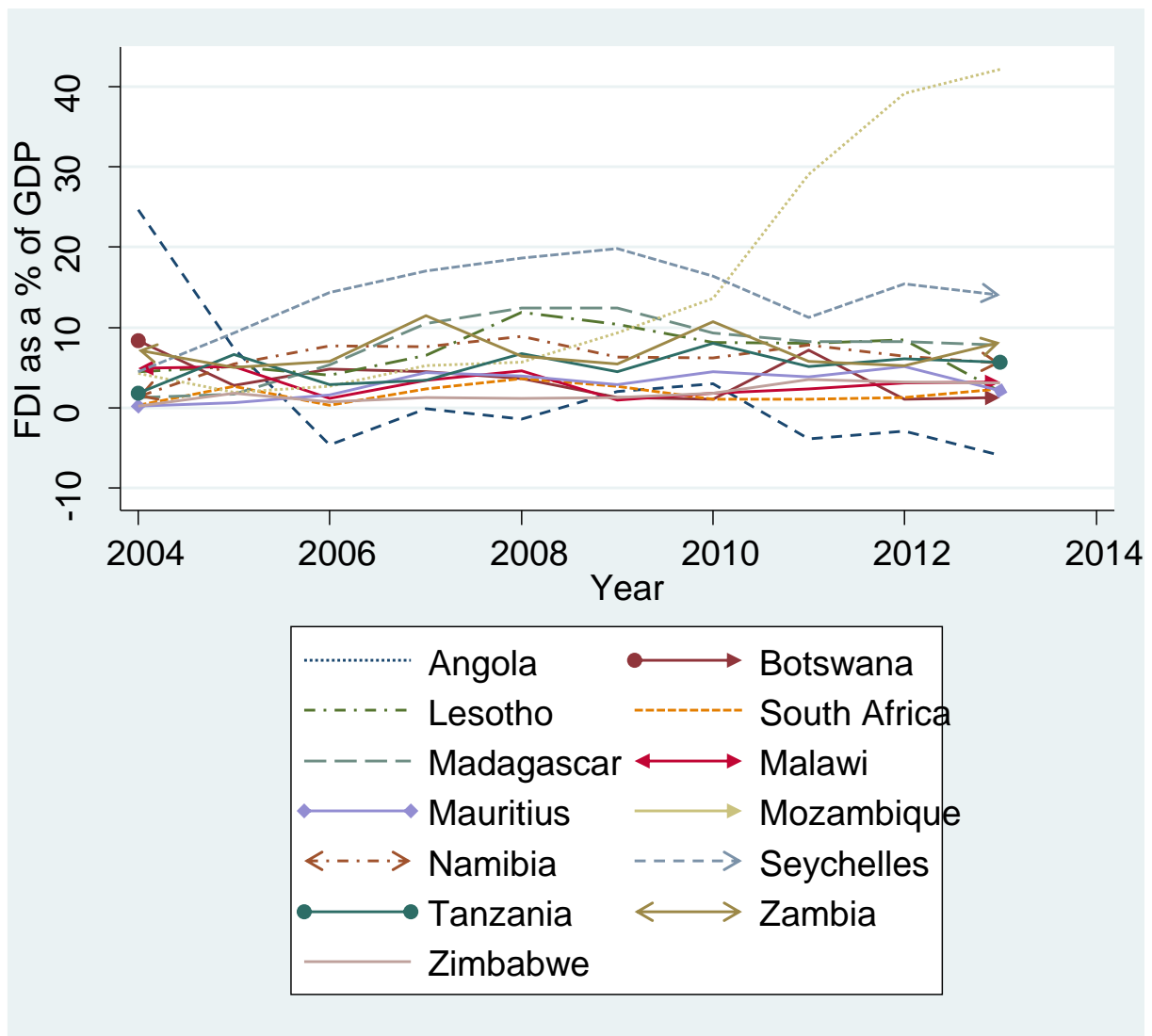
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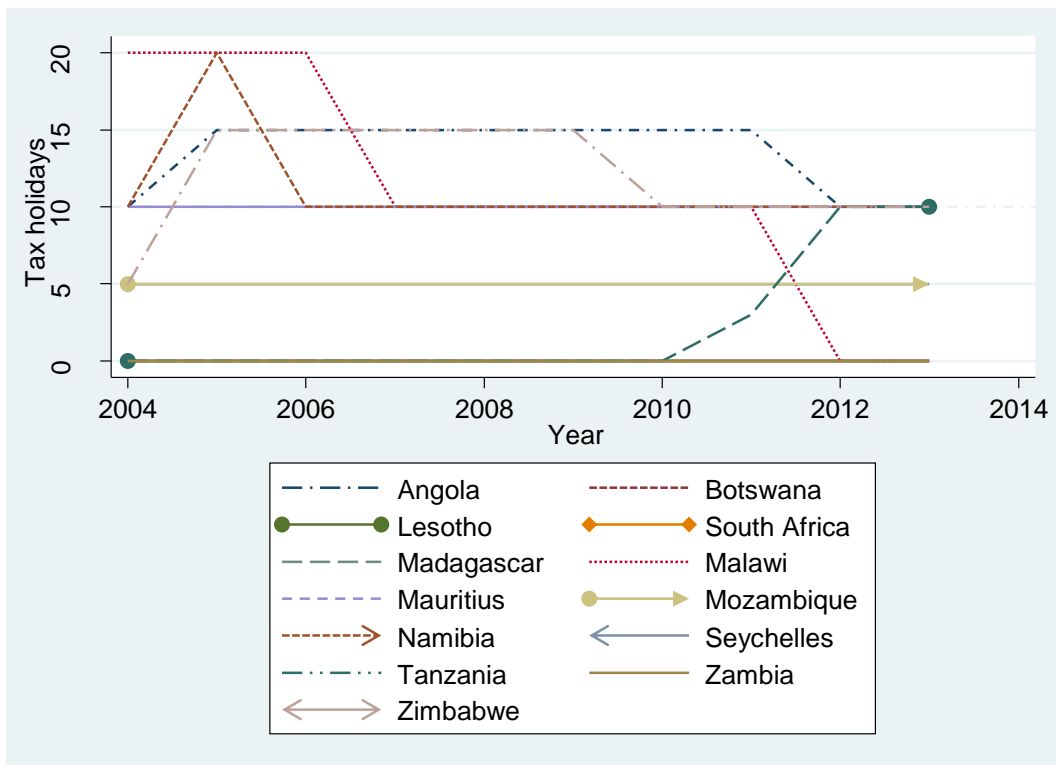
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Appendix A

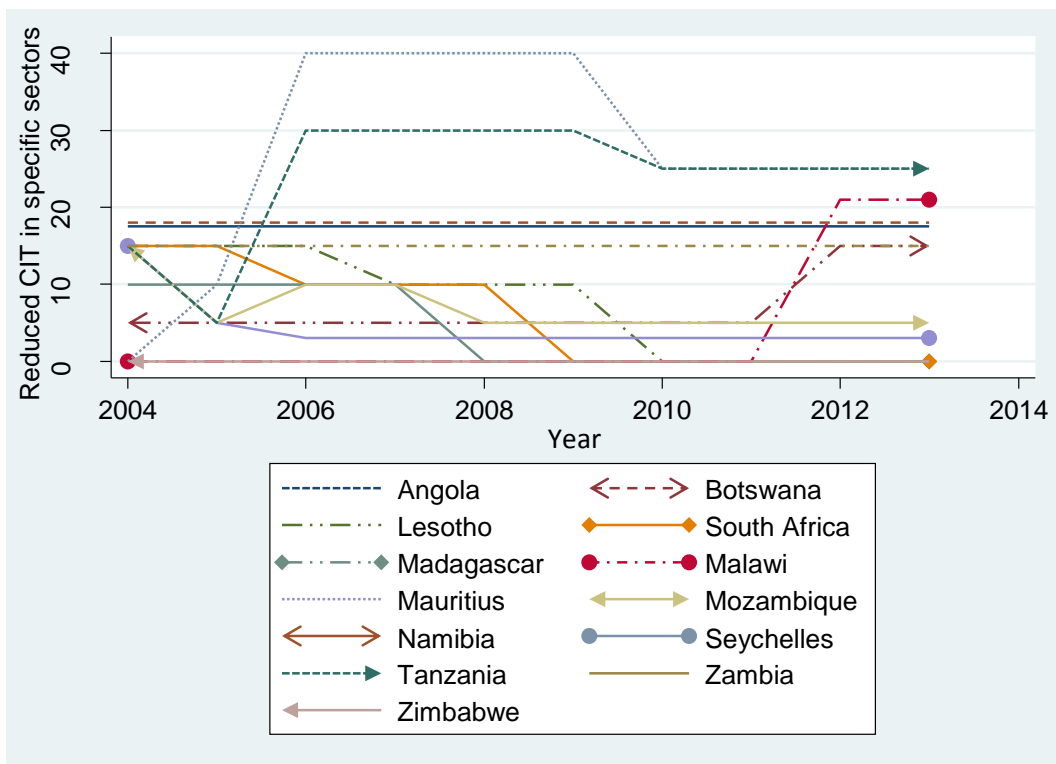
Figure 7: A1 Dependent variable: net FDI inflow as a % of GDP



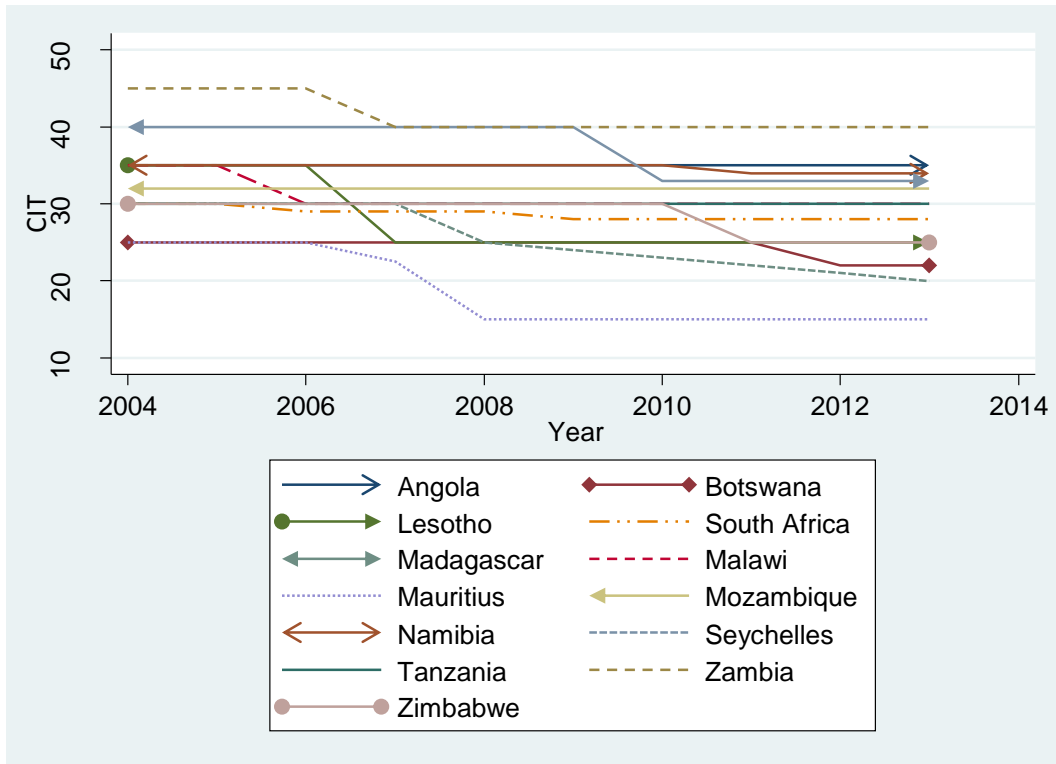
**Figure 8: A2 Tax holidays**



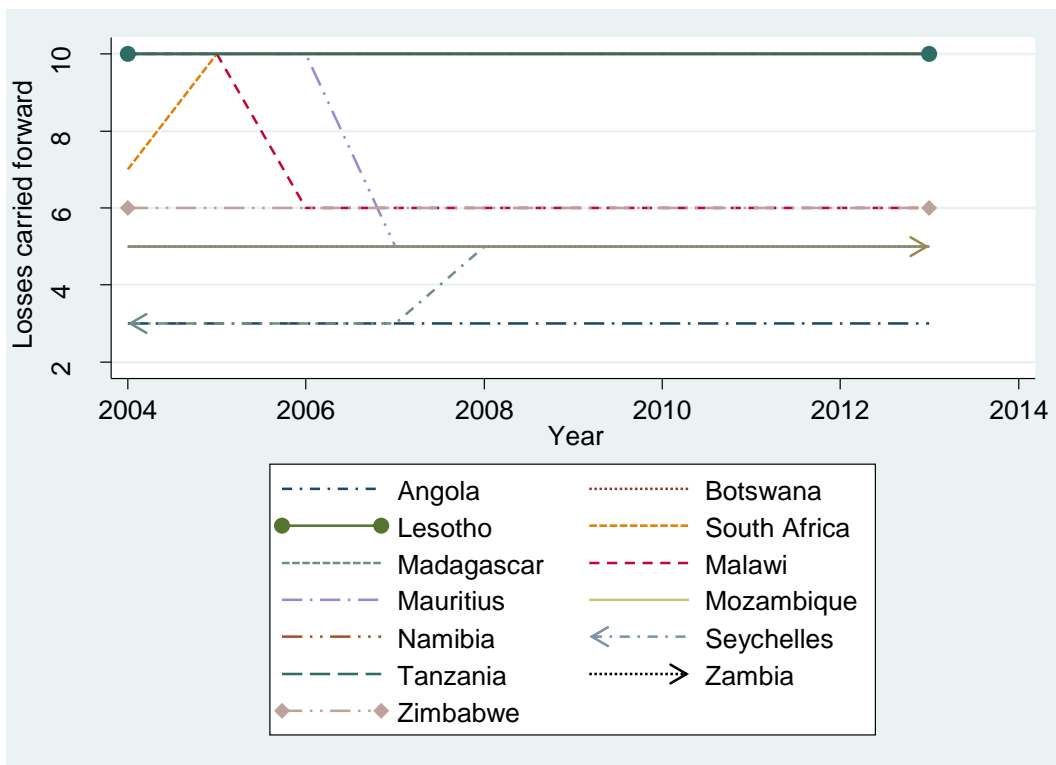
**Figure 9: A3 Reduced CIT in specific sectors**



**Figure 10: A4 CIT**

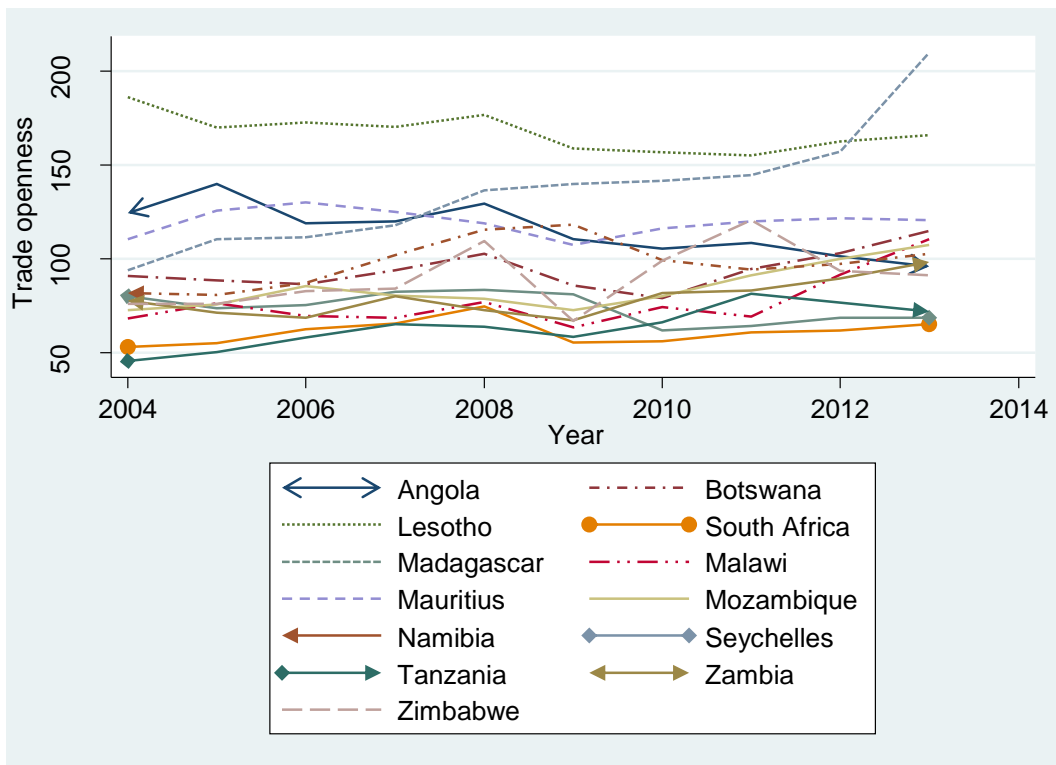


**Figure 11: A5 Losses carried forward**

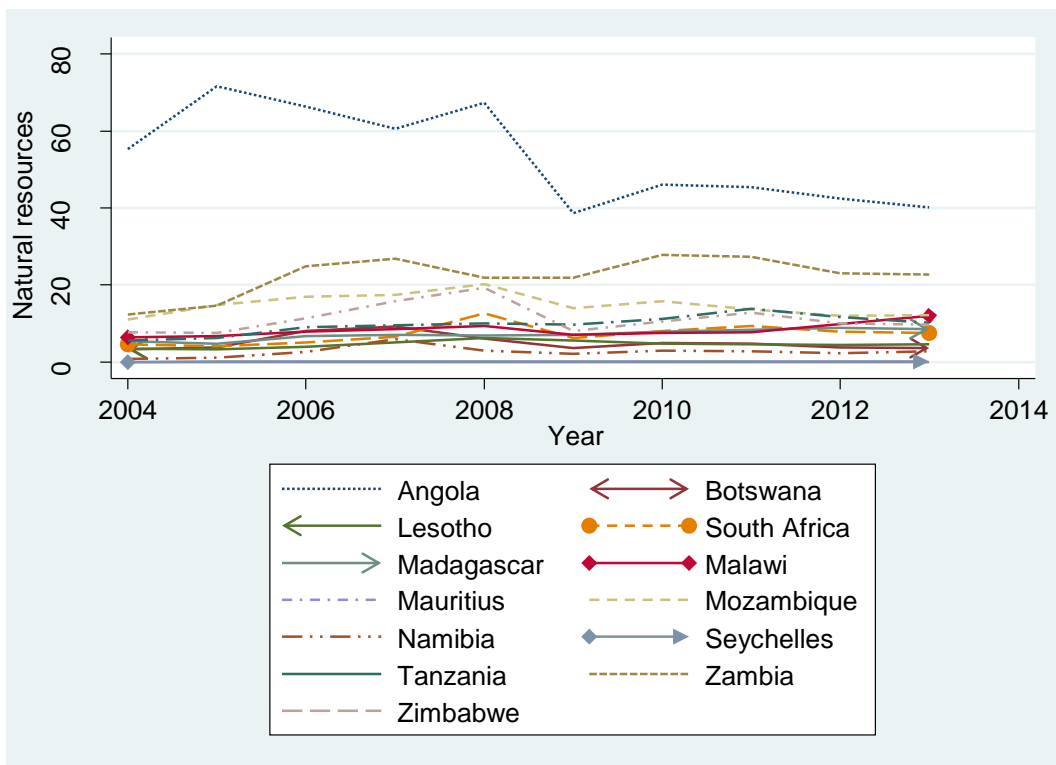




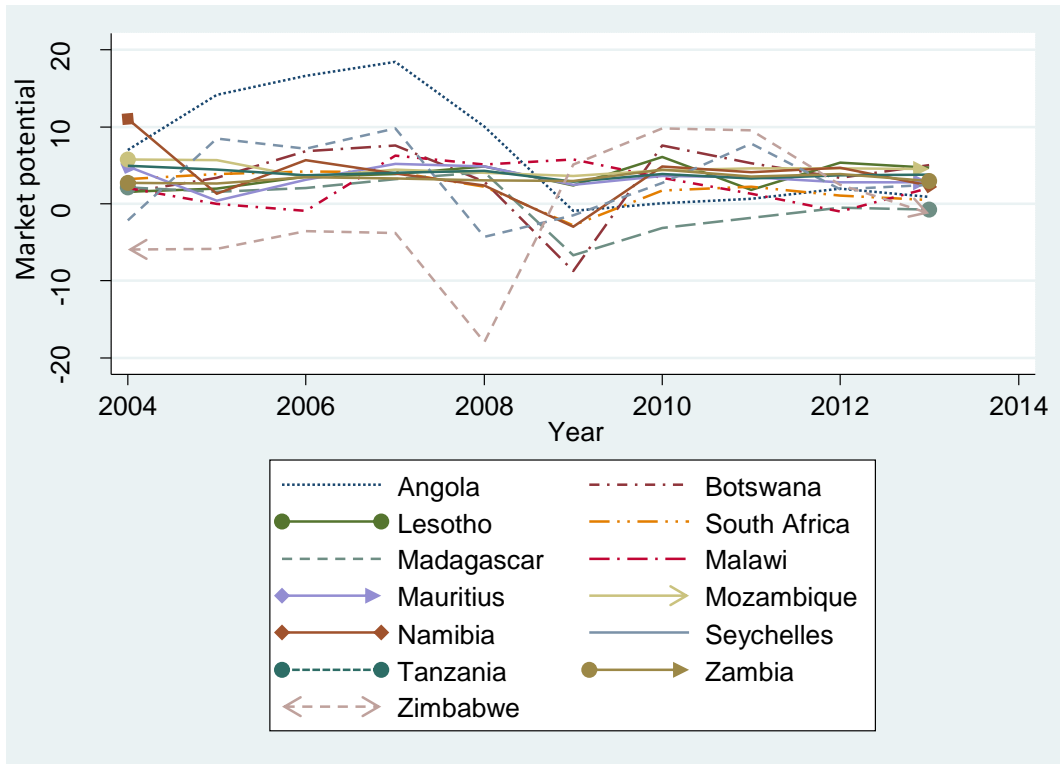
**Figure 12: A6 Trade openness**



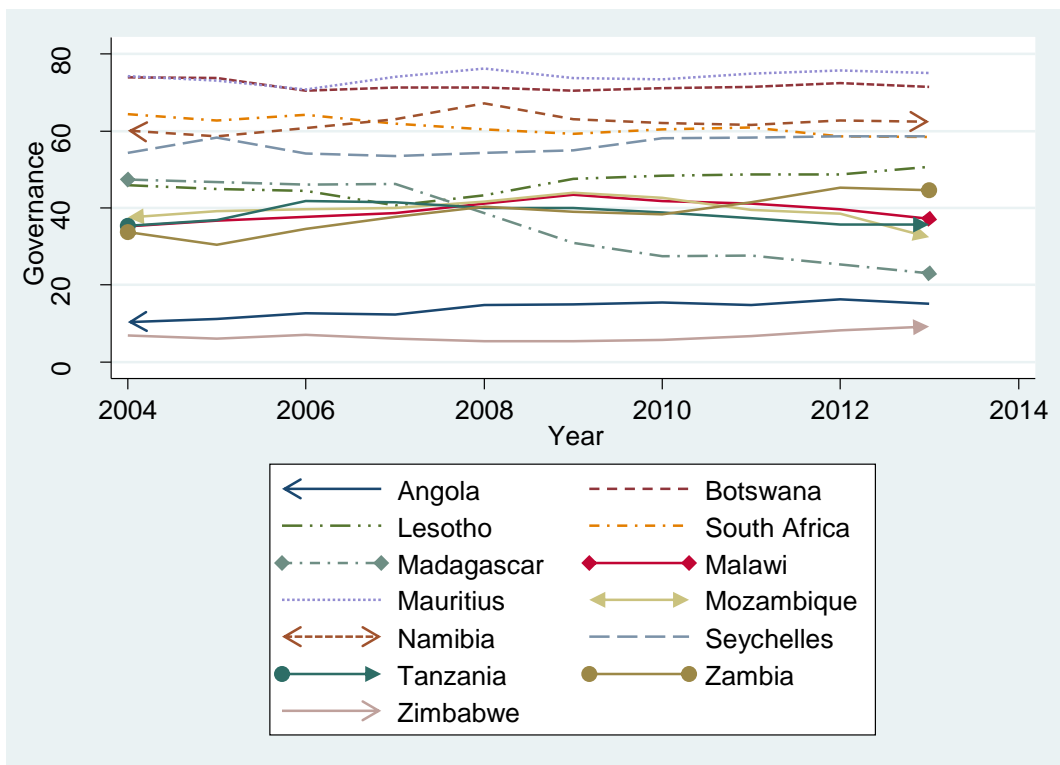
**Figure 13: A7 Natural resources**



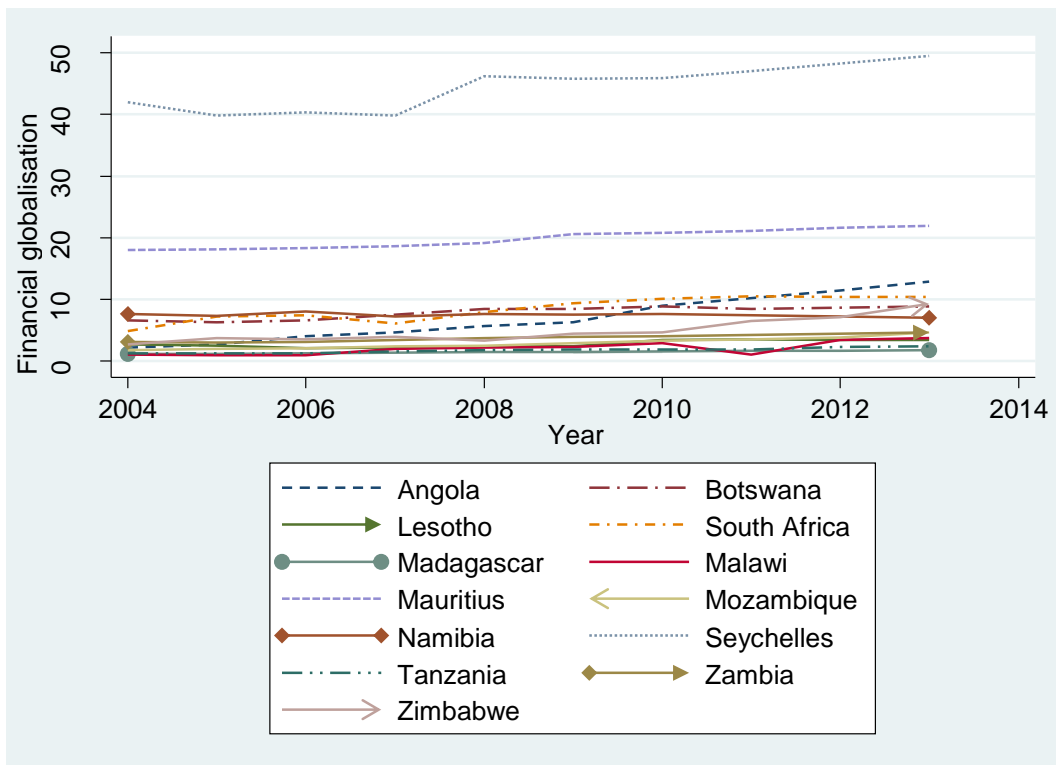
**Figure 14: A8 Market potential**



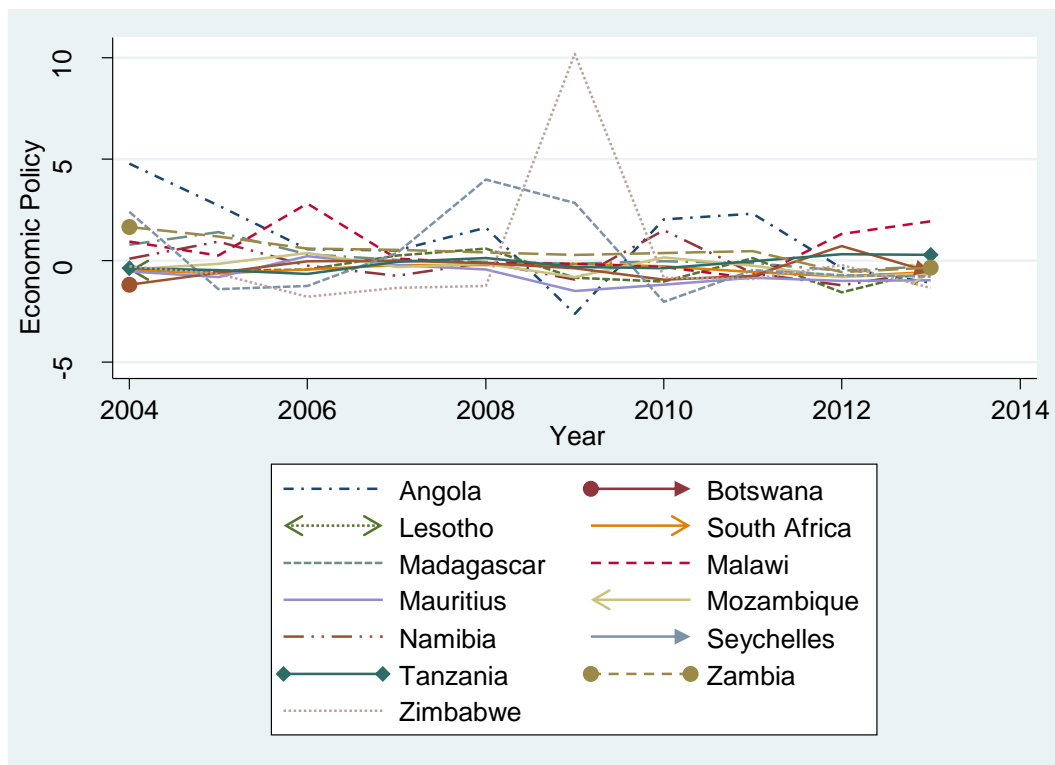
**Figure 15: A9 Governance**



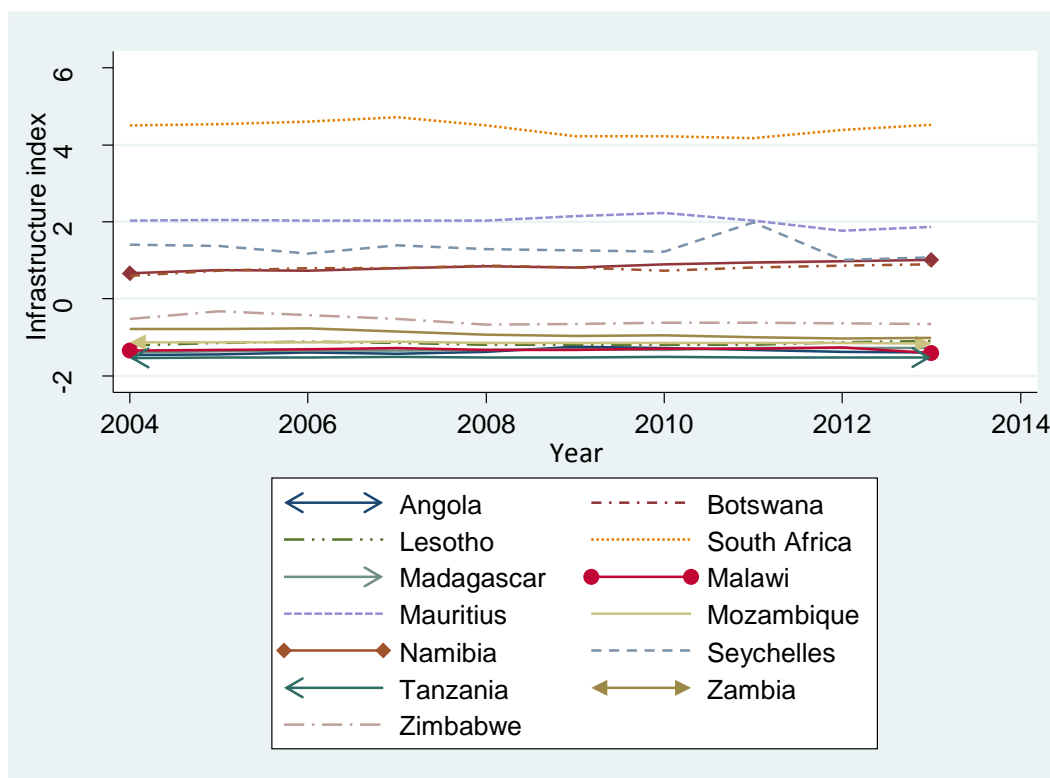
**Figure 16: A10 Financial globalisation**



**Figure 17: A11 Economic Policy**



**Figure 18: A12 Infrastructure**



### A 13 Data trends analysis

This section discusses the data trends and relationships of data behaviour between countries as plotted in Appendix A. The dependent variable net FDI inflow as a % of GDP is shown in Appendix graph A1. The graph shows that the variables range from negative values to positive values in the range of -10 to 42. Most SADC countries' FDI net inflows range in values between 0 and 10. Mozambique had the fastest growing net FDI inflow in the study period which rose from around 2 in 2004 to 42 in 2013. Angola's net FDI inflow fell the most from 24 in 2004 to -6 in 2013. Graph A2 shows the behaviour of tax holidays. Most countries do not show changes in the time trend of this variable. This shows that the same holiday period was maintained in most countries between 2004 and 2013. The highest tax holiday offered was as high as 20 years and the least was no tax holidays at all as most SADC countries sought better incentives than the conventional tax holidays.

Graph A3 shows reduced CIT in specific sectors which exhibits the same behaviour as tax holidays where countries maintained the same rate throughout the period. The lowest rate offered is 0% and the highest 40%. CIT rates in graph A4 shows that Zambia has the highest

rate of 45% and Mauritius, the lowest rate of 15%. Losses carried forward range from 3 years to an unlimited number of years, as shown in graph A5.

Macroeconomic variables have a more defined time trend than tax incentives variables. Trade openness in graph A6 shows that Lesotho has the highest openness index of over 150 throughout the period. South Africa has the lowest trade openness values of below 100 between 2004 and 2013. The natural resources graph A7 shows that most SADC countries have the same range of natural resources ranging between 0 and 20, except for Angola and Zambia. Angola is an outlier with resources rents of above 40 compared to the next best country Zambia which has values ranging between 20 and 25. Mauritius has the lowest number of resources just above zero.

Market potential shown by GDP growth rate also shows a similar trend to natural resources with most countries having values in the 0 to 10 range throughout the study period. Zimbabwe has the lowest growth rate below 0 from 2004 to 2008 which rose to around 10 in 2010 and fell drastically between 2011 and 2013. The governance index shows that the individual country data has same variations throughout the period. However, countries have wide variations with Mauritius having the highest average scores and Zimbabwe has the poorest record. Graph A10 shows financial globalization; it shows that the access to banks in most countries range between 0 and 10. Seychelles has the highest access figure of between 40 and 50 in the period of study, followed by Mauritius with ranges between 18 and 22.

Economic policy index graph A11 shows variations between 2008 and 2010. The infrastructure index in graph A12 shows that the SADC countries have different infrastructural stocks. South Africa has the highest index of above 4 in the period of study and Angola has the lowest with values ranging between -1.4 and 0.

## Appendix B

**Table 22: B1 Derivation of Economic Policy Index**

<b>Principal Components Analysis</b>				
<b>Eigenvalues Number</b>	(components=2) Value	(trace=2) Difference	Proportion	Cumulative value
<b>1</b>	1.07117	0.142338	0.5356	0.5356
<b>2</b>	0.928831	.....	0.4644	1.0000

<b>Eigenvectors</b>	Loading			
<b>Variable</b>	PC1	PC2		
<b>Government</b>	-0.7071	0.7071		
<b>Inflation</b>	0.7071	0.7071		

Source: Author's own calculations

**Table 23: B2 Derivation of infrastructure index**

<b>Principal Components Analysis</b>				
<b>Eigenvalues</b>	(components=3)	(trace=3)		
<b>Number</b>	Eigenvalue	Difference	Proportion	Cumulative value
<b>1</b>	1.79543	0.82803	0.5985	0.5985
<b>2</b>	0.967396	0.730218	0.3225	0.9209
<b>3</b>	0.237178	.....	0.0791	1.0000
<b>Eigenvectors</b>	Loading:			
<b>Variable</b>	PC1	PC2	PC3	
<b>telephone</b>	0.6797	-0.2423	0.6923	
<b>electricity</b>	0.2264	0.9671	0.1161	
<b>internet</b>	0.6976	-0.0778	-0.7122	

Source: Author's own calculations

### Appendix C Descriptive statistics

**Table 24: Descriptive statistics for Panel 1**

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
FDI	70	5.117639	8.055935	-5.98095	42.1086
Tax Holidays	70	6.257143	6.419368	0	20
Log CIT	70	3.468794	0.1322305	3.218876	3.806663
Log Losses Carried Forward	70	1.796096	0.3987589	1.098612	2.302585
Reduced CIT	70	10.52857	9.429327	0	30

Governance	70	-0.5271286	0.5504665	-1.58	0.43
Market Potential	70	3.142819	4.830837	-17.9515	18.5068
Infrastructure Index	70	-0.3384829	1.991317	-1.534163	4.726848
Log Natural Resources	70	2.621836	0.7009959	1.394158	4.271171
Log Trade Openness	70	4.371043	0.2439851	3.822472	4.939189
Log Financial Globalisation	70	1.254922	0.6725667	-0.0759571	2.551716
Economic Policy Index	70	0.1899924	1.655951	-2.640939	10.16996

**Table 25: Descriptive statistics for Panel 2**

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
FDI	60	6.920253	4.756146	0.217592	19.8545
Tax Holidays	60	4.333333	4.911649	0	20
Log CIT	60	3.300067	0.2762199	2.70805	3.688879
Log Losses Carried Forward	60	1.841089	0.3878329	1.098612	2.302585
Reduced CIT	60	11.31667	10.81664	0	40
Governance	60	0.2050556	0.4682721	-0.8116667	0.8316667
Market Potential	60	2.920659	3.624864	-8.69076	11.032
Infrastructure Index	60	0.4158341	1.259368	-1.396387	2.225538
Log Natural Resources	60	-0.2624646	2.632074	-5.745855	2.22569
Log Trade Openness	60	4.70079	0.2937308	4.122606	5.344986

Log Financial Globalisation	60	2.029385	1.165739	0.1477129	3.903279
Economic Policy Index	60	-0.2216578	1.165739	0.1477129	4.001255

**Table 26: Descriptive statistics from Panel 3**

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
FDI	120	6.300716	6.9293	-5.98095	42.1086
Tax Holidays	120	5.816667	5.851069	0	20
Log CIT	120	3.393786	0.2356405	2.70805	2.806663
Log Losses Carried Forward	120	1.779358	0.3846057	1.098612	2.302585
Reduced CIT	120	11.3	10.2115	0	40
Governance	120	-0.230825	0.637725	-1.58	0.8316667
Market Potential	120	3.122228	4.430161	-17.9515	18.5068
Infrastructure Index	120	-0.3599021	1.202963	-1.534163	2.225538
Log Natural Resources	120	1.23821	2.435843	-5.745855	4.271171
Log Trade Openness	120	4.557929	0.3003646	3.822472	5.344986
Log Financial Globalisation	120	1.571746	1.035321	-0.759571	3.903279
Economic Policy Index	120	0.0361047	1.465533	-2.640939	10.16996



**Table 27: Descriptive statistics from Panel 4**

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
FDI	130	5.949615	6.772942	-5.98095	42.1086
Tax Holidays	130	5.369231	5.831136	0	20
Log CIT	130	3.39092	0.2266671	2.70805	3.806663
Log Losses Carried Forward	130	1.816862	0.392877	1.098612	2.302585
Reduced CIT	130	10.89231	10.06105	0	40
Governance	130	-.1891974	.629786	-1.58	.8316667
Market Potential	130	3.040284	4.30169	-17.9515	18.5068
Infrastructure Index	130	0.0096634	1.728839	-1.534163	4.726848
Log Natural Resources	130	1.29062	2.348381	-5.745855	4.271171
Log Trade Openness	130	4.523234	0.3139	3.822472	5.344986
Log Financial Globalisation	130	1.612366	1.006828	-0.0759571	3.903279
Economic Policy Index	130	-2.15E-08	1.414213	-2.640939	10.16996

**Appendix D Interpretation of time dummies**

The time dummies and constants show insignificant values for panels 3 and 4. In Panel 1, years 2004 and 2005 were dropped due to collinearity. Values for 2007, 2008 and 2010 are significantly different from zero and positively signed, meaning that the specific year effects for Panel 1 Model A in 2008 were 27.22%. This shows that for countries in the panel, events of 2007 had a positive influence on FDI inflows. The constant is significant in models A, B and C

and negatively signed. This shows that the FDI inflows had a negative intercept, thus countries in the panel are not attractive to FDI inflows without implementing FDI attraction policies.

Panel 2 has years 2004 and 2007 dropped due to collinearity. Values for years 2005 and 2006 are significant and negatively signed. Thus, the events of those years negatively impacted FDI inflows.