

**EXAMINING THE CONTRIBUTION OF ISLAMIC BANK TO
INDONESIA ECONOMIC GROWTH**

A THESIS

Presented as Partial Fulfilment of the Requirements to Obtain the Bachelor
Degree in Economics Department



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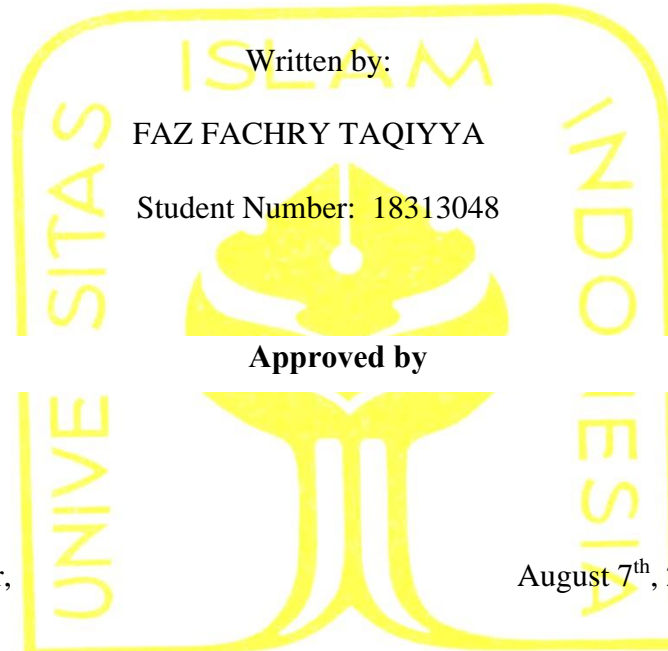
DEPARTMENT OF ECONOMICS INTERNATIONAL PROGRAM

FACULTY OF BUSINESS AND ECONOMICS

UNIVERSITAS ISLAM INDONESIA

2022/2023

**EXAMINING THE CONTRIBUTION OF ISLAMIC BANK TO
INDONESIA ECONOMIC GROWTH**



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By:

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Defended before the Board of Examiners
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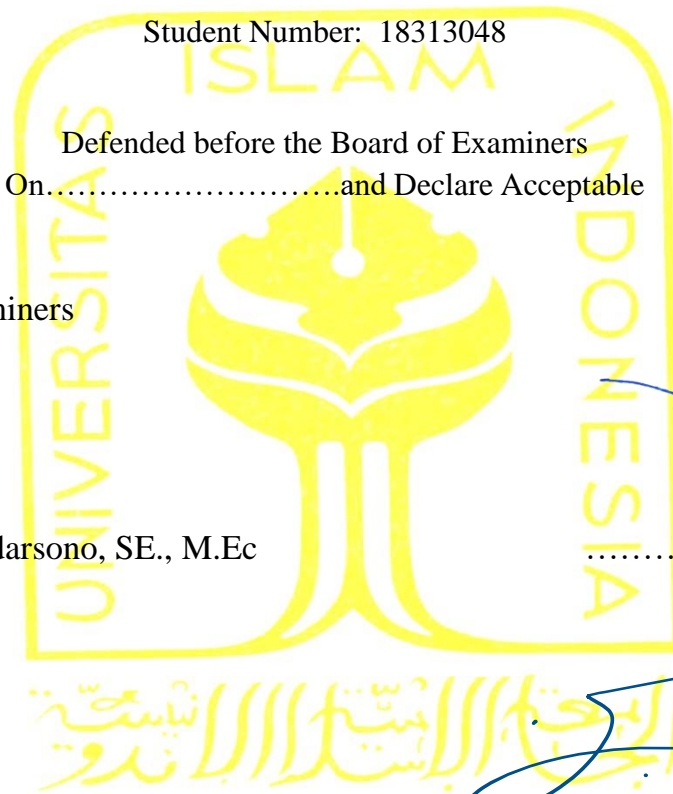
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DECLARATION OF AUTHENTICITY

Hereby, I declare the originality of the thesis; I have not presented someone else's work to obtain my university degree, nor have I presented someone else's words, ideas or expressions without any of the acknowledgments. All quotations are cited and listed in the bibliography of the thesis. If in the future this statement is proven to be false, I am willing to accept any sanction complying with the determined regulation or its consequence.

Yogyakarta, 7 August 2023

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Faz Fachry Taqiyya

MOTTOS

“Allah will not change the condition of a people until they change what is in themselves. And when Allah intends for a people ill, there is no repelling it. And there is not for them besides Him any patron.”

—Ar-Ra’d

“It does not matter how slowly you go as long as you do not stop.”

— Confucius

“You never know what's around the corner. It could be everything. Or it could be nothing. You keep putting one foot in front of the other, and then one day you look back and you've climbed a mountain.”

— Tom Hiddleston

ACKNOWLEDGMENT

Alhamdulillah rabbil aalamiin. In the name of Allah, the Entirely Merciful, the Especially Merciful. All praises out for Allah, the only Lord of the universe who give us many things unaccountably. Peace be upon the messenger, the chosen one Muhammad SAW, who has brought the brightness in this world and showed us the paths that we should take in order to gain Allah's ridho.

Alhamdulillahirabbil'amin, the thesis entitled "Assessing the Contribution of Islamic Finance to Indonesia Economic Growth" as a partial requirement to obtain the bachelor degree in Economics Department, International Program, Faculty of Economics, Universitas Islam Indonesia is finally finished. I would like to thank everyone who has helped me finishing this thesis in the exact amount of time that I have planned and those who support me in the time I started my thesis. I would like to address my appreciation, regards, and love to:

1. Allah *Subhanaahu Wa Ta'aala* for every blessing, guidance, and mercy in every second of my life. I am so grateful for everything He presents me every second.
2. *Rasullulah* Muhammad SAW who enlighten our life and bring the peace which bring us to the goodness.
3. My Parents Who have provided both moral and material support, as well as love and care, enabling me to successfully complete my thesis.
4. My Brothers, who always support me and motivate me to finish what I start.

5. My respected academic advisor, Mr. Heri Sudarsono, SE, M.Ec., and Mrs. Ruli Hapsari, S. Pd, MA. who have dedicated their time and patience to guide me and provide valuable input, enabling my thesis to be well-structured.
6. All My beloved friends who always support and motivate me

Yogyakarta, 7 August 2023

Author,

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Faz Fachry Taqiyya

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ABSTRACT

This study aims to examine the impact of Islamic finance on economic growth in Indonesia. Several variables, namely Total Financing, Total Deposits, Inflation, and Trade Openness are employed for analysis. The research data covers quarterly observations from the first quarter of 2005 to the fourth quarter of 2021. Panel data regression analysis using the ARDL model effectively describes the relationship between the dependent and independent variables. The findings indicate that Islamic finance has a positive long-term effect on Indonesia's economic growth. The increase in Total Financing and Total Deposits provides greater room for accelerated economic growth in Indonesia.

Keywords: Economic growth, Islamic finance, Total Deposit, Total Financing

ABSTRAK

Studi ini bertujuan untuk mengkaji dampak keuangan Islam terhadap pertumbuhan ekonomi di Indonesia. Beberapa variabel, yaitu Pembiayaan Total, Simpanan Total, Inflasi, dan Keterbukaan Perdagangan digunakan untuk analisis. Data penelitian mencakup pengamatan berkala per kuartal dari kuartal pertama tahun 2005 hingga kuartal keempat tahun 2021. Analisis regresi data panel menggunakan model ARDL secara efektif menjelaskan hubungan antara variabel dependen dan independen. Temuan menunjukkan bahwa keuangan Islam memiliki efek positif jangka panjang terhadap pertumbuhan ekonomi Indonesia. Peningkatan Pembiayaan Total dan Simpanan Total memberikan ruang yang lebih besar untuk percepatan pertumbuhan ekonomi di Indonesia.

Kata Kunci: Pertumbuhan ekonomi, Keuangan Islam, Total Pembiayaan, Total Pendanaan.

CHAPTER I

INTRODUCTION

1.1 Background

Extensive empirical evidence indicates that the development of the financial sector plays a pivotal role in fostering economic progress. This phenomenon facilitates economic growth through multiple channels, such as capital accumulation and technological advancements. By bolstering the savings rate, mobilizing and pooling funds, generating investment-related information, encouraging foreign capital inflows, and optimizing capital allocation, financial sector development contributes to the overall expansion of economies (World Bank, 2017). The optimal allocation of these resources is perceived to have a direct impact on economic growth. This role is played by a range of financial institutions, such as commercial banks, stock markets, and bond markets, among others (Kassim, 2016).

By definition, financial sector is a sector comprises institutions, markets, instruments, and a regulatory and legal framework that enable transactions to be conducted by providing credit. The development of the financial sector is fundamentally concerned with reducing the costs associated with the financial system. This reduction process pertains to lowering the expenses related to information acquisition, contract enforcement, and transaction facilitation, which in turn has facilitated the emergence of financial contracts, markets, and intermediaries (world bank, 2016). The financial sector has a significant role in

the economic development of a nation in the current economy. Although the impact of the financial sector on the economy is not as tangible as that of the real economy, it is reasonable because the financial sector typically has fewer assets in its locations. Thus, the direct effect of financial companies is relatively minor. However, this does not significantly influence the financial sector's impact on the economy, as several studies have found that the financial sector's effects can have a positive impact on economic development (Bakar & Sulong, 2018).

Financial intermediaries play a crucial role in mobilizing savings, which increases the investable capital that is essential to the productive side of the economy. In this view, efforts to develop the financial sector are seen as aligned with efforts to enhance productive capacity in the economy (Abd. Majid & H. Kassim, 2015). The financial sector's mobilization of deposits and savings as credit from surplus to deficit parties with lower risks, such as transaction costs and asymmetric information, is one of the reasons why the sector is a primary driver of growth in the real sector, namely accumulation and allocation. Additionally, the financial sector simplifies the transfer of goods and services, payment schemes, and excellent risk management. The financial sector's development system of capital accumulation can result in economic growth. (Bakar & Sulong, 2018). In several countries, financial systems and banking are crucial in driving economic activity. The movement of funds between lenders, investors, and borrowers facilitates the cycle of production and societal progress.

The connection between the financial sector and the real economy has been a topic of interest in research due to their fundamental link. There are established

empirical studies that examine the relationship between these two sectors. Beck and Levine (2004) conducted a study on the role of financial sector development on the economy in 40 countries between 1976 and 1998. They used stock markets and banks as indicators of financial sector development and Gross Domestic Product (GDP) as a measure of economic growth. Their study used the Generalized Method of Moments (GMM) technique, which is designed for dynamic panels, and found strong evidence of the important and positive role of financial development in the process of economic growth.

Beck et al. (2000) also provided further empirical support for the importance of financial sector development in economic growth. The study assessed several intermediary financial development indicators using a large dataset from 77 countries over an extended period from 1960 to 1995, and evaluated their impact on economic growth, total factor productivity growth, physical capital accumulation, and private savings rate. It was discovered that the financial sector had a significant positive effect on total factor productivity growth, which had a subsequent positive effect on overall GDP growth. Several economic crises, such as the Mexican crisis in the mid-1980s, the Asian crisis in the mid-1990s, and the US subprime crisis in 2007, clearly demonstrated the close and significant link between the financial and real sectors. (Abd. Majid & H. Kassim, 2015)

Islamic finance pertains to the delivery of financial services that comply with Islamic law (*Sharia*). *sharia* prohibits the charging of interest (*Riba*), products that involve excessive uncertainty (*Gharar*), gambling (*Maysir*), short sales, and financing of activities that are deemed harmful to society. It also mandates that

parties adhere to principles of fairness and the inviolability of contracts. Transactions must be supported by genuine economic activities, and risks must be shared in economic dealings (Kammer et al., 2015).

Islamic finance products are contract-based and according to Hassan et al. (2015) it can be divided into three main categories: The first category includes debt-like financing, which involves sales with markups and deferred payments (*Murabahah*), deferred delivery of products (*Salam*), and leasing with options to buy (*Ijārah*). Pure lending is only allowed in benevolent cases, such as *Qard*, which is often used for current deposits. The Second category is profit-and-loss-sharing financing, which has two modalities: profit-sharing and loss-bearing (*Mudharabah*), in which the financier provides capital and the beneficiary provides labor and skills, and pure profit-and-loss-sharing (*Musyarakahh*), where both parties have equity-like financing and share profits and losses. Finally, The Third category includes services, such as safe-keeping contracts (*Wadi'ah*) and agency contracts (*Wakalah*) for money market transactions. Islamic finance has expanded to offer a range of services, but banking remains dominant and represented about four-fifths of total Islamic finance assets in 2013.

The development of Islamic banking in Indonesia started in 1992 with the establishment of Bank Muamalat Indonesia as the sole Islamic bank in the country until the global financial crisis in 1998 (Abduh & Azmi Omar, 2012). Since then, the development of Islamic banking has received significant attention, particularly after the global financial crisis in 2008 (Risfandy et al., 2020). The growth of Islamic banking has experienced rapid expansion, from only one unit of Islamic

commercial bank (BUS) and nine Islamic rural banks (BPRS) in 1992 (Abduh & Azmi Omar, 2012), to 14 units of BUS, 20 units of Islamic business units of conventional banks (UUS), and 164 BPRS in June 2019 (OJK, 2019). Bank Indonesia has designed policies aimed at directing Islamic banks to enhance the sector compared to conventional banks (Sukmana & Kholid, 2013).

According to the report by DDCAP Group, (2019) the Islamic Financial Service Board Report, Islamic banking in Indonesia ranks among the top five in terms of percentage allocation of funds to the manufacturing sector among Islamic banks in 13 countries: United Kingdom, Kuwait, Bahrain, Jordan, Iran, Pakistan, Oman, Malaysia, Bangladesh, United Arab Emirates, and Saudi Arabia. In 2019, in terms of IFCI rank, Indonesia was in the first place, overtaking Malaysia which had been ranked 1 for three years in a row. Even though Indonesia ranked in the top 10 of world Islamic Financial countries, it was unfortunate that Indonesia only had 1.9% in terms of Global Islamic bank asset whereas Indonesia is a country with the highest muslim population (DDCAP Group, 2019).

Indonesia's Islamic banking industry has seen significant growth when compared to the same industry in other countries. The growth of Islamic bank assets in Indonesia is quite impressive, having quadrupled. In the five years (2012-2017), the average growth of banking assets was 40%, while other countries only reached around 10-15% (Agus Suryanto et al., 2020). Lately, Islamic economics has had the fastest growth in the sector of global financial industry that even surpasses the conventional financial market growth. According to the Global Islamic economic

report 2020, the value of Islamic financial assets increased by 13% in 2019 from \$2.52 trillion to \$2.88 trillion (Dinar Standard, 2020).

Due to the impact of the COVID-19 crisis, the value of Islamic financial assets was expected to show no growth in 2020, but is projected to recover and grow at a five-year compound annual growth rate (CAGR) of 5% starting from 2019, reaching \$3.69 trillion in 2024 (Dinar Standard, 2020). The expansive scope of Islamic Economics in the industrial sector presents a significant opening for Islamic finance to expand and make a contribution. In line with Bakar and Sulong, (2018), a sound financial system is expected to yield favorable outcomes for economic growth. Indonesian Islamic banks experienced remarkable growth in 2017, with their assets expanding by 13.5% and surprisingly it keeps the growing trend in the next following years (OJK, 2022), Here is the detailed progress the in table:

Table 1.1 Indonesia Islamic Bank Asset Growth

NAME	2016	2017	2018	2019	2020	2021	2022
Asset	254,184	288,027	316,691	350,364	397,073	441,789	531,860
Growth	5.14	13.31	9.95	10.63	13.33	11.2	20.3
Capital	27,153	31,105	36,764	40,715	46,854	50,661	71,270
ROA	0.63	0.63	1.28	1.73	1.40	1.55	2.00

Source: Financial Service Authority Report (2015-2023)

Based on the table 1.1, there has been continuous growth of asset, Capital and ROA over these late 7 years. According to gaasbeck (2007), bank assets are what a

bank possesses which consist of loans, securities, and reserves. Liabilities, on the other hand, are the bank's obligations to external parties, such as deposits and borrowings from other institutions. Meanwhile, capital, also known as "net worth," "equity capital," or "bank equity," represents the funds associated with the bank. These funds can be obtained by selling new shares in the bank or by utilizing retained earnings (profits) derived from the bank's assets after deducting its liabilities. Return on assets (ROA) measures how effectively a company utilizes its assets to generate profits during a specific time frame.

By August 2022, Islamic banks only held a 7% market share of the total financial market (OJK, 2022). Consequently, the impact provided by Islamic banks is not as significant as that provided by conventional banks. However, this research is conducted due to the noteworthy growth of Islamic banks and the potential they possess. With several advantages in Indonesia's favor, Islamic banks have the opportunity to maximize their potential. As Islamic banks continue to grow in Indonesia, their contribution will also increase. Therefore, this research aims to understand the impact provided by total finance and total deposits.

1.2 Formulation of the problem

Based on the study background, a few problems are formulated as follows.

1. What is the effect of Total Deposits on Economic Growth?
2. What is the effect of Total Finance on Economic Growth?
3. What is the effect of Inflation on Economic Growth?
4. What is the effect of Trade Openness on Economic Growth?

1.3 Research Objectives

Having formulated the research problems, there are four research objectives to be achieved.

1. To analyze the effect of Total Deposits on Economic Growth
2. To analyze the effect of Total Finance on Economic Growth
3. To analyze the effect of Inflation on Economic Growth
4. To analyze the effect of Trade Openness on Economic Growth

1.4 Problem Limitation

This study is conducted within a specific scope. The research only covers the Indonesian region, focusing on total finance, total deposits, inflation, and trade openness. The data studied in this research include the 16-year period, starting from Q1 2005 to Q4 2021.

1.5 Research contributions

1. For The Author

The author benefits from this research in terms of additional knowledge of Islamic finance in Indonesia. In particular, the author can explore the potential effects of total deposits, total financing inflation, and trade openness on economic growth.

2. For Academicians

This research provides benefits theoretically. It would make a significant contribution to the field of economic development, especially

concerning the role of Islamic finance in the economic growth of Indonesia. Furthermore, it can be a reference for other researchers to conduct further research.

3. For The Related Institutions

For other related institutions such as government and societies, hopefully, the research findings can be put as the reflected condition of society so that there will be some learning points that can be taken.

CHAPTER II

LITERATURE REVIEW

3.1 Literature Review

This chapter analyzes various past studies that are related to the factors that influence economic growth. The aim of providing these previous studies is to serve as a point of reference for the current study and to reinforce the results of the analysis. The studies that have been reviewed include:

Research by Abd. Majid and H. Kassim (2015) aimed to empirically test the contribution of Islamic banking to economic growth in Malaysia. It used four variables, namely Total Financing (TF), Total Deposits (TD), inflation, and financial volatility/DJIMY, etc. (FV) using statistical tests such as ARDL, VECM, and VDCs. The empirical study found a long- and short-term relationship between Islamic banking and the economic growth of Malaysia from the third quarter of 1997 to the second quarter of 2012. The research found that the role of ISBIs in total financing (TF) and funding (TD) played a crucial role in explaining the economic growth in Malaysia (significant positive in the ARDL model). Meanwhile, FV and INF indicated that a more stable financial industry would have a positive contribution to the economy. Based on this, banks and financial institutions were encouraged to increase their Islamic banking and financial institutions. Thus, Sabri and Kasim's research recommends providing a conducive environment for Islamic banking in the long term to support long-term economic growth in the country (Malaysia).

Another study from Kassim (2016) , the rise of Islamic banking and finance in Malaysia's financial sector, along with the country's prominent role in the global Islamic finance industry, necessitates an assessment of how Islamic finance contributes to real economic activity. To empirically examine the impact of Islamic finance on key macroeconomic indicators, this study employed the ARDL approach using quarterly data from Malaysia spanning from 1998 to 2013. The findings indicated that Islamic finance had begun to play a significant role in the real economy by effectively fulfilling the financial intermediation function of pooling and directing funds towards investment activities. Given the substantial contributions of Islamic finance to Malaysia's economy, ongoing efforts were required to further expand the industry. This entailed refining the legal and regulatory framework to facilitate the industry's healthy growth, thereby reinforcing Malaysia's position as a global leader in the Islamic finance sector.

The next study, conducted by Sakinah et al. (2022) is about the increasingly important role of Islamic finance in global and national economic development. In this study, they analyzed the relationship between Islamic finance and the economy in Indonesia in both the short and long term. Using VECM methodology, the variables used were investment, trade openness, and inflation for macroeconomics, and Islamic banking, capital markets, and sukuk for Islamic finance, and a dummy variable for COVID-19. The results of the study showed a one-way causal relationship between Islamic finance and Indonesia's GDP. Sukuk had a significant influence on

GDP in the short term, while in the long term, Islamic mutual funds and Islamic bank financing had a significant impact on GDP. This means that any increase in Islamic mutual funds and bank financing will contribute to long-term economic growth. The same goes for sukuk, that any increase in sukuk will contribute to short-term economic growth.

Another study by Supriani et al. (2021) investigated the relationship between Islamic banking financing and economic growth in Indonesia, the country with the largest Muslim population in the world. In this study, they used ARDL and time-series data taken quarterly from the first quarter of 2011 to the third quarter of 2019. To avoid bias, the researchers did not include 1998, 2008, and 2020, which were years of crisis. They used four variables, including the financing-to-deposit ratio, GFCF, inflation, and open trade. The results of the ARDL test showed that Islamic bank financing, GFCF, and open trade had a significant contribution to Indonesia's long-term economic growth. However, in the short term, the contribution of Islamic bank financing was not strong. This means that any increase in financing in Islamic banks, GFCF, and open trade will contribute to the growth of Indonesia's economy.

The research conducted by Abduh and Azmi Omar (2012) aimed to examine the relationship between the development of Islamic banking and economic growth in Indonesia, both in the short and long term. In this study, Abduh and Omar used quarterly data, starting from the first quarter of 2003 until the second quarter of 2010, and three variables: GDP, GFCF, and total

financing (TF). Based on the results obtained, Islamic banking variables were significant in 2 out of 3 equations. This indicated that Islamic banking had a positive and contributory role in long-term and short-term economic growth. In other words, the better and increasing the Islamic financial system, the better the economic growth. . Based on this study, it was also found that economic growth contributes to the development of Islamic banking. Therefore, it can be concluded that the relationship between Islamic finance and economic growth in Indonesia is a two-way relationship (bi-directional relationship).

Bakar and Sulong (2018) examined the relationship between financial development and economic growth by reviewing existing literature. Various studies conducted during different time periods were analyzed to ensure a comprehensive understanding of different ideas and findings. The study presents the results, implications, and discussions for each category of literature. It is observed that the impact of financial development on economic growth depends on factors such as the time frames selected, the countries included in the study, the variables considered, and the proxies used. However, in most cases, the influence of the financial sector on economic growth appears to be more significant and positive in developing countries compared to developed countries. The study suggests that future research should incorporate recent advancements in econometric methods and the use of proxies, such as financial indices, to obtain a more accurate understanding of the relationship between the financial sector and economic growth. This

approach would be more advanced and reliable than relying solely on past proxies and methodologies.

Another research is conducted by Hachicha and ben Amar (2015). The purpose of the paper is to investigate empirically the impact of the Islamic Bank Financing on Malaysia's economic growth over the period 2000Q1-2011Q4. A neoclassical production function augmented by some indicators of Islamic bank finance has been the theoretical framework for this paper's empirical investigation. In this study, ECM model was chosen due to the variable's characteristics. The finding showed in the long run, the GDP in Malaysia is not sensitive to Islamic financing. The results showed that the effect of the different Islamic finance indicators on the economic growth in the long run was less important than their effect in the short run. This economic result can be explained by the structure of Islamic bank financing that marginalizes the profit-and-loss sharing (PLS)-based instruments. This turns out to be consistent with the economic reality in Malaysia, as the Islamic banks engage much more in non-participatory activities whose impact is, generally, of short term.

A study by Djennas (2016) assessed the contribution of Islamic finance in an economic system by modeling a composite index in order to analyze the risk of crises caused by financial openness and its impact on growth and volatility of business cycles. Through a sample of 14 industrialized countries in the world, of which 8 countries are considered as leaders of Islamic finance, this study aimed to establish a comparative analysis between the economic

performances of the two sets of countries. The period ranges from 1980 to 2013 covering the most important crises experienced by the selected countries. Overall, the results showed a relatively similar performance between economies where Islamic finance prevails, and other conventional economic systems. Moreover, when considering some specific components of the financial stress index, countries that adopt the principles of Islamic finance are strongly positioned to avoid various situations of crisis and economic downturns.

Research by Jawad and Christian (2019) about Growth in Islamic banking that has gained a lot of interest and attention during the last few years. The growth in empirical work has given rise to a new concept, which can be called “Islamic banking development” (IBD). It will be interesting to test the nexus between IBD and growth, since the literature suggests a positive result for conventional finance and growth. The study used a panel of 24 countries for a period of 11 years using annual data (2004-2014) to test conventional hypothesis of supply leading or demand following between IBD and growth. In addition, they also investigated direction of causality in a panel setting between the two. Apart from the topic, the paper differs from the existing limited literature, on the basis of dataset used and the estimation procedure to assess the nexus. Their results suggested that IBD affected growth positively. Comprehensive tests suggested the presence of a long run relationship between IBD and growth.

The next research is conducted by Tabash and Anagreh (2017) about the Islamic investment in UAE. The paper used empirical analysis to test the role of Islamic banking in enhancing the economic growth of United Arab Emirates (UAE). Gross Domestic Product (GDP), Gross formation (GF), and Foreign Direct Investment (FDI) were used as representatives for economic growth, while Islamic banks' investments were used as a representative for Islamic financial sector in the UAE. The study used time series techniques to test the link between the variables. In the study, co-integration along with error correction models is utilized. Furthermore, the findings depict that Islamic investments have contributed in increasing investments and in bringing FDI into the country in the long-term. The study also showed that there was two-way association between Islamic banks' investments and FDI. It showed that FDI supported Islamic banking and Islamic banking brought FDI. The paper concluded that authorities of the UAE should devote more attention for this growing banking sector by facilitating regulations for establishing new Islamic banks and then creating a suitable environment for their growth and progress in the UAE.

The study conducted by Masoud and Hardaker (2012) aimed to provide a theoretical framework that integrates the endogenous growth and functions of financial markets and institutions theory in order to investigate how the financial market and the banking sector develop indicators that affect economic growth in the observed countries. The paper is an empirical analysis of the relationship between financial development and economic growth for

42 emerging markets, over 12 years, using the endogenous growth model. First, the results suggested that stock market development had a significant effect on economic growth, and this effect remains strong even after the influence of banking sector and other control variables using a growth model. Second, the research findings largely supported the view that there is a stable, long-term equilibrium relationship between the evolution of the stock market and the evolution of the economy

The next research is conducted by Zirek et al. (2016) . The paper investigated the impact of Islamic banking variables on economic growth in a panel setting for 14 member countries of Organization of Islamic Countries during 1999-2011 period. They examined the short-run effect as well as the long-run effects by employing the panel VAR method. they found a positive and significant relationship between Islamic finance and economic growth. The relationship was robust with regard to several macroeconomic control variables such as capital stock, unemployment, inflation, and government expenditure. They show that an increase in the share of Islamic deposits, assets, and loans in total banking instrument result in an increase in economic growth. The result also showed that in the long run, economic growth responded positively to shocks in Islamic instruments, namely Islamic deposits, investment and size. Shock in Islamic banking contributes to more than 3% of the forecast error in economic growth in the next 10-year period.

Table 3.1 Researches graph

No	Name	Method	Variables
1	Abd. Majid and H. Kassim (2015)	ARDL, VECM, VDES	Total Financing (TF), Total Deposits (TD), inflation, and financial volatility/DJIMY, etc. (FV)
2	Kassim (2016)	ARDL	Total Financing, GFCF, Gross Domestic Product (GDP)
3	Sakinah et al. (2022)	VECM	investment, trade openness, and inflation, and Islamic banking, capital markets, and sukuk.
4	Supriani et al. (2021)	ARDL and time-series data	financing-to-deposit ratio, GFCF, inflation, and open trade
5	Abduh and Azmi Omar (2012)	ARDL	GDP, GFCF, and total financing (TF)
6	Hachicha and ben Amar (2015)	ARDL	investment, the labor force and the indicator of Islamic bank finance
7	Djennas, (2016)	ARDL	
8	Jawad and Christian (2019)	ARDL	Islamic bank development, economic growth
9	Tabash and Anagreh (2017)	Time series, ARDL	GDP, Gross formation (GF), FDI, Islamic banks' investments
10	Masoud and Hardaker (2012)	ARDL	
11	Zirek et al. (2016)	VAR	capital stock, unemployment, inflation, and government expenditure, Islamic deposits, assets, and loans in total banking instrument

The unique aspect of this research lies in its extensive observation period spanning from the first quarter of 2005 to the fourth quarter of 2021. Additionally, it sets itself apart by combining variables previously examined in other studies.

3.2 Theoretical Review

3.2.1 Economic Growth

In this study, economic growth is categorized into 3 categories, namely Classical, Neoclassical, and Endogenous theory of growth:

The classical economic theory of growth first emerged in 18th & 19th centuries, which was introduced by Adam Smith, then followed by several scholars such as David Ricardo and Thomas Malthus. Adam Smith's book which discussed the theory of economic growth is 'Wealth of Nations' has become the initial concept of growth. In the third chapter, Smith's concept revolves around the idea that a country's future income is contingent upon the accumulation of capital. The more investment directed towards improving productive processes, the greater the wealth that will be generated in the future. Successful countries are those that effectively grow, manage, and protect their capital (Adam Smith Institute, n.d.).

A fourth aspect highlighted by Smith is the automatic nature of this system. When resources are scarce, people are willing to pay a premium for them, leading to increased profitability for suppliers. Consequently, producers invest more capital to meet the demand or vice versa when the situation is oversupply. This ensures that the industry remains focused on fulfilling the most vital needs of the nation without necessitating centralized direction. However, this automatic system is only effective in the presence of free trade and competition. Government subsidies, monopolies granted to favored producers, or protective tariff barriers can distort the system by

enabling higher prices to be charged. The adverse impact of such interventions is primarily borne by the disadvantaged segments of society, who face elevated costs for essential goods on which they heavily rely (Adam Smith Institute, n.d.).

Another well-known classical economic scholar is David Ricardo. Renowned for formulating the theory of comparative advantage, this individual's contributions are highly recognized. Comparative advantage theory posits that in the realm of international trade, countries derive the greatest advantages by specializing in the production of goods that entail lower opportunity costs in their manufacturing process (Letiche, 1960).

According to Hernández A. (2003) Neo Classical growth theory is based on the theory from Solow and Swan, first introduced in 1950's. This model, which focuses on capital accumulation and its connection to savings decisions, serves as the cornerstone for most growth analyses. The neoclassical growth theory revolves around the concept of diminishing returns to capital and labor. It comprises three key propositions. Firstly, in the long-run steady state, the growth of output is solely determined by the growth rate of labor in efficiency units and is independent of the ratio of saving and investment to GDP. Secondly, the level of per capita income relies on the ratio of saving and investment to GDP, with a positive correlation to the savings-investment ratio and a negative correlation to the population growth rate. Lastly, assuming uniform preferences and

technology across countries, there exists an inverse relationship between the capital-labor ratio and the productivity of capital.

The simplified version of the Solow-Swan model comprises two equations: a production function and a capital accumulation equation. The fundamental conclusion drawn from the model is that the growth of output per capita and regional disparities over time cannot be solely explained by physical capital. The model assumes the absence of technological progress, resulting in the economy reaching a steady-state equilibrium characterized by a long-run level of output and capital. The model assumes a closed economy that produces a single good using both labor (L) and capital (K). Labor experiences constant exogenous growth, and the saving rate is determined externally. All savings are invested, meaning that the saving-investment equation holds true. The model does not consider government intervention, and a fixed number of firms operate within the economy, all employing the same production technology (Najeb Masoud, 2013). Thus, it takes a form as follows:

$$Y = F(K, L)$$

$$Y = \text{Real GDP}$$

$$K = \text{Capital}$$

$$L = \text{Labor}$$

In the Endogenous theory of growth, Paul Romer is one of the well-known economic scholars whose idea states that innovation is one of

variables affecting the growth of economy significantly. According to his perspective, the emergence of fresh knowledge occurs within the economic system and contributes positively to productivity and the growth of per capita output. An important characteristic of his theory is the notion that this new knowledge is treated as an intangible form of capital, serving as a crucial input in the production process with increasing marginal productivity (Schilirò, 2019).

In general, there are three main factors in economic growth from several growth theories, namely Classical, Neoclassical, Solow, and endogenous theory by Romer. These three factors are:

1. Capital accumulation, which includes all types or forms of investment that are newly made in the form of land, physical equipment and human resources, or capital.
2. Population growth, which includes a significant number of the workforce.
3. Technological development, where newer technology can improve production efficiency, thus providing more output.

Based on the information above, it can be concluded that economic growth is a country's effort to improve the development and welfare of its economy. According to Rostow, all advanced countries that currently exist have gone through all stages of takeoff into sustainable growth by themselves. As for developing countries that are still in the traditional stage

or living in the precondition stage, they only need to follow a set of certain development rules to take off towards a society with sustainable economic growth. The main step to achieve the necessary development to take off is by mobilizing domestic and foreign savings, which will generate sufficient investment to increase economic growth (Todaro & Smith, 2011).

The Harrod Domar theory analyzes the requirements needed to increase long-term economic growth and economic development in a country. This theory states that an economy with savings from a portion of income is essential to replace depleted or damaged capital goods such as buildings, equipment, and materials. However, to be able to grow, it is necessary to have investment, which is a net addition to the capital stock. Assuming a direct economic relationship between the total amount of capital stock, K , and total GDP, Y , for example, \$3 of capital is needed to generate an additional annual GDP of \$1. This means that each net addition to the capital stock in the form of new investment will result in an increase in national output flow or GDP (Todaro & Smith, 2011).

In realizing economic growth, the role of entrepreneurs is very important, as they are considered to be the group that will continuously carry out renewal and innovation in economic activities. The forms of innovation include introducing new products, expanding market reach, producing many goods in a short time, and developing new raw materials into a product. In Schumpeter's theory, he began his analysis with an unfavorable economic condition, but this condition did not last long because entrepreneurs strive

to innovate and invest to gain profit. This will certainly increase the economic growth of a country and increase people's income. The result of the increase in economic growth will encourage other companies to invest in the country, resulting in the production of new goods and increased investment (Todaro & Smith, 2011).

In this regard, several studies have already utilized GDP as a benchmark in determining economic growth, as evidenced by previous research such as Abd. Majid and H. Kassim (2015), Abduh and Azmi Omar (2012), Supriani et al., (2021), Sakinah et al., (2022).

3.2.2 Relationship of Financial Sector and Economic Growth

The financial sector encompasses businesses and organizations that offer financial services to both commercial and individual customers. This sector generates significant revenue through activities like mortgages and lending, which become more valuable when interest rates decrease (World Bank, 2017).

Studies on the relationship between the financial sector and the real sector often try to find causal relationships between the two. So far, there are several known relationships, two of which are Supply-leading and Demand-following (Supriani et al., 2021).

1. First, Supply-leading or financial growth lead is a condition where the financial sector provides the necessary capital needed for economic activities. In this case, effective allocation of capital from

the financial sector is crucial, and effective allocation provides ease for economic activities to occur.

2. The second relationship is Demand-following, where the real sector provides stimulation for the financial sector to grow. The financial sector will grow along with the growth of the real sector, as the growth of the real economy will increase demand in the financial sector, and this requires the financial sector to develop.

A study conducted by Jung Woo, (1986) using 56 samples showed that the Supply-leading theory is more relevant to developing countries while Demand-Following is more relevant to developed countries. However, the grouping of countries regarding this theory is still not accurate. Demetriades & Hussein (1996) tested using 16 countries as samples, and the results obtained were not in line with the results from Jung (Abd. Majid & H. Kassim, 2015a).

Regardless of the direction of the two relationships, economic growth and the financial sector have a strong connection. A study conducted Khalifa Al-Yousif, (2002) showed that financial development had a positive influence on economic growth. Several literatures and studies have shown the connection between the real and financial sectors. Financial intermediaries play a role in providing ease for the real sector to fulfill capital needs for investment and savings. In this case, financing and funding are keys to investment activities. Economic growth and the financial sector have a significant positive relationship.

3.2.3 The Relationship Between Investment and Economic Growth

According to Gregory Mankiw (2018), investment is defined as the goods purchased by individuals or companies to increase their capital stock. Another definition by Lamberton (1999), it entails putting money into ventures with the expectation of earning additional value. While Lipsey et al. (1999) characterize investment as spending on goods that are not immediately consumed. Investments can be categorized into short-term, medium-term, and long-term based on their duration. The core essence of investment lies in committing funds for a specific period to secure anticipated future income as compensation. Various factors such as time allocation, projected inflation rates, and uncertainties play a role in making investment decisions. In 1936, Keynes (2016) introduced the investment multiplier model in his book "General Theory of Employment, Interest, and Monetary". He argued that to increase national income, investments are needed to be increased. Keynes viewed investment as part of the total supply and explained that whenever output changed, the investment would also change. The investment multiplier model measures the change in national income that results from a change in investment.

In this study, the Islamic bank investment product that will be used are *Musyarakah* and *Mudharabah*. The term "*Musyarakah*" within the realm of Islamic law denotes a form of joint partnership characterized by the principles of sharing. It encompasses the amalgamation of capital or labor among multiple individuals to establish a business, in which profits are

allocated according to a predetermined ratio, and losses are distributed based on the contribution ratio. For a *Musyarakah* arrangement to be deemed valid, certain prerequisites must be met. Firstly, the involved parties must possess the legal capacity to enter into a contract, indicating that they have attained the age of majority. Furthermore, the contract must be entered into voluntarily and without any form of coercion or undue influence (Adela, 2018).

Within a *Musyarakah* partnership, each partner retains the right to actively participate in the management and contribute to the business. However, there may exist an agreement among partners whereby one assumes the managerial role while others remain inactive. In such scenarios, the "silent" partner is entitled to a proportionate share of the profit corresponding to their investment, relative to the extent of their contribution. Conversely, if all partners unanimously agree to actively engage in the joint venture, each partner acts as an agent on behalf of the others in all business matters, and any actions undertaken by one partner within the ordinary course of business are deemed authorized by all partners (Adela, 2018).

Musyarakah can assume various forms, including an unlimited and equal partnership in which partners possess equal rights with regard to capital, management, and decision-making authority. Alternatively, a more restricted investment partnership may be established, wherein partners contribute to a capital fund using monetary resources, assets, or labor, and each partner acts solely as an agent for themselves, without assuming

responsibility for the actions of other partners. In both forms, profits are distributed according to a mutually agreed-upon arrangement, while losses are borne proportionately in accordance with each partner's capital contribution. Unlike conventional interest-based loans, *Musyarakah* does not involve a predetermined rate of return. Instead, the return in *Musyarakah* relies upon the actual profit generated by the joint venture. This characteristic, coupled with the presence of risk, renders *Musyarakah* an acceptable Islamic financing instrument (Rammal, 2004)

In an interest-bearing loan, the financier is assured a fixed rate of return irrespective of the debtor's profit or loss. Conversely, in *Musyarakah*, the financier may incur losses if the joint venture fails to generate profits. *Musyarakahh* (equity partnership) financing is a crucial method for driving economic activity in the Islamic economy. This involves depositors, banks, and investors pooling their resources to fund projects and sharing in the profits and risks. It has a significant impact on savings, investment, and the domestic resource gap. Compared to traditional interest-based financing, *Musyarakahh* financing is more flexible and involves three rates of return: a return rate for depositors, a return rate for banks, and a return rate for investors. In contrast, interest rates are determined arbitrarily based on loan maturities between the bank and depositor or investor, with the investor assuming financing risk. The implementation of interest rates in the money market equilibrium results in delays in transforming savings into investments and influencing economic activity. Thus, *Musyarakahh*

financing ensures the participation of all parties simultaneously, including the bank, saver, and investor in the *Musyarakahh* process, limiting any lag to the implementation period. (Adela, 2018)

Mudhrabah (finance trusteeship), *Mudharabah* is a contract between two parties, one of which provides financing to the other for a specific purpose, as agreed upon. The party responsible for providing the funds is known as the *Rabb-ul-mal*, while the other party responsible for managing and executing the project is called the *Mudarib* or entrepreneur. One of the requirements of *Mudharabah* is that the financier or the *Rabb-ul-mal* cannot expect a fixed rate of return or any additional entitlement to the principal amount unless they share in the risk of the venture (Rammal, 2003).

The previous study conducted by Rammal, (2004), and Adela (2018) showed that *Musyarakah* and *Mudharabah* had a positive and significant impact on economic growth. *Mudharabah* and *Musyarakah* have a direct impact on the economy since they give a substantial involvement in real economics.

3.2.4 The Relationship between Inflation and Economic Growth

Bank Indonesia (Bank Indonesia, n.d.) defines inflation as the increase in the general prices of goods and services over a certain period of time. The causes of inflation can be categorized into two-supply-side pressures, or cost-push inflation, and demand-side pressures, or demand-pull inflation, as well as inflation expectations. Factors that contribute to cost-push inflation

include exchange rate depreciation, inflation in other countries, higher administered prices, negative supply shocks from natural disasters, and distribution chain disruptions. On the other hand, demand-pull inflation is caused by high demand for goods and services that exceeds supply. In macroeconomics, demand-pull inflation occurs when real output exceeds potential output, or when aggregate demand surpasses economic capacity. Lastly, inflation expectations are influenced by the behavior of the public and economic actors when making economic decisions based on expected inflation. Therefore, inflation expectations can be either adaptive or forward-looking.

The producer and merchant prices tend to increase during festive periods (such as *Eid-ul-Fitr*, Christmas, and New Year) and when provincial minimum wages (UMP) are determined. Even though the goods' availability can cope with the increased demand, the prices tend to go beyond typical supply-demand conditions. Additionally, when new provincial minimum wages are established, merchants tend to raise prices despite a moderate effect on demand (Indonesia Bank, n.d.).

The prevailing metric employed to gauge inflation is the alteration in the headline consumer price index (CPI), denoted as a percentage. The CPI encompasses both domestically manufactured and imported consumer goods, thereby encompassing the general expenses incurred by an average consumer. This choice of utilizing the CPI as the focal point arises from its vast coverage across various countries, with data available on a monthly and

quarterly basis. Furthermore, it is also the preferred indicator pursued by the majority of central banks, as highlighted by the International Monetary Fund (IMF) in 2020 (International Monetary Fund, 2020).

The previous studies by Supriani et al. (2021), Sakinah et al. (2022), and Abd. Majid & H. Kassim, (2015) proved that inflation had a significant effect on economic growth. The study from Abduh and Azmi Omar (2012) showed, the more inflation happened, the worse its effect on economic growth. In the study, inflation denoted a negative effect on economic growth. The result of the study is inflation represented the volatility of the economy which would increase the uncertainty of the economy, thus giving negative impacts.

3.2.5 The Relationship between Trade Openness and Economic Growth.

Trade liberalization/openness refers to the elimination or reduction of constraints and limitations that impede the unrestricted flow of goods across national borders. These barriers encompass tariffs, such as taxes and additional charges, as well as non-tariff barriers like regulations and limits on quantity. Economists commonly perceive the relaxation or removal of these barriers as measures aimed at fostering the principles of unrestricted commerce. The trade-to-GDP ratio is a commonly employed metric to assess the significance of international transactions compared to domestic transactions. This indicator is computed by taking the average of total trade (the combined value of exports and imports of goods and services) relative

to GDP for each country. It is often referred to as the trade openness ratio, although the term "openness" can be somewhat misleading. A low ratio does not necessarily indicate the presence of high barriers (such as tariffs or non-tariff measures) to foreign trade, but can be influenced by factors like the size of the economy and geographical distance from potential trading partners (OECD, 2011).

Productivity growth plays a crucial role in the process whereby trade contributes to economic expansion. When a country embraces trade and invests in research and development (R&D), its comparative advantage can gradually shift towards producing highly differentiated goods, which yield larger profit margins. Grossman and Helpman (1994) examined this evolution of comparative advantage using an endogenous growth model. They demonstrated that countries rich in human capital tend to be net exporters of differentiated products while importing labor-intensive traditional products consistently over time. Furthermore, they established that if the development of new products requires a substantial amount of human capital compared to the production of existing differentiated products, the volume of international trade, relative to global Gross National Product (GNP) or global expenditure, will increase progressively (Dao et al., n.d.).

The focus on market access in practical terms indicates a perspective influenced by mercantilism among policymakers in the realm of international trade. From a mercantilist standpoint, policymakers believe

that granting foreign goods access to the domestic market is not a socially beneficial policy for the liberalizing economy. Instead, they perceive allowing foreign sellers to enter the domestic market under more favorable conditions of market access as a "concession" or "favor" that undermines the rights of domestic producers to their own market. In this view, it necessitates reciprocal concessions in terms of foreign market access (Hillman, 2008).

The link between open trade and economic growth is a highly controversial topic among growth and development experts. Despite much discussion, there is still no clear resolution to this issue. Theoretical growth studies show that the relationship between trade restrictions and growth is complex and unclear. There are numerous models in the endogenous growth literature that present differing viewpoints on how trade restrictions can either boost or decrease the global rate of growth (such as works by Romer, Grossman, and Helpman, Rivera-Batiz and Romer, and Matsuyama). It's important to consider that if trading partners have vastly different technologies and resources, even though economic integration can increase the global growth rate, it may harm certain countries (as shown in studies by Grossman and Helpman, Lucas, Rivera-Batiz and Xie, and Young)(Yanikkaya, 2003).

The impact of trade liberalization on economic growth is a widely discussed topic among economists. Both Mercantilists, Smith and Ricardo emphasized the significance of trade liberalization. Neo-classical growth

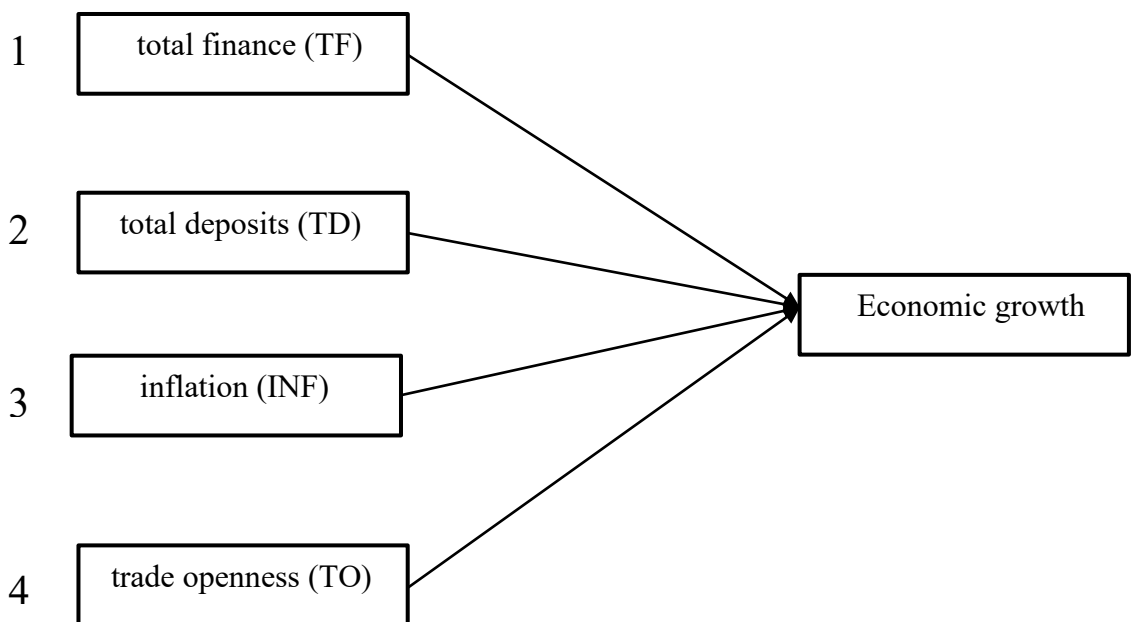
theories, which form the basis for modern economic growth theories, suggest that trade liberalization can have a positive effect on economic growth in the medium term, but its impact may not be sustained in the long term (Parikh, 2004). This is based on the Romer Endogenous or New Growth Theory model introduced by Romer, (1986) and Lucas, (1988) which explains that trade liberalization drives economic growth through various channels. One of the key ways trade liberalizations affects economic growth is through increased capital inflows, including foreign direct investment, which fills investment gaps in the economy. This leads to increased investment, production, and market size, as well as higher employment levels and reduced poverty. It also gives developing countries access to new technologies from developed countries. Additionally, trade liberalization provides both consumers and producers with access to larger markets, allowing them to benefit from economies of scale. Another important impact of trade liberalization is the transmission of knowledge and technology (Qayyum et al., 2018).

Keho, (2017) looked into how trade openness affected the economic growth of Cote d'Ivoire between 1965 and 2014. The research took into consideration various factors such as capital stock, labor, and trade openness. The methods used included the Autoregressive Distributed Lag bounds test for cointegration and the Toda and Yamamoto Granger causality tests. The findings of the study indicated that trade openness had a positive impact on economic growth both in the short and long term. Additionally,

the results highlight a strong and positive connection between trade openness and the formation of capital in driving economic growth.

Kim, (2011) demonstrated that in addition to openness to trade resulting in positive impacts on economic growth and real income in developed nations, it has a negative impact on developing countries. The actual impact of trade also varies based on the level of financial development and inflation. In countries with low financial development, trade openness has a negative effect on growth, but in countries with high financial development, it has little impact. On the other hand, trade openness is beneficial for economic growth in nations with low inflation but has a negligible effect on growth in countries with high inflation (Kim, 2011).

Based on the explanation above, the study model is formulized as follows:



The reason for framework above based on the following theory:

1. Solow-Swan Theory: Based on Solow Model, Businesses and governments rely on financing to make important investments in physical assets like machinery, factories, and infrastructure. These investments boost the overall amount of capital in an economy, resulting in increased productivity and expansion of the economy.
2. Multiplier Effect Theory: Based on Multiplier Effect theory. The multiplier effect theory proposes that when money is initially injected into an economy, it doesn't stop with the first recipients. Instead, those who receive the money as income will spend some of it on products and services. Thus, more capital channeled into economy creates greater impact.
3. Inflation Effect on Economy: According to the theory of Inflation. When inflation is high or unpredictable, it can make people and businesses uncertain about what prices will be in the future. In response to this uncertainty, they may hold off on making purchases and investments. This action can result in a slowdown in economic activity because both consumer spending and business investment decrease, thus it might affect negatively to economic.
4. Smith and Ricardo Theory of Comparative Advantage: According to the comparative advantage theory. Comparative advantage theory suggest that country should specialized themselves in the goods or services that they have comparative advantage, which means they produce more efficiently than other nations. When the barrier of trade is reduced, it will allow the country to expand and scale up the production.

3.3 Research Hypothesis

Hypothesis is a provisional speculation regarding the formulation of a research problem, where the research issue is framed in the form of a

question sentence (Sugiyono, 2008). A hypothesis is referred to as a temporary solution since the answer provided can only be perceived through existing theories or from prior research. In the present study, the hypotheses are the output of previous research used as a point of reference for the current investigation. Here are the hypotheses examined in this study

1. The effect of Total Finance on Economic Growth

Barajas et al., (2013) asserted that financial inclusion is connected to favorable economic results. They noted that countries with better financial inclusion tend to have a stronger and consistent positive correlation between financial depth and long-term economic growth. Consequently, if financial services fail to reach a significant portion of the population in a country, there may be an opportunity cost in terms of economic growth. A good financial system will lead to better economic growth. (Abduh & Azmi Omar, 2012b)

H1: There is a positive and significant correlation between TF and Growth

2. The effect of Total Deposits on Economic Growth

Total deposits play an important role in the financing process in banks. As demonstrated by the study conducted by Asif et al., (2014) on the influence of the Islamic investment trend on Pakistan's economic growth, they found that deposits from Islamic banks had a significant

impact on predicting economic growth at various time lags. Therefore, hypothesis 2 is proposed as follows:

H2: There is a positive and significant correlation between TD and Growth

3. The effect of Inflation on Economic Growth

INF is a measure of macroeconomic stability that evaluates the volatility of product prices (Imam & Kpodar, 2016). A higher inflation rate indicates that the value of the rupiah has decreased in comparison to products and services in general, leading to higher production costs for firms and lower profits. This, in turn, can reduce the overall output and profitability of companies, resulting in a decrease in economic growth at the macro level. Therefore, hypothesis 3 is proposed as follows:

H3: there is a negative and significant correlation between INF and Growth.

4. The effect of Trade Openness on Economic Growth

The Trade Openness represents the aggregate proportion of exports and imports to nominal GDP (Abd. Majid & H. Kassim, 2015a). When Trade Openness rises in a country, it implies that businesses have a greater likelihood to expand their production capacity by accessing foreign markets, strengthening competitiveness in the domestic market,

and obtaining technology transfer advantages. As a result, hypothesis 4 is proposed:

H4: There is a significant and positive link between OPENNES and economic growth

CHAPTER III

RESEARCH METHOD

4.1 Type and Source of Data

This research makes use of secondary data in the form of time series from different sources, such as OJK, BPS, and IFS. The data covers a 16-year period from 2005 to 2021 with a total of 64 data points, and the research aims to investigate how dependent variable is affected by independent variables. The dependent variables include first, the total financing from Islamic financial units from 2005 to 2021 in million rupiahs. Second, the total deposits from Islamic financial units from 2005 to 2021 in million rupiahs. Third, the inflation rate in Indonesia represented through CPI in ratio units from 2005-2021. Fourth, Indonesia's trade openness level in ratio units from 2005-2021 towards Indonesia's economic growth.

In these range of years, Indonesia encountered several crises of economic, such as in 2008, Indonesia affected by the World Financial crisis of Subprime Mortgage, and in 2020-2021, Indonesia Economic heavily affected by Corona virus Pandemic which in result giving Indonesia contraction in GDP.

4.2 Research Variable

According to Sugiono (2008), the operational definition of a variable is an attribute, characteristic, or value of a person, object, or activity that has a certain variation determined by the researcher to be studied and then from which drawn a few conclusions.

4.2.1 Dependent Variable

The dependent variable is a variable that is influenced by other variables and is subject to change. It is often called the response variable and is represented by the letter Y. In this research, the dependent variable being studied is the economic growth of Indonesia.

4.2.1.1 Economic Growth

In a national level, economic growth is the top priority, as it can be measured by the increase in the quantity of goods and services produced over a specific period. This research focuses on the dependent variable, which is the growth of the economic ratio by using GDP as the benchmark. Gross Domestic Product data by field of activity represents the value added from all economic activities in a country. An increase in GDP means an increase in the activity of economics which lead into the better economy. This study aims to capture the economic growth as a whole, by utilizing the ratio of economic growth derived from GDP. GDP is one of the indicators used to measure the economy of a country. Gregory Mankiw, (2018) thus this research employs economic growth ratio as the dependent variable and incorporate four independent variables expounded in the following paragraph.

In this study, the formula for the economic growth by Gregory Mankiw (2018) and Supriani et al., (2021) was used

$$Growth = \frac{GDP_T - GDP_{T-1}}{GDP_{T-1}} \times 100$$

4.2.2 Independent Variable

4.2.2.1 Total Financing (TF)

Total financing is a total amount of capital distributed by Islamic banks to the deficit sector/ non-bank third party under the contract of investment (*Mudharabah* and *Musyarakahh*). The data will be presented in the form of ratio. For the formula used is as studied by Abduh and Azmi Omar, (2012)

$$\frac{\sum Musyarakah + \sum Mudharabah}{GDP} \times 100$$

4.2.2.2 Total Deposits (TD)

Total deposits is the entire amount of funds deposited by Islamic bank clients for the purpose of reinvestment in order to earn a return on the selected investments. The investments mentioned in this study are *Musyarakahh* and *Mudharabah*. This study will present data in the form of a ratio. The Total Deposits formula is referring to the formula used by the previous study, Abduh and Azmi Omar, (2012):

$$\frac{\sum Deposito + \sum Savings + \sum CA}{GDP} \times 100$$

4.2.2.3 Inflation (CPI)

Inflation refers to the overall rise in prices of goods and services across a certain duration. Measuring inflation can be done by taking into account the prices of various products as a benchmark for overall price increases. Bank Indonesia, for example, utilizes 7 prices of goods and services for this purpose. The increase in these 7 prices of goods and services will be assumed as the inflation and vice versa. The data presented for CPI in this research is in the form of a ratio. The formula used in this study refers to the formula used by the previous study conducted by Supriani et al., (2021) with the equation as follow:

$$\frac{CPI_T - CPI_{T-1}}{CPI_{T-1}} \times 100$$

4.2.2.4 Trade Openness

Trade Openness or trade liberalization is a removal of barriers for international transaction namely export and import of goods and services. In this research, the trade openness is comparison of total export and import of Indonesia in quartal over several periods. The data provided in this research will be in the form of a ratio. The formula used in this study refers to the formula used by Supriani et al., (2021).

$$\frac{\sum Exports + \sum Imports}{GDP}$$

It can be concluded from the data above that:

Table 4.1 Table of Formulas

Variable	Explanation	Formula	Source
Growth	The Number which tells how are the GDP grows in compare to previous year	$Growth = \frac{GDP_T - GDP_{T-1}}{GDP_{T-1}} \times 100$	BPS
TF	The total amount of capital invested (<i>Mudharabah/Musyarakah</i>) by bank to the non-bank Third Party	$\frac{\sum Musyarakah + \sum Mudharabah}{GDP} \times 100$	OJK
TD	The total amount of capital accumulated by bank though their product (deposit etc.)	$\frac{\sum Deposito + \sum Savings + \sum CA}{GDP} \times 100$	OJK
INF	Change in Consumer Price Index (CPI)	$\frac{CPI_T - CPI_{T-1}}{CPI_{T-1}} \times 100$	BI
TR	The sum of exports and imports of goods and services measured as a share of GDP.	$\frac{\sum Exports + \sum Imports}{GDP}$	BPS

4.3 Analysis Method

This research focuses on Indonesia as its scope. The research approach is quantitative data analysis, with the dependent variable of economic growth, measured by the ratio of GDP growth between 2005 and 2021. To estimate the variables in the established empirical model, the data in this study were processed using EViews 10.0 software. After the model was estimated, the data were analyzed using the following methods

$$RY = f(TF, TD, INF, \text{ and } TO)$$

$$RY = f(TF, TD, INF, \text{ and } TO)$$

which:

RY = Ratio of Economic Growth

TF = Total Financing

TD = Total Deposits

INF = Inflation

TO = Trade Openness

4.3.1 Stationarity Test

The purpose of conducting a stationarity test is to examine whether a variable is fluctuating around its mean with no dependence on time and variance. This is crucial in time series analysis to ensure that the data is reliable and can be used for further analysis. According to Widarjono, (2018), a stationary variable should have a consistent mean and variance over time. Examining data stationarity is a fundamental aspect of analyzing time series data. Failure to do so can lead to false regression, thus testing for stationarity is crucial. This process is conducted to verify that the regression is not false. The Augmented Dickey-Fuller (ADF) test is typically utilized to evaluate data stationarity (Herranz, 2017).

4.3.2 Cointegration Test:

Cointegration test aims to determine whether there is a long-term relationship between one variable and another variable. If the variables are cointegrated, there is a stable long-term relationship between them. On the other hand, if there is no cointegration between the variables, it implies that there is no long-term relationship between them. The ARDL Bound Test is the cointegration test used in this study.

4.3.3 Optimum Lag Test:

The subsequent test conducted following the stationary test is the optimal lag test. The optimal lag test is conducted to determine the optimal lag length to be used for further analysis. Lag in the ARDL model serves to indicate the influence of time intervals on observations. Another benefit is to eliminate autocorrelation issues in the research. The criteria for the optimal lag test can be observed from the model. These criteria include the Final Production Error (FPE), the Akaike Information Criterion (AIC), the Schwarz Bayesian Criterion (SBC), and the Hannan-Quinn (HQ). Through testing with these criteria, lag candidates will be generated for each criterion, referring to the optimal lag (Gujarati, 2003).

4.4 Classical Assumption Test:

4.4.1 Heteroscedasticity test:

Heteroscedasticity test is aimed at determining whether there is a difference in variance between the regression model and the residuals of

one observation compared to another. Homoscedasticity is present when the residual variance is consistent across observations, while heteroscedasticity is present when the residual variance is not consistent (Ghozali, 2018).

4.4.2 Autocorrelation Test:

Autocorrelation plays a crucial role in statistical analyses due to several reasons. Firstly, it can significantly impact the accuracy and reliability of inferential statements associated with conventional hypothesis tests and confidence intervals. For instance, positive autocorrelation can lead to underestimated p-values and confidence intervals that are too narrow. Secondly, detecting the presence of autocorrelation can enable a researcher to choose a more appropriate statistical analysis that is less vulnerable to this issue. Finally, incorporating information on autocorrelation can enhance the precision of predictions made using regression equations. Therefore, it is important to examine and address the potential issue of autocorrelation in statistical analyses (Salkind, 2007).

4.5 Hypothesis test:

4.5.1 R Test

Widarjono, (2018) explains that the Coefficient of Determination (R-Squared) Test is utilized to describe the amount of variation of the dependent variable that can be accounted for by the independent variable.

Moreover, this test can assess how well the regression line fits the data. When the R-Squared value approaches 1, it means that the independent variable effectively explains the dependent variable. Conversely, if the R-Squared value moves away from 1 or gets closer to 0, it indicates that the independent variable is less effective in explaining the dependent variable.

4.5.2 F test

According to Widarjono, (2018) the F-Test is utilized to examine the impact of all independent variables on the dependent variable, which is also known as the significance test of the model. ANOVA can be used to explain the F-Test. If the calculated F-value exceeds the critical F-value, then we reject the null hypothesis, indicating a simultaneous impact of the independent variable on the dependent variable. On the other hand, if the calculated F-value is lower than the critical F-value, we cannot reject the null hypothesis, indicating that there is no simultaneous impact of the independent variable on the dependent variable.

4.5.3 T test

To evaluate the impact of individual independent variables on the dependent variable, the T-Test is utilized. The variance between the T-Test in simple regression and multiple regression is based on the degree of freedom (df). In simple regression, the df equals $n-2$, while in multiple regression, it is contingent on the quantity of independent variables combined with a constant, which is $n-k$ as noted by (Widarjono, 2018).

The null hypothesis can be accepted or rejected by comparing the calculated t-value and critical t-value and evaluating the probability value of the t-value against the α value. When the probability value of the t-value is smaller than the α value, the null hypothesis is rejected, implying a partial influence of the independent variable on the dependent variable. Conversely, when the probability value of the t-value is greater than the α value, the null hypothesis is not rejected, suggesting no partial effect of the independent variable on the dependent variable.

CHAPTER IV

RESULT AND DISCUSSION

5.1 Description Analysis

The objective of this study is to identify and analyze the factors that determine economic growth by examining the dependent variable of Economic Growth in ratio. The independent variables consist of secondary data such as Total Finance (TF) in ratio units, Total Deposit (TD) in ratio units, Inflation (INF) in ratio units, and Trade Openness (OPENNESS) in ratio units. The research is conducted at the national level of Indonesia using a panel data regression model. The analysis of the regression results provides an explanation of the regression model and its testing is carried out based on the specified requirements to ensure the best model is chosen to address the research problem and objectives.

Unit Root Test

While evaluating time series data, it is critical to assess whether it is stationary. Non-stationary data can lead to incorrect analysis, hence it's critical to run a stationarity test. This test aids in the development of a reliable regression. The stationarity test is often performed using the Augmented Dickey-Fuller test (ADF) unit root test.

Variables	Level Order		First Order	
	ADF	PP	ADF	PP
Y	0.0883	0.0000	0.0000	0.0001
TF	0.5308	0.5000	0.0046	0.0000
TD	0.7267	0.7281	0.0000	0.0000
INF	0.1553	0.0801	0.0000	0.0000
TO	0.7437	0.5507	0.0000	0.0000

Table 5.1 Unit Root Test

Based on the unit root testing outputs, the four independent variables mentioned above meet the requirements of stationary variables, as demonstrated by the number by probability values less than 5%. As a result, the variables listed above fulfill the criteria for the ARDL test.

Cointegration Test

The purpose of cointegration testing is to identify if there is a long-term relationship between different variables. When variables are cointegrated, it indicates that there is a stable, long-term relationship between them. Conversely, if there is no cointegration between variables, it suggests that there is no long-term relationship between them. To conduct the cointegration test in this study, the ARDL Bound Test is utilized.

Bond Test

Table 5.2 ARDL Bound test

ARDL Bounds Test		
Test Statistic	Value	K
F-statistic	17.08063	4

UJI BOND TEST		
Critical Value Bond Test		
Significance	I0	I1
10%	2.2	3.09
5%	2.56	3.49
1%	3.29	4.37

The following hypothesis is used in the ARDL Bound Test:

Ho = No long-term relationship exists.

Ha = A long-term relationship exists.

Criteria for refusal: Ho is rejected if (F-statistic) > 4.37 (critical value I1 Bound sig 1%).

The table illustrates that there is a long-term connection between the variables TF, TD, INF, TOPENNESS, and GROWTH at a level of significance of 1%, in which the variables TF, TD, INF, and TO are explanatory variables for the variable GROWTH. This reveals that there is a long-term relation between Economic Growth and Total Financing, Total Funding, Inflation, and Trade TO movements. In the long term, the values of other factors, such as Total Financing, Total Funding, Inflation, and Trade Openness, drive the rise and fall of Economic Growth

Autocorrelation Test

Table 5.3 Autocorrelation test

AUTROCORRELATION TEST			
F-statistic	0.77117	Prob. F (2,39)	0.4691
Obs*R-squared	2.284016	Prob. Chi-Square (2)	0.3192

With a chi-square probability value of 0.24, this model's analysis indicates no autocorrelation. The chart depicts that the probability value for the autocorrelation test is greater than 5%, hence the hypothesis that there is no autocorrelation in the model is not rejected. This clearly shows that the empirical model is autocorrelation-free.

Heteroscedasticity Test

Table 5.4 Heteroscedasticity Test

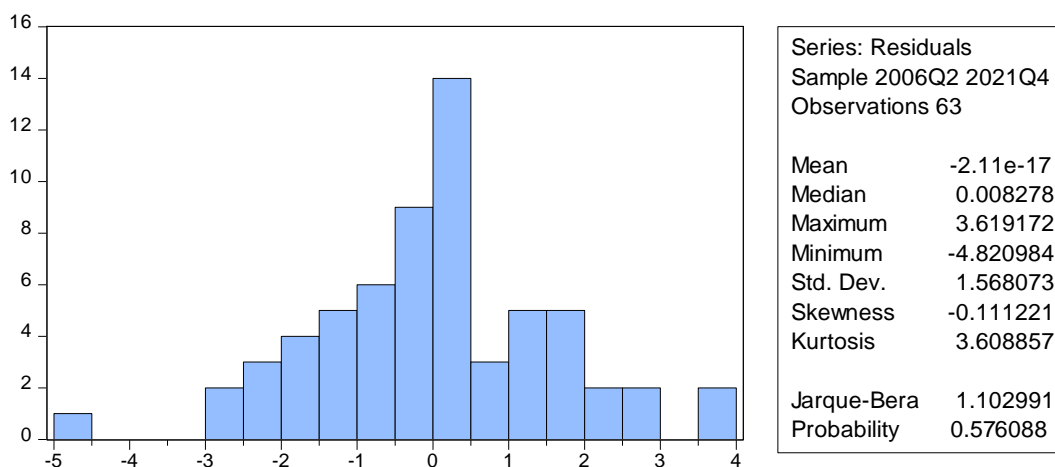
HETEROSCEDASTICITY TEST			
F-statistic	0.573458	Prob. F (21,41)	0.9047
Obs*R-squared	12.73625	Prob. Chi-Square (21)	0.8518
Scaled explained SS	7.739587	Prob. Chi-Square (21)	0.9891

The observed R-squared value has been more than 0.05. The Prob. chi-square (17) value in Obs*R-Squared indicates a p-value of 0.9432. As the p-value of 0.9432 is more than 5%, H0 is accepted, implying that the regression model is heteroscedastic, or that there is no issue with the non-heteroscedasticity assumption.

Normality Test

Normality tests are used to test whether the residuals of a model are normally distributed. The interpretation of the normality test result in the null hypothesis of the normality test is that the residuals are normally distributed.

Table 5.5 Normality Test

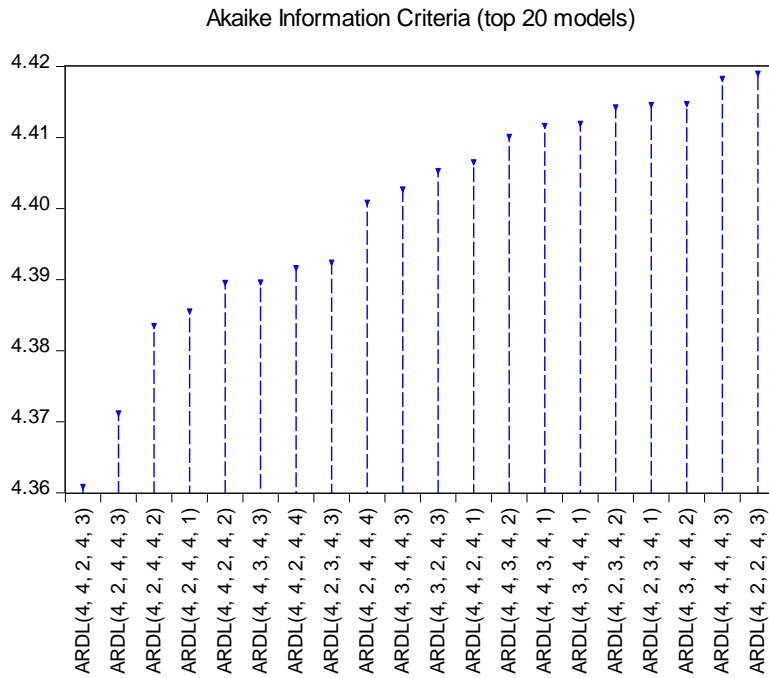


The test statistic indicates the extent to which the sample distribution deviates from the predicted normal distribution, whereas the p-value indicates the possibility of receiving such an extreme test statistic if the null hypothesis is true. If the p-value is less than the level of significance (0.05), the null hypothesis of normality is rejected. If the p-value is greater than the significance, the null hypothesis is not rejected, suggesting that the residuals follow a normal distribution. This conclusion implies that the model matches the data well. If the p-value is less than 0.05, the null hypothesis of normality is rejected, suggesting that the residuals do not have a normal distribution. This may imply a misspecification of the model or the presence of outliers or heteroscedasticity in the data.

According to the result of the test, it reveals that the probability value of the normality test is 0.576088. based on the criteria of the test P value > 0.05 it means the null hypothesis is not rejected; this indicates that the residuals are normally distributed and this model is sufficiently specified.

Optimum Lag

Table 5.6 Optimum Lag Test



To choose the best optimum lag of the equation based on the result of Akaike information criteria, the least number will give the optimum equation. Thus, based on the result above, it is concluded that the optimum lag for the test in this study is (4,4,2,4,3). In determining the optimum lag

5.2 ARDL Test Estimation

The findings from the cointegration test revealed evidence of long-term cointegration among the examined variables, prompting the utilization of the ARDL model for further analysis. The ARDL model is additionally utilized to explore the existence of a short-term relationship among the variables. It is a frequently used time series model that enables the assessment of the coherence between the short-term relationship and the long-term relationship of the tested variables.

Table 5.7 ARDL Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
D(GDP(-1))	-1.135268	0.126569	-8.969529	0.0000
D(GDP(-2))	-1.179783	0.146888	-8.031870	0.0000
D(GDP(-3))	-0.833521	0.138500	-6.018194	0.0000
D(GDP(-4))	-0.174085	0.116088	-1.499594	0.1410
D(TF)	-3.024060	1.914903	-1.579223	0.1216
D(TF(-1))	2.819474	2.069937	1.362106	0.1803
D(TF(-2))	5.030164	2.215800	2.270135	0.0283
D(TD)	-1.672594	1.683806	-0.993341	0.3261
D(TD(-1))	-4.746617	1.916551	-2.476646	0.0173
D(TD(-2))	-4.426246	1.940759	-2.280678	0.0276
D(TD(-3))	1.292832	0.775695	1.666675	0.1028
D(TD(-4))	1.409154	0.790476	1.782665	0.0817
D(INF)	0.506280	0.342952	1.476244	0.1472
D(INF(-1))	-0.204748	0.353215	-0.579670	0.5652
D(INF(-2))	-0.105217	0.249795	-0.421215	0.6757
D(INF(-3))	-0.423724	0.250568	-1.691054	0.0981
D(INF(-4))	-0.793393	0.267583	-2.965034	0.0049
D(TO)	2.230292	1.036606	2.151533	0.0371
D(TO(-1))	2.996792	1.075618	2.786112	0.0079
C	2.046625	0.916235	2.233734	0.0308

R-squared	0.857262	Mean dependent var	0.012698
Adjusted R-squared	0.794191	S.D. dependent var	4.150456
S.E. of regression	1.882903	Akaike info criterion	4.356493
Sum squared resid	152.4489	Schwarz criterion	5.036853

Log likelihood	-117.2295	Hannan-Quinn criter.	4.624082
F-statistic	13.59212	Durbin-Watson stat	1.770779
Prob(F-statistic)	0.000000		

F statistic Test

The significance levels used for the F-test in this study were 1%, 5%, and 10%. The F-test criteria compare the value of the F-probability statistics to the significance level. This shows that the dependent variables have a big effect on the independent variables and vice versa. In the regression analysis, the probability value, or F-statistic, is 0.000000. This means that it is significant at the 1% level of significance. This explains that the factors TF, TD, INF, and TO have an effect on the Economic Development of Indonesia from 2005 to 2021.

R square

Coefficient of determination (R-Square) signifies the degree to which the model's independent variable can explain the effect of the dependent variable. R-Square values vary from 0 and 1. If it approaches one, it indicates that the independent variable can be better explained by the dependent variable. The R-Square value derived from the data analysis is 0.865458, meaning that 86.54% of the variance in the Economic Growth variable can

be explained by the variables TF, TD, INF, and TO, with the remaining 13.46% attributable to factors outside the model.

T statistic Test

Table 5.8 T statistic Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.*	Explanation
D(GDP(-1))	-1.135268	0.126569	-8.969529	0.0000	SIGNIFICANT
D(GDP(-2))	-1.179783	0.146888	-8.031870	0.0000	SIGNIFICANT
D(GDP(-3))	-0.833521	0.138500	-6.018194	0.0000	SIGNIFICANT
D(GDP(-4))	-0.174085	0.116088	-1.499594	0.1410	INSIGNIFICANT
D(TF)	-3.024060	1.914903	-1.579223	0.1216	INSIGNIFICANT
D(TF(-1))	2.819474	2.069937	1.362106	0.1803	INSIGNIFICANT
D(TF(-2))	5.030164	2.215800	2.270135	0.0283	SIGNIFICANT
D(TD)	-1.672594	1.683806	-0.993341	0.3261	INSIGNIFICANT
D(TD(-1))	-4.746617	1.916551	-2.476646	0.0173	SIGNIFICANT
D(TD(-2))	-4.426246	1.940759	-2.280678	0.0276	SIGNIFICANT
D(TD(-3))	1.292832	0.775695	1.666675	0.1028	INSIGNIFICANT
D(TD(-4))	1.409154	0.790476	1.782665	0.0817	SIGNIFICANT
D(INF)	0.506280	0.342952	1.476244	0.1472	INSIGNIFICANT
D(INF(-1))	-0.204748	0.353215	-0.579670	0.5652	INSIGNIFICANT
D(INF(-2))	-0.105217	0.249795	-0.421215	0.6757	INSIGNIFICANT
D(INF(-3))	-0.423724	0.250568	-1.691054	0.0981	SIGNIFICANT
D(INF(-4))	-0.793393	0.267583	-2.965034	0.0049	SIGNIFICANT

D(TO)	2.230292	1.036606	2.151533	0.0371	SIGNIFICANT
D(TO(-1))	2.996792	1.075618	2.786112	0.0079	SIGNIFICANT
C	2.046625	0.916235	2.233734	0.0308	

Based on the table above, the significance levels for the long-term t-test are 1%, 5%, and 10%, which corresponds to a confidence level of 99.9%, 95.5%, or 90%. The testing criterion is to detect whether the obtained t-probability is below the significance level. If this is the case, then the obtained model parameters have a substantial impact. If, on the other hand, the t-probability discovered is greater than the significance level, then the obtained parameter values have no significant effect.

Short Run ARDL

Following the observation of cointegration among the variables, short-term ARDL Estimation is performed. This test examines the short-term relationship between the independent and dependent variables.

Table 5.9 Short Run ARDL Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
D(GDP(-1))	-1.135268	0.126569	-8.969529	0.0000
D(GDP(-2))	-1.179783	0.146888	-8.031870	0.0000
D(GDP(-3))	-0.833521	0.138500	-6.018194	0.0000
D(GDP(-4))	-0.174085	0.116088	-1.499594	0.1410

D(TF)	-3.024060	1.914903	-1.579223	0.1216
D(TF(-1))	2.819474	2.069937	1.362106	0.1803
D(TF(-2))	5.030164	2.215800	2.270135	0.0283
D(TD)	-1.672594	1.683806	-0.993341	0.3261
D(TD(-1))	-4.746617	1.916551	-2.476646	0.0173
D(TD(-2))	-4.426246	1.940759	-2.280678	0.0276
D(TD(-3))	1.292832	0.775695	1.666675	0.1028
D(TD(-4))	1.409154	0.790476	1.782665	0.0817
D(INF)	0.506280	0.342952	1.476244	0.1472
D(INF(-1))	-0.204748	0.353215	-0.579670	0.5652
D(INF(-2))	-0.105217	0.249795	-0.421215	0.6757
D(INF(-3))	-0.423724	0.250568	-1.691054	0.0981
D(INF(-4))	-0.793393	0.267583	-2.965034	0.0049
D(TO)	2.230292	1.036606	2.151533	0.0371
D(TO(-1))	2.996792	1.075618	2.786112	0.0079
C	2.046625	0.916235	2.233734	0.0308

In this study, the significance levels for the short-term t-test are 1%, 5%, and 10%, which corresponds to a level of confidence of 99%, 95%, or 90%. The testing criterion is to determine whether the obtained t-probability is less than the significance level. If this is the case, then the obtained parameter values have a substantial impact. If, on the other hand, the t-

probability acquired is greater than the significance level, then the obtained parameter values have no significant effect.

Long Run T statistic test

Table 5.10 Long Run T-statistic

Variable	Coefficient	Std. Error	t-Statistic	Prob.*	Explanation
D(TF)	1.116345	0.721301	1.547682	0.129	INSIGNIFICANT
D(TD)	-1.883905	0.909102	- 2.07227	0.0443	SIGNIFICANT
D(INF)	-0.236151	0.140118	-1.685374	0.0992	SIGNIFICANT
D(TO)	1.20923	0.296772	4.074606	0.0002	SIGNIFICANT
C	0.473465	0.218266	2.169206	0.0076	SIGNIFICANT

1. D TF = Total Finance on economic growth. According to the results of the calculation, the coefficient of the Total Finance variable has an insignificant positive impact on economic development over the long term. This is evident from table Cointegration, which demonstrates that the probability level of the Total Finance variable is 0.129, which is less than the significance level employed, =10%, with a constant of 1.116345. This means that a one-unit increase in Total Finance will result in a 1.116345-unit increase in the Economic Growth, and vice versa. This result is in line with the research conducted by Sakinah et al. (2022) Sakinah et al. (2022), Abduh & Azmi Omar (2012) Abduh & Azmi Omar (2012), Islamic finance had a significant impact on the economic growth.
2. D TD = Total Deposits on economic growth. According to the results of the calculation, the coefficient of the Total Deposits variable has a

significant negative impact on economic growth over the long term. This is evident from table Cointegration, which demonstrates that the probability level of the Total Deposits variable is 0.0443, which is less than the significance level applied, =10%, with a constant of -1.8. This means that a one-unit increase in Total Deposits will result in a 1.8 unit decrease in the Economic Growth, and vice versa. This result is in line with the study of Supriani et al. (2021), the Total funding had a significant effect on economic growth in long term.

3. D INF = Inflation on economic growth. According to the result of calculation, the coefficient of the inflation variable has negative impact on economic growth over the long term. This is evident from the table cointegration, which demonstrates that the probability level of the Inflation variable is 0.992, which is less than the significance level applied, =1%, with a constant of -0.28. This means that a one-unit increase in Total Deposits will result in a 0.28 unit decrease in the Economic Growth, and vice versa. This result is in line with the study of Supriani et al. (2021), the Total funding had a significant effect on economic growth in long term
4. D TO = Trade Openness (TO) on economic growth. According to the results of the calculation, the coefficient of the Trade Openness variable has a significant positive impact on economic development over the long term. This is evident from table Cointegration, which demonstrates that the probability level of the Trade Openness variable is 0.0000, which is less than the significance level employed, =10%, with a constant of 0.478. This

means that a one-unit increase in Trade Openness will result in a 0.478 unit increase in the Economic Growth, and vice versa. This kind of effect is also in line with the study from Supriani et al. (2021) which stated that Trade Openness had a positive significant effect on Indonesian economic growth Indonesia

5.3 Economic Analyses

According to the findings of the ARDL regression model, which are presented in the table, an R-Square value of 0.857262 demonstrates that 85.72% of the variation in the dependent variable (Economic Growth) can be explained by the variation in the independent variables analyzed (Total Finance, Total Deposits, Inflation, Trade Openness). This study's high R-Squares value is due to the fact that only one variable is insignificant over time, while the remaining 14.28% is explained by variables outside the model. Additional explanations are provided in the following section:

1. The Effect of Total Finance on Short- and Long-Term Economic Growth.

Economic Growth, as measured by GDP, is the sum of all value-added economic activity. Total finance, which is the total amount of financing provided by banks to the deficit sector to provide support (capital) in increasing economic activity, becomes a positive relationship in this instance, as the more funding provided, the greater the deficit sector's GDP.

Total Finance has a negative short-term impact on the economic growth and has positive impact on the long-term relationship with economic growth but unfortunately, the effect doesn't significantly impact the dependent variable or economic growth. As Shown in the table 4.10, every increase in total financial resources will have a negative impact on economic growth in short and positive impact in the long term.

The findings of this study align with what previous research has shown. Just like Supriani pointed out, there is a positive long-term connection between financing and economic growth. Kassim, (2016), Abd. Majid and H. Kassim, (2015), Abduh and Azmi Omar, (2012b)s research also backs up this notion, confirming the positive relationship between the variables.

The positive relationship can be explained by a factor such as, Investment and Business Growth, an access to financing allows businesses to expand their operations, invest in new projects, and purchase equipment and technology. This increased investment leads to job creation, higher productivity, and overall economic growth which in line with the theory of investment function in economic growth theory.

2. The effect of total deposits on short- and long- term economic growth

The term "total deposits" refers to the total quantity of capital that bank customers deposit into their accounts. This money is then transferred to deficit parties through the bank for the purpose of investment, such as through *Mudharabah* and *Musyarakahh*. An increase in total deposits is considered beneficial for economic development, as it indicates more funds are available for investment and financing.

This study has discovered that total deposits have a positive effect on short-term economic growth but a negative effect on long-term economic growth.

According to the theory of investment, an increase in capital will allow economy to grow. The capital increase will allow more economic activity to be conducted, thus it supposed affect economy positively.

In this study, the observed anomaly can be attributed to various factors, including constraints related to the product range offered by Islamic finance, heightened complexity and associated costs, as well as challenges stemming from regulatory aspects. These factors have the potential to influence the decision-making process of banks concerning fund mobilization.

3. The effect of inflation on short- and long-term economic growth.

Inflation is the general rise in prices, which can have positive and negative effects on the economy. An excessive high inflation rate can hinder economic expansion. In order to maintain economic growth and stability, Indonesia strives for annual inflation rates below 10%. In this study, while inflation has a significant positive effect over the long term, its positive effect over the short term is not statistically significant.

The findings of this study indicate a negative relationship between inflation and economic growth, aligning with the conclusions drawn by Abd. Majid and H. Kassim, (2015). Their study demonstrated that a stable inflation environment contributes to improved economic growth. This correlation can be attributed to various adverse effects of inflation on economic activities, including reduced purchasing power, heightened uncertainty for consumers and investors, distortions in the labor market, and impacts on interest rates. Such consequences disrupt economic operations.

4. The effect of trade openness on short- and long-term economic growth.

Trade openness refers to the liberalization of purchasing and selling activities between countries at various levels. Export and import activities provide opportunities for a country to expand its

economic activities on a broader scope. By utilizing the concept of comparative advantage, each country can maximize their potential resources in economic activities. An increase in scope of economics means more output will be produced, thus it will give more space for growth

In this study, trade openness has both a short-term and long-term positive impact. The result from the study is in line with the result of previous study conducted by Sakinah et al., (2022). There are some advantages from trade openness, such as increase efficiency and productivity, Trade liberalization enables countries to focus on producing goods and services in which they have a comparative advantage due to their available resources and technological capabilities. This specialization enhances productivity and efficiency as resources are directed towards their most effective applications. Consequently, this positive feedback initiates a sequence of economic growth, resulting in an increased overall output for the nations involved.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

The regression analysis conducted has yielded the following findings regarding the impact of four indicators - Total finance, Total Funding, Inflation, Trade Openness on economic growth summarized as follows:

1. The total finance has an insignificant and positive effect to the Economic Growth, it is based on the result of data table 4.11. With the coefficient of 1.116345 an increase a unit. According to what shows from table Cointegration, which demonstrates that the probability level of the Total Finance variable is 0.129, which is less than the significance level employed, =10%, with a constant of 1.116345. This means that a one-unit increase in Total Finance will result in a 1.116345-unit increase in the Economic Growth, and vice versa. This result is in line with the research conducted by Sakinah et al. (2022) Sakinah et al. (2022), Abduh & Azmi Omar (2012) Abduh & Azmi Omar (2012), Islamic finance had a significant impact on the economic growth
2. Total deposit has a significant and negative effect on the economic growth, referred to the 4.11 table, the coefficient of the Total Deposits variable has a significant negative impact on economic growth over the long term. This is evident from table Cointegration, which demonstrates that the probability level of the

Total Deposits variable is 0.0443, which is less than the significance level applied, =10%, with a constant of -1.8. This means that a one-unit increase in Total Deposits will result in a 1.8 unit decrease in the Economic Growth, and vice versa. This result is in line with the study of Supriani et al. (2021), the Total funding had a significant effect on economic growth in long term.

3. The Inflation has negative significant effect on economic growth. the coefficient of the inflation variable has negative impact on economic growth over the long term. This is evident from the table cointegration in 4.11, which demonstrates that the probability level of the Inflation variable is 0.992, which is less than the significance level applied, =1%, with a constant of -0.28. This means that a one-unit increase in Total Deposits will result in a 0.28 unit decrease in the Economic Growth, and vice versa. This result is in line with the study of Supriani et al. (2021), the Total funding had a significant effect on economic growth in long term
4. Trade Openness (TO) on economic growth. According to the results of the calculation, the coefficient of the Trade Openness variable has a significant positive impact on economic development over the long term. This is evident from table Cointegration, which demonstrates that the probability level of the Trade Openness variable is 0.0000, which is less than the significance level employed, =10%, with a constant of 0.478. This

means that a one-unit increase in Trade Openness will result in a 0.478 unit increase in the Economic Growth, and vice versa. This kind of effect is also in line with the study from Supriani et al. (2021) which stated that Trade Openness had a positive significant effect on Indonesian economic growth Indonesia

6.2 Recommendations

1. It is recommended that the Indonesian government continue supporting and promoting Islamic finance's development due to its positive impact on the economy. Encouragement in the financing and funding sector is crucial to bolster economic growth through the financial market.
2. The government should pay much attention to the inflation and bank deposit, since both of them have possibility to give negative effect on the economic growth. In this study, an excess of capability of total deposit hold by Islamic bank results negatively.

Bibliography

- Abd. Majid, M. S., & H. Kassim, S. (2015a). Assessing the contribution of Islamic finance to economic growth: Empirical evidence from Malaysia. *Journal of Islamic Accounting and Business Research*, 6(2), 292–310. <https://doi.org/10.1108/JIABR-07-2012-0050>
- Abd. Majid, M. S., & H. Kassim, S. (2015b). Assessing the contribution of Islamic finance to economic growth: Empirical evidence from Malaysia. *Journal of Islamic Accounting and Business Research*, 6(2), 292–310. <https://doi.org/10.1108/JIABR-07-2012-0050>
- Abduh, M., & Azmi Omar, M. (2012a). Islamic banking and economic growth: the Indonesian experience. *International Journal of Islamic and Middle Eastern Finance and Management*, 5(1), 35–47. <https://doi.org/10.1108/17538391211216811>
- Abduh, M., & Azmi Omar, M. (2012b). Islamic banking and economic growth: the Indonesian experience. *International Journal of Islamic and Middle Eastern Finance and Management*, 5(1), 35–47. <https://doi.org/10.1108/17538391211216811>
- Adam Smith Institute. (n.d.). *The Wealth of Nations*. <https://www.adamsmith.org/the-wealth-of-nations>
- Adela, H. (2018). The impact of *Musharakah* financing on the monetary policy in the Islamic economy. *Review of Economics and Political Science*, 3(3/4), 139–152. <https://doi.org/10.1108/REPS-10-2018-014>
- Agus Suryanto, D., Susanti, S., Studi Manajemen, P., Ekuitas, S., & Barat, J. (2020). Analisis Net Operating Margin (NOM), Non Performing Financing (NPF), Financing to Debt Ratio (FDR) dan Pengaruhnya Pada Efisiensi Perbankan Syariah di Indonesia. *Jurnal Riset Akuntansi Dan Keuangan*, 8(1), 29–40. <https://doi.org/10.17509/jrak.v8i1.19331>

- Asif, M., Ather, I. M., & Isma, Z. (2014). *Impact of Islamic Investment Trend on Economic Growth-A Case Study of Pakistan*.
- Bakar, H. O., & Sulong, Z. (2018). The Role of Financial Sector on Economic Growth: Theoretical and Empirical Literature Reviews Analysis. *Journal of Global Economics*, 06(04). <https://doi.org/10.4172/2375-4389.1000309>
- Bank Indonesia. (n.d.). *Inflasi*. <https://www.bi.go.id/id/fungsi-utama/moneter/inflasi/default.aspx>
- Barajas, A., Chami, R., & Yousefi, S. R. (2013). *The Finance and Growth Nexus Re-Examined: Do All Countries Benefit Equally?*
- Beck, T., & Levine, R. (2004). Stock markets, banks, and growth: Panel evidence. *Journal of Banking & Finance*, 28(3), 423–442. [https://doi.org/10.1016/S0378-4266\(02\)00408-9](https://doi.org/10.1016/S0378-4266(02)00408-9)
- Beck, T., Levine, R., & Loayza, N. (2000). Finance and the sources of growth. *Journal of Financial Economics*, 58(1–2), 261–300. [https://doi.org/10.1016/S0304-405X\(00\)00072-6](https://doi.org/10.1016/S0304-405X(00)00072-6)
- Dao, A. T., Uk, A., & Dao, A. (n.d.). *Digital Commons @ IWU Trade Openness and Economic Growth CORE View metadata, citation and similar papers at core Trade Openness and Economic Growth*. http://digitalcommons.iwu.edu/israel_economics/2
- DDCAP Group. (2019). *Islamic Finance Country Index*.
- Demetriades, P. O., & Hussein, K. A. (1996). Does financial development cause economic growth? Time-series evidence from 16 countries. *Journal of Development Economics*, 51(2), 387–411. [https://doi.org/10.1016/S0304-3878\(96\)00421-X](https://doi.org/10.1016/S0304-3878(96)00421-X)
- Dinar Standard. (2020). *State of the Global Islamic Economy Report*.

- Djennas, M. (2016). Business cycle volatility, growth and financial openness: Does Islamic finance make any difference? *Borsa Istanbul Review*, 16(3), 121–145. <https://doi.org/10.1016/j.bir.2016.06.003>
- gaasbeck, van. (2007). *Money and banking*. <https://www.csus.edu/indiv/v/vangaasbeckk/courses/135/sup/bankbal.pdf>
- Ghozali, I. (2018). *Aplikasi Analisis Multivariate Dengan Program IBM SPSS 25* (9th ed.). Badan Penerbit Universitas Diponegoro.
- Gregory mankiw. (2018). *Introduction to macroeconomics* (Dedy A Halim, Ed.; 7th edition, Vol. 7). Salemba Empat.
- Grossman, G. M., & Helpman, E. (1994). Endogenous Innovation in the Theory of Growth. *The Journal of Economic Perspectives*, 8(1), 23–44.
- Gujarati, D. N. (2003). *Basic econometrics*. McGraw Hill.
- Hachicha, N., & Ben Amar, A. (2015). Does Islamic bank financing contribute to economic growth? The Malaysian case. *International Journal of Islamic and Middle Eastern Finance and Management*, 8(3), 349–368. <https://doi.org/10.1108/IMEFM-07-2014-0063>
- Hassan, M., Shahmoradi Asghar, & Turk Rima. (2015). *IMF working paper: An Overview of Islamic Finance*.
- Herranz, E. (2017). Unit root tests. *Wiley Interdisciplinary Reviews: Computational Statistics*, 9(3), e1396. <https://doi.org/10.1002/wics.1396>
- Hillman, A. (2008). Trade Liberalization and Globalization. In *Readings in Public Choice and Constitutional Political Economy*. https://doi.org/10.1007/978-0-387-75870-1_27
- Imam, P., & Kpodar, K. (2016). Islamic banking: Good for growth? *Economic Modelling*, 59, 387–401. <https://doi.org/10.1016/j.econmod.2016.08.004>
- International Monetary Fund. (2020). *CONSUMER PRICE INDEX MANUAL Concepts and Methods*. International Monetary Fund, Publication Services.

- Jawad, A., & Christian, K. (2019). ISLAMIC BANKING AND ECONOMIC GROWTH: APPLYING THE CONVENTIONAL HYPOTHESIS. *Journal of Islamic Monetary Economics and Finance*, 5(1).
<https://doi.org/10.21098/jimf.v5i1.1047>
- Jung Woo. (1986). Financial Development and Economic Growth: International Evidence. *Economic Development and Cultural Change*, 34(2), 333–346.
- Kammer, A., Norat, M., Piñón, M., Prasad, A., Towe, C., Zeidane, Z., Aljabrin, S., Sulaiman ALSaeed, K., Arda, A., Awad, R., Barajas, A., Chartouni, C., Chung, K., El Hamiani Khatat, M., El Khoury, C., Galand, J., Harutyunyan, A., Hurcan, Y., Jansen, B., ... Kargbo-Sical, D. (2015). *Islamic Finance: Opportunities, Challenges, and Policy Options* The IMF staff team comprised
- Kassim, S. (2016). Islamic finance and economic growth: The Malaysian experience. *Global Finance Journal*, 30, 66–76.
<https://doi.org/10.1016/j.gfj.2015.11.007>
- Keho, Y. (2017). The impact of trade openness on economic growth: The case of Cote d'Ivoire. *Cogent Economics & Finance*, 5(1), 1332820.
<https://doi.org/10.1080/23322039.2017.1332820>
- Keynes, J. M. (2016). *General Theory Of Employment , Interest And Money*. Atlantic Publishers & Dist.
- Khalifa Al-Yousif, Y. (2002). Financial development and economic growth Another look at the evidence from developing countries. *Review of Financial Economics*, 2, 131–150.
- Kim, D.-H. (2011). Trade, growth and income. *The Journal of International Trade & Economic Development*, 20(5), 677–709.
<https://doi.org/10.1080/09638199.2011.538966>
- Lamberton, D. (1999). *The Economics of Intangible Investment*, Elizabeth Webster, Cheltenham, UK, Edward Elgar, 1999, x + 118 pp., £39.95, ISBN 1

85898 858 6. *Prometheus*, 17(4), 451–452.
<https://doi.org/10.1080/08109029908632122>

Letiche, J. (1960). David Ricardo And Adam Smith on economic growth. *The Punjab University Economist*, 1(2), 7–35.

Lipsey, R. E., Feenstra, R. C., Hahn, C., & Hatsopoulos, G. N. (1999). *The Role of Foreign Direct Investment in International Capital Flows*.
<https://doi.org/10.3386/w7094>

Lucas, R. E. (1988). On the mechanics of economic development. *Journal of Monetary Economics*, 22(1), 3–42. [https://doi.org/10.1016/0304-3932\(88\)90168-7](https://doi.org/10.1016/0304-3932(88)90168-7)

Masoud, N., & Hardaker, G. (2012). The impact of financial development on economic growth: Empirical analysis of emerging market countries. *Studies in Economics and Finance*, 29(3), 148–173.
<https://doi.org/10.1108/10867371211246830>

Najeb Masoud. (2013). NEOCLASSICAL ECONOMIC GROWTH THEORY: AN EMPIRICAL APPROACH. *Far East Journal of Psychology and Business*, 11, 10–33.

OECD. (2011). *OECD Science, Technology and Industry Scoreboard 2011*. OECD.
https://doi.org/10.1787/sti_scoreboard-2011-en

OJK. (2019). *Statistik Perbankan Syariah Desember 2019*.

OJK. (2022). *Statistik Perbankan Syariah Desember 2021*.

Parikh, A. (2004). Relationship Between Trade Liberalisation, Growth and Balance of Payments in Developing Countries: An Econometric Study. *Hamburg Institute of International Economics, Discussion Paper Series*, 20.
<https://doi.org/10.2139/ssrn.575963>

- Qayyum, M., Younas, N., & Bashir, M. A. (2018). The Impact of Trade Liberalization on Economic Growth: A case study of Pakistan. *Journal of Economics and Sustainable Development*, 9, 65–71.
- Rammal, H. G. (2003). Mudaraba In Islamic Finance: Principles and Application. *Business Journal for Entrepreneurs*, 16, 105–112.
- Rammal, H. G. (2004). Financing Through Musharaka: Principles and Application. *ResearchGate*.
https://www.researchgate.net/publication/256002438_Financing_Through_Musharaka_Principles_and_Application
- René Antonio Hernández. (2003). Neoclassical and Endogenous Growth Models: Theory and Practice. *Research Gate*.
- Risfandy, T., Harahap, B., Hakim, A. R., Sutaryo, S., Nugroho, L. I., & Trinugroho, I. (2020). Equity Financing at Islamic Banks: Do Competition and Bank Fundamentals Matter? *Emerging Markets Finance and Trade*, 56(2), 314–328.
<https://doi.org/10.1080/1540496X.2018.1553160>
- Romer, P. M. (1986). Increasing Returns and Long-Run Growth. *Journal of Political Economy*, 94(5), 1002–1037.
- Sakinah, G., Kasri, R. A., & Nurkholis, N. (2022). Islamic Finance and Indonesia's Economy: An Empirical Analysis. *Jurnal Ekonomi & Keuangan Islam*, 47–59. <https://doi.org/10.20885/jeki.vol8.iss1.art4>
- Salkind, N. J. (2007). *Encyclopedia of Measurement and Statistics*. Vol. 3. SAGE Publications. <https://books.google.co.id/books?id=VUkNzQEACAAJ>
- Schilirò, D. (2019). *The growth conundrum: Paul Romer's endogenous growth*.
- Sugiyono. (2008). *METODE PENELITIAN KUANTITATIF, KUALITATIF DAN R&D*. . ALFABETA.
- Sukmana, R., & Kholid, M. (2013). An assessment of liquidity policies with respect to Islamic and conventional banks: A case study of Indonesia. *Qualitative*

Research in Financial Markets, 5(2), 126–138.
<https://doi.org/10.1108/QRFM-09-2011-0023>

Supriani, I., Fianto, B. A., Fauziah, N. N., & Maulayati, R. R. (2021). Revisiting the Contribution of Islamic Banks' Financing to Economic Growth: The Indonesian Experience. *Shirkah: Journal of Economics and Business*, 6(1).
<https://doi.org/10.22515/shirkah.v6i1.383>

Tabash, M. I., & Anagreh, S. (2017). Do Islamic banks contribute to growth of the economy? Evidence from United Arab Emirates (UAE). *Banks and Bank Systems*, 12(1), 113–118. [https://doi.org/10.21511/bbs.12\(1-1\).2017.03](https://doi.org/10.21511/bbs.12(1-1).2017.03)

Todaro, M., & Smith, S. (2011). *Pembangunan Ekonomi* (11th ed., Vol. 1). Erlangga.

Widarjono, A. (2018). *Ekonometrika pengantar dan aplikasinya disertai panduan views edisi kelima*. UPP STIM YKPN Yogyakarta.

world bank. (2016). *financial development*.

World Bank. (2017). *Financial Development*. Financial Development.
<https://www.worldbank.org/en/publication/gfdr/gfdr-2016/background/financial-development>

Yanikkaya, H. (2003). Trade openness and economic growth: a cross-country empirical investigation. *Journal of Development Economics*, 72(1), 57–89.
[https://doi.org/10.1016/S0304-3878\(03\)00068-3](https://doi.org/10.1016/S0304-3878(03)00068-3)

Zirek, D., Celebi, F., & Kabir Hassan, M. (2016). The Islamic Banking and Economic Growth Nexus: A Panel VAR Analysis for Organization of Islamic Cooperation (OIC) Countries. In *Journal of Economic Cooperation and Development* (Vol. 37).