

**BINDURA UNIVERSITY OF SCIENCE EDUCATION**  
**FACULTY OF SCIENCE AND ENGINEERING**  
**DEPARTMENT OF STATISTICS AND MATHEMATICS**



**THE IMPACT OF MONETARY POLICIES ON FOREIGN DIRECT**

**A RESEARCH SUBMITTED BY:**

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**TO**

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FOR THE BACHELOR OF SCIENCE HONOURS DEGREE IN STATISTICS AND  
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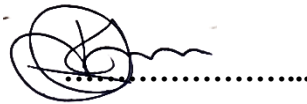
**JUNE 2023**

**APPROVAL FORM**

The undersigned certify that they have read and recommend to the Bindura University of Science Education for acceptance of a dissertation entitled “***THE IMPACT OF MONETARY POLICIES ON FOREIGN DIRECT INVESTMENT***”.

Submitted by ***Tinashe Ndllovu***, Registration Number ***B191626B*** in partial fulfilment of the requirements for the Bachelor of Science Honours degree in Statistics and Financial Mathematics.

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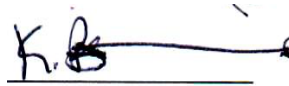
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## DECLARATION OF AUTHORSHIP

I declare that this research project herein is my own original work and has not be copied or extracted from previous sources without due acknowledgement of the sources.

TINASHE NDLOVU

A handwritten signature in black ink, consisting of a circular loop followed by a vertical stroke and a wavy line extending to the right. The signature is positioned above a horizontal dotted line.

19/06/2023

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Date

## **DEDICATION**

I wish to dedicate this work to entire Ndlovu family, without them this work would not have been possible.

## **ACKNOWLEDGEMENTS**

First of all, I thank the Lord Almighty so much for his love, grace and the opportunity to pursue education up to this level.

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## **ABSTRACT**

The study used the Stepwise regression model to assess the impact of monetary policies on foreign direct investment in Zimbabwe with other selected macroeconomic variables such as exchange rate, inflation transparency and gross domestic product for the period of 1960 to 2021. Data were taken from the World Bank, Data Bank and The Global Economy. The empirical results derived indicated that all variables have an impact on the influx of foreign direct investment. The study further established that inflation has a negative impact on investment while gross domestic product has a positive impact on foreign direct investment. As a result, it is recommended that policies that encourage reduction of the inflation be formulated in order to attract the foreign direct investment. It is also recommended that the ZAR or USD be adopted as the main currency in order to reduce the economy's exposure to exchange rate risk. No research work that is exhaustive. As a result, we recommend that future research expand the model to incorporate more macroeconomic factors and, if data are available, broaden its scope to encompass a larger sample size.

**Keywords:** Foreign Direct Investment, Stepwise Regression

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## ACRONYMS

FDI .....	Foreign Direct Investment
DW .....	Durbin-Waston
ER .....	Exchange rates
EC .....	Economic growth
PPP .....	Purchasing Power Parity
RBZ .....	Reserve Bank of Zimbabwe
TOP .....	Trade openness
WB .....	World Bank
MP .....	Monetary policies

## **CHAPTER 1**

### **1.0 Introduction**

Foreign direct investment (FDI) is considered a valuable component in emerging economies' growth plans. As a result, the design of a strategy to encourage inward FDI flows is highly significant to policymakers. Most countries adhere to procedures and policies designed to draw in the largest amounts of foreign direct investment possible. Financial Indicators are one of the main pillars here policies are tested in order to influence FDI, and it is through it that the government attempts to attract this investment using the various mechanisms and instruments available to it.

The employment of expansive monetary policy tools has therefore begun to increase both in strength and scope. In this chapter, we have the background of the study, the problem statement, objectives, and justification of the study, the significance of the study, the definition of terms, and the summary of Chapter 1.

#### **1.1. Background of the study**

Foreign direct investment has significantly increased as a result of globalization, which has made the world into a single global village. Particularly, FDI has grown to be a significant source of economic development and growth for emerging, economies. Through the spread of knowledge and technology, FDI has not only increased employment and production in emerging nations but also significantly altered the industrial structure. Because of this, emerging nations all over the world have worked very hard to draw in foreign direct investments.

The benefits that are captured in the scope of FDI have led both developed and developing countries to compete globally for scarce FDI. It is anticipated that FDI-attracting nations will see increased employment, economic growth, and development (UNCTAD, 2014). However, compared to affluent countries, developing countries have received relatively fewer FDI inflows. For instance, global FDI trends show that FDI increased by 9% between 2012 and 2013. (UNCTAD, 2014). Africa saw a growth of 4% throughout that time (UNCTAD, 2014). The FDI can be affected by a number of factors, including monetary policies and financial indicators inclusively. Monetary policymakers regard it as essential to the development of policies to encourage inward FDI flows for the betterment of their economic growth. According to UNCTAD

2014 data, Zimbabwe hasn't benefited from the FDI inflows into the region. In terms of foreign direct investment (FDI), Zimbabwe has brought in US\$1.4 billion, or less than 1% of the total for Sub-Saharan Africa (UNCTAD, 2014).

Between 2010 and 2013, FDI in Zimbabwe remained stable at \$400 million USD (GOZ, 2014). This amount pales in comparison to Southern African equivalents like Mozambique, which received \$5.9 billion in 2013, South Africa, and Zambia, which attracted US\$8.1 billion and US\$1.8 billion, respectively (RBZ, 2014). This amount pales in comparison to Southern African equivalents like Mozambique, which received \$5.9 billion in 2013, South Africa, and Zambia, which attracted US\$8.1 billion and US\$1.8 billion, respectively (RBZ, 2014).

The influx of Foreign Direct Investment is influenced by a myriad of factors, including the implementation of monetary policies. Kaharan's (2022) assertion suggests that the 2008 global economic crisis precipitated the widespread adoption of unconventional monetary policy measures on a global scale.

Expansionary monetary policies have emerged as potent and extensive tools, receiving increased utilization in comparison to previous times. The ability of Central Banks to react with greater speed to a crisis through the use of liquidity-enhancing measures, as opposed to fiscal policy tools, has resulted in the widespread adoption of expansionary monetary policies by numerous nations. The effects of monetary policies have ramifications for both domestic and foreign direct investment.

## **1.2. Problem statement**

Although a number of researchers have carried out research on how monetary policy has affected the FDI, diverse examinations have been created to learn the connection between monetary policies and FDI. According to the Reserve Bank of Zimbabwe (2020), Zimbabwe's foreign direct investment for 2020 was \$0.15B, a 39.74% decline from 2019, 2019 was \$0.25B, and a 65.24% decline from 2018, for 2018 was \$0.72B, a 133.69% increase from 2017, for 2017 was \$0.31B, a 10.44% decline from 2016. There is a decline in foreign direct investments in Zimbabwe which raises a concern about the economic growth in Zimbabwe.

### **1.3. Main Objectives**

The researcher was guided by the following objectives in carrying out the research:

- To specify the Model;
- To identify the models;
- To estimate the models.

### **1.4. Research Questions**

- What are the financial indicators and non-financial indicators that affect Foreign Direct Investment?

### **1.5. The justification of the study**

The proposed materials are expected to exhibit utility to fellow researchers who aspire to conduct additional investigations. Incorporation of the aforementioned information will contribute to the extant literature concerning monetary policy in relation to foreign direct investment. The present investigation aims to provide the researcher with a comprehensive comprehension of the topic of interest. Moreover, this undertaking may enhance one's aptitude in diagnosing, analyzing, and exercising sound judgment when conducting future studies encompassing assorted subjects. This study aims to provide the nation with an empirical investigation of the influence that monetary policy has on foreign direct investment and its effects on the economy.

### **1.6. Significance of the study**

The researcher considers it necessary to assess the effects of the monetary policies on Foreign Direct Investment. This will help the monetary policy decision-makers make decisions that will minimize the decline of foreign direct investments.

## **1.7. Scope of the study**

The study focused on monetary policy's influence on foreign direct investments in Zimbabwe. The information used captures Foreign Direct Investments of Zimbabwe in all possible sources which include, IMF and other different publications.

## **1.8. Definition of terms**

- 1.8.1. Foreign direct investment (FDI) is a type of international investment, wherein an investor domiciled in one country initiates a durable association with and wields substantial control over an enterprise located in another country (OECD, 2020).
- 1.8.2. Monetary policy pertains to the fiscal regulations implemented by the monetary governing body of a nation, such as the Federal Reserve, with the aim of accomplishing the economic objectives of the country. (federalreserve. Gov)

## **1.9. Summary**

Over the past years there has been a decline of foreign direct investment in Zimbabwe which has also contributed to the staggering economy. In order to cab this there is a need for an appropriate method to cab and address this tragic problem, the proper model must be developed that will assist in noting which string to pull for the rise of FDI. The next chapter will concentrate on a literature review of the impact of monetary policies on FDI.

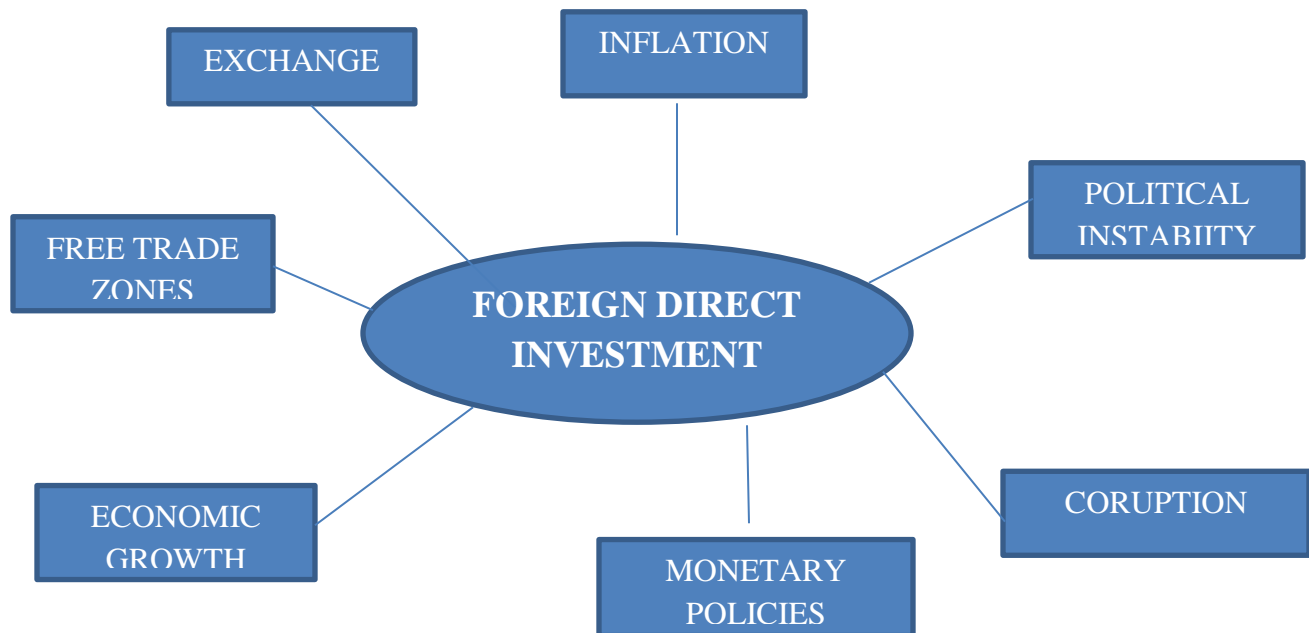
## 2. CHAPTER 2

### 2.0.Literature Review

#### 2.1.Introduction

This chapter aims at reviewing the documented theories and studies by other researchers on the effect of monetary policy on FDI through conceptual literature and empirical literature. As a point of start this chapter reviews performance theories here monetary policy is control variable. The session fully expounds on associated material from different studies conducted in the past. Conceptual literature centers on the chief theories and ideologies of FDI. The empirical literature segment centers on some empirical studies embarked of FDI. Both conceptual literature and empirical literature reviewed outline the research by clarifying FDI as well as monetary policy in this related study, thus enabling appropriate empirical model specifications.

#### 2.2.Conceptual Framework





## **2.3. Definition of concepts**

### **2.3.1. Monetary Policy**

Monetary policy is a series of regulations instituted by the monetary authorities with the objective of facilitating the prompt and unrestricted circulation of the medium of exchange in order to realize the goals of monetary policy in an optimal manner. Monetary policy denotes the measures implemented by the state through its Central Bank to attain economic equilibrium and forestall the diverse challenges that the domestic economy may encounter (Shalghoum, 2012, p. 44)

The 2008 global economic crisis has given rise to the widespread adoption of unconventional monetary policy approaches. Consequently, expansive monetary instruments are being implemented with greater effectiveness and increased scope than previous instances. To boost aggregate demand and reestablish the operational capacity of the financial system subsequent to the 2008 crisis, the Federal Reserve System (FED) implemented a range of unorthodox measures in lieu of traditional approaches. Chen (2012) posited that the implementation of monetary policies yielded the creation of liquidity, subsequent to which there was a noticeable decline in interest rates and a concurrent surge in global stock market indices. Numerous scholarly investigations have established that the accommodative monetary policy implemented by central banks during this period led to a decline in interest rates and an increase in the stock market index.

Radwan and Nawal (2017, p. 9) delineate two distinct concepts of monetary policy. The first concept, referred to as monetary policy in the narrow sense, pertains to the measures implemented by monetary authorities to regulate the money supply with the aim of attaining specific objectives. Meanwhile, the second concept, termed monetary policy in the broad sense, encompasses all monetary and banking regulations enacted by the government and central bank to influence the amount of cash and credit accessible to the government, the significant of government borrowing, and the extent and nature of public debt.

Khalaf *et al.*, (2019) asserted that the discount rate, open market operations, bank rate, and legal reserve ratio represent the quantitative monetary policy instruments exercised by central banks, which serve to exert indirect influence on the aggregate volume of deposits held by commercial banks. The central bank exercises authority over these factors through an array of both direct and

indirect control tools at its disposal. The regulation of credit amount, utilization, and conditions holds a significant influence over the internal credit policies of commercial banks. Consequently, the extent and nature of credit extended by these banks are profoundly impacted.

### **2.3.2. Foreign direct Investment**

The origins of FDI remain a subject of considerable ongoing investigation and inquiry within the academic community. Despite the existence of many theories that aim to explain the concept of FDI, there isn't a universally acknowledged superior or comprehensive one. The origins of the FDI hypothesis can be traced back to the initial contributions of Smith (1776) [cited in Smith, 1937] and Ricardo (1817) in the realm of global specialization of production. Smith's theory on absolute advantage suggest that trade occurs between to nation hen one country can produce and export goods using a certain amount of labor and capita that exceeds that of its closest competitors.

Smith's thesis was lacking in its ability to explain the mechanisms underlying the emergence of trade among nations lacking involvement in manufacturing. In 1817, Ricardo formulated and disseminated his own theoretical construct that employed the principle of comparative advantage to elucidate the concept of Foreign Direct Investment (FDI). The scholar advocated the notion that the mobility of labor and capital was limited solely to national boundaries and did not extend across them. Additionally, he held a heightened level of interest in the movements of factors on an international level. The above-mentioned hypothesis, predicated upon a framework suggesting two countries, two distinct goods, and the presence of perfect factor mobility, has proven to be unsustainable in light of its failure to adequately account for international capital flows.

Hymer is recognized as one of the pioneering scholars who introduced a methodical approach towards the examination of foreign direct investment (FDI). He introduced the corporate approach to industrial organization, commonly known as the Foreign Direct Investment (FDI) theory.

Hymer suggest that in order for international businesses to prosper, they must compete with domestic enterprises that possess a competitive advantage derived from elements such as local culture, language, legal structures, and consumer inclinations. The issue of foreign exchange risk is also a pertinent matter of consideration for enterprises operating in foreign jurisdictions. To overcome the aforementioned drawbacks, the presence of market power is imperative.

Popovici *et al.*, (2014) assert that the conceptual basis of Foreign Direct Investment (FDI) theory is grounded on the convergence of three integrative theories, namely, the theory of the firm, the theory of the international capital market, and the theory of global commerce. Consequently, it is imperative to scrutinize foreign direct investment (FDI) theories through two distinct economic perspectives, specifically the macroeconomic and microeconomic vantage points concerning FDI.

A subsequent theoretical approach aimed at elucidating the phenomenon of Foreign Direct Investment (FDI) is known as the Foreign Exchange Risk Theory. The foreign exchange risk was initially appraised from a perspective pertaining to worldwide commerce. Itagaki (1981) as well as Cushman (1985) conducted a study to investigate the impact of uncertainty on the inflow of foreign direct investment. Cushman's sole empirical analysis to date reveals that a rise in foreign currency value led to a decrease in American Foreign Direct Investment (FDI), while an increase in the actual exchange rate facilitated FDI undertaken by the United States dollar.

## **2.4.The relationship between FDI and Financial Indicators.**

### **2.4.1. Gross Domestic Product.**

A correlation has been observed between economic expansion and Foreign Direct Investment (FDI), which is of a constructive nature. According to Ramarize (2000), the connection between economic growth and foreign direct investments (FDIs) is not simply a matter of chance. The speaker asserts that economies which exhibit high rates of growth in conjunction with a sizable domestic consumer base, often adopt steady and reliable macroeconomic strategies. This, ill attract international investors.

### **2.4.2. Interest Rate**

Interest rate refers to the percentage at which financial institutions charge borrowers for the use of money that has been lent to them. This rate is typically expressed as an annual percentage and is depending upon a variety of factors including the type of loan and the borrower's creditworthiness. Global policymakers often use interest as a tool economic activities due to their significant impact on the global economy

The real interest rate constitutes a crucial financial factor that significantly affects the influx of Foreign Direct Investments (FDI) in Africa. The imposition of high interest rates within an economy can serve as a viable alternative to mitigate certain classes of risk. According to Obsfed's

1986, it has been identified that when the interest decreases and there are political risks and uncertainties, foreign direct investments tend to decline.

### **2.4.3. Openness Of the Economy**

The concept of the "openness of the economy" pertains to the degree to which a particular country is integrated into the global economy. It is a measure that takes into account several factors, such as the volume of trade and investment flows, as well as the level of regulatory and legal constraints that may impede or facilitate economic transactions. Morisset (2012) asserts that the majority of empirical investigations on foreign direct investment (FDI) in developing nations have established a favorable correlation between openness and FDI.

### **2.4.4. International reserves**

International reserves refer to the foreign currency assets that a country's monetary authority or central bank holds. Such reserves provide a buffer against external shocks to a nation's economy, as well as facilitate the smooth functioning of international trade and finance. The accumulation of international reserves is often viewed as a sign of a country's financial stability and ability to meet its external financial obligations.

The proportion of international reserves in relation to gross domestic product (GDP) is a key determinant of foreign direct investment (FDI) inflows into a given nation. It is commonly observed that foreign investors tend to exhibit a higher level of confidence towards an economy characterized by substantial international reserves. A healthy stock of international reserves holds a magnetic attraction to foreign investors. On the other hand, minimal levels of international reserves encourage a counterproductive outcome.

### **2.4.5. Inflation Rate**

The inflation rate is a fundamental measure of the rate at which the prices of goods and services are increasing over time. This metric is often used by policymakers, economists, and financial analysts to assess the health of an economy and to inform decision-making pertaining to monetary policy, investment strategy, and other important areas.

Oyakhilome *et al.*, (2022) observed that there exists a notable difference in the inflation threshold between underdeveloped economies and industrialized ones. Specifically, he also discovered that the former display an inflation threshold that is approximately five times higher than that seen in

the latter. In developed economies, the effect of inflation on Foreign Direct Investment (FDI) exhibits a negative correlation, even prior to attaining its threshold level, whilst in industrialized economies, FDI tends to decrease upon achieving the inflationary threshold.

#### **2.4.6. External Debt**

External debt refers to the amount of money that a country owes to foreign creditors. It is a measure of the borrowing that a country has undertaken from external sources in order to finance its economic activities. The incidence of debt can be attributed to the clumsy implementation of macroeconomic policies, which act as a limiting to foreign investment. The provision of basic infrastructure such as roads, water, telephone, and electricity is often hindered in African countries due to the onerous burden of debt service.

There exists a causal relationship between the inadequate inflow of Foreign Direct Investment (FDI) and the economic status of the countries situated in the Sub-Saharan African region (SSA) - those which received the minimal FDI in 1999 were properly labelled as Highly Indebted Poor Countries (HIPC). An elevation in the national debt is observed to have a dampening effect on foreign direct investments, while a corresponding reduction in the national debt tends to increase the inflow of foreign direct investments Chakrabarti (2001),.

#### **2.4.7. Taxes**

Taxation is a mechanism of fiscal policy that allows the government to generate revenue by imposing charges on individuals, businesses, or entities based on their income, property, sales, or other factors. This form of public finance is a crucial tool that enables governments to finance and provide public goods and services that benefit society at large. The effectiveness and fairness of taxation systems have been subject to intense scrutiny and debate, with policymakers and academic analysts exploring the optimal rates and methods of taxation to promote economic growth and equitable distribution of resources.

Hess (2000) has identified high taxation as one of the primary impediments to Foreign Direct Investment (FDI), thereby emphasizing the potential obstacles for multinational corporations intending to invest in foreign economies. The inadequacy of tax laws implementation results in an unfavorable commercial milieu that deters investors, ultimately leading to a decrease in Foreign Direct Investments (FDI).

#### **2.4.8. Political Rights**

The political rights of individuals comprise a fundamental feature of civil rights that guarantee the ability of individuals to participate in the governance of their respective societies. Such rights pertain to the participation and representation of individuals in political processes, including the right to vote, run for public office, and engage in political speech and expression. These political rights are typically protected by constitutional laws and legal frameworks, which enable individuals to exercise these prerogatives without fear of persecution or infringement. Political rights are therefore crucial in ensuring the protection of fundamental human liberties and democratic values.

In addition to the determinants that impact the flow of foreign direct investments, political rights also exert a significant influence. Democratic and politically stable economies are observed to possess a greater propensity to attract potential investors, consequently strengthening the inflow of Foreign Direct Investments (FDI). In contrast, economies characterized by political instability are found to exhibit a decrease in the influx of FDI. Furthermore, Ngowi (2001) contends that the continent of Africa has not attracted adequate levels of foreign direct investment (FDI) primarily due to the region's reputation as a high-risk area that is plagued by a dearth of political and institutional stability and predictability.

#### **2.4.9. Infrastructure**

Infrastructure refers to the fundamental physical and organizational structures and facilities necessary for the operation of a society or enterprise. This can include buildings, roads, bridges, communication systems, and other essential components that support and facilitate economic, social, and political activities.

The existence of sound infrastructure is likely to attract Foreign Direct Investment (FDI) inflow due to the appeal of economies showcasing well-developed road networks, efficient water supply, strong airport infrastructure, seamless power supply, comprehensive telecommunication facilities, and robust internet access, as evidenced by the keen interest and attraction of many foreign investors in these domains. It has been widely postulated that nations possessing highly developed infrastructure tend to experience lower production costs, leading to greater appeal for Foreign Direct Investors (FDI) (Morisset, 2000).

#### **2.4.10. The availability of natural resources**

According to Thomas (2002), investors with a focus on resource gaining shall establish offshore subsidiaries to ensure a relatively steady or cost-effective flow of inputs. Primarily, these inputs include raw materials, energy sources, and various factors of production. According to Morisset (2000: 7), the predominant focus of foreign direct investment (FDI) in Africa tends to be directed towards those nations that possess substantial reservoirs of natural resources, specifically those rich in oil, gold and other valuable minerals.

#### **2.5. Research Gap**

The gap in the research stems from the inability to explain the potential existence of FDI and financial indicators over the short- or long-term. Examining the factors that influence FDI through financial indicators on the economic growth of African nations without taking into account the length and direction of relationship of their interactions will be counterproductive. Therefore, by choosing Zimbabwe to sample, this study seeks to fill this knowledge vacuum in the literature and offer fresh perspective. It will make a significant contribution to the body of information on the topic for next researchers. The policymakers must be able to determine the monetary policies that have the most impact on foreign direct investments if the country is to be able to attract in more foreign direct investments.

#### **2.6. Empirical literature Review**

The phenomenon of globalization has significantly stimulated the spread of foreign direct investment, thereby elevating it to new heights. This integration of global economies has fostered an environment of interconnectedness, rendering the world as a unified global village. Furthermore, foreign direct investment (FDI) has increasingly emerged as a pivotal factor in driving growth and facilitating economic development in emerging economies. The recent increase in demand for Foreign Direct Investment (FDI) has resulted in a surge of scholarly research regarding the underlying determinants of FDI. Numerous studies have been conducted by scholars regarding the connection between foreign direct investment (FDI) and financial indicators in developing economies.

Cicea *et al.*, (2020) conducted numerous studies across various domains utilizing the Linear Regression approach. The results of these studies indicate a substantial influence of GDP, as well

as other financial indicators such as trade openness and interest, on the inflow of Foreign Direct Investment (FDI). Whilst analyzing the factors that influence Foreign Direct Investment (FDI), it was observed that trade and investment liberalization, market size, level of development, human capital, political indicators stability, regulatory quality, openness of the host economy, and good governance have a positive impact on FDI. Conversely, corruption was noted to be a detrimental factor insofar as FDI is concerned.

Kong *et al.*, (2020) executed a research that employed linear regression analysis to investigate the determinants of foreign direct investment (FDI). Their study revealed a favorable association between the development of financial sector and FDI. Wijeweera *et al.*, (2008) investigated the variations in foreign direct investment (FDI) inflows from 1950 to 2004, paying particular attention to market size, trade openness, labor costs, exchange rates, and interest rates. The study findings have revealed that investment flows from foreign sources and prevailing interest rates in Sri Lanka exhibit an inverse connection in the short term. However, in the long-term, this relationship becomes positive, subject to the fluctuations of the currency rate.

HO (2012) employed the ordinary least square (OLS) estimation technique to scrutinize the impacts of pull variables on capital migration within the Nigerian context. The findings illustrate that the authentic exchange rate and the interest rate are significant determinants in the context of foreign direct investment in Nigeria.

Based on the empirical observations, it is suggested that policy makers should enhance the economic landscape of Nigeria by reducing the prevailing interest rates. Such a measure is deemed essential for fostering the integration of foreign direct investments in the country and reaping the associated benefits. A study conducted by Malik (2013) in Pakistan yielded comparable results, indicating a positive correlation between the coefficients of GDP, inflation, and exchange rate when subjected to a significance level of 1%. It has been determined that the inflow of foreign direct investment (FDI) into Pakistan is significantly and positively influenced by various macroeconomic indicators.

Adeel-Farooq *et al.*, (2017), carried an empirical investigation in examining the influence of Trade Off and financial liberalization on the economic growth of Pakistan and India. An index for financial liberalization was produced utilizing both the autoregressive distributed lag (ARDL)



methodology and principal component analysis approach, with the aim of examining its potential influence on the economic growth of chosen nations. According to the results, it has been ascertained that trade openness has a positive impact on Pakistan's economic growth. However, financial liberalization appears to only promote favorable effects in the long-term. The researchers recommended employing pooled mean group estimations, conventional panel unit root testing, and cointegration analysis techniques for the purpose of conducting data analysis. The results indicate that financial openness had a detrimental effect on the financial development of South Asian nations, while significant benefits were observed in relation to trade openness.

Shen *et al.*, (2015) utilized econometric methodologies to carry out a multiple regression analysis on time-series data spanning from 1985 to 2012. The objective of the study was to explore the impact of interest rates on the inflow of foreign direct investment (FDI) in Sierra Leone. Hence, it may be posited that the inflow of foreign direct investment in Sierra Leone remains impacted by elevated levels of interest rates.

According to a study conducted by McaiG *et al.*, (2022) that encompassed the entirety of Asia, the findings indicate that the suggested interest rate has a negligible effect on FDI inflows. Upon completion of the Multiple Linear Regression analysis, the results indicated that foreign Portfolio Investments (FPI) exhibited a positive correlation with economic development and Interest Risk. Conversely, FPI was found to have a negative association with inflation, exchange rates, and nation risk.

Musyoka *et al.*, (2020) employed the Ordinary Least Squares (OLS) methodology to examine the impact of the real interest rate and exchange rate on Foreign Direct Investment (FDI) in Kenya. Empirical evidence suggests that there exists a noteworthy and detrimental influence of real interest rates and exchange rates on foreign direct investment inflows in Kenya. The present study has ascertained that the policy governing interest rates exerts a significant influence on the attraction of foreign direct investment in the country of Kenya. Omankhanlen (2011) conducted a study utilizing annual data spanning from 1980 to 2009, with the objective of analyzing the effects of exchange rates and inflation on foreign direct investment, as well as exploring their potential association with economic growth within the Nigerian context.

The results of the study indicate that exchange rates possess a considerable and advantageous influence on foreign direct investment, while inflation displays an insignificant effect on FDI. Benson *et al.*, (2019) conducted a study that investigated the effects of interest rates, inflation, and exchange rate on foreign direct investment in Nigeria between the years 2006 to 2018. It has been asserted that there exists a substantiated correlation between Foreign Direct Investment (FDI) and exchange rate movements. While lacking statistical significance, the long-term co-integrating equation indicates a negative correlation between foreign direct investment and interest rates. Over the course of time, there has been an observed negative correlation between inflations rates and foreign direct investment (FDI).

Faroh *et al.*, (2019) endeavored to investigate the impact of interest rates on the influx of foreign direct investment in Sierra Leone. The current investigation was executed utilizing time series data spanning the years 1985 through 2012, which incorporated the incorporation of diverse variables, namely GDP, which functioned as a proxy for market size, inflation, economic feasibility, exchange rates, interest rates, and trade volume, which functioned as a proxy for trade openness.

Al-Hassan (2015) conducted an investigation on the influence of monetary and fiscal policy on foreign direct investment flows in Algeria over the period of 1990-2012. The study employed a Vector Autoregressive (VAR) model to scrutinize the impact of these policies and their ability to attract FDI. The variables denoting the monetary policy in this study comprise of monetary mass M2, discount rate, and exchange rate. Representing the financial policy, the public expenditures variable plays a crucial role. The findings suggest that both monetary policy and finance exert a favorable impact on foreign direct investment (FDI), with a particular emphasis on the unidirectional causal association between the discount rate, the volume of money, and public expenditure on one side and FDI on the other.

Javed (2009), studied the impact of exchange rate fluctuations on economic growth (EG) in Pakistan was investigated. This research endeavor aimed to analyze how fluctuations in exchange rates affect a range of variables, including imports, exports, manufacturing products, reserve money, and the consumer price index, across both short-term and long-term time scales. The data compilation process involved the utilization of the International Monetary Fund's International Financial Statistics, as well as economic surveys conducted within Pakistan. In order to ascertain the distribution of lags, the analysis employed the ARDL approach, utilizing the adopted estimates.

The findings indicated a positive correlation between MP and EG. Furthermore, the findings revealed a positive correlation between MP and EG, indicating that an incremental increase of 1% in MP yields a notable enhancement of 32% in EG. The findings suggested that EG exhibits a favorable and enduring correlation with the status of a reserve currency, the volume of exports, as well as the volatility of exchange rates.

Yuehua Z *et al.*, (2017) established an empirical framework for scrutinizing the effects of interest rates on foreign direct investment (FDI) inflows into Sierra Leone, based on time series data spanning from 1990 to 2016. The results of the study suggest that there exists a significant impact of interest rates on the inflow of foreign direct investment (FDI). This observation leads to the proposition that interest rates could be employed as a tool for informing policies aimed at promoting FDI inflows.

Singhania *et al.*, (2011) conducted a search for the optimal model. The researchers employed dummy variables to quantify alterations in Foreign Direct Investment (FDI) policy, while also performing standard tests to ensure the fulfilment of various assumptions prior to utilizing an autoregressive integrated moving averages (ARIMA) model. It has been ascertained that the influence of interest rates on Foreign Direct Investment (FDI) inflows into India is inconsequential.

Asongu (2022) performed an investigation to scrutinize the consequences of financial markets and foreign direct investment. The researcher devised an index applicable to financial markets using Linear Regression analysis. The results illustrate that inflation exerts a positive impact on foreign direct investment (FDI), while financial liberalization illustrates a favorable influence only in the long-run.

Kariuki (2015) conducted an empirical examination on the determinants of foreign direct investment (FDI) in African countries. The study employed a panel analysis approach utilizing yearly data spanning from 1984 to 2010, extracted from a cohort consisting of 35 African nations. The outcomes of the estimation revealed a statistically significant and favorable relationship between foreign direct investment (FDI) inflows and the performance of stock prices indices. Consequently, it was deduced that there was a favorable performance exhibited by the stock markets.

Tsaurai (2014) conducted research to analyze how foreign direct investment influences the performance of Zimbabwe's stock market. Utilizing a bi-variate causality test framework and analyzing data spanning from 1988 to 2012, the current investigation established a prolonged correlation between the expansion of Zimbabwe's stock market and net inflows of foreign direct investment.

In their study encompassing the entire continent of Asia, Chandra *et al.*, (2020) determined that the interest rate had a negligible impact on foreign direct investment (FDI) inflows. Following the implementation of Multiple Linear Regression, the outcomes indicate that Foreign Portfolio Investments (FPI) are positively influenced by economic growth and Interest Risk, but negatively affected by inflation, exchange rates, and nation risk. This finding suggests that economic development and interest rate stability facilitate FPI influx, whereas inflation, fluctuating exchange rates, and heightened nation risk discourage such investments.

Fu *et al.*, (2021) foregrounded the internal fund theory, which posits that investment decisions are contingent on the level of returns, factoring in several elements and return on investment parameters, such as the interest rate. Conversely, the theory postulated by Keynes suggests that an escalation in the interest rate leads to a reduction in the inward flow of foreign direct investment (FDI) and yields an unfavorable effect, as highlighted by Fanani (2021).

## **2.4.Summary**

After conducting a thorough review of pertinent literature, it has been determined that monetary policy measures have a noticeable impact on foreign direct investment, particularly in instances where the financial variables such as interest rates and stock market indices are altered. In addition, academic sources have revealed that the changes in FDI can be explained by factors like the level of foreign trade accessibility, the quality of infrastructure, the degree of economic security, and the previous year's market size. Foreign Direct Investment (FDI) inflows demonstrated a positive correlation with various factors, including economic stability, infrastructure, internal economic stability, and openness of the economy. Conversely, FDI inflows displayed a negative correlation with the attractiveness and size of the domestic market. Drawing upon the above-mentioned discoveries, it is feasible to undertake a scholarly examination of the investigation exploring the implications of monetary policies in conjunction with financial indicators on the inflow of foreign

direct investment towards developing nations, with particular emphasis on Zimbabwe. The following section will focus on the methodology that has been employed for the purpose of gathering data to be subjected to analysis.

## **CHAPTER 3**

### **3. RESEARCH METHODOLOGY**

#### **3.0.Introduction**

The current chapter aims to present the methodology that will be employed to dissect the impact of monetary policy on foreign direct investment (FDI) in Zimbabwe. A yearly time series dataset spanning a period of 61 years, from 1960 to 2021, will be utilized for the purpose of analysis. Consequently, the Stepwise Regression Autoregressive method was employed to examine the presence of short-term and long-term associations among the variables. The present study shall employ data displayed in conjunction with the customary associations between foreign direct investment (FDI) and the various explanatory factors incorporated in the analytical framework.

#### **3.1.Research Design**

According to MacMillan and Schumacher (2001:166), the process of conducting research involves the deliberate selection of subjects, study locations, and data collection techniques that align with the overall research objectives. The aforementioned study reveals that a fundamental aim of a robust research design is to furnish outcomes that are considered trustworthy in the academic domain. This study employed an explanatory research design as its methodological framework. The principal objectives of exploratory research design are to fulfill the intellectual curiosity and seek in-depth comprehension of experts, evaluate the viability of initiating a more comprehensive investigation, and formulate the approaches that will be implemented in following research endeavors. The present investigation employs a research design that is considered suitable as it allows for a complete investigation and interpretation of the various consequences subjected to analysis. The present study aimed to investigate the effects of financial indicators on foreign direct investment.

#### **3.2.Research Method**

Stocks (2003) states that there are two distinct types of research methodologies: quantitative and qualitative methods. The qualitative research's findings cannot be quantified, it is usually

appropriate for small samples. Quantitative approaches are dependent on numerical or quantitative data and are frequently related to measurable analysis. Therefore, quantitative research will be used in this evaluation.

### **3.2.1. Quantitative research method**

Van der Merwe (1996) contended that quantitative research is a systematic inquiry approach aimed at verifying hypotheses, establishing veracities, uncovering correlations among variables, and predicting future events. Quantitative research utilizes techniques that have been adopted from the traditional sciences to provide impartial, generalizable, and dependable results. These methods involve an objective and arbitrary selection of research participants from the study population, followed by an institutionalized survey or intercession, and then the utilization of quantifiable techniques to test predetermined theories pertaining to explicit factors. (Weinreich, 2009)

## **3.3.Data**

### **3.3.1. Sample period**

Sample period is the time period over which a sample of data will be collected. The study makes use of yearly time series data covering 61 years, from 1960 to 2017. Since the majority of the data for the variables was only accessible on an annual basis, the study is unable to employ monthly or quarterly time series data.

### **3.3.2. Data analysis / Software's**

Data transformation and modeling are involved in data analysis with the objective of identifying relationships that will help to support the research conclusion. E-Views 7 and SPSS were used in this study to investigate the relationships between the dependent and independent variables. . Data from 1960 through 2021 was used.

### **3.3.3. Data sources**

The researcher has chosen to use annual time series data because the study is quantitative in nature. The research used data from World Bank publications, The Global economy, and Databank for the years 1960 to 2021. A satisfactory sample size of 61 observations was acquired to produce precise outcomes. The present specimen is deemed admissible and coherent with the variables that the

researcher aspires to explore a correlation among during the specific timeframe. The degree to which financial indicators impact foreign direct investment was determined using secondary data.

#### **3.3.4. Data collection procedure**

Data collecting is the process of acquiring empirical evidence in order to learn new things about a condition and find the answers to the questions that motivate the research, (Kothari, 2004). World Bank, Data Bank, and The Global Economy were used to gather secondary data for this study. For the duration of the study, the annual exchange rates, inflation rates, GDP, transparency, and foreign direct investment have been used.

#### **3.3.5. Data Validity and Reliability**

According to Messick (1989), validity pertains to the ways in which hypothetical reasoning and experimental confirmations contribute to the sufficiency and relevance of understandings and behaviors that are dependent on test results. Furthermore, the scientist has ensured the accuracy of the data by obtaining it from reputable sources like the World Bank, and Data Bank while making no changes to the data.

#### **3.3.6. Secondary Data**

Secondary data is information that has been obtained by a group that is not affiliated with the exploratory idea but has done so for a different reason and at a different time in the past. If the professional makes use of these details, the current clients will no longer be required to know them. These may be available in written, written, or electronic structures. The analyst can access a variety of auxiliary data sources to learn more about a sector, potential product applications, and the commercial hub. Additionally, auxiliary data is employed to improve basic comprehension of the research problem. Auxiliary information is classified according to its source, which can be internal or external. Inner, or in-house, information is extra information gathered within the organization where inquiry is being conducted. The sources of external supplemental information are external. Using supplementary information can be useful in a variety of ways. The first piece of optional information is that getting there is cheaper and takes less time. Thirdly, supplemental information increases the value of the examination plan while saving time, effort, and money.

Additionally, optional also has some drawbacks, such as a decrease in the accuracy and consistency of information due to the fact that information acquired by an outsider may not be



reliable. Due to ecological factors, information acquired in one region might not be useful for the other. The knowledge becomes more advanced as time goes on. The results of the investigation may be distorted by secondary information acquired. It is necessary to update or alter for use in order to make use of optional information. Additionally, optional information may create concerns about authenticity and copyright.

### **3.4. Population and Sampling**

According to Polit and Beck (2004:50), a population can be delineated as the comprehensive or complete set of individuals who meet certain specified criteria. A sample is a portion of the population that has been chosen to be involved in the study (Polit and Beck 2004:731). The most fundamental phenomenological request method was used, which is a purposive examining technique. The term "objective populace" refers to the entire set of units from which deductions are to be made using the overview data.

#### **3.4.1. Total population sampling**

Total population sampling is a type of targeted inspection technique where a specialist examines the entire population that possesses a particular set of characteristics. Testing the entire population is typically done when the example is small. The main benefit of using absolute population testing is that since all population tests are taken into account, it reduces the risk of missing important information about a particular unit of the population and gives the scientist in-depth knowledge about the wonder they are considering.

### **3.5. Estimation Methodology**

The Theoretical Model

The hypothetical model utilized in this examination can be communicated as follows:

$$FDI = f(INFL, EXCH, GDP, TRANS)$$

This multiplicative equation can be expressed as

$$FI = \alpha + \alpha_1 INFL + \alpha_2 EXCH + \alpha_3 TRANS + \alpha_4 GDP$$

### **3.6.Multicollinearity Tests**

Gujarati (2004) states that multicollinearity arises when a model's predictors that provide inessential information about the answer are connected with one another. This issue in polynomial regression occurs through the improper use of dummy variables, which include variables that are generated from other variables in the equation and practically identical variables that are used twice. The standard errors increase as multicollinearity increases. Confidence intervals for coefficients have a tendency to be very wide and t-statistics have a tendency to be very tiny when considerable multicollinearity is present. The magnitudes of the variances, standard errors, and covariance will increase if collinearity is present. In this study, a pairwise correlation test will be used to check for multicollinearity among the variables. Gujarati (2004) states that a value of 0.8 or higher denotes the presence of a larger multicollinearity between variables, which goes against the conventional principles of linear regression.

### **3.7.Model Identification**

Stepwise regression is a progressive and iterative approach towards constructing a regression model, in which the selection of independent variables to be incorporated in the ultimate model is carried out in a step-by-step manner. The chosen sample is representative of the overall population. The present study demonstrates that a linear relationship exists between the independent variable(s) and the dependent variable.

### **3.8.Model Specification**

Stepwise regression seeks to identify a group of independent variables that have a significant effect on the dependent variable using a series of tests (such as F-tests and t-tests). Stepwise regression will be used in this instance to determine how fast INFL, GDP, TRANS, and EXCH effect FDI. Two main techniques are typically used in traditional stepwise regression procedures. The first step involves including all possible independent variables and removing those that are not statistically significant. Conversely, the second method involves an independent assessment of each variable's statistical significance, introducing only those demonstrated to bear statistical significance. Each independent variable will be tested against the FDI, allowing us to identify and eliminate those that have a low or minor effect on the FDI. When using backward elimination

regression, independent variables will be included starting with the one with the lowest coefficient of determination, removed one at a time, and then tested to determine if they are statistically significant.

### **3.9.Chapter Summary**

In chapter three, an outline of methodology has been laid down on determining the impact of financial indicators on foreign direct investment. Back Stepwise regression will be employed after the test have been run, such as testing for the correlation among the explanatory variables and also testing the multicollinearity. The research findings, data presentation, and result analysis will all be covered in the following chapter.

## 4. Chapter Four

### 4.0.Introduction

This chapter is concerned with the presentation and analysis of the research findings from chapter three. Summaries of the original E-Views results from the analysis of the statistical relationship between FDIs and financial indicators in Zimbabwe are included in the results of the study. To complement and simplify some of the findings from the E-Views package, tables will also be used.

### 4.1.Descriptive Statistics

For the purpose of providing a succinct summary of the fundamental characteristics and features of the variables under consideration, a preliminary analysis of the data used was carried out. The summary of the descriptive statistics is presented in Table 1.

4.4.1. Table 4.1.1.: Descriptive Statistics

	FDI	GDP	TRANS	INFL	EXCH
Mean	89913367	8.13E+09	1.435484	16.86619	1.08E+08
Median	28412568	6.48E+09	1.5	-0.583892	0.00304
Maximum	7.18E+08	3.42E+10	2.5	557.2018	6.72E+09
Minimum	-30506684	1.05E+09	1	-72.73	0.000571
Std. Dev.	1.52E+08	6.99E+09	0.447982	84.4406	8.54E+08
Skewness	2.101654	1.672381	0.806297	4.789631	7.682213
Kurtosis	7.152223	5.656272	2.875288	29.23296	60.01639
Jarque-Bera	90.18093	47.12829	6.758028	2014.82	9007.915
Probability	0	0	0.034081	0	0
Sum	5.57E+09	5.04E+11	89	1045.704	6.72E+09
Sum Sq. Dev.	1.40E+18	2.98E+21	12.24194	434943.1	4.45E+19
Observations	61	61	61	61	61

*Source: Authors Calculations*

The above Error! Reference source not found. reports summary of the descriptive statistics, which illustrates that the average mean of FDI is 89913367 and Skewness is 2.101654 indicating that FDI is on the rise over a period of time, with a standard deviation of 1.52. High kurtosis of 7.152223 is caused with outliers on the data set, the Jarque-Bera statistic confirms that FDI is not normally distributed because the corresponding probability value is less than 5% hence we reject the null hypothesis. . GDP has a mean of 8.13 and have a Skewness of 1.672381 showing that GDP is rising in a given period of time, with a standard deviation of 6.99. More so GDP has kurtosis of 5.656272 which is caused by outliers on the data set. GDP is not normally distributed because the probability value is less than 0.05. Furthermore TRANS has an average mean of 1.435484 and Skewness of 0.806297 indicating that corruption is decreasing.

TRANS has a standard deviation of 0.447982. TRANS has a probability of 0.034081 implying that TRANS is not normally distributed over the period of time. From the results above shows that INFLA has a mean of 16.86619 and are positively skewed indicating that there is an increase in inflation. Results also indicate that inflation is not normally distributed because its corresponding probability is 0. Finally EXCH has a mean of 1.08 and are positively skewed indicating that there is an increase in exchange over a period of time. Results also indicate that EXCH is normally distributed because its corresponding probability value is 0 over a period of time.

4.4.2. Table 4.1.2.: Correlation Matrix

	FDI	GDP	TRANS	INFL	EXCH
FDI	1				
GDP	0.792239	1			
TRANS	0.454739	0.591924	1		
INFL	0.087642	0.350918	0.44635	1	
EXCH	-0.032641	-0.068641	-0.125481	0.214157	1

*Source: Authors Calculations*

The above Table 4.1.2.: Correlation Matrix shows where correlation analysis has been carried out to determine the level of association or relationship among variables. It ranges between -1 and +1. A correlation of -1 or +1 shows a perfect negative or a perfect positive relationship. The value of 0 for correlation, indicates no association among or between tested variables. The table above

shows the correlation between the dependent and the independent variables. The table above shows that there is a positive correlation between GDP and FDI. The FDI is correlated to transparency. There is a semi correlation between transparency and gdp. There is a negative correlation between EXCH and GDP, EXCH and TRANS. Furthermore there is a positive relationship between INF and TRANS and also between EXCH and INFL. This may be a problem of multi-collinearity between independent variables. However, tests for multi-collinearity checks will be held.

4.4.3. Table 4.1.3.: Multicollinearity and autocorrelation outcome table

MODEL	COLLINEARITY STATISTICS (VIF)	AUTO-CORRELATION STATS (D-W Statistics)
GDP	1.563449	1.110272
TRANS	1.78379	
INFL	1.397724	
EXCH	1.120782	

*Source: Authors Calculations*

- If  $0 < VIF < 5$ , the results indicate the absence of multicollinearity.
- If  $5 < VIF < 10$ , Multicollinearity is a problem of considerable concern
- If  $VIF > 10$ , an evident issue of multicollinearity is witnessed with respect to a certain variable.

The Variance Inflation Factor (VIF) is commonly employed as a diagnostic tool to identify the existence of multicollinearity issues in the dataset. The researcher analyzed the Variance Inflation Factor (VIF) values in order to confirm the absence of multicollinearity Tabulated data reveals that there is no multicollinearity in all regressors as the value of  $VIF < 5$ .

#### **4.5.REGRESSING EACH INDEPENDENT VARIABLE AGAINST THE DEPENDENT.**

4.5.1. Table 4.2.1.: FDI and EXCH

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	90541455	19550057	4.631263	0
EXCH	-0.00579	0.022897	-0.25297	0.8012
R-Squared	0.001065			

Adjusted R-squared	-0.01558
F-statistic	0.063993
Prob(F-statistic)	0.801157
Akaike info criterion	40.55745
Durbin-Watson stat	0.532893

**Source: Authors Calculations**

The Table 4.2.1.: FDI and EXCH shows the results of FDI and EXCH. The R-squared results is 0.001065 and the D-Waston stats is 0.532893

#### 4.5.2. Table 4.2.2.: FDI and INFLATION

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	87261016	19715405	4.426032	0
INFL	157258.5	230756.4	0.681491	0.4982
R-squared			0.007681	
Adjusted R-squared			-0.00886	
F-statistic			0.46443	
Prob(F-statistic)			0.498183	
Akaike info criterion			40.36441	
Durbin-Watson stat			0.918691	

**Source: Authors Calculations**

The Table 4.2.2.: FDI and INFLATION is showing the results of FDI and INFL ran separately. The R-squared is 0.007681 while D-Watson stats is 0.918691

#### 4.5.3. Table 4.2.3.: FDI and TRANS

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.31E+08	58436248	-2.23944	0.0288
TRANS	1.54E+08	38887869	3.954967	0.0002
R-squared			0.206787	
Adjusted R-squared			0.193567	
F-statistic			15.64176	
Prob(F-statistic)			0.000205	
Akaike info criterion			40.32686	
Durbin-Watson stat			0.879257	

*Source: Authors Calculations*

The Table 4.2.3.: FDI and TRANS is showing the results of FDI and Transparency. The R-squared is 0.206787 while D-Watson stats is 0.879257

#### 4.5.4. Table 4.2.4.: FDI and GDP

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5E+07	18246550	-2.7245	0.0084
GDP	0.017165	0.001707	10.05661	0
R-squared			0.627642	
Adjusted R-squared			0.621437	
F-statistic			101.1355	
Prob(F-statistic)			0	
Akaike info criterion			39.57062	
Durbin-Watson stat			0.907804	

*Source: Authors Calculations*

The Table 4.2.4.: FDI and GDP shows the results between the FDI and GDP where R-squared is 0.627642 and D-Watson stats is 0.907804.



#### 4.6. Using backward stepwise regression

The independent variables were added from the one with the list R-squared to the one with the highest value of R-squared checking closely the behavior of the R-squared.

4.6.1. Table 4.3.1.: FDI, INFLA and EXCH

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	87948608	19925975	4.413767	0
INFL	177963.3	237898.2	0.748065	0.4574
EXCH	-0.00956	0.023527	-0.4064	0.6859
R-squared			0.010451	
Adjusted R-squared			-0.02309	
F-statistic			0.311562	
Prob(F-statistic)			0.733499	
Akaike info criterion			40.58027	
Durbin-Watson stat			0.594867	

*Source: Authors Calculations*

The Table 4.3.1.: FDI, INFLA and EXCH is showing the results that were obtained when we added EXCH in our model. The R-Squared is 0.010451. The R-squared increased from 0.007681 to 0.010451 by 0.00277. The increase is not significant.

4.6.2. Table 4.3.2.: FDI AND INFL, EXCH, TRANS

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.68E+08	65738300	-2.55348	0.0133
INFL	-301357	242872.1	-1.2408	0.2197
EXCH	0.012583	0.021665	0.580817	0.5636
TRANS	1.82E+08	45073410	4.04149	0.0002
R-squared			0.227889	
Adjusted R-squared			0.187952	
F-statistic			5.706237	
Prob(F-statistic)			0.001712	

Akaike info criterion	40.36441
Durbin-Watson stat	0.918691

**Source: Authors Calculations**

The above Table 4.3.2.: FDI AND INFL, EXCH, TRANS show the results of FDI, EXCH, TRANS. The R-squared has increased from the previous model from 0.010451 to 0.227889. The R-squared changed by 0.217438. The increase incurred in R-squared is not significant to the model.

4.6.3. Table 4.3.3.: FDI and INFLA, EXCH, TRANS, GDP

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-9.5E+07	43523614	-2.17462	0.0338
INFL	-478005	159163.2	-3.00324	0.004
EXCH	0.016525	0.014095	1.172414	0.2459
TRANS	29814790	33891838	0.879704	0.3827
GDP	0.018198	0.002033	8.953138	0
R-squared				0.679128
Adjusted R-squared				0.656611
F-statistic				30.16027
Prob(F-statistic)				0
Akaike info criterion				39.51858
Durbin-Watson stat				1.110272

**Source: Authors Calculations**

The Table 4.3.3.: FDI and INFLA, EXCH, TRANS, GDP above is showing the results of the final model here all the variables have been added. Our R-squared increased by 0.451239 from 0.227889 to 0.679128. The increase in R-squared is significant and the range of our R-squared 0.679128 is showing that the variables in model are significant to make the model fit. The probabilities of our variables further specify which variables are more important and impactful in our model. INFL has the probability of 0.004 which is less than 0.05, this shows that Inflation is an important and significant for this model. The EXCH has probability value of 0.2459 which is less than 0.05 and

this reveals that the exchange rate is a variable that does not explain FDI ell. TRANS has the probability value of 0.3827 which is below 0.05, this also implies that transparency doesn't explain our dependent variable very well. Lastly on probabilities e have GDP which has the probability value of 0 which is less than 0.05 and this implies that gdp explains FDI very well. Therefore for our model to be attractive e ill eliminate the variables that are insignificant to our model such as Exchange rate and Trans

#### 4.7.The final model

4.7.1. Table 4.4.1.: FDI and INFLA, GDP

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5.7E+07	17532298	-3.22659	0.002
GDP	0.018816	0.001733	10.85651	0
INFL	-389557	143531	-2.7141	0.0087
R-squared			0.668972	
Adjusted R-squared			0.657751	
F-statistic			59.6164	
Prob(F-statistic)			0	
Akaike info criterion			39.48523	
Durbin-Watson stat			1.074536	

*Source: Authors Calculations*

The Table 4.4.1.: FDI and INFLA, GDP Show the results of the final model. The coefficient of determination  $R^2$  is 0.668972. The findings indicate that approximately 67% of the fluctuations in Foreign Direct Investment can be attributed to variances in the explanatory factors. The data shows that the model is fit as more than half of the variances are explained by it. The F-test probability shows that the model is valid with significant statistical evidence at a 5% level. The probability value for our independent variables are both less than 0.05 meaning that they explain very well our dependent variable. D-Watson shows that there is no multicollinearity within our variables.

From the output below, the regression equation is

$$\text{FDI} = 5.70000 - 389557\text{INFL} + 0.018816\text{GDP}$$

Inflation has a negative relationship with foreign direct investment. Inflation is significant at 5% and 10% levels. This indicates that a 1% increase unit rate of inflation yields a decrease in foreign direct investments by 389557. This can be caused by reduced purchasing power which is caused by the decline of currency in comparison to other nations' currencies. These results show that high levels of inflation would discourage foreign direct investments by depreciating the local currency and perhaps lowering the value of assets related to the local currency in relation to other currencies. For instance, in Zimbabwe, where the RTGS dollar is depreciating daily, investors may be interested to put their money in Zimbabwe but the end result will cause them not to because they don't have confidence in our currency. GDP has a positive relationship with foreign direct investment. GDP is significant at 5% and 10% levels. This indicates that z 1% increase if GDP ill yield and increase in foreign direct investment by 0.018816.

#### **4.8.SUMMARY CHAPTER**

This chapter presents and thoroughly analyzes the obtained results. The stated results were obtained through the application of stepwise regression methodology. The findings indicate that the foreign direct investment (FDI) in Zimbabwe is subject to inflationary pressures, as confirmed by their negative correlation. Conversely, there exists a positive correlation between FDI and Gross Domestic Product (GDP). After the presentation and analysis of the findings, the subsequent chapter will provide a comprehensive summary of the research and present conclusions. Additionally, the chapter will emphasize recommendations aimed at addressing the issue under scrutiny

## **5. CHAPTER FIVE**

### **SUMMARY, CONCLUSION, AND RECOMMENDATIONS**

#### **5.0. Introduction**

This chapter serves as a suitable conclusion, gives a summary of all research efforts, and presents the key findings that resulted from the results of the research. In order to formulate workable recommendations, the results' practical significance was assessed. The researcher's conclusions that he will offer in this chapter are the result of data analysis findings from the previous chapter.

#### **5.1. Summary**

The investigation's objective was to evaluate how the economic indicators affected foreign direct investment in Zimbabwe. The study used an explanatory research design and Zimbabwean data from the World Bank, Data Bank, and The Global Economy from 1960 to 2021. Foreign Direct Investment is the dependent variable employed in the study, and exchange rates, inflation, transparency, and gross domestic product are some of the independent factors. After conducting the research, the researcher discovered a negative correlation between inflation and foreign direct investment. A 1% increase in the inflation rate led to a 389557 drop in foreign direct investments. Foreign direct investment and GDP are positively correlated. This showed that an increase in GDP of 1% would result in an increase in foreign direct investment of 0.018816.

#### **5.2. Conclusion**

In this study, the impact of financial variables is examined in relation to foreign direct investment in Zimbabwe. Based on the research's findings, we can conclude that Zimbabwe's FDI is both positively and negatively significantly impacted by inflation rates and gross domestic product for the period under study and that there is a positive relationship between GDP and FDI. Additionally, Stepwise Regression was used, and the results showed that the exchange rate and transparency do, if barely, have a favorable effect on FDI. FDI is inversely connected with inflation, according to research by Benson, Eya, and Yunusa (2019). According to Omankhanlen (2011), FDI is mostly negatively affected by inflation. According to Malik & Malik (2013), GDP positively affects FDI.

### **5.3.Policy Recommendations**

The government should revise the Indigenization and Economic Empowerment Act in order to draw in foreign direct investment. As a result, there will be some competition for imports and it will help to grow the manufacturing sector. Inflation rates that are in line with economic growth will be achieved because of the competition's ability to defend domestic inflation from external inflation.

The government should think about moving to the ZAR or USD since this will lessen exchange rate volatility, which is greatly influenced by the black market, and the stable currency will enhance confidence among international investors to invest in Zimbabwe.

The study so advises the government to keep up its gold coin policy, which serves as a tool to both attract foreign investors who will pay with foreign currency when buying gold coins and to combat the inflation that is constantly on the rise. The Zimbabwe Investment Development Authority (ZIDA) is a more potent, though not yet completely operational, streamlined government agency (a "one-stop shop") is suggestive that the government takes action in the utilization of the ZIDA.

As part of its commitment to emphasizing investment retention, the government must create legal institutions or processes to maintain continuous communication with investors. By lowering regulatory costs, the government must move quickly to improve the business environment, but firms have remained frustrated by inconsistent policy, flimsy institutions, and a lack of fiscal restraint.

## References

- Adeel-Farooq, R., Abu Bakar, N. and Raji, J. (2017), “*Trade openness, financial liberalization and economic growth*”, South Asian Journal of Business Studies, Vol. 6 No. 3, pp. 229-246, doi: 10.1108/SAJBS-06-2016-0054.
- Alshamsi, K. H., Hussin, M. R., & Azam, M. (2015). The impact of inflation and GDP per capita on foreign direct investment; A case of United Arab Emirates. *Investment Management and Financial Innovations*, 132-141.
- Benson, E., Eya, C. I., & Yunusa, A. (2019). Effect of exchange and interest rates on FDI in Nigeria 2006-2018. *International Journal of Contemporary Research and Review*.
- Cicea, C., and Marinescu, C. (2020). Bibliometric analysis analysis of foreign direct investment and economic growth relationship. *Journal of Business Economics and Management*, 22(2), 445-466. <https://doi.org/10.3846/jbem.2020.14018>
- Dunning J.H. (1980). Toward an Eclectic theory of Production: *Some Empirical Tests*, *Journal of International Business Studies*, Vol.11, Spring/Summer, No 1, 9-31.
- Dunning J.H. (1993). *Multinational and Enterprises and the Global Economy*, Addison-Wesley.
- Dunning J.H. (2002). *Theories of foreign direct investment*. Multinational Enterprises and the Global Economy, Cheltenham pp. 52-76.
- Emmanuel B, Nkoa O (2018) Determinants of foreign direct investment in Africa: *an analysis of the impact of financial development*. *Econ Bull* 38(1):221–233
- Faroh, A., & Shen, H. (2015). Impact of interest rates on FDI: Case study Sierra Leone. *International Journal of Business Management and Economic Research*, VI(1), 124-132.
- Fornah S, Yuehua Z (2017) *Empirical analysis on the Influence of interest rates on foreign direct investment in Sierra Leone*. *Int J Res Bus Stud Manag* 4(12):28–35

Fu, Jing, Aland Collins and Shujie Yao. 2021. 'Does Lockdown Bring Shutdown Impact of the covid-19 Pandemic on Foreign Direct Investment' *Emerging Markets Finance and Trade* 57(10): 2792-811

Hymer, S. H. (1976). *The International Operations of National Firms*. PHD Thesis published by MIT Press in 1976, 1960).

Kariuki C (2015) The determinants of foreign direct investment in the African Union. *J Econ, Bus Manag* 3(3):346–351

OECD. (2020). *OECD - ilibrary*. Retrieved from OECD Website. <https://data.oecd.org>

The World Bank. (2020, February 27). *The World Bank Data: Indicators*. Retrieved from World Bank Web site: <http://www.data.worldbank.org>

Omankhanlen, A. E. (2011). The effect of exchange rate and inflation on foreign direct Investment and its relationship with economic growth in Nigeria. *Economics and Applied informatics*, 1-13.

Saini, N. & Singhania, M. (2018). Determinants of FDI in developed and developing countries: A quantitative analysis using GMM. *Journal of Economic Studies*, 45(2), 348-382.

UNCTAD. (2019). *World Investment Report 2019*. Retrieved from World Investment development reports website: <https://unctadstat.unctad.org/wds/ReportFolders>

Komla Agudze & Oyakhilome Ibhagui Inflation and FDI in industrialized and developing economies. ( <https://doi.org/10.1080/02692171.2020.1853683> )

Khalafallah, Z. (2018). Channels of monetary policy transformation in the Algerian economy, a standard analytical study for the period (1990-2016).

Malik, S., & Malik, Q. A. (2013). Empirical analysis of macroeconomic indicators as determinants of foreign direct investment in Pakistan. *IOSR Journal of Business and Management*, VII(2), 77-82.

Musyoka N, Ocharo KN (2018) Real interest rate, inflation, exchange rate, competitiveness and foreign direct investment in Kenya. *Am J Econ*3(1):1–18



Okafor HO (2012) Do domestic macroeconomic variables matter for foreign direct investment inflow in Nigeria. *Res J Financ Account* 3(9):55–67

Omankhanlen, A. E. (2011). The effect of exchange rate and inflation on foreign direct investment and its relationship with economic growth in Nigeria. *Economics and Applied informatics*, 1-13.

Singhanian M, Gupta A (2011) Determinants of foreign direct investment in India. *J Int Trade Law Policy* 10(1):64–82

Tsaurai K (2014) Stock market and foreign direct investment in Zimbabwe. *Risk Gov Control: Financ Mark Inst* 4(2):53–60

Radwan, M and Nawal, G. (2017). The role of monetary policy in achieving economic stability (1990-2014) in Algeria - a standard study -,

Ullah Z, Shah MH, Khan W, Ali A. Macroeconomic Factors As Drivers Of Foreign Portfolio Investment In Emerging Economy. *Multicultural Education*. 2021;7(6). [[Google Scholar](#)]

Wijeweera, A., & Mounter, S. (2008). A VAR analysis on the determinants of FDI inflows: The case of Sri Lanka. *Applied Econometrics and International Development*.

Singhanian M, Gupta A (2011) Determinants of foreign direct investment in India. *J Int Trade Law Policy* 10(1):64–82

McConnel, C. R. (2008). *Economics*. Mc Graw Hill International Edition.

Ramirez, M.D. (2006). *Economic and Institutional Determinants of Foreign Direct Investment in Chile, a time series analysis, 1960-2001*, *Contemporary Economic Policy*, 24(3), 459-471.

*Morrisset, P. (2000). Foreign Direct Investment to Africa: policies also matter. Transnational Corporation* 9, 107-25.

OECD (2002), *Foreign Direct Investment for Development: Maximizing Benefits, Minimizing Costs*, Organization for Economic Cooperation and Development, Paris.

Javed, Z. and Farooq, M. (2009), “Economic growth and exchange rate volatility in the case of Pakistan”, *Pakistan Journal of life and social sciences*, Vol. 7 No. 2, pp. 112-118.

Kumari, R. and Sharma, A.K. (2018), “Long-term relationship between population health, FDI and economic growth: new empirical evidence”, *International Journal of Business and Globalisation*, Vol. 20 No. 3, pp. 371-393.

## Appendix A

fdi,inf and gdp

Dependent Variable: FDI

Method: Stepwise Regression

Date: 06/09/23 Time: 11:49

Sample: 1960 2021

Included observations: 62

Number of always included regressors: 3

No search regressors

Selection method: Stepwise forwards

Stopping criterion: p-value forwards/backwards = 0.5/0.5

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Variable	Coefficient	Std. Error	t-Statistic	Prob.
INFL	-389557.0	143531.0	-2.714098	0.0087
GDP	0.018816	0.001733	10.85651	0.0000
C	-56569585	17532298	-3.226593	0.0020

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R-squared	0.668972	Mean dependent var	89913367
Adjusted R-squared	0.657751	S.D. dependent var	1.52E+08
S.E. of regression	88639275	Akaike info criterion	39.48523
Sum squared resid	4.64E+17	Schwarz criterion	39.58815
Log likelihood	-1221.042	Hannan-Quinn criter.	39.52564
F-statistic	59.61640	Durbin-Watson stat	1.074536
Prob(F-statistic)	0.000000		

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### Selection Summary

No regressors were chosen by the stepwise routine

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