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BANDIRMA ONYEDİ EYLÜL UNIVERSITY

INSTITUTE OF GRADUATE SCHOOLS

DEPARTMENT OF ECONOMICS

Master's Thesis

**THE EFFECT OF FOREIGN DEBT, INVESTMENT, AND
COMMODITY EXPORTS ON INDONESIA'S GDP IN THE ERA
OF PRESIDENT JOKOWI DODO**

Alwi Shihab Rahmayudha

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Supervisor:

Assoc. Prof. Hale Kirer Silvalecuna

Bandırma 2025

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APPROVAL OF THE THESIS



ETHICAL STATEMENT
TO
BANDIRMA ONYEDİ EYLÜL UNIVERSITY
INSTITUTE OF SOCIAL SCIENCES

I hereby declare that all the information in this thesis has been collected and presented in accordance with academic rules and ethical principles. As required by these rules and principles, I also declare that I have mentioned and indicated the source of all data, thoughts, and results that are not my own are given reference to and cited accordingly. (30 / 06 /2025)

ABSTRACT

This study explores how external debt, foreign direct investment (FDI), and commodity exports have influenced Indonesia's Gross Domestic Product (GDP) during the presidency of Joko Widodo, covering the years 2014 to 2024. This period has been characterized by a noticeable increase in external borrowing, growing inflows of foreign investment, and a renewed emphasis on downstreaming policies, especially in the export of key commodities like nickel.

The analysis is based on secondary data drawn primarily from Bank Indonesia's SEKI (Indonesian Economic and Financial Statistics), along with additional sources such as books, academic journals, and related publications. To investigate the relationships among the variables, the Autoregressive Distributed Lag (ARDL) model was employed. The results show that FDI has no significant effect on GDP in either the short or long term. On the other hand, both external debt and commodity exports demonstrate a strong and positive relationship with economic growth. These findings suggest that Indonesia's economy continues to rely heavily on debt and export performance as its main engines of growth.

Keywords: *Commodity Exports, External Debt, FDI, Gross Domestic Product, Indonesian Economic Growth*

ÖZET

Bu çalışma, 2014–2024 yılları arasında Başkan Joko Widodo yönetimi döneminde dış borç, doğrudan yabancı yatırım (DYY) ve emtia ihracatının Endonezya'nın Gayri Safi Yurtiçi Hasılası (GSYH) üzerindeki etkilerini belirlemeyi amaçlamaktadır. Söz konusu dönem, artan dış borç seviyesi, yabancı sermaye girişleri ve nikel gibi emtiaların ihracatına yönelik işleme politikalarının yeniden uygulanmasıyla karakterize edilmektedir.

Çalışmada kullanılan veriler, Bank Indonesia'nın (BI) SEKI (Endonezya Ekonomi ve Finansal İstatistikleri) başlıklı yayını ile kitaplar, dergiler ve benzeri diğer ikincil kaynaklardan elde edilmiştir. Analiz kapsamında Otoregresif Dağıtılmış Gecikmeli Model (ARDL) kullanılmıştır. Elde edilen bulgular, doğrudan yabancı yatırımın kısa ve uzun vadede GSYH üzerinde anlamlı bir etkisinin olmadığını ortaya koymaktadır. Buna karşılık, dış borç ve emtia ihracatının GSYH büyümesiyle pozitif ve anlamlı ilişkiler gösterdiği tespit edilmiştir. Bu bulgular, Endonezya ekonomisinin büyümesinde dış borçlanma ve ihracatın hâlâ temel itici güçler olduğunu göstermektedir.

Anahtar Kelimeler: *Dış Borç, Doğrudan Yabancı Yatırım, Emtia İhracatı, Endonezya Ekonomik Büyümesi, Gayri Safi Yurtiçi Hasıla*

PREFACE

On this occasion, I would like to thank the presence of Allah Subhanahu wa Ta'ala for all His grace and gifts so that I can complete this thesis entitled The Effect of Foreign Debt, Investment, and Commodity Exports on Indonesia's GDP in the Era of President Jokowi Dodo, as one of the requirements to obtain a Master of Economics degree at Bandırma Onyedi Eylül University.

I recognize that without the assistance and support of various parties, this thesis would not have been completed properly. Therefore, I would like to express my deepest gratitude to:

1. Assoc. Prof. HALE KIRER SILVALECUNA as the supervisor, has guided me patiently and provided a lot of meaningful input during the writing process.
2. To my parents and beloved family, for all the prayers, encouragement, and love that have been given.
3. All my friends, especially my housemates, are always willing to listen to my complaints.
4. All people who are directly or indirectly involved in supporting the smooth writing of this thesis.

I realize that this thesis is far from perfect. Therefore, constructive criticism and suggestions are highly expected for the improvement of future research. It is hoped that this work may offer advantages to parties interested in the field of macroeconomics studies, especially related to Indonesia's economic development policy.

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ABBREVIATIONS

APBN	: Determination of the State Revenue and Expenditure Budget
ASEAN	: Association of Southeast Asian Nations
BI	: Bank Indonesia
BPS	: Central Bureau of Statistics
C	: Household Consumption
DI	: Disposable Income
FPFA	: Factor Payment from Abroad
FPTA	: Factor Payment to Abroad
G	: Government Spending
GDP	: Gross Domestic Product
GNI	: Gross National Income
GNP	: Gross National Product
I	: Investment
IMF	: International Monetary Fund
IDR	: Indonesian Rupiah
IFCA	: Income of Citizens Abroad
IFFC	: Income of Foreign Citizens in the Country
LKPP	: Central Government Financial Report
NNI	: Net National Income
NNP	: Net National Product
NX	: Net Export or Export-Import
PDRB	: Gross Regional Domestic Product
PI	: Personal Income
PNBP	: Non-tax revenue
SBI	: Bank Indonesia Certificates
SBN	: Government Bonds

SBSN	: State Sharia Securities
SEKI	: Indonesian Economic and Financial Statistics
SULNI	: Indonesia's Foreign Debt Statistics
UU/UUD	: The 1945 Constitution of the Republic Indonesia
UNSD	: United Nations Statistics Division
UUPM	: Investment Law under Law No. 25/2007 of the Republic of Indonesia



INTRODUCTION

Indonesia officially entered the 8th presidential election phase in early 2024. This election also marks the end of the term of the 7th President, Ir. H. Joko Widodo or better known as Jokowi, who has led Indonesia for two terms since 2014. Jokowi is the first President of Indonesia to come from outside the elite circles of the military and traditional politics. His political career began as Mayor of Solo, then Governor of the special capital region of Jakarta, until finally being trusted as President of the Republic of Indonesia. The 2014–2024 election period in this study is based on the high level of legitimacy and public acceptance of President Joko Widodo's (Jokowi) administration. According to data from the Indonesian Survey Institute (LSI), public satisfaction with Jokowi has continued to rise, reaching 76.2 percent in early 2023, indicating high public trust in his leadership (SCMP, 2023). Furthermore, Jokowi is one of only the Indonesian presidents to win consecutive direct presidential elections in the democratic era. He won the 2014 election with 53.2 percent of the vote and was re-elected in the 2019 election with 55.5 percent of the vote (BBC News, 2019). This demonstrates strong and sustained public support. In terms of international popularity, according to a GoodStats report (2022), Jokowi is also listed as the world's second-most followed Instagram leader, with 49.7 million followers, just behind Indian Prime Minister Narendra Modi (71.7 million). This reflects Jokowi's significant influence as a public figure, both domestically and globally. During his administration, Jokowi was known for his massive infrastructure development policies, economic deregulation, and efforts to attract foreign investment as part of a strategy to increase national economic growth.

During his decade of leadership, various economic policies taken by Jokowi have become the subject of public discussion and have drawn various responses. Among the most highlighted issues are the increase in foreign debt, the increase in foreign investment, and the export of leading commodities such as nickel, coal, and palm oil. One of the prominent strategic policies is the ban on nickel ore exports which was re-imposed in 2020, after previously being implemented in 2014. This policy is part of the downstream strategy, which aims to increase the added value of Indonesia's export commodities. This step was taken even though the export value of mining commodities

in 2022 reached USD 73.5 billion, up 52.69% compared to the previous year (Bank Indonesia, 2023a). This shows how great the potential of Indonesian commodities is in the global market. However, efforts to encourage exports with added value require large costs. In this context, the two main sources of financing utilized by the government are foreign debt and investment. According to Arsyad (2010), foreign debt plays an important role in supporting state spending and encouraging economic activity. However, like two sides of a coin, debt and investment also carry risks if not managed carefully and sustainably.

The increase in Indonesia's foreign debt has raised public concerns. In the SEKI publication issued by Bank Indonesia from 2014 to 2023, Indonesia's foreign debt has continued to increase from around 293.3 billion USD in 2014 to around 407.1 billion USD in 2023. The debt has shown consistent growth every year, with significant increases such as from 320 billion USD in 2016 to more than 403 billion USD in 2019, before slightly stabilizing at around 405-407 billion USD in the last two years. Bank Indonesia data shows that in 2024, Indonesia's foreign debt will reach 6,235 trillion Indonesian Rupiah (IDR) (Newswire, 2024). Some people consider this spike in debt to be a form of dependence on foreign investment, especially from China. This concern arose along with the experience of countries such as Sri Lanka, where the Hambantota port project was eventually taken over by China due to the inability to pay the debt.

Issues such as poverty, inflation, and rising prices of basic necessities are often associated with foreign debt policies. Therefore, it is important to examine in more depth the relationship between foreign debt, investment, commodity exports, and Indonesia's economic growth, especially in the era of President Joko Widodo's administration. This is why this study was conducted.

This study focuses on the influence of External Debt (ED), Foreign Direct Investment (FDI), and Commodity Exports on Indonesia's Gross Domestic Product (GDP) during the administration of President Joko Widodo (2014–2024). The aim is to find out whether the issues that are developing in society are true, such as the view that foreign debt burdens the economy, or that increasing FDI has a negative impact, and the export policies implemented have an impact on GDP.

The main objective of this study is to quantitatively analyze the extent to which ED, FDI, and exports contribute to Indonesia's GDP during Jokowi's administration. This study also aims to test whether the three variables have a positive or negative influence on national economic growth, and whether there are indications of economic risks that should be watched out for.

The methodology used in this research is a quantitative method with an Autoregressive Distributed Lag (ARDL) approach. The data used is quarterly data, with as many as 40 data points in the form of a time series. The data used in this study are secondary data obtained from Bank Indonesia (BI) in its publication entitled Indonesian Economic and Financial Statistics (SEKI), and other sources including books, journals, etc. The data in SEKI is compiled using primary data from Bank Indonesia and secondary data from other institutions such as the Ministry of Finance, the Central Bureau of Statistics (BPS), and the Deposit Insurance Corporation (LPS).

Based on the background that has been explained, the research question in this study is as follows:

- Does foreign debt affect Indonesia's gross domestic product during the administration of President Joko Widodo?
- Does foreign direct investment have a significant effect on Indonesia's economic growth?
- To what extent do commodity exports contribute to Indonesia's GDP growth during the administration of President Jokowi?
- Are the negative issues that have developed in society related to foreign debt and the dominance of foreign investment empirically proven?

This study was conducted with the hope of finding out whether there is a positive relationship between foreign debt, investment and commodity exports in Indonesia towards the Indonesian economy under the leadership of President Joko Widodo. Moreover it is also hoped that this study can provide education to the public about the importance of analyzing and examining data in concluding something. It is expected that the analysis in this study can also be used to formulate appropriate policies to increase

the added value of commodity exports in Indonesia. And it can be useful for researchers in conducting research on related matters in the future.



CHAPTER ONE

GDP, FOREIGN DEBT, INVESTMENT, AND COMMODITY EXPORT THEORY

1. Gross Domestic Product

Economic Growth reflects the expansion of economic activity in a given area. This can be observed from the increase in the production of goods and services that society produces. This increase in production is typically accompanied by community prosperity, which can be measured by Gross Domestic Product (GDP). Continued economic growth suggests a strong regional economy (Amir, 2007). GDP is a key economic indicator commonly used to measure a country's economic activity. GDP itself measures the total value of all final goods and services produced within a country's territorial borders over a specified period. Economic growth is often used as a benchmark for the success of economic development (Nuraini, 2017). GDP itself can be categorized into several types, namely, GDP based on current prices (Nominal GDP), GDP based on constant prices (Real GDP), GDP Growth rate, and GDP per capita.

GDP at current prices (Nominal GDP) is the added value of goods and services calculated using current prices each year. It is the added value of goods and services in which price changes are not adjusted. As a result, nominal GDP may increase during inflation or decrease during deflation. Therefore, the country does not use nominal GDP as a measure of economic growth (OCBC NISP, 2022). These calculations are used with the aim of showing shifts and structure in the economy.

GDP at constant prices, or Real GDP, is the added value of goods and services, which is calculated using the benchmark prices applicable in a particular year as the basis for the calculation. It can be said that Real GDP is adjusted for inflation, thus providing a more accurate picture of actual economic growth and also enabling one to see whether the increase that occurred was caused by production costs or price increases, regardless of price changes (Callen, 2024).

1.1 The GDP Growth Rate

The GDP growth rate is a measure of the change in the value of all goods and services produced in a country during a certain period of time in percentage form from one period to the next. It is used to assess how fast a country's economy is growing or shrinking (Iowa State University, 2018). The level of economic growth is a form of interpretation of how well an economy performs and its productivity during a certain period. A positive economic growth rate indicates that the economy has progressed over the period that has been measured, or it can be said that the country has experienced an increase in output and an increase in economic activity. On the other hand, a negative economic growth rate indicates that there is an economic downturn, which can cause job losses, increased poverty, and decreased prosperity in the country's society.

Since the GDP growth rate is a comparison of GDP itself over a certain period of time, the calculation of the economic growth rate can use the formula below.

$$Growth = \frac{GDP_t - GDP_{t-1}}{GDP_{t-1}} * 100$$

where GDP_t indicates the Gross Domestic Product in that period, and GDP_{t-1} indicates the Gross Domestic Product one period before.

If it is interpreted as Indonesia's GDP in 2022-2023, the calculation is as follows (Bank Indonesia, 2023b).

$$Growth = \frac{20,892,377 - 19,588,090}{19,588,090} * 100 = 6,65\%$$

It can be interpreted that Indonesia's economic growth in 2023 was 6.65%.

1.2 Gross Domestic Product Per Capita

The definition of GDP per capita is the sum of the added value that has been produced by all the country's business units or the final sum of the value of goods and services that have been produced by all economic units, and this result is divided by the total population of the country. It can be simplified that GDP per capita is the total income earned by the country divided by the country's population. In general, the higher the figure

produced by GDP per capita, the more prosperous the people are. Therefore, GDP per capita can be used to represent the prosperity of a country's population.

1.3 The Methods to Calculate Gross Domestic Product Approach

There are 3 approaches to calculate GDP, namely: the Production approach, the expenditure approach, and the income approach (Sucihatiningsih et al., 2020). Calculation of Gross Domestic Product using the production approach is the sum of the added value generated by the production of goods and services from various production units in that country (Chen, 2016). In Indonesia, the business unit consists of Agriculture, Forestry, and Fisheries; Mining and Quarrying; Processing Industry; Electricity and Gas Procurement; Water Supply, Waste, Waste and Recycling Processing; Construction; Wholesale and Retail Trade, Car and Motorbike Repair; Transportation and Warehousing; Provision of Accommodation and Food and Drink; Information and Communication; Financial Services and Insurance; Real Estate; Government Administration, Defense, and Mandatory Social Security; Company Services, Education, Health, and Other Services. From the results of this explanation, the GDP calculation formula using the production approach can be written as follows:

$$GDP = (Q_1 \times P_1) + (Q_2 \times P_2) + (Q_3 \times P_3) + \dots + (Q_n \times P_n)$$

where Q_1 is a product from goods/services 1, Q_n is a product from goods/services to n , P_1 is the price of the first goods/services, and P_n is the price of goods/services to n .

Calculation of Gross Domestic Product using the expenditure approach is the sum of the added value generated by the production of goods and services from various units, including Household Consumption (C), Investment (I), Government Spending (G), and Net Exports (exports minus imports). Based on this, the formula for calculating Gross Domestic Product using the expenditure approach is obtained as below:

$$GDP = C + I + G + (X - M)$$

In Indonesia itself, the limitations and understanding of each variable have been explained by the Central Bureau of Statistics (2024). The Household Consumption (C) variable in the expenditure approach represents expenditure on goods and services that households carry out for the purpose of consumption.

The variable Government Expenditure (G) is expenditure made by all types of output from the government, which has been reduced by the value of the output for the formation of its capital and also reduced by the value of sales of goods/services and added to the value of goods or services purchased from producers to be given to RT (neighborhood associations) for free or at a low price.

The investment (I) variable is Inventory and also Gross Fixed Capital Formation. Inventory refers to goods that have been owned by a production unit or a unit that produces for further use, such as being sold, given to other parties, or used in other ways. Inventory can also be in the form of inventory originating from other parties that will be used as intermediate input or resold without undergoing further processing.

Net Export or Export-Import (NX) in Indonesia refers to the United Nations Statistics Division (UNSD). According to the UNSD (1993), foreign goods export-import transactions are included in the Gross Regional Domestic Product (PDRB) component. Meanwhile, to carry out international transactions, residents in a provincial area are needed for foreign economic actors (non-residents). Meanwhile, export transactions of goods are transaction activities for the transfer of ownership of goods (either in the form of sales, barter, gifts, or grants) from residents of a provincial area to foreign economic actors (non-residents). Imports of goods are transaction activities for the transfer of ownership of goods (either in the form of sales, barter, gifts, or grants) from foreign economic actors (non-residents) to residents of a provincial area.

The last approach in calculating national income is the income approach. The income approach is a calculation of national income based on the compensation received by the individual agents in carrying out the production process. Compensation can take the form of wages or salaries (w), rent (r), interest (i), and profits (p). Therefore, the formula obtained is as below:

$$GDP = w + r + i + p$$

1.4 Other National Income

The concept of National Income is not only GDP, but there are also other concepts. Initially, National Income was carried out by Sir William Petty in England to calculate

people's income, which included two variables, namely Population and Social Income (Kurniawan, 2020). However, this concept was challenged because it was no longer following the modern economy. In the theory carried out by Sir William Petty, the existing changes were not included.

The current definition of National Income put forward by Marshall (1890) in his book "Principles of Economics" is all products of goods and services that have been produced in a period of generally one year. Meanwhile, the Central Bureau of Statistics (2022) explains that National Income is the income received by all citizens in a certain period. There are several other concepts related to National Income besides GDP, namely Gross National Product (GNP), Gross National Income (GNI), Net National Product (NNP), Net National Income (NNI), and finally Personal Income (PI). The description of the relationship between each concept from GNP to PI can be described as follows.

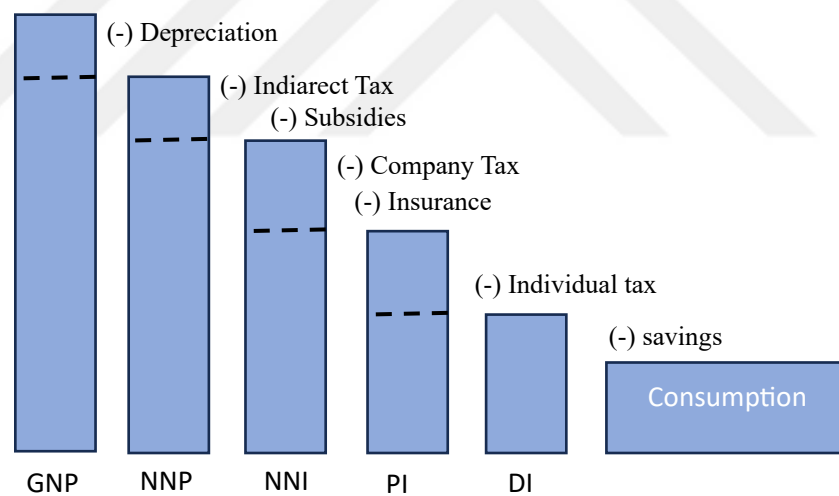


Figure 1 Revenue Components Series

As described in Figure 1, though Gross Domestic Product (GDP) gives an elementary idea of a nation's national output, a better understanding involves looking into a set of allied indicators including Gross National Product (GNP), Gross National Income (GNI), Net National Product (NNP), Net National Income (NNI), Personal Income (PI), and Disposable Income (DI), all of them sum up to national income and show a broad picture of a country's economic performance.

GNP is an estimate of the value of output or how much the valuation of the production of products or services produced by the residents of a country in a certain period (Callen, 2024). Based on this, the formula for GNP can be written as below:

$$GNP = GDP + (ICA - IFCC)$$

where GDP represents Gross Domestic Product, ICA represents the Income of Citizens Abroad, and IFCC represents the Income of Foreign Citizens in the Country.

Gross National Income (GNI) is all income received by citizens of the country, both domestically and abroad. This is different from GNP, which calculates the valuation of products or services produced. GNI calculates the income received from the production activities of a country's citizens, both domestically and abroad, including production owned by citizens, such as wages, profits, interest, and rent. From the explanation above, the GNI formula can be written as follows:

$$GNI = GDP + (FPFA - FPTA)$$

There is a level standard made by the World Bank (2025) based on GNI per capita calculated using the World Bank Atlas method. Based on the standards applied in 2025, it is stated that there are 4 country classifications. Countries with low income equal to less than \$ 1,145, for lower middle income countries between \$ 1,146 and \$ 4,515, countries with upper middle income between \$ 4,516 and \$ 14,005, and finally, countries with high income more than \$ 14,005.

FPFA in GNI represents Factor Payment from Abroad, and FPTA represents Factor Payment to Abroad. Similar to GNP, when calculating GNI, it is also noted that there is no double counting. It should be noted that GNI calculates the net income generated by the citizens themselves, excluding income generated by foreign citizens who are currently in the country.

Net National Product (NNP) is the value of the total production of goods and services produced by the country's citizens themselves, both citizens within the country and those abroad, minus the depreciation of assets used in production (Suparmono, 2018). Based on this explanation, the GNP calculation formula is obtained as below.

$$\mathbf{NNP = GNP - Depreciation}$$

NNP can provide an overview of the net value generated by all production. However, the NNP is less precise in representing National Income because there is no proper assessment in calculating depreciation.

Net National Income is the net income from all existing sources, both domestic and foreign sources received by the citizens themselves after being reduced by taxes. In other words, NNI calculates the net income generated by all production. Unlike the NNP, the NNI can represent National Income because the NNI calculates the net income received by citizens after being reduced by taxes and does not forget to add the subsidies provided for a more detailed calculation. From this explanation, the NNI formula is obtained as below.

$$\mathbf{NNI = NNP - Indirect Taxes + Subsidies}$$

Indirect Taxes are taxes whose implementation can be delegated to other parties. Usually, this tax is imposed on the consumption of goods and services, and taxpayers are the end consumers. For example Value Added Tax (VAT), Import Duty, and Excise.

PI (Personal Income) is the total income received by individuals or households in a country before being reduced by income tax or direct taxes imposed on the individual or household. PI includes all forms of income received such as wages, salaries, rental income, investment income, and income received from transfer payments (social benefits, pension benefits, and government subsidies). However, the calculation of PI can also be obtained from NNI which has been reduced by corporate tax that must be paid by the company to the government, retained earnings or profits that are not distributed by the company to shareholders for the benefit of the company, pension contributions, and insurance (Yoshanda, 2020).

Disposable Income (DI) differs slightly from Personal Income (PI). Personal income is the income earned by individuals or households before it is reduced by their obligations, such as taxes. Suparmono (2018) explains that DI is PI that has been reduced by any obligations such as income tax or savings. As explained above, the following formula is obtained.

$$DI = PI - \text{Direct Tax}$$

1.5 Economic Growth Theories

The theory of economic growth is a response to the conditions or era of that time. Many factors influence the formation of ideas related to the theory of economic growth, including changes in technology, shifts in eras, population fluctuations, insights into the production process, poverty, and political conditions, among others. Because of this, the theory of economic growth continues to develop until now.

1.5.1 Classical Foundations

The foundations of classical economic thought were established by prominent thinkers who developed their ideas during the 18th and 19th centuries, including Adam Smith, David Ricardo, Thomas Malthus, among others. This historical period marked the inception of systematic economic analysis, thereby laying the groundwork for modern economic theory. Classical economics emerged as these intellectuals sought to understand and elucidate the dynamics of wealth creation, trade, and resource allocation within societies experiencing rapid transformation. Their scholarly work concentrated on critical issues such as the role of labor, the effects of population growth, and the distribution of resources, thereby providing valuable insights into production processes, poverty alleviation, and political conditions. Owing to this comprehensive and progressive perspective, economic growth theory continues to evolve and adapt to contemporary economic challenges and contexts.

1.5.1.1 Adam Smith's Invisible Hand Theory

One of the earliest contributions to the foundations of economic growth theory can be traced to Adam Smith. Smith (1776), in his work “An Inquiry into the Nature and Causes of the Wealth of Nations”, put forward the concept of a free market. The free market itself refers to an economic system in which the interaction of supply and demand determines prices and resource allocation without significant government intervention. In a free market, the exchange of goods and services occurs voluntarily between producers and consumers (Pindyck & Rubinfeld, 2018). It should be noted that in that era, England was going through the Industrial Revolution. At that time, the wealth of a country was

considered to depend on the amount of gold and silver it had. The mercantilism approach, which was very popular at that time, made England implement strict trade rules, such as limiting exports and imports, to keep the reserves of precious metals in the country.

Because of this, Smith introduced the concept of the "Invisible Hand" and "Laissez-faire." Smith believed that the economy could prosper if each individual made decisions for their own interests. Likewise, in the thinking of economic liberalism, which advocates using the Laissez-faire approach. Laissez-faire itself comes from the French, which means "let it be" or "let it run." Where there is no intervention from the government. The government should only intervene in the economy as far as necessary, such as protecting property rights and maintaining fairness in trade (Chabibi, 2019). They believe that markets that are not intervened in by the government can produce a more efficient and innovative economy.

1.5.1.2 Malthusian Population Theory

In contrast to Adam Smith, Malthus (1798) had a reasonably pessimistic view regarding growth. In his work "An Essay on the Principle of Population" in 1798, Malthus put forward the opinion that population growth has faster growth compared to the production process carried out. This can lead to poverty and hunger.

Many factors can affect economic growth. Population growth is one of these factors. Malthus argued that population growth can lead to increased per capita income. Likewise, very high population growth and numbers can cause a slowdown in per capita income and national income. This is because excessive population growth can affect the production process. Due to the inability of the production process to keep up with the rate of population growth itself.

Michael P. Todaro in Economic Development provides a more detailed view of the relationship between population growth and economic development (Todaro, 2000). Todaro also argues that economic growth can indeed be driven by population growth, but this can also be an obstacle to economic growth itself. Population growth has different impacts on developed and developing countries. In developed countries, population growth can increase economic growth because people in developed countries use the income they earn to make high investments. In developing countries, population growth

only becomes an obstacle to economic development, where population growth will put pressure on employment and cause high unemployment and a lack of adequate provision of educational and social facilities. This happens because the economic conditions in developed and developing countries are different.

1.5.1.3 Keynesian Economic Theory

In the 17th and 18th centuries, Britain experienced the Industrial Revolution, which brought about major changes in the economy and society. A group of industrialists, experts, and economists promoted laissez-faire freedom as the best way to increase the nation's wealth. They became known as the “Manchester Liberals” because many of them came from the booming industrial city of Manchester. And they believed that if the British government removed almost all regulations and barriers to market behavior, Britain would progress more rapidly (Clark, 2002).

In the 1940s, Keynesian theory dominated economic policy and economic theory, replacing the previously dominant economic liberalism. Economic liberalism began to fade due to massive unemployment and was considered incapable of handling the crisis (Cypher & Dietz, 1997).

Jahan et. al (2014) explains that there are 3 main principles in Keynesian thinking as to why government intervention is needed:

- Aggregate demand is influenced by both the public and private sectors. Although the private sector can sometimes cause adverse macroeconomic effects, such as reduced consumer spending during a recession, Keynesian thought suggests that this may sometimes require active government policy. Therefore, Keynesian economics advocates a mixed economy that is guided primarily by the private sector but partly operated by the government.
- Keynes argued that prices and wages are sticky in the short run. Prices and wages react slowly to existing supply and demand. This results in labor shortages and surpluses. This means that unemployment and crises should not wait for the market to resolve itself.
- Keynesian Thinking Accepts that the economy can experience long-run disequilibrium. This is caused by anticipated and unanticipated changes in aggregate

demand. Because prices are sticky, fluctuations in any component of expenditure such as consumption, investment, or government purchases can cause output to change.

1.5.1.4 Neo-classical Growth Models (Solow-Swan)

The Solow-Swan growth model theory was developed by two economists, Robert M. Solow from the United States and T.W. Swan from Australia. Robert M. Solow put forward his theory in his book entitled *Growth Theory: An Exposition* (1970), while T.W. Swan published a similar concept in a work entitled *Economic Growth and Capital Accumulation* (1956). This theory explains long-term economic growth by considering capital (K), labor (L), and technology (A). The Solow-Swan model emphasizes that the level of output growth is determined by the progress or development of the technology itself (Amalia et al., 2016).

In the application of the Solow-Swan model, it is based on the production function in the economic growth model, which can be stated simply as follows:

$$Y = F(K, L) \quad (1)$$

Where Y represents output, K represents capital, and L represents labor. However, in the Solow-Swan model, technology is considered an important factor determining the productivity of capital and labor, so the production function is developed into:

$$Y = AK^\alpha L^\beta \quad (2)$$

Variable A represents technological progress that is assumed to increase exogenously over time. The Solow-Swan growth model uses the Cobb-Douglas production function to represent the relationship between capital, labor, and technology. This model aims to explain the mechanism of output growth over time and the long-run conditions under which growth can only be sustained through technological progress.

1.5.2 Modern Growth Theories

There is a difference between the Modern Growth Theories and the Solow-Swan Model. Modern Growth Theories emerged as a response to the limitations of the Solow-Swan model, where the model assumes that only technological advances originating from outside the economic system (exogenous) have an influence on long-term growth.

1.5.2.1 Endogenous Growth Theory

The primary difference between the Solow-Swan growth model and endogenous growth theory is the assumption regarding the return on capital. In the Solow-Swan model, the more capital is added, both in physical capital (K) and in human resources (L), the additional return will continue to decline. In contrast, endogenous growth theory assumes that the return on capital does not have to decline but can even remain the same or increase, especially due to positive external effects (Cypher & Dietz, 1997). Endogenous Growth Theory offers a more realistic explanation of how economic growth can be influenced by government policies, education, research and development (R&D), and market incentives. Therefore, the endogenous growth theory model equation can be written as follows:

$$Y = F(R, K, H)$$

where (Y) is total output, (R) is research and development (R&D) conducted by all firms in the economy, (K) is the accumulated capital stock, and (H) is the accumulated human capital stock.

This theory emphasizes that investment in education and knowledge not only increases individual productivity but also has an indirect impact on the work environment. For example, increasing the average level of education in society not only makes individuals more productive but also increases the productivity of other coworkers through interaction and collaboration. This is known as the spillover effect of human capital (Cypher & Dietz, 1997).

In addition, this theory also explains the importance of the learning-by-doing process, namely the ability of the workforce to continue to learn and improve skills from daily work experiences. Thus, even though inputs such as the number of workers do not change, productivity can still increase over time.

Endogenous growth theory believes that economic growth does not have to depend on external factors such as technological advances from outside. Instead, growth can emerge from within the economic system itself through improvements in the quality of human resources, innovation, and the country's ability to develop and utilize existing

technology. Therefore, each country can have a unique growth path, depending on the characteristics and quality of the inputs it has (Cypher & Dietz, 1997).

1.5.2.2 Unified Growth Theory

Unified Growth Theory was discovered by Oded Galor, a Herbert Goldberger Professor of Economics at Brown University. This theory was first introduced in the 2000s in a work entitled *Unified Growth Theory* (Galor, 2005). This theory attempts to explain the entire process of economic growth from pre-industrial times to the modern era. Unified Growth Theory combines demographic, technological, and structural economic change approaches in one large framework. Galor developed this theory to address the limitations of previous growth models, such as the Solow-Swan model and endogenous growth theory.

The Unified Growth Theory explains the phenomenon of the "Great Divergence," namely the significant difference between countries that experienced the transition to modern growth earlier, such as the UK, and countries that were slower, such as China. The causes of this difference are explained by factors such as geography, colonial history, public policy, and most importantly, institutions that support education and human capital development (Galor, 2005).

Methodologically, the Unified Growth Theory also presents a new approach to economic theory. The transition from stagnation to growth is not the result of a single major event but is a gradual and endogenous process in which variables such as technology, demographic structure, and institutions change over time and drive the economic system from a stagnant equilibrium to a sustainable growth equilibrium. The Unified Growth Theory asserts that modern economic growth is a natural outcome of the process of economic evolution itself, not simply due to chance or external intervention (Galor, 2005).

1.5.2.3 Institutional Economics and Growth.

According to Bruce E. Kaufman (2007), Institutional Economics can act as a complement or a substitute for neoclassical economic theory. As a complement, this approach can expand economic analysis by highlighting the role of institutions such as laws, policies, and social norms in influencing economic behavior. While as a substitute,

Institutional Economics presents an alternative paradigm that often produces different conclusions from neoclassical ones, especially in terms of belief in the ability of markets to regulate themselves.

There are several things that are emphasized by economic institutions in influencing long-term economic growth. According to Acemoglu et al. (2005), these are explained as follows :

- Economic institutions play a significant role in economic growth because they influence the incentives of economic actors, especially in investment and the organization of production. Although cultural and geographic factors can play a role, differences in economic institutions are the main cause of differences in prosperity across countries. These institutions not only determine the extent of economic growth, but also influence how wealth and resources are distributed within a society. This is what produces the following framework

$$economic\ institutions_t \rightarrow \left\{ \frac{economic\ performance_t}{distribution\ of\ resources_{t+1}} \right.$$

- Economic institutions are formed from some of the results of community choices. However, not all communities want the same form of economic institutions because of differences in interests and distribution of resources. Whose institutions win is determined by political power and groups that are politically stronger tend to be able to realize the institutions they want.

$$political\ power_t \rightarrow economic\ institutions_t$$

- When political power influences the formation of economic institutions, inefficiency and poverty often arise because of commitment problems. The ruling group cannot guarantee that they will not abuse their power for their own interests. This makes it difficult to separate efficiency and distribution because there is no reliable compensation mechanism.
- Political power in society comes in two forms, *de jure* (official, based on political institutions such as a system of government or constitution) and *de facto* (unofficial, derived from real influence on the ground). Political

institutions such as democracy or monarchy influence how *de jure* power is shared and how political actors are constrained in using their power.

$$\text{political institutions}_t \rightarrow \text{de jure political power}_t$$

- In addition to formal power, groups in society can have *de facto* power, such as through rebellion, mass mobilization, or economic power. This *de facto* power comes from two things: the group's ability to unite (solve collective action problems) and the amount of economic resources they have to support their political influence.

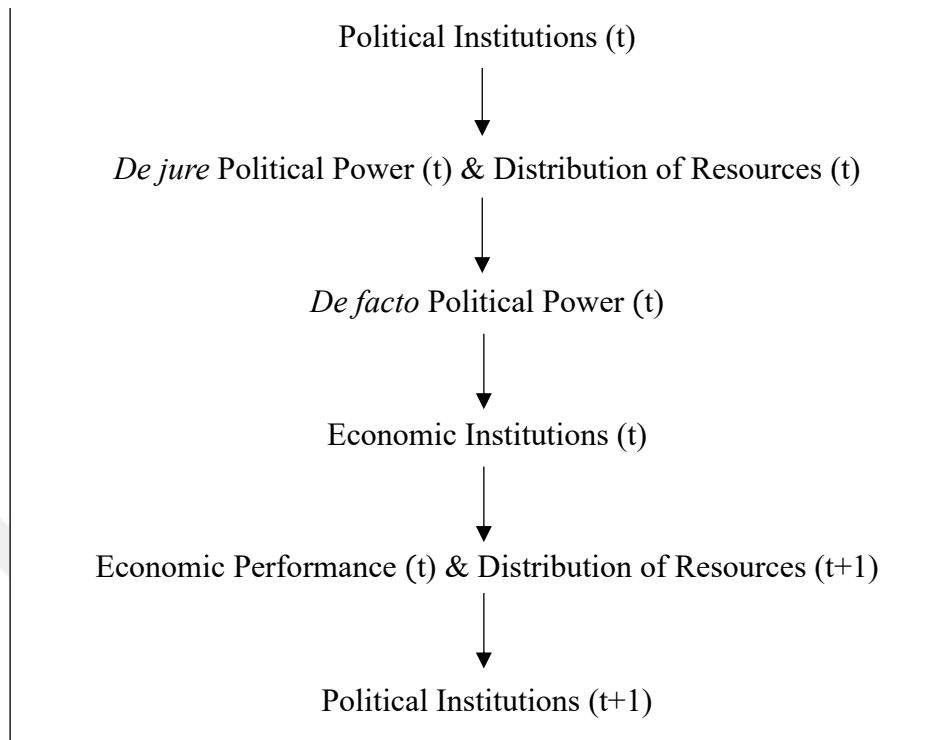
$$\text{distribution of resources}_t \rightarrow \text{de facto political power}_t$$

- Changes in political institutions and the distribution of resources are two major variables that influence the course of economic institutions and the economic performance of a country. If political institutions give all power to a few people, then fair economic institutions are difficult to form. Because political institutions determine who has *de jure* power, political institutions are above economic institutions in the hierarchy that influences economic outcomes.

Based on the analysis that has been described, Acemoglu's scheme which describes the relationship between political and economic institutions can be seen in Table 1.

De jure political power is legitimate power according to law or constitution (president, parliament, election system). *De facto* political power or real political power is a power that is owned (real actors, can be through money, military, networks, or other informal powers). Moreover, the new distribution of resources will again affect *de facto* political power, which can cause changes or maintain political institutions in the next period.

Table 1 Acemoglu scheme



Source : Daron Acemoglu et al (2005), Institutions as a Fundamental Cause of Long-Run Growth

2. External Debt

The role of the government in a country's development is crucial. Even though the most important component in a country is the people, without the presence of a government with a record that the government has good competence, the vision of a country's development to create a prosperous country will be difficult to realize. The role of government in the state consists of service, development, and empowerment (Rasyid et al., 1998). However, there are several theories that say that the government should not intervene in an economy in order to achieve an optimal economy, as put forward by the classical economic thought of Adam Smith, David Ricardo, and John Stuart Mill in the 18th and 19th centuries. It is also related to the theory that "Supply Creates its Own Demand" put forward by a classical economic figure, namely Jean Baptiste Say. However, this cannot be realized immediately in the current economic era. Previous research conducted by Retnosari and Safara (2023) It was found that in the case study, Indonesia still needs intervention from the government to maintain the stability of the Indonesian economy.

The three functions of the government's role put forward by Rasyid can be said to be that the government functions as a regulator, driver, and provider of policies that facilitate economic growth, build infrastructure, and improve community welfare. For this goal to be realized, large financial resources are also needed. That is where the important role of Foreign Debt is.

2.1 Definition of External Debt

ASEAN countries, including Indonesia, are a group of countries where the majority of countries are developing countries. Developing countries have a similarity in that the role of external debt greatly influences the determination of the State Revenue and Expenditure Budget. National development requires significant funds from the Determination of the State Revenue and Expenditure Budget (APBN), which comes from State Revenue (including taxes, Non-tax revenue (PNBP), and grants) as well as Financing Revenue, one of which is debt (Nainggolan, 2021). Foreign debt itself is a loan obtained by the government from international financial institutions, such as the World Bank, International Monetary Fund (IMF), other countries, or global financial markets. Funds obtained from this debt are usually used to invest in infrastructure development, economic development projects, and strengthening the economy in the long term. Support received from other countries can also be classified as foreign debt because much of the foreign aid must be returned or must be repaid.

There are several meanings and explanations for External Debt. According to Bank Indonesia (2023a), External Debt is defined as debt from residents domiciled in an economic territory to non-residents. Where this concept is based on or refers to the concept of the IMF's External Debt Statistics in its article entitled Guide for Compilers and Users which reads "*Gross external debt, at any given time, is the outstanding amount of those actual currents, and not contingent liabilities that require payments (s) of principal and/or interest by the debtor at some point(s) in the future and that are owed to non-residents by residents of an economy*" (International Monetary Fund, 2014).

In this case, the Indonesian government divides foreign debt into three classifications in its publications, namely foreign debt carried out by the government, foreign debt carried out by the private sector, and foreign debt carried out by the Central Bank. In

contrast to the World Bank, it classifies foreign debt into 3 parts, namely long-term debt, short-term debt, and use of credit to the IMF. In this classification, long-term debt can be categorized as private debt that is not guaranteed by the government, government debt, and debt that is guaranteed by the government. Meanwhile, short-term debt is debt that has a due date of one year or less than one year.

2.2 Public External Debt (Government)

In the publication "Indonesian Foreign Debt Statistics" (SULNI) carried out by Bank Indonesia and the Ministry of Finance (2023a), a definition of Government Foreign Debt is found, namely debt owned by the central government which consists of bilateral, Multilateral, Commercial, Supplier, and Letter debt. State Value (SBN) provided that the SBN is issued overseas or domestically and is owned by non-residents. Meanwhile, SBN itself consists of Sharia Securities issued by the State (SBSN) and Debt Securities issued by the State (SUN). SUN itself also has derivatives, namely consisting of State Bonds which have a term of more than 12 months, and State Treasury Notes (SPN) which have the same term as Bonds of 12 months. SBSN also has its derivative, namely long-term SBSN with its product which is also called Ijarah Fixed Rate (IFR) and also consists of Global Sukuk.

2.3 Private Foreign Debt

Private Foreign Debt in publications made by Bank Indonesia and the Minister of Finance is foreign debt made by residents to non-residents in foreign currency or rupiah, which is based on a debt agreement or other agreement, cash and savings that do not belong to residents, and also other obligations to non-residents. Private Foreign Debt consists of several things, namely debt from Financial Institutions and Non-Financial Institution Companies. Meanwhile, the external debt of financial institutions itself consists of banks and non-bank financial institutions. One of the components included in private foreign debt is foreign debt, which originates from the issuance of domestic securities owned by non-residents (Bank Indonesia, 2023a).

2.4 Central Bank Debt

Foreign Debt by the Central Bank in publications made by Bank Indonesia and the Minister of Finance is debt owned by Bank Indonesia intended to support the balance of

payments and foreign exchange reserves. There are also debts to non-resident parties who have allocated their funds to Bank Indonesia Certificates (SBI), as well as those who have allocated their funds to debts in the form of cash, savings, and other obligations to non-residents.

2.5 Legal Framework for Indonesia's External Debt

Indonesia's External Debt is also regulated by statutory regulation No.1/2003 concerning state finances. In this regulation, it is explained that the debt ratio that the government may carry is 60% of Indonesia's GDP. In accordance with the recommended by the World Bank in its study entitled Finding the Tipping Point, When Sovereign Debt Turns Bad (Caner et al., 2010), the debt to GDP ratio is 77%, where if it exceeds this ratio, the country's economic growth is at risk of slowing down.

In the 2020 Central Government Financial Report (LKPP), the central government's loan position was Rp 6,079.17 trillion, where the ratio of government debt to GDP was 39.39% with a debt position of 90% which is long-term. This means that it is still far below the provisions of Law No. 1/2003 concerning state finances. In this way, the government still has the freedom to make payments. In this report, we can also find out several things, namely that the debt carried out is dominated by the rupiah so that it can maintain stability and fluctuations caused by the dollar. Also, 85.89% of the debt is in the form of Government Securities (SBN). This shows that the Government is trying to increase financial independence with the help and role of the community in creating small risks. Finally, the government's net equity assets reached Rp 4,473.2, which means the government's assets are greater than its debts.

2.6 Theories of External Debt

There are several views regarding the relationship between debt and economic growth. These views discuss how the debt from the government and from the private sectors can affect the economic growth of a country. Debt can be seen as a double-edged sword. On the one hand, it can be an important tool to encourage development and growth, but on the other hand, excessive debt can cause a financial crisis and burden future generations. This section will explain economists' views regarding the relationship between debt and economic growth, which are explained through three different schools

of thought, namely Classical/Neo-Classical, Keynesian, and Ricardian. Each of these schools has a unique perspective on the impact of debt on the economy, with each school offering different solutions and policies to manage debt so as not to hinder economic growth and maintain the country's financial balance.

2.6.1 Classical and Neoclassical Views

Classical and Neo-classical economic thought both agree and have the same view in addressing foreign debt. Adam Smith in his work *The Wealth of Nations* (1776), states that foreign debt is a good step for a country's economic growth by increasing domestic productivity, such as infrastructure development or investment in profitable industries. Marshall as a figure in Neo-classical thought is also in line with Smith's opinion that foreign debt can also be used as financing for important infrastructure development projects which can have a positive impact on the development and acceleration of the country's economy (Marshall, 1890). Even though foreign debt can have a good contribution if used correctly, this does not mean that classical and neo-classical economic thinking supports the use of foreign debt. These thoughts also provide a warning against excessive use of foreign debt. The danger of uncontrolled foreign debt according to classical and neo-classical economic thinking is explained by Barro (1990), that foreign debt can hinder a country's economic growth in the long term. This is because the impact resulting from foreign debt still has to be paid by the future government. It may be argued that the investments we enjoy presently must be repaid in the future, resulting in a scenario where the initial benefits appear to have no lasting significance.

2.6.2 Keynesian Perspective

Keynesian economic thought focuses on macroeconomic theory related to the influence of total economic expenditure on output, inflation, and employment. This idea was developed by the English economist John Maynard Keynes in the 1930s.

Keynesian thought has the concept that economic decline and optimal economic performance can be achieved by government intervention to influence aggregate demand in the economy. The difference between classical thought, neo-classical thought, and Keynesian thought is that Keynesian thought does not believe that markets have the capacity to restore market balance naturally. Classical and neo-classical thinking believes

that if aggregate demand in the market mechanism decreases, production will also decrease, this will trigger a decrease in prices and wages, resulting in inflation. The occurrence of inflation and low wages can stimulate entrepreneurs to increase investment and employ more people until the market can finally balance again (Pigou, 1936). However, Keynesians don't believe this because pessimism is very close to business actors during a recession. Bad business conditions can have the opposite impact. Namely, business actors can reduce capital investment and this will affect the economy and employment as a whole (Jahan et al., 2014). Keynesians also question how deep the recession will last until it can finally return to market balance as before. Overall Keynesian economics is a macroeconomic theory about total spending in the economy and its effect on output, employment, and inflation.

Therefore, Keynesian thinking according to Bernheim (1989) and Eisner (1989), is that policies to increase the spending budget through foreign debt can have a significant influence on a country's economic growth. Expenditures that exceed revenues from the government budget can be covered by foreign debt. With the hope of an increase in income with the aim of increasing consumption until ultimately achieving prosperity. This effect can also lighten the tax burden and ultimately lead to increased income, which can boost the country's economy. Foreign debt can have a positive impact on a country's economy provided that the government has taken into account existing risks and managed them in accordance with existing needs (Skousen, 1997). According to Keynesians in their book "The General Theory of Employment, Interest, and Money," they argue that there is no need to worry about foreign debt as long as the country has control over its own currency. Even foreign debt can provide a stimulus for a country's economic growth in a short time (Pigou, 1936).

2.6.3 Fisher's Paradox

Fisher's paradox or what is often known as the Fisher Effect is an economic theory put forward by American economist Irving Fisher in his book entitled *The Theory of Interest* (1930). The Fisher effect describes the relationship between inflation and nominal and real interest rates (Fisher, 1913). In this case, the Fisher equation provides information that the real interest rate is when the rate of increase in interest has been reduced by the

rate of increase in inflation. For example, when visiting a bank, the nominal interest rate given is 4% while the inflation rate is 3%, so the actual interest rate you get is 1%.

Foreign debt is related to the Fisher effect. According to the international agreement published by the IMF that the debt-to-GDP ratio cannot be more than 60%. With a debt-to-GDP ratio of approximately 29% in 2023, Indonesia is considered safe. However, if we relate it to the Fisher effect, the nominal value of Indonesia's debt continues to increase. In 2018 Indonesia's foreign debt was 375,430 million USD, but in 2023, Indonesia's foreign debt will touch 408,464 million USD. This can happen because the higher the debt value, the higher the interest that must be paid. This condition is called Fisher's paradox in economic theory because the more principal installments that have to be paid, the more debt interest that has to be paid until ultimately more debt will accumulate. It can be concluded that the money borrowed is intended to pay off the debt that has been borrowed (Hayes, 2022).

3. Understanding Export Commodities

Commodity exports play a crucial role in a country's economy, particularly for countries rich in natural resources. Indonesia, strategically located along the equator, is endowed with abundant natural resources. Therefore, Indonesia is very dependent on exports, especially since Indonesia is still a developing country. Through exports, countries can increase foreign exchange earnings, encourage economic growth, and create jobs. There is a causal relationship between exports and economic growth that is interdependent with cause and effect. Relatively high export growth can also bring higher economic growth (Emery, 1967).

3.1 Definition of Export

There are several opinions related to the definition of export itself. According to Banu Santoso, as stated by (Puspandari et al., 2022), Export is a trading activity that involves the removal of goods from Indonesian customs territory to overseas in accordance with applicable provisions. According to Amir (2005) in his book, Export is an effort to sell commodities owned by a country to other countries by expecting payment in foreign currency. Additionally, as stated by the Central Bureau of Statistics of Indonesia (2024), the definition of export itself is all goods taken out of the territory of a country, both

commercial and non-commercial, such as grants, donations, or gifts, as well as goods that will be processed abroad and the results will be re-entered into the country legally.

From the above understanding, there is a similarity that export is a trade that carries out the process of releasing goods from one country to another in a legal manner. In Indonesia, export commodities are divided into 2 large parts, namely Migas (Oil and Gas) and non-Migas. Furthermore, non-Migas will be divided into 3 more groups, namely Agricultural commodities, Processing industry commodities, Mining commodities and others (Badan Pusat Statistik Indonesia, 2024).

3.2 Economic Theories of Export

There are so many views and theories that can be related to commodity exports. Discussion of commodity exports cannot be separated from international trade and the commodity market itself. A market is a place where sellers and buyers gather to make transactions to buy or sell goods (services). Therefore, this section will discuss several theories related to the market itself.

3.2.1 Classical Theories

There are several theories related to exports in classical thought. Such as the law of supply and demand and the theory of comparative advantage.

3.2.1.1 The Law of Supply and Demand

According to Smith's (1776) view, in his work *The Wealth of Nations*, the law of supply and demand occurs as a result of how the market mechanism works. According to Smith, the market mechanism occurs naturally through the mechanism of supply and demand without any interruption or interference from the government or other external parties.

In his work *Principles of Economics*, Marshall (1890) developed the demand and supply curves that show where the market equilibrium point is. The equilibrium point is at the point where the rising supply curve and the falling demand curve intersect so that in the end there is no excess supply or unsatisfied demand. The market mechanism is shown in Figure 2

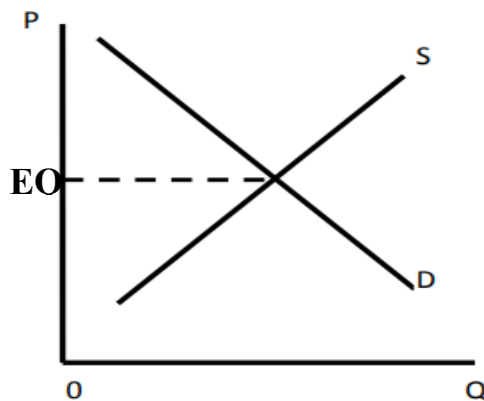


Figure 2 Demand and Supply Curve

The concept of supply and demand results in two simple laws: the Law of Supply and the Law of Demand. The Law of Demand means that if the price of a product goes up, people will buy less of it, and if the price goes down, people will buy more of it. Conversely, the Law of Supply states that if the price goes up, producers will supply more of the good, and if the price goes down, they will supply less of the good, all other things being equal (called *ceteris paribus*). So, if the price of a product goes up, people will buy less but producers will sell more; conversely, if the price goes down, people will buy more but producers will sell less.

3.2.1.2 The Theory of Comparative Advantage

The theory of comparative advantage was put forward by David Ricardo in his work entitled *On the Principles of Political Economy and Taxation* in 1817. The concept of comparative advantage is based on the weaknesses found in the theory of absolute advantage put forward by Adam Smith in his work entitled *The Wealth of Nations* in 1776. According to the theory of absolute advantage, a country is considered superior if it can produce goods or services with fewer resources or time than other countries, thus producing more with the same resources. Ricardo criticized this theory because he thought that international trade would not occur if it only relied on absolute advantage. To overcome this problem, Ricardo proposed the theory of comparative advantage, which allows trade to occur even if one country is superior in producing all goods, as long as each country focuses on goods with lower opportunity costs.

David Ricardo through the theory of comparative advantage emphasizes that international trade allows countries to benefit each other by specializing in the production of goods where they have the lowest opportunity costs (Cypher & Dietz, 1997). In this way, a free market will be created in international trade, and the unlimited exchange that occurs between countries can increase total world production. The comparative advantage in question is dependent on the concept of opportunity costs, where there are sacrifices that must be made in producing a good.

In the book *The Process of Economic Development* Cypher and Dietz (1997), it is stated that David Ricardo gave an analogy of wine and cloth produced by Portugal and England related to the theory of comparative advantage. They produced advantage of producing the products with a lower opportunity cost.

3.2.2 Modern Theories and Perspectives

There are several modern theories related to exports and international trade, such as the New Trade Theory, Porter's Diamond Model, and the Global Value Chain.

3.2.2.1 New Trade Theory (Economies of Scale, Network Effects)

New Trade Theory is an economic theory that emerged in the 1980s. One of its pioneers was Paul Krugman, who also expanded the classical understanding of international trade. Classical trade theory, such as David Ricardo's comparative advantage, states that trade between countries occurs because of differences in productivity or resources owned by each country. However, New Trade Theory offers a new view. This theory explains that international trade can also occur even though countries have almost the same conditions, such as equal levels of technology or resources.

In classical international trade theory, it is assumed that industries operate with constant returns to scale, meaning that if inputs such as labor are doubled, output will also double. However, in practice, many industries actually show economies of scale, where the larger the scale of production, the more efficient the production process. That is, when inputs are doubled, output can more than double. This efficiency can be seen from the decrease in the amount of input needed to produce one unit of goods when production is increased. In the context of international trade, this creates a large incentive for countries

to specialize in the production of certain goods. For example, if two countries have the same production capacity, but only one country produces the world's entire need for one type of good, then the world can produce more goods with the same amount of labor. As a result, both countries benefit if they specialize in production and trade with each other. This is the basis of the New Trade Theory, where international trade occurs not only because of differences in resources or technology, but also because of the benefits of a large scale of production and the resulting efficiency (Krugman et al., 2012).

3.2.2.2 Porter's Diamond Model (National Competitive Advantage)

Porter's Diamond Model is a framework developed by Michael E. Porter in his book "The Competitive Advantage of Nations" (1991). This model explains why some countries are more competitively superior in certain industries than others. Porter argues that national competitive advantage is determined not only by natural factors or production costs, but also by the internal conditions of the country that encourage innovation and productivity. Because of that, Porter's Diamond Model was formed.

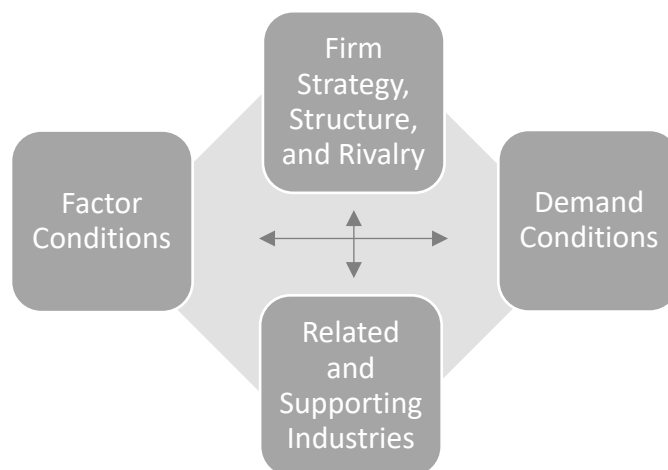


Figure 3 The diamond of national advantage

There are 4 main pillars in the diamond model. Factor Conditions, according to classical economic theory, countries will excel in exporting goods that utilize resources they have in abundance such as labor, land, capital, or infrastructure. However, according to Porter, this is not necessarily true. In developed countries, superiority does not come

from factors provided by nature, but rather from those created such as skilled labor or research and technology capabilities. More important than how many factors a country owns is how quickly and efficiently it can create, improve, and utilize them in a particular industry.

Demand Conditions, although trade is now global, demand from the domestic market still has a big influence. If local consumers have high tastes and demand quality and innovation, then local companies will be encouraged to grow faster and become more competitive than companies from other countries. Therefore, it is not how big the domestic market is but how smart and demanding its consumers are. For example, in Japan heavy equipment such as excavators is very popular, so Japanese manufacturers excel in this segment globally even ahead of Caterpillar, the world leader.

In Firm Strategy, Structure, and Rivalry, the way companies are formed and run is heavily influenced by national culture and customs. For example, in Italy small and flexible family companies are better suited to the fashion, furniture, or design industries. In Germany, the corporate structure is more rigid and technical, suited to industries such as machinery, chemicals, and optics. There is no single correct management style; what matters is the fit between the company's style and the needs of its industry. Fierce domestic competition also encourages companies to be more resilient in the global market.

In Related and Supporting Industries, the superiority of an industry is also greatly influenced by the existence of suppliers or supporting industries that are also internationally superior. For example, the gold and silver jewelry industry in Italy is very competitive because the suppliers of precious metal recycling machines and tools also come from Italy and are recognized worldwide. Efficient and innovative local suppliers provide great benefits to the main company.

3.2.2.3 Global Value Chain Analysis

Global Value Chain (GVC) Analysis is an approach used to understand how a product or service is produced through various stages of production spread across various countries. According to Gereffi, Humphrey, and Sturgeon in their work entitled *The Governance of Global Value Chains* (2005), there are 5 main forms of governance in the

global value chain (GVC) that show how the relationship between lead firms and suppliers is regulated:

1. **Market**

Relationships are transactional and uncomplicated. Information is easily encoded, product specifications are simple, and suppliers have adequate capabilities. The costs of switching partners are low, so explicit coordination is almost unnecessary.

2. **Modular**

Suppliers produce products to buyer specifications that can be quite complex, but technical information can be well encoded. Suppliers have independent competence and provide turn-key services, so coordination remains efficient.

3. **Relational**

The relationship between buyers and sellers is close and interdependent. Trust, reputation, or family and ethnic ties play an important role. Interactions are usually complex and require high levels of commitment, sometimes supported by proximity, but can also occur in widely dispersed networks.

4. **Captive**

This occurs when small suppliers are highly dependent on large buyers. Because of this dependence, suppliers have difficulty switching partners and are usually under close supervision. The lead firm has high control over the supplier's processes and work results.

5. **Hierarchy**

This occurs when the entire production process is under one company. This is like in a large vertically integrated company, where decisions and control come from the manager or head office to the lower units and this is the most centralized form.

4. Foreign Direct Investment

Foreign direct investment also plays an important role in economic growth. This can also stimulate the spread of technology, which can have an impact on human resources and business development itself (Ali et al., 2023). Not only the spread of technology, but

also foreign direct investment can carry out technology transfer, which can ultimately influence economic growth itself (Ebghaei, 2023).

There are so many definitions related to Foreign Direct Investment. According to the World Bank (2024), foreign direct investment is a net inflow of investment in companies engaged in the economy other than that of the investor with the aim of obtaining long-term management rights with, provision that the rights obtained are more than or equal to 10% of the shares. Meanwhile, according to Krugman (2012), in his book entitled "International Economics: Theory and Policy" explains that what is meant by FDI is the flow of capital originating from internationally where companies from a country are establishing or expanding their companies in other countries. And not only moving resources, but also the implementation of control over the company. In line with this, Todaro (2000) also argues that funds obtained from FDI are investment funds that are intended to carry out business activities or are used to carry out procurement such as procurement of production equipment or facilities, buying land, opening factories, bringing in machines, and buying raw materials.

4.1 Theories of Foreign Direct Investment

There are many theories or thoughts related to FDI. FDI itself was put forward by Stephen Hymer. Stephen Hymer is an economist from Canada. Initially, Hymer introduced the modern theory of Foreign Direct Investment (FDI) because of his criticism of classical portfolio investment theory and his deeper understanding of how multinational companies operate abroad in his PhD dissertation in the (1960) at the Massachusetts Institute of Technology (MIT). Because this idea ultimately changed the way economists view why companies make direct investments abroad.

4.1.1 Classical Theories

There are many classical theories related to Foreign Direct Investment, such as Internalization Theory and Monopolistic Advantage Theory.

4.1.1.1 Internalization Theory (O-L-I Paradigm)

Internalization Theory explains why companies prefer to make FDI rather than selling technology or brands through licensing to foreign companies. Internalization Theory is one of the important parts of a large framework called the O-L-I Paradigm, introduced by

John H. Dunning in his work entitled “ *The Eclectic Paradigm of International Production: A Restatement and Some Possible Extensions*“ (1988). In his work, he explains that O-L-I is an abbreviation of:

- **O (Ownership advantages):** The advantages that the company has, such as technology, brand, patents, superior management, etc.
- **L (Location advantages):** The advantages that the destination country has, such as cheap labor costs, natural resources, large markets, tax policies, etc.
- **I (Internalization advantages):** The benefits that a company can gain by managing its own strengths (internalization), compared to just selling the rights to external parties.

Internalization theory focuses on imperfections in intermediate product markets. Two types of intermediate products are distinguished: knowledge flows connecting research and development (R&D) to production, and components and raw materials flows from upstream to downstream production facilities. Most applications of this theory focus more on knowledge flows (Casson, 2015).

Companies protect their knowledge through secrecy, rather than licensing it to independent local producers, because intellectual property rights such as patents are often weak and easy to copy. Instead, companies manage the knowledge themselves in their production facilities. This is called the internalization of the knowledge market within the company. This internalization encourages companies to become multinational because knowledge is a public good. New technology development is usually done in one R&D facility, and the knowledge is then passed on to subsidiaries abroad. In this way, the company becomes the owner of factories in multiple countries and becomes multinational.

4.1.1.2 Monopolistic Advantage Theory

The most widely used theory to explain multinational corporations (MNCs) states that a firm must have some unique or monopolistic advantage in order to produce in another country. This advantage usually arises from imperfections in the labor or product markets,

although not all forms of advantage will automatically encourage a firm to operate abroad (Lall & Siddharthan, 1982).

For such advantages to truly drive a company to become multinational, there are at least three conditions that must be met. First, the advantage must give the company an advantage over its competitors, not only domestically, but also over potential investors in the host country (both local and from third countries). Second, the advantage must be able to be taken and used effectively abroad. Third, the company must be able to earn greater profits if it manages the advantage itself, rather than if it simply licenses it to another independent company.

Hymer (1960) believes that a company conducts FDI because it wants maximum profit and also has certain advantages that local companies in the country do not possess. The advantages in question are such as technology, better management, and strong brands. FDI itself involves the transfer of a broader package of resources, such as technology, management skills, and entrepreneurship, not just the transfer of financial capital as explained by the theory of foreign portfolio investment (FPI). FDI itself does not change the ownership of the resources or rights transferred. Unlike indirect investment which involves changes in ownership based on existing portfolios or shareholdings, FDI maintains direct control over the resources. FDI itself is a strategy that is carried out to combat market imperfections in the international market.

4.1.2 Modern Perspectives

Theories related to foreign direct investment continue to develop, such as the Eclectic Paradigm and Product Life Cycle Theory, which are in the modern perspective approach.

4.1.2.1 Eclectic Paradigm (OLI Paradigm)

The concept of the Eclectic Paradigm was first introduced by John Dunning (1988) in a presentation at the Nobel Symposium in Stockholm on The International Allocation of Economic Activity. The purpose of this concept is to provide a holistic framework that can be used to identify and explain the various factors that influence the initial actions of companies in producing abroad, as well as the development of that production. The Eclectic Paradigm also explains why and how companies undertake Foreign Direct Investment and become Multinational Enterprises (MNEs).

Within the framework of the Eclectic Paradigm, foreign direct investment does not just happen, but is driven by three main complementary factors, namely ownership advantages (O), location attractiveness (L), and internalization advantages (I).

Ownership advantages include intangible assets such as technology, managerial skills, or global coordination capabilities that a firm possesses. Over time, these advantages come not only from the country of origin, but also from the firm's ability to manage and integrate operations across countries. This is seen in a comparison between American and Japanese MNEs, where large American and European firms have been taking advantage of global coordination advantages since the 1960s–1970s.

Location advantage explains that FDI tends to be directed to sectors that use intermediate goods in which the investor country has a comparative advantage. In a global market without barriers, this investment becomes welfare-creating if the price paid for the output reflects its social opportunity cost, and the freed domestic resources can be used efficiently according to the principle of comparative advantage.

Internalization advantage becomes important when there is international market failure, such as high transaction costs in transferring products between countries. Under such conditions, companies choose to manage their own production activities abroad rather than relying on third parties. In other words, without international market failure, there is no reason for international production to occur.

With these three factors, the company's decision to conduct FDI can be explained comprehensively. This paradigm shows that FDI is not just the result of a single factor, but rather a complex interaction between the company's advantages, the conditions of the host country, and the efficiency of internal management across countries (Dunning, 1988).

4.1.2.2 Product Life Cycle Theory

In contrast to Hymer, Vernon explains the concept of a Multinational Enterprise (MNE) using a microeconomic approach, namely the product life cycle (PLC). In this case, FDI cannot be separated from MNE because that is what the PLC theory explains. PLC was put forward by Vernon and his colleagues at Harvard. Vernon explains the theory of foreign investment with the PLC theory in his writing entitled *International Investment*

and International Trade in the Product Cycle in 1996. The product cycle put forward by Vernon describes how a new product is initially created and produced which is intended to meet domestic consumption until it finally continues to be exported to countries that have similar needs until it finally becomes mature in that country with the final result of investing in that country (can be in the form of factories, production, technology, and others).

John Dunning and Lundan (2008) explains in their book entitled “Multinational Enterprises and the Global Economy” that Vernon put forward several stages in the PLC. The first is the Introduction and Innovation stage, where the product is created in the country of origin with the aim of meeting domestic needs.

The second stage is the Export Stage, where a product has begun to be accepted and can meet domestic needs. The next stage is for the company to utilize its innovation and production capabilities to export the product to other countries that have similar needs.

The third stage is the standardization and relocation of production. After exports have been carried out, the company tries to make its products more standard (mature) in that country. With the aim of making price competition more relevant. After all that is achieved, at this stage the company begins to consider moving production to the destination country with lower labor costs and a larger market. The main goal is to reduce production costs and increase price competitiveness.

The fourth stage is the Production in Other Countries stage. If the conditions in the destination country (exporting country) are suitable, then the company can build local production facilities to replace exports from the country of origin or from the holding company. If things go as expected, the final goal of this stage could even be to re-export the product to the country of origin.

4.2 Legal Framework for FDI in Indonesia

In its implementation, there is a legal basis that regulates FDI in Indonesia. According to Citrazalabilla and Suyatno (2024), there are two main laws related to FDI in Indonesia, namely Undang Undang Number 25 of 2007 about Investment (UUPM). And

the Government Regulation replaces Law Number 2 of 2022 about Job Creation (Perppu Ciptaker).

Clause 2 of UUPM determines that all activities related to investment in Indonesia must be direct investment. In other words, investment made in Indonesia is directly directed to a business entity in Indonesia without going through capital market instruments or securities. The direct investment referred to is like establishing a company not in the form of securities or shares. In other words, Indonesia requires FDI, not FPI.

The affirmation is more visible in Clause 5 of UUPM as explained by the article that foreign investment in Indonesia must be in the form of a Limited Liability Company (PT). because also to participate in the auction in implementing the project must be in the form of a PT under Clause 1 paragraph 8 of the Presidential Regulation. So that the company or PT will be subject to the laws in Indonesia. The purpose of this is so that FDI carried out in Indonesia has a clear legal entity structure and provides stronger legal guarantees.

In more detail, activities related to FDI in Indonesia are explained in the Presidential Regulation (Perpres) concerning Government Cooperation with Business Entities (KPBU). Clause 1, paragraph 6 of the Perpres explains the definition and basic principles of KPBU, where KPBU is a form of cooperation between the government and business entities in providing infrastructure and public services. The cooperation also includes the division of roles, risks, and responsibilities between the government and business entities.

CHAPTER TWO

INDONESIA'S EXTERNAL SECTOR AND ECONOMIC PERFORMANCE IN THE JOKO WIDODO ERA

1. Overview of the Indonesian Economy at the End of the Jokowi Era

Referring to data from the Central Bureau of Statistics (BPS), Indonesia's economic growth averaged 5% during Joko Widodo's term of office. This reflects a dynamic that gave birth to challenges and achievements during Joko Widodo's administration itself, such as the challenge of the COVID-19 pandemic, with various problems that occurred, but Indonesia still showed fairly stable economic growth. However, in the economic growth of the Joko Widodo presidential period, economic growth fluctuated with a figure of 4.8% and then increased to 5.17% recorded in 2018. In 2020, the COVID-19 pandemic caused an economic shock with a figure of 2.07%, but the economy recovered with a growth figure of 5.31% recorded in 2022.

During the administration of Joko Widodo, one of the main focuses of his government was investment and infrastructure, where large-scale investments were made in the construction of toll roads, ports, airports, and other infrastructure. There are more than 2,050 km of toll roads that have been built and 5,823 km of national roads built during the administration of Joko Widodo (Office of the Presidential Staff of the Republic of Indonesia, 2024). This is expected to increase connectivity from population mobility and encourage economic growth in various regions of Indonesia.

Based on a survey released by the Central Statistics Agency (BPS) in March 2023, Indonesia's poverty rate was still recorded at 9.36% or 25.90 million people. Finance Minister Sri Mulyani detailed data throughout 2023, stating that the Ministry of Finance had disbursed Rp443.4 trillion with various elements of assistance programs for the poor, ranging from the Family Hope Program (PKH), Food Cards, El-Nino Direct Cash Assistance, fuel subsidies, electricity subsidies, KUR (People's Business Credit) interest cuts, to food assistance to the community.

The programs disbursed in the State Budget (APBN) really emphasize the social and justice aspects for the community, which is analyzed as the most vulnerable by the end of

Joko Widodo's term. In the 2020-2024 National Medium-Term Development Plan (RPJMN), the government targets the poverty rate to fall to 6.5% to 7.5% and 0% for extreme poverty. However, according to BPS, the extreme poverty rate in Indonesia in September 2023 still reached 1.74%, down from March 2022 with a figure of 2.04% (Azzahra, 2024).

1.1 Fiscal Policy and Public Finance

In the Fiscal Policy and Public Finance section, we will discuss Government Revenue (Tax Revenue, Customs and Excise Revenue, and Non-Tax Revenue) and Government Expenditure.

1.1.1 Government Revenue

State revenue at the end of Joko Widodo's administration, recorded at Rp 2,774.30 trillion or equivalent to 180.37 billion USD, reflecting 112.64% of the 2023 State Budget (APBN) goal, which corresponds to 105.20% of the target set by Presidential Regulation Number 75/2023, and this figure grew to 5.25%. This achievement can be said to be higher, reaching Rp 138.46 trillion compared to the same period in the previous year, by consistently maintaining a positive performance pattern since the beginning of 2023. Thus, in nominal terms, the temporary realization of the State Revenue component sourced from tax revenues was Rp 2,155.42 trillion, and Non-Tax State Revenues (PNBP) were Rp 605.89 trillion, then the realization of Grants was Rp 12.99 trillion, as can be seen in Figure 4 (Kemenkeu, 2024).

Based on the growth figures in Figure 4, the temporary realization of Taxation and Non-Tax State Revenue (PNBP) shows quite positive results. The growth recorded in these two categories is Taxation and Non-Tax State Revenue (PNBP), each growing by 5.94% and 1.73%. The analyzed figures show that Indonesia's economic growth has a stable increase in state revenue through taxes and non-tax sources.

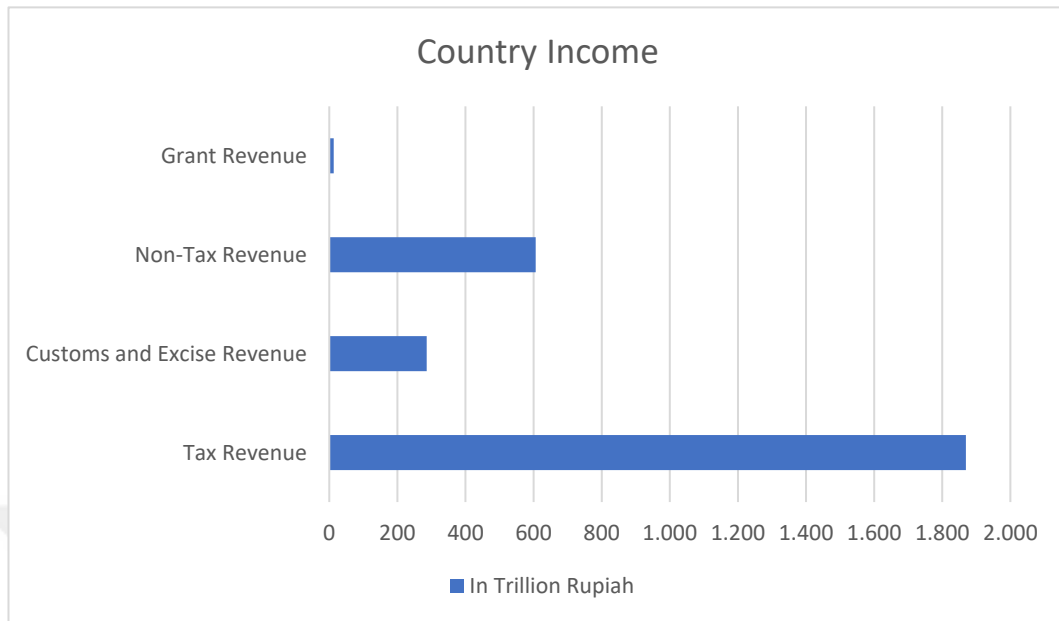


Figure 4 Government Revenue

Sources: Kemenkeu (Kaleidoscope Ministry of Finance), State Budget (APBN) 2024

According to Figure 4, the percentage of the various achievements of each component of State Revenue against the target set in Presidential Regulation (Perpres) Number 75 of 2023. It is noted that these two components have succeeded in exceeding their planning expectations. We see that revenue from the Taxation sector alone reached 101.75% of the target that has been set, providing an indication of better performance in tax collection. On the other hand, Non-Tax State Revenue (PNBP) showed an achievement of 117.47% of the target that had been set, providing results that exceeded the expected target.

1.1.1.1 Tax Revenue

Temporary realization As of December 31, 2023, the achievement of revenue from the tax sector was recorded at Rp1,869.23 trillion, which is equal to 121.515 billion USD, with the realization of tax revenue of 102.8% of the total tax revenue targeted by Presidential Regulation (Perpres) Number 75 of 2023. In other words, tax revenue shows a significant contribution to total state revenue.

Tax revenue in 2023 comes from several main sources, namely: Non-Oil and Gas Income Tax (PPh) of Rp993,03 trillion, Oil and Gas PPh of Rp68,79 trillion, Value Added Tax and Luxury Goods Sales Tax (PPN/PPnBM) of Rp764,34 trillion, and Land and Building Tax (PBB) and other taxes of Rp43,08 trillion. Among these components, Non-

Oil and Gas PPh and PPN/PPnBM are the two largest contributors, contributing 53,13% and 40,89% of total tax revenue, respectively (Kemenkeu, 2024).

Non-Oil and Gas Income Tax revenue is divided into 3 main components: Article 25/29 Corporate Income Tax, Article 21 Income Tax, and Final Income Tax. These three components play a major role in driving tax revenue performance, with their contribution to total Non-Oil and Gas Income Tax revenue reaching 74.20%. This shows that these components are the backbone of Non-Oil and Gas Income Tax revenue.

Article 25/29 Corporate Income Tax, which is Corporate Income Tax, covers tax payments made by business entities based on their taxable income. Article 21 Income Tax is Income Tax imposed on income received or earned by employees, which is usually deducted directly by the employer. Meanwhile, Final Income Tax covers income tax imposed on certain types of income that are deducted directly by a third party.

Meanwhile, tax revenue from Value Added Tax (PPN) and Luxury Goods Sales Tax (PPnBM) consists of several types of revenue. In this category, Domestic VAT (PPN DN) and Import VAT contributed significantly to total VAT/PPnBM revenue, with percentages of 62.35% and 33.47%, respectively. This shows that most of the VAT revenue comes from domestic transactions, while the rest comes from import activities. Cumulatively, VAT/PPnBM revenue grew by 11.16%, reflecting a positive increase in state revenue from this sector. If we look in more detail, until December 31, 2023, Domestic VAT grew by 22.11%, indicating that revenue from domestic transactions increased significantly. On the other hand, Import VAT contracted by 5.51%, meaning that revenue from import transactions decreased compared to the previous year.

1.1.1.2 Customs and Excise Tax Revenue

From the Customs and Excise Tax Revenue, the revenue figure reached Rp 286.19 trillion, with the realization of Customs and Excise revenue of 95.36% of the target set by Presidential Regulation (Perpres) Number 75 of 2023. Although the realization of customs and excise tax revenue is below the realization of tax revenue, it can still be said that this sector is still relatively good, even though it has decreased compared to the previous year.

Temporary realization of Customs and Excise revenues recorded several important components that contributed significantly to total revenues. Total revenues from this sector consisted of revenues from Excise of Rp221.82 trillion, Import Duty (BM) of Rp50.84 trillion, and Export Duty (BK) of Rp13.53 trillion. Of the total revenues, revenues from Excise were the most dominant, especially from Tobacco Product Excise (CHT), which contributed 74.59% to total Customs and Excise revenues. This shows how important the role of Tobacco Product Excise is in the composition of revenues from this sector.

Furthermore, the performance of Excise revenue has decreased, which is mainly caused by several main factors. One significant factor is the reduced production of Tobacco Products (HT). This reduction in production is a strategic step taken to control consumption and to support efforts to monitor illegal cigarettes. Monitoring the circulation of illegal cigarettes is one of the main focuses to ensure that revenue from this sector can be optimized, despite challenges in the form of decreased production.

In order to suppress cigarette consumption in Indonesia, the policy of increasing the Tobacco Excise Tariff (CHT) is being optimized. With the various opportunities and strengths that Indonesia currently has, it can be a fairly important component in implementing the tobacco excise tariff policy optimally. The government and the community can receive a better contribution from the Tobacco Excise Tariff (CHT) policy by emphasizing it on controlling consumption, in addition to how to improve the quality of health for the community, and the tariff increase will also support the national development program through state revenue (Nafi'ah, 2021).

Meanwhile, the performance of Import Duty (BM) declined because of the decline in import value. Lower import value has a direct impact on revenue from the Import Duty. In addition, increased utilization of Free Trade Agreements (FTA) also plays a role in the decline in BM performance. Utilization of FTA allows for a reduction or even elimination of import duties for certain goods, which in turn reduces revenue from this sector. On the other hand, the performance of Export Duty (BK) is still influenced by several main factors. One of the factors that has been influencing this is the lower price of palm oil products, although the volume of palm oil exports has increased. This lower price has a

negative impact on revenue from Export Duty, although the volume of exports has increased. In addition, the decline in prices and export volumes for copper and bauxite commodities also contributed to the decline in BK's performance. These two commodities play an important role in Export Duty revenues, so that fluctuations in their prices and export volumes have a direct impact on the overall performance of this sector.

1.1.1.3 Non-Tax Revenue (PNBP)

The provisional realization of Non-Tax State Revenue (PNBP) during 2023 reached a very impressive figure, namely Rp 605,89 trillion or around 39,39 billion USD. This achievement is equivalent to 137.27% of the target set in the 2023 State Budget (APBN) or 117.47% of the target set in Presidential Regulation (Perpres) Number 75 of 2023. The growth of PNBP recorded a positive figure of 1.73% compared to the previous year (Kemenkeu, 2024). The increase in the achievement of the realization of Non-Tax State Revenue (PNBP) mainly came from the realization of Separated State Assets (KND) PNBP. This category includes various forms of state assets that are separated to be managed independently and make a significant contribution to the total receipt of Non-Tax State Revenue (PNBP).

The significant increase in the realization of PNBP KND shows the effectiveness of better management of state assets and the ability to optimize existing revenue sources. However, not all PNBP components experienced positive growth. Other PNBP realizations recorded negative growth. PNBP revenues from Natural Resources (SDA) contracted by 5.20%, indicating challenges in this sector that may be influenced by commodity price fluctuations and global economic conditions. PNBP from Public Service Agencies (BLU) also experienced very small growth, which was only 0.52%, which may reflect stability but not a significant increase. Meanwhile, PNBP from the Other category contracted by 8.52%, indicating a decrease in revenues from other sources that are not included in the main category.

Non-Tax State Revenue (PNBP) originating from Separated State Assets (KND) shows a very positive trend. The realization of revenue from KND reached RP82.06 trillion, reflecting a significant growth of 102.13% compared to the previous year. This figure shows that the contribution of KND to total PNBP revenue has increased

significantly. This positive achievement was mainly driven by an increase in dividend payments from State-Owned Enterprises (BUMN), both from the banking and non-banking sectors. Dividends paid by BUMN made a large contribution to KND revenue, reflecting the good performance of state-owned companies in contributing to state revenue.

Non-Tax State Revenue (PNBP) from Natural Resources (SDA) during 2023 reached an impressive figure of RP254.81 trillion or around 16,559 billion USD. This achievement is equivalent to 130.02% of the target set in the 2023 State Budget (APBN) or 114.10% of the target set in Presidential Regulation (Perpres) Number 75 of 2023. The negative growth in revenue from Oil and Gas SDA, which slowed down by 21.47%, was influenced by the decline in crude oil prices (Indonesian Crude Price/ICP) and the decline in oil production or oil lifting. The decline in crude oil prices has a direct impact on revenue from the Oil and Gas SDA sector, considering that the price of crude oil is one of the main determining factors in calculating revenue from oil and gas. In addition, the decline in oil lifting indicates a decline in the volume of oil production, which also contributed to the decline in revenue from this sector.

On the other hand, the performance of revenue from Non-Oil and Gas Natural Resources showed more positive results, with a growth of 14.96%. The increase in the performance of Non-Oil and Gas Natural Resources was supported by the increase in coal royalty rates, which is one of the strategic steps taken by the government to increase revenue from the mining sector. The implementation of Government Regulation (PP) Number 26 of 2022 has had a positive impact on increasing revenue from Mineral and Coal Natural Resources, even amidst declining coal commodity prices. Non-Tax State Revenue (PNBP) from Public Service Agencies (BLU) during 2023 was recorded at RP89.43 trillion. However, this figure shows a contraction of 0.52%. This contraction reflects a slowdown in revenue growth from the BLU sector.

The slowdown in PNBP revenue from BLU was mainly due to a decrease in revenue from the Palm Oil Plantation Fund Management Agency (BPDPKS). BPDPKS experienced a decrease in revenue due to lower Crude Palm Oil (CPO) prices this year. Lower CPO prices have a direct impact on revenues from the palm oil industry,

considering that CPO is one of the main commodities managed by the Palm Oil Plantation Fund Management Agency (BPDPKS). However, it should be noted that revenues from BLUs that are not related to palm oil have increased.

1.1.2 Government Expenditure

In 2023, Indonesian State Expenditure is estimated to reach RP3,121.94 trillion or around 202,91 billion USD. This figure is equivalent to 101.99% of the 2023 State Budget (APBN) ceiling or 100.15% of the ceiling set in Presidential Regulation Number 75 of 2023. Compared to the previous year, there was a growth of 0.83%. The State Expenditure consists of Central Government Expenditure of RP2,240.65 trillion and Transfers to Regions (TKD) of RP881.30 trillion as can be seen in Figure 5 (Kemenkeu, 2024). In the Central Government Expenditure component, there was an increase in the realization of capital expenditure by 27.74%. This increase was mainly used to support the infrastructure budget, which includes the construction of dams, irrigation, procurement of special material equipment (almatsus), and main weapons system equipment (alutsista), as well as the construction of the Indonesian Capital Region (IKN) office building.

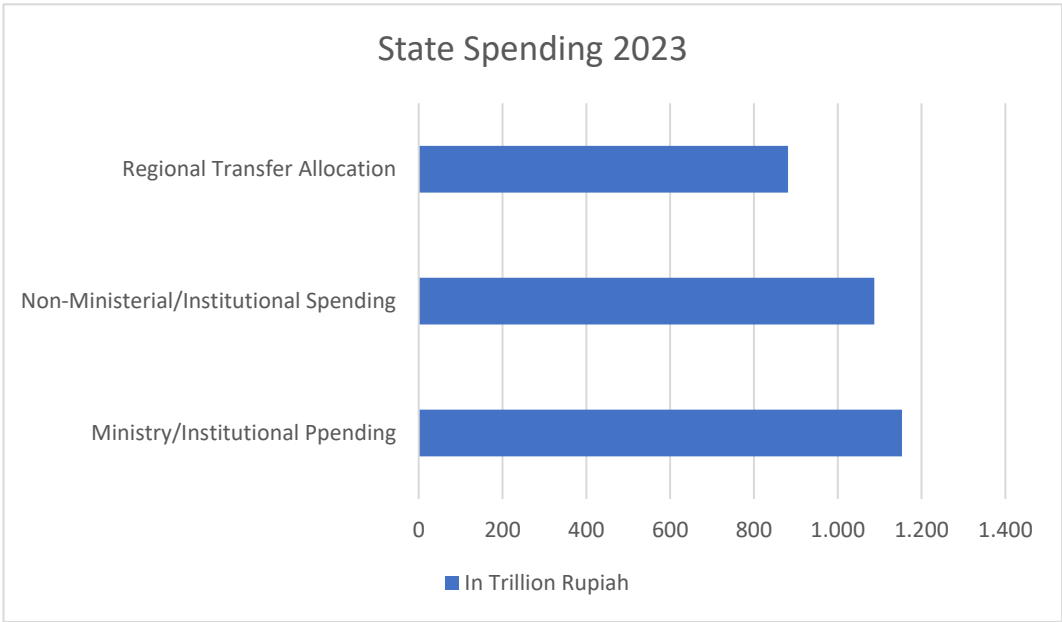


Figure 5 Realization of State Spending

Sources: Kemenkeu (Kaleidoscope Ministry of Finance), State Budget (APBN) 2024

In addition, State Expenditure was also influenced by an increase in the Employee Expenditure by 2.46% compared to the previous year. At the same time, Social Expenditure saw a minor decline of 2.86% from the previous year. However, the Social Expenditure budget is still used to improve public welfare. Programs funded from this Social Expenditure include the distribution of various social assistance programs, such as the Family Hope Program (PKH), Food Cards, Smart Indonesia Program (PIP), and Recipients of Contribution Assistance (PBI) for National Health Insurance (JKN). Thus, although there are several adjustments in social spending, overall, the realization of state spending in 2023 shows quite significant efforts in supporting infrastructure development, improving public welfare, and strengthening the country's defense capacity.

1.2 Impact of Fiscal Policy on National Development

The impact of state spending is mainly the improvement of infrastructure, the development of strategic state projects, and also being allocated for the welfare of the Indonesian people.

1.2.1 Infrastructure Development

On November 15, 2023, coinciding with the commemoration of Heroes' Day, amidst the increasing need for the state budget to ensure the sustainability of infrastructure development programs and social programs, President Joko Widodo issued Presidential Regulation (Perpres) Number 75/2023. This Perpres is about Presidential Regulation Number 130 of 2022 concerning the Details of the State Budget (APBN) for the 2023 Fiscal Year, which has been changed through an amendment that increases the tax revenue target by around IDR100 trillion, from the initial target of IDR1,718 trillion to IDR1,818.2 trillion. This increase in the tax revenue target reflects the government's efforts to increase funding sources to support infrastructure development. However, the funding allocated for infrastructure development is still considered suboptimal, so further efforts are needed in utilizing the budget (Hanafi, 2022).

However, this step shows the government's commitment to optimizing state revenues to support various development programs and public welfare. An example that we can take from the realization of infrastructure development is the realization of the budget for the development of the National Capital City (IKN), which has reached Rp 26.7 trillion,

which is equivalent to 97.6% of the total budget ceiling for 2023 of Rp 27.4 trillion. This realization is mainly influenced by the infrastructure cluster, which reached Rp 23.8 trillion. This figure can be said to be the infrastructure cluster used in various important projects, including: (1) Construction of the state palace and the core area of the government center (KIPP), (2) Construction of apartment towers (rusun) for the State Civil Apparatus (ASN) and security (hankam), (3) Construction of the IKN toll road, and (4) Construction of the Sepaku Semoi dam. In addition, budget support for the IKN also includes the realization of the non-infrastructure cluster, which is Rp 2.9 trillion. This fund is used for several purposes, including: (1) Planning for the relocation of the IKN, (2) Security support by the Indonesian National Police (Polri), and (3) Operations of the IKN Authority. With effective management, the government ensures that the budget allocation for the development of the IKN can run according to the plans and targets that have been set.

1.2.2 Social Welfare Programs

Social spending in 2023 decreased by 2,86% compared to the previous year, but the available funds were still utilized optimally to improve community welfare. Various social assistance programs or social assistance have been distributed, including the Family Hope Program (PKH), Basic Food Cards, the Smart Indonesia Program (PIP), and the National Health Insurance (JKN) Contribution Assistance Recipients (PBI). The distribution of social assistance reached Rp 156.90 trillion, or 109.33 percent of the budget ceiling, although there was a contraction of 2.86%. This decline was largely influenced by the thickening of social assistance carried out in 2022 through the distribution of Direct Cash Assistance (BLT) for Cooking Oil (Migor) and BBM BLT, but was not continued in 2023.

The use of this social assistance spending covers several important programs, including:

1. Distribution of the Family Hope Program (PKH) for 9.9 million Beneficiary Families (KPM) and the Basic Food Card program for 18.7 million KPM managed by the Ministry of Social Affairs (Kemensos).

2. Payment of contribution assistance to 96.7 million National Health Insurance (JKN) Contribution Assistance Recipients (PBI) implemented by the Ministry of Health (Kemenkes).

3. Distribution of Smart Indonesia Program (PIP) assistance for 20.3 million students and Smart Indonesia Card (KIP) College assistance for 960.5 thousand students through the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek) and the Ministry of Religion (Kemenag).

4. Disaster management assistance managed by the National Disaster Management Agency (BNPB), which is used, among other things, for housing stimulus assistance to 42.4 thousand Heads of Families (KK) affected by the disaster in Cianjur Regency.

Thus, despite the contraction in social spending, the government remains committed to providing the necessary assistance to improve people's welfare and address urgent needs. These programs are designed to ensure people's access to basic needs, education, health, and support in emergency situations due to natural disasters and other factors.

1.2.3 Energy Subsidies

Energy subsidy spending reached RP164,29 trillion or 10,68 billion USD. However, there was a decrease of 4.40% annually. In the annual period, the realization of subsidies for Fuel Oil (BBM) and 3 kg LPG Cylinders decreased by 17.32%. The decrease in the realization of this subsidy was largely due to the decline in the Indonesian Crude Price (ICP) by an average of 18.97% during the January-December 2023 period. This decrease in ICP indicates a decrease in the price of Indonesian crude oil on the international market, which has an impact on the decrease in the amount of subsidies that need to be issued by the government. In terms of volume, consumption of certain types of BBM (JBT), including kerosene, diesel, and bio solar, as well as 3 kg LPG Cylinders also decreased. The total volume of JBT consumption decreased by 8.72%, while the volume of 3 kg LPG Cylinder consumption decreased by 1.53%. This decrease reflects the reduced demand for BBM and LPG among the public, which can be influenced by various factors including changes in consumption behavior and energy efficiency. On the other hand, electricity subsidies experienced a significant increase of Rp68.70 trillion or 94.66% of the budget ceiling, with an increase of 22.15%. The increase in electricity subsidies was

influenced by the depreciation of the rupiah exchange rate against the US dollar by 2.61% (Kemenkeu, 2024).

1.2.4 Non-Energy Subsidies

Non-energy subsidies are allocated at Rp105,30 trillion or 6,84 billion USD. In this case, non-energy subsidies experienced a significant increase of 30.07% annually. The realization of non-energy subsidy spending experienced a significant annual increase of 30.07%. This increase in realization was dominated by Program Credit Subsidies, which reached Rp46.86 trillion or 44.51% of the total realization of non-energy subsidy spending. The largest part of the Program Credit Subsidy is the distribution of Interest Subsidies for People's Business Credit (KUR). This subsidy recorded a significant increase of 60.83%. This is in line with the government's efforts to accelerate the development and empowerment of Micro, Small, and Medium Enterprises (UMKM).

In addition, Fertilizer Subsidies emerged as the second largest contributor with a realization of Rp42.06 trillion or around 39.94% of the total realization of non-energy subsidy spending. The significant increase of 41.28% in the distribution of fertilizer subsidies was largely due to the underpayment of fertilizer subsidies in previous years. However, the volume of subsidized fertilizer distribution decreased from 7.4 million tons in December 2022 to 6.1 million tons in December 2023. This decrease in volume indicates efficiency in the use of fertilizer subsidies, although the realized value has increased.

On the other hand, Tax Subsidies were recorded at Rp 11.29 trillion, a decrease of 28.28%. This decrease may reflect changes in fiscal policy or optimization in tax revenues that reduce the need for subsidies. Meanwhile, Public Service Obligation (PSO) Subsidies in December 2023 reached Rp 5.09 trillion, a decrease of 19.29%. This decrease may be caused by various factors, including operational efficiency and policy adjustments in the implementation of the PSO program.

2. Analysis of External Debt in the Jokowi Era

Indonesia as a developing country is not free from debt. Debt is used to meet infrastructure development and increase economic growth. One source of development

financing that is often used by the government is foreign debt. Foreign debt is used to finance state expenditures so that it can support economic activities (Arsyad, 2010). Foreign debt can make a significant contribution to development, but it can also worsen the economic situation of a country if it is not managed properly.

During the Jokowi administration, the policy of debt issuance became a public spotlight. As can be seen in Figure 6, during the Joko Widodo period, foreign debt continued to increase. It was originally 293.328 million USD in 2014 and increased to 407.106 million USD in 2023, as can be seen in Figure 6. However, it should be remembered that External Debt consists of government foreign debt and private foreign debt. The increase in debt that occurred can also be categorized in line with the infrastructure development carried out by Joko Widodo. This can be seen from the increase in assets owned by Indonesia which has increased. According to the Central Government Financial Report (LKPP), which has been audited by the Republic of Indonesia Audit Board (BPK RI, 2014), the total state assets in 2014 reached Rp 3.910 trillion. It is recorded that current assets, long-term investments, fixed assets, long-term receivables, and other assets have increased since 2014. The total state assets in 2023 were recorded at Rp 13.072 trillion.



Figure 6 External Debt Indonesia

Sources: Bank Indonesia, Indonesian Economic and Financial Statistics (SEKI) 2014-2023

2.1 Trends in Public and Private External Debt

Indonesia's foreign debt accounts for a fairly large portion of the total debt. If you want to compare the total debt of the Indonesian government, which is 497 billion USD, with Indonesia's Foreign Debt, which is 407 billion USD in 2023. However, it should be underlined that government debt is dominated by domestic debt, which consists of loans and government securities. The loan itself is 11,08% and the issuance of Government Securities itself is 88,92% of the total Government Debt (Pratiwi, 2024). Government Securities themselves are more dominant due to the low cost of funds and easy process when compared to other forms of debt financing.

It is very clear that Indonesia's foreign debt is almost equal to the total debt of the Indonesian government. But it should be remembered that the proportion of Indonesia's Foreign Debt consists of Government Foreign Debt and Private Foreign Debt. The position of the government's own foreign debt was recorded at 193 billion USD in July 2023. Likewise, private foreign debt is not much different from the government's foreign debt, which is 194 billion USD.

There is an increase in the government's foreign debt caused by the withdrawal of foreign loans used to support the financing of programs and projects being run. The programs and projects in question include the health services sector and social activities amounting to 24% of the total government's foreign debt. Government administration, defense, and mandatory social security amounting to 18,1%. Education services use 16,8%. For construction, 14,2%. And the last is used for financial services and insurance amounting to 10,1%. The proportion of debt shows that the position of the government's foreign debt and the government's debt itself is relatively safe and under control. Where almost all of the government's foreign debt itself has a long-term tenor, while for the government's debt itself, 88% comes from within the country in the form of government securities, thus reducing the risk of exchange rates because the government's securities themselves are in the form of rupiah.

Meanwhile, the position of private foreign debt also experienced a decline in growth. The decline occurred due to foreign debt payments made by financial institutions. Meanwhile, the position of private foreign debt itself consists of the processing industry,

energy, financial services, and mining sectors, with a contribution of 78,1% of the total private foreign debt. Similar to government foreign debt, private foreign debt can be categorized as relatively safe because 75% of the total private foreign debt has a long-term tenor.

Indonesia's foreign debt structure can be said to remain healthy with a cautious attitude in its management. This is reflected in Indonesia's foreign debt in July 2023, where the ratio of foreign debt to GDP was 29,2%. And also the total foreign debt dominated by long-term tenors reached 87,8%. In order to maintain a healthy foreign debt structure, Bank Indonesia as the Central Bank continues to strengthen coordination with the government in monitoring foreign debt. The role of foreign debt will also continue to be carried out optimally to encourage national economic growth and in financing development by continuing to minimize risks that can affect the stability of the Indonesian economy.

2.2 Management of External Debt

Foreign Debt incurred by Indonesia comes from various countries and international organizations. However, in general, foreign debt is mostly directed to Indonesia's trading partners and to global investors. According to the Indonesian Foreign Debt Statistics (SULNI) report conducted by Bank Indonesia together with the Ministry of Finance of the Republic of Indonesia, it was found that the largest borrowing country in June 2023 was Singapore, with a total of 57.217 million USD, which amounted to 14,4% of Indonesia's total foreign debt as can be seen in Figure 6. The debt position consists of government foreign debt of 498 million USD and private foreign debt of 56.719 million USD. It can be clearly seen that private foreign debt dominates 99% of Indonesia's total Foreign Debt to Singapore, indicating that the debt is mostly used for infrastructure development or financing a project carried out by the private sector. And this also shows the closeness of the economic cooperation between Indonesia and Singapore.

Followed by the United States in second place with a total of 29.514 million USD. Similar to Singapore, the composition of Indonesia's foreign debt to the US is more dominant 99% carried out by the private sector with a total of 29.295 million USD. At the same time, the government's foreign debt itself is 219 million USD. Unlike Japan, Japan

has a composition of foreign debt that is quite different from that of Singapore and the United States. Where the Indonesian government's foreign debt has a composition of 34,8% or as much as 8.005 million USD of the total Indonesian Foreign Debt to Japan. Meanwhile, the composition of private foreign debt is 65,1% or as much as 14.981 million USD of the total Indonesian foreign debt to Japan. While China is in fourth place, it has a composition of Government Foreign Debt of 1.369 million USD, or equivalent to 6,7% of the total Indonesian Foreign Debt to China. Meanwhile, private foreign debt has a debt composition of 18.837 million USD, or equivalent to 93,2%.

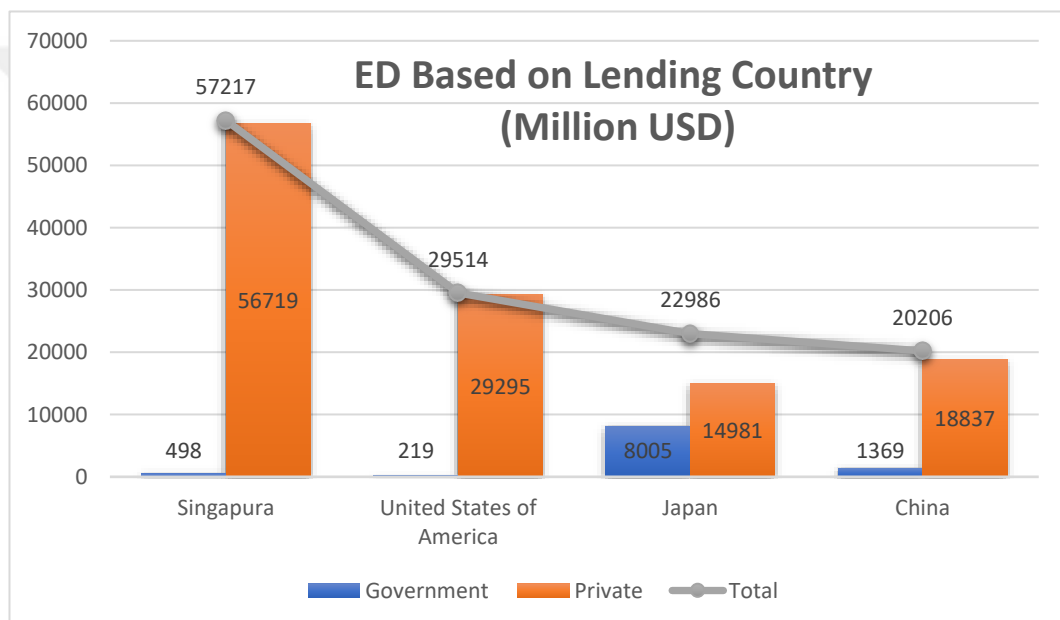


Figure 7 External Debt Based on Lending Country

Sources: Bank Indonesia, Indonesian Foreign Debt Statistics (SULNI) 2023

In summary, Indonesia's Foreign Debt is used to finance the deficit of the Indonesian State Budget (APBN), finance priority activities of ministries or institutions, and is also lent to local governments, State-Owned Enterprises (BUMN), or granted to local governments (Kementerian Keuangan RI, 2024). Foreign loans themselves are often used to finance important infrastructure projects, such as the construction of roads, ports, airports, and clean water projects. This can help improve domestic connectivity, encourage economic growth, and create jobs. Foreign Debt itself can also increase Foreign Investment. The use of Foreign Debt that can be accounted for and has a positive impact on the country can increase the confidence of foreign investors. That way, Foreign

Direct Investment can continue to enter and increase until it can finally provide new jobs and stimulate the Indonesian Economy.

2.3 Impact of External Debt on Economic Stability

There is a difference between government foreign debt and private foreign debt in terms of their use. Government Foreign Debt is used more to finance infrastructure development and the welfare of the Indonesian people. Some of the largest sectors are allocated to the use of government foreign debt. The health services and social activities sector is 46.343 million USD, government administration, defense, and social security is 34.599 million USD, education services is 32.360 million USD, and construction services is 27.416 million USD.

One example of the use of the Indonesian Government's Foreign Debt in infrastructure development:

- Mass Rapid Transit (MRT) Jakarta

MRT Jakarta is funded by Foreign Debt Through the Japan International Cooperation Agency (JICA), where MRT Jakarta can accommodate 412 thousand passengers every day. Can provide 48 thousand jobs during construction. Reduce congestion and also speed up the travel distance of Lebak Bulus - Bundaran HI to 30 minutes. So that it can reduce carbon emissions (Co2) by around 93.663 tons per year.

- Jatigede Reservoir

Jatigede Reservoir is financed by foreign debt from China. The loan amount is 332.6 million USD. Jatigede Reservoir itself has a capacity of 1.7 billion cubic meters of volume per year. It can irrigate 90.000 hectares of irrigation networks to ultimately increase the harvest by 2 planting seasons. Also, the Jatigede Reservoir can generate 110 megawatts of electricity.

In contrast, private foreign debt is more widely used for working capital and investment carried out by national and foreign private companies. Examples of national companies themselves are PT Bank Central Asia Tbk, PT Astra International Tbk, and PT HM Sampoerna Tbk. Examples of foreign private companies in Indonesia are PT Freeport Indonesia, PT Fastfood Indonesia Tbk (KFC), and PT Ericsson.

As the name suggests, the source of financing for the Government's Foreign Debt itself comes from a Bilateral loan of 17.352 million USD. The Bilateral Loan itself is a loan sourced from a Creditor of a foreign government or an institution appointed by a foreign government or an institution acting for a foreign government that provides loans to the Government, such as the Japan International Cooperation Agency (JICA). Kreditanstalt Für Wiederaufbau (KFW), and The Export Import Bank Of China (CEXIM).

Next is the loan from Multilateral creditors, amounting to 34.434 million USD. The Multilateral Loan itself is a loan sourced from Multilateral Creditors or international financial institutions consisting of several countries, which provide loans to the Government. Examples of international financial institutions are the World Bank, the Asian Development Bank (ADB), and the Islamic Development Bank (IsDB).

Government loans originating from commercial creditors amounted to 3.584 million USD. Commercial creditors are divided into 2: Foreign Private Creditor Loans (KSA) and Export Credit Guarantee Institution Creditor Loans (LPKE). KSA is a loan originating from Foreign Private Creditors or foreign financial institutions, national financial institutions, and foreign non-financial institutions domiciled and conducting business activities outside the territory of the Republic of Indonesia that provide loans to the Government based on a loan agreement without collateral from the Export Credit Guarantee Institution. While LPKE is a loan originating from an institution appointed by a foreign country to provide guarantees, insurance, direct loans, interest subsidies, and financial assistance to increase the exports of the country concerned or the largest part of the funds are used to purchase goods/services from the country concerned that domiciled and conduct business activities outside the territory of the Republic of Indonesia. Examples of institutions from commercial creditors are Internationale Nederlanden Groep, Crédit Agricole, and Banque BNP Paribas.

Meanwhile, for private foreign debt, the financing is the same as that for government foreign debt, namely from institutions or companies from foreign countries. The only difference is that the Debt made by the Private sector is in the name of the company or institution itself, not in the name of the Indonesian Government.

2.4 Indonesia's External Debt Position with Other Southeast Asian Countries

Indonesia's foreign debt ratio to GDP in 2023 is 29.8%. Indonesia is in a relatively healthy position compared to the average of the five Asian countries mentioned (111.18%). It can be seen that Indonesia is still relatively safe in managing the ratio of foreign debt to its gross domestic product, as seen in Figure 8. This is in line with the application of the principles carried out by Bank Indonesia (BI) and the Indonesian Ministry of Finance, which apply the principle of prudence in its management. As previously explained, Indonesia's foreign debt ratio is managed very well by the government, this can be seen from the BBB+ rating obtained by Indonesia from Rating and Investment Information, Inc. (R&I) (Bank Indonesia, 2023a). This can be interpreted as the fact that in addition to good management of foreign debt, Indonesia is also considered to have a high ability to pay debts with a relatively low risk of failure.

In contrast, Singapore has the highest ratio of foreign debt to GDP of 391% in 2023. Even so, Singapore is one of the global financial centers with very good economic transparency. This can be seen from the many international and multinational companies in Singapore. If using the World Bank standard, the debt to GDP ratio is 77%, and if it exceeds that, the country's economic growth is at risk of slowing down. Because of that, Singapore should experience a slowdown in its economic growth. However, this does not apply to Singapore, even though it has a high debt ratio. It should be remembered that Singapore has large foreign exchange reserves and assets. Even though it has a relatively high debt, Singapore also has a high return capacity. This is also supported by the AAA rating obtained by Singapore from Rating and Investment Information, Inc. (R&I).

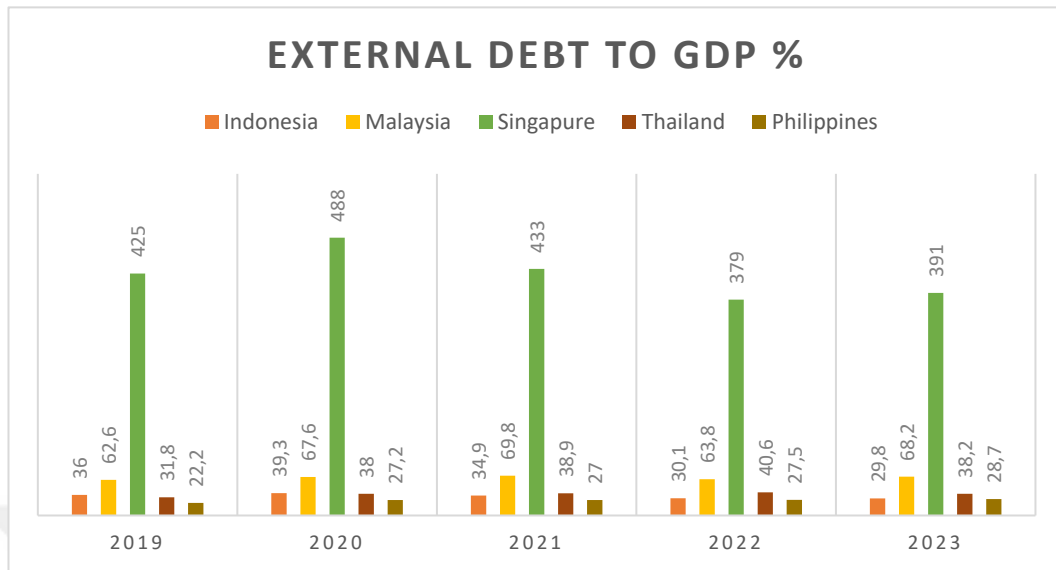


Figure 8 External Debt to GDP Southeast Asian

Sources: Bank Indonesia, Indonesian Foreign Debt Statistics (SULNI) 2023

There are several advantages to be gained from taking out foreign loans that originate from cooperation between countries. One example is getting lower interest rates when compared to foreign loans originating from private institutions, the World Bank, or the IMF. This is also what causes foreign debt originating from cooperation between countries to become one of the main sources of capital in accelerating infrastructure development.

3. Foreign Direct Investment (FDI) Trends and Impacts

The welfare of society can provide information that the economic growth of that country is in good condition or poor condition. There are several factors that can influence the economic growth of a country. As articulated by Suryani (2023), Kuznet stated that economic growth is a country's effort to increase its economic production by adjusting its ideology. Technological progress is one component related to economic growth. This is similar to what is mentioned in the Solow-Swan growth theory (Amalia et al., 2016), where in this theory, there are three indicators that influence economic growth namely capital, labor, and technological development.

It cannot be denied that technological developments influence the economic growth of a country. This is caused by how a company can develop the technology it uses in the hope of making a better contribution to the economy of that country. In Indonesia, the industrial sector can contribute around 50% to the Gross Domestic Product (GDP), most of which comes from the manufacturing industrial sector (Muallif, 2022). One important indicator in building a company is capital. Capital can be obtained in many ways, one of which is foreign investment. Foreign investment can also help produce products with high technology and quality (Ali et al., 2023).

Foreign direct investment that enters indirectly through subsidiaries or third parties also makes a significant contribution to economic growth. This can also stimulate the spread of technology, which can have an impact on human resources and business development itself (Ali et al., 2023). Not only the spread of technology, but also foreign direct investment can carry out technology transfer which can ultimately influence economic growth itself (Ebghaei, 2023).

3.1 FDI Inflows and Sectoral Distribution

In Indonesia itself, investment or investment activities consist of 2 parts, namely foreign investment and domestic investment. The development of realization in 2022 itself has reached Rp 1,207.2 trillion, which has increased by 34% compared to the previous year. As can be seen in graph 9, it can be seen that foreign direct investment has a contribution of 54.2% or Rp 654.4 trillion. Meanwhile, domestic investment itself only has a contribution of 45.8% or Rp 552.8 trillion (Kementrian Investasi, 2023).

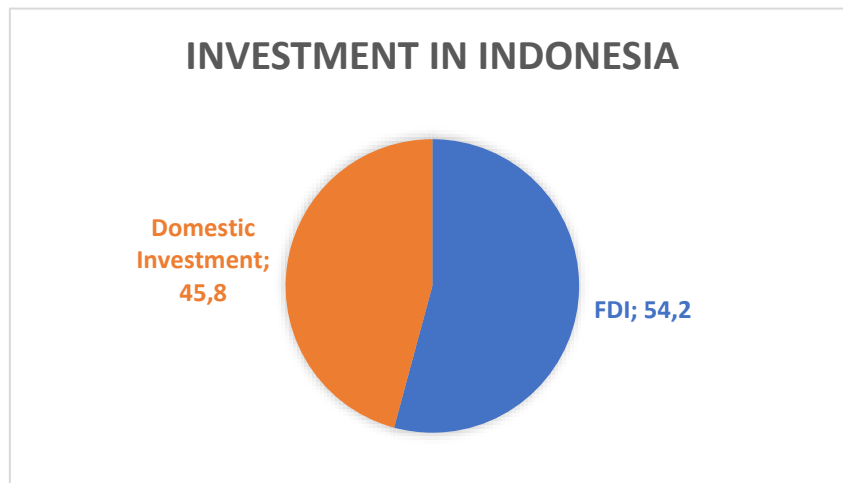


Figure 9 Investment Position in Indonesia

Sources: Ministry of Investment, Investment Realization Statistics Book by Sector 2022

Meanwhile, investment realization in Indonesia itself is divided into 23 sectors and the 3 largest sectors are: (1) Basic Metal, Metal Goods, Non-Machinery and Equipment Industry Sector, (2) Mining Sector, (3) Transportation, Warehouse and Telecommunications sector.

3.1.1 Basic Metal, Metal Goods, Non-Machinery and Equipment Industry Sector

The basic metal industry sector, metal goods, non-machinery, and equipment have a very high appeal in 2022 in terms of foreign investment (FDI) and in terms of domestic investment itself. This is in line with the government's strategy in encouraging the downstreaming of natural resources in Indonesia. On the other hand, it can be seen that the total investment realization provided is Rp 171.2 trillion, or equivalent to 14.2% of the total investment in Indonesia (Kementrian Investasi, 2023).

This can happen due to various policies implemented by the government, such as the ban on the export of raw nickel ore, until finally domestic processing increased. This policy also attracts many investors to Indonesia, especially from countries that have a high need for metals or nickel, for example, to be used for electric car batteries. Moreover, in the future, renewable energy will be prioritized, one of which is by switching to electric cars.

Investment or Investment obtained 91.85% came from FDI with a total of Rp157.3 trillion and 8.15% came from Domestic Investment with a total of Rp14 trillion. Singapore is the highest contributor who invests in this sector with a total investment of Rp59.39 trillion.

3.1.2 Mining Sector

The Mining industry sector also experienced an increase in investment due to the effects of downstreaming compared to the previous year. However, unlike the basic metal industry sector, the Mining industry experienced an increase in terms of Domestic Investment, which previously in 2020 domestic investment in the mining sector was Rp 13.5 trillion, while in 2022 it became Rp 62.5 trillion (Kementrian Investasi, 2023).

Investment or Investment obtained 54.15% came from FDI with a total of Rp73.8 trillion and 45.85% came from Domestic Investment with a total of Rp62.5 trillion. The United States is the highest contributor to investing in this sector, with a total investment of Rp34.68 trillion.

3.1.3 Transportation, Warehouse and Telecommunications Sector

The transportation, warehousing, and telecommunications sectors have their own appeal to investors. This can be seen from the amount of investment obtained, 44.07% came from FDI with a total of RP 59.2 trillion and 55.93% came from Domestic Investment with a total of RP 75.1 trillion. China is the highest contributor to investing in this sector, with a total investment of RP 31.45 trillion.

In contrast to the previous sector, the transportation, warehousing, and telecommunications sectors are dominated by Domestic Investment. This is triggered by various policies implemented by the government, which support domestic investment with tax incentives, ease of licensing through the OSS (Online Single Submission) system, and infrastructure development to facilitate mobility.

3.2 Regulatory Changes and Investment Climate

Indonesia has in recent decades undertaken various regulatory reforms to improve the investment climate, both for domestic and foreign investment. The aim is to increase economic competitiveness and long-term growth.

3.2.1 Job Creation Law (Omnibus Law)

The Indonesian government continues to strive to improve the investment climate through simplifying business licensing, one of which is by revising Government Regulation (PP) Number 5 of 2021 concerning Risk-Based Business Licensing. This revision, which has reached a finalization stage of 95%, was carried out by the Coordinating Ministry for Economic Affairs together with related ministries/institutions, covering the substance of the body and attachments of the regulation.

PP Number 5 of 2021, as a derivative of the Job Creation Law, has the broadest scope in reforming business licensing. One concrete achievement of its implementation is the issuance of 9.5 million Business Identification Numbers (NIB) through the Online Single Submission (OSS) system. Although it has been running well, the government continues to evaluate aspects of basic licensing and environmental requirements in order to provide certainty to business actors. This revision also includes improvements to the governance of building permits and construction regulations that are adjusted in the PP (Menko Perekonomian RI, 2024).

As part of the participatory legislative process, the Government held a Public Consultation Forum in various regions including Batam City. This forum aims to involve the public in the process of forming regulations. In the forum, it was conveyed that Indonesia's economic growth in the second quarter of 2024 is projected to remain above 5%, supported by good inflation control and high interest from potential investors in various national strategic projects.

The revision process of PP Number 5 of 2021 is also in line with Indonesia's accession efforts to the Organization for Economic Cooperation and Development (OECD). The government has initiated the second volume of reforms that focus on implementing regulations that are in line with OECD standards that must be met. In the near future, it is planned to form a National Team for Accelerating OECD Accession, which will cover 26 sectors, including the investment and business licensing sectors.

3.2.2 Downstream

In the form of seriousness in implementing downstreaming in Indonesia, the government issued two laws (UU) as the basis for its implementation, namely Law No. 3

of 2020 concerning mineral and coal mining, which instructs not to export raw materials. And the second is Law No. 3 of 2014 concerning Industry (Artha et al., 2023).

Downstreaming the commodity industry in Indonesia is an effort to process raw materials into semi-finished or finished products that have higher added value. The main objective of downstreaming is to reduce dependence on raw material exports, increase the competitiveness of domestic products, and strengthen the Indonesian economy in the global market. In addition, downstreaming is also expected to create more jobs, improve the economic structure, and reduce its vulnerability to fluctuations in world commodity prices. Indonesia is known for its wealth of natural resources, such as nickel, palm oil, coal, and tin (Banowati, 2021).

However, for years, most of these commodities have been exported in raw form, which results in lower added value compared to processed products. For example, exports of nickel ore in raw form provide a lower export value compared to ferronickel or stainless steel processed domestically. Therefore, as of June 10, 2023, the government has officially imposed a ban on bauxite ore exports referring to Law No. 3 of 2020 Amendment to Law No. 4 of 2009 concerning Mineral and Coal Mining, where exports of raw minerals can be carried out no later than 3 years after the regulation comes into effect. This policy of banning raw mineral exports is primarily intended to encourage downstreaming in an effort to increase the added value of products. including setting a ban on the export of raw nickel ore through the Ministry of Energy and Mineral Resources through the Minister of Energy and Mineral Resources Regulation 11/2019, which provides a decision to accelerate the ban on nickel ore exports in 2020. Downstreaming in the nickel sector, for example, has succeeded in encouraging the construction of smelters and increasing exports of processed products, including ferronickel and stainless steel (Artha et al., 2023).

The success of this downstreaming has made Indonesia a major player in the world stainless steel market, which was previously dominated by other countries such as China. The government also provides various incentives for companies investing in the processing sector, such as tax reductions and ease of licensing. However, although downstreaming brings many benefits, major challenges still remain. One of them is the

limited adequate infrastructure to support the processing industry, such as smelters and palm oil processing facilities. In addition, there are also challenges related to the quality of human resources (HR), which require improvement through training and education in order to keep up with technological developments and more modern production processes.

In addition to the nickel sector, downstreaming is also applied to the palm oil sector through the development of the biodiesel industry. The Indonesian government is promoting the B30 program, which requires the use of a 30% biodiesel mixture in diesel fuel. This program not only reduces dependence on imported fossil fuels but also increases domestic demand for processed palm oil products. Downstreaming in Indonesia has had a positive impact on the economy, with increasing added value of products and the contribution of the industrial sector to GDP. In the future, with consistent policies and support for innovation and improving the quality of human resources, downstreaming will further strengthen Indonesia's position as a country with an advanced and competitive processing industry in the global market (Erwan & Al Muhariah, 2019).

3.3 Contribution of FDI to Economic Growth

The contribution of FDI to economic growth can be seen from the increase in investment or capital and labor absorption.

3.3.1 Foreign Direct Investment Contribution Based on Capital

The realization of foreign investment in Indonesia's secondary sector has experienced consistent growth during the period 2019 to 2022. The highest increase occurred in the metal industry, which rose sharply from USD 3,558 million in 2019 to USD 10,961 million in 2022. This spike reflects the success of the downstream program encouraged by the government, especially in metal products. In addition, the chemical and pharmaceutical industries also showed a significant upward trend, from USD 1,486 million in 2019 to USD 4,506 million in 2022 (Artha et al., 2023).

The food industry also recorded stable growth, with investment realization increasing from USD 1,272 million in 2019 to USD 2,425 million in 2022. Other sectors that experienced significant investment increases included the motor vehicle industry, from

USD 754 million in 2019 to USD 1,523 million in 2022, and the paper and printing industry, from USD 446 million in 2019 to USD 1,630 million in 2022.

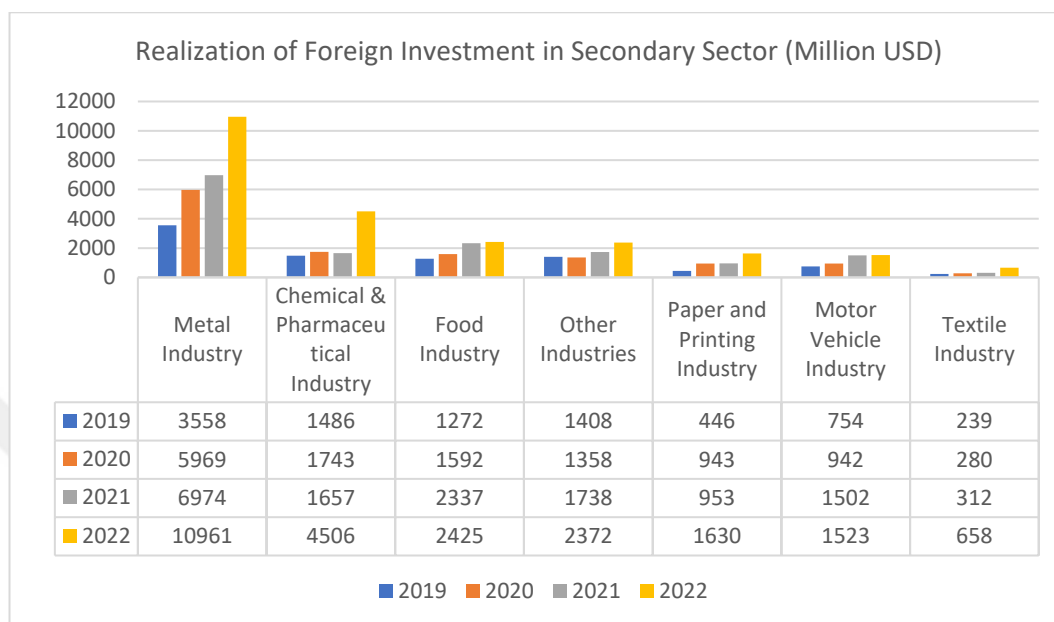


Figure 10 Realization of Foreign Investment in Secondary Sector

Sources: Danareksa Research Institute 2023

Meanwhile, several other sectors such as the textile industry, rubber and plastic industry, and the wood industry experienced more moderate investment growth. For example, the textile industry grew from USD 239 million in 2019 to USD 658 million in 2022, while the wood industry showed a smaller increase, from USD 95 million in 2019 to USD 243 million in 2022.

Overall, these data confirm that the secondary sector, especially the metal and chemical industries, has become a major destination for foreign investors in recent years, in line with the direction of the Indonesian government's industrialization and downstreaming policies.

3.3.2 Foreign Direct Investment Contribution Based on Labor Absorption

Based on data on the development of labor absorption in Indonesia during the period 2020 to 2024, there is a significant upward trend. In 2020, the number of workers absorbed from Domestic Investment (PMDN) reached 611,335 people, while from Foreign Investment (PMA) it was 545,026 people, with a total workforce absorption of

1,156,361 people. The following year, namely 2021, it increased to 1,207,893 people, consisting of 626,663 people from PMDN and 581,230 people from PMA (Kementerian Investasi dan Hilirisasi, 2025).



Figure 11 Development of Indonesian Labor Absorption

Sources: Ministry of Investment and Downstream 2025

In 2022, the total workforce absorbed again increased to 1,305,001 people, with PMDN contributing 759,738 people and PMA contributing 545,263 people. A fairly sharp increase occurred in 2023, where the total workforce absorbed reached 1,823,543 people, with PMDN contributing 1,176,374 people and PMA contributing 647,169 people. This positive trend continued until 2024, when the highest number of workforce absorption in the last five years was recorded, namely 2,456,130 people. Of that number, 1,473,909 people came from PMDN, while 982,221 people came from PMA.

These data show that both domestic and foreign investment play an important role in absorbing labor, with PMDN's contribution tending to be greater than PMA's in the last five years, but both show a consistent increasing trend.

4. Export Commodity Performance

Commodity exports are an important component of the Indonesian economy. In 2022, commodity exports cumulatively increased by 26.07%, with a value reaching US\$291.98

billion. Indonesia's export commodities include copper, CPO (Crude Palm Oil), oil and natural gas, and coal. Indonesia is a country that produces very important commodities in the world market, such as Crude Palm Oil (CPO), rubber, tobacco, tea, and coffee from the non-oil and gas sector. Meanwhile, in the oil and gas sector, Indonesia is the third coal-producing country in the world, after India and China (KOMISI VI DPR RI, 2022).

4.1 Trends in Key Export Commodities (Migas, Non-Migas)

It can be seen in Figure 11 that there will be an increase in demand for raw materials and capital goods from 2020 to 2022. Even the export value of mining commodities in 2022 was 73,504,314 Billion USD. This value increased by 52.69% from 2021, with a value of 48,139,205 Billion USD (Bank Indonesia, 2023a).

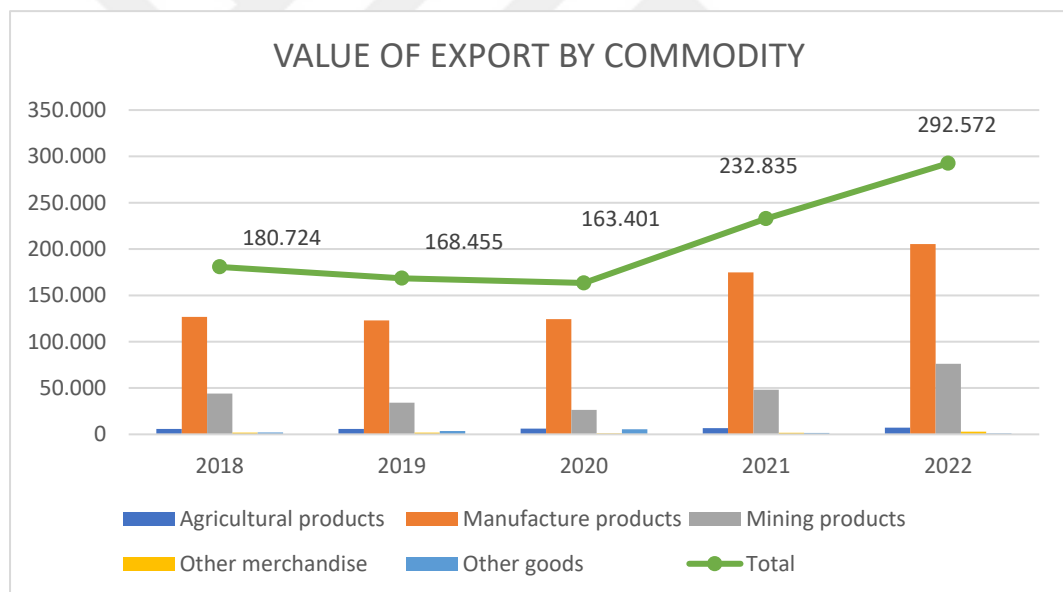


Figure 12 Value Of Export by Commodity

Sources: Bank Indonesia, 2023

4.1.1 Oil and Gas (Migas) Exports

Migas commodities come from the Indonesian abbreviation, which means Oil and Gas. Oil and Gas Commodities in Indonesia itself consist of 3 types of commodities, namely crude oil, oil products, and natural gas. The role of oil and gas exports to Indonesia's own export results is only 5.8% because the production results of oil and gas

itself are still widely used to meet domestic needs. Several types of oil and gas production that are exported to other countries are: Crude oil/petroleum; Natural Gas; Liquefied Natural Gas (LNG); Liquefied Petroleum Gas (LPG); Refined Petroleum Products (Gasoline, Diesel, Kerosene, Avtur, Lubricating Oil). The natural gas in question is natural gas that is exported through pipes to neighboring countries such as Singapore and Malaysia. Refined Petroleum Products themselves are mostly exported to Malaysia with a value of 2,081 million USD, which represents 38.54% of the total exports of Refined Petroleum Products in 2023. Meanwhile, Thailand's crude oil is the largest contributor with a total export value of 1,333 million USD. Indonesia's crude oil exports to Thailand meet 76.22% of Indonesia's total crude oil exports. Meanwhile, Natural Gas is mostly exported to China with a value of 2,400 million USD. Natural gas exports to China account for 27.36% of Indonesia's total natural gas exports.

4.1.2 Non-oil and Gas (Non-Migas) Exports

Non-Migas export commodities mean non-oil and gas export commodities. Non-oil and gas commodities in Indonesia have a significant role because non-oil and gas commodities have contributed 94.20% to total exports in Indonesia in the last 5 years, while oil and gas commodities have contributed 5.80% in the last 5 years. Non-oil and gas commodities have a total of 301 commodities, of which the 301 commodities are simplified by grouping them into 3 types of parts, namely Agricultural commodities, processing industry, and mining and others.

Of the three groups of non-oil and gas commodities, the processing industry commodity has an important role because it has a share of 76.84% of the contribution given to the non-oil and gas commodities themselves. Mining and others contribute 21.35% of the contribution to non-oil and gas commodities, and agriculture contributes 1.81% to the total non-oil and gas commodities.

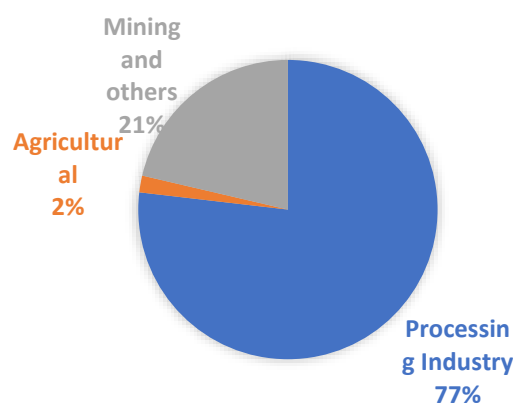


Figure 13 Non-Migas Commodities in Indonesia

Sources: Central Bureau of Statistics of Indonesia 2024

4.1.2.1 Agricultural Exports

The agricultural group has 3 commodity sectors in it, namely agricultural export commodities, forestry export commodities, and fishery export commodities. All agriculture, forestry, and fisheries sectors themselves represent 46 types of commodities in Indonesia. Of the 3 sectors, 2 of them have sub-sectors. Namely, Agriculture has a sub-sector of agricultural commodities for annual crops, seasonal crops, ornamental plants, and plant breeding. From the fisheries sector, there are sub-sectors of fish farming commodities, capture fisheries, and aquaculture. The Agricultural Commodity of the Annual Crop Agriculture subsector has a very large contribution of 58.86% of the contribution given to all agricultural commodities in 2023. The leading agricultural commodity product is Coffee. Coffee has an average contribution of 35.24% in the Annual Crop Agriculture subsector and contributes 19.33% to the agricultural commodity itself, with total exports reaching 276 thousand tons. Fruits also have a good influence on the Annual Crop Agriculture subsector. Exported annual fruits such as Coconut, Mangosteen, Pineapple, and others have a contribution of 17.79% to the Annual Crop Agriculture subsector. Fishery Commodities themselves have their superior products where in the Livestock sub-sector, Bird's Nest has a contribution of 89% to the total Livestock sub-sector in 2023 with total exports reaching 1,335 tons. In the Aquaculture sub-sector, the superior products are Seaweed and Ganges which have a contribution of 61.89% to the total Aquaculture sub-sector with total exports reaching 251 thousand tons. The superior product of the Capture Fisheries sub-sector is Cultivated Pearls. Cultivated Pearls have a contribution of 24.02% to the total Capture Fisheries sub-sector with total

exports reaching 10.1 tons. Forestry Commodities Have Leading Products in the form of Rubber and the like with total exports reaching 46.7 thousand tons in 2023. Another leading forestry product is Agarwood, which has a total export of 1.2 thousand tons.

Meanwhile, in the agricultural sector, Indonesia is a country known as an agricultural country that relies on the agricultural sector both as a source of livelihood and as a support for development. The development process in Indonesia makes the agricultural sector very important in the national economy because almost the majority of the Indonesian population lives in rural areas, with a livelihood as farmers. In addition to the agricultural sector making a significant contribution to Indonesia's gross domestic product (GDP), some of Indonesia's exports also come from the agricultural sector, so that the agricultural sector has an important role in absorbing labor and providing food and clothing needs for the Indonesian population (Parmadi et al., 2018; Wibowo, 2012). Agriculture in Indonesia still has enormous potential. Indonesia is the 3rd largest coffee producer in the world after Brazil and Vietnam, with a total production of 794.8 tons in 2022 (BPS, 2023). Indonesia is also the largest producer of palm oil in the world. Total palm oil production in Indonesia is 45.5 million tons, which contributes 59% of total world production (USDA, 2023), and 26.22 million tons were exported to various countries in 2022.

4.1.2.2 Manufacturing Exports (Processing Industry)

The processing industry commodity has an important role in the Indonesian economy because it has a total contribution to non-oil and gas export commodities of 76.84% in the 2023 period. Meanwhile, commodity exports in Indonesia itself are dominated by non-oil and gas commodities, with a total contribution to commodity exports in Indonesia of 94.20%. In other words, the processing industry commodities are the backbone of commodity exports in Indonesia. The processing industry commodities themselves have several sub-categories, namely: food commodities; base metal commodities; chemical commodities and goods made from chemicals; ready-made clothing commodities; paper commodities and paper goods; and rubber commodities and goods made from rubber.

The processing industry commodity of the food commodity sub-sector has several superior products such as palm oil. Palm oil has a very large contribution influence where the total contribution given to the food industry commodity is an average of 61.87% with

a total of 28.6 million tons in 2023. The second leading product in the food commodity sub-sector is margarine which contributes 4.27% with total exports reaching 1.9 million tons in 2023. Frozen shrimp is also a superior product of the food commodity sub-sector, contributing 3.69% of the total exports of 140 thousand tons in 2023.

The processing industry commodity of the Base Metal Commodity sub sector has several superior products. Iron and steel are the first superior products of the base metal commodity sub-sector with total exports of 10.92 million tons. Copper is the second superior product in the base metal commodity sub-sector with an average contribution of 7.21% and total exports of 257 thousand tons. Precious base metals have a contribution of 4.27% with total exports of 1,384 tons in 2023.

The sub-sector of chemical commodities and chemical goods has a contribution of 8.74% to the processing industry. There are several superior products from the sub-sector of chemical commodities and chemical goods. Organic Basic Chemicals Sourced from Agricultural Products such as alluvial acid, acetic acid, citrate acid, benzoic acid, fatty acid, fatty alcohol, furfural, and sorbitol. Has a contribution of 42.55% of the total export value of the chemical and chemical goods industrial commodity sub-sector with a total export of 7.88 million tons in 2023. The second leading product in the chemical and chemical goods commodity sub-sector has a total contribution of 12.56% in 2022, namely Soap and Detergent, Cleaning and Polishing Materials, Perfume and Cosmetics with a total export of 2.2 million tons in 2023. Synthetic resin commodities and plastic raw materials are the next leading products with a contribution of 7.77% of the total export value of chemical and chemical goods commodities with a total export of 1.36 million tons in 2023.

4.1.2.3 Mineral Exports (Mining)

Indonesian Mining Commodities are grouped into 3 subcategories, namely: coal and lignite mining; metal ore mining; and other mining and excavation. Mining commodities are the 2nd largest contributor to non-oil and gas commodities. The average contribution given by the mining industry is 18.34% in the last 5 years. And they have contributed 21.35% to total non-oil and gas exports in 2023.

The mining commodity of the coal and lignite mining sub-sector has a contribution of 82.33% to the mining commodity itself. The coal and lignite sub-sector commodity itself consists of 2 commodities, as the name suggests, namely coal and lignite. Coal is a superior product of mining commodities with a total export of 379.7 million tons with an export value of 34,592 million USD in 2023. Lignite is a low-quality coal often referred to as brown coal. Lignite has a total export of 139 million tons with an export value of 8,102 million USD in 2023.

Mining commodities in the metal ore mining sub-sector have a contribution of 16.68% to the mining commodities themselves. The metal ore mining sub-sector commodities consist of 7 commodities: copper ore, zirconium, niobium, and tantalum ore; iron ore; zinc ore; lead ore; titanium ore; and other metal ores. There are 3 leading products in the metal ore mining sub-sector. These commodities are copper ore, which has a contribution of 96.29%, with total exports of 3 million tons and an export value of 8,326 million USD in 2023. Then, zirconium, niobium, and tantalum ores contributed 1.99%, with total exports of 95 thousand tons at a value of 172 million USD. The last is other metal ores, which have a total export of 1,921 million tons and a value of 68 million USD.

Mining commodities in the Mining and other quarrying sub-sectors have the smallest contribution, which is 0.31% of the contribution given to the total export of mining commodities. Products from the mining and quarrying sub-sector include mountain stone, river stone, limestone, coral, gravel, marble, sand, silica sand, quartz sand, kaolin, clay, and others. Gravel is one of the ones that has made a large contribution to the mining and quarrying sub-sector, with total exports of 7,679 million tons, a value that will reach 55 million USD in 2023. Furthermore, there is soil and clay, which have a total export of 215 thousand tons with a value reaching 13,284 thousand USD in 2023.

Increasing exports of these commodities can increase state revenues through export tax revenues. Increased state revenues can be used to finance development and improve public welfare. In addition, increasing commodity exports can also increase employment and encourage economic growth.

4.2 Export Diversification and Value-Added Exports

Exports play a vital role in the Indonesian economy, especially as one of the main components in the formation of Gross Domestic Product (GDP). During the administration of President Joko Widodo, the government's efforts to increase added value through industrial downstreaming and diversification of export products have had a significant impact on economic growth. The contribution of exports to GDP comes not only from increasing export volumes but also from efforts to maximize revenues from non-oil and gas sectors, such as manufacturing, agriculture, and natural resource-based processing industries. Downstream policies, such as the ban on exports of raw nickel ore since 2020, have encouraged the construction of smelters and strengthened the domestic industrial base. As a result, exports of processed nickel products have increased drastically, contributing more to GDP (Sanitra, 2020).

In addition, the increase in global commodity prices, including coal, crude palm oil (CPO), and liquefied natural gas (LNG), also had a direct impact on increasing export value. This can be seen from the significant increase in Indonesia's export value in 2021 and 2022, which reached USD 230 billion and USD 268 billion respectively. However, the impact of exports on GDP is not only determined by the export value itself, but also by the multiplier effect it generates. Increased exports, especially from the manufacturing and processing sectors, can drive economic activity in other sectors, such as transportation, logistics, and financial services.

Exports not only increase GDP directly but also through their influence on supporting sectors. However, there are still challenges that hinder the maximum contribution of exports to GDP. One of them is the high dependence on primary commodities, such as coal and CPO, which are vulnerable to global price fluctuations. This dependence can cause volatility in the contribution of exports to GDP. Therefore, the government continues to strive to increase export diversification to reduce this risk. The role of exports in driving GDP will be increasingly important, especially with the implementation of various free trade agreements that open up access to international markets. If the downstreaming and export diversification strategies can continue to be improved, exports will become a more sustainable engine of economic growth, providing a greater positive impact on GDP.

4.3 Impact of Global Market Conditions on Exports

President Joko Widodo's (Jokowi) government has launched various policies to support Indonesia's export sector, focusing on simplifying regulations, facilitating logistics, and increasing access to international markets. These policies aim to strengthen Indonesia's position in the global market, increase state revenues, and encourage economic growth. In this context, the impact of export policies on Indonesia's economic sector is very relevant, especially in relation to its contribution to the country's GDP (Gross Domestic Product). One of the policies that has been implemented by the government is the simplification of the export licensing process. Previously, exports from Indonesia were often hampered by complex regulations and slow bureaucracy.

However, under Jokowi's leadership, efforts to speed up this process were made through the implementation of an electronic system that allows entrepreneurs and exporters to more easily meet export requirements. This policy reduces the time required to obtain export permits and documents, thereby increasing operational efficiency and reducing costs incurred by exporters. In addition, policies to facilitate access to international markets also play a very important role. The Indonesian government is working with various countries and international organizations to expand Indonesia's export market, especially in Asia, Europe, and the Americas (Sari, 2024).

Strengthening trade relations through free trade agreements and economic cooperation, such as the ASEAN Free Trade Area (AFTA) and the Comprehensive Economic Partnership Agreement (CEPA) with a number of countries, provides great opportunities for Indonesian products to enter foreign markets without major tariff barriers. Logistics facilitation is also a major policy that has a direct impact on the export sector. The Jokowi government focuses on building infrastructure such as ports, airports, and toll roads that connect producing areas with major export centers. Ports such as Tanjung Priok Port and processing facilities in industrial areas have been improved to accelerate the distribution of goods to international markets. Success in improving this infrastructure helps lower logistics costs and reduce trade barriers.

The impact of these policies on Indonesia's GDP is significant. In recent years, Indonesia's exports have increased, which has had an impact on other economic sectors,

such as manufacturing and agriculture. Key commodities such as palm oil, coal, textiles, and rubber have made a major contribution to the Indonesian economy, with export value increasing in direct proportion to GDP growth. For example, the palm oil sector, which is one of Indonesia's leading commodities, has directly benefited from this policy, considering that Indonesia is one of the world's largest producers.



CHAPTER THREE

METHODOLOGY AND DATA ANALYSIS

1. Literature Review

Numerous studies have been undertaken regarding the influence of external debt, export commodities, and foreign direct investment (FDI) on economic growth. Various investigations across several continents have been examined.

Research conducted in the Asian continent, especially in Indonesia, shows that foreign debt is a significant factor that can boost economic growth (Darmawan, 2022; Maria & Mudayen, 2017; Rachmadi, 2013). The study concluded that foreign debt has a positive effect on economic growth. This is supported by the findings of Rabbani (2013), who found that in ASEAN-4 countries (Indonesia, Malaysia, the Philippines, and Thailand), both foreign debt and foreign investment (FDI) have a positive relationship with economic growth, although exports have been shown to have a negative effect on GDP.

Several other studies have also explored the role of FDI in ASEAN countries. For example, Jufrida et al. (2017) found that FDI has a positive but statistically insignificant impact on Indonesia's GDP. Meanwhile, Gultom (2023) highlighted that in the case of Indonesia, FDI and external debt both have a significant positive effect on GDP, and in contrast to Rabbani's findings, net exports also contribute positively. To strengthen these findings, studies by Blomstrom et al. (1995) and de Mello (1997) show that FDI generally stimulates growth in developing countries. Similarly, a study conducted in Sri Lanka using a cointegration approach revealed that FDI has a positive effect on GDP and shows a causal relationship with economic growth (Athukorala, 2013).

In terms of exports, Ginting (2017) found that increased exports lead to higher economic growth in Indonesia, although the reverse is not necessarily true. This finding is supported by studies from other Southeast Asian contexts, such as Duasa (2011) and Muna Sulaiman (2009), both of whom found both long-run and short-run relationships between exports and economic growth in Malaysia. Furthermore, Sumiyarti (2015)

observed that Export-Led Growth still applies in Indonesia, although the impact of exports on GDP is still relatively small.

Research involving European countries reveals that debt has a significant impact on GDP per capita (Mencinger et al., 2014). A study conducted only in Greece illustrates a one-way causal relationship from economic growth to external debt. This observation implies that as a country's economy expands, it tends to lead to an increase in the level of external debt (Dritsaki, 2013). Similarly, Grancay (2015), whose research includes the Irish context, observes both long-run and short-run relationships between economic growth and exports, further reinforcing the importance of macroeconomic relationships in European economies.

Research on Latin American and Caribbean countries shows a significant negative correlation between total external debt levels and economic growth rates (Schclarek & Ramon-Ballester, 2005). This suggests that in this region, high external debt may hinder rather than support economic development. Furthermore, similar research suggests that stable economic growth may contribute to lower debt levels (Bittencourt, 2015), suggesting a potentially inverse relationship: as economies strengthen, their reliance on external debt may decline.

Several studies have explored the relationship between foreign direct investment (FDI) and economic growth in BRICS countries. Dees (1998), in a study focused on China, found that FDI has a positive effect on economic growth, reinforcing the idea that FDI plays a key role in developing economies. Similarly, Malik and Ash Narayan Sah (2024) found that FDI exhibits a substantial correlation with economic growth in the short run. However, their results do not show a long-run relationship between the two variables in the context of BRICS economies. In contrast, Ayomitunde et al. (2019) reported that FDI, GDP per capita, and economic growth have a long-run equilibrium relationship. Their study also revealed a one-way feedback effect running from FDI to economic growth, suggesting that investment inflows can act as a driver of long-run economic performance in BRICS countries.

In summary, the effect of external debt, exports, and FDI on economic growth varies across regions, reflecting differences highlight the need for context-specific strategies to promote sustainable economic development.

2. Methodology

In this thesis research, the influence of Foreign Debt, Investment, and Commodity Exports on Indonesia's GDP in the era of President Jokowi Dodo (2014-2024) is conducted. The data used is quarterly data, with 40 observations in the form of a time series. Testing is carried out using EViews 12 with a quantitative approach using an Autoregressive Distributed Lag (ARDL). In this direction, first, stationarity tests will be carried out using several methods, including the Augmented Dickey-Fuller (ADF) test, the Phillips-Perron (PP) test, the Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test, and the Ng-Perron test. Furthermore, the selection of the appropriate model will be carried out using the Schwarz Criterion Test. After the ARDL model estimation is done, a series of diagnostic tests will be carried out, including Normality, Autocorrelation, and Heteroscedasticity tests. Furthermore, stability tests are carried out through the Ramsey RESET, CUSUM, and CUSUM of Squares tests. This will be followed by the Bound test, ARDL long-term estimation, and Error Correction Regression test.

**Table 2 Definition of Research Variables and Data Sources
(Quarterly Data 2014–2023)**

Variable	Definition	Source
GDP	The GDP value used is based on current prices, converted to USD.	(Bank Indonesia, 2023b)
External Debt	Total external debt, which includes government and private external debt, is presented in million USD.	(Bank Indonesia, 2023a, 2023b)
Exports	Value of commodity exports, presented in million USD.	(Bank Indonesia, 2023b)
FDI	Direct investment flows in Indonesia by economic sector, presented in million USD.	(Bank Indonesia, 2023b)

There are four variables in this study, the first is the dependent variable of Indonesia's GDP, and the second, third, and fourth are independent variables. Namely Foreign Debt, Investment, and commodity exports (including agriculture, mining, and manufacturing) as can be seen in Table 2. The data used in this study are secondary data obtained from Bank Indonesia (BI) in its publication entitled SEKI (Indonesian Economic and Financial Statistics), and other sources including books, journals, etc. The data in SEKI is compiled using primary data from Bank Indonesia and secondary data from other institutions such as the Ministry of Finance, the Central Statistics Agency (BPS), and the Deposit Insurance Corporation (LPS).

2.1 Autoregressive Distributed Lag (ARDL) Model

The Autoregressive Distributed Lag (ARDL) model is one of the econometric methods that is often used to analyze the short-term and long-term relationships between dependent variables and independent variables in a regression model. This model is widely used in economic, financial, and social research because of its flexibility in handling stationary data or data that has a combination of stationarity at the level and stationarity at the first differentiation (Arintoko, 2021). The main advantage of the ARDL model is its ability to overcome different integration problems in variables. In many traditional econometric models, such as the Johansen Cointegration Test, all variables must have the same level of integration for example, all must be $I(1)$ or $I(0)$. However, the ARDL model can be used when some variables are $I(0)$ and others are $I(1)$, as long as there is no variable with higher integration than $I(1)$ (for example $I(2)$). This makes the ARDL model more flexible than other approaches in the analysis of long-term relationships.

In ARDL analysis, the dependent variable is regressed against the lag of itself and against the lag of the independent variables. This model allows for the capture of the dynamic effects of changes in the independent variables on the dependent variable, both in the short and long run. The ARDL approach is very useful in overcoming the problem of spurious regression, namely regression results that appear significant but actually have no real economic relationship. This problem often arises in regressions between variables

that have a time trend without any real causal relationship. By using the ARDL model, we can test for the existence of a long-run relationship between variables using the Bounds Testing Approach (Pesaran et al., 2001).

The main advantage of the ARDL model is its flexibility in handling variables with different levels of integration. This model also allows the estimation of short-term and long-term relationships in one framework, and can be applied to small data samples, which are often a constraint in other cointegration methods. In addition, the ARDL model provides more accurate results in estimating the dynamic relationship between variables. However, the ARDL model also has several weaknesses. One of them is its sensitivity to non-optimal lag selection, which can lead to biased or invalid results. In addition, although this model can handle $I(0)$ and $I(1)$ variables, this model cannot be used if there are variables that are $I(2)$. ARDL is also less suitable for data that has strong non-linear properties, because its basic approach is based on linear regression (Ponziani, 2023).

2.2 Stationary Tests

In time series analysis, the stationary test is an important step to ensure that the data used meets the basic assumptions in various statistical and econometric models. Stationarity refers to the statistical properties of data that do not change over time, such as the mean and variance remaining constant. Non-stationary data can cause model estimates to be biased and invalid, so it needs to be tested using certain methods. Some common methods used to test stationarity include the Augmented Dickey-Fuller (ADF) test, the Phillips-Perron (PP) test, the Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test, and the Ng-Perron test.

2.2.1 Augmented Dickey-Fuller (ADF) Test

The Augmented Dickey-Fuller (ADF) test is a development of the Dickey-Fuller (DF) test used to test for the presence of a unit root in time series data. The ADF test was developed to overcome the problem of autocorrelation in the residuals by adding lags of the tested variables. The null hypothesis in this test states that the data has a unit root, which means it is not stationary. If the test statistic value is smaller than its critical value, then the null hypothesis is rejected, so the data is considered stationary. The ADF test has

three main forms, namely without intercept and trend, with intercept, and with intercept and trend. Each form is used depending on the characteristics of the data being tested. Although the ADF test is widely used, this method has several limitations, especially in terms of sensitivity to the selection of the number of lags.

If the number of lags used is too small, the residuals in the regression may still contain autocorrelation, which causes the test results to be biased. Conversely, if the number of lags is too large, the degrees of freedom are reduced, which reduces the power of the test. Therefore, the selection of the optimal lag is very important in the application of the ADF test. In practice, lag selection is often done using information criteria such as the Akaike Information Criterion (AIC) or the Schwarz Bayesian Criterion (SBC).

2.2.2 Phillips-Perron (PP) test

The Phillips-Perron (PP) test is an alternative to the ADF test that overcomes the weaknesses in handling heteroscedasticity and autocorrelation in the residuals. The PP test does not require the addition of lag in the regression model, but uses non-parametric corrections to overcome these problems. The null hypothesis in the PP test also states that the data has a unit root, while the alternative hypothesis is that the data is stationary. If the test statistic value is smaller than the critical value, then the null hypothesis is rejected, which means the data is considered stationary (Rofatul, 2011).

One of the main advantages of the PP test is its ability to handle outliers and data with complex autocorrelation structures. Compared to the ADF test, the PP test is more flexible in handling data that has a non-normal distribution. However, the PP test also has limitations, especially in terms of sensitivity to the choice of estimation method and sample size. In data with small sample sizes, the results of the PP test tend to be less stable than the ADF test.

2.2.3 Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test

Unlike the ADF and PP tests that test for the presence of a unit root, the Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test uses a different approach with the null hypothesis that the data is stationary. In other words, the KPSS test tries to determine whether the data used meets the stationarity assumption or not. If the value of the test statistic is greater than its critical value, then the null hypothesis is rejected, which means the data is not

stationary. The KPSS test assumes that the data consists of deterministic components (such as trends) and stochastic components (such as random fluctuations). If the stochastic component is too large, then the data is considered non-stationary. One of the advantages of the KPSS test is its ability to identify the role of trends in time series data, which is often overlooked in the ADF and PP tests. However, the KPSS test also has weaknesses, especially in terms of the tendency to detect weak trends as non-stationary. Therefore, the KPSS test is often used as a complement to the stationarity test, together with the ADF or PP test.

2.2.4 Ng-Perron Test

The Ng-Perron test was developed as an improvement of the ADF and PP tests in detecting unit roots, especially in small samples. This test is designed to improve estimation efficiency and reduce bias that often occurs in traditional stationarity tests. Ng-Perron test uses four main statistics, namely MZa, MZt, MSB, and MPT. MZa and MZt are used to test the null hypothesis of the existence of a unit root, while MSB and MPT function as additional indicators in determining data stationarity. One of the main advantages of the Ng-Perron test is its ability to correct sample size bias, which is often a problem in the ADF and PP tests.

In data with a limited number of observations, the results of the ADF and PP tests are often less accurate due to their sensitivity to the choice of lag. The Ng-Perron test overcomes this problem by using a more efficient estimation technique, so that the results obtained are more reliable. In practice, the choice of a stationarity test method depends on the characteristics of the data being tested and the purpose of the analysis. The ADF and PP tests are often used together to ensure the consistency of the results, while the KPSS test is used as a complement to validate the results of the unit root test. The Ng-Perron test is used less frequently than the other methods, but it is very useful in conditions where small sample sizes are a constraint.

2.3 The Schwarz Criterion (SIC) Test

Schwarz Criterion (SIC) or Schwarz Bayesian Information Criterion (SBIC) is one of the methods used in selecting statistical models, especially in time series analysis and econometrics. SIC was developed by Gideon Schwarz in 1978 as an alternative to the

Akaike Information Criterion (AIC). SIC is used to assess model quality by considering the balance between model accuracy and complexity. In data analysis, selecting the right model is very important so that the estimation results do not experience bias or overfitting. In the context of model selection before applying the Autoregressive Distributed Lag (ARDL) model, SIC plays a role in determining the optimal number of lags to be used in the analysis (Hamwi, 2018). The ARDL model itself is often used in the analysis of short-term and long-term relationships between economic variables. Therefore, selecting the right lag through SIC can improve model accuracy and avoid multicollinearity problems that may occur if the number of lags used is too large.

SIC has similar characteristics to AIC, but is stricter in penalizing a larger number of parameters. Therefore, models selected based on SIC tend to be simpler than models selected based on AIC. This makes SIC a good tool to avoid overfitting, although in some cases it can cause the selected model to have fewer parameters and thus be less able to capture the complexity of the data.

2.4 Residual Diagnostic Test

In regression analysis, residual testing is very important to ensure that the model used produces valid and reliable estimates. Residual is the difference between the actual value and the predicted value of the regression model. Residual diagnostic tests are conducted to evaluate whether the assumptions underlying the regression method are met (Feng et al., 2020). The three main diagnostic tests used in residual analysis are the Normality Test, Autocorrelation Test, and Heteroskedasticity Test.

2.4.1 Normality Test (Residual Normality Test)

The residual normality test aims to evaluate whether the residuals in the regression model are normally distributed. The normality assumption is very important in the regression model because it affects the validity of the hypothesis test and parameter estimation performed. If the residuals are not normally distributed, then statistical tests such as the t-test and F-test can produce invalid or biased results. One method often used to test the normality of the residuals is the Kolmogorov-Smirnov Test, which compares the residual distribution with the theoretical normal distribution. If the p-value is greater than a certain significance level (for example, 0.05), then the residuals are considered

normally distributed. Another method is the Shapiro-Wilk Test, which works by comparing sample statistics with a normal distribution. In addition to statistical tests, residual normality can also be tested using visualizations such as histograms, Normal Q-Q Plots (Quantile-Quantile Plots), and P-P Plots (Probability-Probability Plots). In the Normal Q-Q Plot, if the residual points are along the diagonal line, then it can be said that the residuals follow a normal distribution.

If there is a significant deviation from the line, it indicates that there is an abnormality in the residuals. The main causes of residual abnormality are usually related to insufficient data, the presence of outliers, or the presence of non-linear relationships in the regression model. To overcome this problem, several approaches that can be taken include transforming variables using methods such as log transformation, square root transformation, or Box-Cox transformation. In addition, significant outliers can also be removed or adjusted.

2.4.2 Autocorrelation Test (Residual Autocorrelation Test)

Residual autocorrelation refers to the relationship between the current residuals and the previous residuals in a regression model. In classical linear regression, the basic assumption that must be met is that the residuals are independent of each other (there is no correlation between them). If the residuals have a certain pattern that is correlated over time, then this can cause inaccuracy in the estimation of regression parameters and increase the possibility of errors in decision making. The most common test used to detect autocorrelation is to look at the probability of the p-value being greater or less than 5%.

2.4.3 Heteroscedasticity Test

Heteroscedasticity refers to the condition where the variance of the residuals is not constant across the range of the independent variable. In a good regression model, it is desirable that the residuals have homogeneous or constant variance, known as homoscedasticity. If the variance of the residuals increases or decreases as the value of the independent variable changes, then the model suffers from heteroscedasticity. Heteroscedasticity often occurs in data that has different scales or exponential growth. For example, in economic studies, individual earnings may have a larger variance at high income levels than at low income levels.

One method used to detect heteroscedasticity is the Breusch-Pagan Test, which tests whether the residual variance is correlated with the value of the independent variable. If the p-value of this test is smaller than the significance level (0.05), then it can be concluded that heteroscedasticity occurs in the regression model. Another commonly used method is the White Test, which is more flexible because it does not require assumptions about the specific form of the relationship between the independent variable and the residual variance. In addition to statistical tests, heteroscedasticity can also be identified visually using the Scatter Plot between the residual and the independent variable (Sukarelawan et al., 2024).

2.5 Stability Diagnosis Test

Stability testing is one of the important steps in econometric analysis to ensure that the estimated regression model does not experience parameter changes over time. In time series data analysis, parameter stability is crucial because model instability can lead to inaccurate and misleading prediction results. Therefore, various stability test methods have been developed to identify whether the model remains valid over various time periods. The three main methods often used to test model stability are the Ramsey RESET Test, the CUSUM Test, and the CUSUM of Squares Test. These three methods have different approaches in evaluating the stability of regression parameters, but in general, they aim to detect possible misspecification or structural changes in the model.

2.5.1 Ramsey RESET Test

Ramsey Regression Equation Specification Error Test (RESET) is a method used to test whether there is a misspecification in a regression model, such as an inappropriate function form or the loss of important variables in the model. This test was developed by James B. Ramsey in 1969 and is based on the idea that if the model has the correct specification, then there is no systematic pattern left in the residuals. In the RESET Test, the main step is to add squares or higher powers of the predicted values (fitted values) to the initial regression model, and then check whether this additional variable is significant or not (Warsito & Ispriyanti, 2004). If the coefficient of the additional variable is significant, then this indicates a misspecification in the initial model. The advantage of the RESET Test is its ability to detect misspecification of the model without having to

know the specific form of the error. However, this test cannot directly indicate which variables are missing or what form of non-linearity is present in the model. Therefore, this test is usually used as an initial step in identifying model specification problems.

2.5.2 The CUSUM (Cumulative Sum) Test

The CUSUM (Cumulative Sum Test) is a method used to evaluate the stability of parameters in a regression model. This test is based on the cumulative calculation of the standard residuals of the model, which are then compared to certain critical limits. If the cumulative plot of the residuals remains within the critical limits, then the model is considered stable. Conversely, if the plot line goes outside the critical limits, then this indicates a structural change in the model. This method was first introduced by Brown, Durbin, and Evans in 1975.

If the cumulative plot of residuals remains within the critical limits, then the null hypothesis that the regression parameters are stable is not rejected. However, if the plot goes outside the limits, then this indicates a change in the model parameters that may be due to structural changes in the data. One of the advantages of the CUSUM Test is its ability to detect gradual changes in model parameters, making it very useful in time series analysis with slowly changing trends. However, this test is less sensitive to sudden and drastic changes, which makes it more suitable for detecting structural changes that occur gradually.

2.5.3 CUSUM of Squares Test

In addition to the CUSUM Test, another method that is often used to test model stability is the CUSUM of Squares Test. This method is similar to the CUSUM Test, but uses the squares of the standardized residuals to calculate their cumulative sum. The main purpose of this test is to detect changes in variability in the model, not just changes in the average parameter, as in the CUSUM Test. The steps in the CUSUM of Squares Test are as follows: Estimate the regression model and calculate the standardized residuals. Calculate the cumulative sum of the squares of the standardized residuals. Plot the cumulative results against the critical limits at a certain level of significance. In general, this test is more sensitive to sudden changes in data variability. If the CUSUM of Squares plot remains within the critical limits, then the model is considered stable. However, if it

goes outside the limits, then this indicates instability in the model, which can be caused by various factors such as increased volatility, changes in the structure of the relationship between variables, or external shocks that affect the data. The main advantage of the CUSUM of Squares Test is its ability to detect changes in variability that may not be detected by the regular CUSUM Test. Therefore, these two tests are often used together to get a more complete picture of the stability of the mode.

3 Analysis and Results

The analysis data and results shown are data on Indonesia's GDP, External Debt, Exports, and FDI, which have been converted into logarithmic form to facilitate the data processing calculations carried out.

3.1 Stationary Test

As an initial step in the analysis, a stationarity test was conducted using several methods, the results of which can be seen in Table 3. The methods used include Augmented Dickey-Fuller (ADF), Phillips-Perron (PP), Kwiatkowski-Phillips-Schmidt-Shin (KPSS), and Ng-Perron. Before conducting ARDL analysis, the variables in this study were converted into logarithmic form so that the estimation results were more stable and the interpretation of the coefficients was easier to understand. In the stationary test conducted, it was found that the GDP variable is stationary at first difference. This can be seen from the significant results in several methods used. Likewise, the External Debt variable is stationary at first difference, significant results can be seen in several methods used. The Export variable is also stationary at first difference, which can be seen from the significant results in several methods used. This is different from the FDI variable, which is stationary at level I (0) because differencing is not needed in several methods used.

Table 3 Stationary Test

Variables	ADF	PP	KPSS		Ng peron			Decision
				MZa	MZt	MSB	MPT	
GDP	Level -4.026 (-4.211) 1.Difference -7.278(0) ^c *	Level -3.911 (-4.211) 1.Difference -7.330(3) ^c *	level 0.103(3) ^a * (0.216) 1.Difference 0.187	Level -12.621 (-23.800) 1.Difference -18.515(0) ^b *	Level -2.464 (-3.420) 1.Difference -2.955(0) ^b *	Level 0.195 (0.143) 1.Difference 0.159(0) *	Level 7.482 (4.030) 1.Difference 1.634(0) *	(1)
External Debt	Level -1.105 (-4.211) 1.Difference -7.106(0) ^a *	Level -1.105 (-4.211) 1.Difference -7,234(3) ^a *	Level 0.181 (0.216) 1.Difference 0.088(5) ^a *	Level -2.318 (-23.800) 1.Difference -18.468(0) ^b *	Level -0.866 (-3.420) 1.Difference -3.027(0) ^b *	Level 0.373 (0.143) 1.Difference 0.163(0) *	Level 30.439 (4.030) 1.Difference 1.367(0) *	(1)
Ekspor	Level -2.057 (-4.211) 1.Difference -5.314(0) ^c *	Level -2.126 (-4.211) 1.Difference -5,314(0) ^c *	Level 0.141(4) ^a ** (0.216) 1.Difference 0.074	Level -4.575 (-23.800) 1.Difference -18.730(0) ^b *	Level -1.496 (-3.420) 1.Difference -3.056(0) ^b *	Level 0.327 (0.143) 1.Difference 0.163(0) *	Level 19.794 (4.030) 1.Difference 1.319(0) *	(1)
FDI	Level -5.174(0) ^b * (-3.610) 1.Difference -5.861	Level -5,148(2) ^b * (-3.610) 1.Difference -18.628	Level 0.139(3) ^b * (0.739) 1.Difference 0.500	Level -18.998(0) ^b * (-13.800) 1.Difference -3968	Level -3.080(0) ^b * (-2.580) 1.Difference -44.547	Level 0.162(0) * (0.174) 1.Difference 0.011	Level 1.294(0) * (1.780) 1.Difference 0.022	(0)

Note: a: with trend and intercept, b: with intercept only, c: without trend and intercept. *, ** indicates significance at the 1% and 5% levels.

3.2 Schwarz Criterion Test (top 20 models)

Before estimating ARDL, the first thing to do is to determine the best model for estimating ARDL. As can be seen in Figure 14. The Schwarz Criterion (SIC) Test was conducted to determine the optimal model, and the most optimal model is model 172 or ARDL (1,1,1,0). Based on the selected model, it shows that the optimal lag length for

GDP, FDI, and External Debt is 1-lag length. At the same time, the Export variable has a direct impact without any Lag length.

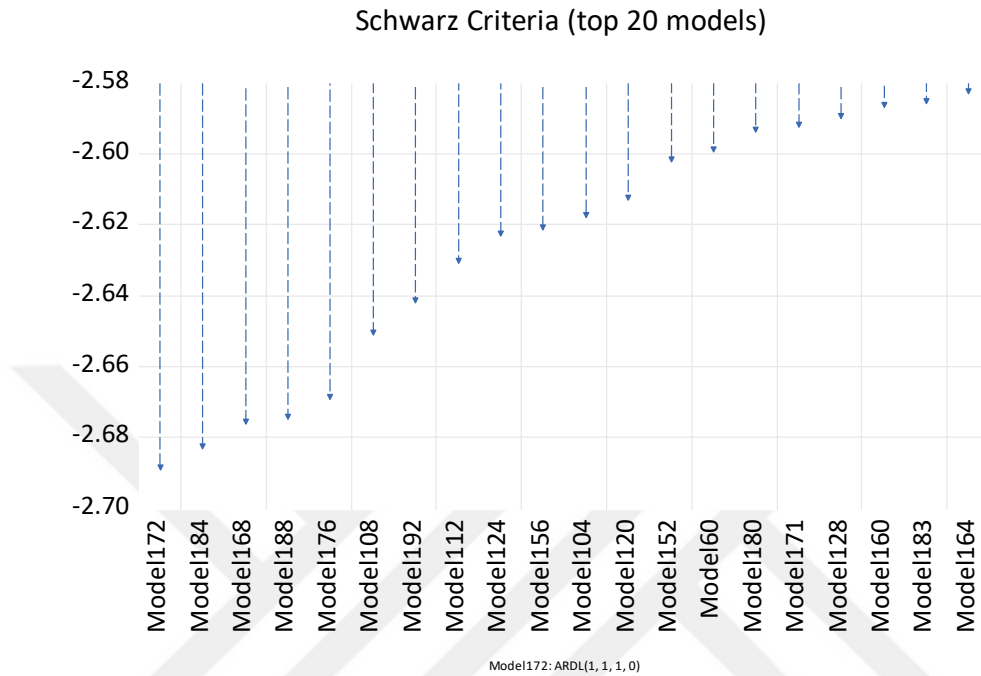


Figure 14 The Schwarz Criterion (SIC) Test

3.3 Autoregressive Distributed Lag (ARDL)

It can be seen that the ARDL model estimation carried out in Table 4 is based on as many as 40 data points with GDP as its dependent variable. FDI, External Debt, and Export are Independent variables, and all variables have been changed into a Logarithmic form to facilitate the estimation process. The model selected based on the SIC test is ARDL (1,1,1,0).

In the estimation, it can be seen that GDP-1 has a positive and significant effect on current GDP, with a coefficient of 0.581 and a p-value of 0.000. The current FDI does not have a significant effect on the current GDP, with a coefficient of 0.000 and a p-value of 0.983. FDI (-1) has a negative but insignificant effect on GDP, with a coefficient of -0.063 and a p-value of 0.067. Current External Debt has a negative but insignificant effect on GDP with a coefficient of -0.649 and a p-value of 0.132. In contrast, External Debt (-1) shows that it has a positive and significant effect on GDP with a coefficient of 0.959 and a p-value of 0.029. Similarly, Export has a positive and significant effect on GDP with a coefficient of 0.129 and a p-value of 0.013

Table 4 ARDL (1,1,1,0) Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LGDP(-1)	0.581943	0.097360	5.977236	0.0000
LFDI	0.000683	0.033540	0.020357	0.9839
LFDI(-1)	-0.063257	0.033431	-1.892131	0.0676
LED	-0.649877	0.421083	-1.543345	0.1326
LED(-1)	0.959290	0.421019	2.278493	0.0295
LE	0.129131	0.049428	2.612526	0.0136
C	0.422238	0.937615	0.450332	0.6555

3.4 Residual Diagnostic Test Results

At this stage, residual tests and stability tests will be carried out, where the residual test consists of Normality Tests, Autocorrelation Tests, and Heteroscedasticity Tests.

It is seen in Table 5 that the residuals in the ARDL model are distributed normally as indicated by the p-value of the Jarque-Bera test is 0.458, which is greater than 0.05.

Table 5 Residual Diagnostic Test Results

Residual Tests	F-stat	Prob.
Jarque-Bera	1.558	0.458
Breusch-Godfrey Serial Correlation LM Test	0.204	0.892
Breusch-Pagan-Godfrey Heteroscedasticity test	1.005	0.438

In the Autocorrelation LM-Test test on the ARDL Model, it is known that there is no autocorrelation in the ARDL model, so it can be said that the regression estimate is unbiased and efficient. This can be seen in the p-value of 0.892, which is greater than 0.05. In the Heteroscedasticity test on the ARDL Model, it is known that there is no heteroscedasticity in the ARDL model, so that it can be said that the regression estimate is unbiased and efficient. This can be seen in Table 5, with a P-value of 0.438, where the value is greater than 0.05.

3.5 Stability Diagnostic Test Results

The stability test consists of the Ramsey RESET Test, Cusum, and Cusum of Square Test. The stability test on the ARDL model is used to see whether the ARDL model estimate is stable or not.

Table 6 Ramsey RESET Test

Ramsey RESET Test	Value	Prob.
T-Stat	0.145	0.885
F-Stat	0.021	0.870

From the results of the Ramsey RESET Test conducted in Table 6, it was found that the ARDL estimation model conducted was stable. This can be seen from the p-value results, which show the number 0.885, where the number is greater than 0.05.

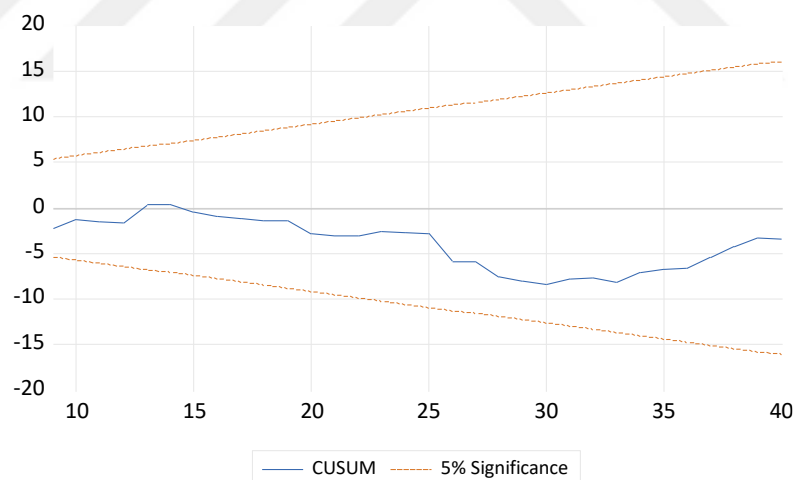


Figure 15 Cumulative Sum Test

Although the Ramsey RESET test results show that the ARDL model is stable, CUSUM and CUSUM of Square tests are still needed. Figures 15 and 16 show that the ARDL model is stable. This can be seen from the CUSUM and CUSUM of Square lines, which are still within the critical line limit of 5%.

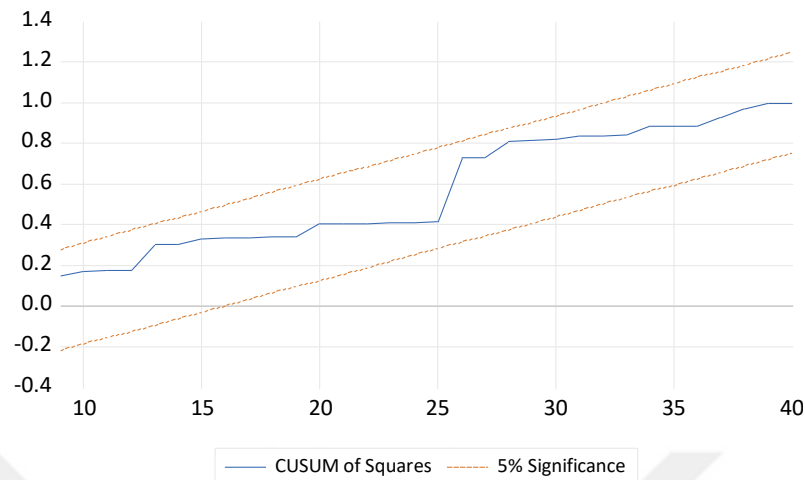


Figure 16 CUSUM of Square Test

3.6 Bound Test Result

As it is seen in Table 7, the F-statistic with a value of 5,586 is greater than the upper limit of I(1) 4,913 at 5% significance level. This means that in the ARDL model, cointegration exists, and a long-term relationship between variables is shown.

Table 7 Bound Test

Test Statistic	Value	Signif.	I(0)	I(1)
F Stat	5.586175			
Sample	39	10%	2.958	4.1
		5%	3.615	4.913
		1%	5.198	6.845

3.7 ARDL Long Run Relation Result

External debt and Exports have made significant contributions to GDP. External Debt has a coefficient of 0.740, which means that every 1% increase in External Debt will increase GDP by 0.74%. While for Export itself has a coefficient of 0.308, which means that every 1% increase in Exports will increase GDP by 0.308%. While for FDI itself does not have a significant long-term relationship with GDP.

Table 8 ARDL Long Run Relation Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LFDI	-0.149678	0.112798	-1.326952	0.1939
LED	0.740120	0.198251	3.733240	0.0007
LE	0.308884	0.105370	2.931425	0.0062

In Table 8, it can be found that External Debt and Export have significant contributions to GDP. External Debt has a coefficient of 0.740, which means that every 1% increase in External Debt will increase GDP by 0.74%. While for Export itself has a coefficient of 0.308, which means that every 1% increase in Exports will increase GDP by 0.308%. While for FDI itself does not have a significant long-term relationship with GDP.

3.8 ARDL Error Correction Regression

We can see in Table 9 the coefficient result of CointEq(-1) as -0.418, which can be interpreted to mean that if there is a correction in one period, then 41.8% of the imbalance will be adjusted.

Table 9 ARDL Error Correction Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
C	0.4222238	0.081207	5.199532	0.0000
DLFDI	0.000683	0.027411	0.027411	0.9783
DLED	-0.649877	0.366279	-1.774269	0.0855
CointEq(-1)	-0.418057	0.084565	-4.943634	0.0000

3.9 Discussion of Results

Stationarity tests were conducted on all variables using the ADF, PP, KPSS, and Ng-Perron methods. All variables were converted to logarithmic form to maintain model stability and facilitate coefficient interpretation. The test results show that the GDP, foreign debt (ED), and export (E) variables are stationary at the first difference level (I(1)), while the FDI variable is stationary at the level (I(0)).

The best model was determined using the Schwarz criterion (SIC), and the ARDL (1,1,1,0) model was obtained, which means that the optimal lag for GDP, FDI, and ED is 1-lag length, while the Export variable does not use a lag. The ARDL estimation results show that the LGDP (-1) variable has a positive and significant effect on GDP, with a coefficient of 0.581943 and a probability value of 0.0000. The FDI variable in the current period is not significant, marked by a coefficient of 0.000683 and a probability of 0.9839, while FDI (-1) shows a negative effect and approaches significance with a coefficient of -0.063257 and a probability of 0.0676. The LED variable in the current period has a negative but insignificant effect, with a coefficient of -0.649877 and a probability of 0.1326, but in LED (-1) it has a positive and significant effect, with a coefficient of 0.959290 and a probability of 0.0295. Meanwhile, the export variable (LE) has a positive and significant effect on GDP with a coefficient of 0.129131 and a probability of 0.0136.

In the long-term relationship, the LFDI variable shows a negative but insignificant effect on GDP, with a coefficient of -0.149678 and a probability value of 0.1939. On the other hand, the LED variable has a positive and significant effect on GDP, with a coefficient of 0.740120 and a probability of 0.0007. The export variable (LE) also shows a positive and significant effect on GDP, with a coefficient of 0.308884 and a probability of 0.0062. In the ARDL Error Correction Model test, it was found that the DLFDI variable was not significant with a small coefficient of 0.000683 and a probability of 0.9783. the DLED variable showed a negative and insignificant effect with a coefficient of -0.6499 and a probability of 0.0855. The error correction term coefficient (CointEq (-1)) of -0.4181 with a probability of 0.0000 indicates a readjustment towards long-term equilibrium of around 41.8% each period after an imbalance occurs.

Conclusion

President Joko Widodo is a leader with a high level of legitimacy and public satisfaction. According to a survey by the Indonesian Survey Institute (LSI), public satisfaction with his leadership reached 76.2% in early 2023. Furthermore, Jokowi also won two consecutive direct presidential elections in 2014 with 53.15% of the vote and in 2019 with 55.50%. This data demonstrates the high level of public support for Jokowi's administration during his two terms, making the 2014–2024 period relevant for analysis in the context of Indonesia's economic growth. This study is very significant as it investigates the role of foreign debt, FDI, and commodity exports in driving Indonesia's economic growth during President Joko Widodo's administration. Meanwhile, there has been a significant increase in foreign debt and foreign investment flows, as well as export policies aimed at increasing the added value of leading commodities such as nickel. A thorough understanding of the contribution of these three factors to GDP is urgently required. Additionally, public concerns about the risk of dependency on foreign debt and investment, along with the benefits of export policies regarding downstreaming, underline the importance of this analysis as a foundation for developing more suitable economic policies and addressing the concerns expressed by the public.

Based on the estimation results of the ARDL model (1,1,1,0) with GDP as the dependent variable and FDI, external debt, and exports as independent variables, it was found that FDI did not have a significant effect on GDP, either in the short or long term. This is reflected in the very small FDI coefficient value (0.000) with a p-value of 0.983 in the current period, as well as a negative coefficient (-0.063), which is also insignificant (p-value 0.067) for its lag. On the other hand, foreign debt and exports show a positive and significant relationship to GDP, both in the short and long term. In the long term, external debt has a coefficient of 0.740 and exports of 0.308, which means that an increase in each variable by 1% will drive GDP growth by 0.74% and 0.308%.

According to Blomstrom et al. (1995) and De Mello (1997), FDI is expected to provide stimulus to developing countries like Indonesia. However, the insignificant contribution of FDI to GDP indicates that foreign investment in Indonesia has not been able to create a strong economic impact, because FDI mostly enters the non-productive or export-oriented sector and is still mostly in the form of foreign debt. These results are

in line with research conducted by Firdaus Jufrida et al. (2017), which suggests that FDI does not have a significant effect on GDP, but on the contrary, domestic investment has a positive impact on GDP. This is because a lot of FDI enters sectors such as mining or real estate, which ultimately do not absorb much local labor intensively, as shown in Figures 9 and 10. Indonesia has also been exporting raw materials for an extended period, thus limiting the multiplier effect on other sectors. As a result, technology transfer has not been optimal.

Indonesia currently still relies on commodity exports and financing through foreign debt as the main source of economic growth. In line with previous research conducted by Darmawan (2022), Maria (2017), and Rachmadi (2013), many Asian countries especially Indonesia, still depend on and need foreign debt in carrying out national development. This finding confirms that the Indonesian economy is currently still very dependent on two main pillars, namely exports and financing through foreign debt. As Ginting (2017) found, it is not economic growth that increases exports, but exports that increase economic growth in Indonesia. Although both show significant contributions to GDP, excessive dependence can pose economic risks in the long term, especially if export commodity prices decline or debt burdens increase.

There needs to be a policy to strengthen the quality of FDI. For example:

1. The Government needs to encourage FDI to enter productive sectors such as manufacturing, technology, and innovation-based economics.
2. FDI should not only bring capital, but also technology and management transfer, and encourage collaboration with local industries, by encouraging foreign investment in manufacturing, technology, and innovation-based industries, and strengthening the linkages between foreign investors and national industry players.
3. Make it easier for foreign investors to invest in Indonesia, because currently the regulations for FDI are still very complicated, which makes foreign investors uninterested.

It is hoped that this will change the role of FDI from being only a source of funds to being the main driver of sustainable growth, so that Indonesia does not only depend on foreign debt and commodity exports.

This study has limitations in the scope of variables and time periods used, because this study focuses on analyzing the development of External Debt, FDI, and Exports Commodity against Gross Domestic Product. The time period analyzed only covers the term of President Joko Widodo's administration from 2014-2024, and the results obtained do not necessarily reflect long-term conditions or previous administrations. In addition, the scope of the variables used is still limited to External Debt, FDI, and Exports Commodity, so it does not cover other factors that also have the potential to affect Gross Domestic Product. Therefore, further studies are recommended to consider the addition of other variables and a wider time scope, so that future analysis results can provide a more complete understanding of the factors that affect Indonesia's economic growth.

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