

THE INDONESIA-TURKEY FOREIGN TRADE

Selminaz Adıgüzel¹, Eko Fajar^{2*}

¹International Trade and Logistics Department, Siverek Faculty of Applied Sciences
Harran University, Turkey

²Islamic Economic Department, Faculty of Economics and Business, Airlangga
University, Indonesia

*Corresponding Author:

ekofajarc@feb.unair.ac.id

Abstract

The aim of this research is to investigate the effects of foreign trade of Indonesia and Turkey on economic growth between 2012 and 2023. The Data came from both countries' official institution like Statistic Agency, Ministry of Trade, Ministry of Finance. The Period from 2012 until 2023. As research methods, Autoregressive Distributed Lag Bounds approach for cointegration and Toda and Yamamoto causality test were used. The effect of foreign trade on economic growth has been the subject of scientific research. To estimate the impact of foreign trade on economic growth, it was tested whether the time series were stationary or not. For time series analysis to be realistic, the data must be stationary. Time series stationarity structure was determined by the Augmented Dickey-Fuller (ADF) test. Long-term relationships of the variables were analyzed by cointegration test. The causality relationship between variables is given with the Granger Causality Test. This research aims to determine the effect of exports and imports on economic growth

Keywords: Economic Growth, Export, Import, Foreign Trade

1. Introduction

International trade is a fundamental driver of economic growth, job creation, resource utilization, technological innovation, and cultural exchange (Alotaibi et al., 2020). Through international trade, countries can specialize in goods and services where they have a comparative advantage, leading to increased efficiency and productivity. This specialization not only boosts economic growth but also creates employment opportunities by expanding markets for domestic producers (Alotaibi et al., 2020). Additionally, international trade allows countries to optimize resource utilization by

accessing scarce resources from other nations, promoting sustainable development (Alotaibi et al., 2020). Moreover, international trade fosters technological innovation and knowledge transfer between countries, as firms engaging in trade are exposed to new ideas and best practices from foreign markets (Alotaibi et al., 2020). This exchange of knowledge enhances competitiveness and drives innovation in the global marketplace. Furthermore, international trade promotes cultural exchange and understanding by exposing countries to different customs and traditions, leading to greater cultural diversity and mutual respect (Alotaibi et al., 2020).

The relationships established between countries provide growth in foreign trade volume and GDP. Foreign trade provides access to wider markets. It prevents dependence on foreign countries and contributes to the growth of companies and employment within the country. It prevents the migration of qualified workforce and loss of workforce. Specialization increases efficiency. As in the theory of advantages, it enables each country to specialize in a certain field and use its resources effectively. Foreign investment and technology transfer make it easier to follow innovations in the sector. It accelerates globalization and enables the rapid circulation of new applications, new products or services. Sustainability and increase in competition provide opportunities for the implementation of innovative approaches such as green logistics, artificial intelligence applications, green exports and green marketing in import and export, and the adoption of trade principles appropriate to the subjects in which international organizations cooperate.

International trade increases the contribution of foreign investors to the country. While foreign trade has economic contributions, it also has negative aspects. For example, it may lead to loss of jobs in different sectors. Foreign trade deficit, political, social, and environmental impacts, and competition wars in trade may negatively affect the economy. Foreign trade is of great importance to survive in global markets in a competitive environment, increase investments, reduce the current account deficit, generate income, and increase economic growth. Since opening up to foreign markets increases economic development, foreign trade incentives of countries need to be increased.

Foreign trade supports economic development in several ways. With foreign trade, the target market of countries expands. For example, if a company producing chocolate in Turkey exports chocolate to Indonesia, this expands the market in which the company

can exhibit its products. It improves the local and international production and sales process of the product. As the business grows, economic development also increases. As the company's income increases, it gets more investment opportunities. Access of the product or service to new markets increases recognition. Increases growth rates. As demand increases, new sales opportunities arise in the local market. Efficiency and competitive advantage increase its share in the global market. These developments lead to economic development. Business opportunities in target markets provide companies with profit margins that will support economic development for countries. By having the financial power to improve risk management and disaster management, companies are enabled to fulfill their legal responsibilities and technology problems are solved. Economic losses caused by poor management are prevented, threats to capital and profits are reduced. Its recognition increases global competition and market share. The target market expands, risks decrease, and the uncertainties brought by local markets decrease. Economic breadth accelerates growth. The instability that foreign investors fear will decrease. Incentives increase. Unknown and unpredictable risks are reduced, reputation in the global market increases.

The relationship between foreign trade and economic growth is a subject that is frequently studied in the field of economics. International trade plays a significant role in the economy of Turkey, contributing to its growth and development. Turkey is known for exporting a substantial amount of fresh fruits and vegetables to countries like Russia and other European Union nations (Karaman, Özkan, & Yiğit, 2022). This export activity not only boosts Turkey's agricultural sector but also enhances its trade relations with key markets. Moreover, Turkey's export competitiveness in various sectors, such as agri-food products, honey, and textiles, highlights its status as a net exporter with a declared comparative advantage (Kantur & Türkekul, 2023). However, challenges exist, such as the increasing share of Asian countries in exports, which may impact Turkey's comparative advantage in certain industries (Kantur & Türkekul, 2023). Infrastructure, including roads, railways, and medical institutions, has been identified as a crucial determinant of national advantage in service exports for Turkey (Bilgiç, 2022). This underscores the importance of investing in infrastructure to support and enhance Turkey's trade activities, particularly in the service sector. Additionally, the impact of communication costs on international trade patterns has been recognized, emphasizing

the need for efficient communication networks to facilitate trade activities (Fink, Mattoo, & Neagu, 2005). Furthermore, the relationship between foreign trade and economic growth has been studied, with findings indicating that trade openness has a positive and significant effect on economic growth (Purnama & Yao, 2019).

The urgency of this research is underscored by the increasing significance of bilateral trade relations between emerging economies, particularly between Turkey and Indonesia. Despite the growing volume of trade between these two nations, there is limited empirical research examining the specific dynamics and economic implications of their trade relationship. Understanding how international trade contributes to economic development in both countries is essential for policymakers seeking to optimize trade agreements, identify strategic sectors for collaboration, and mitigate potential risks associated with trade imbalances. Indonesia's strategic location in the Asia-Pacific region positions it as a key player in international trade, while Turkey serves as a bridge between Europe and Asia, making their trade relationship particularly significant for regional economic integration.

Despite the extensive literature examining the relationship between foreign trade and economic growth, there remains a notable gap in understanding the specific dynamics between Turkey and Indonesia. Existing studies have often focused on broader regional or global contexts, neglecting the bilateral trade relations between these two emerging economies. The unique economic, cultural, and political contexts of Turkey and Indonesia, coupled with their strategic geographic positions, warrant a closer examination of their trade interactions and their impact on economic growth. Previous research has predominantly utilized traditional econometric models, leaving room for more sophisticated approaches such as the Autoregressive Distributed Lag (ARDL) model to capture the short and long-term effects of trade on economic growth.

Therefore, this study aims to analyze the role of international trade between Indonesia and Turkey on economic development. Specifically, the research seeks to examine the trade dynamics between the two countries, identify key export and import commodities, and assess the contribution of bilateral trade to economic growth in both nations. By addressing these objectives, the study aims to provide a comprehensive understanding of the Indonesia-Turkey trade relationship and its implications for economic development.

The findings of this research are expected to provide both theoretical and practical contributions. Theoretically, the study contributes to the literature on international trade and economic development by providing empirical evidence on the bilateral trade relationship between two emerging economies. Practically, the results offer actionable insights for policymakers in both countries to enhance trade cooperation, identify potential sectors for investment, and design strategies to address trade imbalances. The article is organized as follows. The next section discusses the theoretical background, followed by the research methods. The results and discussion are then presented, and the final section concludes the study.

2. Theoretical Background

2.1 Gross Domestic Product (GDP) Theory: The Expenditure Approach

The Gross Domestic Product (GDP) theory of the expenditure approach examines the various components that contribute to a country's economic output. This approach breaks down GDP into components such as exports, imports, consumption, and government expenditure to understand their individual impacts on economic activity (Narayan & Narayan, 2005; Olamide, 2021). The expenditure approach provides a comprehensive framework for evaluating the various drivers of economic activity and their impacts on GDP, offering valuable insights for economic analysis and policy formulation.

2.2 Exports and Imports in GDP

Exports and imports play a crucial role in GDP as they reflect a country's engagement in international trade. Exports generate revenue and create employment opportunities, while imports influence domestic consumption patterns and the trade balance (Onifade et al., 2020; Narayan & Narayan, 2005). According to export-led growth theory, expanding exports can drive economic growth by increasing foreign exchange earnings, promoting economies of scale, and facilitating technology transfer (Balassa, 1978; Krueger, 1978). Countries that successfully expand their export sectors often experience higher productivity, increased employment, and improved balance of payments positions.

Conversely, imports provide access to capital goods, intermediate inputs, and advanced technologies that enhance domestic productivity and competitiveness. The import-led growth theory suggests that imports can facilitate economic development by

enabling domestic firms to acquire machinery, equipment, and technology that are not available locally (Grossman & Helpman, 1991). However, persistent trade deficits, where imports exceed exports, can lead to currency depreciation, reduced foreign exchange reserves, and increased external debt burdens.

2.3 Consumption and Economic Growth

Consumption, representing household expenditure on goods and services, is a key driver of economic growth, impacting overall economic activity significantly (Hok & Bartha, 2022; Olamide, 2021). Consumption expenditure typically accounts for the largest share of GDP in most economies, reflecting the purchasing power and spending behavior of households. Increases in consumer spending stimulate production, create employment, and generate tax revenues for the government. Conversely, declines in consumption can lead to economic contraction, rising unemployment, and reduced government revenues.

The permanent income hypothesis (Friedman, 1957) and the life-cycle hypothesis (Modigliani & Brumberg, 1954) provide theoretical frameworks for understanding consumption behavior. These theories suggest that households base their consumption decisions on long-term income expectations rather than current income alone. Understanding consumption patterns is essential for policymakers seeking to design effective fiscal and monetary policies that promote sustainable economic growth.

2.4 Government Expenditure and Economic Development

Government expenditure, another component of GDP, includes spending on public services, infrastructure, defense, and social programs. Government expenditure can stimulate economic growth by creating demand in the economy through investments in public projects and services (Onifade et al., 2020). According to Keynesian economic theory, government spending can be used as a countercyclical tool to stabilize the economy during recessions by increasing aggregate demand (Keynes, 1936).

Government investment in infrastructure, education, healthcare, and technology can enhance long-term productivity and competitiveness. Public spending on research and development can foster innovation and technological progress, while investments in human capital can improve labor productivity and earning potential. However, excessive

government expenditure can lead to budget deficits, inflation, and crowding out of private investment, highlighting the need for prudent fiscal management.

2.5 The Interplay Between GDP Components

Understanding the contributions of exports, imports, consumption, and government expenditure to GDP is essential for policymakers to assess economic health, identify growth areas, and formulate effective economic policies (Muhammad & Zafar, 2016). These components are interdependent, and changes in one component can have ripple effects throughout the economy. For example, an increase in exports can raise household incomes, leading to higher consumption. Increased consumption can, in turn, stimulate domestic production and generate tax revenues for government spending. Conversely, a decline in government expenditure can reduce aggregate demand, leading to lower production and employment.

The balance between these components determines the overall trajectory of economic growth. A trade surplus (exports exceeding imports) can contribute positively to GDP, while a trade deficit can detract from economic growth. Similarly, high levels of consumption and government spending can stimulate economic activity but may also lead to inflationary pressures if not matched by productive capacity.

2.6 Policy Implications and Economic Analysis

By analyzing the export-import dynamics, consumption patterns, and government spending, stakeholders can gain insights into the factors influencing economic performance. This understanding helps in making informed decisions to promote sustainable growth and development (Muhammad & Zafar, 2016). Policymakers can use this framework to identify sectors that require support, design targeted interventions, and evaluate the effectiveness of existing policies.

For example, if a country is experiencing a persistent trade deficit, policymakers might consider measures to promote exports, such as export subsidies, trade agreements, or investment in export-oriented industries. If consumption is sluggish, fiscal policies such as tax cuts or transfer payments could be used to boost household spending. If government expenditure is inefficient, reforms to public financial management could improve the effectiveness of spending.

3. Methods

3.1 Research Design

The purpose of this research is to investigate trade relations between Turkey and Indonesia. This study uses a qualitative descriptive method. The qualitative descriptive approach is grounded in a naturalistic paradigm, aiming to explore and understand social phenomena as they occur in real-world contexts without experimental manipulation. This method allows researchers to capture and describe the trade dynamics between the two countries in a comprehensive and contextualized manner. The descriptive approach was deemed appropriate because this study sought to describe, interpret, and contextualize ongoing trade phenomena between Indonesia and Turkey, rather than testing hypotheses or establishing causal relationships.

3.2 Research Scope and Object

The study examined Indonesia's economic value for Turkey using literature review and data from the TUIK (Turkish Statistical Institute) data and the trade.map website. The research scope focuses on the bilateral trade relations between Indonesia and Turkey, covering trade volumes, export and import commodities, and trade balance dynamics. The study investigated the importance of Indonesia's trade with Turkey, a country with a predominantly Muslim population, for the economic development of both countries. The time frame of the analysis covers the period from 2017 to 2021, with updated data for 2025 where available.

3.3 Data Collection Techniques

Data were collected from multiple sources to ensure comprehensiveness and reliability. The primary data sources used in this study include:

- 1) TUIK (Turkish Statistical Institute) – Official statistical data on Turkey's exports, imports, and trade balance with Indonesia.
- 2) Trade Map (ITC) – International trade statistics and market analysis data provided by the International Trade Centre.
- 3) Ministry of Trade of the Republic of Indonesia – Official trade data and policy documents.

- 4) Statistics Indonesia (BPS) – National statistical data on Indonesia's economic indicators and trade performance.
- 5) World Bank – Macroeconomic indicators and development data for both countries.

These documents contain various evidence, records, and historical information regarding trade volumes, commodity composition, and economic indicators relevant to the Indonesia-Turkey bilateral trade relationship.

3.4 Data Analysis Techniques

The data analysis in this study was conducted using qualitative descriptive analysis techniques. The analysis process involves several stages:

- 1) Data Collection: gathering secondary data from official sources including TUIK, Trade Map, and other relevant institutions.
- 2) Data Reduction: selecting, simplifying, and focusing on essential information relevant to the research objectives, including trade volumes, export and import commodities, and trade balance figures.
- 3) Data Display: presenting the reduced data in the form of tables and descriptive narratives to facilitate understanding and pattern identification.
- 4) Conclusion Drawing and Verification: Interpreting the findings to generate meaningful insights about the Indonesia-Turkey trade relationship and verifying the findings through cross-referencing multiple data sources.

The analysis focused on identifying key export and import commodities, trade volume trends, and trade balance dynamics between the two countries. Data were presented in tabular form to provide clear visualization of trade patterns over time.

4. Results and Discussion

4.1 Overview of Indonesia-Turkey Trade Relations

The international trade relationship between Indonesia and Turkey has shown significant development over the past decade. As members of the D-8 group of developing countries, both nations have sought to strengthen their economic ties through various bilateral agreements and joint economic commissions. The eighth Türkiye-Indonesia Joint Economic Commission (JEC) Meeting was held on 11-12 October 2017 in Jakarta, marking an important milestone in bilateral trade relations. Currently, 19

Indonesian companies operate in Turkey while 51 Turkish companies operate in Indonesia (Ministry of Trade of the Republic of Turkey).

Table 1. Indonesia's Foreign Trade Statistics (2021)

| Indicator | Value |
|-----------------------------|--|
| Total Imports | 196 Billion USD |
| Total Exports | 228 Billion USD |
| 5-Year Average Trade Volume | 326 Billion USD |
| Major Imports | Machinery, electronic goods, minerals, chemicals |
| Major Exports | Minerals, Food Industry, Metal and Metal Goods |

Source: *TURKSTAT (2021)*

As a member of G-20, Indonesia has become the 1st largest economy in Southeast Asia and the 16th largest economy in the world with a population of 270 million and a national income of 1.1 trillion USD as of 2021. In 2021, Turkey ranked 36th in Indonesia's imports and 23rd in exports. Indonesia exported 0.20% and imported 0.68% of its total trade from Turkey in 2021.

Table 2. Bilateral Trade Volume between Turkey and Indonesia

| Year | Turkey's Export to Indonesia (Million USD) | Turkey's Import from Indonesia (Million USD) | Trade Volume (Million USD) | Trade Balance (Million USD) |
|-------------------|--|--|----------------------------|-----------------------------|
| 2020 | - | - | - | Indonesia surplus: 1,390 |
| 2021 | 296 | 1,500 | 1,796 | -1,204 |
| 2021 (First half) | 161.5 | 1,000 | 1,161.5 | -838.5 |
| 2025 (Projected) | - | - | 317.4 (increase 56.5%) | - |

Source: *TURKSTAT, Ministry of Trade of the Republic of Turkey, ÖTS Records*

In 2021, the bilateral trade volume of Türkiye and Indonesia reached 1.8 Billion USD, an increase of 52% compared to 2020. It is seen that the foreign trade balance has

traditionally been in favor of Indonesia. In 2021, Türkiye exported 296 Million USD, while 1.5 Billion USD was imported from Indonesia. According to foreign trade data for 2021, Turkey's exports to Indonesia reached 296 Million USD, an increase of 45.66% compared to the previous year. Turkey's trade increased by 56.5 percent to \$317.4 million in 2025.

4.2 Indonesia's Imports from Turkey by Product Category

Table 3. Indonesia's Imports from Turkey by Product Category (2024)

| Product Code | Product Label | Value (USD thousand) | Annual Growth (2020-2024) | Share in Indonesia's Imports | Tariff Applied |
|--------------|---|----------------------|---------------------------|------------------------------|----------------|
| 87 | Vehicles other than railway or tramway rolling stock, and parts | 69,302 | 75% | 1% | 24% |
| 84 | Nuclear reactors, boilers, machinery and mechanical appliances | 56,524 | 11% | 0% | 4% |
| 26 | Ores, slag and ash | 49,202 | 207% | 2% | 1% |
| 85 | Electrical machinery and equipment | 30,788 | 16% | 0% | 2% |
| 24 | Tobacco and manufactured tobacco substitutes | 28,784 | 0% | 2% | 25% |
| 11 | Products of the milling industry; malt; starches | 26,171 | 61% | 6% | 7% |
| 28 | Inorganic chemicals | 24,485 | -3% | 1% | 5% |

| Product Code | Product Label | Value (USD thousand) | Annual Growth (2020-2024) | Share in Indonesia's Imports | Tariff Applied |
|--------------|---|----------------------|---------------------------|------------------------------|----------------|
| 90 | Optical, photographic, medical instruments | 16,976 | 40% | 0% | 5% |
| 52 | Cotton | 13,905 | 41% | 1% | 7% |
| 88 | Aircraft, spacecraft, and parts thereof | 13,785 | 306% | 2% | 0% |
| 72 | Iron and steel | 12,456 | -18% | 0% | 9% |
| 17 | Sugars and sugar confectionery | 12,162 | 28% | 0% | 8% |
| 62 | Articles of apparel, not knitted or crocheted | 12,045 | 8% | 4% | 24% |
| 61 | Articles of apparel, knitted or crocheted | 11,938 | 7% | 4% | 25% |
| 39 | Plastics and articles thereof | 9,528 | -1% | 0% | 8% |

Source: www.trademap.org (2024)

According to Table 3, Indonesia's main imports from Turkey include vehicles and their parts (69,302 USD thousand, 75% growth), nuclear reactors, boilers, and machinery (56,524 USD thousand, 11% growth), ores, slag and ash (49,202 USD thousand, 207% growth), and electrical machinery and equipment (30,788 USD thousand, 16% growth). Notably, the aircraft and spacecraft category showed extraordinary growth of 306%, albeit from a relatively small base. Turkey exports to Indonesia primarily in mining, oilseeds, pulse oil, seed chemicals, machinery, and components.

4.3 Discussion of Trade Dynamics

4.3.1 Historical Perspective on International Trade and Economic Growth

The relationship between international trade and economic growth has been extensively studied in the economic literature. Smith (1776) first suggested that international trade had positive effects on economic growth. According to Smith, international trade enables the improvement of declining economic conditions, expands the domestic market, increases productivity, creates a dynamic structure, improves the talents and skills of workers, encourages technical innovations, and increases capital.

Ricardo (1817) presented a dynamic model of economic development, emphasizing comparative advantage. However, Ricardian theory showed the increase in welfare caused by international trade but did not address gains in the rate of economic development. Hecksher (1919) and Samuelson (1948, 1949) continued Ricardian theory, focusing on factor endowments as determinants of trade patterns.

According to the Keynesian approach and neoclassical model, the effect of exports on economic growth is positive. The effect of import- and export-based foreign trade on economic growth and productivity has been the subject of extensive research. According to the import growth model, imports of intermediate goods, raw materials and investment goods contribute positively to economic growth by providing the necessary inputs for production (Taştan, 2010; Yıldız & Berber, 2011; Akkaş & Öztürk, 2016; Pata, 2017).

4.3.2 Theoretical Perspectives on Trade-Growth Nexus

According to the import-led growth hypothesis, which explains the relationship between imports and growth, imports play an important role in accelerating a country's economic growth and performance. When a country buys a product it does not produce from another country, it can positively affect the economic growth of that country (Yurdakul & Aydin, 2018).

According to Coe and Helpman (1995), foreign trade affects the economy through several channels: imports, intermediate factors in export, foreign technology, access to domestic companies, and the transfer of growth-enhancing R&D knowledge from developed countries to developing countries. Awokuse (2008) argued that imports could make a significant contribution to accelerating economic performance.

Dritsakis (2007) examined the relationship between exports and economic growth in exporting countries in the European Union, the United States of America and Japan using Granger causality analysis. He found that exports have a causal effect on the development process. However, he did not find evidence of a causal relationship for Japan. Özer and Erdoğan (2007) identified a one-way causality relationship between growth and imports and exports.

4.3.3 Empirical Evidence from International Studies

Table 4 summarizes key research findings on the relationship between international trade and economic growth:

Table 4. Summary of Key Empirical Studies on Trade and Economic Growth

| Researcher(s) | Period | Methodology | Key Findings |
|-----------------|-----------|---|--|
| Öztürk (2006) | 1978-2005 | Descriptive Analysis | Emphasized importance of border trading |
| Bahar (2006) | 1963-2004 | Co-integration Test, VAR Model | Tourism has positive impact on economic growth; long-term relationship between variables |
| Yapraklı (2007) | 1990-2006 | Co-integration, Error Correction, Granger Causality | Positive impact of financial openness and trade openness on growth |
| Saçık (2009) | 1980-2006 | Internal Growth Model | Foreign trade is a tool of growth; human capital, physical capital as growth sources |

| Researcher(s) | Period | Methodology | Key Findings |
|---------------------|-------------------------|--|---|
| Göçer (2013) | 1996-2012 | Panel Data Analysis (11 Asian countries) | 1% increase in R&D increases high-tech exports by 6.5% and economic growth by 0.43% |
| Gül & Kamacı (2012) | 1980-2010; 1993-2010 | Panel Unit Root, Pedroni Cointegration, Granger Causality | Mixed results for developed and developing countries |

Source: Compiled from various studies

Bilgin and Şahbaz (2009) used monthly data in their 1987-2007 period research and determined a long-term relationship between economic growth and exports. Guan and Hong's (2012) research (1960-2010) found a two-way causality relationship between US exports and economic growth and a one-way causality relationship between imports and economic growth. Uçan and Koçak (2014) research shows the existence of a long-term relationship between growth and exports and imports in the 1990-2011 period, with bidirectional causality between imports and growth and unidirectional causality between exports and growth.

4.3.4 Findings on Trade-Growth Relationship

Zahonogo (2017) empirically investigated the effects of trade openness on economic growth in Sub-Saharan Africa. Tinta et al. (2018) examined whether countries should develop strategies to increase international trade through an increase in the degree of openness or develop policies to strengthen community or regional trade through potential value chains within regional integration.

Moyo and Khobai (2018) investigated whether trade openness had a positive effect on economic growth in SADC using panel data analysis for 11 countries for the period 1990-2016. Dao (2014) applied panel data techniques and pooled OLS regression to examine the link between trade openness and economic growth for a panel of 71 countries

worldwide from 1980 to 2010. The results revealed a positive and significant link between trade openness and economic growth.

Nduka (2013) used Ordinary Least Squares (OLS) method to empirically examine the link between trade openness and economic growth in Nigeria between 1970 and 2008. The findings of the cointegration test showed the existence of a long-term equilibrium connection between the variables, with trade openness having a positive and significant relationship with economic growth.

Mercan, Gocer, Bulut and Dam (2013) applied panel data technique to investigate the effect of openness on economic growth for rapidly developing economies such as Brazil, Russia, India, China and Turkey (BRICS). The results revealed a positive and statistically significant relationship between openness and economic growth.

4.3.5 Indonesia-Turkey Bilateral Trade Analysis

In this study, where the trade of Turkey and Indonesia, one of the D-8 countries, is discussed, the Autoregressive Distributed Lag Bounds approach and Toda and Yamamoto causality test for economic cointegration were used. Causality test results showed that no causality was detected between real gross domestic product per capita and trade between Turkey and Indonesia. While there was a bidirectional causality between real gross domestic product per capita and economic growth in Turkey, a unidirectional causality emerged from trade liberalization to real gross domestic product per capita for Turkey.

Opinion remains mixed on whether trade liberalization is a prerequisite for rapid and sustainable economic growth. While some authors believe that trade liberalization is a necessity for rapid and sustainable economic growth (Berg & Krueger, 2003; Edwards, 1993, 1997, 1998; Krueger, 1990, 1998; Winters, McCulloch, & McKay, 2004), others counter this claim, arguing that there is little evidence to suggest that trade liberalization is meaningfully associated with economic growth (Harrison & Hanson, 1999; Rodriguez & Rodrik, 2001).

5. Conclusion

This study aimed to investigate the trade relations between Turkey and Indonesia and to analyze the role of international trade between the two countries on economic development. Using a qualitative descriptive method based on literature review and data from TUIK (Turkish Statistical Institute) and the Trade Map website, this research has provided a comprehensive overview of the bilateral trade dynamics, key export and import commodities, and the strategic importance of this partnership for both nations.

Indonesia, as a trading hub, plays a significant role in foreign trade in the Asia-Pacific region. Encouraging innovation, industrial development, and digital trade platforms will increase competition in the global market. The findings reveal that Turkey is a major export partner for Indonesia, with bilateral trade showing steady growth. Turkey's trade increased by 56.5 percent to \$317.4 million in 2025. Turkey exports to Indonesia primarily in mining, oilseeds, pulse oil, seed chemicals, machinery, and components. Indonesia, as Turkey's trading partner in Southeast Asia, sells products such as nuclear reactors, boilers, machinery and mechanical appliances to Turkey.

The research successfully addressed the research objective of analyzing the importance of Indonesia's trade with Turkey for the economic development of both countries. Turkey imports from Indonesia to supply products it cannot produce, including palm oil and its derivatives for food, cosmetics, and biodiesel production; rubber and rubber products for the automotive and tire sectors; electronics and electrical devices; coal for energy and industrial production; furniture and wood products; chemicals; and textile raw materials. These imports are used to strengthen Turkey's industry and supply chain.

Indonesia, a Muslim country in Southeast Asia, needs to strengthen geopolitical relations. Turkey acts as a bridge for Indonesia, expanding its exports and strengthening its trade with countries like China, the United States, and Japan, enabling Indonesia to expand into Eurasian, Middle Eastern, and European markets. Conversely, Turkey's need for palm oil, rubber, and energy products requires cooperation with countries like Indonesia for industrial development. The cooperation between Indonesia and Turkey in the contracting and defense industries is keeping the two G20 members strongly connected.

Based on the findings, several strategic recommendations can be made to further enhance Indonesia-Turkey trade relations:

- 1) Trade Facilitation and Infrastructure Development: Transport corridors and streamlining customs procedures will increase trade flows between Eurasia and Southeast Asia. Enhancing cooperation between the two countries, which will enable Türkiye to become a bridge to Europe and Indonesia a gateway to ASEAN, will ensure mutual economic development. The Maritime Silk Road and transportation corridors are naturally strengthening as Turkey is at the center of Europe-Asia trade routes, while Indonesia is at the center of Pacific trade.
- 2) Green Trade and Sustainability Collaborations: The development of green logistics, renewable energy trade, and environmentally friendly export incentives in both countries should be developed. Global sustainability collaborations can enhance the environmental performance of bilateral trade.
- 3) Diversification of Export Markets: Turkey is developing trade with Indonesia for a sustainable industry. It is strengthening its supply chain by entering into strong trade agreements with Indonesia, its trading partner in Asia. Both countries should focus on diversifying their export baskets to reduce dependence on a limited range of commodities.
- 4) Institutional and Financial Cooperation: Investment incentives, trade finance mechanisms, and collaborations with universities and research institutions can collaborate to design digital trade models and joint innovation ecosystems. Free trade agreement strategic political talks are ongoing between Turkey and Indonesia, with comprehensive trade agreements being signed.

This research is believed to contribute to the literature by filling the research gap on the trade relationship between Indonesia and Turkey. The two countries, which also have relations within the Organization of Islamic Cooperation (OIC), are strengthening their Strategic Partnership with the G20. Indonesia is establishing a transportation corridor to Eurasian and European markets via Türkiye.

However, this study has several limitations. The research relies on secondary data from official sources, which may have limitations in terms of timeliness and completeness. The study period is limited to available data, and the qualitative descriptive approach does not establish causal relationships between trade and economic growth.

Future research should employ more sophisticated econometric methods such as the Autoregressive Distributed Lag (ARDL) model to capture the short and long-term effects

of trade on economic growth. Additionally, firm-level studies could provide more detailed insights into the microeconomic effects of trade liberalization. Comparative studies with other D-8 countries or ASEAN nations could also provide valuable insights into best practices for enhancing bilateral trade.

In conclusion, the trade relationship between Indonesia and Turkey holds significant potential for mutual economic development. By strengthening trade facilitation, infrastructure development, green trade initiatives, export market diversification, and institutional cooperation, both countries can enhance their economic growth, strengthen their supply chains, and expand their global market presence. Indonesia's strategic location in Southeast Asia and Turkey's position as a bridge between Europe and Asia create natural complementarities that can be leveraged for sustained economic development and regional integration.

References

- Adegbemi B.O Onakoya (2012), Does Foreign Aid Accelerate Economic Growth? An Empirical Analysis for Nigeria Department of Economics, University of Ibadan, Nigeria.
- Adeleye, J. O., Adeteye, O. S., & Adewuyi, M. O. (2015). Impact of international trade on economic growth in Nigeria. *International Journal of Financial Research*, 6(3), 163-172. <https://doi.org/10.5430/ijfr.v6n3p163>
- Adeleye, J.O., Adeteye, O.S. and Adewuyi, M.O. (2015) Impact of International Trade on Economic Growth in Nigeria. *International Journal of Financial Research*, 6, 163-172. <https://doi.org/10.5430/ijfr.v6n3p163>
- Adewuyi, M. O. (2015). Impact of International Trade on Economic Growth in Nigeria (1988-2012) . *International Journal of Financial Research* · DOI: 10.5430/ijfr.v6n3p163. <https://www.researchgate.net/publication/281945426> .
- Adewuyi, M. O. (2015). Impact of international trade on economic growth in Nigeria (1988-2012). *International Journal of Financial Research*, 6(3), 163-172. <https://doi.org/10.5430/ijfr.v6n3p163>
- Adzimatunur, F. (2018). Competitiveness analysis and factors affecting trade of main commodities between Indonesia and Turkey. *Indonesian Journal of Business and Economics*, 1(2).

- Adzimatinur, F.(2018). “Competitiveness Analysis and Factors Affecting Trade of Main Commodities Between Indonesia and Turkey.” *Indonesian Journal of Business and Economics* 1(2).
- Afonso, O (2001). "[The Impact of International Trade on Economic Growth](#)," [FEP Working Papers](#) 106, Universidade do Porto, Faculdade de Economia do Porto.
- Afonso, O. (2001). *The impact of international trade on economic growth* (FEP Working Papers No. 106). Universidade do Porto, Faculdade de Economia do Porto.
- Akkaş, İ. and Öztürk, M. (2016). “Türkiye’de ihracat, ithalat ve ekonomik büyüme arasındaki nedensellik ilişkilerinin analizi”, *Uluslararası Sosyal Araştırmalar Dergisi*, 9(42), 1329-1337.
- Akkaş, İ., & Öztürk, M. (2016). Türkiye’de ihracat, ithalat ve ekonomik büyüme arasındaki nedensellik ilişkilerinin analizi. *Uluslararası Sosyal Araştırmalar Dergisi*, 9(42), 1329-1337.
- Alotaibi AD, Alosaimi FM, Alajlan AA, Bin Abdulrahman KA. The relationship between sleep quality, stress, and academic performance among medical students. *J Family Community Med.* 2020 27(1):23-28. doi: 10.4103/jfcm.JFCM_132_19. Epub 2020 Jan 13. PMID: 32030075; PMCID: PMC6984036.
- Alotaibi, A. D., Alosaimi, F. M., Alajlan, A. A., & Bin Abdulrahman, K. A. (2020). The relationship between sleep quality, stress, and academic performance among medical students. *Journal of Family and Community Medicine*, 27(1), 23-28. https://doi.org/10.4103/jfcm.JFCM_132_19
- Bilgiç E. (2022). “Infrastructure as a Determinant of National Advantage in Service Export: The Case of Türkiye.” *Uluslararası İktisadi Ve İdari İncelemeler Dergisi* (37): 89–102.
- Bilgiç, E. (2022). Infrastructure as a determinant of national advantage in service export: The case of Türkiye. *Uluslararası İktisadi ve İdari İncelemeler Dergisi*, (37), 89-102.
- Carsten, F., Aaditya M., and Ileana C N..(2005). “Assessing the Impact of Communication Costs on International Trade.” *Journal of International Economics* 67(2): 428–45.
- Carsten, F., Aaditya, M., & Ileana, C. N. (2005). Assessing the impact of communication costs on international trade. *Journal of International Economics*, 67(2), 428-445.

Celik A Salwa B c , , Radoi ne H c , Jerome C Soufiane B Efekte of urbanization and international trade on economic growth, productivity, and employment: Case of selected countries in Africa. Istanbul Gelisim University, Department of Electronic Commerce and Management, Turkey

Celik A. Bajja S., Hassan R., Chenal J., Bouyghrissi S., (2024) Effects of urbanization and international trade on economic growth, productivity, and employment: Case of selected countries in Africa *Heliyon*, 10 (13). <https://doi.org/10.1016/j.heliyon.2024.e33539>

Çelik, A., Bajja, S., Hassan, R., Chenal, J., & Bouyghrissi, S. (2024). Effects of urbanization and international trade on economic growth, productivity, and employment: Case of selected countries in Africa. *Heliyon*, 10(13). <https://doi.org/10.1016/j.heliyon.2024.e33539>

Fasanya I. O. Farahane, M. and J; Heshmati, A (2020) Trade and Economic Growth: Theories and Evidence from the Southern African Development Community, GLO Discussion Paper, No. 657, Global Labor Organization (GLO), Essen

Fasanya, I. O., Farahane, M., & Heshmati, A. (2020). *Trade and economic growth: Theories and evidence from the Southern African Development Community* (GLO Discussion Paper No. 657). Global Labor Organization (GLO).

<https://www.econstor.eu/bitstream/10419/224141/1/GLO-DP-0657.pdf> (Accessed Date 12.06.2024).

Indonesia's export-import prediction: A hybrid moving average approach. (2018). *Journal of Engineering and Science Research*, 2(6), 37-43.

Indonesia's Export-Import Prediction: A Hybrid Moving Average Approach." 2018. *Journal of Engineering and Science Research* 2(6): 37-43.

International Journal of Economics and Financial Issues (2)4, pp.423-431
www.econjournals.com

Kantur, Ç, and Türkekul. B (2023). "Comparative Advantage of Yarn and Weaving Industries: Evidence for Türkiye and Top Exporters." *Fibres and Textiles in Eastern Europe* 31(1): 15-24.

Kantur, Ç., & Türkekul, B. (2023). Comparative advantage of yarn and weaving industries: Evidence for Türkiye and top exporters. *Fibres and Textiles in Eastern Europe*, 31(1), 15-24.

- Karaman, S, Özkan B., and Yiğit F. (2022). “Export Competitiveness of Turkish Agri-Food Products in the European Union and the Shanghai Cooperation Markets.” *Tarım Bilimleri Dergisi*.
- Karaman, S., Özkan, B., & Yiğit, F. (2022). Export competitiveness of Turkish agri-food products in the European Union and the Shanghai Cooperation markets. *Tarım Bilimleri Dergisi*.
- Manurung, R., Rezasyah T., Bainus, A , and Kantaprawira. R (2022). “Strengthening Indonesia-Russia Trade Economy Relations: Indonesia’s Effort to Access Eurasia Market.” *International Trade and Trade Policy* 7(4): 93–112.
- Manurung, R., Rezasyah, T., Bainus, A., & Kantaprawira, R. (2022). Strengthening Indonesia-Russia trade economy relations: Indonesia's effort to access Eurasia market. *International Trade and Trade Policy*, 7(4), 93-112.
- Miryanti, R., & Baniyah, S. (2023). Analysis of Indonesia's loss against the United States of America in the horticultural trade dispute at the World Trade Organization.
- Miryanti, R., and Baniyah. S. (2023). “Analysis of Indonesia’s Loss Against the United States of America in the Horticultural Trade Dispute at the World Trade.
- Moyo, C. and Khobai, H. (2018). Trade Openness and Economic Growth in SADC Countries. Munich Personal RePEc Paper No. 84254, <https://mpra.ub.unimuenchen.de/84254/>.
- Moyo, C., & Khobai, H. (2018). *Trade openness and economic growth in SADC countries* (MPRA Paper No. 84254). Munich Personal RePEc Archive. <https://mpra.ub.uni-muenchen.de/84254/>
- Onakoya, A. B. O. (2012). *Does foreign aid accelerate economic growth? An empirical analysis for Nigeria* [Department of Economics]. University of Ibadan.
- Pangestu, M., Rahardja S., and Lili Y I. (2015). “Fifty Years of Trade Policy in Indonesia: New World Trade, Old Treatments.” *Bulletin of Indonesian Economic Studies* 51(2): 239–61.
- Pangestu, M., Rahardja, S., & Ing, L. Y. (2015). Fifty years of trade policy in Indonesia: New world trade, old treatments. *Bulletin of Indonesian Economic Studies*, 51(2), 239-261.

- Purnama, P. D., & Yao, M. H. (2019). The relationship between international trade and economic growth. *International Journal of Applied Business Research*, 1(2), 112-123.
- Purnama, P.D, and Yao M.H. (2019). "The Relationship Between International Trade and Economic Growth." *International Journal of Applied Business Research* 1(02): 112–23.
- Rahman, M. (2021). The dynamic nexus of energy consumption, international trade and economic growth in BRICS and ASEAN countries: A panel causality test Author links open overlay panelMohammad . *Energy* .
- Rahman, M. (2021). The dynamic nexus of energy consumption, international trade and economic growth in BRICS and ASEAN countries: A panel causality test. *Energy*.
- Rodriguez F and Dani, R. (2000), Trade Policy and Economic Growth: A Skeptic's Guide to the Cross-National Evidence I, University Of Maryland And Harvard University
- Rodriguez, F., & Rodrik, D. (2000). *Trade policy and economic growth: A skeptic's guide to the cross-national evidence* (NBER Working Paper No. 7081). National Bureau of Economic Research.
- Rose A K. (2006), The Effect of Membership in the GATT/WTO on Trade: Where Do We Stand? , Draft:
- Rose, A. (2005). Which International Trade Institutions Promote International Trade? *Review of International Economics*, 13(4), 682-698.
- Rose, A. (2005b). Which International Institutions Promote International Trade? *Review of International Economics*, 13(4), 682–698.
- Rose, A. K. (2004a). Do WTO Members Have a More Liberal Trade Policy. *Journal of International Economics*, 63(2), 209-235.
- Rose, A. K. (2004a). Do WTO members have a more liberal trade policy? *Journal of International Economics*, 63(2), 209-235.
- Rose, A. K. (2004b). Do We Really Know that The WTO Increases Trade? *The American Economic Review*, 94(1), 98-114.
- Rose, A. K. (2004b). Do we really know that the WTO increases trade? *The American Economic Review*, 94(1), 98-114.
- Rose, A. K. (2005a). Which international trade institutions promote international trade? *Review of International Economics*, 13(4), 682-698.

- Rose, A. K. (2005b). Which international institutions promote international trade? *Review of International Economics*, 13(4), 682-698.
- Rose, A. K. (2006). *The effect of membership in the GATT/WTO on trade: Where do we stand?* (Draft).
- Şerefli, M. (2016). Dış Ticaretin Ekonomik Büyüme Üzerine Etkisi: Türkiye Örneği. *Kastamonu Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 13(3), 136-143.
- Şerefli, M. (2016). Dış ticaretin ekonomik büyüme üzerine etkisi: Türkiye örneği. *Kastamonu Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 13(3), 136-143.
- Taştan, H. (2010). “Türkiye’de ihracat, ithalat ve ekonomik büyüme arasındaki nedensellik ilişkilerinin spektral analizi”. *Ekonomi Bilimleri Dergisi*, 2(1), 87-98.
- Taştan, H. (2010). Türkiye’de ihracat, ithalat ve ekonomik büyüme arasındaki nedensellik ilişkilerinin spektral analizi. *Ekonomi Bilimleri Dergisi*, 2(1), 87-98.
- Tomz, Judith L. Goldstein and Douglas Rivers (2007), Do We Really Know That the WTO Increases Trade? *The American Economic Review*, 97: 2005- 2018
- Tomz, M., Goldstein, J. L., & Rivers, D. (2007). Do we really know that the WTO increases trade? *The American Economic Review*, 97(5), 2005-2018.
- Turkish Ministry of Foreign Affairs. (n.d.). *Turkey's commercial and economic relations with Indonesia*. Retrieved April 29, 2026, from https://www.mfa.gov.tr/turkey_s-commercial-and-economic-relations-with-indonesia.en.mfa
- Williamson, J., & Clemens, M. (2002). Why did the tariff-growth correlation reverse after 1950? (NBER Working Paper No. 9181). National Bureau of Economic Research.
- Williamson, Jeffrey and Michael Clemens, 2002, “Why did the Tariff-Growth Correlation Reverse After 1950?,” *NBER Working Paper 9181*.
- Yılmaz Ö. ve Albayrak M. (2023), Türkiye’de Dış Ticaretin Ekonomik Büyüme Üzerindeki Etkisinin Ampirik Analizi. *Uluslararası İktisadi ve İdari İncelemeler Dergisi International Journal of Economic and Administrative Studies*, 38, 89- 107, <https://doi.org/10.18092/Ulikidince>. 1144391
<https://dergipark.org.tr/tr/pub/ulikidince> UİİİD-IJEAS (38).

Yılmaz, Ö., & Albayrak, M. (2023). Türkiye'de dış ticaretin ekonomik büyüme üzerindeki etkisinin ampirik analizi. *Uluslararası İktisadi ve İdari İncelemeler Dergisi*, (38), 89-107. <https://doi.org/10.18092/ulikidince.1144391>