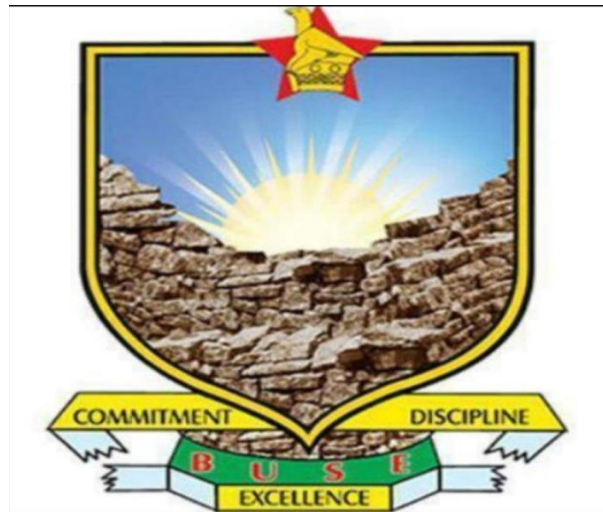


BINDURA UNIVERSITY OF SCIENCE EDUCATION



**FACULTY OF COMMERCE
DEPARTMENT OF ECONOMICS**

**A STUDY ON THE EFFECTS OF INTERNATIONAL TRADE ON ECONOMIC
GROWTH IN ZIMBABWE (2010-2020)**

BY

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CHAPTER I

INTRODUCTION

1.1 Introduction

International trade has been recognized for a long as a crucial driver of economic growth and development in countries around the world. The benefits of trade include increased efficiency, innovation, and access to larger markets, which can lead to higher levels of economic activity and income. For developing countries, in particular, international trade has been seen as a key tool for reducing poverty, promoting growth, and improving living standards.

This research paper focuses on the effects of international trade on economic growth in Zimbabwe. Zimbabwe has experienced significant economic challenges in recent decades, including hyperinflation, political instability, and declining agricultural production. However, the country has made efforts to open up its economy to international trade in recent years, including the adoption of a more market-oriented economic policy and membership in regional and international trade organizations.

The purpose of this paper is to examine the impact of international trade on economic growth in Zimbabwe, with a particular focus on the period of 2010-2020. The paper will analyse the relationship between trade and economic growth in Zimbabwe using quantitative methods. The study will examine the effect of trade on key macroeconomic variables, such as gross domestic product (GDP), inflation and trade openness. Overall, this research paper aims to provide a comprehensive analysis of the effects of international trade on economic growth in Zimbabwe. The findings of this study may have important implications for policymakers and development practitioners seeking to promote economic growth and reduce poverty in the country.

1.2 Background to the study

After independence from British colonial rule in 1980, the country enjoyed a period of economic growth and stability, driven by a thriving agricultural sector and strong commodity prices. However, a series of economic and political factors, including hyperinflation, political instability, and declining agricultural production, led to a protracted period of economic decline and stagnation.

The diagram below represents the past relationship between exports, imports and economic growth both imports and exports are positively related with economic growth. The graph below shows that there was a constant economic growth for a period of one year from 1990 – 1991 followed by a recession in 1992 and a great economic recovery from 1993-1996, from 1997 - 2000 there was a decline in GDP from that period up to 2008 Zimbabwe was in slump. Between a periods of 2009 to 2011 the economy has experienced sharp economic recovery and from there it started to decrease until today we are still facing recessionary economic growth.

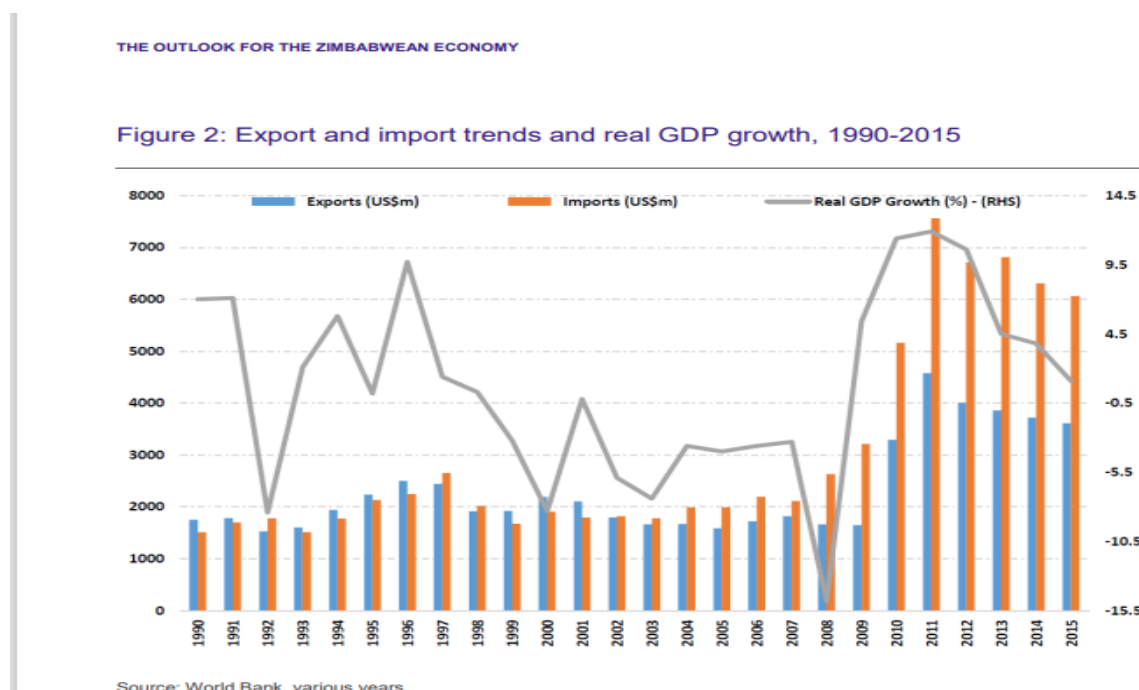


Figure 1: The relationship between export, imports and economic growth.

In response to these challenges, Zimbabwe has undertaken a series of economic reforms aimed at promoting growth and development. These reforms have included the liberalization of

markets, the removal of price controls, and the adoption of a more market-oriented economic policy. In addition, Zimbabwe has sought to increase its participation in international trade by joining regional and international trade organizations and signing free trade agreements with other countries.

The impact of these policy changes on economic growth and development in Zimbabwe is a topic of significant interest among researchers, policymakers, and development practitioners. International trade has been seen as a key tool for promoting growth and reducing poverty in developing countries, and Zimbabwe's efforts to increase its participation in global trade have the potential to drive economic expansion and development.

Given the importance of international trade to Zimbabwe's economic development, this research paper aims to provide a comprehensive analysis of the effects of international trade on economic growth in the country. The study will examine the impact of trade on key macroeconomic variables, such as GDP, inflation, and trade openness. The findings of this research may have important implications for policymakers seeking to promote economic growth and reduce poverty in Zimbabwe.

1.2 Statement of the problem

Zimbabwe has been experiencing recessionary economic growth from 2010 to 2020. The country experienced continuous BOP (Balance of Payments) deficit due to poor performance on international trade which has resulted in a decline in exports and increased imports. In this revolution, it was important to understand how international trade can affect growth of an economy. Poor performance on international trade may bring a lot of long run consequences which may hinder economic growth.

Considering the theoretical emphasis on the positive correlation between trade and economic growth and the inclusive empirical evidence, it becomes imperative to examine the relationship between trade and economic growth for Zimbabwe.

1.3 Research Objectives

The research objectives are as follows.

- i. To explain the impact of exports on economic growth in Zimbabwe.

- ii. To describe the relationship between imports and economic growth.
- iii. Propose intervention measures to increase exports and to reduce imports

1.4 Research Questions

- i. What are the effects of exports to economic growth?
- ii. How does imports affect economic growth?
- iii. Which ways or policies should have adapted to reduce imports and to boost exports?

1.5 Significance of the study

The study can provide insights into the impact of international trade on economic growth in Zimbabwe, which can inform policy decisions and recommendations. Understanding how international trade affects economic growth can help policymakers develop policies that promote trade and stimulate economic growth in Zimbabwe (World Bank, 2020). To add on that, the study can inform the work of international organizations such as the World Trade Organization and the International Monetary Fund. By providing insights into the impact of international trade on economic growth in Zimbabwe, the study can help these organizations develop policies and programs that support economic development in developing countries.

1.6 Assumptions

- Assuming that there are no trade barriers and no transport costs.
- Factors of production are highly mobile across the country.
- Income levels, taste patterns and demand conditions are the same across different countries.

1.7 Delimitations of the study

- The research used data from World Bank for the past decade from 2010 - 2020 to ensure that data used in the research is current and relevant to the current economic situation in Zimbabwe.
- The research focus specifically on the effects of international trade on economic growth in Zimbabwe and not include other countries. This delimitation may be necessary to ensure that the research is focused and manageable.

- The research may be limited by economic factors, such as inflation, currency devaluation, or changes in government policies. These factors may impact the relationship between international trade and economic growth.

1.8 Limitations of the study

- One of the main limitation is the availability and reliability of data. Zimbabwe may not have adequate data on international trade or may have unreliable data, which could limit the scope and accuracy of the research (United Nations Conference on Trade and Development, 2019).
- Economic growth can also be affected by external factors such as political instability, natural disasters and so many other exogenous factors. These factors could affect international trade and economic growth, making it difficult to isolate the effect of international trade on economic growth in Zimbabwe.
- Establishing a causal relationship between international trade and economic growth is complex. Many factors contribute to economic growth, and it may be difficult to isolate the effect of international trade on economic growth in Zimbabwe. Additionally, there may be reverse causality, where economic growth affects international trade (Ghebreyesus, 2017).

1.9 Definition of terms

- International trade: The exchange of goods and services across borders, typically involving imports and exports.
- Economic growth: The increase in the production of goods and services in an economy over time, usually measured by the Gross Domestic Product (GDP).
- Tariffs: Taxes imposed by governments on imported goods.
- Balance of trade: The difference between a country's exports and imports, typically measured over a specific period of time.
- Foreign direct investment (FDI): Investment made by a company or individual in one country in a business located in another country.

- Exchange rate: The value of one currency relative to another currency.
- Inflation: The rate at which the general level of prices for goods and services is rising in an economy over time.
- Economic policy: The set of measures and strategies adopted by governments to manage economic activity and achieve specific economic goals.
- International economic institutions: Organizations such as the International Monetary Fund (IMF) and World Trade Organization (WTO) that play a role in regulating and promoting international economic activity.
- Indicators: Quantitative measures used to assess the performance of an economy, such as GDP, inflation rate, and unemployment rate.

1.10 Summary

Chapter has highlighted the background of the study, problem statement, research questions, research objectives, significance of the study, limitations and delimitations of the study and also definition of key terms.

CHAPTER II

LITERATURE REVIEW

2.0 Introduction

In this chapter, I will delve into the theoretical framework that underpins the complex relationship between trade and economic growth. A comprehensive review of the existing literature will be provided, including different schools of thought and their divergent views on this subject matter. Additionally, I will explore the empirical evidence that sheds light on the relationship between international trade and economic growth, providing a deeper understanding of this crucial aspect of modern economics.

2.1 Theoretical framework

2.1.1 Absolute advantage theory

This theory was developed by Adam Smith in 1776, suggests that a country should specialize in producing goods and services that it can produce more efficiently than other countries, thereby increasing its productivity and economic growth. Zimbabwe can use this theory to identify its areas of strength and focus on producing goods and services that it has a competitive advantage in and export to other countries.

The theory of absolute advantage recognizes that trade is a mutually beneficial exchange between countries. In order for trade to occur, each country must specialize in producing goods in which it is efficient and exchange them for goods in which it is less efficient. This leads to increased efficiency and productivity gains through the use of technical and organizational improvements. As a result, countries are able to produce more goods using the same resources, leading to lower prices and increased consumption for both trading partners.

Smith's perspective builds upon the idea that specialization and increased productivity are the key drivers of international trade. Rather than relying on natural differences between countries, Smith believes that specialization is the foundation for creating differences between countries, leading to increased productivity gains and the ability to produce more goods with the same resources. Overall, the theory highlighted the benefits of international trade and specialization, which can lead to increased efficiency and productivity gains for all countries involved.

2.1.2 Comparative advantage theory.

Comparative advantage, developed by a classical economist David Ricardo in the 19th century, suggests that a country should specialize in producing goods and services that it can produce at a lower opportunity cost than other countries, even if it does not have an absolute advantage in producing those goods and services. Zimbabwe can use this theory to identify areas where it can benefit from trading with other countries, by importing goods and services that it is not efficient in producing and exporting goods and services that it is efficient in producing.

The Ricardian theory of comparative advantage builds upon Adam Smith's theory of absolute advantage by incorporating the role of technology as a driver of international trade. Ricardo's theory makes several key assumptions, including the mobility of labour between sectors, fixed and heterogeneous technology across countries, and homogenous resources. These assumptions enable the theory to explain the benefits of international trade, which arise from differences in opportunity costs and the ability of countries to specialize in producing goods in which they have a comparative advantage.

Although both theories emphasize the importance of labour, there are notable differences between Smith's and Ricardo's views. Smith argues that the productivity of labour is primarily determined by the division of labour, while Ricardo contends that technology is also a critical factor that can improve labour productivity. Furthermore, Ricardo's theory highlights the importance of opportunity costs in determining the basis for international trade.

In conclusion, this theory provides a framework for understanding the benefits of international trade, highlighting the role of differences in opportunity costs and the ability of countries to specialize in producing goods in which they have a comparative advantage.

2.1.3. Hecksher –Orlin theory.

The Hecksher-Orlin model is an important theory for Zimbabwe to consider when analysing the effects of international trade on its economic growth. The model suggests that a country will specialize in producing and exporting goods that use its abundant factors of production while importing goods that require scarce factors of production. By doing so, countries can maximize their production efficiency and improve their economic growth.

Zimbabwe has a diverse range of natural resources and factor endowments, such as agricultural land, mineral resources, and human capital. By applying the Hecksher-Orlin model, Zimbabwe can identify which of its factor endowments are abundant and which are scarce. For instance, Zimbabwe is abundant in mineral resources, such as platinum, gold, and diamonds, as well as agricultural land for crops such as tobacco, cotton, and maize. In contrast, Zimbabwe has a scarcity of capital and technology.

Using the Hecksher-Orlin model, Zimbabwe can identify which of its goods and services it should export and import. For example, Zimbabwe could export its mineral resources and agricultural products, which are abundant in the country, and import capital and technology, which are scarce. This can help Zimbabwe to increase its exports and improve its balance of trade, leading to economic growth.

In addition, the Hecksher-Orlin model can also inform Zimbabwe's trade policies. Zimbabwe can identify which factors of production it needs to promote and develop in order to increase its competitiveness in certain sectors. For instance, Zimbabwe can invest in improving technology and infrastructure to increase its production efficiency in the agricultural sector.

In conclusion, the Hecksher-Orlin model is a valuable tool for Zimbabwe to analyse its factor endowments and identify opportunities for increasing exports and improving economic growth. By focusing on its abundant factors of production, Zimbabwe can increase its competitiveness in international trade and develop its economy.

2.1.4 The product life cycle.

This was developed by Raymond Vernon in the 1960s, suggests that the demand for a product evolves over time, and the production and trade of the product will change as it goes through different stages of its life cycle. Zimbabwe can use this theory to analyse its current exports and identify opportunities for diversifying its exports by identifying products that are in the growth stage of their life cycle.

These theoretical frameworks provide a basis for understanding the effects of international trade on economic growth in Zimbabwe. By identifying its areas of strength, comparative advantage, factor endowments, and the life cycle of its exports, Zimbabwe can increase its productivity, diversify its exports, and benefit from trading with other countries.

2.1.5 Dependency Theory

The Dependency Theory, which was first introduced by Andre Gunder Frank in 1967, suggests that developing countries are dependent on developed countries for their economic growth, and that international trade can exacerbate this dependency.

This theory suggests that developing nations are structurally dependent on developed countries, which hampers their economic growth and perpetuates global inequalities. When examining the effects of international trade on economic growth in Zimbabwe, the Dependency Theory provides valuable insights.

According to the theory, developing countries often find themselves in a state of dependency due to historical factors such as colonialism, which resulted in the extraction of resources and the imposition of unequal trade relationships. In the case of Zimbabwe, this dependency manifests through its reliance on developed nations for markets, technology, and investment. The effects of international trade on economic growth in Zimbabwe are closely tied to this dependency.

Dependency theory can contribute to economic growth by providing access to larger markets, attracting foreign direct investment (FDI), and facilitating technology transfer. By exporting

goods and services, Zimbabwe can earn foreign exchange, which can be used for investment and development projects. Furthermore, trade can encourage competition, productivity improvements, and specialization, which can stimulate economic growth.

2.1.6 New Trade Theory

The New Trade Theory, which was developed by Paul Krugman in 1979, suggests that economies of scale and technology play a crucial role in determining patterns of international trade.

Applying this theory on the study of the effects of international trade on economic growth in Zimbabwe can shed light on the potential mechanisms through which trade can impact the country's economic development.

The New Trade Theory challenges the traditional assumption of comparative advantage as the sole determinant of trade patterns. It argues that economies of scale, or the cost advantages associated with producing a larger volume of output, can be an important driver of international trade. In addition, the theory highlights the significance of product differentiation and market power in shaping trade dynamics.

The New Trade Theory suggests that international trade can have several effects on economic growth. Firstly, by engaging in trade, Zimbabwe can access larger markets and benefit from economies of scale. This is particularly relevant for industries that require substantial investment and have high fixed costs, such as manufacturing or technology sectors. Through trade, Zimbabwe can tap into global demand, increase production volumes, and achieve cost efficiencies, leading to higher economic growth.

Secondly, the New Trade Theory emphasizes the importance of product differentiation. By producing unique and differentiated goods, Zimbabwe can carve out a niche in the global market and gain a competitive edge. This can contribute to higher export revenues, increased

market share, and overall economic growth. Product differentiation can be achieved through investments in research and development, innovation, and branding.

The theory also highlights the potential benefits of specialization and trade for resource-constrained economies like Zimbabwe. By focusing on industries where the country has a comparative advantage, such as agriculture and mining, Zimbabwe can enhance productivity and generate export earnings. However, it is important to ensure that the gains from specialization are reinvested into other sectors to diversify the economy and reduce dependence on a limited range of industries.

Furthermore, the New Trade Theory underscores the role of government policies and institutions in promoting economic growth through international trade. Governments can support domestic industries by providing infrastructure, access to finance, and policies that foster innovation and technological development. Additionally, policies that encourage foreign direct investment and promote regional integration can enhance trade opportunities and facilitate economic growth.

2.1.7 The Neo-Classical Growth Theory

The Neo-Classical Growth Theory, which was developed by Robert Solow in 1956, posits that economic growth is driven by increases in capital accumulation, human capital, and technological progress. The Neoclassical Growth Theory, also known as the Solow-Swan model, is highly relevant to understanding the effects of international trade on economic growth in Zimbabwe. This theory provides insights into the long-term determinants of economic growth and can help analyse how international trade influences the country's economic development.

According to the Neoclassical Growth Theory, economic growth is primarily driven by the accumulation of capital, technological progress, and the efficient allocation of resources. It assumes that countries converge towards a steady-state level of output per capita over time.

International trade can impact economic growth in Zimbabwe through various channels. Firstly, trade allows for the accumulation of capital. By engaging in international trade, Zimbabwe can attract foreign direct investment (FDI), access financial resources, and increase domestic savings. These capital inflows can support investments in infrastructure, technology, and human capital, all of which are crucial for long-term economic growth.

Secondly, international trade can facilitate technological progress. Through trade, Zimbabwe can gain access to new technologies, new ideas, and best practices from more technologically advanced countries. This can enhance productivity, improve efficiency, and stimulate innovation within domestic industries. Additionally, trade can foster competition and provide incentives for firms to upgrade their technologies and improve their products and processes.

Furthermore, international trade promotes the efficient allocation of resources. By participating in global markets, Zimbabwe can specialize in the production of goods and services that it has a comparative advantage in. This specialization allows for a more efficient allocation of resources, as resources are allocated to sectors where they are most productive. This can lead to increased productivity, higher output, and overall economic growth.

The Neoclassical Growth Theory also emphasizes the importance of institutions and policies in facilitating economic growth. By international trade, Zimbabwe can benefit from adopting policies that promote trade liberalization, market openness, and a conducive business environment. These policies can attract foreign investment, foster competition, and enhance the efficiency of resource allocation, thereby driving economic growth.

2.2 Empirical Review

There have been several empirical studies that have examined the relationship between international trade and economic growth in many different developing countries. Below are some of the key empirical findings.

One study by Chinyoka and Odhiambo (2016) used a VECM to examine the causal relationship between trade and economic growth in Zimbabwe over the period 1980-2014. The study found evidence of a long-run relationship between exports and economic growth, suggesting that increasing exports can lead to higher economic growth. However, the study also found evidence of a short-run bi-directional causality between exports and economic growth, suggesting that economic growth can also lead to increased exports.

Another study by Muchapondwa and Ndlela (2014) examined the impact of trade liberalization on economic growth in Zimbabwe using a computable general equilibrium (CGE) model. The study found that trade liberalization had a positive impact on economic growth in Zimbabwe, leading to higher GDP and increased employment. The authors suggest that continued trade liberalization can be an effective strategy for promoting economic growth and development in Zimbabwe.

In addition, a study by Zivanomoyo and Gwarazimba (2017) examined the impact of trade on the agricultural sector in Zimbabwe using a panel data analysis. The study found that trade openness had a positive impact on agricultural productivity in Zimbabwe, leading to increased output and higher incomes for farmers. The authors suggest that increasing trade openness can be an effective strategy for promoting growth and development in the agricultural sector in Zimbabwe.

A number of empirical studies have examined the relationship between international trade and economic growth in developing countries. Kavoussi's (1984) study, which covered 73 middle and low-income developing countries from 1960-1978, found a positive correlation between higher rates of economic growth and higher rates of export growth. This positive correlation held for both middle- and low-income countries, although the effects tended to diminish according to the level of economic development.

Frankel and Romer's (1999) study found that trade has a large and robust positive effect on income, although the significance was only moderate. Ekanayake's (1999) study on developing Asian countries found bi-directional causality between export growth and economic growth in

seven out of eight countries, with short-run Granger causality running from economic growth to export growth.

According to Akinlo (2004), there is a positive and significant relationship between international trade and economic growth in Zimbabwe. He argues that trade openness enhances productivity, stimulates technology advancements, and promotes efficiency in resource allocation. Moreover, Akinlo posits that trade liberalisation policies can lead to the creation of employment opportunities and development of skilled labour force, which are critical for economic growth.

Another study by Bonga-Bonga and Nleya (2008) confirms the positive impact of international trade on economic growth in Zimbabwe. Using a Vector Auto regression (VAR) model, they found that an increase in exports positively influences economic growth in Zimbabwe. Additionally, they argue that trade openness can lead to the inflow of foreign direct investment (FDI), which can stimulate economic growth.

2.3 Research gap

Despite the growing literature on the relationship between international trade and economic growth, there is a research gap in the specific case of Zimbabwe. While some studies have examined the relationship between export expansion and economic growth in developing countries (Kavoussi, 1984), and others have investigated the causal relationship between export growth and economic growth in developing Asian countries (Ekanayake, 1999), there is a lack of empirical evidence on the specific effects of international trade on economic growth in Zimbabwe. Furthermore, while some studies have found evidence supporting the export-led growth hypothesis (Din, 2004), others have challenged it (Frankel and Romer, 1999), highlighting the need for further research. Therefore, this study aims to fill this research gap by examining the specific effects of international trade on economic growth in Zimbabwe.

2.4 Summary

This chapter has covered literature review under two categories which are theoretical framework and the empirical review and it also highlighted the research gap.

CHAPTER III

RESEARCH METHODOLOGY

3.0 Chapter introduction

This chapter presents the research design and methodology of the study. In this chapter I'm to address on how to solve the research problem and how to achieve the research objectives. Over and above that, this chapter is going to shed light on the methods and techniques used to collect and analyze data.

3.1 Research Methodology

The research was conducted using quantitative methods of numerical secondary data. Annual time series data of Zimbabwe for a period of a decade from 2010 - 2020 was used to assess the effects of international trade on economic growth. Secondary data was chosen over primary data because secondary data is cheaper to gather compared to primary data since its readily available and it's also less time consuming compared to collecting primary data. The study will use Ordinary Least Squares (OLS) econometric method using E-views to evaluate the impact of endogenous to exogenous variables affecting economic growth of Zimbabwe. The researcher chooses the OLS method because it provides assurance in providing Best Linear Unbiased Estimators (BLUE) compared to other estimation techniques. More so, OLS estimators have also consistency that is as the sample size increase indefinitely the estimators converge to their true population values (Gujarati, 2004). The data used from this research was retrieved from World Bank website.

3.2 Model Specification

The model specification of this study is based on the augmented Solow growth model, which incorporates international trade as an additional factor of production. The Solow growth model is a neoclassical model that explains how economic growth depends on capital accumulation, labour force growth, and technological progress. The augmented Solow growth model extends the original model by trade openness as sources of economic growth. The general form of the augmented Solow growth model can be expressed as:

$$Y = AK^\alpha L^\beta H^\gamma T^\delta$$

where Y is output or GDP, A is total factor productivity (TFP) or technology level, K is physical capital stock, L is labour force, H is human capital stock, T is trade openness, and α , β , γ , and δ are output elasticities of physical capital, labour, human capital, and trade openness respectively.

The researcher employed a model to examine the correlation between international trade and economic growth in Zimbabwe as shown below:

$$GDP = f(INFL,IMP,EXP,OPEN,FDI).....(3.1)$$

The technique of data analysis is the ordinary least squares regression method. GDP is the gross domestic product as proxy for economic growth. The explanatory variables are trade openness (OPEN) as a proxy for international trade which is measured by the sum of exports and imports divided by Gross Domestic Product, INF is the inflation rate as a control variable, EXP is the exports of goods and services as a percentage of GDP as a control variable, IMP is the imports of goods and services as a percentage of GDP as a control variable, and FDI is the investment from foreign investors in Zimbabwe.

The functional form of the model could be a linear regression model with the dependent variable (economic growth) as the outcome variable and the independent variables as predictors. The model could be expressed as:

$$Economic\ growth = \beta_0 + \beta_1 Exports + \beta_2 Imports + \beta_3 FDI + \beta_4 Inflation\ rate + \beta_5 Openness + \varepsilon..... (3.2)$$

Where:

β_0 = intercept of the relationship in the model

$\beta_1 - \beta_5$ = coefficients of the exogenous variables

ε = stochastic variable (error term)

The model can also be presented in logarithm form as follows:

$$\text{LogGDP} = \beta_0 + \beta_1 \log \text{EXP} + \beta_2 \log \text{IMP} + \beta_3 \log \text{FDI} + \beta_4 \log \text{INFL} + \beta_5 \log \text{OPEN} + \mu \dots \dots$$

(3.3)

3.3 Justification of variables

3.3.1 Gross Domestic Product (GDP)

The gross domestic product (GDP) is a commonly utilized indicator to assess economic growth. It reflects the total value of goods and services produced within a country's boundaries during a particular time, typically a year. In the present study, the GDP is employed as a reliant variable to evaluate the extent of economic growth in Zimbabwe.

3.3.2 Inflation

Inflation refers to the overall escalation in the prices of goods and services in an economy during a specific timeframe. High inflation rates can negatively affect economic growth by reducing consumers' purchasing power and reducing investment. When the prices of goods and services rise, it often leads to an increase in the cost of raw materials, resulting in higher production costs. This, in turn, may lead to a reduction in production levels within an economy. It is important to note that such increases can have a significant impact on the overall economic performance of a country. In this study, inflation can be used as an independent variable to measure the impact of inflation on economic growth.

3.3.3 Foreign Direct Investment (FDI)

FDI refers to investment made by a foreign company in the economy of another country. FDI can have a positive impact on economic growth by creating jobs, increasing access to capital,

and improving technology transfer. In this study, FDI can be used as an independent variable to measure the impact of FDI on economic growth.

3.3.4 Imports

Imports are goods and services purchased from another country. Imports can have a positive impact on economic growth by increasing access to goods and services not produced domestically and by providing inputs for domestic production. In this study, imports can be used as an independent variable to measure the impact of imports on economic growth.

3.3.5 Trade openness

Trade openness refers to the degree to which a country participates in international trade. High levels of trade openness can lead to greater economic growth by increasing access to markets, promoting competition, and increasing specialization. In this study, trade openness can be used as an independent variable to measure the impact of trade openness on economic growth.

3.3.6 Exports

Exports denote the merchandise and services that are manufactured in a particular country and marketed to other nations. Exports can have a positive impact on economic growth by increasing revenue and creating jobs. In this study, exports can be used as an independent variable to measure the impact of exports on economic growth.

3.3.7 Error term (ϵ)

The residual term, commonly referred to as the error term, holds immense significance in econometric modelling. It takes into account the influence of all exogenous variables that are excluded from the model due to diverse reasons such as out-dated or inaccessible data or imprecision in estimation. Moreover, the error term signifies other factors that may have an impact on economic growth but are not accounted for in the model, like natural disasters or corruption. It is hypothesized that the error term conforms to a normal distribution with a mean of zero and an invariant variance.

3.4 Data Analysis

In order to carry out the research on the effects of international trade on economic growth the stated below tests are necessary.

3.4.1 Test – statistic

To assess the statistical importance of the calculated coefficients of individual explanatory variables, the T-statistic was utilized. A statistic is deemed statistically significant if its value falls within the critical region, which denotes an absolute value greater than 2 at a 2% level of significance (Gujarati, 2004).

3.4.2 Heteroscedasticity

In this research, the white heteroscedasticity test will be conducted to verify that the error terms conform to a normal distribution and that the variance of errors from regression is not influenced by the values of the independent variable. This test is crucial in ensuring the validity and accuracy of our findings.

3.4.3 Stationery tests

In order to ensure the reliability of our results and prevent any false conclusions, it is essential to conduct stationary tests of the variables using the Augmented Dickey Fuller (ADF) procedures. The ADF test is a powerful tool that allows us to assess the unit root test status and is particularly useful in dealing with non-stationary time series data. This step is crucial in avoiding spurious regressions and mitigating the risk of inflated results with a low Durbin Watson (DW) statistic (Gujarati, 2004). By carefully examining the stationarity of our data, we can confidently draw meaningful conclusions from our analysis.

3.4.4 Multicollinearity

Multicollinearity is a common issue that arises when two or more independent variables in a regression model exhibit strong correlation with one another. To ensure the accuracy and validity of our analysis, it is imperative that we test for multicollinearity in this research. The correlation matrix will be utilized to assess the degree of multicollinearity among the variables,

with a maximum correlation coefficient threshold of 80%. This step is crucial in ensuring that the explanatory variables do not possess a systematic relationship that causes them to move together, which may lead to inaccurate results. By carefully examining and addressing multicollinearity, we can confidently draw reliable and meaningful conclusions from our analysis.

3.4.5 Coefficient of determinant ()

To evaluate the degree to which the explanatory variables account for the model's variation, the coefficient of determination (R^2) will be employed as a measure of goodness of fit. The adjusted (R^2) will also be used to verify the model's quality. Furthermore, the F-test will be utilized to determine the overall significance of the model, as well as the significance of each variable individually

3.4.6 Normality test

To assess whether the error terms follow a normal distribution, the Jarque-Bera (J-B) test will be conducted. It aims to identify any deviations from normality, which might arise due to inaccurate explanatory variables and lead to variations in real-world outcomes

3.4.7 Auto-correlation

To ascertain whether the fitted model completely elucidates the pattern of association between the explanatory variables (exports, imports, FDI, inflation, and openness) and the dependent variable (GDP), the Durbin Watson (DW) statistic test will also be administered to detect autocorrelation.

3.4.8 F-test

In regression analysis, the F-test is implemented to examine the overall significance of a regression model, which assesses the significance of each variable independently.

3.5 Summary

To ensure the reliability of the findings, this section provides a clear definition of the diagnostic tests that will be covered. Additionally, it specifies the data type and sources that will be used in the investigation. It's worth noting that the model used in this study was obtained from Gujarati (2004).

CHAPTER IV

RESULTS, PRESENTATION AND ANALYSIS

4.0 Introduction

This research holds immense significance in understanding the impact of international trade on Zimbabwe's economic growth over a decade, from 2010 to 2020. We intend to delve deep into the subject, exploring every aspect that contributes to the relationship between international trade and economic growth. This chapter will employ rigorous methods, including econometric analysis using E-Views 7, to ensure the validity and reliability of our findings.

4.1 Summary Statistics

Table 1 below represents the descriptive statistics of all the variables used.

Table 1 Descriptive statistics

	GDP	EXPORTS	FDI	IMPORTS	INFLATION	TRADE OPENNESS
Mean	1.98E+10	4.81E+09	-3.48E+08	6.98E+09	75.60875	0.618152
Median	1.95E+10	4.20E+09	-3.44E+08	6.58E+09	3.022670	0.546716
Maximum	3.42E+10	8.94E+09	-1.23E+08	9.70E+09	557.2018	0.894665
Minimum	1.20E+10	3.46E+09	-7.17E+08	5.34E+09	-2.43097	0.500297
Std. Dev.	5.65E+09	1.58E+09	1.60E+08	1.27E+09	176.8984	0.137710
Skewness	1.350653	1.759420	-0.83258	0.761467	2.158048	1.117903
Kurtosis	5.137659	5.327482	3.858702	2.930067	6.189523	2.635508
Jarque-Bera	5.438878	8.158059	1.608817	1.065268	13.20080	2.352023
Probability	0.065912	0.016924	0.447352	0.587057	0.001360	0.308507
Sum	2.17E+11	5.29E+10	-3.83E+09	7.68E+10	831.6963	6.799673
Sum Sq. Dev.	3.19E+20	2.49E+19	2.56E+17	1.62E+19	312930.6	0.189640
Observations	11	11	11	11	11	11

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Source: E-views 7

Table 1 above shows descriptive statistics for the variables included in the research project titled "The Effects of International Trade on Economic Growth in Zimbabwe." The variables included are GDP growth, exports of goods and services, foreign direct investment, imports of goods and services, inflation (consumer price), and trade openness.

The mean values for the variables indicate that Zimbabwe's GDP growth averaged at 1.98E+10, while exports of goods and services averaged at 4.81E+09. On the other hand, foreign direct investment had an average value of -3.48E+08, and imports of goods and services averaged at 6.98E+09. The average inflation rate was 75.60875, and trade openness had an average value of 0.618152.

The median values for the variables are relatively close to the mean, which indicates that the data is relatively normally distributed.

The minimum and maximum values show the range of the variables, and it can be seen that there is a wide variation in the values of foreign direct investment and inflation (consumer price). By examining the minimum and maximum values, potential outliers in the data can be identified.

The standard deviation values indicate the amount of dispersion or variation in the data, and it can be seen that the variables with the highest dispersion are inflation and trade openness.

The skewness values indicate the symmetry of the distribution of the data, and it can be seen that all variables, except for foreign direct investment, have positive skewness values, indicating that the data is skewed to the right.

The kurtosis values indicate the flatness or peakedness of the distribution of the data, and it can be seen that all variables have positive kurtosis values, indicating that the data is leptokurtic (i.e., has a higher peak than a normal distribution).

Finally, the Jarque-Bera test results indicate that the data is not normally distributed, as the probability values are below the significance level of 0.05 except for imports and exports which are normally distributed because their probabilities are above 0.05.

4.2 Results of the Model's Diagnostic Tests

4.2.1 Stationarity Results

According to the results of ADF test below, it shows that exports, imports, FDI and trade openness are stationary at the level, which indicates that they do not have a unit root and are stationary in nature. This is essential because including non-stationary variables in a regression model can lead to spurious regression results and misleading conclusions.

Additionally, the first-differenced inflation variable is also stationary, which suggests that it can also be included in the regression model as a control variable but it can only be included after first differenced.

Overall, the results are in line with the theory that international trade can affect economic growth, and the variables of interest are suitable for examining this relationship in Zimbabwe. However, it is worth noting that these results alone are not sufficient to draw any significant conclusions, and further analysis is required, such as a regression analysis, to determine the nature and extent of the relationship between international trade and economic growth in Zimbabwe.

4.2.2 Unit root test

Table 2 ADF TEST AT LEVEL

VARIABLE	ADF STAT	1% critical value	5% critical value	10 critical value	DECISION
GDP	-2.59694	-4.29707	-3.2127	-2.74768	Stationery
EXPORTS	-2.557979	-4.29707	-3.2127	-2.74768	Stationery
IMPORTS	-3.43246	-4.4206	-3.25981	-2.77113	Stationery
FDI	-3.009931	-4.4206	-3.25981	-2.77113	Stationery
INFLATION	3.441666	-4.29707	-3.2127s	-2.74768	Not stationery
TRADE OPENNESS	-1.598587	-4.29707	-3.2127	-2.74768	Stationery
	FIRST DIFFERENCE				
INFLATION	1.855344	-4.58265	-3.32097	-2.80138	Stationery

Source: E-views 7

Table 2 above presents stationarity results found using the ADF tests. All variables were found to be stationery at level difference except for inflation which was found stationery after first difference.

4.2.3 Multicollinearity Test

Table 3 Correlation Matrix

	GDP	EXPORT	FDI	IMPORTS	INFLATION	TRADE OPENNESS
GDP	1.000000	0.855172	-7.27E-01	0.478494	0.159450	-0.603376
EXPORTS	0.855172	1.000000	-5.72E-01	0.568719	0.270224	-0.184197
FDI	-0.727374	-0.5723	1.000000	-0.72171	0.463012	0.269727
IMPORTS	0.478494	0.568719	-7.22E-01	1.000000	-0.34425	0.286182
INFLATION	0.159450	0.270224	0.463012	-0.34425	1.000000	-0.253646
TRADE OPENNESS	-0.603376	-0.1842	0.269727	0.286182	-0.25365	1.000000

Source E-views 7

When conducting regression analysis, it is essential to test for multicollinearity among the variables. Multicollinearity refers to the situation where two or more variables in a regression model are highly correlated with each other, making it difficult to estimate the coefficients of the variables accurately.

To test for multicollinearity, we use the correlation matrix. The correlation coefficient is a statistical measure that shows the extent to which two variables fluctuate together. When the correlation coefficient between two variables is greater than 0.8, it suggests that the variables are highly correlated, and multicollinearity may be a serious problem.

According to Gujarati (2004), to determine if the multicollinearity between two or more variables has a negligible effect on estimating the model, it is generally recommended to consider a coefficient of determination less than 0.8.

In this study, we hypothesize that there is no perfect multicollinearity among the variables. Our null hypothesis is that there is perfect multicollinearity, while the alternative hypothesis is that there is no perfect multicollinearity. Based on the correlation matrix results, we find that all variables have correlation coefficients less than 0.8 except for GDP only which has 0.855172.

Therefore, we reject the null hypothesis and conclude that there is no perfect multicollinearity among the variables.

This implies that the OLS assumption of no multicollinearity is satisfied, and we can proceed with the regression analysis confidently. It is worth noting, however, that while there is no perfect multicollinearity, there may still be some degree of multicollinearity among the variables, which could affect the accuracy of the coefficient estimates.

4.2.4 Autocorrelation Test

The absence of autocorrelation is an important assumption in the ordinary least squares (OLS) regression analysis. Autocorrelation refers to the existence of correlation between the error terms of a regression model. The presence of autocorrelation may result in biased and inconsistent estimates of the regression coefficients, which affects the reliability of the results to avoid these consequences the researcher used Breusch-Godfrey LM test to detect the presence or absence of autocorrelation.

Table 4 Breusch-Godfrey LM Test

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.002392	Prob. F(1,4)	0.9633
Obs*R-squared	0.006575	Prob. Chi-Square(1)	0.9354

Source: E-views 7

The results presented by serial correlation test shows that the data has no auto correlation as shown by its probabilities which are all above 5% (Gujarati 2004).The null hypothesis for the Breusch-Godfrey LM test is that there is no serial correlation as shown by the above results.

The results show a very low F-statistic and a high probability value (0.9633), which suggests that we fail to reject the null hypothesis and conclude that there is no evidence of serial correlation in the regression errors. Similarly, the Observed R-squared statistic has a low value of 0.006575 and a high probability value (0.9354), which indicates that the null hypothesis

cannot be rejected at the 5% significance level. Therefore, we can conclude that the regression model is free from serial correlation.

4.2.5 Heteroscedasticity Test

Heteroscedasticity occurs in regression analysis when the variance of the errors is not constant across the range of values of the independent variable. In other words, the variability of the errors increases or decreases as the value of the independent variable increases.

Table 5 ARCH Heteroscedasticity Test

Heteroskedasticity Test: ARCH			
F-statistic	0.953495	Prob. F(1,8)	0.3574
Obs*R-squared	1.064942	Prob. Chi-Square(1)	0.3021

Source: E-views 7

At 10% level of statistical significance, we have found the evidence to reject the null hypothesis which states that there is heteroscedasticity and conclude that there is no heteroscedasticity in the model. The F-statistic is 0.953495 with a corresponding p-value of 0.3574. The F-statistic tests the null hypothesis that there is no heteroscedasticity in the data. Since the p-value is greater than the conventional significance level of 0.05, we fail to reject the null hypothesis. This indicates that there is no strong evidence to suggest the presence of heteroscedasticity.

4.3 Model Specification

4.3.1 Regression Analysis

Table 6 Results from OLS regression

Dependent Variable: GDP		
Method: Least Squares		
Date: 03/04/23 Time: 23:57		

Sample: 2010 2020				
Included observations: 11				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.59E+10	1.16E+09	13.66898	0
EXPORTS	2.208532	0.200255	1.10E+01	0.0001
FDI	2.391261	3.245626	0.736764	0.4944
IMPORTS	1.444481	0.28939	4.991466	0.0041
INFLATION	-2693338	1900810	-1.41694	0.2157
TRADE OPENNESS	-2.55E+10	2.21E+09	-11.5483	0.0001
R-squared	0.996303	Mean dependent var		1.98E+10
Adjusted R-squared	0.992606	S.D. dependent var		5.65E+09
S.E. of regression	4.86E+08	Akaike info criterion		43.14268
Sum squared resid	1.18E+18	Schwarz criterion		43.35971
		Hannan-Quinn criter.		43.00587
F-statistic	269.4914	Durbin-Watson stat		1.786665
Prob(F-statistic)	0.000004			

Source E-views 7

R-squared (R ²)	0.996303		
Adjusted (R ²)	0.992606	F-statistic	4.172984
Durbin Watson	1.786665	Prob(F-statistic)	0.00004

Using the regression results that we obtained above the model can be written as follows:

$$\text{GDP} = \beta_0 + \beta_1 \text{EXP} + \beta_2 \text{IMP} + \beta_3 \text{FDI} + \beta_4 \text{INFL} + \beta_5 \text{OPEN}$$

$$\text{GDP} = 1.59\text{E}+10 + 2.208532 \text{ EXP} + 1.444481 \text{ IMP} + 2.39126 \text{ FDI} - 2693338 \text{ INFL} - 2.55\text{E}+10 \text{ OPEN}$$

4.3.2 Significance of the model

The R-squared value of 0.996303 and adjusted R-squared of 0.992606 indicate that the model explains a large proportion of the variation in economic growth, with the adjusted R-squared value taking into account the number of variables included in the model.

Furthermore, the low p-values for exports, imports, and trade openness suggest that these variables have a significant effect on economic growth.

The F-value, which is a measure of the overall significance of the model, is also highly statistically significant at the 1% level of significance, with a value of 0.000004. This suggests that collectively, all the variables included in the model have a significant impact on economic growth.

Overall, this implies that the statistical model used to analyze the relationship between economic growth and the variables of exports, imports, and trade openness is robust and provides strong evidence to support the idea that these variables have a significant impact on economic growth.

4.4 Interpretation of results

The results of the OLS regression analysis suggest that international trade has a significant impact on economic growth in Zimbabwe. Specifically, the coefficients for exports of goods and services and imports of goods and services are positive and statistically significant at the 1% level, indicating that these variables have a significant positive effect on economic growth in Zimbabwe. The coefficient for exports of goods and services is 2.208532, and the coefficient for imports of goods and services is 1.444481. These results suggest that for every unit increase in exports and imports, the economic growth of Zimbabwe is likely to increase by 2.208532 units and 1.444481 units, respectively.

On the other hand, the coefficient for foreign direct investment (FDI) is positive but statistically insignificant, with a p-value of 0.4944, indicating that there is not enough evidence to conclude that FDI has a significant effect on economic growth in Zimbabwe. Similarly, the coefficient

for inflation is negative but statistically insignificant, suggesting that inflation does not have a significant impact on economic growth in Zimbabwe.

Finally, the coefficient for trade openness is negative and statistically significant at the 1% level, indicating that higher levels of trade openness may have a negative impact on economic growth in Zimbabwe. This coefficient is $-2.55E+10$, meaning that for every unit increase in trade openness, the economic growth of Zimbabwe is likely to decrease by $2.55E+10$ units.

Overall, the results suggest that international trade, particularly exports and imports of goods and services, play a significant role in promoting economic growth in Zimbabwe, while FDI and inflation do not have a significant impact. However, policymakers should carefully consider the potential risks associated with increased trade openness and explore ways to mitigate any negative effects on economic growth.

4.4.1 Exports

It has been revealed by the regression analysis that a remarkable and favorable association prevails between exports and economic growth. The coefficient for exports of goods and services is given as 2.208532, which means that for every unit increase in exports, economic growth is expected to increase by 2.208532 units.

The coefficient of exports is stated to be statistically significant at the 1% level, indicating that there is a high level of confidence that the observed relationship between exports and economic growth is not due to chance.

The results of the regression analysis provide strong evidence to support the idea that exports have a significant positive effect on economic growth in Zimbabwe. The statistically significant coefficient for exports suggests that increases in exports are likely to lead to increases in economic growth, and that policies aimed at promoting exports could be an effective way to promote economic growth in Zimbabwe.

This is consistent with the findings of previous empirical researches done by Chinyoka and Odhiambo (2016), which suggest that there is a long run relationship between exports and economic growth and policies aimed at promoting exports could be an effective way to boost economic growth in the country.

However, the study also found evidence of a short-run bi-directional causality between exports and economic growth, suggesting that economic growth can also lead to increased exports.

4.4.2 Imports

The results suggest that there is a strong relationship between imports of goods and services and economic growth in Zimbabwe. The coefficient for imports of goods and services is 1.444481, which indicates that for every unit increase in imports of goods and services, the economic growth of Zimbabwe is likely to increase by 1.444481 units.

The coefficient for imports of goods and services is statistically significant at the 1% level. Zimbabwe could benefit from increasing its imports of goods and services as it can positively impact the country's economic growth. However, policymakers should carefully consider the potential risks associated with increased imports, such as currency fluctuations, trade imbalances, imported inflation and dependency on foreign goods and services.

Similarly, this study is also in line with previous researches undertaken by Ocran & Quartey, (2013). However, their study also highlighted potential risks associated with increased imports, such as trade imbalances and dependency on foreign goods and services, which policymakers should carefully consider.

4.4.3 Foreign Direct Investment

The coefficient for FDI is 2.391261, which indicates that for every unit increase in FDI, the economic growth of Zimbabwe is likely to increase by 2.391261 units. However, the p-value

associated with the coefficient is 0.4944, which is greater than the commonly used threshold of 0.05.

This implies that there is insufficient evidence to reject the null hypothesis that there is no significant relationship between FDI and economic growth in Zimbabwe. Zimbabwe may not benefit significantly from increasing FDI. However, policymakers should carefully consider the potential benefits and risks associated with FDI and explore other avenues for economic growth, such as domestic investment, trade, and innovation.

4.4.4. Inflation rate

The results of the analysis indicate that inflation have a negative effect on economic growth in the country. The coefficient for inflation is reported to be -2693338. This indicates that a unit increase in inflation is associated with a decrease in economic growth by 2,693,338 units. However, the statement highlights that the coefficient is not statistically significant. This means that the observed relationship between inflation and economic growth is not statistically significant.

The p-value for inflation is given as 0.2157, which is greater than the commonly used threshold of 0.05. A p-value is a measure of the strength of evidence against the null hypothesis, which in this case is that there is no relationship between inflation and economic growth. A p-value of 0.2157 indicates that there is not enough evidence to reject the null hypothesis at the 5% level of significance, which suggests that the relationship between inflation and economic growth is not statistically significant.

The results of the regression analysis provide evidence to suggest that inflation have a negative effect on economic growth in Zimbabwe. The negative coefficient and high p-value suggest that increases in inflation is associated with decreases in economic growth, therefore policymakers may need to focus on reduction in inflation to promote economic growth in the country. This is also supported by the research which was previously done by (Mbutor &

Nkoro, 2016), which concluded that there is a negative relationship between inflation and economic growth.

4.4.5 Trade Openness

Regression analysis has been conducted to investigate the relationship between trade openness and economic growth in Zimbabwe. The results of the analysis indicate that trade openness has a significant negative effect on economic growth in the country.

The coefficient for trade openness is reported to be $-2.55E+10$. This implies that a unit increase in trade openness, as measured by the sum of exports and imports as a percentage of GDP, leads to a decrease in economic growth by $2.55E+10$ units. The negative coefficient suggests that an increase in trade openness is associated with a significant decrease in economic growth.

The statement also highlights that the coefficient for trade openness is statistically significant at the 1% level. A significance level of 1% suggests that there is a very low probability of observing such a relationship by random variation in the data. The statistically significant coefficient strengthens the argument that the observed relationship between trade openness and economic growth is reliable.

Overall, the results of the regression analysis suggest that trade openness has a significant negative effect on economic growth in Zimbabwe. The negative coefficient for trade openness implies that increases in trade openness, as measured by the sum of exports and imports as a percentage of GDP, are associated with decreases in economic growth. The statistically significant coefficient strengthens the evidence for this relationship. These findings may have important implications for policymakers and stakeholders in Zimbabwe, who may need to consider the potential negative effects of increased trade openness on economic growth, and explore strategies to mitigate these effects.

However according to (Edwards, 1998), trade openness has a positive effect on economic growth. The negative effect of trade openness found in this study may be due to factors such

as the vulnerability of the country's export base and the lack of competitiveness of domestic industries.

4.5 Conclusion

In conclusion, this chapter has covered model's diagnostic tests and also the results of OLS suggesting that international trade, particularly exports and imports of goods and services, has a significant positive effect on economic growth in Zimbabwe. However, trade openness has a significant negative effect on economic growth. Foreign direct investment and inflation do not appear to have significant effects on economic growth in Zimbabwe.

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

Chapter 5 provides a comprehensive summary, conclusion, and recommendations based on the study's findings. It highlights areas where further research could be conducted to fill any gaps that may exist. These insights are intended to benefit future researchers by providing them with a clear understanding of the study's outcomes and implications for future work.

5.1 Summary of Results

Based on the findings, it can be inferred that exports, imports and FDI have a positive impact on economic growth. Therefore, any increase in these is likely to result in an improvement in economic growth. On the other hand, inflation and trade openness exhibit an inverse relationship with economic growth. This implies that enhancing these variables may lead to a negative effect on economic growth.

5.2 Conclusion

The OLS regression analysis shows that economic growth is significantly and positively associated with exports and imports. A unit increase in exports and imports increases GDP by 2.208532 and 1.444481, respectively. However, FDI and inflation are not statistically significant in predicting economic growth, as their p-values are greater than the significance level of 0.05.

Trade openness has a significant negative effect on economic growth, and a unit increase in trade openness decreases GDP by 2.55E+10. The R-squared value of 0.996303 indicates that the model explains 99.63% of the variation in economic growth, and the adjusted R-squared value of 0.992606 suggests that the independent variables used in the model have a good fit.

Overall, the results suggest that countries with higher levels of exports and imports tend to experience higher GDP growth, while higher levels of trade openness may have a negative impact on GDP growth. However, it is important to consider other factors that may affect GDP growth, such as political stability, infrastructure, and human capital, before drawing any definitive conclusions.

5.3 Recommendations

1. Governments should focus on promoting exports and imports of goods and services to stimulate economic growth. This can be achieved through policies that promote trade agreements, eliminate trade barriers, and provide incentives to domestic producers to increase exports, however, in trying to increase exports and imports it should take into consideration other factors such as maintaining trade balance, avoiding imported inflation as well as relying on foreign goods.
2. The negative impact of trade openness on GDP growth suggests that policymakers should carefully consider the potential costs and benefits of opening up their economies to international trade. They may need to balance the benefits of increased access to foreign markets with the potential negative effects on domestic industries and employment.
3. Foreign direct investment (FDI) does not have a statistically significant effect on GDP growth, so governments should not rely solely on FDI to drive economic growth. Instead, they should focus on creating a favorable business environment that encourages domestic investment and entrepreneurship.
4. Inflation does not have a statistically significant effect on GDP growth, but policymakers should still be vigilant in controlling inflation to prevent negative effects on the economy, such as reduced purchasing power and decreased investor confidence.

Overall, policymakers should use the results of this analysis to inform their decisions on economic policy, while also considering other relevant factors, such as political stability, infrastructure, and human capital.

5.4 Suggestions for future research

1. Expand the sample size: The sample size of this study is only 11, which may not be reliable for giving conclusions decisions based on the results of the findings. Therefore, future studies could consider using a larger sample size to improve the validity of the findings.
2. Consider the impact of non-trade factors: The current study only considers the impact of international trade on economic growth. However, other factors, such as political stability, natural disasters, and technological advancements, may also influence economic growth. Therefore, future studies could examine the interaction of these factors with international trade on economic growth.
3. Use a different model: The current study uses a simple OLS regression model, which assumes linearity between the independent and dependent variables. However, in reality, the relationship between international trade and economic growth may be more complex. Therefore, future studies could use alternative models such as the autoregressive distributed lag model, which captures the short-run and long-run effects of international trade on economic growth.
4. Conduct a comparative analysis: While the current study provides insight into the relationship between international trade and economic growth in Zimbabwe, a comparative analysis across different countries could offer more generalizable findings. Future studies could compare the relationship between international trade and economic growth across different countries and regions to identify common patterns and unique differences.

