THE EFFECT OF ILLICIT FINANCIAL FLOWS ON ZIMBABWE'S ECONOMIC GROWTH AND DEVELOPMENT

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THE EFFECT OF ILLICIT FINANCIAL FLOWS ON ZIMBABWE'S ECONOMIC GROWTH AND DEVELOPMENT

By

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ABSTRACT

This study examines the effect of Illicit Financial Flows (IFFs) and capital flight on Zimbabwe's economic growth and development. The study data covered the period 1980-2020 applying the Autoregressive Distributed Lag (ARDL) regression model to assess the relationship between IFFs and capital flight and Zimbabwe's economic growth and development. Most empirical studies on developing countries show that in both the short and long run, IFFs and capital flight not only reduce the revenue base of the economy but its multiplier effects result in a negative significant relationship between economic growth and development. This supports the continued call for policymakers and government to develop effective policies and continue to have intergovernmental and bilateral engagements to share knowledge and information to deter and control these activities. Unless these activities are controlled, most developing countries will have revenue shortfalls that will have to be funded from Other Donor Assistance (ODA), AID and loans.

The study used two ARDL models to assess the impact of GDP and Manufacturing output to assess the impact. GDP and Manufacturing output have been chosen as the proxies of economic growth. Data showed that capital flight had a positive coefficient relationship with GDP in the long run. It was statistically significant and capital flight also had a negative and insignificant effect on manufacturing output during the period 1980-2020. Thus, Zimbabwe should effectively engage in policies and measures that identify and deter IFFs and capital flight activities because the multiplier effects of the activities have a negative impact on economic growth and development. The continued depletion of state resources discredits the objectives of the government to achieve the 2030 Millennium Development Goals. Government expenditure in non-productive sectors must be avoided, instead, priority must be given to sectors that attract investors and stimulate economic growth and development.

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LIST OF ACRONYMS

ADF	Augmented Dickey-Fuller
ARDL	Autoregressive Distributed Lag
CENFRI	Centre For Financial Regulation
CLRM	Classical Linear Regression Model
CNRG	Centre For Natural Resources Governance
DF	Dickey-Fuller
DOTS	Direction of Trade
DW	Durbin-Watson
ECDPM	European Centre for Development Policy
ECM	Error Correction Mechanism
ESAP	Economic Structural Adjustment Programme
FDI	Foreign Direct Investment
FIU	Financial Intelligence Unit
GDP	Gross Domestic Product
GEGAFRICA	Global Economic Governance Africa
GMM	Generalised Method of Moments
HDM	Harrold-Domar Growth Model
IFF	Illicit Financial Flow
IMF	International Monetary Fund
MDG	Millennium Development Goal
OECD	Organization for Economic Co-operation and Development
OLS	Ordinary Least Squares
PP	Philip-Perron
RBZ	Reserve Bank of Zimbabwe
UNDP	United Nations Development Programme
UNECA	United Nations Economic Commission for Africa
UNICRI	United Nations Interregional Crime and Justice Research Institute
UNIDO	United Nations Industrial Development Organisation
VIF	Variance Inflation Factor
WAEMU	West African Economic and Monetary Union
ZACC	Zimbabwe Anti-Corruption Commission
ZELA	Zimbabwe Environmental Law Association
ZEPARU	Zimbabwe Economic Policy Analysis and Research Unit
ZIMCODD	Zimbabwe Coalition on Debt and Development
ZIMRA	Zimbabwe Revenue Authority

CHAPTER ONE: INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 INTRODUCTION

The issue of Illicit Financial Flows (IFFs) and capital flight has received a great deal of attention over recent past years as the number of volumes, magnitude and impact of these transactions continue to rise (Miyandazi, 2019; Thiao & Read, 2021). According to Ncube and Okeke-Uzodike (2015), IFFs have increasingly become an integral part of the development agenda and the global economy due to the growth in the numbers of such transactions and at the same time developing countries continuously searching for financial assistance. Therefore, by diverting the efforts to control the IFFs and capital flight activities, developing countries might not need as much aid and financial assistance as they currently request. This is based on the fact that once there are adequate and effective controls on these leakages, these developing countries would not have huge budget shortages that require additional loans. These activities divert huge amounts of funds and affect the government's ability to deliver on its primary responsibility of providing the bare minimum infrastructure and services that are expected to spur economic growth and development.

Research has proven that the major constraint to economic growth and development in Africa is the shortage of financing and this finance gap deters public investments and social service delivery (Fjeldstad & Heggstad, 2014; Triki & Faye, 2013). According to Nkuranzinza (2014), embezzled public funds transferred abroad negatively affect tax revenues as these funds are not taxed when they leave the country and this reduces the amount of resources that could have been spent on the development of vital sectors such as agriculture, education, health, and infrastructure.

There is a thin line between IFFs and capital flight. According to Ngwenya (2019), IFFs refer to funds sourced or associated with illegal activities or transferred and utilised illegally whilst capital flight is considered an unrecorded and untaxed illicit leakage of capital and resources out of a country. Both IFFs and capital flight activities take place through criminal and corrupt activities that also include to some extent the bribery of public officials.

According to Mevel, Vakataki and Karing (2015); UNECA (2013) and United Nations (2016; Elhiraika, Mukungu & Nyoike, 2015), IFFs are usually broken down into three main components:

i. commercial tax evasion mainly through trade. mispricing and laundered commercial transactions by multinational corporations.
ii. corruption, which is the proceeds from theft and bribery by government officials and;
iii. proceeds from various criminal activities, such as racketeering and drug trading.

The major causes of capital flight are economic and or political trigger(s), which include large public sector deficits, accelerating and uncontrollable inflation, slow economic growth, rising taxes and political instability (Makova et al, 2014). Where state security and monitoring institutions that were established to curb these practices are not fully effective and efficient, there is a bigger risk that ordinary citizens will also start to engage in various forms of IFFs or capital flight activities (Umar & Cope, 2021). This is done to supplement consumption shortfalls because of inflationary challenges; for instance, to protect savings and investments from devaluation, as a result of the negative effects on the economy. Whilst the individual engagement is at a small scale, the collective impact of these activities on the country's economic growth is very huge as it tends to reduce both private and public domestic capital expenditure that have negative corrosive multiplier effects on economic growth.

According to Reuter (2017), IFFs threaten the essential attributes of development, which include, credibility in democratic institutions, rule of law and broader social trust. The opportunity cost of these lost funds could have been used to build and improve transport network infrastructure, health care facilities and to provide education facilities all deemed as requirements for attracting and boosting economic development in any country. Ngwenya (2019), reflects that the effects of IFFs and capital flight activities in developing countries; include, a net impact of serious budget shortfalls, reduction of the government's tax base, inability to attract foreign direct investment, artificial increases in prices; risk to financial sector stability (Oloruntoba, 2018), a compromise of political institutions, distortions on investment and savings and changes in demand

of money and exchange rates and interest. This study focuses on the effect of IFFs on Zimbabwe's economic growth and development between 1980-2020.

1.2 BACKGROUND TO THE STUDY

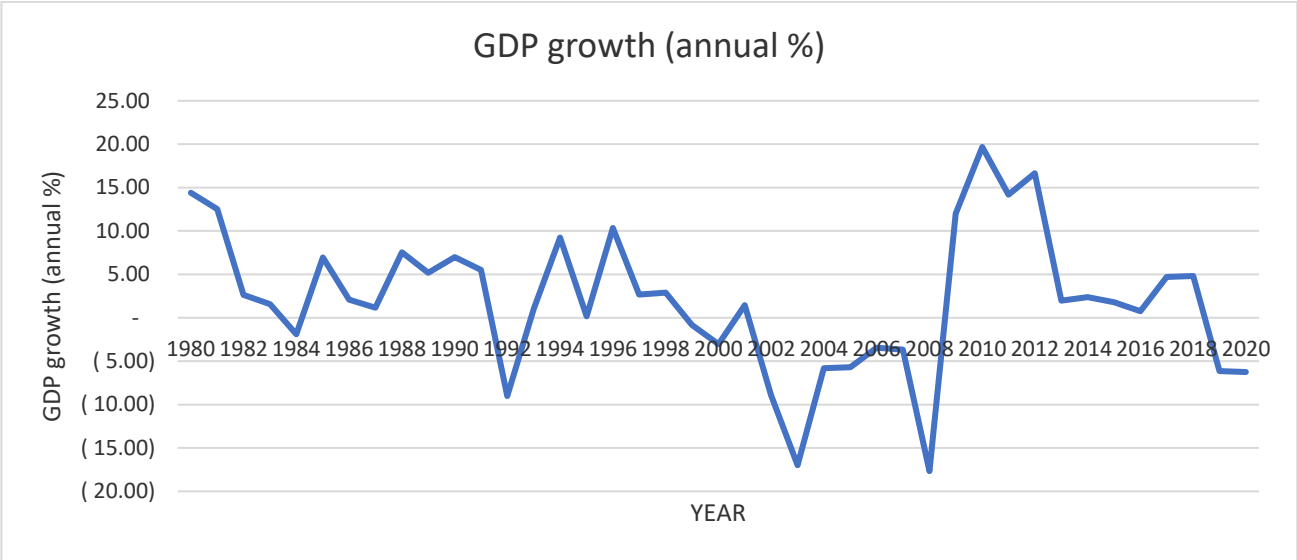
In economics, IFF activities are another form of illegal capital flight as they are both considered financial crimes. Chamisa (2019) noted that in Zimbabwe most of these transactions are defined as the externalising of funds, a sanitary term representing points to illicit financial flows.. These include transactions that involve a legitimate transfer of funds for imports that are intentionally designed not to materialise, resulting in the non-remittance of export revenue back to Zimbabwe. Most of the time these unethical practices and transactions are executed as normal transactions. According to Mevel, Siope and Jaringi (2013), IFFs are conducted to avoid any form of detection by government official financial statistics. As a result, the source of funds and motivation of the actors can be so obscure.

Various studies suggest that IFFs involve trade mispricing generally known as misinvoicing, money laundering, multinational companies' bribery and tax evasion (Acha, Akpanuko & Unuafe, 2013; Ayodeji, 2018; Reed & Fontana, 2011; Cooper, Rusere, van der Linden & Ferreira, 2018; Cobham, Jansky & Mares, 2021; O'hare et al. 2014). Transparency International (2018) and Nitsch (2017), described misinvoicing as the false declaration of economic activities through false reporting and faking data entries in customs declarations and other official documents for various reasons. Imported goods can have their value and quantity falsified to reduce the total cost of customs duty payable for imports. Misinvoicing is also used by large multinational companies to avoid paying or reducing corporate tax. According to Sebele-Mpofu et al. (2021), profits and revenue are strategically moved through invoice manipulation from regions of higher corporate tax to jurisdictions of lower tax. As a result, the country of transfer is denied tax revenue, as the company profits are significantly reduced or overturned to a loss. Intercompany loans can also be used to move revenue from one region to another, especially where the tax law allows. loans and interest payments can also be considered to be an allowable deduction as they reduce tax liability.

In the past two to three decades, Zimbabwe's economic growth rate has been on the decline due to the deteriorated political environment, coupled with sanctions that have affected the economy (Malinga, 2018). Several failed economic policies have also received mixed reactions in the country from both corporate and individual levels and these have contributed to the rampant corrupt activities in the country (Mnangagwa, 2009; Beseada & Moyo, 2008).

Private investment in Zimbabwe has been significantly low for the past three decades (Bonga & Nyoni, 2017).According to Kurebwa (2021), IFFs are a major challenge to Zimbabwe's development. In addition, Gumede and Fadiran (2019) highlight that IFFs and capital flight activities have a direct impact on the country's ability to raise, retain and mobilise its resources to finance sustainable economic development. According to Makuyana and Odhiambo (2014),the generalised root causes associated with these activities in Zimbabwe; include the effects the high national debt overhang, low business confidence, low industrial competitiveness, inadequate infrastructure uncontrolled inflation, deterioration of social and economic status, cash shortages, a thriving black market as well as other macro-economic challenges caused by failed government fiscal and monetary policies. This has resulted in the loss of investors' confidence in the economy and financial sector systems by both the private and public sectors. According to Dlamini and Mbira (2017), depositors' confidence in the banking sector is a key ingredient for the liquidity health of any financial system. Due to the continued failure of economic and political policies by the Zimbabwean administrative government, the country has experienced a period of slow, negative and stagnant economic growth over the last two decades as evident in Figure 1.1.

Figure 1. 1 Zimbabwe Economic Growth Trend 1980-2020



Own compilation: World Bank (Development Indicators Data)

Pre-2008 Zimbabwe had negative growth; as a result of the multiplier effects of the disastrous land reform programme. The production capacity in the manufacturing and food processing industries and the farms were significantly affected, resulting in shortages of basic commodities and an increase in hyperinflation (Mnangagwa, 2011). In a bid to address both the political and economic situation, the Government of National Unity was formed in 2008. During this period several financial institutions were shut down, causing some uncertainty and confusion in the economy. According to Dzomira (2014), the collapse of ENG Capital and Century Discount House in December 2003 heralded the onset of unfortunate events which culminated in some financial institutions being placed under curatorship for corporate scandals and failure and this triggered a liquidity crisis. These systemic closures of the financial institutions also resulted in a loss of confidence in the financial institutions that are still being felt in the present day. The Zimbabwe liquidity crisis has seriously affected banks and companies since 2009 after the introduction of the multi-currency system affecting the country's economic development growth levels (Dlamini & Mbira, 2017). According to Buigut (2014), in 2009 the multicurrency dollarization system was introduced to tame the devastating hyperinflation and this brought about much-needed stability in the economy until 2012 when the economic growth started to decline (Ngoma, 2020;

Elhiraika, Mukungu & Nyoike, 2015). Since 2013 the economic growth rate has been very low characterised by shortages of cash and uncontrollable inflation.

The unemployment rate in Zimbabwe is at an all-time high, with rates varying from 20%- 94% and this implies a substantial unemployment crisis (Maringe & Masinhire, 2021). On the other hand, state education, institutions continue to produce graduates in an already stressed economy that cannot absorb them in the formal sector as most companies are scaling down their operations in response to the deteriorating economic conditions. This has also increased poverty levels. The new administrative government post-Mugabe era in 2017, presented an opportunity to address the economic situation; however, this appears to have been short-lived as the economic growth rate of the country has been on the decline.

What remains a mystery is the impact of the Chiadzwa diamonds revenue discovered in 2008 as there is little public information known on the exact quantity and value of minerals that were and are extracted from these mining activities. The late President Mugabe once announced that at least $15 billion in diamond revenue was misappropriated (Banya, 2018). To date, the authenticity of this statement has never been proven, as no investigation or commission of inquiry was established to verify these allegations of the misappropriations of alluvial Marange Chiadzwa diamond funds. Based on the economic growth projections in Figure 1.1 above, had both the proceeds and minerals been effectively and efficiently managed and accounted for, there is no doubt that this would have improved the government's revenue base, resulting in an increase and improvement in development structures attracting investors and stimulating economic growth. The misappropriation of the funds generally shows the level and extent of corrupt activities are at their highest level. Over the years, the corruption levels of Zimbabwe have become so deep-rooted and institutionalised that some people now accept it as their sole means of survival due to a total collapse of systems that offer checks and balances (Zinyama, 2021: Thabani, 2017).

According to Bonga and Nyoni (2017), investors in Zimbabwe are exposed to various risks; such as political risk (also referred to as country risk), currency risk and interest

rate risk among other risks. These are the main risks that are discouraging investors from investing in the country. To protect their assets and investments from these risks, both companies and individuals have been forced to adopt ethical and unethical strategies of protecting their asset values against unexpected devaluations mostly through hedging against forex reserves or investing excess capital in financial institutions in the neighbouring stable countries. This includes finding ways to legally and illegally transfer their funds and wealth out of the country for safekeeping.

The continued economic decline and political events have resulted in the loss of confidence in both the Zimbabwean political and economic environment by the public, and private corporate investors including potential investors (Mugauri, 2019). Between 2008-2015, The Zimbabwean economy was characterised by the closure of several financial institutions (Kondongwe, 2015; Nyoka, 2015). Since then, the financial industry sector has not yet recovered as there has been a growing culture of loss of confidence in the banking sector partly due to the serious cash shortages over the years. The formal financial banking system operations have been negatively affected by both the political and economic environment leading to few transactions still operating within that system. Once the cash lands in the normal system, the account holders quickly have to move the funds out of that system or transact to convert it into a stable asset or currency to protect its value.

According to Moyo (2011), the loss of public confidence in the banking sector is due to the breakdown of the social contract between the public and the financial and monetary authorities. This move has resulted in the engagement of various activities to mobilise their resources legally or illegally both in and out of the country with some engaging in both corruption and IFFs activities. As a result of these unethical cultures, large amounts of financial resources have been siphoned out of the country leaving the government with huge budget deficits, heavily indebted and fewer funds spent on infrastructure development and service delivery projects, resulting in slow or stagnant economic growth (ZELA & ZIMCODD, 2018). The few remaining operating financial institutions are currently not able to provide long-term loans to borrowers to stimulate economic growth due to a decline in the market and economic confidence level and general uncertainty levels.

The cash shortages on the other hand have boosted the number of transactions and activities that operate within the mobile money transfer services network. According to Chitimira and Torerai (2021), the increase in the demand for mobile money services has also brought challenges as the mobile services are governed by the Ministry of Information, Communication, Technology, and Courier Services and not the Ministry of Finance and Economic Development. This makes it difficult to monitor unusual activities, trends and transactions from a finance oversight perspective at the same time while making it easy for illegal transactions to be processed via mobile networks. The most common is the conversion of hard cash foreign currency into local currency at black market rates. This is evident by the numerous reports issued by the Reserve Bank of Zimbabwe (RBZ) on certain mobile numbers and operators/agents that have been flagged or suspended on allegations of engaging in suspected irregular transactions (Reserve Bank of Zimbabwe, 2021).

The low savings culture has resulted in serious budgetary shortfalls and constraints making it difficult for the government to provide its basic service delivery responsibility. The country's capacity to raise resources from various sources of taxes has been hampered by structural and systemic factors such as corruption and IFFs as these have triggered other negative multiplier effects on the economy. The current state of the economy and systemic challenges has failed to attract foreign investors. According to Kurebwa (2021), the Reserve Bank of Zimbabwe [RBZ] (2018) published a list of companies and individuals who had moved funds close to US$1 billion offshore illegally. To this day little is known by the public as to whether the funds were recovered by the state or whether those that were involved were prosecuted or are yet to be prosecuted.

Furthermore, Nyathi (2016) and Shumba (2014), stated that the following measures have been implemented by the Zimbabwean government as a measure to curb capital flight; the Indigenization and Economic Empowerment policy (2000), the Amendment of the Mines and Minerals Act (2021), and the Adoption policy by the RBZ. Despite the implementation of these measures, several cases have been reported in the media of individuals connected to the political elite caught trying to smuggle minerals through

various airports in and out of Zimbabwe (Marazanye, 2016). This has raised questions on the effectiveness of government measures that they have implemented to try and curb these capital flight and illicit activities. By strengthening the rule of law and effectively prosecuting offenders, increasing citizens' trust in state institutions goes a long way in reducing the IFFs (Kurebwa, 2021). This is expected to increase the government revenue as money is channelled and retained in the economic-financial system that allows for normal taxation and levying to take place

1.3 PROBLEM STATEMENT

Kitenge (2020) highlights that IFFs negatively impact developing countries as they reduce tax revenues and savings while positively impacting developed nations that provide a haven for such funds. Additionally, Kitenge (2020) suggested that reducing IFF will unlock much-needed capital for infrastructure development. According to Makochekanwa (2007), capital outflow magnifies the capital scarcity problem. Lack of financial resources reduces investments and leads to a decline in capital balances. The long-term adverse effects of both IFFs and capital flight include the worsening capital scarcity problem and a further reduction in domestic investment resources. Not only do they affect the government's ability to service debt due to a low revenue tax base, but they also affect the balance of payments, and exchange rates and creditors might refuse to give further assistance as a result of capital outflow (Forson, Obeng & Brafu-Insaidoo, 2017).

According to Kurebwa (2021), the unfavourable economic environment in Zimbabwe and policy changes have contributed to the smuggling and money laundering as people try to remit their funds out of the country and this resulted in the loss of more than US$32 billion between 2000 -2020 through IFFs. The extent of the engagement in practices of IFFs and capital flight and the ineffectiveness of the new administration to harness these practices let alone recover the ill-gotten wealth has had adverse effects on Zimbabwean economic growth.

Capital flight increases poor governance, thereby creating a conducive environment that discourages investment (Nkurunziza, 2014). This is evident in the state of the public health sector in Zimbabwe which has collapsed. The local government ministry through the city and district councils has also failed to maintain the water and sewer

infrastructure and the road network is in very bad shape. In addition, the impact of IFFs and capital flights is very clear as they drain and derailed development (Sahadath, 2014). With International Organisations and NGOs pouring in aid money, corrupt state officials illicitly move state funds to private accounts enriching themselves and subsequently diminishing the economic growth of the country as the state's capacity stagnates and both the inequality gap and poverty levels increase.

The Zimbabwean government has been struggling to improve its economic growth rate (Munangagwa,2009). This is largely due to the implementation of regressive economic policies that have resulted in stagnant or negative economic growth rates. The rampant corruption in the country has presented opportunities for individuals, corporate and government officials to engage in IFFs and capital flight transactions. This has resulted in a massive reduction in the revenue base resulting in the government failing to provide the basic infrastructure and economic environment that can attract and stimulate economic growth, development and investment.

Due to the nature of the study, its causes and effects there has been very few studies that have been undertaken in Zimbabwe. These include Makochekenwa (2007), an empirical investigation of capital flight from Zimbabwe, Kurebwa (2018), implications of IFFs on Africa's democratic governance, Ncube and Uzodike (2015), understanding IFFs on Post-2000 Zimbabwe and Implications of IFFS on Zimbabwe's development. As noted in the studies mentioned above, most of these studies, were not specific to the impact of IFF's and Capital flight on Zimbabwe's economic growth and development but other issues associated with it. This represents that the gap in literature in which the study seeks to address.

1.4 RESEARCH OBJECTIVES

1.4.1 Research Aim

The research aim is to evaluate the general practices of IFFs and capital flight in developing countries and their effect on Zimbabwe's economic growth and development.

1.4.1.1 *Research Objectives*

The main aim of this research is to investigate the effect of IFFs on Zimbabwe's economic growth and development. To realize the purpose of this study, the following supporting research objectives will be addressed:

a) To determine the drivers of IFFs and capital flight activities in Zimbabwe
b) To determine the impact of IFFs and capital flights on Zimbabwe's economic growth and development.
c) To provide relevant recommendations to control and deter capital flights and IFF activities in Zimbabwe.

1.4.2 Research Hypotheses

The research aims to investigate the following set of hypotheses:

H_o: IFFs and capital flight do not have an impact on Zimbabwe's economic growth and development.

H1: IFFs and capital flight have an impact on Zimbabwe's economic growth and development.

1.5 SCOPE OF THE STUDY

The research is based on IFFs activities and their effect on Zimbabwe's economic growth from 1980-2020. This period covers the post-colonisation period, after gaining independence in 1980. The researcher will use a literature review and secondary data focused on the subject matter.

1.6 SIGNIFICANCE OF THE STUDY

The research seeks to establish what are the main drivers of IFFs and capital flight and to what extent both individuals and corporations (both private and state organisations) have participated in these activities and their effects on the state of economic growth of the country. Worldwide there are growing concerns and interests on the impact of IFFs and capital flight activities on economic growth and development. A target to reduce IFFs is included in the Sustainable development Goals (Forstater,

2018). Due to other politically linked economic challenges the concerns appear to be growing more louder in developing countries as the impact and extent has been identified as detrimental to economic growth and development.

In some countries the topic of IFFs and capital flight is very sensitive and most studies or available literature does not cover impact on economic growth and development but rather the drivers of such activities. IFFs and capital flows deplete the government of the much needed tax and revenue bases and this has a huge impact on its ability to create an environment that is conducive to promote and stimulate economic growth.

In other cases, it appears as if there is no proper coordinated efforts and cooperation between countries, governments and other independent institutions on matters around IFFs and capital flight. This also makes it difficult to quantify the exact quantum of losses related to IFFs and capital flight related activities that affect most developing economies.

It is expected that the research outcome will:

i. Give valuable information to the stakeholders/role players who have critical roles and responsibilities to deter these activities from taking place.
ii. Provide valuable information, especially at individual levels on the contributions that they undertake both within and outside the mainstream financial systems have on the economic growth of the country.
iii. Provide information that can be used by other countries in Sub-Saharan Africa in the global fight against IFFs and capital flights.

1.7 ETHICAL CONSIDERATIONS

Arifin (2018), recommend that a researcher should maintain ethical principles for any study that they are engaged in or decide to engage in. The protection of human subjects through the application of appropriate ethical principles is important in any research study (Arifin, 2018). According to Clark-Kazak (2017), the researcher is obligated to protect the respondents' details or any information that can compromise anonymity of the respondent. This research was conducted with care and ensured that

ethical considerations were upheld at the highest level to avoid any unintentional and intentional harm to any research participant or organisation. The researcher made use of publicly available information and there was no need to obtain consent to use such information. Given the effects of plagiarism, all information obtained from other sources was cited and referenced to the source of information.

Whilst the research did not involve any participants, the researcher obtained guidance from the Policy on Research Ethics, from Nelson Mandela University as well as the Code of Conduct of researchers at Nelson Mandela University on how to conduct ethical research. Before the commencement of the data collection, the researcher also applied for ethics clearance at the Nelson Mandela University, Faculty Ethics Committee of the Faculty of Business and Economic Science and this was approved with reference **H22-BES-DEV-068.**

1.8 STRUCTURE OF THE STUDY

The research is structured into the following five chapters:

Chapter one – Introduction. This chapter discussed the research background and the significance of the study.

Chapter two - The overview of illicit financial flows.

Chapter three – Literature review. This chapter discussed empirical and literature reviews relevant to the study.

Chapter four – Methodology. This chapter discussed the research design that was followed for the study.

Chapter five – Findings and interpretation of data. This chapter discussed the findings and interpretation of the data analysis.

Chapter six – Summary, recommendations, and conclusion. This chapter made recommendations in response to the research problems and findings.

1.9 CHAPTER SUMMARY

The purpose of this chapter was to consider the importance of controlling the levels of IFFs and capital flight to improve the developing countries' revenue base. Most of the developing countries continue to have challenges with revenue shortfalls because of rampant uncontrollable activities due to IFFs and Capital Flights. The effects of government revenue shortfalls affect the rate of economic development of any country as the government fails to provide its primary obligation to its citizens of basic infrastructure and service delivery. The study also discusses the drivers of IFFs and capital flight and their impact on Zimbabwe’s Economic growth and development over the research period (1980-2020).

CHAPTER TWO: OVERVIEW OF IFF AND CAPITAL FLIGHT AND ITS EFFECT ON ECONOMIC GROWTH AND DEVELOPMENT

2.1 CHAPTER INTRODUCTION

Chapter one provided an introduction to the study and offered an outline of the process. Chapter two provides an overview of IFFs and capital flight, the types of transactions and activities that fall under these activities, the drivers of these activities and their expected effect and impact on economic growth and development.

2.2 ILLICIT FINANCIAL FLOWS DEFINED

Globally there has been a growing consensus that IFFs are one of the factors impeding economic and human development (Collin, 2019). According to Cobham (2014), IFFs involve the concealment of profit movements, transfers of ownership or income streams. IFFs in Africa are described as illegally earned, transferred or resources moved from one country to another in violation of the laws (African Union Commission, 2019). IFF can be initiated by sending an instruction from one country and the actual physical transaction or monetary exchange takes place in another country. IFF activities can also have half of the transaction taking place in one country and the other half processed in another country making it difficult to trace the origin of these transactions. Epstein (2005) and Aziani (2018) define IFF as capital moved abroad because it is illegal or is vulnerable to economic or political threat while Kurebwa (2018) describes IFFs as transactions that involve the flow of money in violation of the laws of the country of origin or during their movement or its use.

The general act of IFFs ranges from a transaction that involves a simple transfer from an individual account to very complex schemes executed by individuals, corporations and governments trying to conceal or move proceeds from one country to another. According to Blankenberg and Khan (2012), IFFs include cross-border flows that harm the economy. Gumede and Fadiran (2018) describe IFFs as a corrupt and illegal practice, done to acquire money without following due processes in line with the international financial and trade regulatory frameworks. According to OECD (2014) and Aziani (2018), IFFs are generated by actions of crimes and activities associated with financial capital transfers from one country to another, thus, contravening national or international law.

2.3 MAIN FORMS OF ILLICIT FINANCIAL FLOWS

Miyandazi (2019) describes the three sources of IFFs as commercial tax evasion, trade misinvoicing and abusive transfer pricing, and criminal activities that include trading in drugs, ammunition, human trafficking, contraband smuggling and bribery and theft by corrupt government officials (Oloruntoba, 2018). Chamisa (2019) extends the scope of IFFs to include the transfer of legitimate or illegally obtained funds to other territories by physically smuggling through banks. It can also be disguised as a legitimate transfer of funds purported to be paying for imports that never materialise and the non-remittance of export revenue and using or saving those funds in a foreign land.

2.3.1 Trade Misinvoicing

Trade mispricing is defined as the deliberate over-invoicing of imports or under-invoicing of exports by companies to avoid higher taxes and levies (Nicolaou-Manias, 2016). This contributes to the biggest form of IFFs because of the value and the role of the players involved. The main perpetrators of these activities are the big multinational corporates and mining multinational companies that are involved in a lot of import and export activities. According to Forstater (2018) trade misinvoicing occurs through customs and or tax fraud involving exporters and importers knowingly misrepresenting the values quantity or nature of the goods or services in a commercial transaction. Therefore, a potential vehicle to move unrecorded capital out of the country is through misinvoicing international trade transactions as exporters may understate export revenue invoices whilst importers may inflate the imported materials (Nitsch, 2011). The practice of trade misinvoicing is more active in countries that export valuable natural resources such as oil and gold depriving those countries of billions of dollars in legitimate tax revenue (Gathii, 2019).

An importer can manipulate the invoicing system by inflating the value of the goods imported to be more than the actual value, and this is known as over-invoicing. When the invoice is eventually settled, an instruction can be given to the seller to transfer the difference between the inflated invoice and the actual correct value to another bank account held offshore or in that foreign country. The reverse is also true when an exporter reduces the value of the exported goods, the difference between the under-invoiced amount and the correct amount is also channelled to another bank account.

In both incidences, the state is deprived of potential tax revenue because of the under-declaration. Multinational corporations or sister companies also implement and abuse mispricing practices when they want to avoid paying tax or reduce their tax liability (Sebele-Mpofu, Mashiri & Schwartz, 2021); as the profits are systematically shifted from a high tax jurisdiction to a low tax jurisdiction (O'Hare et al., 2014; Tsounis & Vlachvei, 2020).

Tandon and Rao (2017) noted that illicit trade through misinvoicing involves illegal activities whereby bribed officials overlook errs and facilitate transactions or bribes received by state officials leave the country in fear of confiscation.

2.3.2 Abusive transfer pricing

Transfer pricing is another form of practice mainly used by multinational companies to their advantage. Some companies use the term "Management fees" to abuse the system. One company transfers money from one country to another disguised as a payment for these intercompany management fees and yet there were no services rendered by the company or branch being billed by the other. According to Cobham et al. (2021), transfer pricing can be abused, and it involves the manipulation of transfer prices namely interest payments, licence fees or intercompany payments operating in different countries. Abusive transfer pricing is known to erode the tax base and shift profits from a high-tax to a low-tax country enabling tax avoidance and evasion (Sebele-Mpofu et al., 2021). According to Gathii (2019), abusive transfer pricing takes place when multinational companies with subsidiaries operating in other countries engage in intercompany income transfers that exploit their joint assets to redistribute the profits to reduce the overall tax liability.

The authorities in most developing countries have challenges in identifying these abusive transactions or activities they do not have the technical expertise to calculate the quantum of this abusive practice. Collin (2019) states that most countries lack the apparatus to either detect IFFs or curb the practices that give rise to them. This should also be viewed in line with the fact that the multi-national companies have a lot of resources which gives them an unfair advantage over local companies and the government as they can apply and manipulate the transfer pricing concept to their

advantage. Therefore, government tax authorities continue to tighten and close loopholes in the income tax laws that are prone to abuse by multinational companies as these practices have an impact on taxes and its ability to provide public goods and services directly affecting social welfare (Mashiri, Dzomira & Canicio, 2016), infrastructure investment and economic growth (Mashiri, Dzomira & Canicio, 2021; Kouamé & Goyette, 2018).

2.3.3 Commercial tax evasion

According to Maradze, Nyoni and Nyoni (2020), tax avoidance refers to the legal use of tax laws to reduce the tax burden through the reduction or omission of income declared in the tax returns or the general non-filing of tax returns. Tax evasion makes use of illegal practices to escape from paying taxes. This, therefore, means that both practices of misinvoicing and transfer pricing have a direct impact on tax evasion. The smuggling of goods at the country's main ports of entry also results in the evasion of taxation as less import duty is paid for imported goods. According to Aumeerun, Jugurunarth and Soondrum (2016), tax evasion is an illegal way of avoiding tax payments that affect the economy and the behaviour of taxpayers. This behaviour is often undertaken by individuals and corporates who know what they are doing.

2.4 DRIVERS OF ILLICIT FINANCIAL FLOWS AND CAPITAL FLIGHT

Most perpetrators of IFFs are more interested in hiding their wealth than in maximising their rate of return or interested in preserving their purchasing power in cases where there are hyperinflationary challenges. According to Acha, Akpanuko and Unuafe (2013), the causes of concern include unfavourable exchange rates and misalignment, financial sector constraints and repression, fiscal deficits, weak institutions, macroeconomic policy distortions, corruption and extraordinary access to government funds. UNDP (2011) groups the drivers of IFFs as macroeconomic factors, structural issues, governance, and corruption.

2.4.1 Macroeconomic drivers or local currency devaluation expectation

According to Idris (2021), IFFs and capital flight can take place in reaction to anticipation to fear of currency devaluations. No investor would want to hold an asset that can easily lose value overnight. Due to various macroeconomic challenges, most developing countries have been forced to implement fiscal and monetary policy reforms that have negatively affected the local currency resulting in a series of

devaluations. Devaluation rumours become economic challenges forcing both public and private investors, to withdraw or transfer their funds to foreign economies to prevent losses by keeping their capital in a more stable currency. Exchange rate controls and policy instruments that are used in developing countries to stimulate economic growth and development can encourage people to engage in these activities especially when they affect their monetary or asset values. According to Roy, Obidairo and Ogunleye (2022), interventions such as pegged or fixed exchange rates are commonly adopted to incentivise some sectors, but require political discipline to ensure their effectiveness or the desired output will only lead to corrupt activities or IFFs taking place.

Due to some of the negative macroeconomic effects; as a result of failed fiscal and monetary policies, most private companies end up engaging in tax evasion and trade mispricing activities. Researchers suggest that macroeconomic factors such as external debt levels, foreign borrowings, inflation rate and budget deficits are among some of the factors that affect capital flight (Osei-Assibey, Danquah & Domfeh, 2017; Das, Chowdhury & Islam, 2021). When a country's economic growth rate is considered stagnant, the common solution has often been to borrow and stimulate expansion. If the borrowed funds are used in the production sectors, in the short run the economy is expected to have a high growth rate. It is very important to ensure that the debt level is well managed. Failure to manage the government's debt levels has serious consequences in the long run when the debt has to be paid, as it crowds out investment and causes the debt overhang hypothesis. According to Senadza, Fiagbe and Quartey (2017) when debt overhang occurs, there is a general disincentive to invest as investors expect inflation, devaluation and other economic misuses by the government to service the debt. Increased debt levels mean that in the long run, the government will have to prioritise debt repayments crowding out public investment.

2.4.2 Economic and political Instability

Economic indices, such as low gross domestic products and uncontrollable inflationary rates both contribute to the IFFs and capital flows. The political instability of a country is not only a threat to the lives but to both properties and investments. Thus, most investors attempt to transfer most of their savings outside of the economy (Ojiya, Zhegum & Amadi, 2019). According to Boyce and Ndikumana (2012), an inappropriate

governing framework encourages the looting and stealing of public funds, trade misinvoicing and a high rate of transfer of funds across boundaries encouraging capital flight.

In most developing countries especially in Africa, the political environment and differences between political parties have not yet reached a mature level. In most cases there is an unknown fear of what can be clawed back from the previous government should a new government come into power. If officials in the ruling government fear that they cannot protect their wealth in the country when a new government comes into power, they tend to move their wealth to other jurisdictions (Blankenburg & Khan, 2012). In support, Akani (2013) suggests that residents of a country may decide to keep or hide their assets outside the country due to insecurity and lack of confidence in the domestic political situation as these affect the future value of the assets.

2.4.3 Corruption and Governance

According to Collin (2019), developing countries are more likely to suffer from corruption which is a driver of IFFs. Corruption is a major enabler to facilitate IFFs activities as at least one party receives a bribe from one or more parties to ignore suspicious activity or open the channels through which transactions or funds can be processed illegally (Cooper et al., 2018).

According to UNICRI (2018), corruption is a significant contributor to IFFs as it plays a dual role. It can either be the source or the channel facilitator of such transactions with the source being the corrupt official looking for a place to hide the funds or ill-gotten wealth and the facilitator accepting bribes and kickbacks to allow other individuals and private companies to engage in such activities. Letete and Sarr (2017), suggest that IFFs are a result of rent extraction through corrupt practices by political groups, the politically connected elite or those who can afford to bribe corrupt government officials.

Furthermore, Reed and Fontana (2011) highlight that corruption and governance contribute to IFFs, as they are also the source of some of these activities and also act as a facilitator for the creation and movement of these transactions. The weakness of

governance structures in state institutions contributes to and encourages IFFs in both public and private spaces. For misinvoicing and tax evasion to be successfully executed there has to be either corrupt officials involved or weaknesses identified in some of the state institutions that are supposed to monitor and control such activities (Schneider & Nega, 2013). However, Ayodeji (2018) argues that a governance crisis destabilises security and state legitimacy while intensifying insecurity. When the government cannot perform its expected statutory duties, it is likely unable to effectively manage its resources. According to Osei-Assibey, Danquah and Domfeh (2017), quality institutions are an important domestic catalyst in the country whilst weak institutions, weak democracy and political freedom promote the illegal flow of capital out of the country (Osei-Assibey, Domfeh & Danquah, 2018).

2.4.4 Natural resources

Countries that have valuable natural resources such as gold and oil have challenges managing the IFFs activities associated with them due to the value associated with such minerals. These countries depend on the revenue from those minerals to be able to run their economies and these are prone to attract corruption and IFFs activities. Natural resources generally generate huge revenue which contributes to the weakening of accountability, thus increasing the risk of embezzlement of government revenue through corruption (Ndikumana & Boyce, 2018)

According to Le Billion (2011) and Ndikumana and Boyce (2018), the following factors make the extractive sector prone to IFFs;

i. It is mostly under political control at the highest level like the President's Office and they can easily facilitate IFFs activities with no questions asked.
ii. There is no clear-cut ownership of the companies that deal with extractive sectors.
iii. Due to the high capital requirement in this industry, there is no competition resulting in fewer checks and balances
iv. The extractive sector involves a very complex, technical and reporting process that requires a certain level of expertise that cannot be acquired by or is in short supply in the government. This opens the room for manipulation for those companies involved that have abundant resources.

The extractive industries and minerals are also known to have a direct negative impact on economic growth as evidenced by the resource curse (Nhabinde & Heshmati, 2020). According to Ndikumana (2017), IFFs and capital flight have been fuelled by natural resources, especially in countries with weak and corrupt institutions where export earnings can be diverted and used to finance private wealth accumulation overseas or stashed in tax heavens.

2.4.5 Investment returns and high debt cost

No economy can survive without investment at both micro and macro levels, an attractive investment climate is when expected returns are higher than the cost. At an investment level, the following theories are the main drivers of IFFs and capital flight activities. These theories affect both individuals and corporates. These are the Debt-driven capital flight theory, Portfolio choice theory, Investment diversion theory and Tax diversion thesis. As a matter of principle, all investors seek to maximise their profits based on the risk assessment of their portfolio. When the investments or the economic environment of a country becomes too risky to keep their investments with a low-risk return, it creates an uncertain environment and incentive for the investors to withdraw or transfer their investment to countries with a higher return or less risky and this is called the Portfolio Choice Theory.

According to Otieno, Kiprop and Muluvi (2021), the Portfolio Choice theory developed by Markowitz in 1952, states that investors seek to maximise profits by allocating their funds between domestic and foreign investment based on risk and rate of return. Chamisa (2020) suggests that the flow of assets depends on the rate of return, risk forecast and investors' wealth. When generating new investments or maintaining investments in developing countries becomes risky, the adjusted risk returns become lower, creating incentives to look for countries with a low-risk exposure (Ndikumana & Boyce, 2011).

The investment diversion theory identified the instability in the macroeconomic and political systems of developing countries and better alternative investments outside those countries as the key drivers of capital flight (Lawal et al., 2017). According to Mekonnen (2017), the investment diversion theory suggests the need to diversify investments and invest in a more stable economic and political country. When economies experience unfavourable macroeconomic and political conditions for a very

long period, some bureaucrats, corrupt political officials and politically connected individuals siphon state funds and invest or transfer their funds to countries where there are better returns and more stability (Anetor, 2019). In addition to a stable economic and political environment, higher returns and secure secret confidentiality provided by the financial institutions in the foreign recipient country tend to attract corrupt leaders' public officials to transfer the resources to those countries. For a capital flight to take place the negative macro-economic and political uncertainty must take place at the same time when alternative superior investments exist in other countries (Anyamaobi & Rogers-Banigo, 2021).

In the case of debt-driven capital flight, the residents of a country are motivated to transfer their assets to a foreign country because of the increasing debt level and its consequences (Mekonnen, 2017). Countries that incur large debts and become debt-dependent, signal negative perceptions to the investors leading to credit risk associated with currency weaknesses and credit downgrades (Ncanywa & Masoga, 2018); and this triggers inflation and its effects.

According to Anetor (2019), external debt may harm the exchange rate in the long run if the debt incurred is for purposes not linked to factors of production that can generate foreign exchange that can enable debt repayment. The main effect is that when the foreign debts are now due for payment, it triggers the demand for foreign currency resulting in the devaluation of the local currency (Precious, 2020). These events naturally force investors to dollarize their investments or invest in a more stable currency to mitigate the risk of devaluation. There is also an inherent risk that in future, for the government to be able to repay the loans, they would have to increase the tax rates or introduce new taxes and this tax liability fear discourages investors. According to Otieno, Moses and Matundura (2022), capital flight leads to poor economic growth which triggers additional borrowing to promote economic stability and if the borrowings are not properly managed it creates debt or aid dependence, further capital flight and a continuous cycle.

Lawal et al. (2017) suggest that the tax diversion theory causes capital flight activities to take place because of the increases in taxes in the domestic economy. When a government continues to have budget shortfall deficit issues, it can increase the tax tariffs, increase income and corporates taxes rates, or introduce new tax laws to try

and reduce the budget shortfalls by collecting more taxes. When this takes place or is expected to take place, both individuals and corporates engage in IFFs and capital flight activities to move their wealth abroad or in jurisdictions where the government cannot tax their wealth. According to Akani (2013), with tax diversion theory, governments lose revenue because when wealth and investments are transferred abroad it is outside their control and they cannot tax it. The effect of this move is that reduces the government's ability to generate revenue resulting in several multiplier effects that affect economic growth and development.

2.5 MEASURING ILLICIT FINANCIAL FLOWS AND THEIR LIMITATIONS

Due to the general nature of IFFs and their associations with illegal transactions and activities, questions have been raised about the exact quantum, of such transactions. According to Uddin, Yousuf and Islam (2017), the numerous definitions of IFFs and capital flight have led to the development of numerous methods of measuring these transactions. These transactions are supposed to be undetected and as such might be understated in value or unrecorded. It also gets complicated when money laundering activities are added to the mix as the purpose and intentions of engaging in such activities differ from one transaction to the other. The actual measuring of IFFs and capital flight activities is generally subject to contestation by government officials, independent analysts and those individuals who have reasons or something incremental to hide (Ndikumana et al., 2020)

2.5.1 World Bank Residual Model

Researchers, Claessens and Naude (1993) and Dachraoui, Smida and Sebri (2020), defined capital fight by the residual method as the difference between the capital inflows from the net increase in external indebtedness of the public sector and the net inflow of foreign investment and the use of such inflows through current account deficits. According to Fontana (2010), the World bank residual method calculates illicit flows as the difference between the Country's total inflow less the outflow funds. This method calculates the estimated difference between the recorded sources of funds (Kar & Feritas, 2012). It represents the difference between the total receipts and total payments made in a country

2.5.2 Hot money Model

According to Badwan and Atta (2019) and Collin (2019), the hot money method focuses on net errors and omissions, identifying illicit transactions as figures represented by large negative errors or omissions. Johannesen and Pirttila (2016) suggest that hot money as short-term investments may be induced by changes in the political, and economic environment and financial crises. This represents money and assets that can easily be liquidated and returned to the country of origin when the unfavourable conditions change. Fontana (2010) highlights that using the Balance of Payment formula, the net figure that cannot be substantiated and supported with evidence in the equation can be equated to illicit flows as it cannot be properly accounted for.

2.5.3 Trade misinvoicing

Trade misinvoicing calculations, compare the total invoices declared by the trading partners for imports and exports excluding insurance and costs of freight (Osei-Assibey, Danquah & Domfeh, 2017). According to Fontona (2010), this figure or balance that represents the misinvoicing is calculated based on the figures that a country claims to have imported from the rest of the world against the figures that the rest of the world through the International Monetary Fund (IMF) states as having exported to that country (Ocran, Sheefeni & Oduro-Afriyie, 2022).

2.5.4 Measuring limitations

The process of data collection at a country level and the sharing of information between countries is and will always be an issue. Herawan, Ghazali, Nawi and Deris (2017), state that the general nature of the transactions and activities involved concerning IFFs and capital flight, there is an element of ethical and moral compromising taking place, there is no doubt that the calculations will never be accurate and will always be estimated. According to Fontana (2010), the composition of IFFs and capital flight should also include corruption proceeds and criminal proceeds. Due to the developmental differences between countries, data collection in some countries might still be manual and others have sophisticated systems that can produce real-time data. This is bound to have challenges, as such the information, data and statistics shared between countries will not be or will take too long to be

reconcilable. This can easily force government officials to assume that all the unreconcilable data are erroneously and purposefully classified as IFFs.

2.6 IMPACT OF ILLICIT FINANCIAL FLOWS AND CAPITAL FLIGHT ON DEVELOPING COUNTRIES.

The impact of IFFs and capital flight in most developing countries is very huge and increasingly becoming a cause of concern as it results in huge negative effects on the economy. It also tends to influence social, moral and ethical issues and should these not be quickly addressed the implications of morals and ethics can be far-reaching resulting in the birth and fuelling of the black-market system. A thriving black-market system has various negative multiplier effects on the country's macroeconomic environment, and this will result in a continuous cycle of IFFs and capital flight activities taking place in that country. IFFs also tend to significantly inhibit investment compounding the government indebtedness due to the low savings gap and this results in foreign aid dependency.

Most of the researchers have concluded that such activities deplete the resources that could have been used for investment within these economies. According to Kolapo and Oke (2012), these activities not only aggravate the shortages of resources for development but also indirectly lead to a decline in growth. Due to the insecurities around the local currencies and devaluation, most people will engage in illegal activities to convert their local currency into a stable currency that will not be affected by governments devaluations policies. Such activities are mostly done outside the legal financial system, on the black market and will result in serious foreign currency shortages for the country affecting the ability to procure and import the necessary raw materials.

Generally, IFFs and capital flight activities also cause inflation, reduction in tax collection, cancelled or diverted investments and the undermining of free trade. In some instances, IFFs and capital flight activities have been identified as the cause of the continued debt dependence of some of the developing countries as most of the borrowed funds, instead of being invested in the economy have been illegally diverted out of the country (Acha, Akpanuko & Unuafe, 2013). When countries revenue base is not able to fund its budget, the government has no choice but to continue to borrow more funds to supplement the budget deficit. When these budget deficits and debt

levels become too huge the government will end up being debt or donor-dependent. To be able to repay debts, a country needs to be in a positive net-export position, exporting more than they are importing resulting in a positive foreign exchange balance especially when the local currency is not tradable on the international markets. When a country has low exports and does not have sufficient foreign reserves to settle debts, the government might be forced to devalue or depreciate the local currency further and or enforce import restrictions to attract foreign currency. This generally tends to trigger price increases as the imported goods and raw materials, including the cost of capital, become expensive affecting the economic growth rate (Senadza, Fiagbe & Quartey, 2017).

IFFs can undermine and damage the reputation of financial firms and the general financial system (Rao, 2013). Due to the control that the elite and politically connected officials have on some financial institutions, they easily infiltrate the governance structures of the financial firms and banks to enable them to facilitate the IFFs and capital flight activities. Cooper, Rusere, van der Linden and Ferreira (2018) acknowledge that to some extent the IFFs happen outside the financial system, and most of the activities such as mispricing, tax evasion and corruption make use of the financial system compromising its integrity in the process.

According to the African Union Commission (2019), funds lost through IFFs could have helped African countries to achieve the Millennium Development Goals (MDGs) by 2015. IFFs are said to have reduced the revenue base and eliminated the growth benefits and undermined development in those countries. IFFs activities have created unfair advantages, especially for multi-national companies through transfer pricing misuse and this results in unfair competition with the domestic companies. The general erosion of the tax base affects the government's ability to provide public goods and services; such as education, infrastructure, and health care.

According to Ndikumana (2014), the ability of a country to achieve and sustain high growth rates is dependent on its ability to achieve and sustain high levels of domestic investment. Not only do IFFs and capital flight activities, but result in capital leakages out of the country depleting the savings also reduces capital formation. This means that domestic investment is an important driver of economic growth, therefore any factor that hinders domestic investments is also a constraint to growth.

2.7 OVERVIEW OF IFFS AND CAPITAL FLIGHT AND ITS IMPACT ON THE ECONOMIC GROWTH AND DEVELOPMENT OF ZIMBABWE

2.7.1 Key developments post-independence

Zimbabwe gained its independence in 1980 from British rule and since then has been ruled by one party and one leader but to a greater extent till late 2017. In the past two to three decades, Zimbabwe's economic growth rate has been on the decline due to the deteriorated political environment, coupled with sanctions that have affected the economy. Several failed economic policies have also created mistrust and confusion in the country from both corporate and individual levels and these have contributed to the rampant corrupt activities in the country. Due to the continued failure of economic and political policies by the Zimbabwean administrative government, the country has experienced a period of slow, negative and stagnant economic growth over the last two decades.

2.7.1.1 *Economic Structural Adjustment Programme (ESAP)*

According to Kawewe and Dibie (2000), at the end of 1980, Zimbabwe's foreign debt levels increased substantially, and this contributed to infrastructure deterioration. The government was not investing in new infrastructure nor was it maintaining old infrastructure due to the inherited debt levels from the previous government. In 1990, the government felt that the economy and employment were not growing as fast as they expected them to grow. On the contrary population growth rate at that time was considered to be growing faster than the economy contributing to the high unemployment rate. Sibanda and Makwata (2017) argued that the main objective of ESAP was to transform the heavily regularised economy into a more liberalised economy. Other objectives included boosting the economic growth rate, reducing the civil service wage bill and the removal of some tariffs. Furthermore, Mlambo (1997), Kawewe & Dibie (2000) highlight that other funding requirements of that programme meant the borrowing country was required to reduce state investment in the economy, privatise non-performing public corporations, removal or reduction of quotas or tariffs and open up the opening up the economy for free trade as well as the devaluation of the local currency.

The results of ESAP were not as expected as there were short-term gains from the implementation of the structural adjustment programme. The long-term effects are still being experienced today. These include high unemployment levels. due to the state-led retrenchments in state institutions, and the high inflation rate because of the devaluation of the local currencies. Reduced spending patterns in government also led to low infrastructure investment in key sectors as the level of infrastructure investment was not adequate to attract the desired Foreign Direct Investment (FDI).

2.7.1.2 *Land reform programme*

Ness and Cope (2021) highlight that; as a result of political pressure and to increase the support base the ruling party implemented the land reform programme in 2000. This program was packaged on the basis that land was being redistributed from minority white farmers who owned large productive farms to black farmers who owned unproductive land. The redistribution process was not properly done, and it became almost free for all, especially for those that had political links. According to Kairiza (2009), the farm invasions led to a significant reduction in farming output and a reduction in foreign currency due to low exports and this resulted in the government's failure to service multilateral debt obligations precipitating an external debt overhang situation. The land invasion programme caused a lot of confusion and discouraged the much-needed foreign direct investment, inflation skyrocketed and gave birth to the foreign currency black market. Muzurura (2017) highlights, this land invasion upheaval in the then-viable agricultural sector resulted in hyperinflation and widespread price and wage which triggered a drop in productivity.

2.7.1.3 *Operation sunrise currency reform*

The effects of the land reform programme continued to have a significant impact on the economy, and this gave birth to another problem of a liquidity crisis (De Lombaerde, Van Langehove & Rayp, 2016). The uncontrolled inflation resulted in cash shortages. Cash shortages and hyperinflation resulted in RBZ's mass printing of money to finance all sectors of the economy, and this too could not stop runaway inflation creating serious transactional challenges as people had to queue for cash at the banks and carry boxes of large sums of money. In response, the RBZ introduced the bearers' cheques that had been introduced as a temporary solution to the cash

shortages also resulted in an increase in illegal foreign currency exchange activities and illicit dealings in Zimbabwe (Chitimira & Ncube, 2021).

To address the hyperinflationary environment, in July 2006 the RBZ surprised the country through the implementation of the monetary policy, a new beginning that was known as “Operation Sunrise”. According to Kavila and Le Roux (2017), the currency was rebased three times by the removal of three, ten and twelve zeros in August 2006, August 2008 and January 2009. Despite all these attempts to re-denominate the currency and halt inflation (Precious, 2020), the monetary value continued to fall as people refused to accept the new currency preferring to keep their funds in foreign currency.

2.7.1.4 *Multi-currency and financial sector low confidence sector*

Due to the inflationary challenges that have affected the economy, not only has it led to serious cash shortages in the financial sectors, but it has also caused a thriving black-market environment. To try and address these challenges the government introduced a multi-currency system. Zimbabwe’s decision to adopt the multi-currency was due to macro-economic challenges such as foreign currency shortages, hyperinflation, and loss of confidence in the local currency (Uche, Effiom, 2021) and the general financial sector (Chigumira, Chipumho & Shamu, 2009; Buigut, 2015). This brought about a brief period of reprieve as inflation stabilised however in the long run it fuelled the black market as both individuals and corporates competed for foreign currency on the black market resulting in large sums of money being held outside the formal banking systems, in safes and under the mattresses. According to Strassburg and Khumalo (2012), the large volume of money outside the banking sector's monetary circulation is a clear indication of the lack of confidence in the banking sector and contributes to the financial instability of the whole banking sector.

Buigut (2015) noted that whilst the use of the multi-currency brought some reprieve it also resulted in some confusion and reduction in clarity affecting the market transactions. Due to the cross-currency conversion rate issues and the fact that the conversion rates were mostly set by the foreign currency dealers based on a combination of national, and regional global events and government demand, people preferred to keep their liquid foreign currency out of the formal systems in fear of overnight losses.

2.7.1.5 *High corruption level*

According to Muzurura (2017), corruption effects include the reduction of aid, savings and foreign direct investment which are the factors that increase economic growth. Economic policies and acts have been enacted by the ruling party to their benefit at the expense of the economy. This included the land reform programme and the Zimbabwean Indigenisation Empowerment Act (2008) which required foreign-owned companies to transfer at least 51% of their shareholding to locals (Government of Zimbabwe, 2008). Corruption in Zimbabwe has been deep-rooted and intensified over the years and has now systematically captured the state as evidenced by the fact that most of the state institutions are headed by former army generals.

Nyoni (2017), exposes that in Zimbabwe it is now a normal thing for most political leaders to be corrupt, acting in a manner of self-enrichment at the expense of the public due to the climate of unethical leadership and bad governance. The impact of some laws and regulations; such as the Indigenisation and Economic Empowerment Act (2018) was so huge as it caused a lot of confusion in the main sectors of the economy. This mainly affected the banking sector which had foreign-owned banks, extractive industries that had large multinational companies, construction companies and the agri-enterprises industries. During this period when the act was enacted, those corrupt officials through unethical business practices such as fronting, directed most of the indigenisation benefits to themselves or other well-connected elite individuals (Warikandwa & Osode, 2017). Whilst the country is known to be highly regulated, the political leaders and government officials abuse these regulations and controls to facilitate smuggling activities, black market transactions, bribery and kickbacks, as well as other corrupt activities. According to Zinyama (2021) in Zimbabwe, there is evidence of corrupt practices through obstruction of justice and capturing of state agencies tasked with detecting and investigating illicit behaviours.

2.7.1.6 *Extractive resources sector challenges*

According to the ZELA (2016), the gold leakages in Zimbabwe are linked to the criminal activities undertaken by artisanal and small-scale miners which to some extent are facilitated by some political and senior government officials in the security sector. Hlungwani et al. (2021) suggested that the root causes in the extractive sectors are due to unethical, unprofessional and corrupt officials including the state and

political elites. The general granting of mining concessions and the shareholding of most companies is shrouded in secrecy and this has led most people to believe that the political leaders are involved not only in mining but also the illegitimate wealth (Maguwu, 2017). The main minerals that seem to have their revenue, illicitly transferred out of Zimbabwe include gold, diamond, black granite and lithium.

2.7.1.7 *Macroeconomic challenges*

The various challenges that Zimbabwe has gone through, that includes improper policy issues, structural adjustment programmes, corruption and cash shortages have all had a significant impact on the macro-economic environment of the country. Kwaramba, Mahonye and Mandishara (2016), state that the developments in the macroeconomic policy (Kwaramba, Mahonye & Mandishara, 2016), and institution environment over the past four decades contributed to the capital flight behaviour. Capital flight, inflation and exchange rates are closely interrelated (Kwaramba, Mahonye & Mandishara, 2016), and long periods of currency devaluation possess currency risk and which leads to capital flight. Zimbabwe has not only had an extended period of hyperinflation, but it has also had several episodes of currency devaluations including the collapse in the value of local currency encouraging IFFs and capital flight activities.

2.8 IFF AND CAPITAL FLIGHT ACTIVITIES IN ZIMBABWE

The IFF activities identified in Zimbabwe occur through the following formats, mispricing, remittances of funds without proper documentation or through illegal means as well as the extraction of mineral resources.

Research conducted by Sebele-Mpofu et al. (2021), which focused on the transfer pricing challenges in Zimbabwe noted that there is no clear transfer pricing legislation in Zimbabwe, there are too many delays and weak capacity on transfer pricing issues that land in the courts and these remain unresolved for years. The research also noted that due to the lack of skills and expertise in the state institutions to track, and trace abuse of transfer pricing practices, has created opportunities for the private sector to engage in such activities (Sebele-Mpofu et al., 2021). In addition, Chamisa (2020) estimated the IFFs through trade mispricing in Zimbabwe between 2009-2018 estimated that at least $11.52 billion have been taken out of the country through mispricing. The study also concluded that IFFs have negative economic and social

implications, as they eroded domestic resources resulting in a decline and poor provisioning of the basic public infrastructure and utilities for health and education (Chamisa, 2020).

According to Mashiri (2018), multinational companies in Zimbabwe have been found abusing Tax havens, mispricing and legislation loopholes as strategies for capital flight. ZELA (2016) raised concerns about Tax havens and the possibility that they have been used to channel funds out of the country as evidenced by the fact that New Dawn Mining is registered in the Cayman Islands, Zimplats is registered in Guernsey, Caledonia Mining Corporation registered in Jersey and all have mining operations in Zimbabwe. This raises questions on the motives for registration outside Zimbabwe and can be easily linked to possible tax avoidance channels. Trade misinvoicing in Zimbabwe increases during periods of crises, instability and confusion with Nickel being one of the most misinvoiced minerals in the country (ZEPARU, 2017; Kwaramba, Mahonye & Mandishara, 2016).

Kwaramba, Mahonye and Mandishara (2016), indicate that during the periods of economic distress, when the “Look East Policy” was implemented in Zimbabwe, some Chinese investors invested large sums of unrecorded capital, especially in the extractive sector. Noting the obscurity of the mining sector there is no doubt that some of these profits have been illegally repatriated out of Zimbabwe. According to UNIDO (2018), a lot of gold-related transactions were reportedly undertaken smuggled out of the country, primarily into South Africa which was offering higher prices. Zimbabwe has a huge problem with IFFs in the extractive industry as not only is it highly political, but there is so much secrecy as to the actual wealth derived from this sector there is also no clear shareholder ownership of some of the big companies that have been given licences to operate in the country (Mukwakwami, 2013).

There is adequate evidence that the revenue collection in the extractive sector is not strong, a case in question is the Marange Diamonds, with the late President Robert Mugabe being on record stating that the country lost diamond revenue worth billions of dollars due to mismanagement (ZELA, 2016). Furthermore, Kwaramba, Mahonye and Mandishara (2016), reveal that because of the socio-economic challenges, Zimbabwe witnessed significant growth in the informal small-scale miners. These small-scale miners are mostly unregistered, they cannot sell their minerals in the

formal market, and they have no choice but to engage in IFF or capital flight activities. The registered small-scale miners only sell at most 30 % of their gold every three months to Fidelity Printers and Refiners (Zimbabwe) just to maintain their gold licence and the rest is sold on the illicit black market where the buyers always have US dollar cash available, unlike the Fidelity Printers and Refiners who are mandated to buy in local currency or at a controlled exchange rate which is always below the black-market rates.

Due to the cash shortages in the financial sectors and the non-acceptance of the local currency, there has been a significant increase in illegal foreign currency dealings on the black market. This practice spread throughout the country, and was and is still known as "burning money". To protect against the devaluation and depreciation of value, those that are remunerated in local currency, engage in black market activities to convert their local cash into a stable foreign currency to protect its value. The RBZ's role is currently questionable as most of the policies and interventions that it has implemented have become nothing but active vehicles in fuelling black-market rates. According to Nyoni (2017), Zimbabwean political leaders and religious leaders, have a history of setting bad examples of self-enrichment and extravagance at the expense of public ethics.

According to Chitimira and Ncube (2021), the mobile money platform has been used by agents to commit money laundering and illicit foreign currency dealings. Due to the increased activities in migration and illegal immigrants to neighbouring and other developing countries, remittances through various forms of transfers including money transfers have been the only route of survival for most families given the cash shortages challenges with the banks. These transactions can be done by basically initiating the transaction from outside the country and the money, United States dollars in cash is collected by a recipient from another person in Zimbabwe or is transferred into any of the mobile money platforms converted using the black-market rate on the day of transfer.

In Zimbabwe, the three communication network providers Econet Wireless, Net One Cellular and Telecel all have mobile money services known as Ecocash, OneMoney and Telecash respectively (Chitimira & Torerai, 2021). Only Econet Wireless is 100% privately owned, which seeks to suggest why more transactions are processed via this

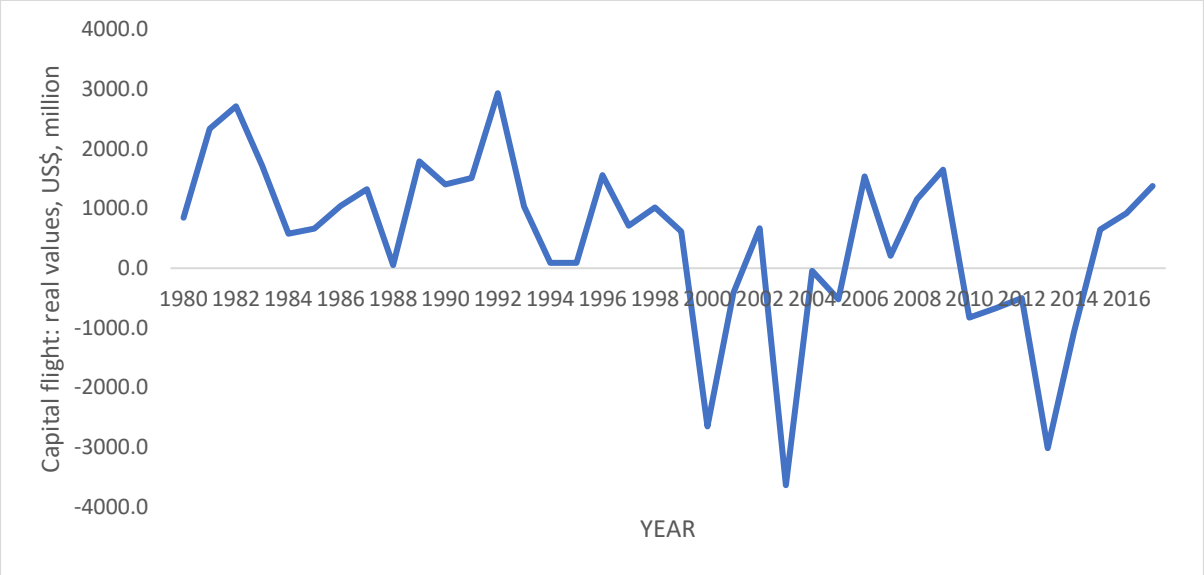
network as the state has a stake in both Telecel and Net One cellular and also the fact that there is a loss of trust and confidence by the general public. Whilst they have brought a solution to the cash shortages, they have also been some challenges concerning the control of activities on these platforms. Reserve Bank of Zimbabwe (2021), stated the fact that it is Financial Intelligence Unit (FIU), had identified and blocked about 30 agents abusing mobile telecommunications services, promoting and enabling illegal foreign exchange transactions and money laundering activities.

Kurebwa's (2021) study on the implications of IFFs in Zimbabwe noted that the collapse and the independence of the legal institutions are significant contributors to these activities. The researcher also noted with concern, corruption issues in the mining and extractive industries as evidenced by several smuggling incidents that have never been properly investigated or finalised. In a study on the role of the legislature and judiciary system in curbing IFFs and trade mispricing in Zimbabwe, Chamisa (2019) noted that after years of weak institutional controls and rampant corruption the country has lost over US$1.4 billion in illicit activities.

Furthermore, the causes of capital flight in Zimbabwe between 1980 and 2005 showed that foreign direct investment inflows and external debt were the major causes (Makochekanwa, 2007). This resulted in a negative economic growth rate during that period as they are aligned to both the investment decision and debt overhang hypothesis. Due to some level of secrecy in the loan and aid agreements, it has provided an opportunity for government and political officials to conduct IFFs and capital flight activities with these funds. In 2020, the then Minister for Health was fired based on procurement-related allegations not only of irregular appointment of a supplier without going to tender but also at inflated prices and it was alleged that he had a direct financial interest in the transaction.

Figure 2.1 shows the capital flight data of Zimbabwe from 1980-2017 using the net invoicing method based on a study by Ndikumana and Boyce (2021)

Figure 2. 1 Zimbabwe capital flight trend: 1980-2017



Source: Ndikumana and Boyce (2021)

According to Ndikumana and Boyce (2021), capital flight is mainly driven by the quest for secrecy and concealment of wealth away from the present and future authorities. Between 1980 and 2000, there was a positive inflow of capital into the country. From 2000 to the 2018 there have been periods of capital outflow from Zimbabwe as shown by 2000-2001,2002-2006 and 2010-2015. Against this backdrop, the study seeks to assess the impact of IFFs and capital flight on Zimbabwe's economic growth and development from 2000 as well as the factors, enablers of such activities. Generally capital inflow is associated with increase in private investment, and this is key to long-term economic growth. On the other hand , when a country experiences uncontrolled capital outflow, private investors tend to shun away from such countries and if this takes place over a long period, the country is expected to experience stagnant, slow or negative economic growth and development.

2.9 IMPACT OF IFFS ON ZIMBABWE ECONOMIC GROWTH & DEVELOPMENT

The immediate impact of the IFF activities is the drainage of capital and tax revenue of the country. According to Kurebwa (2021), IFFs are a major challenge to Zimbabwe's development as they have a direct impact on the country's ability to raise, retain and mobilise its resources to finance sustainable economic development. IFF activities are also known to threaten other fundamental aspects of development; such

as the rule of law, the quality and democratic institutions and the broader social trust (Reuter, 2017). The funds lost from these activities could have been used to finance infrastructure, health care systems, education and other important aspects required for sustainable development.

The multiplier challenges of the IFFs on the economy raise the cost of production in the economy, as a result of the impact of the unfavourable exchange rate that also affects the import costs of raw materials. The long-run effect is that most of the factories end up closing down, as a result of continued losses and the need to rationalise operations in a bid to withstand the prevailing economic doldrums (Ncube, 2019). According to Zivanomoyo and Mukoka (2015), the high unemployment rate in Zimbabwe is evidence that companies were closing shop or could not absorb the job seekers due to cost limitations resulting in a lot of idle unemployed skilled lying idle not being able to positively contribute to the national output of the economy.

Not only did the closure of companies cause high unemployment in Zimbabwe, but it also led to an increase in the poverty levels in the country and an extended loss of income for children's education (Pindiriri, 2015). As a result, when the children are not educated, their future employment opportunities dwindle. According to Abel, Mhaka and LeRoux (2019), a decade after independence the Zimbabwean government was able to adequately finance the social sectors however thereafter there has been a decline in government financing as a result of budgetary constraints. Between 1999 and 2008, the Zimbabwean economy had a negative growth rate, and this triggered the exodus of skilled manpower.

The budget deficit effects of IFFs-related activities resulted in the government not being able to deliver basic social services and this resulted in the intensification of depleted human capital value and growth in the poverty levels in the country (Abel, 2016). According to Abel, Mhaka and LeRoux (2019), between 1990 and 2008 Zimbabwe saw a drop in life expectancy falling from 62 to 44 years, maternal mortality rose drastically from 168 per 100 000 live births in 1990 to 880 per 100 000 live births in 2005.

Akin to the healthcare sector which experienced a massive brain drain, the education sector has lost a lot of qualified teachers who are said to have left the country for greener pastures. The education sector experienced stagnant teachers' salaries

falling to below subsistence level, low-class attendance and unmotivated staff. This environment almost collapsed the education sector had it not been saved by the Government of National Unity in 2008. More than a decade later the same environment seems to be recurring not only in the education sector but also in the whole public sector as their salaries continue to be eroded by inflation, leaving the workers with no option but to engage in some of these IFFs activities associated with the black market.

2.10 EFFECTIVENESS OF MONITORING INSTITUTION

Besides the security and the legal systems, Zimbabwe has several entities that were established to deal with issues related to illicit activities which Zimbabwe Ant-Corruption Commission (ZACC), the Financial Intelligence Unit under the Reserve Bank of Zimbabwe, Anti Money Laundering unit under the Zimbabwe Revenue Authority (ZIMRA) and the National Prosecuting Authority (Chitimira & Ncube, 2021). ZACC is the main body that is supposed to address corruption issues and the challenges and issues that affected this unit cut across all the units. Ortega, Sanjuán, Casquero (2018) show that based on the level of corruption and illicit activities in the media, it would appear as if those institutions are not operating activities or as independent as they should be, and concern has been raised on the lack of political will to fight against corruption in government officials and political elites (Zinyama, 2021; Musvota & Mukonza, 2021).

2.10.1 Zimbabwe Anti-Corruption Commission (ZACC)

The Zimbabwe Anti-Corruption Commission (ZACC) was created in 2009 to combat, investigate and expose cases of corruption in both the public and the private sectors (Dudzai, 2020; Chilunjika, 2021). Transparency International ranked Zimbabwe in 2021 as number 157 of 180 countries in terms of the public sector level of corruption (Transparency International, 2018). Furthermore, of concern is the fact that ZACC's administration is directly under the Office of the President, and this raises questions about the independence of the organisation, affecting its credibility, as evidenced by its high position. According to Bonga (2014), the autonomous level of the body has been questionable and its efficiency was criticised as underpinned by political power which makes it worthless to harness corruption. Besides the normal challenges around budgetary constraints and capacity issues the major challenges affecting the

effectiveness of this organisation is the lack of political will and non-cooperation by several institutions.

According to Mutuma and Jambawo (2017), Zimbabwean corruption has been getting worse over the years and now appears to be normal in the public sector. ZACC has been accused of irregular selection of the citizens to investigate, targeting and investigating petty cases whilst ignoring the politically related corruption and officials who were involved in massive corruption activities (Matebwe, 2019). Due to the mandated powers of the organisation, the structure of the organisation has been criticised as the institution can only investigate and make recommendations based on the findings but cannot arrest (Matumbi, [n.d.]). This then confuses the system as reports and recommendations are completed and kept in the drawers waiting for the Police and the Judiciary to take the matter further. According to the Open Society Initiative for Southern Africa [OSISA] (2017), despite ZACC's lack of independent arresting or prosecuting powers as they have to rely on the police and the National Prosecuting Authority (NPA), it still has enough authority to be effective. Whilst there are many reports and statements issued by ZACC on matters that they are investigating, the conviction rate is unknown and never made public resulting in the public not having confidence in that commission and all the other government enforcement entities.

2.11 CHAPTER SUMMARY

This chapter discussed a comprehensive background of the various types of IFFs transactions and their contribution towards the economic growth of a country (Gültekin, 2019). It also included the general underlying factors that contribute to such activities. The chapter also discussed the theories that underpin IFFs, and these include debt-driven capital flight theory, Portfolio choice theory, Investment diversion theory and Tax diversion thesis. The next chapter discusses the empirical and theoretical literature on IFFs and Capital flight activities and their impact on economic growth.

CHAPTER THREE: LITERATURE REVIEW

3.1 CHAPTER INTRODUCTION

This chapter presents theoretical and empirical literature that explains the relationship between IFFs and capital flight on economic growth. The theoretical literature supporting this study is drawn from economic growth theories. In the empirical literature on the general impact of IFFs and capital flight on economic growth, studies will be presented including the research gaps identified.

3.2 THEORETICAL LITERATURE ON ECONOMIC GROWTH

3.2.1 Keynesian theory

The Keynesian theory was developed around the principle that government intervention is needed to help economies emerge from recessions by increasing government spending, thereby increasing output (Keynes, 1936). This theory suggests that there is a very strong positive relationship between government spending and economic growth. According to Leshoro (2020), government spending has a positive effect on national income as the increased levels of government consumption affect aggregate demand.

The Keynesian theory assumes that investments in plant and equipment are only made when there is an expectation to receive a positive return on such investment. Sharipov (2015), highlights that the Keynesian model of aggregate demand explains the effect of changes in exogenous factors; namely, consumption, investment, government expenditure and trade balance through the multiplier effect, as an impact on economic growth. An increase in the unemployment levels negatively affects income, consumption investments and savings resulting in negative or stagnant economic growth. In an economy where there is no aggregate demand for reviving business activity in the economy, the government should intervene by implementing monetary and fiscal policies that target reduction in interest rates and taxes, including increases in government spending in areas like infrastructure (Sharipov, 2015).

The capital flows are important to satisfy the investment variable of the Gross Domestic Product (GDP) macroeconomic model and increase the production possibility curve of an economy. The Keynesian macroeconomic growth theory assumes that growth in national income is dependent on changes in consumption,

investment, government expenditure, and the balance of payment. According to Makuyana (2017), the Keynesian theory assumes that investment is a major driver of aggregate demand and affects the national output, the profitable returns and expectations by the investors affect the national output and business cycles. Therefore, it logically follows that during business booms, investors expect positive and profitable returns on their investments resulting in large investments. During business recessions, investors hold back on their investments due to the negative returns and both these decisions have a direct impact on the economic growth and development of the economy.

IFFs activities have been known to affect the governments' budgets. Uncontrolled rampant IFFs activities result in the government's budget deficits mainly due to the reduction in the tax base which is a result of the industry’s reduced production from the rationalisation processes, reduced corporate taxes and reduced income tax as a result of the retrenchment processes. Mahlaba (2019) concluded that the government should always use its capacity to ensure full employment and price stability.

3.2.2 The Harrod-Domar Growth model (HDM)

The Harrold-Domar Growth Model (HDM) as developed by Roy Harrod and Evesy Domar in the 1930s was an extension of the Keynesian growth model. The HDM implies that economic growth is directly linked to investment implying that savings filter into investment and is considered a major determinant of economic growth. According to Bouton and Sumlinski (1998), a steady accumulation of capital from savings and investments translates to higher production levels. This model suggests that investments are financed from local savings and an increase in the investments directly stimulates investments and growth (Makuria, 2013).

Furthermore, Khanya (2021) shows that the rate of economic growth is determined jointly by the national savings ratio and national capital-output ratio supporting the notion that economic growth can be directly led by investment. The HDM suggests that more savings and investments can accelerate the rates of economic growth (Coccia, 2019). According to Todaro and Smith (2012), the HDM states that the GDP growth rate is jointly determined by the national savings ratio and the capital-output ratio, therefore, the more the economy can save and invest, the greater the growth of the GDP. The HDM model does not properly explain the link between growth and

inflation, however, this model suggests that failure to save, low and slow capital accumulation and investments tend to lead to prolonged inflationary periods and high unemployment (Makuria, 2013).

Developing countries tend to have budgetary shortfalls and financial challenges that affect government spending and its ability to stimulate investment and economic growth. This shortfall and finance gap have to be funded from foreign aid resulting in the importance of this model as it determines the financial needs required by developing countries to achieve their required growth rate. Nyasha (2014) and Shahid, Saeed and Tirmizi (2015), highlights that the existence of financial intermediaries and a well-functioning financial sector plays a very important role in fulfilling the HDM growth conditions as they can easily facilitate and promote a savings culture in the economy that can divert the pooled resources to high returns investment projects. In cases where the economy is showing signs of recession, the government should intervene by implementing loose fiscal and monetary policies, lower interest rates and adjusting income and corporate tax (Thong & Hao, 2019) This is expected to boost the production scale, drive investment expansion and restoring stability in the economy.

IFF activities generally increase inflation and cause price instability due to unfavourable exchange rates (Ndikumana & Boyce, 2002). IFFs activities tend to cause high costs of production as a result of cash shortages. The cost of imported raw materials increases as foreign currency becomes scarce in the formal banking sector and readily available on the black market but at a premium and thus, destabilising the exchange rates. This reduces supply, creates an artificial shortage of goods and increases prices. Edeme and Ifelunini (2015) reveal that there is a very strong inter-relationship between savings, inflation and economic growth. Inflation erodes the purchasing power of savings and erodes the value of any cash savings and this results in the general loss of confidence in the local currency. To protect the value of their savings, individuals withdraw most or all of their funds from the bank and buy stable foreign currencies to protect their savings. This creates a striving black-market system and whilst individuals can protect the value of their savings, it creates another problem for the government as there are negative savings in the economy. Ribaj and Mexhuani (2021), suggest that high deposits and savings levels have a significant positive impact on economic growth (Ribai & Mexhuani, 2021). This is because savings stimulate investment, production and employment and consequently generate greater

sustainable economic growth (Ribai & Mexhuani, 2021). IFFs on the other hand cause massive withdrawals of any form of savings thus reducing investment levels.

3.2.3 The Solow-Swan (Neo-classical) Growth Model

According to Solow (1956), economic growth is determined by technological change and can be achieved by endogenous variations in factor accumulation. Solow (1956) suggested that a good level of investment in technology is required to replace ageing and depreciated machines and maintain the right level of capital stock. The Solow model also suggests that an increase in economic growth is a result of the increase in labour both quality and quantity, increases in capital through saving and investment and technology improvement (Todaro & Smith, 2012). The basics of the Neo-classical growth theory argue that capital accumulation drives economic growth in the short run, and this can be done through policy implementations that encourage people to save (Onyimadu, 2015).

General investment in research and development; as well as technology, plays a crucial role in the economy according to the Neo-classical growth model. According to Solow (1956), advancement in technology is enough for the growth process and does not require capital accumulation as per the HDM; therefore, capital plus the right technology will give a higher GDP output. The effect of a closed and open economy also affects the economy with most developing countries operating under a closed economy. A closed economy that has an unstable political environment is generally characterised by low savings leading to slow growth in the short run. Where the flow of foreign investment is also impeded by the heavy interference of the government through implementing unfavourable policies, especially in developing countries, the neo-classical theory suggests that this will slow down that country's economic growth.

It is evident from this model that a good level of investment is required to induce economic growth in the economy. Both IFFs and capital flight are expected to have a negative impact on the investment level and improvement in technology as less capital is allocated to research and development and this is expected to negatively affect economic growth and development in the long run.

3.2.4 Assessment of theoretical literature

As noted above most of these theories where developed a long time ago, Keynesian and the HDM theories in the 1930's and the Solow-Swan in 1956. Economic theories in general are important as they assist to analyse and predict the behaviour of the market and the economy. This assist the policy makers when they are drafting policies and regulations as they are drafted with an expectation in mind. From the discussions above it is clear that the three theories above, Keynesian, HDM and Solow-Swan are still applicable in the present day. The negative effects and impact of IFFs and capital flight will have an undesirable on both the theories and the economic growth.

Most of theories are linked to economic growth and development through investment. IFFs reduce investment in the domestic economy which then impacts negatively on economic growth as investment is a major driver of economic growth and development

3.3 EMPIRICAL LITERATURE REVIEW

IFFs and capital flight continue to cause a lot of dialogue in most of the development and bilateral meetings as they seem to cause significant challenges in developing countries. Most of the countries also do not have proper adequate records on the quantification and value of IFFs and Capital flight transactional value and impact on the country. Most of the available empirical literature of the studies conducted focused on the determinants of capital flight. Most of the studies have been selected from African countries with Nigeria having the most studies.

Ogbonnaya and Ogechuckwu (2017) investigated the impact of IFF on economic growth and development in Nigeria from 1980-2015 using time series and secondary data obtained from the Nigeria Central Bank and Global Financial Integrity. Olawale and Ifedayo (2015) studied the impact of capital flight on Nigerian economic growth during the period from 1980-2012 using the Ordinary Least Square (OLS) and Error Correction Mechanism (ECM). Both studies concluded that IFFs and capital flight had a significant negative impact on both the economic growth and development of Nigeria over the study periods. Samson and Edeme (2012), researched capital flight in the Nigerian economy between 1970-2008 using the autoregressive Distributed Lagged model (ARDL) and Two Stage Least Squares techniques (2SLS). The study concluded

that capital flight indeed had a negative significant impact on economic growth and that a reduction in capital flight could sustain the economic growth and development of Nigeria (Samson and Edeme, 2012).

Effiom, Uche and Otei (2021) studied the asymmetric effects of capital flight on domestic investment in Nigeria, using the ARDL. The findings from the study were two-fold in that over the long run there was an asymmetric effect of capital flight on the government's investments and an increase in the capital flight reduced the investment capacity of the government. This finding was also supported by Uzoma and Godday (2019), who studied capital flight and economic growth in Nigeria between 1990-2017 (Gültekin, 2019) using the OLS method of data analysis and the secondary data obtained mainly from the central bank of Nigeria (Oloruntoba, 2018), Security and Exchange Commission and Nigerian Stock Exchange. The research outcome was that, whilst capital flight and external debt servicing negatively impact economic growth, not all capital flights negatively impacted economic growth, and this was in contrast to most of the studies undertaken (Lippi & Reichlin, 1991). While external debt servicing was found to have a negative effect on the economy, the net foreign investment and the external reserves were found to have positive effects on the economy as they served as sources of foreign exchange revenue to the country (Uzoma & Godday, 2019).

Ndikumana (2014) studied 35 sub-Saharan African countries using the balance of payment method and confirmed that capital flight depleted the resources of the developing countries. This resulted in a reduction in both public and private investments as it increases the government insolvency and causes a reduction in private domestic investment. Ndikumana (2014) and Fisseha (2022) also researched the relationship and impact of capital flight and tax havens on 39 African countries between 1970-2010 using data from World Bank indicators. This study concluded that capital flight influences domestic investment (Danladi, Tunbosun, Falaye & James, 2021), and has significantly contributed to the lower growth rate during the study period.

A study by Sodji (2022) and Agyeman, Sakyi and Oteng-Abayie (2022) study on the impact of capital flight on economic growth in West African Economic and Monetary Union (WAEMU) countries for the period 1970-2016 using primary data mainly from

the World Bank and International Monetary Fund (MacCarthy, Ahulu & Thor, 2022). The study concluded that those countries that had a positive capital flight balance, had a reduction in economic growth. Gusarova's (2009), study on the impact of capital flight on economic growth research in developing countries between 2002-2006 using the endogenous growth model concluded that not only did capital flight negatively affect economic growth but also that the study's empirical analysis also raised doubt on the significance of the capital flight effect on GDP per capita (Badwan & Atta, 2016). Asongo and Odhiambo (2019), researched the impact of governance and capital flight on industrialisation in Africa. Industry growth is an indication of a well-functioning economy as created jobs contribute to consumption and savings as well as an increase in the export component. The findings of this research were that good governance has a direct positive impact on industrialisation and capital flight has an opposite effect on industrialisation growth. Surprisingly the study also identified that governance does not significantly mitigate the negative effect of capital flight on industrialisation.

Ndikumana and Boyce (2021) studied the magnitudes and mechanisms of capital flight in Angola, South Africa and Côte d'Ivoire from 1970-2018. The study concluded that capital flight indeed has a direct effect and is a major obstacle to economic development and growth (Ogundipe, Danladi, Falaye & Oyinemi, 2021; Ndikumana & Boyce, 2012). A similar outcome was also derived from the study on South Africa for the period between 1970-2017 by Ndikumana et al (2020) using the net trade invoicing method.

Ndikumana (2014) and Ogundipe, Danladi, Falaye and Oyinemi (2021), concluded that capital flight has a direct impact on savings and most African countries have low savings which result in a high investment gap that leads to low economic growth. This outcome of that research supported the notion that adequate levels of savings are a condition for capital accumulation which stimulates economic growth. Mulaudzi (2018) conducted research on South Africa between 1986- 2020 using the ARDL approach and concluded that capital flight had a negative impact on economic growth, both in the short and long run (Shahzad, 2022). Ashman, Ben and Newman (2011), research on the nature, scale and impact of capital flight from South Africa using the World Bank residual method concluded that capital flight significantly drains investment funds affecting economic growth. Mpenya, Metseyem & Epo (2015) conducted a study on

the effects of capital flight from the oil and wood sectors on economic growth in Cameroon from 1995-2012 using the incremental output ratio based on secondary data and concluded that capital flight had a direct impact on economic growth and the Gross Domestic Product (Gültekin, 2019). Due to the capital flight effects in the oil and wood sector, Cameroon lost economic growth rates of 0.21 and 0.54 during the periods 1995- 2001 and 2002- 2012 respectively (Mpenya, Metseyem & Epo, 2015).

Raheem and Adeniyi (2015), conducted a study on the capital inflows, outflows and economic growth in Sub-Saharan Arica during 1970-2010. The results of the study showed that there is a negative relationship between capital flight and growth. Nicolaou-Manias (2019) conducted a study on South Africa, Zambia, Nigeria, Morocco, and Egypt using the IMF Direction of Trade (DOTS) methodology and identified that IFFs through mispricing, reduced revenues to the fiscus affecting the investment levels of infrastructure affecting economic growth.

Zobeiri, Roshan and Shahrazi (2015) studied the impact of capital flight on Iran between 1981-2012 using the World Bank residual method and the ARDL model for the data analysis. The study was based on secondary data obtained from the Central Bank of the Islamic Republic of Iran and the World Bank. The main finding of that study was that an increase in capital flight had a significant negative impact on the economic growth of Iran. Badwan (2016) researched the impact of capital flight on Palestine between 2000-2020 using secondary data and used the OLS estimation method to analyse the data. The research concluded that the capital flight that took place during the research period harmed the economic growth of Palestine.

Using the OLS method, Makova et al. (2014) conducted a study on Zimbabwe for the period 1980-2010 and identified that whilst, the negative impact had not been immediate, there was evidence that capital flight indeed affected the economic growth of Zimbabwe. Kurebwa (2021) also conducted a study on Zimbabwe using secondary data and identified that between 2000-2020, Zimbabwe lost over US$32 billion to these activities and confirmed that IFFs have a direct impact on the country’s ability to raise, retain and mobilise the required resources to sustain economic development.

Nkurunziza (2012), conducted a study on the impact of illicit financial flows on poverty reduction in 33 African countries from 1970-2008. The findings from the study suggested that assuming all the flight capital had been invested in Africa (Adeleke,

2019), poverty levels would have been significantly lower than it was. According to Ndikumana (2015), the negative effects of capital flight on investments and growth slows down poverty reduction efforts and also increases inequality in income and human development. As the government continues to have budget shortfalls, that end up being substituted by Official Donor Assistance and Aid proceeds, due to the secrecy around these funds, corrupt public officials and those politically connected tend to embezzle these public funds increasing the poverty and inequality levels.

Idris (2020) investigated the impact of capital flight, corruption and unemployment in Nigeria for the period 1980 to 2020. The study concluded that capital flight, weak institutional framework and high political uncertainties that existed in Nigeria during that period created more vacuum of unemployment due to retarded investment. Benjamin (2014) also investigated the impact of capital flight on unemployment in Nigeria using the ordinary least squares method and the Co-integration and Error Correction Mechanism (ECM) methods. The findings concluded that capital flight in the short run, contributed positively to unemployment in both the current and next years and the long run, it only contributed positively to the current year while contributing negatively in the next year but leaving an unemployment gap as the contribution of the current year is greater than that of the next year (Benjamin, 2014).

Polat (2016) also investigated the impact of capital flight on unemployment in 30 Organization for Economic Co-operation and Development (OECD) countries using the dynamic panel data methods for the period 2006-2013. The findings of this investigation were that capital drain affects the firm's ability to expand its activities resulting in it undergoing operating contractions that reduce the labour demands and possibly lay off workers which leads to high. Makwe, Gbosi and Gbanador's (2021) and Adenomon and Ojo (2020) study on capital flight and unemployment rate in Nigeria using the Augmented Dickey-Fuller method using a central bank of Nigeria statistical data for the period 1990 to 2000 concluded that capital flight did not increase the unemployment rate in Nigeria

The effect of capital flight on domestic investments in 30 African nations between 2000 to 2019 was investigated by Leykun-Fisseha (2022) and Ogundipe, Danladi, Falaye and Oyinemi (2021) using the dynamic system generalised method of moments. The investigation concluded that capital flight was indeed one of the conditions that

severely constrained domestic investment and financing in Africa (Fisseha, 2022). Wujung and Mbella (2016) also investigated the impact of capital flight and economic development in Cameroon during the period 1970- 2013 using the fully modified least squares method. Findings revealed a negative relationship between capital flight and economic development in Cameroon that existed during the period of investigation.

Ekienabor, Sina and Kayode (2021), studied the effect of capital flight on economic growth in Nigeria between 1981 to 2019 using secondary data obtained for the Central Bank of Nigeria. The OLS technique method was used to analyse the data and the study concluded that there was a negative significant relationship between capital flight and economic growth in Nigeria during that period. Acha, Akpanuko and Unuafe (2013) studied the impact of illicit financial flows from Africa and their developmental implications using the Nigerian experience. The research used secondary data sourced from Global Financial Integrity and the Central bank of Nigeria, analysed using regression analysis and the OLS technique. The research concluded that proceeds of IFFs were expropriated to offshore financial centres and financial institutions in developed countries denying the fledging economies funds required for investment and ultimate development.

Onyele and Nwokocha (2016), investigated the relationship between capital flight and poverty in Nigeria during the period 1986 to 2014 using the Johansen co-integration test and error correction model. The findings revealed the persistent outflow of domestic resources resulted in a long-run equilibrium relationship between capital flight and poverty since a large number of citizens were drowning in a pool of poverty.

Ortega, Sanjuán and Casquero (2020), studied the impact of illicit financial flows and the provisioning of child and maternal health services in low and middle-income 72 countries for the period 2008 to 2013. The findings of the research revealed that due to the lost resources as a result of the IFFs and lack of funding there was a negative impact on the provisioning of family planning methods and antenatal care in those countries over the investigative period.

3.4 LITERATURE GAP

There has been a growing interest to assess the impact of IFFs and capital flight on the economic growth and development of developing countries because of the ever-

increasing financing deficits gap. Due to the sensitivity of the subject matter, it appears that most of the studies that have taken place are mainly on the drivers and determinants of IFFs. The study seeks to contribute to the available literature by trying to assess the impact of IFFs on Zimbabwe's economic growth and development over the period 1980- 2020. The study will utilise manufacturing sector output as a measure of development in Zimbabwe, an area that has not been investigated to a large extent.

Governments and other independent institutions should encourage and probably fund more funding for research on this issue. This will assist in identification and quantification of the losses and effects and this will force most heads of state to start taking the matter seriously and put in strong probative measures to deter citizens from attempting to or from engaging in such activities. Further research can also be done on the challenges that governments experience in trying to collect and maintain data that can enable the respective institutions to share important information. There is barely sufficient evidence on the impact of IFFs on economic growth and development especially in Zimbabwe. Some of the studies focus on economic growth but growth is a necessary but not sufficient condition for development. It therefore becomes important to include the effect of IFFs on development. Some of the studies may have only focused on growth but this study will also incorporate a development variable as it is assumed and expected that a positive direct relationship exist between development and economic growth. It is anticipated that the findings of this research should add to previous investigations in investigation the impact of IFFs and capital flight on economic growth and development in Zimbabwe.

3.4.1 Assessment of empirical literature

From the analysis of the literature reviewed in this study it is interesting to note that there was no survey or questionnaires that used as a methodology. As previously highlighted, IFFs transactions are basically activities take place to move moneys across borders that has an illegal source. It therefore follows that due to illegality associated with these activities, using surveys and questionnaires is not likely to achieve the desired outcome as most respondents are likely to be dishonest in fear of victimisation.

Most of the studies reviewed took place in Nigeria using a quantitative approach and secondary data obtained from the Central Bank Statistical Bulletin and National Bureau of Statistics. Most of these researches applied the Autoregressive Distributed Lag model mainly due to the reliability of this approach as evidence by the concurrence of conclusion associated with the impact of the IFFs and capital flight on economic growth. The combines research period was from 1970- 2018 and the summarised findings of these studies included IFFs affected growth and development in Nigeria, IFFs reduced the governments capacity and investment levels and reduction in capital flight activities can result in the sustainability of economic growth and development. Surprisingly one study by Uzoma and Godday (2019), also found that where the economy is a recipient to these IFF related funds, the economy is bound to have positive growth as these funds serve as a source of foreign exchange revenue.

Others studies were conducted on selected Sub- Saharan countries, West African Economic and Monetary Union (WAEMU) basically from 1970- 2017.The research techniques used also included the balance of Payment residual method, mis-invoicing, net trade method, ARDL, the generalised method of moments (GMM), Incremental Output Ratio (ICOR), International Monetary Fund (IMF) Direction of Trade (DOTS) methodology. Various methodology approaches have been used to assess the impact and there is also uniform consensus in the findings. These findings include IFFs and capital flight depletes private and domestic savings, increases insolvency risks due to reduction of tax base, reduction in investments, GDP and economic growth.

As highlighted earlier literature on the IFFs and capital flight impact on Zimbabwe is very scarce. The assessed literature also covers the period between 1980- 2020. Research by (Kurebwa, 2021), used literature review methodology and (Makova, et al, 2014) The researchers noted that IFFs affected the countries ability to retain and mobilise resources affecting infrastructure investment, reduces capital formation affecting economic growth and development These activities were also found to facilitate other risks that have a negative impact on African developing countries.

3.5 CHAPTER SUMMARY

This chapter presented both the empirical and theoretical literature on economic growth and investments. It was established that both IFFs and capital flight activities have a direct impact mainly on the savings levels of both the public and private investment in the country. The traditional theories of economic growth provide a basic understanding of the factors that underpin and promote the general economic growth of an economy. These theories can be negated by IFFs and capital flight as they generally affect the savings level of the economy and causes other multiplier effects. Most of the empirical literature confirmed that IFFs and capital flight have a direct negative effect on economic growth and development. The chapter concluded by highlighting the literature gaps in this current study.

CHAPTER FOUR: RESEARCH METHODOLOGY

4.1 CHAPTER INTRODUCTION

Chapter three provided an overview of the empirical and theoretical literature on the IFFs and capital flight, the drivers of these activities and theories that underpin these activities as well as their impact on economic growth and development. Chapter four details the methodology and the research design followed for this study. It also outlines the approach taken by the researcher in undertaking this research. This includes the research paradigm, research design, data collection methods, sampling, data analysis and research rigour. According to Leedy and Ormrod (2016), methodology refers to the technology used to collect and analyse the research data. This chapter also discusses the research and rigour methods, limitations of the research encountered and ethical considerations aspects of conducting this research.

4.2 PRIMARY RESEARCH

The research aims at determining the impact of the IFFs and capital flight activities on Zimbabwe's economic growth and development between 1980-2020. The objective of the study includes determining the drivers of IFFs and capital flight activities in Zimbabwe, determining the impact of IFFs and capital flights on Zimbabwe's economic growth and development and ultimately providing relevant recommendations to control and deter capital fight and IFF activities in Zimbabwe. In addressing the objectives of this study, the researcher chose to use statistical methods to test the null hypothesis and alternative hypothesis outlined in Chapter One.

4.2.1 Research Paradigm

The research paradigm outlines the beliefs and principles which define how a researcher sees the world, and how they interpret and act within that world (Kivunja & Kuyini, 2017; Kamal, 2019). Research paradigm refers to the researcher's view of assumptions that tend to guide their research (Saunders, Lewis and Thornhill, 2009). The main paradigms that have been widely used in information system research are positivism, interpretivism and pragmatism (Rahi, 2017; Ugwu, Ekere & Onoh, 2021). The paradigm choice highlights the research objective, foundation and expectation (Okesina, 2020; Ugwu, Ekere & Onoh, 2021). The paradigm is the first step that lays the foundation for subsequent choices regarding methodology, design and method.

Furthermore, Rahi (2017) and Kawulich (2017), show that the positivist paradigm uses scientific methods to produce knowledge through observation and experimentation. Positivism is directly linked to a scientific model to formulate laws applicable to populations which explain the causes of the observation and measurable behaviours. For a positivist researcher, it is possible to adopt a distant, neutral position that enables the researcher to assume the role of an objective analyst. Positivists assume that reality is objectively given and is measured using properties that are independent of the researchers' instruments (Kumatongo & Muzata, 2021; Blaike, 2010).

According to Kivunja and Kuyini (2017), the interpretive paradigm seeks to understand the subject of the human experience, to understand the viewpoint of the matter. The goal of interpretive research is to understand the individual's social interpretations (Rehman & Alharthi, 2016). In addition, Alharahsheh and Pius (2020), stated that interpretivism assumes a subjective background, which differs based on the participants' viewpoints. They believe that individuals have different experiences and should have different opinions and social constructions, such as language and shared meanings (Aliyu et al., 2014).

The pragmatic paradigm also applies mixed research methods to understand human behaviour (Kivunja & Kuyini, 2017; Makombe, 2017; Okesina, 2020). Pragmatics is limited to a specific system of philosophy (Kumatongo & Muzata, 2021). They are known to be flexible in the choice of methods, procedures and techniques used in the research. Ugwu, Ekere & Onoh (2021), concludes that the research paradigm has a significant role and should be clearly defined. Due to the objective nature of the positivism paradigm in research and its ability to logically analyse and explain the data collected, this research adopted the positivism approach to conclude the impact of IFFs and capital flight on Zimbabwe's economic growth and development.

4.3 RESEARCH DESIGN

Research design is the structured road map for a research study (Kumar, 2014). Research methodology shows the steps that will be taken to conduct the research from the beginning to the end. According to Igwenagu (2016), research methodology is the systematic, theoretical analysis of the methods applied to a field of study, which is supported by concepts, such as paradigms, theoretical models, phases and quantitative or qualitative techniques. The three main methods of conducting research

are qualitative, quantitative and mixed. Silva (2017) states that an extensive description of data is the main characteristic of qualitative research. Qualitative research methods do not apply any statistical procedures to arrive at the findings. Qualitative research can be conducted using various methods which include interviews and questionnaires. According to Oun and Bach (2014), the goal of qualitative research is to collect data and obtain an understanding of human behaviour and assess those results to identify behaviour patterns. Data collection methods include interviews, focus groups, observation and self-study and are considered to be the most time-consuming as they are very interactive in their nature.

Antwi and Hamza (2015), highlight that quantitative research operates under the assumption of objectivity. Quantitative research makes use of surveys, questionnaires, and experiments to collect, tabulate data and analyse the data collected. Quantitative researchers measure variables on a sample of subjects and express the relationship between these variables using statistics; such as correlations and relative frequencies (Lakshman et al., 2000). According to Williams (2007), quantitative research involves numerical data and mathematical models.

Table 4.1 shows the differences between quantitative and qualitative research approaches:

Table 4. 1 Difference between quantitative and qualitative approach

	QUANTITATIVE APPROACH	QUALITATIVE APPROACH
RESEARCH PURPOSE	Numerical description Causal explanation Prediction	Subjective description Empathetic understanding Exploration
RESEARCH METHODS	Empirical examination Measurement Hypothesis testing Randomization Blinding Structured protocols Questionnaires	Ethnographies Case studies Narrative research Interviews Focus group discussion Observations Field notes Recordings & Filming
NATURE OF DATA INSTRUMENTS	Variables Structured and Validated-data collection instruments	Words, images, categories In-depth interviews, participant observation, field notes, and open-ended questions
DATA ANALYSIS	Identify statistical relationships among variables	Use descriptive data, search for patterns, themes ad holistic features and appreciate variations

RESULTS	Generalizable findings	Particularistic findings; provision of insider viewpoint
FINAL REPORT	Formal statistical report with: • Correlations • Comparisons of means • Statistical significance of findings	Informal narrative report

Source: (Antwi and Hamza, 2015; Lakshman et al., 2000)

The purpose of this research is to measure the impact of IFFs and capital flight on the economic growth and development of Zimbabwe. It, therefore, followed that a quantitative methodology approach was adopted and considered to be the most suitable methodology for this type of research. The researcher also applied the unit root testing and ARDL test to the relationships of the variables used in the equation and the significance of the impact of IFFs and capital flight on Zimbabwe's economic growth and development during the period of research interest.

4.3.1 Data collection

The secondary data (capital flight data) was obtained from the Political Economy Research Institute (PERI) website (Ndikumana & Sarr, 2019). This data was estimated by Ndikumana & Boyce (2021) using the trade misinvoicing methodology. As stated earlier, the purpose of this research is to examine the impact of IFFs and the economic growth of Zimbabwe covering from 1980 to 2020. Standard literature was also used to identify other factors associated with economic growth and these were included as control variables in the analysis. The data for these variables were obtained from The World Bank, United Nations Development Programme and the Fraser Institute (Efobi & Asongu, 2018).

4.3.2 Sampling

Since the researcher cannot study the entire population, this research was based on a sample that is representative of the entire population. The chosen data sample covered the period from 1980-2020. This period is of interest as it covers the era from independence to date and is considered long enough for research purposes to provide substantive findings and recommendations on the impact of IFFs and capital flight on Zimbabwe's economic growth and development. It should also be noted that data on illicit financial flows for the period 2018-2020 was not available and this contributed to the limitations of the identified period. However, the regression techniques chosen can

cater for missing observations. Table 4.2 below shows the variables chosen for the study, a brief description of each variable and the source of the chosen variable. The study chose GDP and manufacturing data as the dependent variables and the proxies for economic growth and the rest of the variables were considered independent control variables. This data was also publicly available from the documented sources.

Table 4.2 Research variables

Variable	Dependent/ Independent	Description	Source
Gross Domestic Product **(GDP)**	Dependent	The researcher used the gross domestic product as the measure of economic growth and development in Zimbabwe.	World Bank Database
Manufacturing **(MA)**	Dependent	The gross net output of the manufacturing industry.	World Bank Database
General government final consumption expenditure **(GE)**	Independent	General government final consumption expenditure refers to all government current expenditures for purchases of goods and services	World Bank Database
Trade Openness (**TO)**	Independent	Represents the extent to which a country is engaged in global trade and is determined by the ratio of trade to GDP.	World Bank Database
Investment **(INV)**	Independent	Also known as gross capital formation and is the value of fixed capital assets produced in an economy over a period of time.	World Bank Database
Foreign Direct Investment **(FDI)**	Independent	Net investment inflow in the economy.	World Bank Database
Illicit Financial Flows (IFFs) / Capital flight/ **(ILL/CAP)**	Independent	Funds illegally earned, transferred, and utilised to cover illegal activities and transactions.	Political Economy Research Institute (PERI)
Inflation **(IN)**	Independent	The sustained increase in the price level of goods and services in the economy over a period of time	The Fraser Institute
Legal system (LS)	Independent	The process in which the governments' legal institutions enforce the rule of law and legal procedures.	The Fraser Institute

Source: Authors' Compilation

4.3.3 Analysis of descriptive data

Descriptive statistics is important as it helps to analyse trends of the data collected and used in any research. The descriptive statics also helped in assessing the relationship between IFFs and Zimbabwe's economic growth and development. The other variables that were incorporated in the descriptive statistics for the research period included GDP, manufacturing, general government final consumption expenditure, trade openness, investment, FDI, IFFs, inflation and legal system.

4.4 ECONOMETRIC MODEL

The study used the following two models to examine the impact of IFFS and capital flight on Zimbabwe's economic growth and development.

$$GDP_t = \beta_0 + \beta_1 ILL_t + \beta_2 LS_t + \beta_3 GE_t + \beta_4 TO_t + \beta_5 INV_t + \beta_6 FDI_t + \beta_7 IN_t + \varepsilon_t \ldots\ldots\ldots\ldots\ldots \textbf{(4.1)}$$

$$MA_t = \beta_0 + \beta_1 ILL_t + \beta_2 LS_t + \beta_3 GE_t + \beta_4 TO_t + \beta_5 INV_t + \beta_6 FDI_t + \beta_7 IN_t + \varepsilon_t \ldots\ldots\ldots\ldots\ldots \textbf{(4.2)}$$

Where in GDP_t represents the real GDP growth in period t, ILL_t represents the illicit Financial Flows in period t , LS_t is the Legal System in period t , TO_t is Trade Openness in period t, INV_t is Investments in period t. FDI_t is Foreign Direct Investment for the period t , MA_t is Manufacturing output for the period in period t GE_t is General Government Final Consumption Expenditure in period t and IN_t is Inflation rate for the period t Lastly ε. Is the error term in period t

4.5 DATA ANALYSIS

De Vos et al. (2011), suggest that data analysis is the transformation of data into an understandable and interpretable format, to allow for the studying and testing of the relations of research problems to conclude. A quantitative research methodology was adopted by the researcher and used the ARDL model developed by Pesaran, Shin and Smith in 2001 to determine the effect of illicit flows on economic growth and development.

4.5.1 Correlation of variables

The ARDL model was used to estimate the existence of the short and long-run relationships between the Gross Domestic Product (GDP), and manufacturing (representing trade) as dependent variables and the rest of the explanatory variables (Ayeni, 2020). According to Chia and Lim (2015), by using this testing procedure, the cointegration relationship can be identified by estimating the model using the ordinary least squares (OLS) technique once the lag order of the model is selected.

According to Mukaka (2012), correlation analysis is a statistical method used to assess a possible linear association between two continuous variables and is also used to determine whether there are highly correlated independent variables. Results indicate that the variables are not close to zero. The correlation coefficient varies from a positive one to a negative one. A positive one refers to a perfect relationship between the variables (Clark, Foster, Sloan & Bryman, 2022), whilst a negative one implies that a negative perfect relationship exists between the variables and zero indicates that there is no relationship at all.

The descriptive statistics and correlation analysis are used to describe the data and show co-movements between the variables respectively. However, they cannot be used to investigate cause and effect or causal relationships. The ARDL is thus used to investigate the effect of IFFs on economic growth and development.

Consequently, the advantages of the ARDL are that it allows the researcher to conduct the test with variables from varying orders of integration (Khobai et al., 2020; Sungweme & Odhiambo, 2019; Yakubu, Manu & Bala, 2015). The ARDL model approach is robust for small sample sizes and the technique utilises a reduced form or equation as compared to the other techniques. Furthermore, each of the underlying variables considered in the ARDL approach also stands as a single long-run relationship equation and estimates the long-run and the short-run components of the model simultaneously (Nkoro & Uko, 2016, Al-Malkawi, Marashdeh & Abdullah, 2012). Due to the lagged effects, the ARDL model also can predict future results based on past results (Cirakli & Yildirim, 2019). In addition, Fabozzi et al. (2006) demonstrated that the ARDL model includes a combination of a traditional autoregressive model and a regression with distributed lags over a set of other variables. The Johansen cointegration test can also be used as an alternative however this method requires

that all the variables be I(1) which is not the case at times (Dachraoui, Smida & Sebri, 2020). The ARDL method is also used if the variables are stationary at the level or first different i.e., I (0) or I(1) and not stationary at the second difference, I(2).

4.6 REQUIREMENTS OF THE ARDL TECHNIQUE

According to Malefane & Odhiambo (2019), the following stages are important in applying the ARDL methodology:

Stage 1: Test the stationarity of the time series by conducting unit root tests.

Stage 2: Estimation of the unrestricted Error Correction Model (UECM) as well as conducting the bounding test. The cointegration testing should be performed to check if there is a long-run relationship between the variables and this can be done using the F- test of the Wald test (Tursoy & Faisal, 2016). This is also known as the ARDL bounds test developed by Pesaran, Shin and Smith (2001) and is conducted by testing the hypothesis against the critical values. If the calculated F- value is greater than both the upper and lower bounds critical values, then the null hypothesis of no co-integration can be rejected as this means that the model variables have a long-term co-integration (He, Yin, Zheng & Gao, 2019). If, however, the F- value is between the upper and lower bounds, the decision is assumed to be inconclusive lastly if the F-value is below the upper and lower critical bounds, evidence suggests that there is no cointegration in the model estimated values (He, Yin, Zheng & Gao, 2019; Tursoy & Faisal, 2016).

Stage 3: Estimate the ARDL model with the OLS technique to determine the long-run coefficients and it is at this stage that the variables are introduced into the analysis (Cirakli & Yildirim, 2019). It is only after the coefficients for the long-term relationships have been identified, can the model undergo diagnostic testing again to determine the appropriateness of the model

Stage 4*:* The final stage is to build an Error Correction Model (ECM) which involves the estimation of the long-run relationship coefficients, and this is determined by applying the optimal lag length.

4.6.1 Unit Root Tests

Most macroeconomic models variables assume a random walk model, which according to Studenmund (2011) is a process that can be identified as stationary when its mean and variance are found to be constant across time; and the value of the co-variance between the periods is dependent on the lag between them and not the actual time of computing the covariance. According to Tursoy and Faisal (2016), the unit root test is used to examine the stationarity of the data being assessed, however selecting the correct unit root test is not always easy and might require several tests to be performed.

The main unit root tests methods according to Nkoro & Uko (2016) are Durbin-Watson (DW) test, the Dickey-Fuller test (1979) (DF), the Augmented Dickey-Fuller (1981) (ADF) test, Philip-Perron (1988) (PP). According to Mutezo (2014), Aimola & Odhiambo (2021), it is not required to do a unit root test for the ARDL model, however, it is recommended that the test is conducted to ensure that the variables selected are between I(0) or I(1) and where a variable is I(2) or above the ARDL (Tchetche & Pallaye, 2022), it becomes inappropriate to use this method. It should also be noted that the root test is however required to ascertain the number of times a single variable or series of variables must be differenced to achieve stationarity (Nkoro & Uko, 2016).

To improve the robustness of the selected variables, it is recommended to perform more than one-unit root test and if both the unit root test results give the same results, there will be certain about the order of the integration series (Tursoy & Faisal, 2016, Enders,1995). The study investigates the order of integration of each variable of interest by applying the ADF and the PP unit root tests.

4.6.1.1 *Augmented Dickey-Fuller (ADF) unit root test.*

Due to its simplicity, the ADF test proposed by David Dickey and Wayne Fuller is the most commonly used statistics and econometrics method used to test the time series for stationarity (Kotenko et al., 2020). It is an extension of the Dicky Fuller Test necessitated by the need to include an extra lag in the dependent variables to eliminate autocorrelation problems. The ADF model tests the significance statistical test and provides the results in a hypothesis test including both the null and alternative hypotheses. This test requires adding lags in the equation and checking if the coefficient of the null hypothesis is equal to zero and the alternative hypothesis is less

than zero. Brooks (2008), reveals that the lag length selection is very important as too many lags increase the coefficients stand errors while fewer lags will not help to get rid of the autocorrelations in the residuals. The ADF test's advantage over the PP test is that the PP test does not perform well in situations with finite samples (Davidson & MacKinnon, 2004).

4.6.1.2 *Philip and Perron (PP) unit root test*

The PP test also builds on the principles of the DF test by making a that-parametric adjustment to the t-test statistic (Afriyie et al., 2020). According to Pin et al. (2011), It, therefore, follows that the PP test is a modification of the ADF test and it considers the restrictive nature of the error process. Christiano (1988) argued that breakpoints must not be exogenously given but chosen in such a way as to be correlated with the data. The PP (1998) test is known to solve the serial correlation problem among error terms by using a correlation factor which estimates the long-run discrepancy of the error process with the modification of the Newey-West Formula. The same critical values are used for both the ADF and PP tests as the asymptotic distribution is also the same. The main advantage of the PP tests over the ADF tests is that it is more robust to error and there is also no need to define the regression test lag length (Mallik & Chowdhury, 2001).

4.6.2 ARDL ERROR CORRECTION MODEL (ECM)

The ARDL model can be used to develop the ECM and identify the relationship between the short run and the long run variables in the model. The ECM shows whether a deviation between the short run and long run variables exist. According to Mhango (2019) , the ECM shows the speed adjustment back to long equilibrium after a short-run equilibrium. It is also important to test the robustness of the model and this is done through diagnostic testing. This test examines the serial correlation, normality and the heteroscedasticity of the model. According to Jalil and Ma (2008), if the cumulative and cumulative sum of squares is within the 5% level of significance, the null hypothesis of all coefficients in the model are stable and cannot be rejected.

4.7 VARIABLE DESCRIPTION

This research investigates the impact of IFFs and capital flight on economic growth and the study on both theoretical and empirical literature has assisted in identifying

variables that affect economic growth to include in the model. The variables have also been chosen on the belief that changes in the IFFs and capital flight levels will have an impact on the variables selected.

4.8 DIAGNOSTIC TEST

According to Yakubu, Manu and Bala (2015) diagnostic testing refer to the process of confirming whether the model fulfils the assumptions of the Classical Linear Regression Model (CLRM). If the model fails to satisfy this assumption or there are material deviations, it cannot be confirmed to be true (Pesaran, 1974). If there are no material deviations from the CLRM assumptions, a model can still be used (Wolde-Rufael, 2010). For valid inference and reliable conclusion about coefficients in a model (betas), the model must fulfil the following CLRM assumptions which mostly relate to the error terms;

i. The error terms need to follow a normal distribution.
ii. The error terms have a constant variance; therefore, no heteroskedasticity.
iii. There is no correlation between error terms; this refers to serial correlation.
iv. The regression model is linear, correctly specified, and has an additive error term.
v. All explanatory variables are uncorrelated with the error term
vi. No explanatory variable is a perfect linear function of any other explanatory variables (no perfect multicollinearity).

By satisfying the above assumptions, the model improves precision and increases statistical power. To check the reliability and stability of the ARDL model, the following diagnostic tests, Normality test, Heteroskedasticity test), Regression specification error test (Ramsey, 1969) RESET test and Breusch-Godfrey (1980) serial correlation LM were conducted to check the assumptions above.

4.8.1 Normality test

The normality test is conducted to check the first assumption, which is the normality assumption. According to Ghasemi and Zahediasl (2012), statistical errors are common in scientific literature, and it follows that normality and statistical assumptions are considered important as when the assumptions do not hold, the model results cannot be concluded to be accurate and reliable. The normality test is an important

step in deciding the measures of central tendency and the statistical methods and data analysis to apply to the research data and is generally a prerequisite for many statistical tests (Mishra et al., 2019). Failure to conduct a normality test might result in errors and wrong conclusions from the data analysis. Generally, normality tests can be conducted using visual methods also known as graphical tests and numerical methods. Graphical methods of normality testing can be done using a histogram, stem and leaf plot, box and whisker plot, normal percent-percent plot, normal quantile-quantile plot and the empirical distribution function plot.

According to Das and Imon (2016), due to the subjectivity involved in the graphical tests, it follows that numerical or statistical methods are highly recommended. The following statistical methods can be used to test Kolmogorov-Smirnov (K-S) test, Lilliefors corrected K-S test, Shapiro-Wilk test, Anderson-Darling test, Cramer-von Mises test, D'Agostino skewness test, Anscombe-Glynn kurtosis test, D'Agostino-Pearson omnibus test and the Jarque-Bera test (Ghasemi et al., 2012). The Jarque-Bera test for normality was employed for this research.

4.8.2 Heteroscedasticity tests

According to Asteriou & Stephan (2007), heteroskedasticity is a combination of two Greek words, *"hetero"* which means different and *"skedasticity*" which means variance, meaning different variance. Wooldridge (2016) defines heteroskedasticity as the variance of the error terms, given that the explanatory variables are not constant. If errors have a constant variance, this means the errors are homoscedastic and that phenomenon is called homoscedasticity. However, when the variance of errors is not constant, that means the errors are heteroscedastic and this phenomenon is also known as heteroscedasticity. If there is an unequal scatter of residuals, the population used contains unequal variance, and therefore, the analysis results may be invalid. If heteroskedasticity is present the hypothesis tests become invalid based on the Gauss-Markov assumptions (Gujarati & Porter, 2009).

Many methods can be employed to test the assumption of heteroscedasticity of residuals or dependent variables in a model. One of the useful methods to visualise possible heteroscedasticity is to plot the residuals against the fitted values of the regression suspected of creating heteroscedasticity (Gujarati & Porter, 2009). A formal statistical test that can be used to determine heteroscedasticity is Breusch-Pagan

(1979) test. Hypothesis testing steps are used in the Breusch-Pagan test to determine whether or not heteroscedasticity is present in a model. The test uses the null hypothesis approach.

The Null hypothesis and Alternative hypothesis for the test are as follows:

Null hypothesis: (Ho): Homoscedasticity is present (the residuals are distributed with equal variance)

Alternative hypothesis: (Ha): Heteroscedasticity is present (the residuals are not distributed with equal variance)

If the Breusch-Pagan test fails to reject the null hypothesis, it is assumed that homoscedasticity is present, and the assumption is met. The Breusch-Pagan test can be conducted using most statistical software. The Breusch-Pagan test for heteroscedasticity is employed for this research.

4.8.3 Regression specification error test (Ramsey RESET)

As a matter of principle, misspecification errors can cause errors, bias and inefficiency in the estimation of micro-econometric models (Sapra, 2018). To deal with these misspecification errors, Ramsey (1969) developed the regression error specification test. According to Gujarati (1996), Ramsey's RESET test is used to detect the nonlinearity using the general test for specification error, this test detects omitted variables and incorrect functional form in the linear regression model (Supra, 2018; Shukur & Mantalos, 2004). In addition, Chirwa (2017), states that if specification errors exist, the Ordinary Least Squares estimates are biased and inconsistent, resulting in conventional inference procedures that are inefficient. The RESET test, therefore, tests whether the model specified is correct or not.

4.8.4 Breusch- Godfrey (BG) serial correlation LM

The key assumptions in linear regression are that there is no correlation between residuals and that the residuals are independent. Serial correlation, also known as autocorrelation, is when the error terms in a time series transfer from one period to another. In other words, the error for one time is correlated with the error for a subsequent period. The Breusch-Godfrey (1980) test is a test for autocorrelation of the errors in a regression model. The null hypothesis states that there is no serial

correlation of any errors up to the last one. Since the test is based on the idea of Lagrange multiplier testing. It is sometimes referred to as an LM test for serial correlation. A similar assessment of autocorrelation can also be carried out with the Durbin-Watson test and the Ljung-Box test. However, the test is more general than using the Durbin-Watson statistic, which is only valid for detecting first-order autoregression. The BG test has no restrictions and is statistically more powerful than the Durbin-Watson statistic.

4.8.5 Assumption of Multicollinearity

Multicollinearity occurs when two or more predictor variables in the model are related to each other (Hosmer & Lemeshow, 1989). If the predictor variables are highly correlated with one another, it is difficult to get good estimates of their distinct effect on the outcome variable. When one fits a model, the idea is to identify predictor variables that better predict the outcome variable (Matignon, 2005). A perfect multicollinearity occurs when an outcome variable can be precisely predicted by other predictor variables in the model (Maruyama, 1997; Kleinbaum et al., 2013). If, however, there is multicollinearity the predictor variable that is put last into the model contributes no unique information, and the estimated regression coefficients of the fitted model can be highly unreliable (Maruyama, 1997; Sofroniou & Hutcheson 1999). Multicollinearity does not reduce the predictive power of the model; however, it affects the predictor variables that are highly correlated in terms of their contribution to predicting an outcome variable (Cronbach, 1987).

To detect the impact of multicollinearity, this study made use of the correlation matrix results to detect the correlation relationship of the variables.

4.9 RESEARCH RIGOR

According to Heale and Twycross (2015), research rigour refers to the extent to which the researchers worked to enhance the quality of the study, by measuring the validity and reliability of the study. Validity and reliability in quantitative studies reflect the extent to which errors may arise in measurements (Leedy & Ormrod, 2016; Twycross & Shields, 2004). Research validity is in two parts, internal and external validity (Lakshmi & Mohideen, 2013). The former refers to how the results of the study are legitimate because of the way the data was selected, recorded and analysed whereas the latter involves how the results of the study can be transferable to other groups of

interest. It is also important to note that if the results are not considered to be internally valid, they cannot be externally valid (Lakshmi & Mohideen, 2013).

Lakshmi and Mohideen (2013), define reliability as the degree to which measures are free from error and therefore yield consistent results. When an instrument repeatedly measures the same subject, and the results consistently remain the same, it is considered to be reliable (De Vos et al., 2011; Heale & Twycross, 2015). As a result, such instruments work effectively at different intervals and conditions (Blumberg, Cooper & Schindler, 2014). This research is based on a quantitative methodology and to ensure that it meets research rigour and reliability requirements, diagnostic tests were conducted on the model to confirm the assumptions of CLRM. Diagnostic tests help to confirm the reliability and accuracy of the results as the model is expected to produce the same results if repeated by another researcher using the same data.

4.10 LIMITATIONS OF THE RESEARCH

Whilst the secondary data has its advantages associated with cost-effectiveness and time convenience, it also has its disadvantages as someone else (individual researchers or institutions) previously collected the data, it however also has its limitations. The main disadvantage of secondary data is that there is no guarantee that the data is free from errors and that there was no bias during the data collection process. Whilst the research focuses mainly on the impact of IFFs and capital flight, there are other elements, variables and factors that affect the economic development of a country. The data used in the research is also for a specific period and there is also a possibility that had the data selection period been extended or reduced, the results could also have been different.

4.11 ETHICAL CONSIDERATIONS

Devos et al. (2011), emphasize that mutual trust, acceptance, and cooperation with participants are important ethical qualities. Arifin (2018), recommends that the researcher should maintain ethical principles to protect the participants during the research process. Clark-Kazak (2017), recommends that the researcher is obligated to protect the respondents' details or any information that can compromise the anonymity of the respondent. The research is based on publicly available information and no consent was required however, the researcher applied and received ethical

clearance in terms of the rules and regulations of Nelson Mandela University and also adhered to the University's code of conduct policies and research guidelines. Given the effects of plagiarism, all information obtained from other sources has been properly cited and referenced to the source and author of the information.

4.12 CHAPTER SUMMARY

Presented in this chapter are the research design and paradigm that was chosen for this study, the variables of interest and their sources and the methods of analysis that were applied for the study. A quantitative methodology was adopted for this research and the ARDL was used to analyse the secondary data and assess the impact of IFFs and capital flight on Zimbabwe's economic growth and development. The next chapter presents an analysis of the finding and the interpretations of the data of the descriptive and inferential analysis. The EViews version 13 software was used to carry out the different diagnostic tests and estimations for the research.

CHAPTER FIVE: FINDINGS AND INTERPRETATION OF DATA

5.1 CHAPTER INTRODUCTION

Chapter four delivered the details of the research methodology, data collection, and analysis process for this research study. Chapter five provides the research findings based on the analysis and interpretation of the data, using quantitative methods. The findings provide a critical interpretation of the descriptive statistics and regression results based on the two regression models chosen in chapter four. Firstly, the results of the stationarity test conducted will be provided. Following the stationarity tests, the lags are uncovered and then followed by the ARDL bound testing. Finally, diagnostic tests are conducted to verify the reliability of the models.

5.2 DESCRIPTIVE STATISTICS

As per Chapter 4, a statistical analysis approach was conducted on the secondary data that was obtained from The World Bank, Political Economy Research Institute (PERI) and The Fraser Institute. Table 5.1 shows the statistical description of the variables chosen for the study (Capital Flight, Foreign Direct Investment, Gross Domestic Product, Government Expenditure, Inflation, Investment, Legal System, Manufacturing and Trade).

All the selected research variables data were available for the selected period (41 variables), except for Capital flight which had 38 variables. Capital flight data for the period 2018-2020 was not available and this was considered not to be a significant limitation for the study as the study incorporated other dependent variables as a measure of economic growth. These had all the data for the whole research period of interest. According to Manikandan (2011) mean is the average in the data set or the sum of all scores divided by the number of scores in the data sets and the median of the data set is the middle value of the data when it is arranged from the lowest to the highest. The standard deviation or the dispersion of the set of data shows how each of the variables is spread around the mean (Ali & Bhaskar, 2016). A low standard deviation indicates that the data is clustered around the mean and a greater standard deviation indicates that the data is more spread out between the highest and the lowest. The higher standard deviation shows the more volatile are the variables. Table 5.1 shows that capital flight, Inflation, Legal system and trade have a low standard

deviation whilst Foreign Direct Investment, Gross Domestic Product, Government Expenditure, Investment and Manufacturing have high standard deviations.

The capital flight reached the highest and lowest levels in 1992 and 2003 respectively. Manufacturing and Gross Domestic Product also reached the highest in 1996 and 2016 respectively, whilst they were both at their lowest in 2008. The average capital flight was USD$495.45 million, GDP was USD9.864 billion and Manufacturing was US$2,084 billion. The decrease in the GDP and Manufacturing can be linked to the impact of inflation and a controlled exchange rate that shunned investment. Between 2002-2012 the Zimbabwean, economic environment was characterised by a shortage of working capital support, a shrinking domestic market, high utility tariffs, high wages, credit and liquidity crunch and several supply bottlenecks such as high import costs and fuel and power shortages (Damiyano et al., 2012). These economic challenges raised the cost of production to an extent, that there was a decline in local production as it was now cheaper to import finished products than manufacture them locally.

Data reveals that Government expenditure, Gross Domestic Product and Manufacturing were lowest in 2008 at $90,394,800 million, $4,415,702.800 billion, and $1,123,983,503.4 billion respectively. According to Masiyandima and Edwards (2017), between 2006-2008 the local currency was rebased at least twice before the payments system collapsed and this saw the birth of the dollarization of the economy. This period resulted in a lot of depositors losing the value of their bank deposits which resulted in massive closure and downsizing of firms.

When there is an effective and efficient allocation of resources in the government budget, this is expected to increase investments, GDP and manufacturing levels in the economy (Taiwo & Abayomi, 2011). This is evident from the data as the government spending levels were lowest between 2005-2008, investments between 2005-2006, GDP 2006-2008 and manufacturing between 2007-2009.

The data also showed that between, 2004-2008 there was a general decrease in Foreign Direct Investment, Government Expenditure, Investment and GDP. According to Kanyenze, Chitambara & Tyson (2017), the Zimbabwean economy was characterised by domestic and foreign investment and Foreign direct investment being

largely depressed during this period mainly due to the lack of clarity and confusion brought about by some the of laws and policies that were implemented by the Government. This included the controversial Indigenisation and Economic Empowerment Policy that required foreign investors with more than US$500,000 investments to cede more than 51% of the shares to indigenous persons (Chirisa, Mhlanga, Matamanda & Ncube, 2021). Over the research period GDP reached its lowest in 2008-2009 and the economic fortunes seemed to have been saved by the formation of the Government of National Unity. Post this 2008 period not only did the forced formation of the Government of National Unity change the fortunes of the country but the dollarization also attracted a few foreign direct investments. According to Mpofu (2015), dollarization encourages international investment that promotes economic growth. The GDP appeared to increase up to around 2018 when the late President Robert Mugabe stepped down.

GDP, Government expenditure, Investment, manufacturing and trade display properties of a normal distribution as reflected by the Jarque-Bera test where the p-value exceeds the significance level. This means that the null hypothesis of the data is normally distributed and cannot be rejected. The data also shows that the average inflation rate was 28% over the period and this also to be the highest in the Southern African Development Community (SADC) region over the period

Table 5. 1 Descriptive statistics

	CAPITAL_FLIGHT	FDI	GDP	GOVERNMENT_EXPENDITURE	INFLATION	INVESTMENT	LEGAL_SYSTEM	MANUFACTURING	TRADE
Mean	495.4520	1.25E+08	9.86E+09	1.65E+09	28.48926	1.27E+09	4.200338	2.08E+09	63.89942
Median	690.1839	40 000 000,00	7.76E+09	1.34E+09	2.553176	1.37E+09	4.244717	2.16E+09	63.71249
Maximum	2929.989	7.18E+08	2.05E+10	3.81E+09	558.5600	2.45E+09	5.781733	2.69E+09	109.5216
Minimum	-3633.418	- 30 506 684,00	4.42E+09	90 394 800,00	-27.04865	85 532 400,00	1.849167	1.12E+09	35.91686
Std. Dev.	1419.160	1.75E+08	5.12E+09	9.70E+08	110.4853	5.85E+08	0.794323	4.14E+08	16.76695
Skewness	-1.075543	1.514260	1.073141	1.108710	4.096910	-0.427747	-1.217165	-0.679690	0.328754
Kurtosis	4.356882	4.674868	2.507312	3.505194	18.55797	2.639083	5.591481	2.508343	2.627517
Jarque-Bera	10.24148	20.46092	8.284160	8.835793	528.1983	1.472805	21.59629	3.569802	0.975561
Probability	0.005972	0.000036	0.015890	0.012060	0.000000	0.478833	0.000020	0.167814	0.613988
Sum	18827.18	5.12E+09	4.04E+11	6.76E+10	1168.060	5.19E+10	172.2139	8.55E+10	2619.876
Sum Sq. Dev.	74 518 507,00	1.23E+18	1.05E+21	3.76E+19	488280.2	1.37E+19	25.23798	6.86E+18	11245.22
Observations	38	41	41	41	41	41	41	41	41

Source: Researchers' computations

5.3 CORRELATION RESULTS

An analysis of the research data as per Table 5.2 shows that the variables are not highly correlated. The two correlation coefficients greater than 0.8 are between an independent variable and a dependent variable. Therefore, this is an indication that severe multicollinearity is not a problem in this study.

Table 5.2 also shows the correlation relationship of the variables included in the model. The results show that capital flight has a negative correlation with, FDI, GDP, Government expenditure, Inflation, and manufacturing. All their p-values are greater than 0.05 and which means that they are not statistically significant. Table.5.2 also show that capital flight has a positive insignificant relationship with Investment and the legal system.

Government expenditure, investment, legal system and manufacturing have a positive correlation and significant relation with the GDP. Inflation has a positive relationship with GDP and it is statistically insignificant. FDI, Government expenditure, investment and the legal system have a positive significant association with manufacturing.

According to Shrestha (2020), multicollinearity in regression analysis occurs when several variables are significantly correlated not only with the dependent variables but also to each other. When the variance decomposition proportion is higher than 0.8 to 0.9 the associated variables are considered to be multicollinear (Kim, 2019) According to Makoto and Nyoni (2020), if the correlation coefficient between the individual variables is above 0.8, this implies that multicollinearity is a serious problem. It is important to note that the multicollinearity was not a major problem in the study as the correlations between the independent variables were not 0.8.

Table 5. 2 Correlation Matrix

PROBABILITY	CAPITAL_FLIGHT	FDI	GDP	GOVERNMENT _EXPENDITURE	INFLATION	INVESTMENT	LEGAL_SYSTEM	MANUFACTURING	TRADE
CAPITAL_FLIGHT	1.000000 -----								
FDI	-0.276351 0.0931	1.000000 -----							
GDP	-0.207337 0.2117	0.810417 0.0000	1.000000 -----						
GOVERNMENT_EXPENDITURE	-0.224219 0.1760	0.723886 0.0000	0.946170 0.0000	1.000000 -----					
INFLATION	-0.013435 0.9362	-0.044434 0.7911	0.095826 0.5671	-0.027891 0.8680	1.000000 -----				
INVESTMENT	0.060458 0.7184	0.503979 0.0013	0.685971 0.0000	0.688563 0.0000	-0.015920 0.9244	1.000000 -----			
LEGAL_SYSTEM	0.297617 0.0696	0.257144 0.1191	0.221499 0.1814	0.194642 0.2416	-0.116107 0.4876	0.590058 0.0001	1.000000 -----		
MANUFACTURING	-0.036438 0.8281	0.438499 0.0059	0.479745 0.0023	0.578258 0.0001	-0.352857 0.0298	0.716829 0.0000	0.560201 0.0003	1.000000 -----	
TRADE	-0.306899 0.0609	0.232040 0.1610	-0.161576 0.3325	-0.298109 0.0691	-0.010520 0.9500	-0.256386 0.1202	-0.007150 0.9660	-0.131901 0.4299	1.000000 -----

Source: Researchers' computations

5.4 REGRESSION ANALYSIS

The ARDL model was used to analyse the impact of IFFs and capital flight on Zimbabwe's economic growth and development by using two models. Gross Domestic Product (GDP) and Manufacturing were selected as the dependent variables and proxies of economic growth and development. It is also important to note that before estimating the ARDL models, the appropriate lag length had to be determined. The EViews software using the Aikaike Information criteria (AIC) selected the following lag length for the two models, GDP (2, 2, 0, 0, 2, 1, 0, 1) and manufacturing (1, 0, 1, 2, 2, 0, 2, 0). The regression modelling involved conducting unit root tests, cointegration and diagnostic tests.

5.5 DIAGNOSTIC TEST UNIT ROOT RESULTS

Before performing the causality test in time series analysis, the variables must be checked for stationarity. According to Idriss (2021), it is necessary to conduct unit root testing to determine the stationarity property of the variables and also to avoid errors in the regression. Stationarity is a problem for ordinary least square (OLS) estimations. If all the variables of interest are non – stationary, OLS models may not be appropriate to analyse the relationship (Shrestha & Bhatta, 2018). In line with the methodology of chapter 4, the ADF and the PP unit root tests were carried out on each of the variables. The Null hypothesis for the two-unit root tests is non-stationarity (Nusair, 2004). Therefore, when the test is significant, or the p-value is less than 0,05 the null hypothesis of non-stationarity is rejected. This means that the variable is stationary.

The results from both the tests conducted, as shown in tables 5.3 and table 5.4, proves that some variables are stationary at the level and some at the first difference. The Akaike Information Criteria was used to select the lag length of the unit root tests (Keppler, Bourbonnais & Girod, 2007). An analysis of the PP results shows that at constant, with constant & trend a without constant and trend, Capital flight probability values are less than 1% in levels. This means that capital flight is stationary at levels and is I(0). All other variables result at level, showing that they are not stationary at level. At first difference, all the variables are significant at 1% except for legal which has a p-value of 0.0501 which is close enough to the 5% level (Heshmati, 2017). This p-value is stationary at the 5% level when no constant or trend is used (Heshmati,

2017). It therefore can be concluded that at the first difference using the PP test, all the p-values are stationary (Namahoro, Wu, Xiao & Zhou, 2021).

The ADF unit root test findings reveal that most of the variables are not stationary and therefore, the ADT test failed to reject the null hypothesis of non-stationarity. The three variables, capital flight, FDI, and Legal system were found to be stationary when no constant was used therefore are not stationary at the level using the ADF test. At first, the difference, using the ADF test, eight of the nine variables are significant at 10% and 5% levels. Only one variable, inflation, was not significant at the first level. Therefore, the null hypothesis of non-stationarity is rejected using the ADF unit root test.

The results of the Phillips-Perron test unit root test demonstrate that most of the variables, except Capital Flight, are non-stationary at the level, while all the variables are stationary at the first level. In conclusion, the ADF and the PP tests applied to the first difference of the data series reject the null hypothesis of nonstationary for all the variables used in the study (Odhiambo, 2013), showing that all variables are stationary at the first difference (Lin, Yeh, Tsui & Chien, 2014); therefore, we may proceed with utilizing the ARDL model. Passing the unit root test entails that not only are the variables in a condition that allows them to be used in the cointegration analysis but assurance has now been obtained that the data will produce valid error-free results and have passed the general reliability and validity test.

Table 5. 3 PP Unit root test results

UNIT ROOT TEST TABLE (PP)										
At Level										
		CAPITAL_FLIGHT	FDI	GDP	GOVERNMENT_EXPENDITURE	INFLATION	INVESTMENT	LEGAL_SYSTEM	MANUFACTURING	TRADE
With Constant	t-Statistic	-4.0753	-2.4900	-0.6412	-1.9577	1.9323	-2.0505	-2.0663	-2.0461	-2.2047
	Prob.	0.0030	0.1254	0.8497	0.3036	0.9998	0.2651	0.2588	0.2668	0.2078
		***	n0	n0	n0	n0	n0	n0	n0	n0
With Constant & Trend	t-Statistic	-4.6820	-3.8460	-1.5474	-2.0167	1.2749	-2.0406	-2.0450	-2.0070	-2.8201
	Prob.	0.0031	0.0241	0.7957	0.5747	0.9999	0.5619	0.5596	0.5798	0.1988
		***	**	n0	n0	n0	n0	n0	n0	n0
Without Constant & Trend	t-Statistic	-3.7656	-1.7696	0.5970	-0.9376	2.1747	-0.7453	-0.1986	-0.0850	-0.0232
	Prob.	0.0004	0.0731	0.8412	0.3046	0.9918	0.3873	0.6084	0.6482	0.6691
		***	*	n0	n0	n0	n0	n0	n0	n0
At First Difference										
		d(CAPITAL_FLIGHT)	d(FDI)	d(GDP)	d(GOVERNMENT_EXPENDITURE)	d(INFLATION)	d(INVESTMENT)	d(LEGAL_SYSTEM)	d(MANUFACTURING)	d(TRADE)
With Constant	t-Statistic	-8.9626	-9.4892	-4.5346	-4.3924	-4.2491	-5.4044	-2.9381	-4.8796	-9.4431
	Prob.	0.0000	0.0000	0.0008	0.0012	0.0018	0.0001	0.0501	0.0003	0.0000
		***	***	***	***	***	***	*	***	***
With Constant & Trend	t-Statistic	-9.2215	-9.3103	-4.5922	-4.3400	-4.6891	-5.3415	-2.8845	-4.8143	-9.3584
	Prob.	0.0000	0.0000	0.0037	0.0072	0.0029	0.0005	0.1783	0.0021	0.0000
		***	***	***	***	***	***	n0	***	***
Without Constant & Trend	t-Statistic	-9.0922	-9.5416	-4.5120	-4.4518	-4.1385	-5.4804	-3.0704	-4.9457	-9.4953
	Prob.	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000	0.0030	0.0000	0.0000
		***	***	***	***	***	***	***	***	***
Notes: (*)Significant at the 10%; (**)Significant at the 5%; (***) Significant at the 1%. and (no) Not Significant										

Source: Extracted from EViews

Table 5. 4 ADF unit root test results

UNIT ROOT TEST TABLE (ADF)										
At Level										
		CAPITAL_FLIGHT	FDI	GDP	GOVERNMENT_EXPENDITURE	INFLATION	INVESTMENT	LEGAL_SYSTEM	MANUFACTURING	TRADE
With Constant	t-Statistic	-4.0153	-2.6699	-0.2330	-2.2578	2.1918	-1.8819	-3.0592	-1.7703	-2.3616
	Prob.	0.0036	0.0882	0.9257	0.1903	0.9999	0.3372	0.0382	0.3894	0.1588
		***	*	n0	n0	n0	n0	**	n0	n0
With Constant & Trend	t-Statistic	-4.6707	-3.8932	-1.2453	-2.4313	0.1896	-1.8691	-2.9997	-1.7219	-2.7330
	Prob.	0.0032	0.0216	0.8869	0.3587	0.9968	0.6517	0.1453	0.7228	0.2296
		***	**	n0	n0	n0	n0	n0	n0	n0
Without Constant & Trend	t-Statistic	-3.7475	-2.0232	1.0069	-1.0497	2.8096	-0.6808	-0.3013	-0.0228	0.0949
	Prob.	0.0004	0.0425	0.9144	0.2601	0.9981	0.4158	0.5707	0.6692	0.7070
		***	**	n0	n0	n0	n0	n0	n0	n0
At First Difference										
		d(CAPITAL_FLIGHT)	d(FDI)	d(GDP)	d(GOVERNMENT_EXPENDITURE)	d(INFLATION)	d(INVESTMENT)	d(LEGAL_SYSTEM)	d(MANUFACTURING)	d(TRADE)
With Constant	t-Statistic	-8.9626	-6.0210	-4.4555	-4.4063	-0.4633	-5.4061	-3.2603	-4.8785	-9.1228
	Prob.	0.0000	0.0000	0.0010	0.0011	0.8851	0.0001	0.0239	0.0003	0.0000
		***	***	***	***	n0	***	**	***	***
With Constant & Trend	t-Statistic	-6.7692	-5.8664	-4.5278	-4.3539	-4.0534	-5.3453	-3.2169	-4.8129	-9.0152
	Prob.	0.0000	0.0001	0.0044	0.0070	0.0171	0.0005	0.0960	0.0021	0.0000
		***	***	***	***	**	***	*	***	***
Without Constant & Trend	t-Statistic	-9.0922	-6.0305	-4.4373	-4.4654	0.0118	-5.4817	-3.3013	-4.9450	-9.2017
	Prob.	0.0000	0.0000	0.0000	0.0000	0.6786	0.0000	0.0016	0.0000	0.0000
		***	***	***	***	n0	***	***	***	***
Notes: (*)Significant at the 10%; (**)Significant at the 5%; (***) Significant at the 1%. and (no) Not Significant										

Source: Extracted from EViews

5.6 BOUNDS TEST

The research study is based on two models GDP and Manufacturing. This section assesses the relationship between GDP and Manufacturing on Zimbabwe's economic growth using the ARDL models. The ARDL bound test was employed to establish whether there was the existence of cointegration between the research variables of interest (capital flight, foreign direct investment, government expenditure, trade, investment, inflation, gross domestic product, legal system and manufacturing) and the economic growth. According to Bellourmi (2014), ARDL bound test can be used with the combination of the I(0) and I (1) series whereby I(0) represent the lower critical values and I(1) represent the upper critical values. If the computed F-statistic lies above the upper boundary level, the null hypothesis of no cointegration is rejected. On the other hand, if the test statistic falls below the lower bound, the null hypothesis is not rejected.

5.6.1 Bound Test for Co-integration

Table 5.5 Bound test results for the dependent variables

GDP -Dependent variable						Manufacturing- Dependent variable				
Test Statistic	**Value**	**Signif.**	**I(0)**	**I(1)**		**Test Statistic**	**Value**	**Signif.**	**I(0)**	**I(1)**
F-statistic	19.15247	10%	1.92	2.89		**F-statistic**	6.819920	10%	1.92	2.89
K	7	5%	2.17	3.21		**K**	7	5%	2.17	3.21
		1%	2.73	3.9				1%	2.73	3.9
t-statistic		10%	2.196	3.37		**t-statistic**		10%	2.196	3.37
		5%	2.597	3.907				5%	2.597	3.907
		1%	3.599	5.23				1%	3.599	5.23

Source: Researcher's compilation

Table 5.5 above shows the bound test results where both GDP and Manufacturing are the dependent variables. The value of the GDP F-statistic value is 19.15247 which is greater than all the critical values. The same applies to the Manufacturing F-statistic value of 6.819920 as it is greater than all the critical values. This implies that the null hypothesis of no cointegration among the variables in equations in both the GDP and Manufacturing equation is rejected. From these results, it is clear that there is a long-

run relationship amongst the variables when GDP and Manufacturing are dependent variables because their respective F-statistics are greater than the upper bound critical value at the 5% significance level (Kalai & Zghidi, 2017). The next step of the research was to estimate the long-run cointegration of the equation and the coefficients of the models.

5.6.2 Long-run results of the Estimated Long Run

After discovering the long run-relationship under the ARDL model, the long-term effects of the variables on each other can be estimated from the ARDL model (Keppler, Bourbonnais & Girod, 2007). The following section describes the long-run coefficient estimates between the variables. Table 5.6 shows the long relationship when GDP and manufacturing outputs are the dependent variables.

Table 5.6 ARDL Long run form and Bounds Test

VARIABLE	GDP	MANUFACTURING
CAPITAL_FLIGHT	-0.000208 (-2.137506)**	-8.48E-06 (-0.507985)
LOG(GOVERNMENT)	-0.027437 (-0.227239)	0.384105 (4.061813)***
LOG(INVESTMENT)	0.664025 (2.806723)**	-0.112523 (-0.981962)
LEGAL	-0.144647 (-1.312492)	0.220511 (3.439691)***
FDI	2.02E-10 (0.255326)	-0.002167 (-1.051935)
INFLATION	0.024105 (2.560395)**	-6.43E-10 (-3.047660)***
LOG (TRADE)	0.133987 (0.451443)	0.202808 (1.998491)*
C	9.786237 (2.156913)**	14.00937 (10.36160)***

Note: ***, ** and * indicate significance at 1%, 5% and 10% levels respectively. Figures in parenthesis are t-statistics

Source: Researcher's compilation

Table 5.6 results show that there is a negative coefficient relationship between Capital flight, Government expenditure, legal system and GDP. Where the p-value is greater than 0.05 it implies that the coefficient is insignificant and where is less than 0.05 it is significant. For each unit increase in capital flight, there is a reduction in GDP by 0,02% and the coefficient is significant. This, therefore, means that an increase in capital flight is associated with a low GDP in the economy. This finding is consistent with literature from Makova et al. (2014), who established the existence of a negative relationship between capital flight and economic growth in Zimbabwe. The revenue that has been generated from the remaining functional industries, especially in mining and agriculture is not being ploughed back into the economy to increase the income base. This revenue is however illegally diverted to foreign and neighbouring economies, thus, denying the domestic country the opportunity to invest in infrastructure and employment development (Idris, 2021)

This finding was also consistent with other studies performed by Beja (2006), and Gusarova (2009) who concluded that capital flight retards economic growth and development and contributes to underdevelopment. A continued increase in the capital flight means that there will be a reduction in the taxable revenue for the government and this result in a negative balance of payments and budget shortfalls. It will have to look for alternative ways to fund these shortfall requirements and these normally come with a cost and must be repaid.

The results in Table 5.6 also show that an increase in capital flight has a negative correlation with manufacturing sector output however the coefficient is insignificant. To be specific, a unit increase in the capital flight will cause both real gross domestic products to reduce by -8.48E-06 units. This is not in line with the expectation of a significant coefficient. This could be an indication that capital flight has not caused the demise of the manufacturing sector but rather the micro-economic and political instability environment (Kwaramba, Mahonye & Mandishara, 2016).

The coefficients of the control variables for the GDP specification are discussed below. Government expenditure has a negative but insignificant effect on economic growth. This could be attributed to the spending and prioritisation patterns of the government as they could be spending in the wrong sectors that do not stimulate economic growth.

According to Carboni (2011), there is a linkage between public expenditure and economic growth, and this is affected by the government's expenditure. Not all government expenditure is beneficial and stimulates growth, as the evidence tend to suggest that allocating more resources towards capital expenditure boost the economy (Mbanyele, 2019)

FDI has a positive and insignificant relationship with economic growth. The results show that whilst there might have been a positive flow of the FDI into the country, it did not have any impact on the GDP. This could be attributable to the quality of the investment. Over the research period, Zimbabwe has also seen an influx of Chinese investors and these have been known to deplete the state resources because of the conditions that they impose on the receiving government linked to their investment. According to Mengesha (2020), between 2009-14, Zimbabwe received about USD$7 billion from China and at one time it was among the fastest-growing economies in the world between 2009-2013 with an average growth rate of 12%. This was however in contrast to the GDP growth rate during that period possibly linked to the contraction of business sales or earnings of the country as the money was being channelled to non-productive sectors (Mengesha, 2020). Whilst there is a lot of information and evidence that the Chinese have invested a lot in Zimbabwe's tobacco industry through contract farming there is little evidence of how the tobacco export revenue has contributed to the GDP. This suggests that most of the tobacco export revenue has landed in some form of capital flight activities highlighted in chapter two, such as transfer pricing or misinvoicing.

Table 5.6 results also show that inflation is positively associated with the GDP. A 1% increase in inflation leads to a 2% increase in the GDP, implying that inflation in Zimbabwe has a considerable effect on the GDP. This is not in line with prior expectations and this could be a result of the GDP deflators that were used in the model instead of the consumer price index (CPI). This might also be considered an area for further studies. In the long run, the coefficient of the legal system is negative in the GDP equation, however, the relationship is insignificant. The coefficient is expected to be positive as it measures the strength of the legal system. This insignificant coefficient could be an indication of weak institutional quality in Zimbabwe.

The results also show that trade openness is positive and statistically insignificant at a 5% level of significance suggesting that trade does contribute to higher economic growth in Zimbabwe. When an economy is open and the government has fair policies that protect international investors, these tend to boost economic growth through increased productivity. According to Muzururu (2017), export-oriented multinational companies are likely to set up subsidiary companies in less restricted and open economies and this in turn stimulates economic growth.

The coefficients of the control variables for the manufacturing specification are discussed below. Government expenditure has a positive coefficient. This means that a unit increase in government expenditure brings about an 0.384105 increase in manufacturing. Investment has a negative coefficient relationship with manufacturing and is statistically insignificant as This is linked to the quality of the investments. If the investments are not linked to production, they will not impact manufacturing.

The legal system also has a positive coefficient relationship. and is statistically significant. An improvement in the legal system enhances manufacturing output. This was evident during the land grab era when most of the white farmers lost their land because of the land reforms that ignored property rights and the rule of law. The ripple effect in the manufacturing sector was so huge in the economy. Factories along the agricultural value chain closed down, inflation skyrocketed, and a lot of investors withdraw their investments and relocated to neighbouring and safer countries as they were worried that their businesses might be next (Richardson, 2005).

Both inflation and FDI have negative coefficient relationships with manufacturing whilst FDI is insignificant and FDI is significant. According to Makochekanwa (2007), higher inflation erodes the real value of domestic assets and this stimulates individual and corporate investors to hold or transfer their assets outside the country. The net result of these activities results in a correlation with manufacturing (economic growth).

5.7 ARDL ERROR CORRECTION MODELS

The ECM coefficient also known as the (Error correction term- ECT) shows how quickly variables return to equilibrium and it should have a statistically significant coefficient with a negative sign. The ECT measures the speed of adjustment to the

equilibrium. The results of the ECM test performed on the variables are shown below.

Table 5.7 Short-run coefficients with Error Correction Term

VARIABLE	GDP	MANUFACTURING
DLOG(GOVERNMENT)	-	0.193441 (8.158119)***
DLOG(INVESTMENT)	-	0.015170 (0.740994)
DLOG (INVESTMENT (-1))	-	0.056437 (3.150281)***
DLOG (GDP (-1))	0.263069 (6.080462)***	-
D(CAPITAL_FLIGHT)	-3.03E-06 (-0.618676)	-
D (CAPITAL_FLIGHT (-1))	2.66E-05 (4.888565)***	-
D(LEGAL)	-0.019073 (-0.858828)	0.032477 (1.216530)
D (LEGAL (-1))	0.137079 (6.126949)***	-0.103065 (-2.952944)***
D(FDI)	-1.02E-10 (-1.378704)	-2.33E-10 (-2.370207)**
D (FDI (-1))	-	3.60E-10 (3.792075)***
DLOG(TRADE)	-0.259090 (-4.027775) ***	
CointEq(-1)*	-0.219672 (-15.53451) ***	-0.706278 (-9.269897) ***

Note: ***, ** and * indicate significance at 1%, 5% and 10% levels respectively. Figures in parenthesis are t-statistics

Source: Researcher's compilation

Table 5.7 shows that the ECT for the GDP specification is equal to (-0.219672) while that of the manufacturing sector equation is -0.706278. Both are statistically significant at the 1% level (Bekoe, Chen, Tougem, Nketiah & Sakuwunda, 2022). This suggests that GDP is out of equilibrium in the short run, GDP adjusts to the independent variables with a lag; about 22% share of the discrepancy between long-term and short-term GDP is corrected within a year. For the manufacturing equation, just over 70% of the disequilibrium in the short run is corrected within a year. This means that the adjustment takes place relatively quickly in the manufacturing model.

In the GDP equation, the coefficients of capital flight, legal and FDI are all negative and insignificant in the short run. The coefficient of trade is negative and significant in the short run implying that a 1 % decrease in trade will result in a 0.25% decrease in economic growth in the short run. The short-run relationship between the government expenditure, investment, legal, FDI and the dependent variable manufacturing are also shown in table 5.7. The short-run results of the manufacturing equation show that government expenditure has a positive coefficient relationship with manufacturing and is significant while investment and legal also have a positive coefficient relationship and the p-values are insignificant as they are greater than 0.05. There is evidence that FDI has a positive relationship with the manufacturing level initially, however, over time the relationship becomes negative.

5.8 DIAGNOSTIC TESTS

According to Menegaki (2019), for a model to be trusted, it must be robust and one needs to perform various diagnostic tests on the model to support its robustness. The tests include a normality test, heteroskedasticity test, serial correlation test and Ramsey-REST test. These tests were conducted to verify if the model was normally distributed, and correctly specified, there was no serial or autocorrelation amongst the variables as this could have resulted in errors in the regression model. The test results are shown in Table 5.8.

Table 5. 8 Diagnostic test results

MODEL	NORMALITY	SERIAL CORRELATION	HETEROSCEDASTICITY	RAMSEY RESET TEST
GDP	3.93 (0.14)	2.51 (0.11)	0.76 (0.70)	0.55 (0.589)
Manufacturing	0.15 (0.93)	0.84 (0.45)	1.37 (0.25)	1.656(0.114)

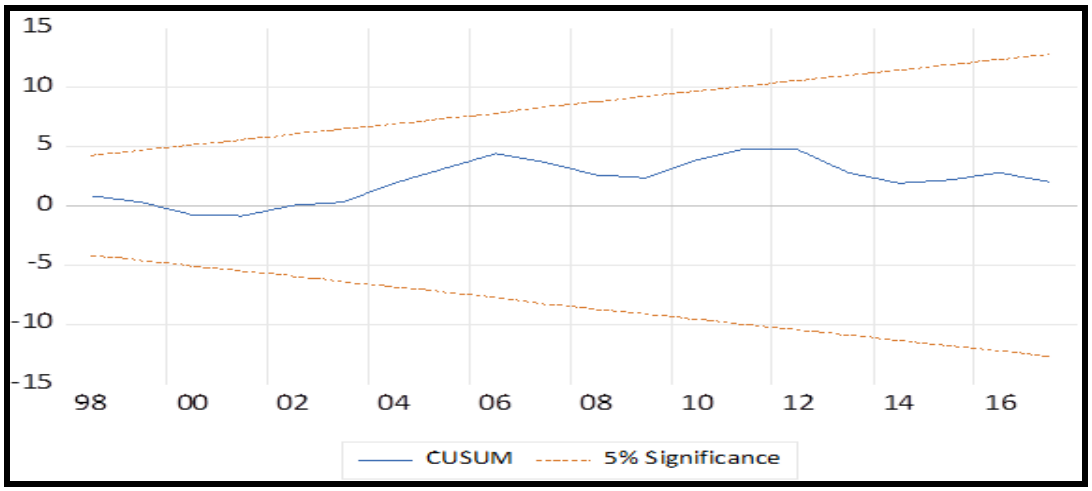
Note: The figures in parenthesis are p-values

Both the GDP and manufacturing specifications pass the diagnostic tests. The residuals are normally distributed based on the Jarque-Bera test. There is no serial correlation, and the residuals are homoscedastic. Lastly, the models are stable as the null of model misspecification is not rejected in the RESET test (Raju, Gupta & Singh, 2021).

5.8.1 Structural stability

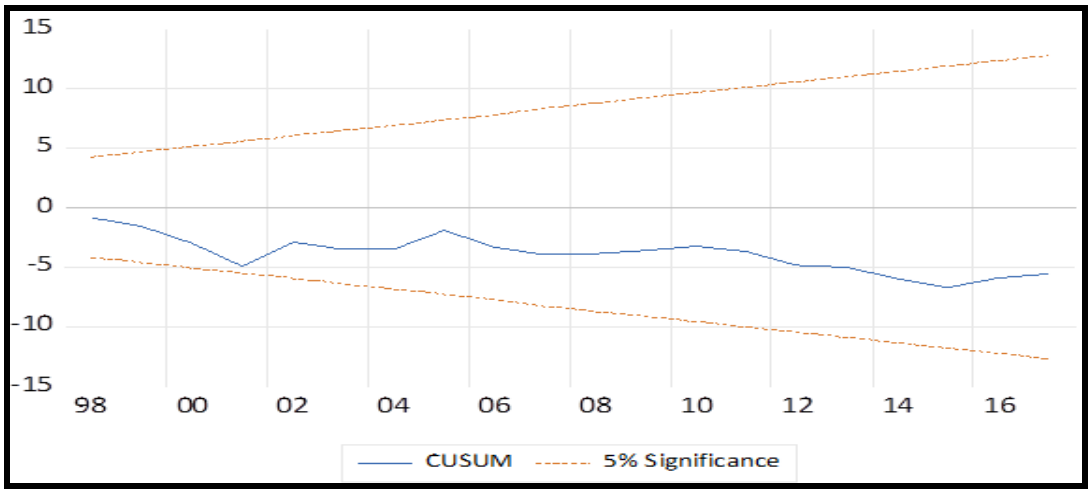
Finally, when analysing the stability of the long-run coefficients together with the short-run dynamics, the cumulative sum (CUSUM) and the cumulative sum of squares (CUSUM) are applied. The graphical representation of CUSUM statistics is shown in Figures 5.1 and 5.2. The null hypothesis that the regression equation is correctly specified cannot be rejected if the plot remains within the critical bound on the 5% significance level. As can be seen from figures 5.1 and 5.2, the plot of CUSUM is within the boundaries (Pahlavani, Wilson & Worthingt, 2005) and hence the statistics confirm the stability of the long-run coefficients of the GDP and manufacturing in models.

Figure 5.1 GDP - CUSUM Stability Test



Source: Extracted from EViews

Figure 5.2 Manufacturing - CUSUM Stability Test



Source: Extracted from EViews

5.9 CHAPTER SUMMARY

This chapter presented results of the impact of capital flight, FDI, government expenditure, trade, investment, inflation, GDP, legal system and manufacturing on Zimbabwe's economic growth and development over the period 1980-2020. The ARDL statistical method was employed to analyse the long and short-run equation as well as test the causal relationship of the independent variables against the dependent variables (proxies of GDP). Diagnostic and stability tests were also conducted to verify the validity and reliability of the ARDL equation. The results show that in the long run capital flight had a positive coefficient relationship with GDP and it is statistically significant that capital flight had a negative and insignificant effect on manufacturing during the period 1980-2020. The next chapter presents the recommendation and concludes the study.

CHAPTER SIX: RECOMMENDATIONS AND CONCLUSIONS

6.1 CHAPTER INTRODUCTION

This chapter concludes the study and summarises the research process, methodology, data analysis, findings limitations and recommendations. The result of the study is based on the analysis of the effect of IFFs and capital flight on Zimbabwe's economic growth and development for the period between 1980-2020. The chapter also suggests some areas that require further research and provides answers to the hypotheses in Chapter one.

6.2 SUMMARY OF THE RESEARCH CHAPTERS

6.2.1 Chapter One: Introduction and Background to the study

Chapter one proves a background of the problem statement, and the aim of the research and outlines the objectives of the study. The researcher identified that IFFs and capital flight have significantly eroded the revenue base of Zimbabwe's government tax base; resulting in, a decline in economic growth and development during the research period (1980-2020). Furthermore, the researcher identified that lack of political will deterred the implementation of incorrect economic policies, loss of confidence in the financial system and political interference in the strategic state institutions; such as the judiciary and other law enforcement institutions that are supposed to fight these economic crimes.

6.2.2 Chapter Two: Overview of IFFs and capital flight

Chapter two presented an overview of IFFs and capital flight activities. The overview focused on the various definitions and main types of IFFs, the drivers as well as the methods of measuring capital flight activities. In addition, the Chapter presented some important milestones and events that took place in Zimbabwe over the research period (1980-2020). The researcher discussed the problems which contributed to a ripple effect in the economy; resulting in negative economic growth. The purpose of this chapter was to achieve the first objective of the study of highlighting the drivers of IFFs and capital flight in Zimbabwe.

6.2.3 Chapter Three: Literature Review

The chapter reflected on the empirical literature on the models of economic growth, as supported by the Keynesian theory, Harrod-Domar Growth model (HDM) and Solow-Swan (Neo-classical) Growth Model. The chapter discussed the determinants of capital flights from various African countries with developing economies, including, Nigeria, Angola, South Africa and Côte d'Ivoire. The chapter helped to select the most suitable dependent and independent variables for research to achieve the second objective of assessing the impact of IFFs and capital flights on Zimbabwe's economic growth and development.

6.2.4 Chapter Four: Research methodology

The quantitative approach was chosen as the most appropriate methodology for this study as discussed in chapter four. The researcher made use of publicly available secondary data obtained from the World Bank, the Political Economy Research Institute and the Fraiser Institute's public database. The ARDL model was used to analyse the data. Two models were also used in the analysis, one for economic growth (GDP model) and the other for development (manufacturing model).

6.2.5 Chapter Five: Findings and discussions

This chapter presented the findings from the data analysis on the impact of IFFs and capital flight on the economic growth of Zimbabwe based on the two models. The results indicated that there is a long-run relationship between the variables for both models (Elliot & Yan, 2013). In the long run, there is a negative coefficient relationship between capital flight and GDP and this is significant. The results also showed that there is a negative correlation between capital flight and manufacturing however it is insignificant. These results imply that for each unit increase in capital flight, there was a significant reduction in GDP and not in manufacturing. In the short run, capital flight has a negative correlation with GDP and is insignificant. These results also assisted in achieving the second objective of the research.

6.2.6 Chapter Six: Recommendation and conclusion

This chapter provides a summary of chapters one to five and also provides a discussion on the achievements of the research objectives to share the research findings from chapter five together with the empirical and literature findings to present

recommendations that will highlight the impact of IFFs and capital flight on economic growth and development.

6.3 ACHIEVEMENT OF RESEARCH OBJECTIVES AND QUESTIONS

The primary objective of this research was to investigate the impact of IFFs and capital flight on Zimbabwe's economic growth and development. Three questions were introduced in chapter one based primary research objective. The research investigated the types of IFFs and capital flight activities and the drivers of these activities in Zimbabwe. The research also proposed recommendations to control and deter such activities.

6.3.1 Achievement of Research Objectives

The primary objective of the research was to assess the impact of IFFs and capital flight on Zimbabwe's economic growth and development between 1980-2020. In addition to the study's primary objective, these secondary objectives were considered:

a) To determine the drivers of IFFs and capital flight activities in Zimbabwe
b) To determine the impact of IFFs and capital flights on Zimbabwe's economic growth and development.
c) To provide relevant recommendations to control and deter capital fight and IFFs in activities in Zimbabwe.

6.3.2 Achievement of Research Questions

- ***To determine the drivers of IFFs and capital flight activities in Zimbabwe*** - Chapter two presented an overview of the IFFs and capital flight and the main forms of IFFs. The chapter also showed the factors that drive individuals and companies to engage in those types of activities.
- ***To determine the impact of IFFs and capital flights on Zimbabwe's economic growth and development***. - The ARDL model for GDP and Manufacturing in chapter five shows that there is a negative correlation between capital flight and GDP. A unit increase in capital flight results in a correlation of -0.000208 and it is statistically significant. A unit increase in capital flight results in a 0.02% decrease in GDP. On the other hand, the Manufacturing ARDL model shows that there is a negative correlation between the capital flight of -8.48E-06 and this is statistically insignificant.

This is an indication that capital flight hinders economic growth and there is a need for the government to put more effort into detecting and deterring IFFs and capital flight transactions. By doing so, the government will increase the revenue base and reduce the deficit diverting more funds to capital productive projects that attract investors into the country stimulating economic growth and development.

6.4 FINDINGS AND RECOMMENDATIONS BASED ON RESULTS

Beyond adding to the knowledge base surrounding the impact of IFFS and capital flight on economic growth and development, the following hypotheses were tested:

H_o: IFFs and capital flight do not have an impact on Zimbabwe's economic growth and development.

H1: IFFs and capital flight have an impact on Zimbabwe's economic growth and development.

The empirical evidence of this research shows that there is a long-run relationship between IFFs and capital flight on Zimbabwe's economic growth and development (Bashir, Khan, Tariq & Akram, 2022). From the data analysis, the findings indicate that the null hypothesis at a 5% level of significance is rejected in favour of the alternative. The null that IFFs do not impact on growth and development is rejected since we found that IFFs do have an impact on development.

A lot of government efforts must be incorporated into various government structures to share information and come up with effective policies and controls to address these IFF and capital activities. As the country continues to lose revenue from these activities it will continue to experience negative growth and there will be a ripple effect in trying to achieve the 2030 Millennium Development Goals

Other results also showed that there was in the long run there was a negative coefficient relationship between government expenditure and GDP growth. This result shows that government needs to assess and reprioritise the expenditure patterns. More budget has to be allocated towards projects that will attract and promote GDP increases. FDI also showed that it had a negative correlation with manufacturing and is significant. Policymakers and governments must assess the quality of the FDI that

it is attracting into the country as it appears that it has negatively contributed to manufacturing output

This study recommends that the government and other national and international stakeholders implement effective policies and adoption strategies to deter IFFs and Capital flight activities as they significantly reduce the revenue base of the economy affecting the economic growth and development of the country. International organisations and financial institutions should be allowed to revoke ‘secrecy’, especially in the tax haven environment. This, therefore, implies that if there were one suspect IFF or capital flight activities to have taken or is taking place they should be able to raise alarm for further investigations by the relevant authorities. Governments should also improve information sharing around these matters especially the bordering neighbours as the macroeconomic effects of these transactions tend to have other negative economic and social effects on the other countries. The more money funds that are recovered and returned to the respective countries, the fewer budget shortfalls counties experience and this led to more funds being available to invest in revenue-generating projects that stimulate economic growth and development, especially in developing countries.

6.5 CONTRIBUTION OF THE STUDY

When considering the purpose of this study, several contributions were evident, ranging from the factors that drive IFFs and capital flight activities to take place at a level that affects the economic growth and development of the country. The research has highlighted the importance of the government putting in measures at economic policy levels and implementing effective and efficient structures to monitor such activities. Controlling these IFFs and capital flight leakages will result in developing countries turning budget shortfalls into surpluses. This will also enable governments to utilise the funds in the productive sectors that have the potential of attracting investors and generating revenue making a positive impact on economic growth. When the government’s efforts to eradicate and control IFF and capital flight activities are visible and tangible, this also results in individuals, corporates and foreign investors having confidence in the financial and banking sector. Once this takes place a normal functioning economy starts to take shape, and this results in a positive increase in economic growth.

In one of the ARDL models, it was identified that inflation had a positive correlation with GDP. This presents another opportunity for future studies to understand what causes this as one would generally have expected that inflation has a negative correlation with GDP.

6.6 LIMITATIONS OF THE STUDY AND FUTURE RESEARCH

The contributions of the study are noted and encouraging; however, they need to be contextualised along with the following notable limitations. Not all the important economic variables were used in the models due to their non-availability.

a) ***Sample size***: The research period was limited to the period 1980-2020. This was due to the availability of the data. The researcher would have wanted to incorporate more variables linked to the Human Development Index (HDI) in the model but was limited due to the unavailability of data.

b) ***Research methodology***: the research used a quantitative methodology approach and used secondary data obtained from The World Bank, The Political Economy Research Institute and The Fraser institute. Whilst secondary data has advantages which include mainly time and cost savings it also has its disadvantages. According to Johnston (2014), the main disadvantage of using secondary data is that the researcher did not participate in the data collection process and does not know how exactly it was collected, the challenges encountered during the collection process and how these were concluded.

c) **Scope of the study:** due to the sensitivity of the study very little research has been done on the impact of IFFs and Capital flight on Zimbabwe's economic growth. Most of the institutions in Zimbabwe; such as The Reserve Bank of Zimbabwe, Ministry of Finance and Zimbabwe Revenue Authority does not have publicly available information on the subject matter. It would be interesting to perform a similar study and use official statistics from those institutions and compare the results.

d) **Future areas of research**: This research made use of secondary data. The research did not go into detail into the causes of the IFFs both at individual and corporate level and this should be considered for future research. The research also briefly discussed the main types of IFFs activities. Future research could also be performed on the main types of IFFs that are taking place in the country. In addition to the above future research could also been done on the current measures in place to detect and prevent the IFFs, their effectiveness and possible corroborative efforts that could improve the operations and controls of cross border institutions with similar institutions in neighbouring countries.

6.7 CONCLUSION

The objective of this study was to demonstrate the importance of understanding the effects of IFFS and capital flight on Zimbabwe's economic growth and development. The need for the study to be carried out was based on the fact that Zimbabwe was once considered to be the breadbasket of Southern Africa in the early 90s. A lot of politically motivated economic policies have been implemented and they have failed to achieve the desired result. This has led to the economic meltdown of the country as well as moral decay as citizens have resorted to corrupt and IFFs activities not only to fund their lifestyle but to protect their savings from the economic instability and the daily erosion of their purchasing power. Not only has this resulted in the reduction of foreign direct investment in the country but there has also been uncontrolled runaway inflation for more than two decades. The government tried to control this by slashing the zeros at least three times, adopting a multi-currency system and adopting the US dollar as its official currency. These efforts have not done much in providing long-term solutions and have also not restored public confidence in the financial system as both corporates and individuals avoid retaining their funds and trading in the official system.

Questions have been asked about how the economy has been functioning for this long, and how this has affected the economic growth of the economy. The empirical findings of this research reveal that IFFs and Capital flight activities have had a significant impact on the economic growth of several developing countries. The findings of this research show that the IFFs and Capital flight have had a significant

impact on Zimbabwe’s economic growth and development (represented by GDP and Manufacturing) during the period of research period Furthermore, the research found that there is an inadequate commitment towards the eradication of these activities as there is no political will from the government.

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APPENDICES

APPENDIX 1: FACULTY ETHICS APPROVAL LETTER

NELSON MANDELA
UNIVERSITY

PO Box 77000, Nelson Mandela University, Port Elizabeth, 6031, South Africa mandela.ac.za

Chairperson: Faculty Research Ethics Committee (Human)
Tel: +27 (0)41 504 2906

Ref: [H22-BES-DEV-068 / Approval]

12 July 2022

Prof S Mago
Department: Development Studies

Dear Prof Mago,

TITLE OF STUDY: THE EFFECT OF ILLICIT FINANCIAL FLOWS ON ZIMBABWE'S ECONOMIC GROWTH AND DEVELOPMENT (MASTERS) (H22-BES-DEV-068)

PRP: Prof S Mago
PI: E Chirowamhangu

Your above-entitled application served at the *Faculty Ethics Committee of the Faculty of Business and Economic Science, (14 June 2022)* for approval. The study is classified as a negligible/low risk study. The ethics clearance reference number is **H22-BES-DEV-068** and approval is subject to the following conditions:

1. The immediate completion and return of the attached acknowledgement to Lindie@mandela.ac.za, the date of receipt of such returned acknowledgement determining the final date of approval for the study where after data collection may commence.
2. Approval for data collection is for 1 calendar year from date of receipt of above mentioned acknowledgement.
3. The submission of an annual progress report by the PRP on the data collection activities of the study (form RECH-004 to be made available shortly on Research Ethics Committee (Human) portal) by 15 December this year for studies approved/extended in the period October of the previous year up to and including September of this year, or 15 December next year for studies approved/extended after September this year.
4. In the event of a requirement to extend the period of data collection (i.e. for a period in excess of 1 calendar year from date of approval), completion of an extension request is required (form RECH-005 to be made available shortly on Research Ethics Committee (Human) portal)
5. In the event of any changes made to the study (excluding extension of the study), completion of an amendments form is required (form RECH-006 to be made available shortly on Research Ethics Committee (Human) portal).
6. In the event of any changes made to the study (excluding extension of the study), RECH will have to approve such amendments and completion of an amendments form is required PRIOR to implementation (form RECH-006 available on Research Ethics Committee (Human) portal).
7. Immediate submission (and possible discontinuation of the study in the case of serious events) of the relevant report to RECH (form RECH-007 to be made available shortly on Research Ethics Committee (Human) portal) in the event of any unanticipated problems, serious incidents or adverse events observed during the course of the study.
8. Immediate submission of a Study Termination Report to RECH (form RECH-008 to be made available shortly on Research Ethics Committee (Human) portal) upon unexpected closure/termination of study.
9. Immediate submission of a Study Exception Report of RECH (form RECH-009 to be made available shortly on Research Ethics Committee (Human) portal) in the event of any study deviations, violations and/or exceptions.

10. Acknowledgement that the study could be subjected to passive and/or active monitoring without prior notice at the discretion of Research Ethics Committee (Human)

Please quote the ethics clearance reference number in all correspondence and enquiries related to the study. For speedy processing of email queries (to be directed to Lindie@mandela.ac.za), it is recommended that the ethics clearance reference number together with an indication of the query appear in the subject line of the email.

We wish you well with the study.

Yours sincerely

Dr A van den Berg
(secundus)

Cc: Department of Research Capacity Development
Faculty Research Co-ordinator: Lindie van Rensburg

APPENDIX 2. EViews STATISTICAL ANALYSIS OUTPUT

1 GDP equation

Long-run and bounds test

ARDL Long Run Form and Bounds Test
Dependent Variable: DLOG(GDP)
Selected Model: ARDL(2, 2, 0, 0, 2, 1, 0, 1)
Case 2: Restricted Constant and No Trend
Date: 11/08/22 Time: 10:31
Sample: 1980 2020
Included observations: 36

Levels Equation
Case 2: Restricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAPITAL_FLIGHT	-0.000208	9.74E-05	-2.137506	0.0451
LOG(GOVERNMENT)	-0.027437	0.120741	-0.227239	0.8225
LOG(INVESTMENT)	0.664025	0.236584	2.806723	0.0109
LEGAL	-0.144647	0.110208	-1.312492	0.2042
FDI	2.02E-10	7.92E-10	0.255326	0.8011
INFLATION	0.024105	0.009415	2.560395	0.0187
LOG(TRADE)	0.133987	0.296798	0.451443	0.6565
C	9.786237	4.537150	2.156913	0.0434

EC = LOG(GDP) - (-0.0002*CAPITAL_FLIGHT -0.0274
*LOG(GOVERNMENT) + 0.6640*LOG(INVESTMENT) -0.1446*LEGAL
+ 0.0000*FDI + 0.0241*INFLATION + 0.1340*LOG(TRADE) + 9.7862)

F-Bounds Test — Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	19.15247	10%	1.92	2.89
k	7	5%	2.17	3.21
		2.5%	2.43	3.51
		1%	2.73	3.9
			Finite Sample: n=40	
Actual Sample Size	36			
		10%	2.152	3.296
		5%	2.523	3.829
		1%	3.402	5.031
			Finite Sample: n=35	
		10%	2.196	3.37
		5%	2.597	3.907
		1%	3.599	5.23

Error correction form

ARDL Error Correction Regression
Dependent Variable: DLOG(GDP)
Selected Model: ARDL(2, 2, 0, 0, 2, 1, 0, 1)
Case 2: Restricted Constant and No Trend
Date: 11/08/22 Time: 10:32
Sample: 1980 2020
Included observations: 36

ECM Regression
Case 2: Restricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(GDP(-1))	0.263069	0.043265	6.080462	0.0000
D(CAPITAL_FLIGHT)	-3.03E-06	4.89E-06	-0.618676	0.5431
D(CAPITAL_FLIGHT(-1))	2.66E-05	5.43E-06	4.888565	0.0001
D(LEGAL)	-0.019073	0.022208	-0.858828	0.4006
D(LEGAL(-1))	0.137079	0.022373	6.126949	0.0000
D(FDI)	-1.02E-10	7.40E-11	-1.378704	0.1832
DLOG(TRADE)	-0.259090	0.064326	-4.027775	0.0007
CointEq(-1)*	-0.219672	0.014141	-15.53451	0.0000

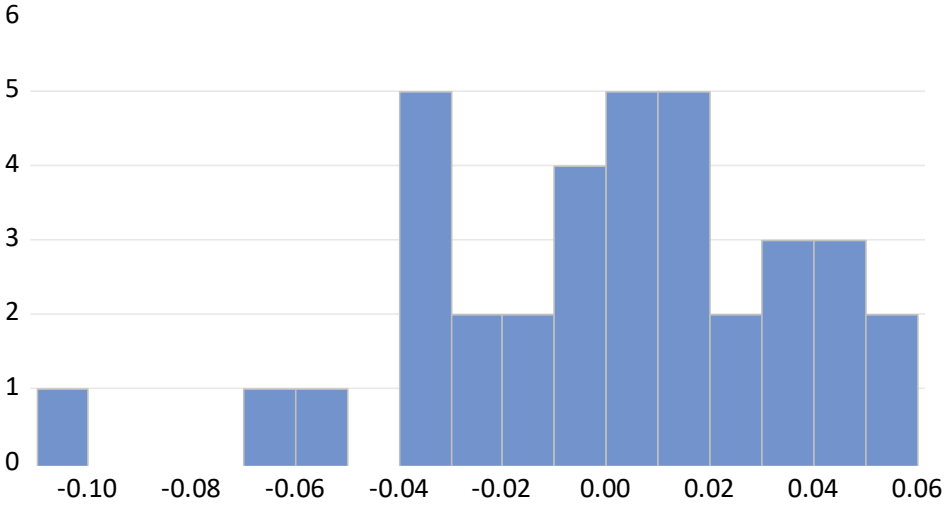
R-squared	0.958755	Mean dependent var	0.021838
Adjusted R-squared	0.948444	S.D. dependent var	0.177027
S.E. of regression	0.040196	Akaike info criterion	-3.396978
Sum squared resid	0.045240	Schwarz criterion	-3.045085
Log likelihood	69.14561	Hannan-Quinn criter.	-3.274158
Durbin-Watson stat	2.407977		

* p-value incompatible with t-Bounds distribution.

F-Bounds Test — Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	19.15247	10%	1.92	2.89
k	7	5%	2.17	3.21
		2.5%	2.43	3.51
		1%	2.73	3.9

Diagnostic tests
Normality test



Series: Residuals	
Sample 1982 2017	
Observations 36	
Mean	1.00e-14
Median	0.002512
Maximum	0.056464
Minimum	-0.108675
Std. Dev.	0.035952
Skewness	-0.711150
Kurtosis	3.774996
Jarque-Bera	3.935335
Probability	0.139783

Heteroscedasticity

Heteroskedasticity Test: Breusch-Pagan-Godfrey
Null hypothesis: Homoskedasticity

F-statistic	0.760477	Prob. F(15,20)	0.7023
Obs*R-squared	13.07529	Prob. Chi-Square(15)	0.5965
Scaled explained SS	5.599362	Prob. Chi-Square(15)	0.9857

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 11/08/22 Time: 10:33
Sample: 1982 2017
Included observations: 36

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.155968	0.074317	-2.098682	0.0487
LOG(GDP(-1))	0.000105	0.003914	0.026911	0.9788
LOG(GDP(-2))	0.003738	0.003169	1.179771	0.2519
CAPITAL_FLIGHT	5.57E-07	3.54E-07	1.572076	0.1316
CAPITAL_FLIGHT(-1)	2.41E-07	4.23E-07	0.571220	0.5742
CAPITAL_FLIGHT(-2)	-7.26E-08	4.48E-07	-0.162079	0.8729
LOG(GOVERNMENT)	0.001031	0.001224	0.842881	0.4093
LOG(INVESTMENT)	0.001230	0.001600	0.768671	0.4511
LEGAL	-0.000217	0.001669	-0.130067	0.8978
LEGAL(-1)	-0.000236	0.002670	-0.088345	0.9305
LEGAL(-2)	-0.000772	0.001904	-0.405399	0.6895
FDI	-6.54E-12	6.63E-12	-0.985675	0.3361
FDI(-1)	-7.33E-12	5.69E-12	-1.287444	0.2126
INFLATION	-3.45E-05	4.37E-05	-0.789520	0.4391
LOG(TRADE)	0.004175	0.004912	0.849786	0.4055
LOG(TRADE(-1))	0.002806	0.005585	0.502496	0.6208

R-squared	0.363202	Mean dependent var	0.001257
Adjusted R-squared	-0.114396	S.D. dependent var	0.002123
S.E. of regression	0.002241	Akaike info criterion	-9.062487
Sum squared resid	0.000100	Schwarz criterion	-8.358701
Log likelihood	179.1248	Hannan-Quinn criter.	-8.816847
F-statistic	0.760477	Durbin-Watson stat	2.465833
Prob(F-statistic)	0.702336		

Serial correlation

Breusch-Godfrey Serial Correlation LM Test:
Null hypothesis: No serial correlation at up to 2 lags

F-statistic	2.507773	Prob. F(2,18)	0.1095
Obs*R-squared	7.845117	Prob. Chi-Square(2)	0.0198

Test Equation:
Dependent Variable: RESID
Method: ARDL
Date: 11/08/22 Time: 10:33
Sample: 1982 2017
Included observations: 36
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(GDP(-1))	0.013630	0.077739	0.175329	0.8628
LOG(GDP(-2))	-0.016272	0.063118	-0.257809	0.7995
CAPITAL_FLIGHT	-3.32E-07	7.17E-06	-0.046286	0.9636
CAPITAL_FLIGHT(-1)	-4.49E-06	8.82E-06	-0.508826	0.6171
CAPITAL_FLIGHT(-2)	-6.99E-08	8.92E-06	-0.007833	0.9938
LOG(GOVERNMENT)	-0.010734	0.024929	-0.430607	0.6719
LOG(INVESTMENT)	0.010620	0.033146	0.320401	0.7524
LEGAL	0.005854	0.033180	0.176440	0.8619
LEGAL(-1)	-0.003162	0.053030	-0.059630	0.9531
LEGAL(-2)	-0.004779	0.038336	-0.124660	0.9022
FDI	-2.21E-12	1.35E-10	-0.016436	0.9871
FDI(-1)	1.36E-11	1.14E-10	0.119084	0.9065
INFLATION	-0.000165	0.000886	-0.186500	0.8541
LOG(TRADE)	-0.041371	0.100685	-0.410900	0.6860
LOG(TRADE(-1))	0.032949	0.114460	0.287861	0.7767
C	0.110647	1.472449	0.075145	0.9409
RESID(-1)	-0.369593	0.229763	-1.608586	0.1251
RESID(-2)	-0.450339	0.249573	-1.804437	0.0879

R-squared	0.217920	Mean dependent var	1.00E-14
Adjusted R-squared	-0.520711	S.D. dependent var	0.035952
S.E. of regression	0.044335	Akaike info criterion	-3.087221
Sum squared resid	0.035381	Schwarz criterion	-2.295461
Log likelihood	73.56997	Hannan-Quinn criter.	-2.810875
F-statistic	0.295032	Durbin-Watson stat	1.985227
Prob(F-statistic)	0.992396		

Ramsey RESET test

Ramsey RESET Test
Equation: GDP_EQUATION
Omitted Variables: Squares of fitted values
Specification: LOG(GDP) LOG(GDP(-1)) LOG(GDP(-2)) CAPITAL_FLIGHT CAPITAL_FLIGHT(-1) CAPITAL_FLIGHT(-2) LOG(GOVERNMENT) LOG(INVESTMENT) LEGAL LEGAL(-1) LEGAL(-2) FDI FDI(-1) INFLATION LOG(TRADE) LOG(TRADE(-1)) C

	Value	df	Probability
t-statistic	0.550442	19	0.5884
F-statistic	0.302986	(1, 19)	0.5884
Likelihood ratio	0.569550	1	0.4504

F-test summary:

	Sum of Sq.	df	Mean Squares
Test SSR	0.000710	1	0.000710
Restricted SSR	0.045240	20	0.002262
Unrestricted SSR	0.044530	19	0.002344

LR test summary:

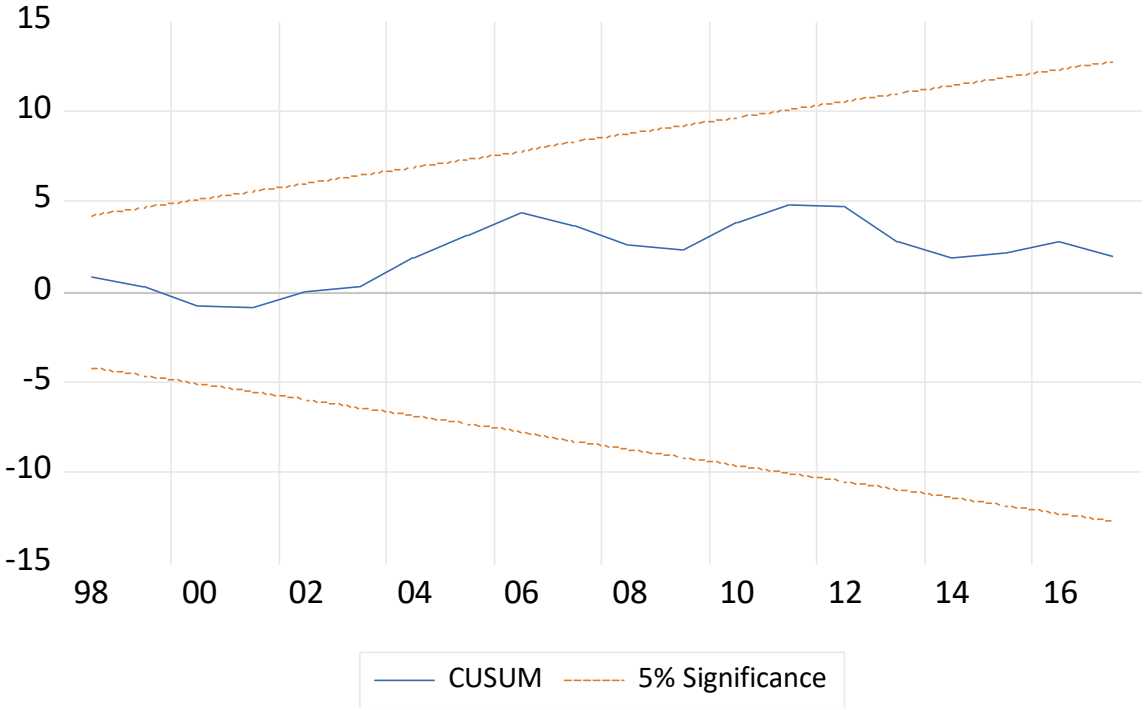
	Value
Restricted LogL	69.14561
Unrestricted LogL	69.43038

Unrestricted Test Equation:
Dependent Variable: LOG(GDP)
Method: Least Squares
Date: 11/08/22 Time: 10:34
Sample: 1982 2017
Included observations: 36

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(GDP(-1))	-2.830670	7.038610	-0.402163	0.6921
LOG(GDP(-2))	0.692712	1.737736	0.398629	0.6946
CAPITAL_FLIGHT	1.12E-05	2.69E-05	0.415227	0.6826
CAPITAL_FLIGHT(-1)	4.62E-05	0.000114	0.406600	0.6888
CAPITAL_FLIGHT(-2)	7.29E-05	0.000181	0.402896	0.6915
LOG(GOVERNMENT)	0.032658	0.075088	0.434938	0.6685
LOG(INVESTMENT)	-0.392629	0.978910	-0.401088	0.6928
LEGAL	0.048383	0.127745	0.378748	0.7091
LEGAL(-1)	-0.333592	0.834000	-0.399991	0.6936
LEGAL(-2)	0.370516	0.923074	0.401393	0.6926
FDI	2.54E-10	6.63E-10	0.383467	0.7056
FDI(-1)	-4.30E-10	1.05E-09	-0.407796	0.6880
INFLATION	-0.014527	0.036024	-0.403263	0.6913
LOG(TRADE)	0.693493	1.733830	0.399978	0.6936
LOG(TRADE(-1))	-0.746003	1.883316	-0.396112	0.6964
C	36.83303	63.03030	0.584370	0.5658
FITTED^2	0.080684	0.146580	0.550442	0.5884

R-squared	0.993152	Mean dependent var	22.85024
Adjusted R-squared	0.987385	S.D. dependent var	0.431028
S.E. of regression	0.048411	Akaike info criterion	-2.912799
Sum squared resid	0.044530	Schwarz criterion	-2.165026
Log likelihood	69.43038	Hannan-Quinn criter.	-2.651806
F-statistic	172.2182	Durbin-Watson stat	2.380124
Prob(F-statistic)	0.000000		

CUSUM test for stability



2 Manufacturing equation

Long-run and bounds test

ARDL Long Run Form and Bounds Test
Dependent Variable: DLOG(MANUFACTURING)
Selected Model: ARDL(1, 0, 1, 2, 2, 0, 2, 0)
Case 2: Restricted Constant and No Trend
Date: 11/08/22 Time: 10:35
Sample: 1980 2020
Included observations: 36

Levels Equation
Case 2: Restricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CAPITAL_FLIGHT	-8.48E-06	1.67E-05	-0.507985	0.6170
LOG(GOVERNMENT)	0.384105	0.094565	4.061813	0.0006
LOG(INVESTMENT)	-0.112523	0.114590	-0.981962	0.3378
LEGAL	0.220511	0.064108	3.439691	0.0026
INFLATION	-0.002167	0.002060	-1.051935	0.3054
FDI	-6.43E-10	2.11E-10	-3.047660	0.0064
LOG(TRADE)	0.202808	0.101481	1.998491	0.0594
C	14.00937	1.352047	10.36160	0.0000

EC = LOG(MANUFACTURING) - (-0.0000*CAPITAL_FLIGHT + 0.3841 *LOG(GOVERNMENT) -0.1125*LOG(INVESTMENT) + 0.2205*LEGAL -0.0022*INFLATION -0.0000*FDI + 0.2028*LOG(TRADE) + 14.0094)

F-Bounds Test — Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	6.819920	10%	1.92	2.89
k	7	5%	2.17	3.21
		2.5%	2.43	3.51
		1%	2.73	3.9
			Finite Sample: n=40	
Actual Sample Size	36			
		10%	2.152	3.296
		5%	2.523	3.829
		1%	3.402	5.031
			Finite Sample: n=35	
		10%	2.196	3.37
		5%	2.597	3.907
		1%	3.599	5.23

Error correction form

ARDL Error Correction Regression
Dependent Variable: DLOG(MANUFACTURING)
Selected Model: ARDL(1, 0, 1, 2, 2, 0, 2, 0)
Case 2: Restricted Constant and No Trend
Date: 11/08/22 Time: 10:36
Sample: 1980 2020
Included observations: 36

ECM Regression
Case 2: Restricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(GOVERNMENT)	0.193441	0.023711	8.158119	0.0000
DLOG(INVESTMENT)	0.015170	0.020472	0.740994	0.4673
DLOG(INVESTMENT(-1))	0.056437	0.017915	3.150281	0.0050
D(LEGAL)	0.032477	0.026697	1.216530	0.2379
D(LEGAL(-1))	-0.103065	0.034902	-2.952944	0.0079
D(FDI)	-2.33E-10	9.82E-11	-2.370207	0.0279
D(FDI(-1))	3.60E-10	9.48E-11	3.792075	0.0011
CointEq(-1)*	-0.706278	0.076191	-9.269897	0.0000

R-squared	0.865210	Mean dependent var	0.006734
Adjusted R-squared	0.831513	S.D. dependent var	0.124143
S.E. of regression	0.050957	Akaike info criterion	-2.922534
Sum squared resid	0.072706	Schwarz criterion	-2.570641
Log likelihood	60.60561	Hannan-Quinn criter.	-2.799714
Durbin-Watson stat	2.223254		

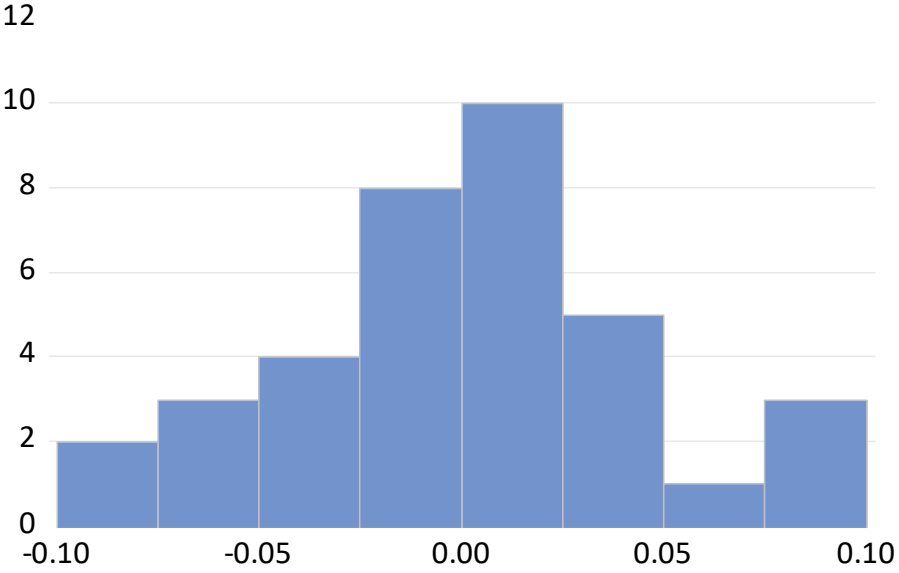
* p-value incompatible with t-Bounds distribution.

F-Bounds Test — Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	6.819920	10%	1.92	2.89
k	7	5%	2.17	3.21
		2.5%	2.43	3.51
		1%	2.73	3.9

Diagnostic tests

Normality test



Series: Residuals	
Sample 1982 2017	
Observations 36	
Mean	-2.22e-15
Median	0.002053
Maximum	0.091054
Minimum	-0.097126
Std. Dev.	0.045577
Skewness	-0.069279
Kurtosis	2.716272
Jarque-Bera	0.149549
Probability	0.927953

Heteroscedasticity

Heteroskedasticity Test: Breusch-Pagan-Godfrey
Null hypothesis: Homoskedasticity

F-statistic	1.368047	Prob. F(15,20)	0.2527
Obs*R-squared	18.23131	Prob. Chi-Square(15)	0.2507
Scaled explained SS	4.828686	Prob. Chi-Square(15)	0.9935

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 11/08/22 Time: 10:36
Sample: 1982 2017
Included observations: 36

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.104724	0.096637	-1.083685	0.2914
LOG(MANUFACTURING(-1))	0.005553	0.006361	0.872961	0.3930
CAPITAL_FLIGHT	-4.50E-08	4.69E-07	-0.096016	0.9245
LOG(GOVERNMENT)	0.000298	0.002571	0.115815	0.9090
LOG(GOVERNMENT(-1))	-0.002064	0.002596	-0.795057	0.4359
LOG(INVESTMENT)	0.001193	0.001716	0.695332	0.4948
LOG(INVESTMENT(-1))	-0.001195	0.001602	-0.745688	0.4645
LOG(INVESTMENT(-2))	0.001194	0.002007	0.594841	0.5586
LEGAL	0.003234	0.001586	2.039577	0.0548
LEGAL(-1)	-0.003022	0.002784	-1.085641	0.2906
LEGAL(-2)	-4.84E-05	0.002359	-0.020523	0.9838
INFLATION	-6.69E-05	5.68E-05	-1.178966	0.2522
FDI	-9.65E-13	5.62E-12	-0.171514	0.8655
FDI(-1)	-7.82E-13	5.74E-12	-0.136206	0.8930
FDI(-2)	-2.96E-12	5.81E-12	-0.508748	0.6165
LOG(TRADE)	2.06E-05	0.003466	0.005935	0.9953

R-squared	0.506425	Mean dependent var	0.002020
Adjusted R-squared	0.136244	S.D. dependent var	0.002683
S.E. of regression	0.002494	Akaike info criterion	-8.848872
Sum squared resid	0.000124	Schwarz criterion	-8.145085
Log likelihood	175.2797	Hannan-Quinn criter.	-8.603231
F-statistic	1.368047	Durbin-Watson stat	2.104791
Prob(F-statistic)	0.252654		

Serial correlation

Breusch-Godfrey Serial Correlation LM Test:
Null hypothesis: No serial correlation at up to 2 lags

F-statistic	0.841475	Prob. F(2,18)	0.4473
Obs*R-squared	3.078105	Prob. Chi-Square(2)	0.2146

Test Equation:
Dependent Variable: RESID
Method: ARDL
Date: 11/08/22 Time: 10:37
Sample: 1982 2017
Included observations: 36
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(MANUFACTURING(-1))	0.134838	0.203697	0.661954	0.5164
CAPITAL_FLIGHT	6.59E-07	1.15E-05	0.057216	0.9550
LOG(GOVERNMENT)	0.015809	0.067836	0.233041	0.8184
LOG(GOVERNMENT(-1))	-0.027332	0.070876	-0.385636	0.7043
LOG(INVESTMENT)	0.012701	0.043420	0.292504	0.7732
LOG(INVESTMENT(-1))	-0.002779	0.039121	-0.071031	0.9442
LOG(INVESTMENT(-2))	-0.018270	0.054385	-0.335931	0.7408
LEGAL	-0.013556	0.040118	-0.337909	0.7393
LEGAL(-1)	0.025919	0.071849	0.360752	0.7225
LEGAL(-2)	-0.035290	0.064765	-0.544883	0.5925
INFLATION	-0.000277	0.001419	-0.195489	0.8472
FDI	-3.12E-11	1.39E-10	-0.224420	0.8250
FDI(-1)	1.83E-12	1.43E-10	0.012864	0.9899
FDI(-2)	6.87E-12	1.44E-10	0.047673	0.9625
LOG(TRADE)	0.004264	0.086943	0.049049	0.9614
C	-2.394378	3.198388	-0.748620	0.4638
RESID(-1)	-0.316492	0.320264	-0.988221	0.3361
RESID(-2)	-0.276880	0.254681	-1.087167	0.2913

R-squared	0.085503	Mean dependent var	-2.22E-15
Adjusted R-squared	-0.778189	S.D. dependent var	0.045577
S.E. of regression	0.060777	Akaike info criterion	-2.456360
Sum squared resid	0.066489	Schwarz criterion	-1.664600
Log likelihood	62.21447	Hannan-Quinn criter.	-2.180014
F-statistic	0.098997	Durbin-Watson stat	2.139249
Prob(F-statistic)	0.999992		

Ramsey RESET test

Ramsey RESET Test
Equation: MANUFACTURING_EQUATION
Omitted Variables: Squares of fitted values
Specification: LOG(MANUFACTURING) LOG(MANUFACTURING(-1)) CAPITAL_FLIGHT LOG(GOVERNMENT) LOG(GOVERNMENT(-1)) LOG(INVESTMENT) LOG(INVESTMENT(-1)) LOG(INVESTMENT(-2)) LEGAL LEGAL(-1) LEGAL(-2) INFLATION FDI FDI(-1) FDI(-2) LOG(TRADE) C

	Value	df	Probability
t-statistic	1.656453	19	0.1141
F-statistic	2.743837	(1, 19)	0.1141
Likelihood ratio	4.856090	1	0.0275

F-test summary:

	Sum of Sq.	df	Mean Squares
Test SSR	0.009175	1	0.009175
Restricted SSR	0.072706	20	0.003635
Unrestricted SSR	0.063531	19	0.003344

LR test summary:

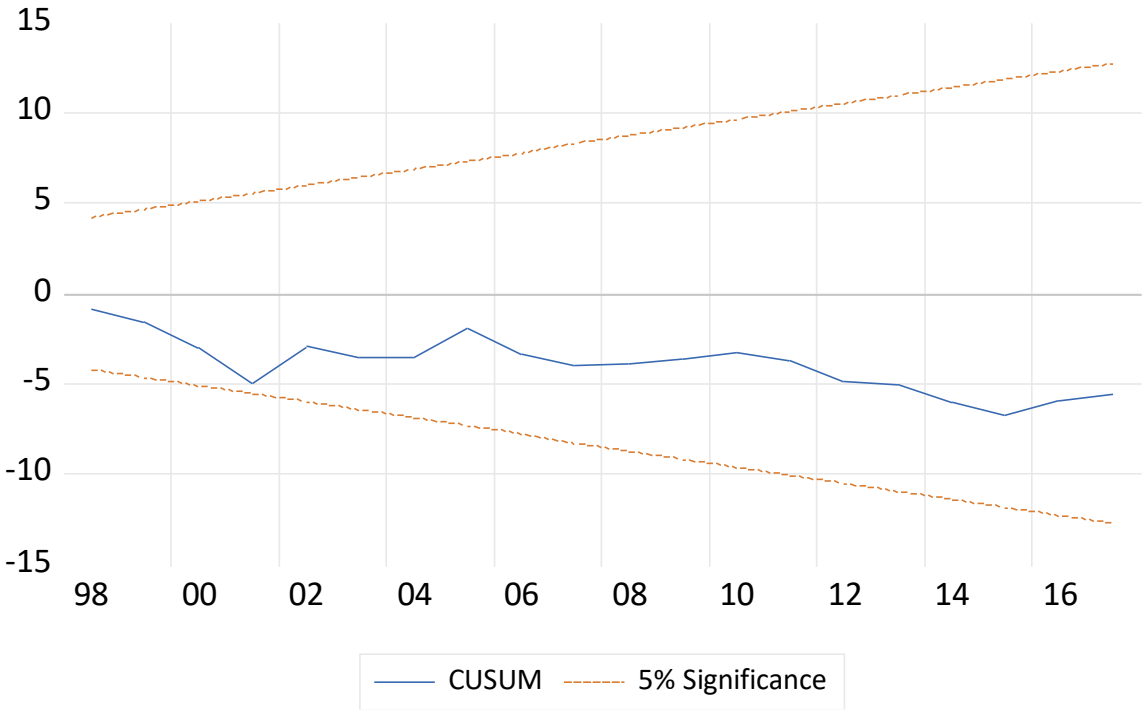
	Value
Restricted LogL	60.60561
Unrestricted LogL	63.03366

Unrestricted Test Equation:
Dependent Variable: LOG(MANUFACTURING)
Method: Least Squares
Date: 11/08/22 Time: 10:37
Sample: 1982 2017
Included observations: 36

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(MANUFACTURING(-1))	8.650300	5.047018	1.713943	0.1028
CAPITAL_FLIGHT	-0.000174	0.000102	-1.705803	0.1043
LOG(GOVERNMENT)	5.628576	3.281730	1.715125	0.1026
LOG(GOVERNMENT(-1))	2.273196	1.326699	1.713423	0.1029
LOG(INVESTMENT)	0.424814	0.250483	1.695978	0.1062
LOG(INVESTMENT(-1))	-1.095587	0.639421	-1.713405	0.1029
LOG(INVESTMENT(-2))	-1.666805	0.973291	-1.712545	0.1031
LEGAL	0.969430	0.566832	1.710261	0.1035
LEGAL(-1)	0.579511	0.343770	1.685752	0.1082
LEGAL(-2)	3.018973	1.761181	1.714175	0.1028
INFLATION	-0.043408	0.025316	-1.714670	0.1027
FDI	-6.70E-09	3.91E-09	-1.715094	0.1026
FDI(-1)	4.04E-09	2.36E-09	1.712228	0.1031
FDI(-2)	-1.05E-08	6.13E-09	-1.714693	0.1027
LOG(TRADE)	4.201449	2.451257	1.713998	0.1028
C	-12.67559	13.80857	-0.917951	0.3702
FITTED^2	-0.661271	0.399209	-1.656453	0.1141

R-squared	0.966430	Mean dependent var	21.43279
Adjusted R-squared	0.938160	S.D. dependent var	0.232531
S.E. of regression	0.057825	Akaike info criterion	-2.557426
Sum squared resid	0.063531	Schwarz criterion	-1.809653
Log likelihood	63.03366	Hannan-Quinn criter.	-2.296433
F-statistic	34.18607	Durbin-Watson stat	2.272430
Prob(F-statistic)	0.000000		

CUSUM test



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ELTON CHIROWAMHANGU	**5— 12— 2022**
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CHAPTER ONE: INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 INTRODUCTION

The issue of Illicit Financial Flows (IFFs) and capital flight has received a great deal of attention over recent past years as the number of volumes, magnitude and impact of these transactions continue to rise (Miyandazi, 2019; Thiao & Read, 2021). According to Ncube and Okeke-Uzodike (2015), IFFs have increasingly become an integral part of the development agenda and the global economy due to the growth in the numbers of such transactions and at the same time developing countries continuously searching for financial assistance. Therefore, by diverting the efforts to control the IFFs and capital flight activities, developing countries might not need as much aid and financial assistance as they currently request. This is based on the fact that once there are adequate and effective controls on these leakages, these developing countries would not have huge budget shortages that require additional loans. These activities divert huge amounts of funds and affect the government's ability to deliver on its primary responsibility of providing the bare minimum infrastructure and services that are expected to spur economic growth and development.

Research has proven that the major constraint to economic growth and development in Africa is the shortage of financing and this finance gap deters public investments and social service delivery (Fjeldstad & Heggstad, 2014; Triki & Faye, 2013). According to Nkurunziza (2014), embezzled public funds transferred abroad negatively affect tax revenues as these funds are not taxed when they leave the country and this reduces the amount of resources that could have been spent on the development of vital sectors such as agriculture, education, health, and infrastructure.

There is a thin line between IFFs and capital flight. According to Ngwenya (2019), IFFs refer to funds sourced or associated with illegal activities or transferred and utilised illegally whilst capital flight is considered an unrecorded and untaxed illicit leakage of capital and resources out of a country. Both IFFs and capital flight activities take place through criminal and corrupt activities that also include to some extent the bribery of public officials.

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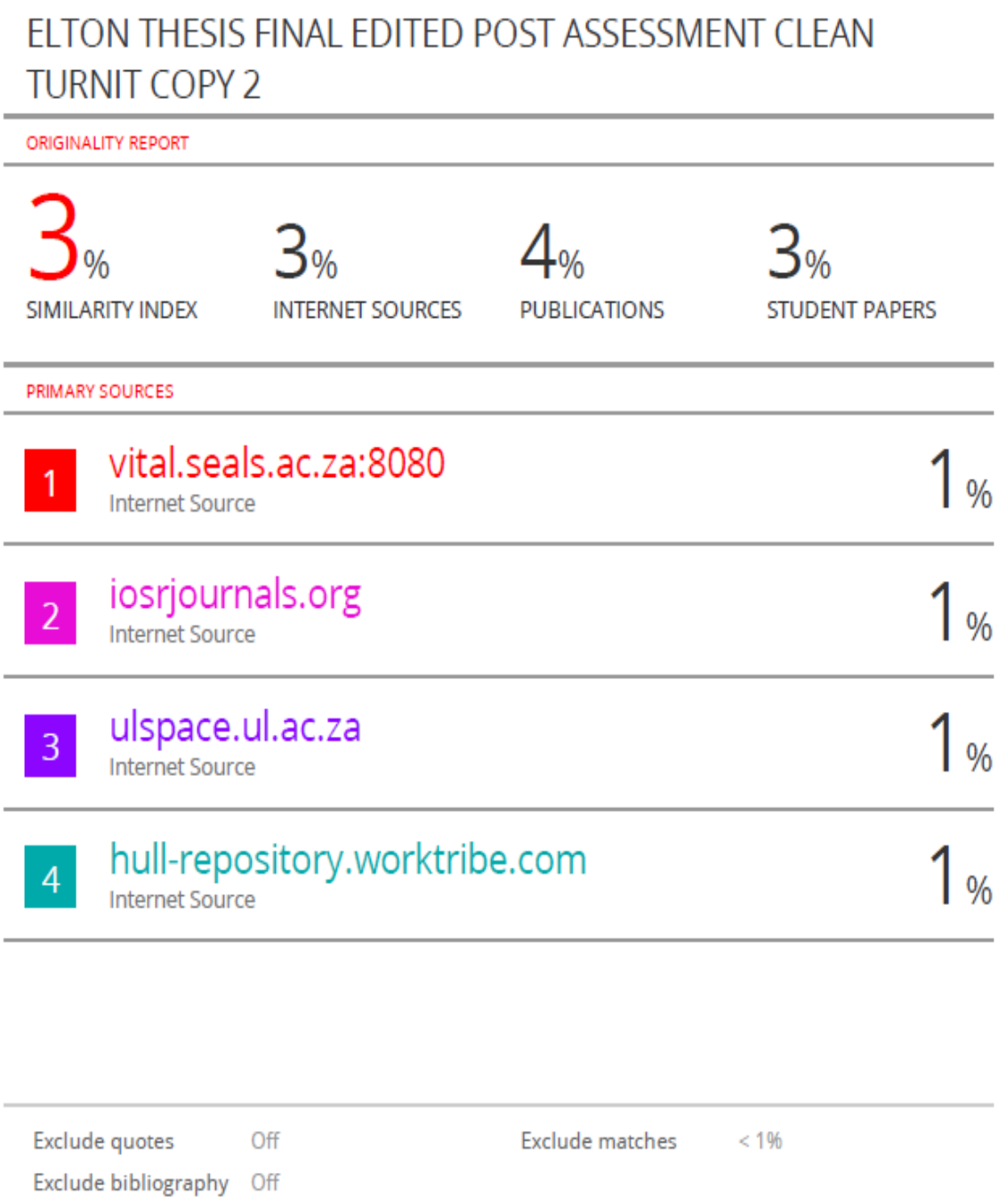
APPENDIX 4.1: TURNITIN SIMILIRAITY REPORT OVERVIEW



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