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****

**TAFADZWA MUSWATI**

**B1851941**

**SUPERVISED BY**

**DR DAMIYANO**

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**AUTHOR’S ADDRESS**  3957 GLEN-NORAH A

CHIKAKA DRIVE

HARARE

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# DEDICATIONS

I dedicate this dissertation to Muswati family whose love and care for me made this study possible and my supervisor, Dr. Damiyano for sharing his knowledge with me; without his theoretical guidance, this dissertation would not have been completed**.**

# ABSTRACT

The goal of the study is to look at the impact of foreign direct investment on economic Zimbabwe’s growth from 1980 to 2020.Theoretical postulates claim that FDI has a favourable impact on economic growth, while empirical evidence is mixed. While some studies show that FDI benefits both host and home countries although there are some disadvantages to both host and home nations. The study examines the effect of FDI on economic growth in Zimbabwe using data from 1980 to 2020 and applies the ordinary least squares (OLS) techniques on time series data using E-views 7 statistical package software. FDI, Gvt expenditure and employment are all subjected to the OLS, with economic growth (GDP) as the dependent variable. All variables have large positive impact on economic growth according to the results of the study. Findings of the study reveals that FDI important in fostering Zimbabwe’s economic growth trajectory. As a result, good policies that lure foreign investors or companies are needed to be implemented so as to create a conducive business environment which will improve opportunities which will lead to economic growth of a nation.

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I would want to express my gratitude to my supervisor, Dr. Damiyano, for his tireless efforts to ensure that l complete all of the procedure necessary to complete all of the procedures necessary to complete the intricate project.

My appreciation also goes out to my fellow classmates, who assisted me in numerous ways.

# ABBREVIATIONS

ADF- Augmented Dicky Fuller

BLUE - Best Linear Unbiased Estimator

ESAP - Economic structural Adjustment Programme

FDI- Foreign Direct Investment

GDP- Gross Domestic Product

HDI - human Development Index

IMF- International Monetary Fund

MOFED- Ministry of Finance and Economic Development

OECD- Organisation for Economic Co-operation and Development

SMP- Staff-Monitored Programme

VIF- Variance Inflation Factor

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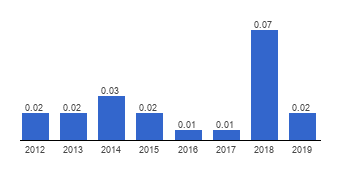
# Chapter I

# 1.0 Introduction

According to Potter (2021), economic growth refers to a rise in the production of economic commodities, when comparing one period of time to another or income. Numerous factors including those related to human resources, natural resources, capital formation, technological development, social and political consideration. Economic development brought on by long term growth result in advantages like higher employment rates and national income. Additional tax revenue generated by economic growth is used by government to fund spending that can help the economy grow further. This chapter comprises of background of the study, problem statement, objective of the study, research questions, purpose of the study as well as limitation and delimitations.

# 1.**1 Back ground to the study**

OECD (2021) alluded an investor from one economy develops a long-term interest in and a sizable amount of control over an enterprise located in another economy through a type of cross-border investment known as foreign direct investment. According to Gwenhamo (2015) increased FDI leads to increased economic growth in a country’s GDP. Due to policies that were unfavourable to foreign investors, FDI net inflows into Zimbabwe were minimal from 1980-1990. Tsaurai and Odhiambo (2012) cited regulations such as the unreasonably long process long process of requiring a minimum of roughly 30% local involvement in sectors and the stringent repatriation of profits policy. According to Gwenhamo (2011), policies towards foreign investors started to alter in late 1980s causing FDI levels to plummet, forcing the Zimbabwean government to devise a new investment policy in order to maintain FDI stability. Moyo (2013),alluded that government’s economic policies established since 1980 have not been beneficial to economic growth because there have been less exports and more imports in the economy, implying a drop in good production to resuscitate the economy, the Zimbabwean government implemented ESAP in 1991 as a strategy to enhance the economic environment and thus promote both economic growth and FDI by providing incentives such as tariff exemptions and encouraging the use of local raw materials Moyo (2013).



Source: World Bank



Source: World Bank

As illustrated by two graphs above where percentage of foreign Direct Investments are, for indicators, the data for Zimbabwe ranges from 1993-2019.According to World Bank (2020) ,the middle value for Zimbabwe during that time was 0.025 with a low value of 0 in 1999 and a high of 0.07 in 2018.In 2019 , it plummeted to just 0.02%.

Source: World Bank (2020)

As illustrated by the graph above, in 1980-1996 FDI was constant but GDP was increasing for that period. This shows that they were other factor which contributing to the growth of GDP from 1980-1996.As discussed above, policies which the government tried to implement were a major drawback to the success of an increase in FDI. In 1997 FDI increased better to a point where in fell to reach the constant level in 2010.While on the other hand in 1997 GDP was increasing with better margins until in 2008 where there was a major crisis globally and this also affect Zimbabwe’s investment performance as the investment environment was not stable in a way that investors were not confidence enough to invest in Zimbabwe’s economy. In 2009 up until 2017 FDI went back to constant level while economic growth was boosting. Economic growth was boosting because they were other factors which were contributing to such performance and these includes increase in employment and government spending. An increase in government expenditures create employment opportunities there by this will definitely foster the production hence economic growth will be boosted. Due to slowness to follow promises of reforms that were made in December 2017 by the new regime in order to improve business environment, investor foreign investors lost their hope as some of the policies that were implemented were not favourable for them to invest in such kind of investment .In 2019 the economy kept on suffering from hyperinflation and these made the economy worse because and implementation of poor monetary policies has led to the currency crisis and also price were going up over and over again. According to Investment Climate summary (2020), the government launched a stabilisation and reform plan backed by an IMF Staff-Monitored Programme (SMP), however the IMF reported in February 2020 that the SMP had gotten off track due to a number of factors and reforms that have not been fully implemented. This also was another cause for the failure of the Open for business mantra where investors were being lured to come and invest in Zimbabwe. According to Masuku (2022), due to volatile currency, lack of clear institutional governance frameworks, slow pace in domesticating international trade or investment treaties, the role of the government in the economy and national politics, there has been no meaningful investment in Zimbabwe. Over the last ten years, Zimbabwe has only managed to attract less than USD 600 million in foreign direct investment each year on average. Tax advantages for new investment by both international and domestic enterprises, making capital expenditures on new factories, machinery, and improvements entirely deductible, are part of Zimbabwe’s strategy to entice FDI. According to the Investment Climate Summary (2020), the government has made slow development in improving the business environment by lowering regulatory costs but policy inconsistency, weak institutions and a lack of fiscal discipline have continued to irritate businesses. Abuse of funds remained a major problem which has contributed negative impact in the economy and thereby creating unfavourable business environment to foreign investors. Economic growth has not increase to the expected level because some the companies have seized their operations and were forced to relocate to neighbouring countries where they are better policies for instance a company Unilever relocated to South Africa.

# 1.2 Statement of the problem

In order to make judgements or decisions that would be advantageous to the ,certain groups of individual, including the general public, investors, economist, government officials, corporations and other stakeholders, would prefer to understand deep about certain questions. It is always the case that economists, investors, government officials, and businesses want to know how foreign direct investment might help them grow and develop although they were some policies which were implemented in trying to raise FDI level in an economy. There have been policies since 1990 which were implemented by the government in order to stimulate FDI in Zimbabwe and some were mantra which were targeting to persuade foreign investors to come and invest in Zimbabwe’s economy. Despite launching and implementing policies, there is a ;large percentage of failure and small percentage of success .According to Masuku (2022)This is because of failure to fully implement reforms due to volatile currency, lack of clear institutional governance frameworks, slow pace in domesticating investment treaties, the role of the government in the economy and national politics, there has been no meaningful investment in Zimbabwe. For example Nigerian billionaire Mr Aliko Dangote wanted to invest in Zimbabwe’s critical economy sector, coal mining, thermal power station and construction but due to poor indigenisation policies which the government had implement in 2008 was not favourable for foreign investor as it was structured as 51% of the company shares were for indigenised Zimbabwean and 49% for foreign investors. This pushed away most foreign investors because it was not a conducive environment to invest in to. In addition, Dangote Industries has launched cement manufacturing in Zambia which was supposed to be launched. According to Zimbabwe Investment Authority (2018), the firm is importing coal in Zimbabwe with a total of 162 investment projects valued USD 1.5 billion were approved in 2017 compared to 164 projects valued 2.3billion in 2016.

# 1.3 Objective of the study

* To find out the association between Zimbabwe's economic growth, development, and investments.
* To assess the economic growth effects of investments
* To assess the economic development effects of investments
* To find out how foreign direct investments will contribute to an economy's growth and development.

# 1.4 Research question

* What is the link between economic growth, development, and foreign direct investment?
* What are the economic effects of foreign direct investment?
* What effect do foreign direct investments have on economic growth?
* How do foreign direct investments contribute to an economic growth and development

# 1.5 Purpose of the study

The study’s main objective is to demonstrate how investment influences or affects to economic growth and development. Also, to show both the favorable and unfavorable consequences of investments on economic growth and development in a given economy. Furthermore, what regulations must the government put in place in order to boost the economy's in flow of foreign direct investment? The focus of the investigation will be on how FDI affect economic growth and development. What needs to be done to increase FDI in Zimbabwe's economy, and what outcomes are anticipated after the implementation policies or regulations that are advantageous to foreign investors, and as a nation as a whole when they are implemented.

# 1.6 Assumptions

The investigator must acquire adequate, credible, and relevant information in order to produce fruitful information. Data on FDI and economic growth was easily obtained from the World Bank website, the Ministry of Industry and Commerce, and the Ministry of Finance and Economic Development in this inquiry (MOFED). They were critical to the study's success.

# 1.7 Limitation

Due to the COVID 19 epidemic, doing face-to-face research from a limited group of people will be substantially more difficult due to movement restrictions. Furthermore, due to limited mobility, meeting with a variety of people will be challenging. It would be extremely sensitive to provide key information so ministries do not provide information to specific individuals. As a result, the research will not be refined as it should be.

# 1.8 Delimitations

* Conducting researches is a huge problem because it requires data and portable devices like smart phones and laptops through social platforms like zoom, google meet, skype is very expensive. Calling is also somewhat expensive.
* As a means of defending themselves against attack, some people might give false information.

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# 1.9 Definition of terms

* Economic growth- According to Potter (2021), economic growth refers to increase in the production of economic goods and services, compared from one period of time to another or income
* Foreign Direct Investment- According to World Bank (2020), It refers to investment equity flows in the reporting economy. This means that sum of equity capital, reinvestment of earnings and other capital.
* Gross Domestic Product-is a monetary measure of the market value of all the final goods and services produced in a specific time period by countries. Dawson, Graham (2006)
* Real Gross Domestic Product-According Ganti (2022) is an inflation-adjusted measure that reflects the value of all goods and service produced by an economy in a given year (expressed in a base-year prices) and is often referred to as a constant-price GDP, inflation-corrected GDP, or constant dollar GDP
* According to Ganti (2022), real gross domestic product (RGDP) is an inflation-adjusted measure that reflects the value of all goods and services produced by an economy in a given year (expressed in base-year prices). It is also known as constant-price GDP, inflation-corrected GDP, or constant-dollar GDP.

# 1.10 Conclusion

The researcher's focal point will be on the effects of investments on economic growth and development in a given economy. What has to be done to improve foreign direct investment in Zimbabwe's economy, and what effects may be expected if policies that are particularly flexible or favorable to individuals, whether international or local investors, and the country as a whole are when implemented.

# CHAPTER II

# LITERATUREREVIEW

# 2.0. Introduction

This chapter attempts to analyze and evaluate some of the hypotheses proposed by various researchers regarding the impact of investment on both economic growth and development. This literature review is organized into two sections: theoretical evidence and empirical evidence. The theoretical section will identify theories that explain how investment affects economic growth and development, while the empirical evidence section will look into some of the findings or results of prior studies done or conducted by other researchers. This research intends to highlight the complex economic issues that affect Zimbabwe's economic growth, development, and investment relationships. The economic issues associated with the relationship between investment, economic growth, and development in relation to Zimbabwe's hurdles to long-term economic growth and development. As a result, macroeconomic instability, drought, capital loss, rapid increases in public debts, shortages of foreign exchange and regulatory, poor policy formulation and implementation, inflation, and mismanagement as a result of corruption activities have hampered both economic growth and development in Zimbabwe.

# 2.1.0 Theoretical literature review

The notions of economic growth and development are the two most important problems in economics. Different school thought has classified different ideas or views on theorical literature review as each scholar had his on view on the issue between economic growth and development as a result of investment in an economy. Levels of investment has certain level which affects both economic growth and development positively.

# 2.1.1 Adam Smith’s theory of growth

It is theory of economic growth which states that there are three starting points of economic growth which are growth of labour force and capital stock, advancement in systematic of labour and capital through great division of work and technological progress. Gujarati (2004) argued Smith suggested that technological development is crucial in the improvement of economic growth. An increase in asset investments is an important aspect because it is to increase the initial investments for example new machines. This simply mean that companies will more productive as they will be able to produce more output at a fast rate. At time if the business there is conducive atmosphere companies tend to reinvest in new machines there by increasing commodities in an economy and hence as a result this will definitely lead to an improvement in economic growth in the economy.

# 2.1.2 Keynesian theory of growth

Consumption is the crucial because it influences the level of production, which is influenced by effective demand. The Keynes model places emphasis on how important the function of the government is to an economy. Amaded (2021) alluded this means that the government plays a vital role in an economy as maintains full employment. There are main objectives or targets of the government in an economy and these objectives includes infrastructure development, unemployment benefits as well as education. This means that there is a direct relationship between economic development and investment and he also presumed that there is a direct link between economic growth and exports. Government responsibility of provide such deeds to the citizen will definitely result in improvement in standard of living Keynes (1930). Consumption is significant because the level of production is determined by effective demand. The Keynes model emphasizes the government's involvement in generating economic growth. According to Amaded (2021), 6the government plays a critical role in an economy by ensuring full employment.

# 2.1.3 Harrod-Domar Growth Model

According to Harrod -Domar growth model, there are two factors that affect the rate of economic growth. These factors are the level of savings and Capital output ratio Pettinger (2019). He also said that the savings we have the investment we have and as result both economic growth and development will be improved as there is an improvement of investments in an economy. Pettinger (2019). said that a lower capital -output means investment is more efficient and the growth rate will be higher.

Rate of economic growth(G) = Level of savings (S)/Capital output ratio (K). Pettinger (2019), believed that in developing countries like Zimbabwe and Zambia if they have high saving rate, economic growth and development are interlinked to higher rates of savings which will in turn into higher investments in an economy too. As a result of lower investments, low output and lower savings there will be a vicious cycle. In order to increase economic growth rates, it is necessary to improve savings either domestically or from abroad. Higher savings create a good circle to sustain economic growth. For instance, improved savings leads to increased investment and then to higher capital stock and then higher economic growth until it goes back again to increased savings as it is a cycle.

# 2.1.4 The Neo-classical model

This model was one that Robert Solow and Trevor Swan developed in 1956 to investigate potential avenues for GDP per capita increase. A country’s economic growth is aided by factors like technological progress and savings rate since the Neoclassical is an exogenous growth model Solow and Swan (1956).

Furthermore, technical advancements have an impact on GDP per capita, resulting in a slower growth rate. Because of technical advancements, labor productivity rises, and as a result, the gross domestic product per capita rises as well. As a result of technological advancements or improvements, outputs increase, and as a result, a country's economic growth increases, and consumer demand increases. Technology advancements or changes increase outputs, which then boosts country's economic growth. On the consumer side, there will be more options because there will be a wider range of outputs to choose from. According to Banton (2020), the relationship between labor and capital influences output as well as technology. An increase in savings has short-term effect on GDP, but only in the short run, not in the long run.

According to Banton (2020), the interaction between labor and capital affects both production and technology. The growth model emphasizes that an economy’s ability to grow depends on how money or capital is amassed inside it and how people use it

# 2.2.0 Empirical Literature review

As of now, many investigators consider investment to be the apex subject or topic because it makes such a significant contribution to the economy. There are numerous elements that have contributed to an economy's development and expansion. The study's major goal is to present empirical research on foreign direct investment, economic growth, and development and there is a direct link between foreign direct investment, economic growth, and economic development.

A variety of factors have contributed to the growth and expansion of an economy. The primary motive of the research is to give empirical findings on foreign direct investment, economic growth, and development. Foreign direct investment, economic growth, and development are all inextricably linked. Huge economic expansion means more opportunities for turnover, which attracts more foreign direct investments. Foreign direct investments, from multinational firms like Coca-Cola, plays an essential big part in the economy of host countries since it supports economic growth and offers job possibilities.

# 2.2.1 To determine the relationship on economic growth, economic development and foreign direct investment in Zimbabwe’s economy

Mustefa (2014) alluded that after conducting research on the relationship between investment and economic growth using Ethiopian data. To determine the major determinants of each variable, he employed basic econometrics methodologies. The study's major goal was to look at the interrelationships between two variables, GDP and foreign direct investment, in the short and long run, using data from 1970 to 2011, and to see if policies aimed at promoting private investment were successful in improving long-term growth. In order to detect associations between variables, the researcher used the Johansen and Juselious approach. According to Mustefa (2014) there is a substantial link between economic growth and both state and private investment. Real GDP and foreign direct investment have a positive association since both variables move in the same direction.

* + 1. **To evaluate the impacts of investments on economic growth**

Moyo (2013) employed a multiple regression model to link FDI to gross domestic product, as well as other macroeconomic variables including government spending and private savings. Foreign direct investment had a major impact on economic growth, according to his research. From 2009 to 2012, he studied the influence of foreign direct investment on Zimbabwe's economic growth. The study's major purpose was to analyze the impact of FDI on the Zimbabwean economy. The study's methodology was to estimate the change in GDP functions using OLS estimation criteria. In Zimbabwe, this was employed as a metric of economic growth. He discovered that FDI has a significant favorable impact on economic growth, which, in turn, has an obvious impact on economic development. There are other factors that have the same influence as FDI, despite the fact that FDI contributes more, such as GDP, government spending, and private investment. If Zimbabwe is to meet its economic growth ambitions, according to Moyo (2013), measures that support inward FDI must be advocated.

# 2.2.3 To evaluate the impacts of investments on economic development

Morrisey and Udomkerdmongkol (2012) utilized GMM to look at how private investment, FDI, and governance interacted in 46 countries from 1996 to 2009. Private and public investment, FDI, GDP, and governance indicators were all investigated. Countries with strong governance are said to stimulate greater FDI and private investment, and political stability is one of the most important aspects in attracting FDI. Between 1990 and 2007, Gohou and Sourmare (2012) used 2S.L.S. to investigate the interactions between economic growth, economic development, and poverty in Africa. Poverty rates, FDI, HDI, GDP, financial and political conditions, investment climate, institutional quality, and political risks were all factors evaluated. The results show a connection between FDI and a decrease in poverty. The welfare of the poorest countries is more impacted by foreign direct investment than that of the wealthier ones

# 2.2.4 To evaluate how foreign direct investments will lead to economic growth and development in an economy

Government capital expenditure, foreign direct investment, and economic growth in Nigeria were investigated by Kolawole and Odubunmi (2015). Foreign direct investment, according to Kolawole and Odubunmi (2015), is a critical source of growth since its effects can be disseminated through technical spillovers, improving overall productivity. Because of increased rivalry, the use of diverse resources, and the introduction of new technologies in the host nation, the economic growth of the host nation is altered. To add to that, Kolawole and Odubunmi (2015) expressed their point of view once more, this time to lighten up their explanation of how FDI has negative consequences. The most important argument they made was that the host nation’s internal development in terms of economic, political and social development is dependent on the effects of FDI on both economic growth and development. This implies that, according to their research, host countries have the ability to foster favorable conditions for positive effects and work to reduce the negative effects of FDI on economic growth and development by employing a variety of strategies.

# 2.3 Gap Analysis

The majority of studies on the subject have focused on FDI and economic growth only, hence not also looking on economic development also. It cannot be denied that investment has a positive impact on economic development in Zimbabwe, but the opposite is also true. For example, currently there is a higher rate of unemployment due to the closure of most businesses because the business environment is not conducive due to policies that do not favor or persuade investors. There is a strong link between investment and economic development since the higher the investment, the more jobs are produced, and as a result, individuals earn a certain income and their standard of life rise will rise because people will be able to consume or spend whatever commodities they choose. In various ways, the poverty rate is reduced. Due to a large body of economic literature that clearly demonstrates the relationships between economic growth, foreign direct investment, private investment, and governmental investment in developing nations like Zimbabwe. Foreign direct investment, private investment, and domestic investment are all proven to be the finest sources of long-term economic growth in a country. It is more valuable to use time series data to analyze the impact of different forms of investments to both economic growth and development, as well as to keep an eye on foreign debts, which can seriously disrupt or shake the economy's performance.

# CHAPTER III

# Research Methodology

# 3.0 Introduction

This investigation will use a quantitative and qualitative strategy to conduct thorough research in order to achieve positive outcomes in the study. Secondary data will be taken from World Bank statistics and Ministry of Finance and Economic Development. This foreign direct investment, economic growth, and development analysis will span the years 1980 to 2020.

# 3.1.0 RESEARCH DESIGN

The overall plan that the researcher picks out to merge diverse components of the research project is referred to as research design. As the overarching approach for conducting research, it establishes a logical method for addressing research issues through data collection, exposition and discussion. A research technique is a road map that guides the researcher through his or her investigation and analysis. The cause and effect model is used in this inquiry to analyze and clarify data related to the research goals.

# 3.1.1Theoretical model

The researcher will use a neoclassical model to determine the links between investment, economic growth, and economic development. Cobb-Douglas will be used to find out this because it is the model that strives to break down economic growth into component sources in every way possible. The primary components that will be employed are total productivity (A), labor (L), output (Q), and capital (K). The following equation demonstrates this:

There are several postulations in the model that relate to constant return to scale. Constant returns to scale mandates that total factor productivity in this equation below, according to one of the postulations in the model below.

**)**

Furthermore, the two researchers Cobb and Douglas argued that total factor productivity is magnified by innovations, investments in more productive industries, and economic policies aiming at liberalization and competitiveness.

According to the Harrod-Domar growth model, an economy's GDP is determined by changes in stock capital and fixed capital formation through time, as well as capital productivity. Changes in capital stock, which is symbolized by the letter K, where K is the function of investment (I), and the equation will be

# 3.1.2 Empirical Model the

There is no denying that this study’s intention is to identify the relationships between foreign direct investment, economic growth, and economic development in Zimbabwe. In the model, independent variables a huge impact on both economic growth and development are incorporated in order to have a good goal on these links. The model is based on a study by Munyanyi (2017) that looked into the relationship between foreign direct investment and economic growth in Zimbabwe. Munyanyi examined the consequences of both economic growth and foreign direct investment, as well as their relationship, in his research. The following was the model's specification:

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Where RGDP is Economic Growth variable measured by Real GDP per capita;

FDI is Foreign direct investment variable measured as a percentage of GDP;

TROP is Trade Openness variable measured as a percentage of GDP;

GSD is Government spending variable measured as a percentage of GDP;

AGRIC is Agriculture Productivity variable measured as a percentage of GDP;

is Constant

are coefficients to be estimated

is Error term

is Natural logarithm

# Model Specification

It is a process which determines the relationship between regressand and regressor variables. This model specification is based on an economic theory, where both explanatory variables and a dependant variable explains how economic growth is determined. Since there is information about all these variables, it be strategic to measure and have some results which will tell us as economist how investments and other factors (explanatory variables) have impact on economic growth. In this model, economic growth, labour force, government expenditure and foreign direct investment are variables which are going to estimate the model so as to have results. Econometric model is shown as follows,

Eco growth is Economic Growth

Labour is employment

Gvt exp is Government expenditure

FDI is foreign direct investment

is constant

are coefficients to be estimated

is Error term

is Natural logarithm

# 3.2 Justification of Variables

# 3.2.0 Economic growth

The expansion in the inflation-adjusted market value of commodities generated by an economy through time is referred to as economic growth. The total amount of commodities made and presented in an economy is referred to as economic expansion Adofu et al (2015). A variety number of things contributes to a country's economic growth such as technological advancement, political issues, investment, are some of the variables. The output of these factors can't be increased if they're underutilized, because they're the backbone of economic growth.

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# 3.2.1 Government Expenditure

The purchase of commodities by the government, which includes public consumption, investment, and transfer payments, is referred to as government expenditure. Government spending, according to Keynesian theory, has a favorable influence on economic growth as it stimulates demand in an economy. According to Keynesian theory, the more the government spends, the more economic growth occurs as a result of expansionary fiscal policy. This increases consumption, which results to a rise in production and a faster rebound from the recession. In particular, whether financed by non-tax income and budget surpluses/deficits, government spending has a favorable long-term impact on economic growth.

# 3.2.2 Employment

The position of having a job is referred to as employment. This indicates that the employee will provide services that he or she can do in a certain context, such as an institution, a farm, or a sports service, for example. After a service is provided as promised, the employer rewards the employee with a salary. Foreign direct investment will almost certainly result in the hiring of a large number of people as foreign company establish their firms in the host countries and as a result people can be employed when people are employed they will earn a reward for instance income and this will definitely raise people's standard of living like educate their children, and pay for medical costs, all thanks to the money they earn at their jobs. In addition, through provision of services by employees more output are produced hence this can improve country's economic growth

# 3.2.3 Foreign Direct Investment

It is a cross border investment which occurs when foreign investor acquires a substantial ownership in and control over a business in a different country. There are three types of foreign direct investment and there are joint ventures with firms based oversees, getting voting stocks in a business based in another country, merger and acquisition. According to the endogenous growth model. FDI increases production of all firms. This means that FDI improves efficiency and productivity factor in the host country there by FDI is seen as a positive impact to economic growth as it will be increasing productions in a country.

# 3.3.0 DATA PRESENTATION AND ANALYSIS PROCEDURES

E-View software will be utilized in this study for a better analysis because it produces both negative and positive outcomes. There are several suppositions that the data will be regularly distributed and stationary at the same time to ensure that the study will produce position conclusions. There will be tests based on these assumptions, such as the Dickey-Fuller test, which checks for stationarity. Economic growth will be the regrassand, while employment, foreign direct investment, and government expenditure will be regressors, with data sourced from the World Bank websites. Furthermore, it is expected that the model will be BLUE.

# 3.3.1 Ordinary Least Square

According to Gujarati (2004), ordinary Least Square is a technique for estimating coefficients of linear regression equations and displaying the link between variables in an estimate equation. OLS, according to Gujarati (2004), is a method for reducing the residual value, which is the discrepancy between actual and estimated values. The researcher discovered it is straight -forward to employ and it has been used by other researchers such as Mustefa (2014), Moyo, and Tawiri (2010). OLS techniques make a variety of assumptions such as that a regression model is linear, that the error term has a population mean of zero, and that all regressors variables being uncorrelated with the error term, among others.

# 3.3.2 Multicollinearity

According to Gujarati (2004), when the correlation coefficient of two or more variables are be +/- 1, the variables are perfectly collinear. When explanatory variables in a model are highly connected to each other, an issue arises that needs to be solved. Variance Inflation Factor (VIF) is used to assess each regressor in a model to see whether there is a problem of multicollinearity. This simply means that VIF measures multicollinearity. Therefore, the greater the VIF value indicates that the correlation between the variable is likewise higher. Employment, FDI and government spending are the independent variables used in this study’s VIF test. Multicollinearity is always present in time series data which is a well-known phenomenon. A research study can resolve such an issue in a model by eliminating one of the collinear variables.

# 3.3.3 Heteroscedasticity

The variance of the residual is not the same over a range of measured values, which is referred to as heteroscedasticity. There are various roots for this complication, according to Gujarati (2004), including the existence of outliers in the data, wrong functional form of the model, combining observations with non-identical scale measures, such as blend high- and low-income families, and so on. The same is true for heteroscedasticity, where the relationship between residuals and explanatory variables in a model must be double-checked. Because of heteroscedasticity, OLS estimators are unbiased. Breusch-Pagan and White will be employed by a researcher in order to test heteroscedasticity. This will be a test to see if a model's residual has varying variance. The test is suitable for usage with the null hypothesis and the H note. There can be some overall-fall F statistics tests to see if there is any significance or not in a model constructed in order to correctly apply the white test. When using these tests, there is a requirement that indicates that the investigator can fail to reject HO if the probability statistics are significant at the 0.1 percent level. This indicates that if the significance is more than 10%, the conclusion will be that there is no heteroscedasticity in the residuals.

# 3.3.4 Autocorrelation

Serial correlation, often known as autocorrelation, is a statistical concept that is frequently employed with the autoregressive moving average model and autoregressive integrated moving average. In a nutshell, autocorrelation is the degree of correlation between two consecutive time intervals of the same variables Gujarati (2004). The incorporation of time series data in a model may highlight the problem of autocorrelation. Autocorrelation can occur in an analysis due to model misspecification or when the OLS assumes observation independence. As a result, residual autocorrelation is a terrible thing. This simply means that no correct correlation between data points will exist. When attempting to solve this issue, Durbin-Watson is a form of test that can be used to detect the problem while testing autocorrelation problem.

# 3.3.5 Diagnostic Testing

Diagnostic testing is used to define and identify problems in order to predict their occurrence in a model. According to Gujarati (2004), the researcher should ensure that recognized assumptions such as no multicollinearity and no autocorrelation are not broken before certifying values of parameters from the estimated model utilizing the BLUE conditions. Ordinary Least Square takes possession of least variance and orderly if these assumptions are violated. In brief, a researcher must examine his or her own data through diagnostic testing in order for the research findings to be more credible.

# 3.4.6 Unit Root testing

A unit root test is used to determine if a time series variable is non-stationary and has a unit root. According to Bierens (2001) the null hypothesis is commonly described as the absence of unit root, while the alternative hypothesis is either stationary, trend stagnant, or explosive root, depending on the test. The series is not stationary if there are unit roots. The series will not be stationary if the p-value is not significant. We shall reject the null hypothesis that the series has a unit root if the p value is less than 0.05, but if there are no unit roots, we can fairly assume that the series is stationary.

# 3.5 Summary

As a concluding comment to this chapter, the researcher provided a concise report on the methods used in the research. The results of the study will be fully described or illustrated in the chapter that follows; all processes are anticipated to be displayed using time series data that was gathered from a number of websites, principally the World Bank’s and MOFED’s. The researcher will offer suggestions based on the findings and some conclusions when all of the presentations study have been completed.

# CHAPTER IV

# DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS

# 4 Introduction

This investigation’s main objective is to ascertain how foreign direct investment has affected Zimbabwe’s economic development and growth. This chapter presents some of the researcher’s findings, well as the model estimation and assessment of the model’s significance. Data was tested intending to prove the link between economic growth in E-views, where diagnostic tests and regression findings were taken. As part of the investigation on this research, the model was estimated and descriptive statistics were used. The World Development Indicators statics section provided the data for the variables utilised in this analysis. GDP and government spending are calculated in millions of dollars using constant LCU, Foreign direct investment, net BOP, current US$ and total employment as the labour force.

# 4.1.0 Data Presentation Process

# 4.1.1 Descriptive statistics

Table 1 on the next page, shows descriptive statistics which is commonly used and these statistics include mean, minimum, standard deviation, maximum and other measures of dispersion. Outliers in the data are commonly checked using maximum and minimum measures. Total observations are 41 for every single variable and there presented on the next page.

# Table 1: descriptive statistics for variables in the research

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | FDI | GDP | GVT EXP | LABOUR | | YEAR |
| Mean | 642000000 | 15200000000 | 12200000000 | 6979965 | | 2000 |
| Median | 247000000 | 15000000000 | 9240000000 | 5698527 | | 2000 |
| Maximum | 2230000000 | 20100000000 | 24600000000 | 72044228 | | 2020 |
| Minimum | 841285 | 9580000000 | 6120000000 | 3238790 | | 1980 |
| Std. Dev. | 811000000 | 3030000000 | 615000000 | 10474703 | 11.97915 | |
| Skewness | 0.898526 | -0.113788 | 0.8816 | 6.05639 | | 0.0928 |
| Kurtosis | 2.040772 | 1.667116 | 2.261381 | 38.15045 | | 1.798571 |
|  |  |  |  |  | |  |
| Jarque-Bera | 7.088751 | 3.123465 | 6.242986 | 2361.384 | | 2.465861 |
| Probability | 0.028887 | 0.209772 | 0.044091 | 0 | | 0.291437 |
|  |  |  |  |  | |  |
| Sum | 26300000000 | 62100000000 | 49900000000 | 286000000 | | 82000 |
| Sum Sq. Dev. | 2630000000000 | 36800000000 | 15100000000 | 43900000000 | | 5740 |
|  |  |  |  |  | |  |
| Observations | 41 | 41 | 41 | 41 | | 41 |

Source :E-views Statistical Package

The above table 1 shows descriptive statistics of variables which are being used for the investigation. The descriptive statistic comprises of maximum, minimum, mean, standard deviation and other dispersion variables tested above. From the table1 above, there are 41 observations and it can be noted that GDP has the highest standard deviation of 3030000000 while labour has the lowest standard deviation 10474703 which means that from all explanatory variables there is high reliability of labour to economic growth represented with GDP. It can be seen that on average Zimbabwe economic growth from 1980 to 2020 has managed to produce 15200000000 annually. While the maximum was 201000000000 in 2020 while minimum lies at 958000000. Government expenditure, FDI, labour are positively skewed while GDP is negatively skewed. `

# Table 2:Unit root at level

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | ADF Test statistics | 1% critical value | 5% critical value | Order of integration |
| GDP | -3.276990 | -3.632900 | -2.948404 | 1(0) |
| FDI | -1.636908 | -3.605593 | -2.936942 | 1(0) |
| GVT EXP | 1.906596 | -3.610453 | -2.938987 | 1(0) |
| LABOUR | 1.642670 | -3.605593 | -2.936942 | 1(0) |
|  |  |  |  |  |

# Table 3 :Unit root at 1st difference

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | ADF Test statistics | 1% critical value | 5% critical value | Order of integration |
| GDP | -3.763881 | -3.610453 | -2.938987 | 1(1) |
| FDI | -6.230261 | -3.610453 | -2.938987 | 1(1) |
| GVT EXP | -8.033002 | -3.610453 | -2.938987 | 1(1) |
| LABOUR | -3.787301 | -3.610453 | -2.938987 | 1(1) |
|  |  |  |  |  |

A variable is said to be stationary when the ADF test statistics value is larger than test statistics. When the data was tested for stationarity at first(level), ADF values were lower than of test statistics. In order to ensure that there is stationarity a second data test was taken. The results showed that there was stationary in all variables that were tested and we can conclude that at 95% confidence level all variables are stationary at 1st level difference.

# 4.1.2Diagnostics test

**4**.1.3 Autocorrelation

When testing for autocorrelation, Durban Watson (DW) statistics is used. It ranges from0 to 4, where a value of 2.0 shows there is 0 autocorrelation in a model. Values that ranges 2.0 to 4 shows that there is negative autocorrelation. On the other hand, values below 2.0 shows that there is positive autocorrelation in a model. As shown by the table below, probability F value for the test is 0.5114 which obviously exceeds 0.1 significant level which is 10%.Following the testing of autocorrelation, the investigator found out that DW value is 1.76 which is less than 2.0 .The researcher have failed to reject the null hypothesis and conclude that the estimated model is not suffering from autocorrelation.

# Table :4

|  |  |
| --- | --- |
| F- statistic 0.187351 | Prob.F(2.35) 0.5114 |
| Obs\*R-squared 0.53541 | Prob Chi-Square (2) 0.7535 |

# 4.1.4 Multicollinearity

Multicollinearity is a statistical concept in which there is a correlation relationship among independent variables. Variables are considered to be perfectly collinear if their coefficients are +/-1.As shown by below results where all variables are less than 0.8 and this implies that the relationship on all independent variables in a model is not strong 2 variables and this means that we should not be worried with multicollinearity.

# Table :5

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **GDP** | **FDI** | **Gvt expenditure** | **labour** |
| **GDP** | 1.000000 | 0.207660 | 0.468890 | 0.196405 |
| **FDI** | 0.207660 | 1.000000 | -0.009762 | -0.055607 |
| **Gvt expenditure** | 0.468890 | -0.009762 | 1.000000 | 0.405984 |
| **Labour** | 0.196405 | -0.055607 | 0.405984 | 1.000000 |

**Source: E -views**

# Table 6: Heteroscedasticity test

|  |  |  |  |
| --- | --- | --- | --- |
| F-statistic | **0.755341** | Prob. F(10) | 0.6154 |
| Obs\*R-squared | 11.34579 | Prob. ChiSquare(9) | 0.403 |
| Scaled explained SS | 10.68234 | Prob.ChiSquare (9) | 0.3188 |

Source : Eviews

It is a problem which shows that variances of error terms are not constant. Bruesch -Pagan-Godfrey test was used to test this model problem in this model. The probability of F stats (0.6154) is greater than 0.1 at 10 % significant level. The observed R -squared is less than F statistics hence this shows that there is homoscedasticity. There we can conclude that there is no presence of heteroscedasticity in this model.

# Estimation of results

# Table 6:OLS estimated results from an equation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **Coefficient** | **Std.Error** | **t-Statistics** | **Prob.** |
| **C** | 11.8 | **6.76** | 11.72309 | 0.0200 |
| **FDI** | 0.797950 | 0.528011 | 1.511237 | 0.1392 |
| **Gvt exp** | 0.228316 | 0.076099 | 3.000259 | 0.0048 |
| **Labour** | 0.916412 | 4.73318 | 0.132260 | 0.8955 |

Source:E-views

R-Squared 0.635254 Durbin Watson 1.757812

Adjusted R-squared 0.593480

F-statistics 0.56678

Prob (F-statistics) 0.54478

# Estimated equation :

Using the diagnostic tests mentioned above, the model didn’t violate the CLRM assumptions, which state that there is no multicollinearity, no autocorrelation and heteroscedasticity among explanatory variables. When the model was estimated adjusted R-squared was 0.593480 implying that 59% 0f the dependent variable (GDP) are explained by the difference in the independent variables (FDI, Gvt exp and labour). Durbin Watson was 1.757812 which nearer to 2 which means that there is no serial correlation. In addition, there is F statistic of 0.56678 and probability (F-statistic) of 0.54478 is statistically significant at 1%. Statistically significant model is correctly specified.

# 4.2.0 Results interpretation

# 4.2.1 Constant (C)

The coefficient of the intercept is 11.8 and is statistically insignificant in the model because the t-statistics is less than 2. Statistical this means that it is insignificant and this can be shown also by results on the p-value 0.02 at 1%,5% and 10%.

# 4.2.2 Foreign direct investment (FDI)

The probability value of FDI is 0.1392. Under the log-log function rule which states that there is a relative change to both dependent and independent variable in a model. This can be proved that under the model researched there is a relative change by 0.797950 and this shows that economic growth (GDP) will be increasing by the same percentage or value. An increase of FDI will result in increasing economic growth is Zimbabwe as investors will be investing to produce and there increasing out. We can conclude that FDI is an important variable at explaining its relationship with economic growth and by that we can reject the null hypothesis.

4.2.3 Government expenditure (Gvt Exp**)**

The probability value of Gvt Exp is 0.0048. Again, there is positive relative change to both dependent and independent variable in a model. As shown by results in the model researched there is a positive relative change by 0.228316. Economic growth (GDP) will be relatively increasing by the 0.2288316. According to Gujarati (2004) on Keynesian school of thought, a rise in government spending or investment stimulates aggregate demand and as a result there will an increasing consumption which raises economic growth from recession. An increase of Gvt Exp results in increase of economic growth in Zimbabwe. We can conclude that government spending is an important variable at explaining its relationship with economic growth and by that we can reject the null hypothesis.

4.2.4 Employment (Labour**)**

In addition, the probability value of labour is 0.8955. As shown by the results above, there is also a positive relative change of labour and economic growth in a model. Labour relatively changes positively by 0.916412 and hence economic growth also increase by same percentage. Increase in employment increase production, this mean that more output will be produced as the capacity to produce large output can be met. Government or firms can increase labour productivity by being involved in direct investments for example through government spending or investment. We can conclude that employment is an important variable at explaining its relationship with economic growth and by that we can reject the null hypothesis.

# Conclusion

Diagnostic tests were done for the model and they have managed to provide outcomes which showed that the estimated model was reliable in explaining the link between the economic growth (GDP) and independent variables in Zimbabwe. Empirically, the study showed that all explanatory variables in the model are positively related to economic growth (GDP). As noted on the estimation of the equation, there is a positive relative change to dependant and explanatory variables although figures or percentages. Based on my findings on this chapter 4, chapter 5 will be providing the summary of the whole investigation, suggestions, conclusions and suggestion for possible study. The following and final chapter will present a summary of the entire study, a conclusion, and some recommendations and proposals for further study based on the findings of this chapter.

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# CHAPTER V

# SUMMARY, CONCLUSION AND POLICY RECOMMENDATION

# 5.0 Introduction

The study’s major goal was to evaluate the influence of foreign direct investment on economic growth and development for the period 1980 to 2020.The overview of the entire investigation, recommendations required to encourage economic growth and development, conclusions and proposals for future research will be the main topics of this last chapter.

# 5.1 Summary of the study

As a result, from testing the data using various diagnostic tests like multicollinearity tests, heteroscedasticity test unit roots and so forth, acquired results from the research concluded that there is a positive or direct relationship on economic growth and independent variables (government expenditure, labour and foreign direct investment in the model. The results obtained showed that Zimbabwe can keep on increasing those 3 variables and hence at the end of the day the economic growth can be boosted and these 3 variables have a vital role in increase the economic growth in an economy. Results of the study also shows that government expenditure, foreign direct and labour are statistically significant o economic growth in an economy.

# 5.2 Conclusions

The research concludes that foreign direct investment had both positive and negative impacts to economic growth in Zimbabwe over the years. Foreign direct investment had negative effects to economic growth because of poor policies that were adopted or implemented by the government which were not favourable to the foreign investor. In trying to resuscitate the economy government thought of adopting ESAP.This resulted in pushing away foreign investors as there were problems like increase in inflation to record levels, devaluation of local currency, skyrocketing of prices and mostly retrenchment. This means that the economy in Zimbabwe was not conducive to operate in and hence foreign companies closed and relocated to neighbouring countries.

As a result, Zimbabwe’s economic growth was reduced as there was a decrease of production of goods and provision of essential services. In addition, the government of Zimbabwe implemented Indigenization policy or act in 2008, where foreign owned companies had to offer at least 51% of shares to indigenous Zimbabweans. This discouraged foreign investments in Zimbabwe’s economy because no investor opted to favour such act as major shares were taken by indigenized citizen.

More so, period between 2009-2012, foreign direct investments in Zimbabwe increased and this also increased economic growth. It was because the GNU of Zimbabwe implemented favourable policies for investors. Because of dollarization, foreign investors gained so much confidence because the it wasn’t and it not possible devaluate US dollars, Rands and Pulas. Some of the foreign companies resumed their operations as they saw big opportunities with environment that was create that period. An increase in foreign direct investments also increases economic growth in a country and vice versa. Conclusively, foreign direct investment has impact to economic growth in an economy.

# 5.3 Policy Recommendation

# 5.3.0 Government

As noted during the period between 2009-2012, where Zimbabwe adopted a multicurrency regime system, the economy was stabilised. Government should try by all means to impose policies which stabilises inflation not keep on injecting bond note or Zimbabwean dollar in the economy as this will keep on increasing the hyperinflation. Thereby this will result in unfavourable environment and foreign investors cannot invest in an economy where there is hyperinflation. In short, the government should adopt effective monetary policies which reduces inflation in order to create a conducive environment for foreign investment and implement good economic reforms.

# 5.4 Area of further study

There is need to see how climate change impacts economic growth and development in Zimbabwe. Climate change now become one of the major problems globally. For the most part, climate change affects agricultural sector. Usually through loss of productivity. To add more climate change, have a positive impact to economic development as new technologies emerges for example energy efficient and electric cars.

# LIST OF APPENDICES

# Appendix A: Raw Data

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| year | GDP | FDI | Government expenditure | labour force |
| 1980 | 10031937390 | 1549689.61 | 6123897978 | 3238790 |
| 1981 | 11288480169 | 3546064.699 | 6456780909 | 3378974 |
| 1982 | 11585852280 | 841285.0402 | 6692679068 | 3545678 |
| 1983 | 11769523429 | 2074321.691 | 6771239098 | 3553899 |
| 1984 | 11545036234 | 2488197.113 | 6708937689 | 3690981 |
| 1985 | 12346768318 | 2848609.099 | 6834569803 | 3678987 |
| 1986 | 12605930581 | 7445128.094 | 6870984578 | 3778909 |
| 1987 | 12750991714 | 30506683.75 | 6937890457 | 3890987 |
| 1988 | 13713994362 | 4093521.528 | 6966421359 | 3990001 |
| 1989 | 14427090039 | 10180763.08 | 6971234789 | 4112897 |
| 1990 | 15435334863 | 12205847.82 | 6975345672 | 4721816 |
| 1991 | 16289184000 | 2790485.896 | 7009873450 | 4850329 |
| 1992 | 14820621200 | 14949899.55 | 7018954328 | 4980977 |
| 1993 | 14976453900 | 27955135.35 | 7120984689 | 5110439 |
| 1994 | 16359559200 | 29922406.5 | 8298737985 | 5232727 |
| 1995 | 16385411500 | 123432189 | 8568904568 | 5345211 |
| 1996 | 18083054300 | 157657897 | 8698312098 | 5434530 |
| 1997 | 18567787600 | 2234598087 | 8790436801 | 5510105 |
| 1998 | 19103507600 | 1879869856 | 9050953421 | 5575962 |
| 1999 | 18947275100 | 1727896785 | 9084634789 | 5637954 |
| 2000 | 18367642000 | 1919806874 | 9237890436 | 5698527 |
| 2001 | 18632065400 | 1798057548 | 9680983125 | 5734130 |
| 2002 | 16974925100 | 1997805878 | 10138906541 | 5765699 |
| 2003 | 14090023900 | 1998098098 | 10469086215 | 5795681 |
| 2004 | 13271740400 | 2080980975 | 11289064219 | 5824993 |
| 2005 | 12513780200 | 2003789679 | 11690864280 | 5852903 |
| 2006 | 12080616300 | 1698087348 | 12480964387 | 5901376 |
| 2007 | 11639271900 | 1690783210 | 12689031896 | 5949276 |
| 2008 | 9582735200 | 1045979869 | 13894390531 | 5999036 |
| 2009 | 10734537800 | 105000000 | 14139643200 | 6052658 |
| 2010 | 12846592800 | 12258666.7 | 16254085200 | 6110955 |
| 2011 | 14670027000 | 344300000 | 17211560600 | 6184085 |
| 2012 | 17114849900 | 349850000 | 21194350200 | 6322675 |
| 2013 | 17455348600 | 373050000 | 19989341900 | 6465320 |
| 2014 | 17870249900 | 472800000 | 20283385300 | 6611175 |
| 2015 | 18188317600 | 399200000 | 23815827400 | 6709332 |
| 2016 | 18325797500 | 343013813 | 22348500300 | 6802164 |
| 2017 | 19188849500 | 306253061.8 | 23231849500 | 6909356 |
| 2018 | 20114560000 | 717078587.2 | 22578595900 | 7028775 |
| 2019 | 18878673900 | 247096265 | 23789360986 | 7156060 |
| 2020 | 17698993100 | 153860000 | 24578906321 | 72044228 |

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# Appendix B: Descriptive Statistics

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|  |  | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | C01 | FDI | GVT\_EXP | LABOUR\_FORCE | | Mean | 1.52E+10 | 6.42E+08 | 1.22E+10 | 6979965 | | Median | 1.50E+10 | 2.47E+08 | 9.24E+09 | 5698527 | | Maximum | 2.01E+10 | 2.23E+09 | 2.46E+10 | 72044228 | | Minimum | 9.58E+09 | 841285 | 6.12E+09 | 3238790 | | Std. Dev. | 3.03E+09 | 8.11E+08 | 6.15E+09 | 10474703 | | Skewness | -0.113788 | 0.898526 | 0.8816 | 6.05639 | | Kurtosis | 1.667116 | 2.040772 | 2.261381 | 38.15045 | |  |  |  |  |  | | Jarque-Bera | 3.123465 | 7.088751 | 6.242986 | 2361.384 | | Probability | 0.209772 | 0.028887 | 0.044091 | 0 | |  |  |  |  |  | | Sum | 6.21E+11 | 2.63E+10 | 4.99E+11 | 2.86E+08 | | Sum Sq. Dev. | 3.68E+20 | 2.63E+19 | 1.51E+21 | 4.39E+15 | |  |  |  |  |  | | Observations | 41 | 41 | 41 | 41 | |  |  |
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|  |  | Appendix C: UNIT ROOT |  | **41** |

# FOREIGN DIRECT INVESTMENT

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Null Hypothesis: FOREIGN\_DIRECT\_INVESTMEN has a unit root | | | | |
| Exogenous: Constant | | |  |  |
| Lag Length: 0 (Automatic - based on SIC, maxlag=9) | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  | t-Statistic | Prob.\* |
|  |  |  |  |  |
|  |  |  |  |  |
| Augmented Dickey-Fuller test statistic | | | -1.636908 | 0.4549 |
| Test critical values: | 1% level |  | -3.605593 |  |
|  | 5% level |  | -2.936942 |  |
|  | 10% level |  | -2.606857 |  |
|  |  |  |  |  |
|  |  |  |  |  |
| \*MacKinnon (1996) one-sided p-values. | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Augmented Dickey-Fuller Test Equation | | | |  |
| Dependent Variable: D(FOREIGN\_DIRECT\_INVESTMEN) | | | | |
| Method: Least Squares | | |  |  |
| Date: 06/21/22 Time: 19:12 | | |  |  |
| Sample (adjusted): 1981 2020 | | |  |  |
| Included observations: 40 after adjustments | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|  |  |  |  |  |
|  |  |  |  |  |
| FOREIGN\_DIRECT\_INVESTMEN(-1) | -0.128263 | 0.078357 | -1.636908 | 0.1099 |
| C | 87756119 | 81431957 | 1.077662 | 0.2880 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.065868 | Mean dependent var | | 3807758. |
| Adjusted R-squared | 0.041285 | S.D. dependent var | | 4.09E+08 |
| S.E. of regression | 4.00E+08 | Akaike info criterion | | 42.50079 |
| Sum squared resid | 6.08E+18 | Schwarz criterion | | 42.58524 |
| Log likelihood | -848.0159 | Hannan-Quinn criter. | | 42.53133 |
| F-statistic | 2.679468 | Durbin-Watson stat | | 1.928858 |
| Prob(F-statistic) | 0.109906 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

# GDP (economic growth)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Null Hypothesis: GDP has a unit root | | | |  |
| Exogenous: Constant | | |  |  |
| Lag Length: 5 (Automatic - based on SIC, maxlag=9) | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  | t-Statistic | Prob.\* |
|  |  |  |  |  |
|  |  |  |  |  |
| Augmented Dickey-Fuller test statistic | | | -3.276990 | 0.0238 |
| Test critical values: | 1% level |  | -3.632900 |  |
|  | 5% level |  | -2.948404 |  |
|  | 10% level |  | -2.612874 |  |
|  |  |  |  |  |
|  |  |  |  |  |
| \*MacKinnon (1996) one-sided p-values. | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Augmented Dickey-Fuller Test Equation | | | |  |
| Dependent Variable: D(GDP) | | |  |  |
| Method: Least Squares | | |  |  |
| Date: 06/21/22 Time: 19:13 | | |  |  |
| Sample (adjusted): 1986 2020 | | |  |  |
| Included observations: 35 after adjustments | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|  |  |  |  |  |
|  |  |  |  |  |
| GDP(-1) | -0.242193 | 0.073907 | -3.276990 | 0.0028 |
| D(GDP(-1)) | 0.571882 | 0.152247 | 3.756277 | 0.0008 |
| D(GDP(-2)) | 0.019495 | 0.171054 | 0.113967 | 0.9101 |
| D(GDP(-3)) | 0.333282 | 0.171240 | 1.946282 | 0.0617 |
| D(GDP(-4)) | -0.243775 | 0.178363 | -1.366734 | 0.1826 |
| D(GDP(-5)) | 0.463223 | 0.164085 | 2.823067 | 0.0087 |
| C | 3.68E+09 | 1.13E+09 | 3.268050 | 0.0029 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.514054 | Mean dependent var | | 1.53E+08 |
| Adjusted R-squared | 0.409922 | S.D. dependent var | | 1.18E+09 |
| S.E. of regression | 9.06E+08 | Akaike info criterion | | 44.26441 |
| Sum squared resid | 2.30E+19 | Schwarz criterion | | 44.57547 |
| Log likelihood | -767.6271 | Hannan-Quinn criter. | | 44.37179 |
| F-statistic | 4.936586 | Durbin-Watson stat | | 1.770556 |
| Prob(F-statistic) | 0.001472 |  |  |  |
|  |  |  |  |  |
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# GOVERNMENT EXPENDITURE

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Null Hypothesis: GOVERNMENT\_EXPENDITURE has a unit root | | | | |
| Exogenous: Constant | | |  |  |
| Lag Length: 1 (Automatic - based on SIC, maxlag=9) | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  | t-Statistic | Prob.\* |
|  |  |  |  |  |
|  |  |  |  |  |
| Augmented Dickey-Fuller test statistic | | | 1.906596 | 0.9997 |
| Test critical values: | 1% level |  | -3.610453 |  |
|  | 5% level |  | -2.938987 |  |
|  | 10% level |  | -2.607932 |  |
|  |  |  |  |  |
|  |  |  |  |  |
| \*MacKinnon (1996) one-sided p-values. | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Augmented Dickey-Fuller Test Equation | | | |  |
| Dependent Variable: D(GOVERNMENT\_EXPENDITURE) | | | |  |
| Method: Least Squares | | |  |  |
| Date: 06/21/22 Time: 19:16 | | |  |  |
| Sample (adjusted): 1982 2020 | | |  |  |
| Included observations: 39 after adjustments | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|  |  |  |  |  |
|  |  |  |  |  |
| GOVERNMENT\_EXPENDITURE(-1) | 0.052159 | 0.027357 | 1.906596 | 0.0646 |
| D(GOVERNMENT\_EXPENDITURE(-1)) | -0.376727 | 0.162529 | -2.317904 | 0.0263 |
| C | 9090846. | 3.46E+08 | 0.026300 | 0.9792 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.158940 | Mean dependent var | | 4.65E+08 |
| Adjusted R-squared | 0.112214 | S.D. dependent var | | 9.93E+08 |
| S.E. of regression | 9.36E+08 | Akaike info criterion | | 44.22601 |
| Sum squared resid | 3.15E+19 | Schwarz criterion | | 44.35398 |
| Log likelihood | -859.4072 | Hannan-Quinn criter. | | 44.27192 |
| F-statistic | 3.401556 | Durbin-Watson stat | | 2.014327 |
| Prob(F-statistic) | 0.044349 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

# LABOUR FORCE (employment)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Null Hypothesis: LABOUR\_FORCE has a unit root | | | |  |
| Exogenous: Constant | | |  |  |
| Lag Length: 0 (Automatic - based on SIC, maxlag=9) | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  | t-Statistic | Prob.\* |
|  |  |  |  |  |
|  |  |  |  |  |
| Augmented Dickey-Fuller test statistic | | | 1.642670 | 0.9994 |
| Test critical values: | 1% level |  | -3.605593 |  |
|  | 5% level |  | -2.936942 |  |
|  | 10% level |  | -2.606857 |  |
|  |  |  |  |  |
|  |  |  |  |  |
| \*MacKinnon (1996) one-sided p-values. | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Augmented Dickey-Fuller Test Equation | | | |  |
| Dependent Variable: D(LABOUR\_FORCE) | | | |  |
| Method: Least Squares | | |  |  |
| Date: 06/21/22 Time: 19:20 | | |  |  |
| Sample (adjusted): 1981 2020 | | |  |  |
| Included observations: 40 after adjustments | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|  |  |  |  |  |
|  |  |  |  |  |
| LABOUR\_FORCE(-1) | 2.339395 | 1.424142 | 1.642670 | 0.1087 |
| C | -10803486 | 7787082. | -1.387360 | 0.1734 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.066302 | Mean dependent var | | 1720136. |
| Adjusted R-squared | 0.041731 | S.D. dependent var | | 10244263 |
| S.E. of regression | 10028236 | Akaike info criterion | | 35.12841 |
| Sum squared resid | 3.82E+15 | Schwarz criterion | | 35.21286 |
| Log likelihood | -700.5683 | Hannan-Quinn criter. | | 35.15895 |
| F-statistic | 2.698364 | Durbin-Watson stat | | 1.088914 |
| Prob(F-statistic) | 0.108702 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

# Appendix D:Ordinary Least Square

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Dependent Variable: GDP | | |  |  |
| Method: Least Squares | | |  |  |
| Date: 06/04/22 Time: 12:24 | | |  |  |
| Sample: 1980 2020 | | |  |  |
| Included observations: 41 | | |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|  |  |  |  |  |
|  |  |  |  |  |
| C | 11.8 | 6.72 | 11.72309 | 0.0200 |
| FOREIGN\_DIRECT\_INVESTMEN | 0.797950 | 0.528011 | 1.511237 | 0.1392 |
| GOVERNMENT\_EXPENDITURE | 0.228316 | 0.076099 | 3.000259 | 0.0048 |
| LABOUR\_FORCE | 0.916412 | 4.73318 | 0.132260 | 0.8955 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.635254 | Mean dependent var | | 1.52E+10 |
| Adjusted R-squared | 0.595680 | S.D. dependent var | | 3.03E+09 |
| S.E. of regression | 2.70E+09 | Akaike info criterion | | 46.36629 |
| Sum squared resid | 2.71E+20 | Schwarz criterion | | 46.53347 |
| Log likelihood | -946.5090 | Hannan-Quinn criter. | | 46.42717 |
| F-statistic | 0.566780 | Durbin-Watson stat | | 1.757812 |
| Prob(F-statistic) | 0.544782 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | Heteroskedasticity Test: Breusch-Pagan-Godfrey | | | | | |  |  |  |  |  | |  |  |  |  |  | | F-statistic | 2.317164 | Prob. F(3,37) | | 0.0915 | | Obs\*R-squared | 6.484676 | Prob. Chi-Square(3) | | 0.0903 | | Scaled explained SS | 3.515304 | Prob. Chi-Square(3) | | 0.3188 | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | | Test Equation: | |  |  |  | | Dependent Variable: RESID^2 | | |  |  | | Method: Least Squares | | |  |  | | Date: 06/04/22 Time: 12:27 | | |  |  | | Sample: 1980 2020 | | |  |  | | Included observations: 41 | | |  |  | |  |  |  |  |  | |  |  |  |  |  | | Variable | Coefficient | Std. Error | t-Statistic | Prob. | |  |  |  |  |  | |  |  |  |  |  | | C | 5.87E+18 | 2.74E+18 | 2.141864 | 0.0389 | | FOREIGN\_DIRECT\_INVESTMEN | 3.56E+09 | 1.44E+09 | 2.479312 | 0.0178 | | GOVERNMENT\_EXPENDITURE | -1.02E+08 | 2.07E+08 | -0.492514 | 0.6253 | | LABOUR\_FORCE | -4.60E+10 | 1.22E+11 | -0.378140 | 0.7075 | |  |  |  |  |  | |  |  |  |  |  | | R-squared | 0.158163 | Mean dependent var | | 6.60E+18 | | Adjusted R-squared | 0.089906 | S.D. dependent var | | 7.71E+18 | | S.E. of regression | 7.35E+18 | Akaike info criterion | | 89.81356 | | Sum squared resid | 2.00E+39 | Schwarz criterion | | 89.98074 | | Log likelihood | -1837.178 | Hannan-Quinn criter. | | 89.87443 | | F-statistic | 2.317164 | Durbin-Watson stat | | 0.845649 | | Prob(F-statistic) | 0.091489 |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |

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| Appendix: | multicolline |
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| --- | --- | --- | --- | --- |
|  | **GDP** | **FDI** | **LABOUR FORCE** | **GOVT**  **EXP** |
| **GDP** | 1.000000 | 0.207660 | 0.196405 | 0.468890 |
| **FDI** | 0.207660 | 1.000000 | -0.055607 | -0.009762 |
| **LABOUR FORCE** | 0.196405 | -0.055607 | 1.000000 | 0.405984 |
| **GOVT EXP** | 0.468890 | -0.009762 | 0.405984 | 1.000000 |

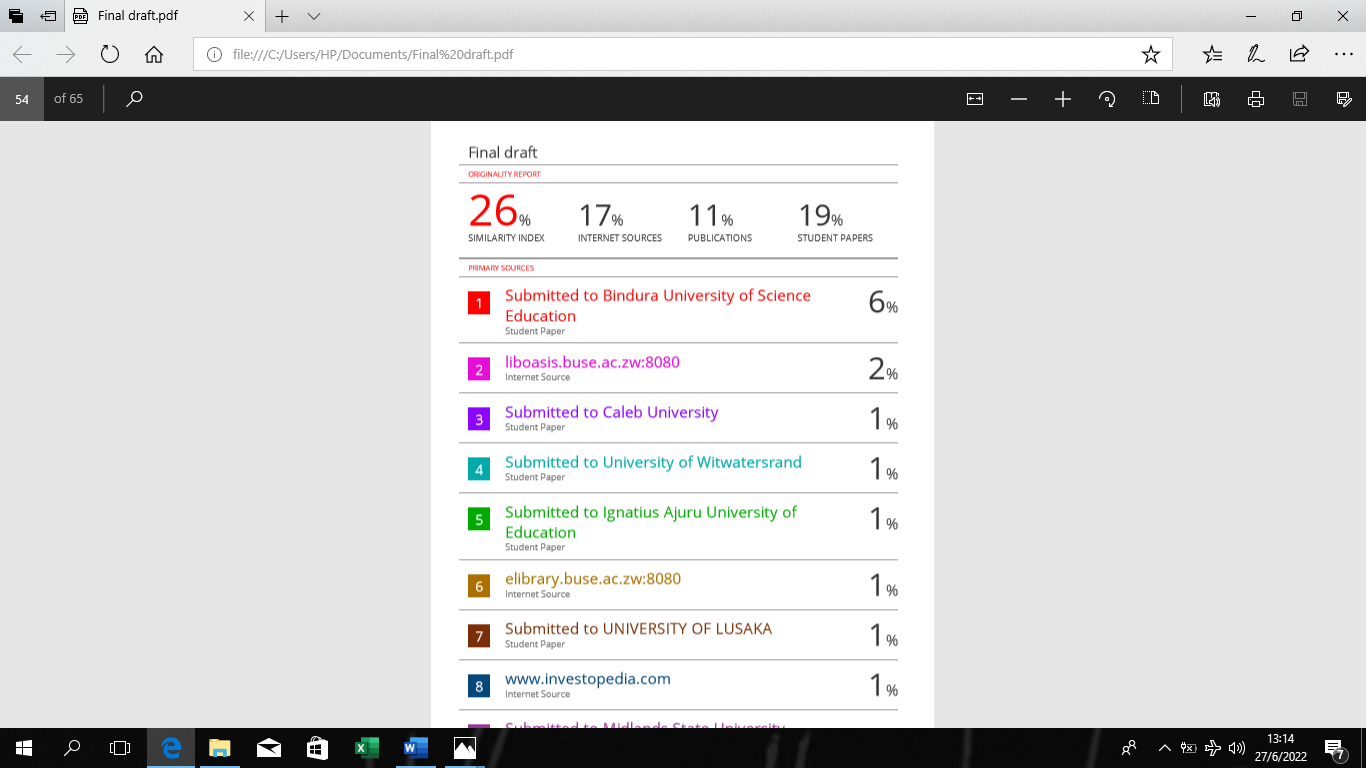
# Appendix F: heteroscedasticity

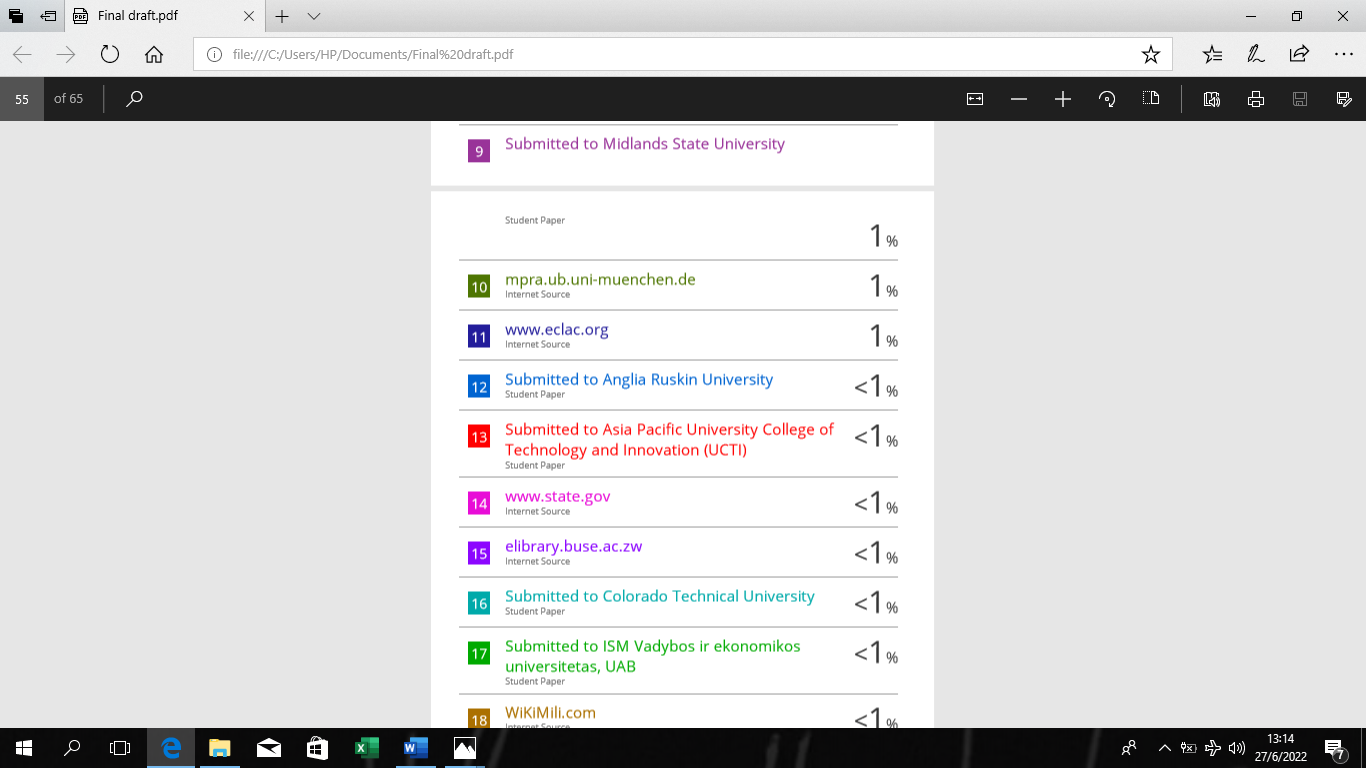
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| --- | --- | --- | --- | --- |
| Heteroskedasticity Test: Breusch-Pagan-Godfrey | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
| F-statistic | 0.755341 | Prob. F(3,37) | | 0.6154 |
| Obs\*R-squared | 11.34579 | Prob. Chi-Square(3) | | 0.403 |
| Scaled explained SS | 10.68234 | Prob. Chi-Square(3) | | 0.3188 |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Test Equation: | |  |  |  |
| Dependent Variable: RESID^2 | | |  |  |
| Method: Least Squares | | |  |  |
| Date: 06/04/22 Time: 12:27 | | |  |  |
| Sample: 1980 2020 | | |  |  |
| Included observations: 41 | | |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|  |  |  |  |  |
|  |  |  |  |  |
| C | 5.87E+18 | 2.74E+18 | 2.141864 | 0.0389 |
| FOREIGN\_DIRECT\_INVESTMEN | 3.56E+09 | 1.44E+09 | 2.479312 | 0.0178 |
| GOVERNMENT\_EXPENDITURE | -1.02E+08 | 2.07E+08 | -0.492514 | 0.6253 |
| LABOUR\_FORCE | -4.60E+10 | 1.22E+11 | -0.378140 | 0.7075 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.358163 | Mean dependent var | | 6.60E+18 |
| Adjusted R-squared | 0.089906 | S.D. dependent var | | 7.71E+18 |
| S.E. of regression | 7.35E+18 | Akaike info criterion | | 89.81356 |
| Sum squared resid | 2.00E+39 | Schwarz criterion | | 89.98074 |
| Log likelihood | -1837.178 | Hannan-Quinn criter. | | 89.87443 |
| F-statistic | 2.317164 | Durbin-Watson stat | | 0.845649 |
| Prob(F-statistic) | 0.091489 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

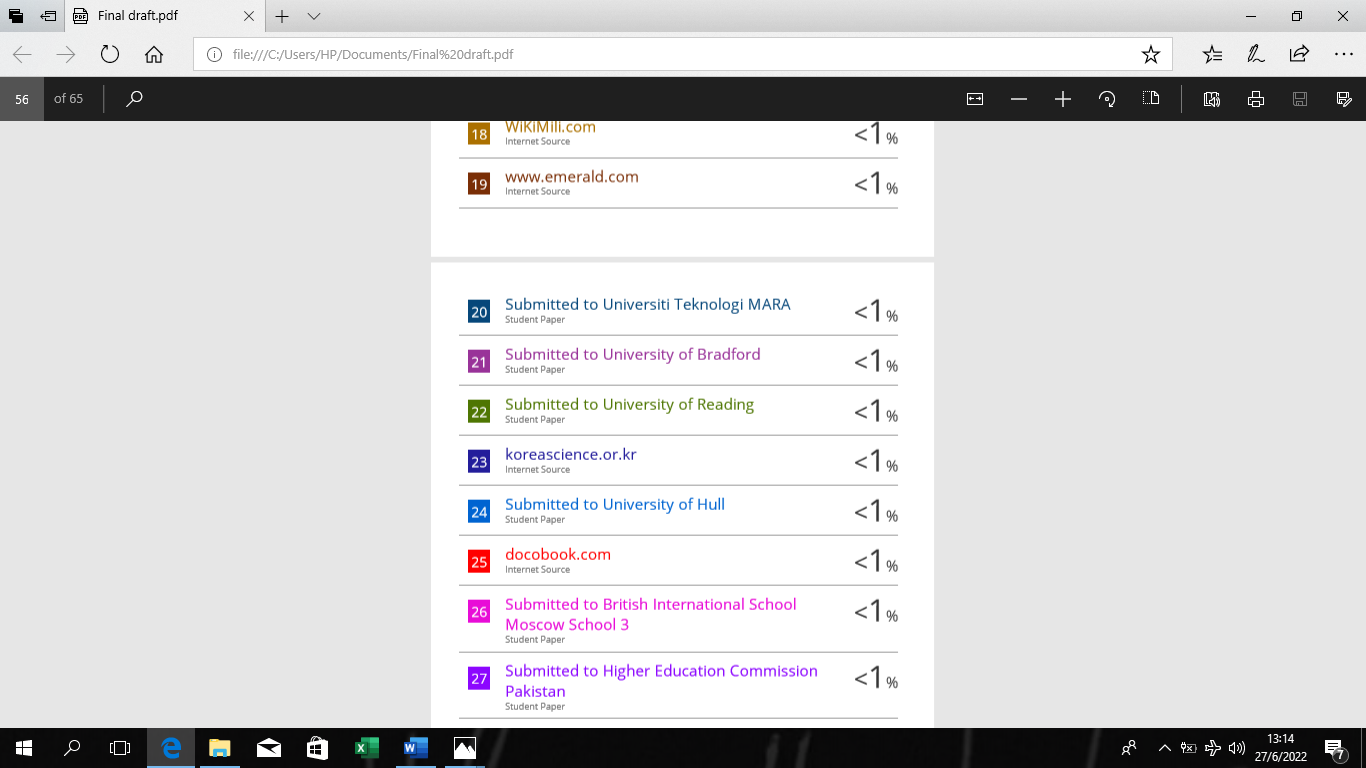
# Appendix H: Autocorrelation

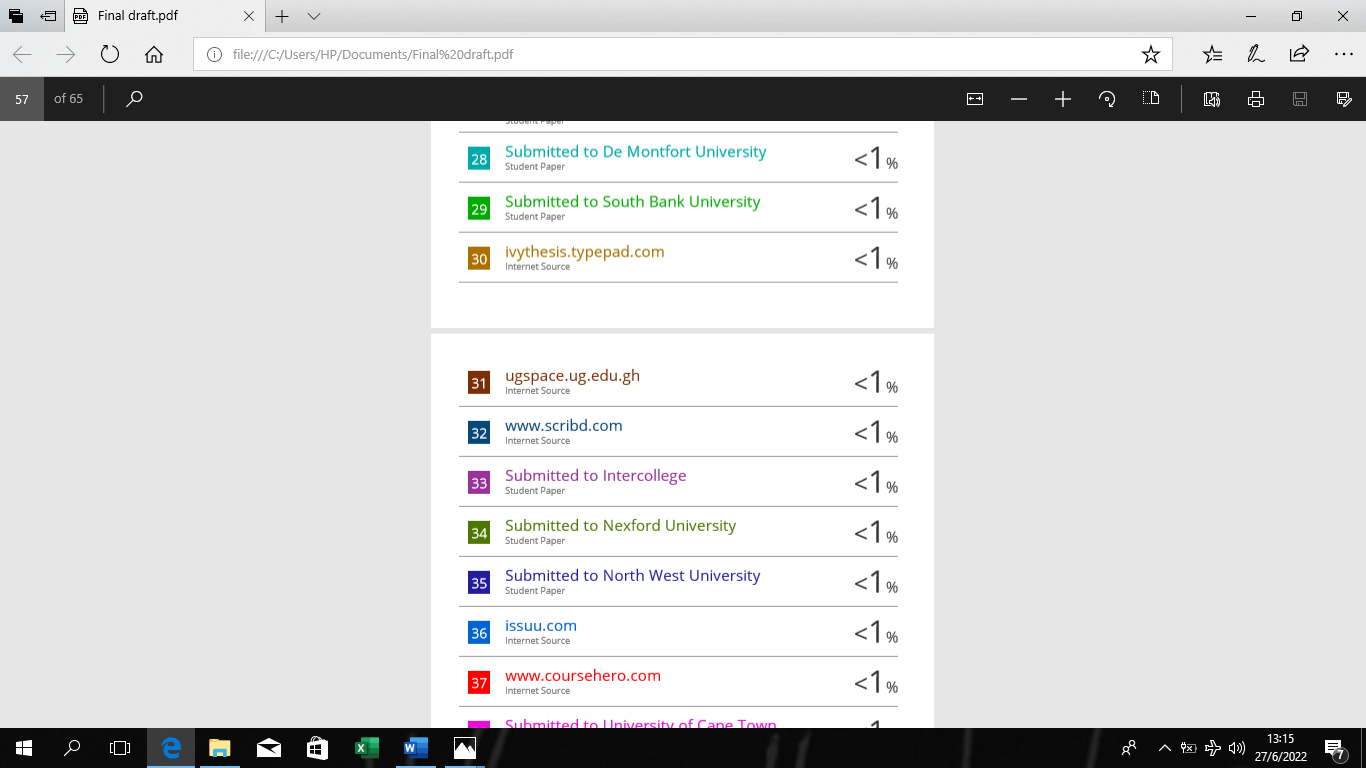
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Breusch-Godfrey auto correlation Serial Correlation LM Test: | | | |  |
|  |  |  |  |  |
|  |  |  |  |  |
| F-statistic | 0.187351 | Prob. F(2,35) | | 0.5114 |
| Obs\*R-squared | 0.53541 | Prob. Chi-Square(2) | | 0.7535 |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Test Equation: | |  |  |  |
| Dependent Variable: RESID | | |  |  |
| Method: Least Squares | | |  |  |
| Date: 06/04/22 Time: 12:31 | | |  |  |
| Sample: 1980 2020 | | |  |  |
| Included observations: 41 | | |  |  |
| Presample missing value lagged residuals set to zero. | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|  |  |  |  |  |
|  |  |  |  |  |
| C | 2.51E+08 | 4.10E+08 | 0.611584 | 0.5448 |
| FOREIGN\_DIRECT\_INVESTMEN | -0.602453 | 0.238998 | -2.520746 | 0.0164 |
| GOVERNMENT\_EXPENDITURE | 0.028851 | 0.032244 | 0.894768 | 0.3770 |
| LABOUR\_FORCE | -31.96477 | 19.32180 | -1.654338 | 0.1070 |
| RESID(-1) | 0.993495 | 0.160579 | 6.186951 | 0.0000 |
| RESID(-2) | -0.055695 | 0.172505 | -0.322858 | 0.7487 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.844072 | Mean dependent var | | -1.21E-06 |
| Adjusted R-squared | 0.821796 | S.D. dependent var | | 2.60E+09 |
| S.E. of regression | 1.10E+09 | Akaike info criterion | | 44.60549 |
| Sum squared resid | 4.22E+19 | Schwarz criterion | | 44.85626 |
| Log likelihood | -908.4126 | Hannan-Quinn criter. | | 44.69681 |
| F-statistic | 37.89245 | Durbin-Watson stat | | 1.767741 |
| Prob(F-statistic) | 0.000000 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

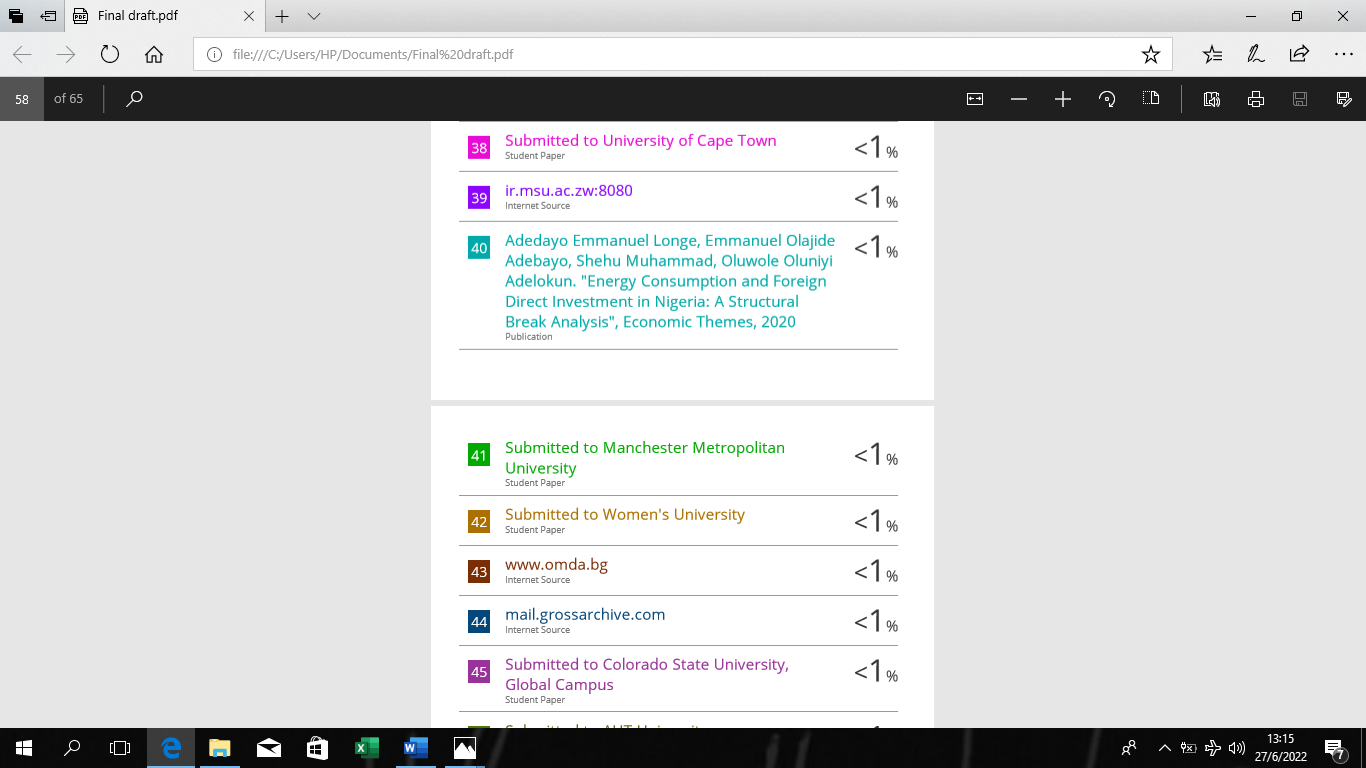
**Similarity index**

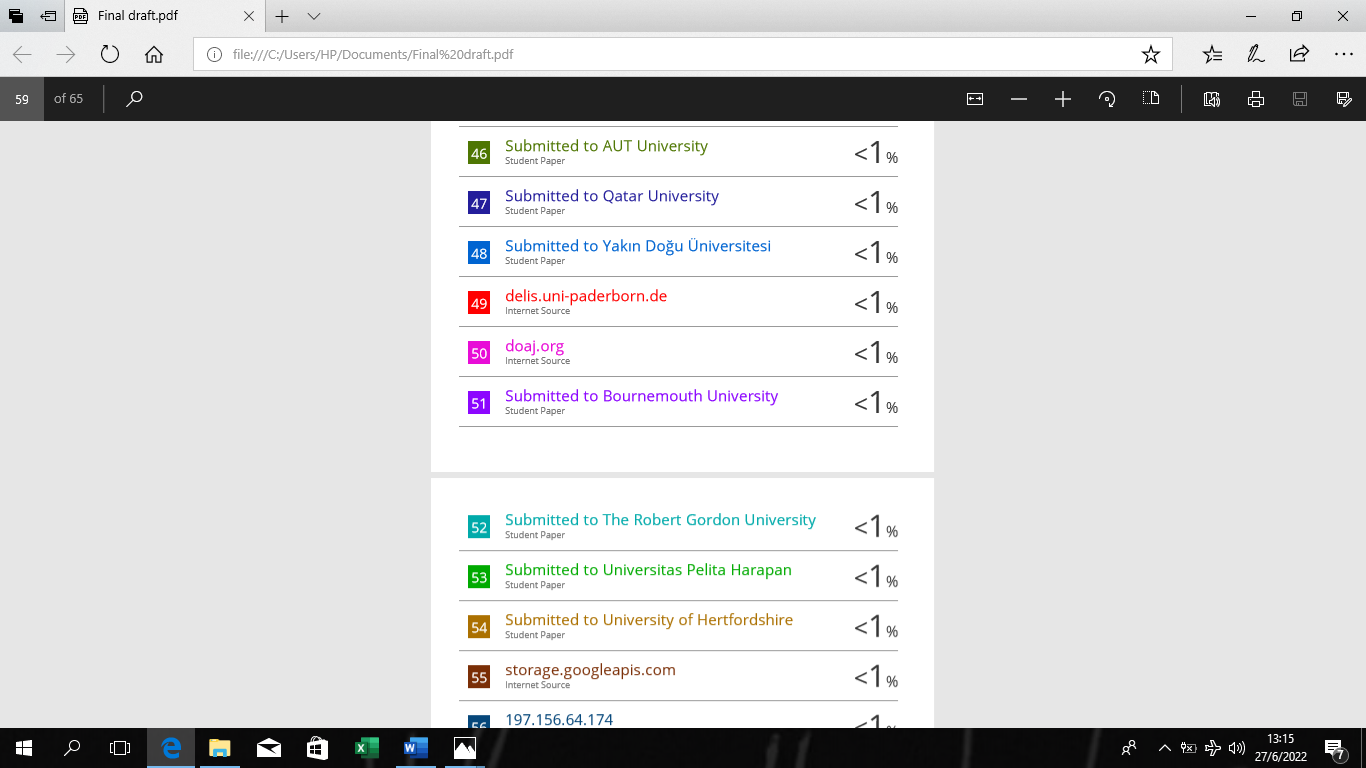


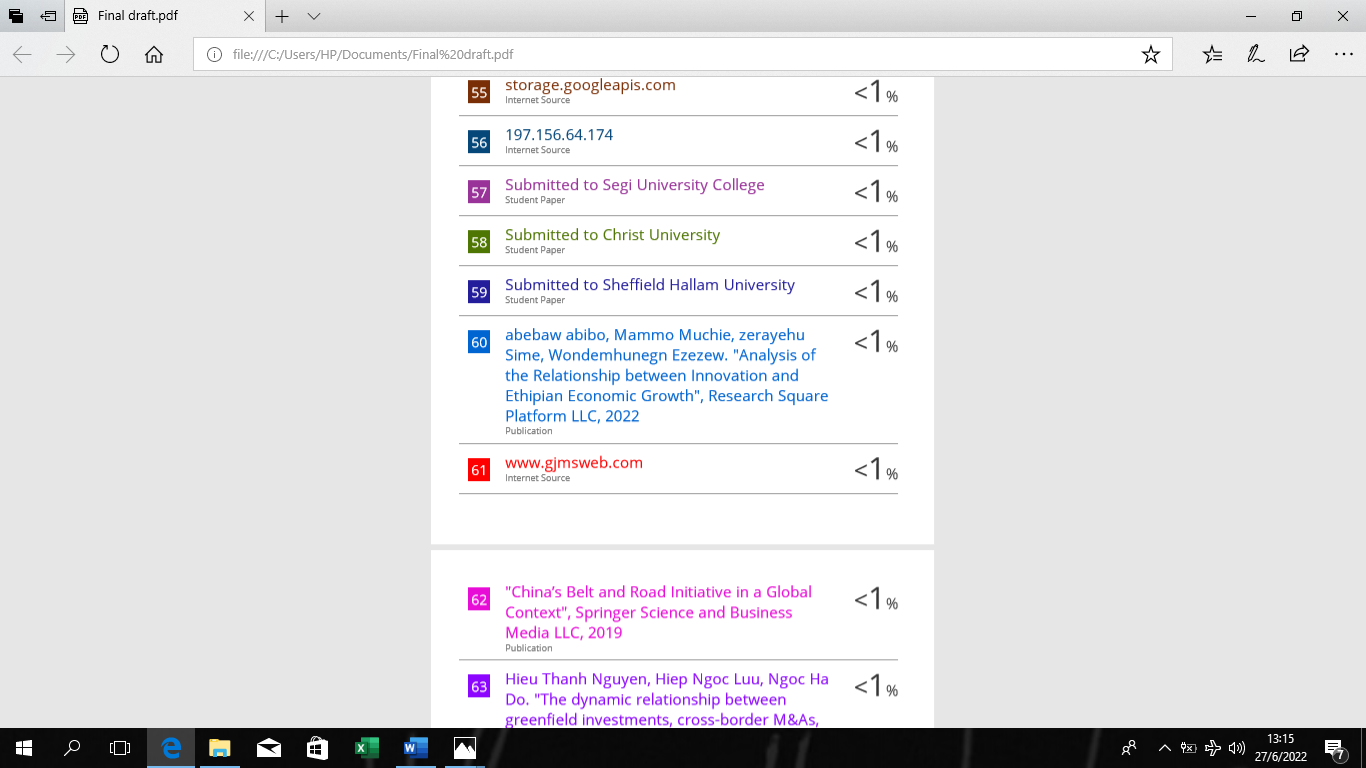


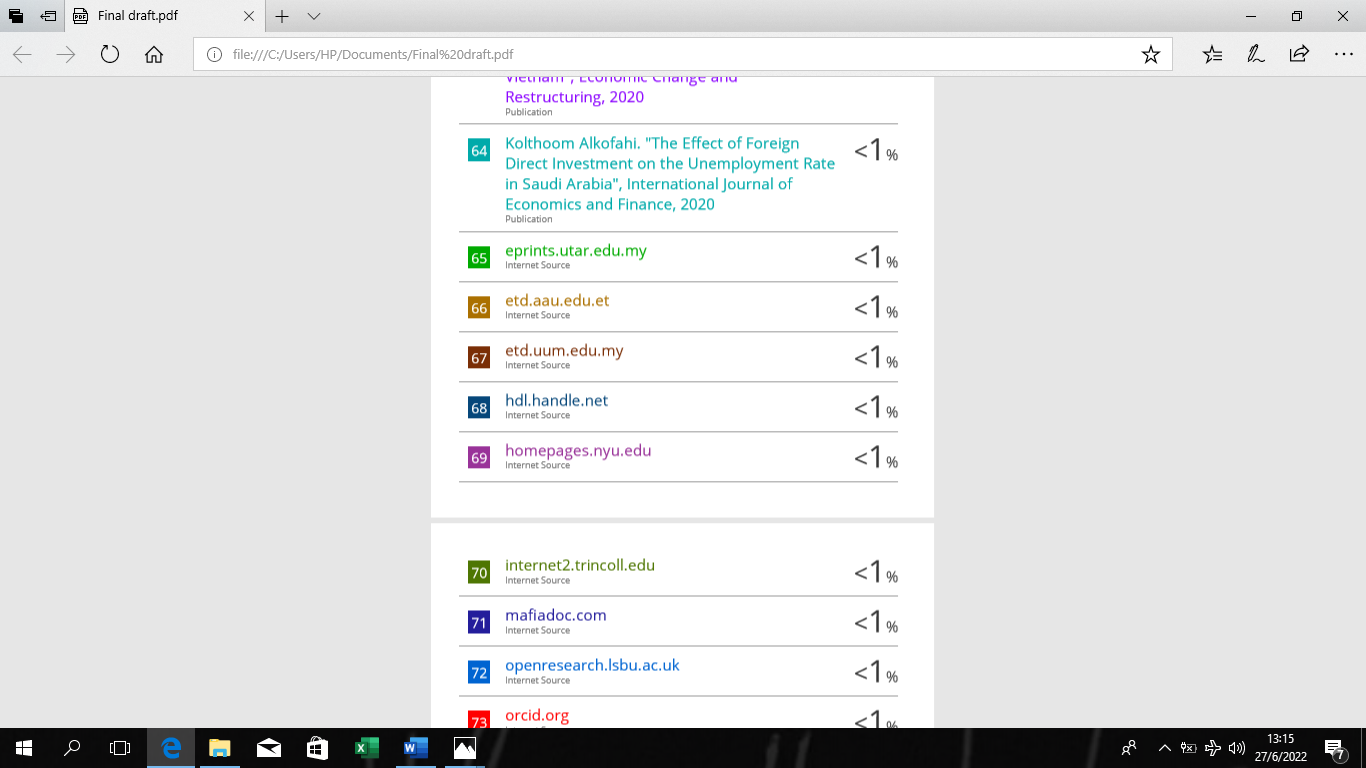


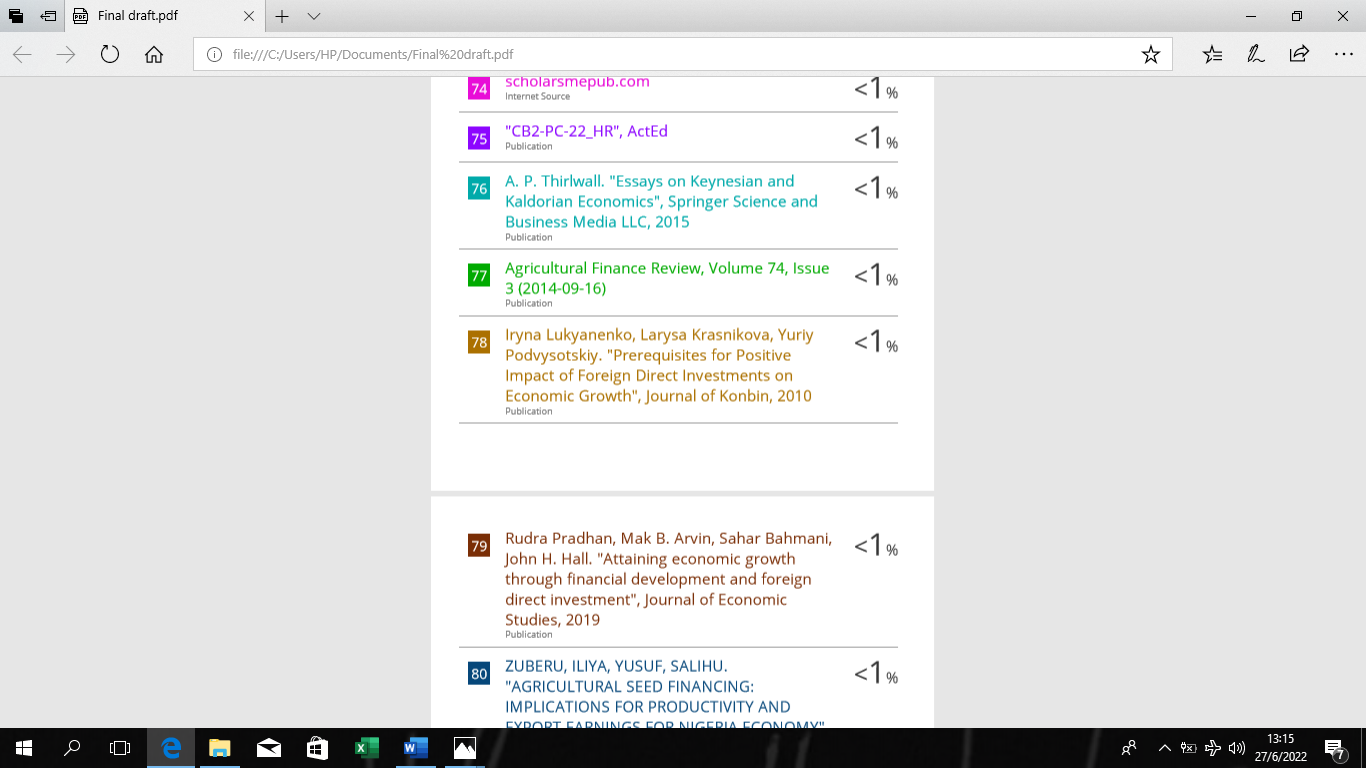


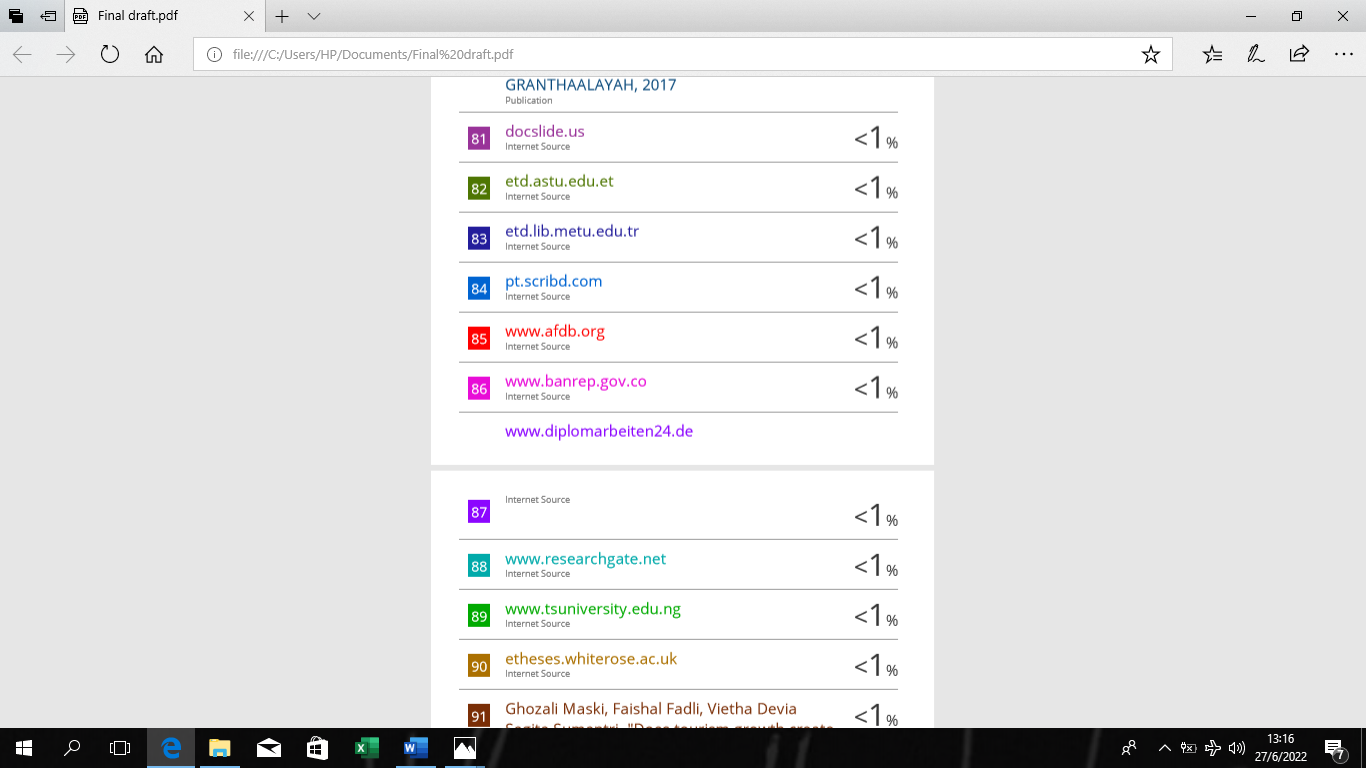


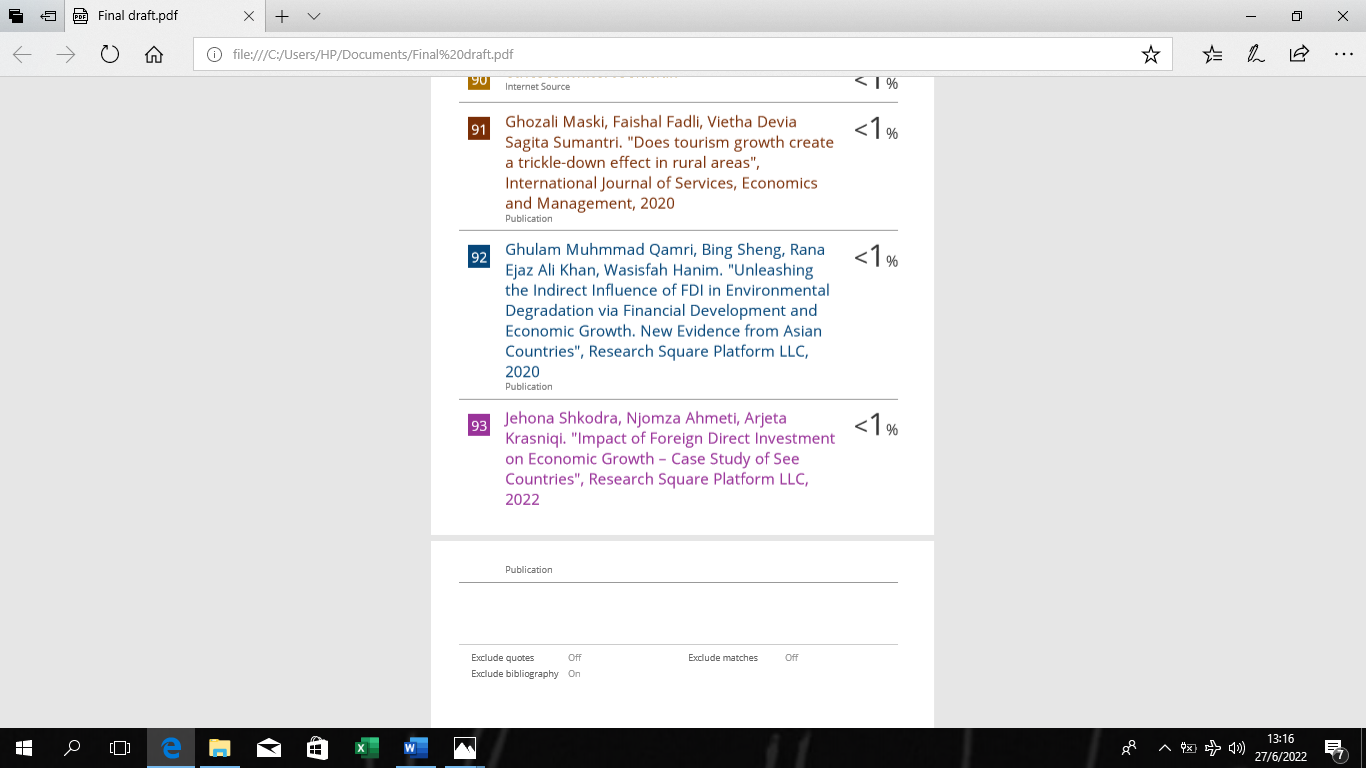












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# References

Autocorrelation retrieved from <http://corporate> financeinstitute.com/resources/knowledge/other/autocorrelation/

Aschauer, David,1989,” Is Public Expenditure Productive?” Journal of Monetary Economics, Vol.23, pp.177-200

Bailey, K. (1994). Interview Studies in Method of social research. Simon and Schuster,4th ed, The free press, New York NY 10020.Ch8. Pp.173-213

Bashir Olayinka Kolawole and Sunkanmi Ayoola Odubunmi (2015), Government Capital Expenditure, foreign direct investment and Economic growth relation in Nigeria, Department of Economics, Lagos State University, Ojo, Lagos, Nigeria,

Bierens, H.J (2001).”Unit roots”.In Baltagi,B.(ed).A Companion to econometric Theory.Oxford:Blackwell Publishers.pp610-633.”2007 revision

Dawson, Graham (2006). Economics and Economy Change. FT/Prentice hall.p.205.

Economy of Zimbabwe. Retrieved from <https://en.m.wikipedia.org>

Government of Zimbabwe (2011), Public Private Partnerships Policy and Guidelines. Government of Zimbabwe, Harare

Government of Zimbabwe (2004), Public Private Partnerships Policy and Guidelines. Government of Zimbabwe, Harare, Zimbabwe, December 2004

Greenwood, Daphne T; Holt, Richard P.F.2010.Local economic Development in the 21th century. Armonk and London: M.E.Sharpe.pp.3-4.

<http://www.fdi.finance/blog/> what are the different types of FDI

<http://www.sciedo.com> .Retrieved from pdf/10.2478/foli-2019-0015

http: www.tandfonline.com/doi/abs/10.1080/13547860.2020.1844610 Retrieved from rjap20 journal code”

[Harod-Domar model of economic growth.retriev](http://www.economicshelp.org/blog/498/economics/harod-domar%20model%20of%20economic%20growth.retriev) from [www.economicshelp.org/blog/498/economics/harod-domar](http://www.economicshelp.org/blog/498/economics/harod-domar)

http//www.Zimsentinel.com retrieved from Zimbabwe is open for business:A mantra faced with many challenges.

http//stats.stackexchange.com/questions/55805/ retrieved from how interpret results from unit root tests

http//www.thegobaleconomy.com retrieved from Zimbabwe: Percent of World FDI

http//www.state.gov retrieved from 2020 Investment Climate Statement: Zimbabwe

http//www.cnbcafrica.com retrieved from Africa’s richest man Aliko Dangote is eyeing Zimbabwe

http//www.yourarticlelibrary.com

International Monetary Fund “finance & Development.” Finance and development /F&D. Retrieved 07/03/2022.

International Monetary Fund. ”What is Keynes Economics”

January 2013.International journal of economics Finance and Management Sciences 1 (6):323 DOI; 10.11648/j.ijefm.2013016.19

Kenton, Will.” Real Gross Domestic Product (GDP) .” retrieved from Investopedia.com.

Lomax, Richard G (2007). statistical Concepts: Asecond course.p.10 ISBN 0-8058-5850-4

Ministry of finance and Economic Development (2010), Fourth Quarter 2009 Treasury Bulleting: October-December, 2009.Government of Zimbabwe, Harare,2010.

Private Investment and Economic Growth evidence from Ethiopia retrieved from opendocs.ids.ac.uk/opendocs/handle/20.500.12413/4485

Public Investment as an Engineer of Growth retrieved International Monetary Fund working paper. wp/14/148

Rosa Forte and Rui Moura (2013), The effects foreign direct investment on the host country’s economic growth: Theory and empirical evidence (2013)

Statistics on the Growth of the Global Gross Domestic Product (GDP) from2003 to 2013, IMF, October 2012.

World Bank (2009),” Joint Aide-Memoire of the Multi-Sectorial World Bank Missions, October 5-November 12,2009.” Zimbabwe: Priority Investments and Policies in infrastructure. World Bank, Washington DC, 2009.World

World Economic Forum (2009), The African Competitiveness Report 2009.World Economic Forum, Geneva ,2009.

World Economic Forum (2009), The African Competitiveness Report 2009. World Economic Forum, Geneva, 2009.

Zimbabwe introduce bond note. retrieved from <http://www.dw.com>

Zimbabwe and the IMF. Retrieved from <https://www.imf.org>