JOURNAL OF DEVELOPING ECONOMIES
https://e-journal.unair.ac.id/JDE/index

THE ROLE OF ECONOMIC DEVELOPMENT IN EXPORT PERFORMANCE IN ISLAMIC COUNTRIES

Vita Kartika Sari*[1]
Umi Karomah Yaumidin[2]

[1] Economic and Business Faculty, Universitas Sebelas Maret, Surakarta, Indonesia
[2] National Research and Innovation Agency, Jakarta, Indonesia

ABSTRACT

The necessity for a reevaluation of international trade has become increasingly apparent, particularly in Islamic countries. This study aims to estimate the economic development of selected Islamic countries, namely Egypt, Indonesia, Malaysia, Pakistan, Turkey, the United Arab Emirates, Brunei Darussalam, and Kuwait, in terms of export performance. This study was conducted within the broader context of Islamic countries, with a specific focus on analyzing dynamic panel data from 2010 to 2019. The dependent variable included exports of goods and services, while the regressors included GDP growth, broad money, and inflation. An estimation based on the panel generalized method of moments revealed a significant effect of export (-1) on export, a significant and negative impact of broad money on export, and a significant and positive effect on inflation. In contrast, GDP growth was not found to be significant. These findings are consistent with the high number of global Muslim consumers and the growth of Islamic finance assets. Currently, Islamic countries are prioritizing product diversification for both the Muslim and global markets. These findings indicate the need for increased economic development to achieve the practical implications of sustainable economic growth in Islamic economies.

Keywords: *Dynamic Panel, Export, Islamic Countries*

JEL: F18; O11; O53

ARTICLE INFO

Received: October 26th, 2023
Revised: February 13th, 2024
Accepted: April 16th, 2024
Online: June th, 2024

*Correspondence:
Vita Kartika Sari

E-mail: vitahanifanaira@gmail.com

To cite this document: Sari, V. K. & Yaumidin, U. K. (2024). The Role of Economic Development in Export Performance in Islamic Countries. *Journal of Developing Economies*, *9*(1), 37-46. https://doi.org/10.20473/jde.v9i1.50958

Introduction

The total export of goods and services sold overseas represents a crucial component of the economy (Fernandes & Tang, 2012). Export positively and extensively affects the balance of trade (Freeman, 2014), improves people's standard of living (Mansion & Bausch, 2020), and supports the economy during a critical period. In achieving a healthy and sustainable industry, it is necessary to identify the determining factors that contribute to export success to develop the appropriate policies (Parhizkar et al., 2010). Export is a relatively low-risk and flexible form of international economic activity (Uner et al., 2013). The challenges facing developing countries in increasing the export volume include resource scarcity, unskilled labor, and inadequate infrastructure (Lee & Zhang, 2022). On the other hand, the global economic

situation has been affected by the COVID-19 pandemic, resulting in a detrimental effect on export performance in Indonesia and Islamic countries. From a global trade perspective, developed countries represent the primary target market for local commodity exports from developing countries. Moreover, Islamic countries offer considerable potential for further expansion of trade.

The estimated Muslim population was projected to reach 1.9 billion by 2020, representing 25% of the global population. This growth has a significant impact on the economy, particularly in countries belonging to the Organization of Islamic Cooperation (OIC) and on the global economy as a whole. The number of export transactions among OIC member countries continues to increase, with a significant portion being driven by the export of halal products. In 2019, the value of these transactions was estimated at US$ 70 billion, while in 2020, it was US$ 55 billion (DinarStandard, 2022). The halal industry is growing rapidly. Islamic countries constitute a unique economic bloc, accounting for 25% of global gross domestic product (GDP) and 15% of the global economy (DinarStandard, 2023). They also have numerous rapidly expanding business sectors, which afford them significant benefits when they engage in both bilateral and multilateral forms of economic cooperation. Therefore, it is vital to facilitate the diversification of halal products and the reinforcement of access for Islamic countries and global market. The implementation of Islamic economic principles in the recovery policy for the countries affected by the COVID-19 pandemic represents a crucial agenda for Indonesia, Saudi Arabia, the United Arab Emirates, and Malaysia. In addition, strategic policies in the financial sector have been implemented by Pakistan, Qatar, and Kuwait. The International Monetary Fund (IMF) predicted that the economic growth of Islamic countries will exceed that of other countries during the COVID-19 pandemic (DinarStandard, 2022). Figure 1 presents the growth trend of per capita income for the selected Islamic countries in this study.

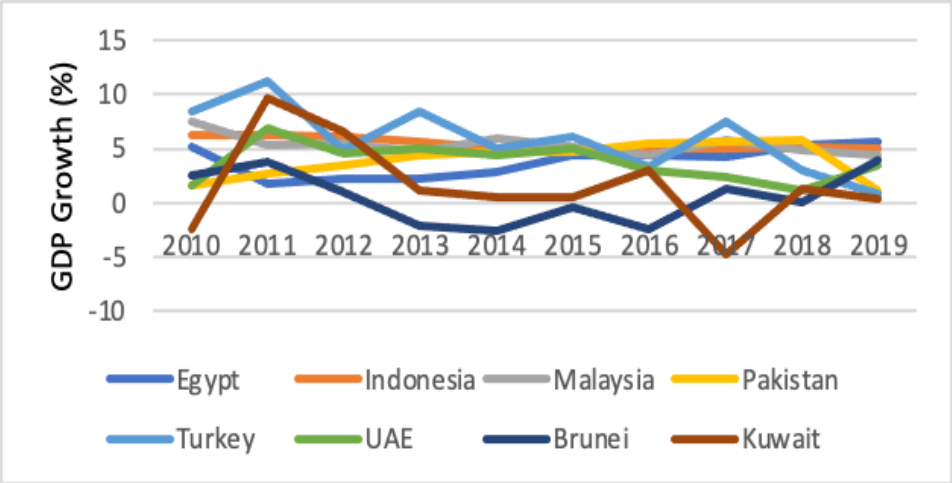

Figure 1: GDP Growth of Eight Islamic Countries

Source: World Bank (2022)

Researchers have highlighted and examined international trade phenomena, primarily export. A study conducted by Ebadi & Ebadi (2015) found that an exchange rate and competitiveness influenced Iranian export volume, while economic shock was found to have a negative influence. Sabaruddin (2016) investigated the determining factors in the bilateral trade between Indonesia and Yemen. The results indicated a significant influence of Yemen's national income on the Indonesian stability in terms of politics and security. In contrast, neither

the Indonesian national income nor Yemen's stability had a significant influence on trade transactions between both countries. Espoir (2020) conducted a study that examined export determinants. The results indicated that trade openness, human capital, and investment are determinants of export diversification in the Southern African Development Community (SADC) member countries. Moreover, inflation was found to have a negative influence on export. A study by Shahzad et al. (2022) examined the influence of exports, economic indicators, and institutions on economic growth across 28 the Organization for Economic Cooperation and Development (OECD) countries. The findings indicated that exports were positively associated with long-term economic growth.

Studies on the topic of export have been extensively carried out for the purpose of informing policy makers, for instance, Grandinetti & Mason (2012). A number of previous studies have focused on the analysis of the impact of export on economic growth. Specifically, this study aims to examine the relationship between broad money, GDP, and inflation on the export volume of eight Islamic countries, namely Egypt, Indonesia, Malaysia, Pakistan, Turkey, the United Arab Emirates, Brunei Darussalam, and Kuwait. These countries were selected based on their export performance and sustainable growth. This study makes a contribution to the existing literature on international trade studies by employing the generalized method of moments (GMM) model, which attempts to explain the relationship between variables and establish causality.

Literature Review

Export represents a fundamental economic activity conducted by a country as part of its international trade operations. Export is a relatively low-risk and flexible business strategy (Uner et al., 2013), that also contributes to social productivity (Pinho & Martins, 2010). The improvement of export quality can only be achieved under two conditions: (1) the implementation of innovations in the production process, and (2) the export of products with an economic added value (Suárez-Porto & Guisado-González, 2014; Trinh et al., 2022).

$$EC_{it}^{H} = \sum_{j=1}^{n} s_{ijt}^{2} \; where \; s_{j=1}^{2} = X_{ijt} / \sum_{h=1}^{n} X_{iht} \tag{1}$$

EC_{it}^{H} is the Herfindahl index export concentration in country i in year t, is the export share of industry j, and is the export value of industry j. The index value ranges between 1/n and 1.

Balassa (1985) identified three key objectives of international trade activities, namely the accumulation of international reserves, the sharpening of capital, and economic growth. In economic theory, it is well-established that a country's position in international trade can be strengthened by comparative advantage and product specialization (Lee & Zhang, 2022). Viner (1950) emphasized that trade creation occurs when a country reduces or eliminates import tariffs from other member countries of the trade blocs, thereby increasing the import volume. This increase is beneficial as it contributes to improving the well-being of a country. Trade diversion is typically followed by establishing a trade league comprising the countries involved in a particular region or with shared characteristics (Adeoti, 2012). As a consequence, nations around the globe can replace their suppliers with less competitive member countries at a low cost. It can be argued that international trade has a positive impact on a nation's welfare, provided that the trade creation outweighs the trade diversion. Krugman (1991) stated that the economic scale drives a country to engage in international trade. Such countries tend to engage in the trade of one commodity type, commonly referred to as intra-industry trade. In contrast, geographical factors do not play a significant role for international trade actors, given the inherent complexity of the analysis involved.

Previous studies have yielded results that corroborate this study. Abidin et al. (2013) investigated the determinants of export from Malaysia, with the results of estimation indicating the presence of significant determinants of exports, including economic scale, trade openness, inflation, and exchange rate. Ebadi & Ebadi (2015) conducted a data panel analysis to examine factors influencing Iranian export volume from 1991 to 2001. The results demonstrated the influence of price (exchange rate) and non-price (competitiveness) variables on the Iranian export volume, while external shock had a negative influence. Sabaruddin (2016) investigated the determining factors of bilateral trade between Indonesia and Yemen using the gravity equation in international trade from 1990 to 2015. The findings indicated a significant influence on Yemen's national income, political stability in Indonesia, and Indonesian representation in Yemen.

Nguyen (2016) conduced a regression analysis to estimate the effect of export on Vietnamese economic growth from 1990 to 2015. The results indicated a significant positive effect of export on Vietnamese economic growth through industrialization. Amir & Uliyati (2022) analyzed the effect of export performance from Indonesia to the United Arab Emirates from 2009 to 2013 by employing the revealed comparative advantage (RCA), intra-industry trade (IIT), and data panel regression methods. The findings revealed that agricultural and manufacturing products were the primary commodities exported from Indonesia to the United Arab Emirates. All primary export commodities from Indonesia to the United Arab Emirates had a high level of competitiveness, indicated by RCA values exceeding 1. The integration level of all primary export commodities from Indonesia to the United Arab Emirates revealed that intra-industry trade between India and the United Arab Emirates was generally characterized by a one-directional integration. The Indonesian export price, competitor country export price, real GDP of the United Arab Emirates, and real and dummy exchange rates, were found to be factors affecting the commodity trade flows of the agricultural sector. In contrast, the factors affecting the manufacturing sector were the Indonesian export price, the competitor country export price, real GDP of the United Arab Emirates, and real exchange rate.

In a study conducted in Indonesia from 1983 to 1997, Sarwedi (2019) found that structural economic movement had a positive effect on short-term export, although the long-term effect was not significant. Industrialization, foreign direct investment, and exchange rate played a significant role in improving Indonesian export. Inflation did not affect export in both the short and long terms. Sun & Li (2018) used data from 2000 to 2015 to estimate the determinants of export margins for Chinese agricultural products destined for ASEAN. The empirical results demonstrated that the economic scale variable played a crucial role in increasing the trade margin, whereas population positively affected the trade margin.

Research Methods

The primary objective of this study was to analyze the effect of broad money (M3), GDP, and inflation on the export volume of eight Islamic countries, namely Egypt, Indonesia, Malaysia, Pakistan, Turkey, the United Arab Emirates, Brunei Darussalam, and Kuwait. This study used secondary data published by the World Bank between 2012 and 2019. The dependent variable was the export of goods and services, which was converted into a logarithm in the estimation model. Meanwhile, the independent variables included M3, GDP growth, and inflation. This study builds upon the empirical study conducted by Shetewy et al. (2022) through the use of dynamic panel data. The empirical model of the dynamic panel data estimated in this study can be written as follows:

$$EXP_{it} = \varphi_1 + \varphi_2 M3_{it} + \varphi_3 GDP_{it} + \varphi_4 INF_{it} + \varphi_5 EXP_{it-1} + e_{it} \quad (2)$$

EXP = export, M3 = broad money, GDP = annual GDP growth, and INF = inflation. The φ_1 represents the intercept, while the φ_2, φ_3, φ_4, φ_5 are the parameters or slope of the variables. In addition, the e_{it} represents the error term. Furthermore, i represents the cross-section of eight countries, while t represents the time series data from 2012 to 2019.

GMM provides a detailed statistical analysis of the empirical method (Hall, 2005). The ordinary least squares estimation results are biased, inconsistent, and inefficient (Baltagi, 2000). As a result, this study employed a dynamic panel data regression method. The dynamic panel method considers the dynamic aspects of data and the correlation with previous data. This method introduces a lag from the functioning of the dependent variable to transform into the independent variable. In order to achieve an unbiased coefficient, the GMM dynamic panel estimation must pass the instrument validity and residual consistency tests. The parameter estimation was validated using the Arellano-Bond test (consistency test) and the Sargan test (instrument validity test). The Arellano-Bond test was employed to assess the estimation consistency derived from the GMM. Meanwhile, the Sargan test was employed to ascertain the validity of instrument variables in which the quantity exceeds the number of estimated parameters (over-identifying restrictions) (Arellano & Bond, 1991).

Table 1: Definition of Variables

Data/Variable	Definition of Operational Variable	Data Source
LnExport	Exports of goods and services (constant 2015 US$), expressed as a natural logarithm	World Bank
M3	Broad money (sum of currency outside banks; demand deposits of the central government; the time, savings, and foreign currency deposits of resident sectors other than the central government; bank and traveler's checks; and other forms of financial securities such as certificates of deposit and commercial paper)	World Bank
GDP	GDP growth (annual %)	World Bank
Inflation	Consumer prices (%)	World Bank

Table 2: Descriptive Statistics of Variables

Variables	Obs.	Mean	Std. Dev	Min.	Max.
LnExport	64	30.865	6.862	22.586	38.242
M3	64	75.672	27.921	38.389	140.092
GDP	64	3.506	2.560	-4.712	8.485
Inflation	64	5.035	5.258	-1.931	29.506

Table 2 presents the descriptive statistics of the data and the correlation between variables. The highest export value was 38.242, while the lowest was 22.586. The M3 variable had the highest value at 140.092, an average value of 75.672, and the lowest value at 38.389. The GDP variable had an average value of 3.506, the highest value at 8.485, and the lowest value at 7.6296. The length of education variable had the highest value at 11.17 and the lowest value at -4.712. The inflation variable had an average value of 5.035, the lowest value at -1.931, and the highest value at 29.506. Table 3 presents the data correlation coefficient matrix. In general, the correlation between export and GDP was relatively low. Similarly, the correlation between export and M3 was also low. Conversely, export had a negative correlation with inflation.

Table 3: Matrix of Correlation

	LnExport	M3	GDP	Inflation
LnExport	1			
M3	0.047	1		
GDP	0.488	-0.133	1	
Inflation	-0.031	-0.235	0.249	1

Results and Discussion

This study estimated the effect of M3, GDP, and inflation in eight Islamic countries, namely Egypt, Indonesia, Malaysia, Pakistan, Turkey, the United Arab Emirates, Brunei Darussalam, and Kuwait, from 2012 to 2019.

Table 4: GMM Panel Estimation

Variables	Coefficient	*t*-statistic
lnExport (-1)	0.5720	18.368***
M3	-0.0117	-6.9663***
GDP	0.0144	0.7444
Inflation	0.0262	6.4210***
Diagnostic Statistics		
No of Obs.	48	
AR (1)	0.0725	
AR (1) p-stat	0.1787	
AR (2)	0.1199	
AR (2) p-stat	0.2477	
Sargan statistics	5.8278	
Sargan *p*-stat	0.2123	

Source: Authors' estimation
Note: [] denotes t-statistic; ***, **, and * denote significant levels at 1%, 5%, and 10%, respectively

The GMM panel estimation results showed that the export (-1) variable had a significant effect, indicating a dynamic export model in the eight Islamic countries. This finding demonstrated that export dynamics had a positive effect on the export performance. The M3 variable was found to be significant at a significance level of (α) 0.01 with a negative coefficient. A 1% decrease in M3 resulted in a 0.01% increase in export in export in the eight countries, provided that all other variables remained constant. The decrease in money supply was found to result in an increase in export, with the estimated cause being the implementation of different monetary policies in the eight countries. Following GMM panel estimation, the GDP variable was found to be insignificant, while inflation significantly and positively affected export. A 1% increase in inflation resulted in a 0.02% increase in export, provided that all other variables remained constant.

A similar study was conducted by Espoir (2020), which found that trade openness, human capital, and investment were determinants of export diversification in the SADC member countries. Conversely, inflation was found to have a negative effect on export. Shahzad et al. (2022) investigated the effect of export, economic indicators, and institutions on economic growth in 28 OECD member countries from 1990 to 2019. The findings demonstrated a positive effect of export and economic indicators on long-term economic growth. Shetewy et al. (2022) examined the effect of financial indicators and internet use on provincial-level export in China from 2000 to 2018. The findings indicated that financial indicators did not

affect export value, while internet use affected export. Lee & Zhang (2022) investigated the relationship between export structure and economic growth in emerging countries. The findings indicated that export diversification played a role in maintaining economic stability. Hall et al. (2010) examined the effect of exchange rate volatility on the export performance of emerging and developed countries. The findings revealed no effect of exchange rate volatility on export.

Macroeconomic indicators play a pivotal role in maintaining international trade continuity, particularly between Indonesia and Islamic countries with opportunities for halal products and products with high export potential in creative fields. The selected Islamic countries were chosen for analysis due to their diverse economic, product quality, institutional, and economic growth characteristics. Nguyen (2016) emphasized the important role of export in maintaining Vietnamese economic stability, boosting national income, and supporting industrialization. Moreover, Sarwedi (2019) found that, in the case of Indonesia, the prices of goods affected export performance in the short term, but decreased export volume in the long term. However, inflation had no significant effect on export, both in the short and long terms.

The effectiveness of this study model was tested using the GMM. Therefore, it was necessary to develop an instrument due to the relatively small data amount of data and the short time interval. Several requirements must be fulfilled to obtain valid parameters. The instrument validity was tested using the Sargan test, while the instrument consistency was tested using the Arellano-Bond test. Based on the results of the GMM panel estimation results, the instrument validity as tested with the Sargan test had a p-value exceeding the significance level of 0.10. Therefore, the null hypothesis was accepted. It can be concluded that the study model had a good and valid instrument. The consistency test showed a p-value for the AR (2) exceeding the significance level of 0.10. Therefore, the residual test in this study was identical, independent, normally distributed, and free from autocorrelation.

The export volume in the selected countries showed fluctuations over the course of the study period. The highest export values were observed in the United Arab Emirates, Turkey, Malaysia, Indonesia, Kuwait, Egypt, and Pakistan, while the lowest export value was observed in Brunei Darussalam. There is an opportunity for the global halal product trade, particularly in the food and fashion industries. Therefore, Islamic countries should prioritize trade promotion strategies, given their prominent roles in the halal industry. In addition, it is essential to reinforce the partnership cooperation between Islamic countries to optimize the supply chain.

Conclusion

This study estimated the dynamic panel model of export volume in selected Islamic countries from 2012 to 2019. Cross-country trade has emerged as a crucial support mechanism for several countries during the recovery phase of the COVID-19. Moreover, the GMM panel dynamic model indicated that the export variable (-1) significantly and positively affected export. This finding demonstrated the dynamics of the estimated variables. Another variable, namely M3, significantly and negatively affected export, while inflation significantly and positively affected export. Lastly, the GDP variable was found to be insignificant.

Islamic countries represent the foundation of the global economy, particularly with regard to halal products, given the current trends in global trade. The combination of high demand, good quality, and effective marketing strategy has contributed to the consumption of products from Islamic countries. Islamic countries are able to compete in the global market and demonstrate excellent business performance. Another notable phenomenon is the introduction of new products and the integration of Islamic and business values, which contribute to the growth of the economy.

A number of policy recommendations can be implemented. Islamic countries must accommodate modernization in international trade to gain a wider market share, maintaining product quality in order to improve reputation and export competition. In addition, creating a new market, especially for halal products, including halal food, halal pharmaceuticals, halal cosmetics, Muslim-friendly travel, apparel, and modest fashion, is essential. Cooperation must also be strengthened between Islamic countries to attract local and international investors, as well as to collaborate with entrepreneurs to open export opportunities to Islamic countries. It is also recommended that traditional commodities be improved with brands that comply with international business environment standards. However, the relatively small sample size of eight Islamic countries is a limitation of this study. This is due to the availability of data and the general nature of export data, rather than the specific commodities being considered.

Declaration

This research article was written based on the authors' perspective and supported by the available data.

Conflict of Interest

The authors have no conflicts of interest to declare.

Availability of Data and Materials

The data can be provided upon request.

Authors' Contribution

Vita Kartika Sari was responsible for the conceptualization of this study, methodology, data collection and analysis, and manuscript preparation. Umi Karomah Yaumidin was responsible for conceptualizing this study and reviewing and editing the manuscript.

Funding Source

Personal funding.

Acknowledgment

We would like to thank the reviewers for their constructive feedback, which has helped us to improve the article. We would also like to thank the journal editor for their assistance in formatting the article in accordance with the journal's guidelines.

References

Abidin, I. S. Z., Bakar, N. A., & Sahlan, R. (2013). The Determinants of Exports between Malaysia and the OIC Member Countries: A Gravity Model Approach. *Procedia Economics and Finance*, *5*(13), 12–19. https://doi.org/10.1016/s2212-5671(13)00004-x

Adeoti, J. O. (2012). Technology-related factors as determinants of export potential of Nigerian manufacturing firms. *Structural Change and Economic Dynamics*, *23*(4), 487–503. https://doi.org/10.1016/j.strueco.2011.05.001

Amir, F., & Uliyati, W. (2022). Determinan Ekspor Komoditi Unggulan Indonesia Ke Uni Emirat Arab [Determinants of Indonesia's Leading Commodity Exports to the United Arab Emirates]. *Eqien - Jurnal Ekonomi Dan Bisnis*, *10*(1), 183–194. https://doi.org/10.34308/eqien.v10i1.514

Arellano, M., & Bond, S. (1991). Some Test of Specification for Panel Data: Monte Carlo Evidence and an Applicationcc to Employment Equations. *The Review of Economic Studies*, *58*(2), 277–297. https://doi.org/https://doi.org/10.2307/2297968

Balassa, B. (1985). Exports, policy choices, and economic growth in developing countries after the 1973 oil shock. *Journal of Development Economics*, *18*(1), 23–35. https://doi.org/https://doi.org/10.1016/0304-3878(85)90004-5

Baltagi, B. H. (2000). *Nonstationary Panels, Panels Cointegration, and Dynamic Panels, Series: Advances in Econometrics*. New York: JAI Press.

DinarStandard. (2022). *State of the Global Islamic Economy Report: Unlocking Opportunity.* DinarStandard.

DinarStandard. (2023). *State of the Global Islamic Economy Report 2023/24*. DinarStandard. https://cdn.salaamgateway.com/reports/pdf/SGIER-2023.pdf.

Ebadi, A., & Ebadi, A. (2015). How the Export Volume Is Affected by Determinant Factors in a Developing Country? *Research in World Economy*, *6*(1), 143–150. https://doi.org/10.5430/rwe.v6n1p143

Espoir, L., M. (2020). Determinant of export diversification: An empirical analysis in the case of SADC countries. *International Journal of Research in Business & Social Science*, *9*(7), 130–144. https://doi.org/https://doi.org/10.20525/ijrbs.v9i7.942

Fernandes, A. P., & Tang, H. (2012). Determinants of vertical integration in export processing: Theory and evidence from China. *Journal of Development Economics*, *99*(2), 396–414. https://doi.org/10.1016/j.jdeveco.2012.05.004

Freeman, J., & Styles, C. (2014). Does location matter to export performance? *International Marketing Review*, *31*(2), 181–208. https://doi.org/10.1108/IMR-02-2013-0039

Grandinetti, R., & Mason, M. C. (2012). Internationalization modes other than exporting: The missing determinant of export performance. *European Business Review*, *24*(3), 236–254. https://doi.org/10.1108/09555341211222495

Hall, A. R. (2005). *Generalized Method of Moments, Advanced texts in econometrics*. Oxford :Oxford University Press

Hall, S., et al. (2010). Exchange-rate volatility and export performance: Do emerging market economies resemble industrial countries or other developing countries? *Economic Modelling*, *27*(6), 1514–1521. https://doi.org/10.1016/j.econmod.2010.01.014

Krugman, P. (1991). Increasing returns and economic geography. *Journal of Political Economy*, *99*(3), 483–499. https://pr.princeton.edu/pictures/g-k/krugman/krugman-increasing_returns_1991.pdf

Lee, D., & Zhang, H. (2022). Export diversification in low-income countries and small states: Do country size and income level matter. *Structural Change and Economic Dynamics*, *60*, 250–265. https://doi.org/10.1016/j.strueco.2021.11.017

Mansion, S. E., & Bausch, A. (2020). Intangible assets and SMEs' export behavior: a meta-analytical perspective. *Small Business Economics*, *55*(3), 727–760. https://doi.org/10.1007/s11187-019-00182-5

Nguyen, T. H. (2016). Impact of Export on Economic Growth in Vietnam: Empirical Research and Recommendations. *International Business and Management*, *13*(3), 45–52. https://doi.org/10.3968/9040

Parhizkar, O., Miller, C. R., & Smith, R. L. (2010). Private sector development implications of the export performance determinants of U.S. small-medium forest enterprises to Mexico, Europe, and Asia. *Forest Policy and Economics*, *12*(5), 387–396. https://doi.org/10.1016/j.forpol.2010.02.010

Pinho, J. C., & Martins, L. (2010). Exporting barriers: Insights from Portuguese small- and medium-sized exporters and non-exporters. *Journal of International Entrepreneurship*, *8*(3), 254–272. https://doi.org/10.1007/s10843-010-0046-x

Sabaruddin, S. S. (2016). Determinant Analysis of Bilateral Trade Between Indonesia and Yemen During the Period 1990-2015: A Gravity Model Approach. JDE (*Journal of Developing Economies)*, *1*(2), 107-121. https://doi.org/10.20473/jde.v1i2.3296

Sarwedi, S. (2019). Determinant Analysis of Supply Change of Indonesia's Export Product. *Bulletin of Monetary Economics and Banking*, *12*(3). https://doi.org/10.21098/bemp.v12i3.375

Shahzad, U., Madaleno, M., Dagar, V., Ghosh, S., & Doğan, B. (2022). Exploring the role of export product quality and economic complexity for economic progress of developed economies: Does institutional quality matter? *Structural Change and Economic Dynamics*, *62(c)*, 40–51. https://doi.org/10.1016/j.strueco.2022.04.003

Shetewy, N., Shahin, A. I., Omri, A., & Dai, K. (2022). Impact of financial development and internet use on export growth: New evidence from machine learning models. *Research in International Business and Finance*, *61*(February), 101643. https://doi.org/10.1016/j.ribaf.2022.101643

Suárez-Porto, V., & Guisado-González, M. (2014). Analysis of the determinants of exporting intensity in the field of innovation. *Investigaciones Europeas de Direccion y Economia de La Empresa*, *20*(2), 79–86. https://doi.org/10.1016/j.iedee.2013.12.002

Sun, Z. & Li, X. (2018). The trade margins of Chinese agricultural exports to ASEAN and their determinants. *Journal of Integrative Agriculture*, *17*(10), 2356–2367. https://doi.org/10.1016/S2095-3119(18)62084-2.

Trinh, V. Q., Nguyen, A. T. Q., & Vo, X. V. (2022). Export quality upgrading and environmental sustainability: Evidence from the East Asia and Pacific Region. *Research in International Business and Finance*, *60*, 101632. https://doi.org/10.1016/j.ribaf.2022.101632.

Uner, M. M., Kocak, A., Cavusgil, E., & Cavusgil, S. T. (2013). Do barriers to export vary for born globals and across stages of internationalization? An empirical inquiry in the emerging market of Turkey. *International Business Review*, *22*(5), 800–813. https://doi.org/10.1016/j.ibusrev.2012.12.005

Viner, J. (1950). *Customs Union Theory.* New York: Carnegie Endowment for International Peace.

World Bank. (2022). *World Bank Open Data.* Retrieved from https://data.worldbank.org/.