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FINANCIAL DEVELOPMENT, FINANCIAL MARKET, AND FINANCIAL INSTITUTIONAL ON INTERNATIONAL TRADE IN DEVELOPING EIGHT COUNTRIES

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Abstract

This study aims to analyze the effect of financial development, financial market, and financial institutional on international trade in developing eight countries, with foreign exchange reserves, foreign direct investment, and real gross domestic product as control variables. This research includes descriptive quantitative research. The population used is eight developing countries. The data in this study is secondary data sourced from World Bank and International Monetary Fund (IMF) reports observation period from 2011 to 2020. The results show that financial development has a positive and significant effect on international trade in D-8 countries, while financial markets and financial institutional have a significant negative effect on international trade in D-8 countries.

Keywords: *Financial Development; Financial Market; Financial Institutional, International Trade; Developing Eight Countries (D8).*

JEL Classification: *E44. G23, O16, F13.*

INTRODUCTION

International trade is an important part of measuring the achievement of global economic growth. There is a theoretical and empirical linkage regarding international trade activities in encouraging the country's economic growth (Ladolo et al., 2022). Traditional international trade theory considers technology, land, and natural wealth to be important factors influencing international trade, but ignores the role of finance in shaping the comparative advantage of international trade (Qiu et al., 2022). This is because a well-developed financial market can increase international trade by mobilizing all matters related to transactions on the world market (Wajda-Lichy et al., 2020).

When a country decides to open its market for international trade, there will be more opportunities to attract foreign investment in that country. In addition, international trade activities can help strengthen a country's financial sector by opening up investment opportunities and establishing cooperation between countries, including increasing competitiveness in world markets (Caporale et al., 2022). Therefore, financial development must be kept stable so as not to reduce the export trade surplus and hinder the development of export trade (Qiu et al., 2022).

According to Beck (2002), says if there is a close relationship between financial development and international trade. Financial development measures the level of development of a country's financial sector including the development of financial markets and institutions, while international trade includes imports and

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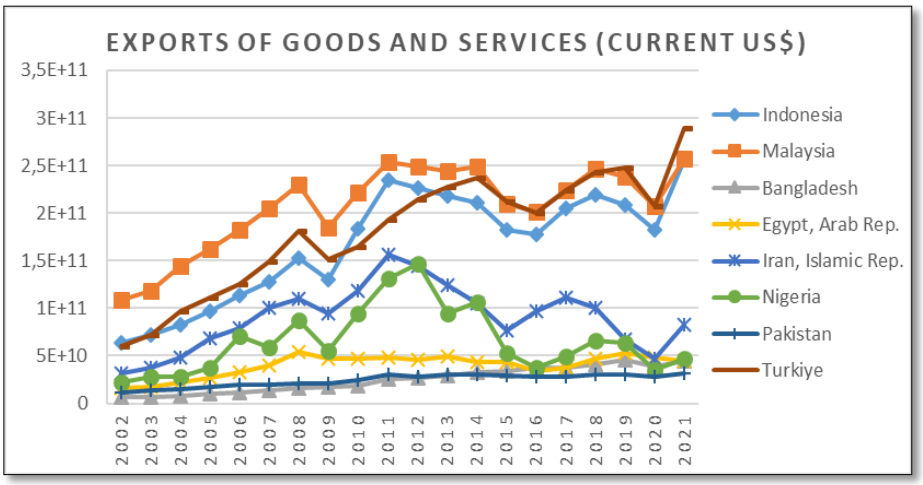
exports of goods and services across countries (Iqbal et al., 2019). Therefore, the two are often associated and interact with each other. This is consistent with the theory which implies that a higher level of financial development should increase the value of exports, especially for sectors that have high returns to scale so as to accelerate integration into international markets (Caporale et al., 2022).

Countries that are members of the developing eight countries (D-8) are a group of developing countries that are members of the Organization of Islamic Cooperation (OIC), in which these countries are striving to achieve sustainable economic development, expand and create opportunities and strengthen the ties of cooperation between member countries, especially in the international trade business.

Figure 1 Export Trade Flows D8



Source: World Development Indicators, 2023.

Based on world bank data, export trade statistics for D-8 countries from 2002 to 2021 as illustrated in Figure 1 above, it can be seen if there is a gap in export trade flows, namely Indonesia, Malaysia and Turkey leading by having more volatile flows in each year, while the countries of Bangladesh, Egypt, Iran, Nigeria, and Pakistan still have not experienced a significant increase. This phenomenon can occur due to the different roles of stakeholders in each country (Pertiwi et al., 2019), in this case government policies are also urgently needed to increase exports to increase trade surpluses and reduce trade deficits (Iqbal et al., 2019). Because by building a more efficient and effective financial system it will be reflected in the financial development index by the IMF (Svirydzenka, 2016).

The financial development index is a relative ranking of countries which includes a number of indicators, such as the size of financial markets, access to financial services, and the ability of financial institutions to provide support to the business sector (IMF, 2023). Financial development can affect international trade in various ways, such as by providing access to capital and reducing financial risks, or by increasing the efficiency and productivity of the business sector (Qiu et al., 2022). Thus, there are very complex direct and indirect interrelation-ships between financial development and trade which have been explored in many studies.

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Several theoretical studies have recently documented a strong positive relationship between financial development and inter-national trade at both the company and industry levels (Sare, 2021), but generally the proxies used vary according to the geographical location and economic conditions of the country. For example, financial development indicators mostly use credit ratios to the private sector and stock market capitalization (Bilas et al., 2017), while some others include FGR, FIR, SLR, and IDEP ratios or scales (Qiu et al., 2022). Meanwhile, international trade generally uses indicators of exports and imports, trade balance or trade openness (Caporale et al., 2022), as well as using trade development and trade ratios (Iqbal et al., 2019).

According to a study conducted by Iqbal et al., (2019), financial developments have a significant positive effect on trading volume but not significant on trading ratios. Meanwhile, Qiu et al., (2022), found that excessive financial development can reduce the scale growth of international trade and have a smaller effect on the structure of export trade and reduce the proportion of the trade process. This opinion is supported by Sare (2021), which shows that high financial developments can reduce international trade.

Seeing the elaboration of the background above, the differences in regions and economic conditions as well as the methods used are the reasons why the results obtained do not show consistent conclusions. Therefore, researchers are interested in conducting further studies regarding the effect of the financial development index, financial market index, and financial institution index on international trade in developing eight countries. It is hoped that this research will provide relevance to improve a better understanding of the factors affecting international trade in developing countries, especially countries that are members of the D-8 OIC group.

LITERATURE REVIEW

International Trade

The theory of traditional international trade (international trade) assumes that technology, land, and all natural resources are important factors affecting international trade. However, along with economic and industrial developments, this theory ignores the role of the financial system, financial markets and financial institutions which can also form a comparative advantage in world trade (Qiu et al., 2022). In addition to the level of per capita income, other factors such as the similarity of characteristics, culture, quality of government, trade agreements, to institutional development are also associated with having an influence on international trade (Iqbal et al., 2019).

International trade is described as an activity of cross-border exchange of goods and services, where currently there are rules and regulations that oversee it that aim to be mutually beneficial for all parties / countries (Kinuthia, 2015). International trade is the main indicator of openness and has made a very large contribution to the country's economic growth and prosperity (Titus et al., 2022).

There are various assessment proxies used to measure international trade, commonly used indicators are export and import levels, trade balance, trade openness (Caporale et al., 2022; Wajda-Lichy et al., 2020), volume and exchange rate volatility (Zahroh et al., 2019) to assess a country's international trade. In addition, trade

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development and the trade development ratio can also be used by calculating the logarithm of total imports and exports for trade development, while the trade ratio uses the logarithm of the total division of export-import (Iqbal et al., 2019).

Financial Development Index

The Financial Development Index is a relative index or ranking of countries covering aspects of access, namely the ability of individuals and companies to access financial services; aspects of depth, namely the level of market size and liquidity; as well as aspects of efficiency, namely the ability of institutions to provide financial services at low cost and with sustainable income and the level of capital market activity (Caporale et al., 2022). According to the IMF in its report, it illustrates that the measurement indicator for the financial development index is built by combining the aggregate value of the financial institution index and the financial market index which measures a country's ability to develop the financial sector, including banking, capital markets, insurance and other financial institutions (IMF, 2023).

In general, there are four types of approaches to financial development, such as credit provided by banks to the private sector to GDP, domestic credit to GDP, and capitalization of the stock market and bond market to GDP (Iqbal et al., 2019), but these measures are proxies standards which do not adequately represent an overall measure of the level of financial development. On the other hand, there is a new, broader-based index built by the IMF taking into account the multidimensional nature of financial developments (Svirydzenka, 2016), namely a composite index that has a more complex measure that covers various aspects, such as aspects of financial development, financial institution indexes, and financial market index (IMF, 2023).

Financial Market Index

Financial Market Index reflects the strength, efficiency, and transparency of a country's financial markets. FM index is a composite of 1) financial market depth index that collects data on stock market capitalization against GDP, stocks traded against GDP, international government bonds against GDP, total financial corporate debt securities against GDP, total non-financial corporate debt securities against GDP; 2) the Financial Market Access Index which collects data on the percentage of market capitalization outside the top 10 largest companies and the total number of debt issuers (domestic and external, non-financial and financial companies); 3) Financial Market Efficiency Index which collects data on the ratio of stock market turnover or traded shares to capitalization (Caporale et al., 2022; IMF, 2023; Svirydzenka, 2016).

Financial Institutional Index

Financial Institutional Index or index of financial institutions represents the existence and stability of financial institutions that support economic activity, especially in international markets. FI index is a combination of 1) financial institutions depth index that collects data on bank credit to the private sector in percent to GDP, pension fund assets to GDP, mutual fund assets to GDP and life and non-life insurance premiums to GDP; 2) financial institution access index that collects data on bank branches per 100,000 adults and ATMs per 100,000 adults; 3) Financial Institutions Efficiency Index which collects data on banking net interest margin, lending-deposits spread, non-interest income to total income, overhead cost to total

assets, return on assets and return on equity (Caporale et al., 2022; IMF, 2023; Svirydzenka, 2016).

Previous Research

Overall, empirical evidence on the relationship between financial development and international trade yields mixed results. Several studies have found positive and negative causal relationships between financial development and country-specific international trade (Bilas et al., 2017; Caporale et al., 2022; Iqbal et al., 2019; Qiu et al., 2022; Titus et al., 2022). In addition, another study is based on the feedback hypothesis (reflecting a two-way relationship) which states that international trade and financial developments can interact with each other (Bayar et al., 2017; Wajda-Lichy et al., 2020).

As the results of a study conducted by Qiu et al., (2022) found that there is an influence of financial development on export trade not only depending on the level of financial development of exporting countries but also on the level of financial development of export destination countries. Another study from Bilas et al., (2017) found a strong cointegration between the development of finance and international trade in Croatia, with having a positive relationship in the short term and vice versa in the long term there is a negative relationship. Meanwhile, Sare (2021) points out that financial developments at the domestic level largely hinder international trade regardless of the financial and trade indicators used.

A more specific study has been conducted by Iqbal et al., (2019), which uses an index developed by the IMF to measure financial development, financial markets, and financial institutions against international trade proxy by the volume of import exports and trade ratios in Asia. The results of his research show that financial development, financial market has a positive and significant effect on the volume of international trade, only financial institutions do not significantly affect the volume of international trade. The opposite result is obtained in the trading ratio, financial development, financial market has a positive but not significant effect, while financial institutions have a positive and significant effect on the trading ratio.

Essentially, a well-developed financial system can improve international trade by reducing the cost of capital, creating economies of scale and increasing competitiveness. However, knowledge of how various financial resources can affect trade between countries can only be gained by analyzing the role of its main subcomponents related to financial institutions and financial market participants (Caporale et al., 2022).

Based on the elaboration of previous research, this study tries to draw the research hypothesis as follows:

H1 = Financial development index has a significant positive effect on international trade in developing eight countries D-8

H2 = Financial market index has a significant positive effect on international trade in developing eight countries D-8

H3 = Financial institutional index has a significant positive effect on international trade in developing eight countries D-8

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METHODOLOGY

This research is included in the type of descriptive quantitative research. The data used are secondary data sourced from the world bank, world development indicators (WDI) and international monetary fund (IMF) with an observation period from 2011 to 2020. The population in this study is eight countries that are included in the multilateral economic and development cooperation forum or known as developing eight countries. While the sampling technique uses purposive sampling techniques with the following criteria:

a. OIC member states included in the D-8
b. OIC member countries that have complete data related to the variables needed in this study

Based on these sample criteria, Bangladesh, Egypt, Indonesia, Malaysia, Nigeria, Palestine and Turkey were obtained which will be used as samples in this study.

This research model adopts theoretical and empirical models regarding the development of international finance and trade developed (Beck, 2002; Caporale et al., 2022; Leibovici, 2021). The selection of the main variables for this research model is based on the growing literature discussed earlier, the measurement indicators used to examine the relationship between financial development and international trade have been adjusted to take into account the specific characteristics of each country sampled, so that additional control variables are included, namely foreign exchange reserves (FER), foreign direct investment (FDI), and real gross domestic product per capita (RGDP) to control the possibility of having both positive and negative effects on international trade.

Data analysis techniques were carried out using the Ordinary Least Square (OLS) panel data regression method through Eviews 10 statistical software, to examine the influence of financial development, financial markets, and financial institutional on international trade in developing eight countries. The stages to be carried out begin with descriptive statistical tests, model selection tests, and continue with multiple regression tests to hypothesis testing. The equation formula used is as follows:

$$LnITRD_{it} = \alpha + \beta_1 FD_{it} + \beta_2 FM_{it} + \beta_3 FI_{it} + \beta_4 LnFER_{it} + \beta_5 FDI_{it} + \beta_6 LnRGDP_{it} + e$$

Information:

LnITRD	=	logarithm of International Trade (total export and import);
α	=	constant
$\beta_1 - \beta_6$	=	multiple regression coefficients
FD	=	financial development (financial development index by the IMF);
FM	=	financial market (financial market index by the IMF);
FI	=	financial institutional (index of financial institutions by the IMF);
LnFER	=	logarithms of foreign exchange reserves (total foreign exchange reserves including gold);
FDI	=	foreign direct investment (total foreign direct investment current US);
LnRGDP	=	logarithm of real gross domestic product (total GDP per Capita);
e	=	error terms.

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RESULT AND DISCUSSION

Table 1 Descriptive Statistical Results

	LnITRD	FD	FM	FI	LnFER	FDI	LnRGDP
Mean	1.656338	0.352894	0.970179	1.120087	10.66565	1.598248	11.61789
Median	1.629178	0.286225	0.826965	0.952295	10.62671	1.452361	11.54860
Maximum	2.190157	0.725425	2.135766	1.937167	11.14529	5.074455	12.04887
Minimum	1.213576	0.146936	0.091176	0.573867	9.883733	-0.204543	11.10937
Std. Dev.	0.227308	0.163853	0.510540	0.371559	0.369967	1.042230	0.245124
Observations	70	70	70	70	70	70	70

Source: Data processed Eviews 10, 2023.

Table 1 above describes the results of descriptive statistical tests, and obtained the average value of international trade (ITRD) reached 1.656338 with a minimum value of 1.213576 and a maximum of 2.190157. The average value of financial development (FD) is 0.352894 with a maximum value of 0.725425 and a minimum of 0.146936. The average financial market (FM) value is 0.970179 with a maximum value of 2.135766 and a minimum of 0.091176. The average value of financial institutions (FI) is 1.120087 with a maximum value of 1.937167 and a minimum of 0.573867. In addition, table 1 also describes the average value of the three control variables, each of which obtained the average value for foreign exchange reserves (FER) at 10.66565, foreign direct investment (FDI) at 1.598248, and real income per capita (RGDP) at 11.61789.

Next is to determine the estimation model. At the stage of determining the estimation model, the first step that must be done is the chow test with criteria (CEM if $\alpha > 0.05$ and FEM if $\alpha < 0.05$), the second stage is the hausman test with criteria (FEM if $\alpha < 0.05$ and REM if $\alpha > 0.05$), and the last stage is the lagrange multiple test with criteria (REM if $\alpha < 0.05$ and CEM if $\alpha > 0.05$). The three stages of testing the determination of the result estimation model are shown in tables 2, 3, and 4 below (Widarjono, 2005).

Table 2 Chow Test Results

Effects Test	Statistic	d.f.	Prob.
Cross-section F	11.077158	(6,60)	0.0000
Cross-section Chi-square	52.192337	6	0.0000

Source: Data processed Eviews 10, 2023.

Based on table 2 chow test results, namely comparing between Commond Effect Model and Fixed Effect Model. And obtained a chi-square probability value of 0.0000 smaller than alpha 0.05 which means that the model that passes the chow test is the Fixed Effect Model.

Table 3 Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	23.385659	3	0.0653

Source: Data processed Eviews 10, 2023.

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Based on table 3 of the hausman test results, which compares between Fixed Effect Model and Random Effect Model. And obtained a random cross-section probability value of 0.0653 greater than alpha 0.05, then the model that passes the hausman test is the Random Effect Model.

Table 4 Lagrange Multiple Test Results

Null (no rand. effect) Alternative	Cross-section One-sided	Period One-sided	Both
Breusch-Pagan	0.442482 (0.5059)	37.84606 (0.0000)	38.28854 (0.0000)
Honda	-0.665193 (0.7470)	6.151915 (0.0000)	3.879699 (0.0001)
King-Wu	-0.665193 (0.7470)	6.151915 (0.0000)	3.375557 (0.0004)
SLM	1.379120 (0.0839)	6.225366 (0.0000)	-- --
GHM	-- --	-- --	37.84606 (0.0000)

Source: Data processed Eviews 10, 2023.

Based on table 4 of multiple lagrange test results, which compares between the Random Effect Model and the Commond Effect Model. And obtained breusch-pagan value in brackets of 0.5059 greater than alpha 0.05. Thus, the model that passes the lagrange multiple test is the Commond Effect Model (CEM) which will be used by researchers in regression testing of Ordinary Least Square (OLS) panel data in this study.

Table 5 below is the result of the first regression test based by researchers by listing the three models, namely CEM, FEM, and REM models to see and estimate how much effect the three models produce between independent variables, namely financial development, financial markets, and financial institutional on international trade.

Table 5 First Regression Test Results

Variable	Model 1 Commond Effect		Model 2 Fixed Effect		Model 3 Random Effect	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
FD	4.226776*	0.0560	5.222499	0.2330	12.17780***	0.0000
FM	-0.671548*	0.0811	-1.038805	0.1614	-2.071414***	0.0001
FI	-0.451150	0.3502	-1.532812*	0.0653	-2.243388***	0.0004
LnFER						
FDI						
LnRGDP						
Constant	1.321584	0.0000	2.538060	0.0000	1.881301	0.0000
F-statistics	91.05028		65.53875		14.22086	
Prob (F-statistics)	0.000000		0.000000		0.000000	
R2	0.805396		0.907671		0.392615	

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Adjusted R2	0.796551	0.893821	0.365007
Durbin Watson	0.496451	1.131652	0.779471
Obs	70	70	70

Source: Data processed Eviews 10, 2023.
Note: *Significant at 10% (α < 0.10); **Significant at 5% (α < 0.05); ***Significant at 1% (α < 0.01).

In table 5 model 1 using the CEM model, it is obtained if financial development (FD) and financial market (FM) affect international trade (ITRD) with a significance level of 10%, while financial institutions (FI) have no influence on international trade. Different results are obtained from model 2 which uses the FEM model, that only financial institutions (FI) have an effect on international trade, while FD and FM do not affect international trade. Different results are also evidenced by model 3, namely the REM model, seen if the three independent variables have a significant influence at the level of 1% on international trade.

After knowing if the selected model is a Commond Effect model, then the next step is to test the second regression by adding the three control variables that will be described in table 6 below.

Table 6 Second Regression Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.264141	0.498110	8.560647	0.0000
FD	6.335415***	1.722316	3.678427	0.0005
FM	-0.945932***	0.294567	-3.211261	0.0021
FI	-1.109440**	0.378176	-2.933665	0.0047
LnFER	0.033397	0.077530	0.430757	0.6681
FDI	0.055469***	0.012965	4.278470	0.0001
LnRGDP	-0.269239***	0.077263	-3.484693	0.0009

Source: Data processed Eviews 10, 2023.
Note: *Significant at 10% (α < 0.10); **Significant at 5% (α < 0.05); ***Significant at 1% (α < 0.01).

As can be seen in table 6 above, the independent variable, namely only financial development (FD) has a positive effect on international trade (ITRD), while financial market (FM) and financial institutions (FI) have a negative effect on international trade. While the three control variables are only foreign exchange reserves (FER) which do not affect international trade (ITRD), while foreign direct investment (FDI) has a positive effect, and real gross domestic product (RGDP) negatively affects international trade (ITRD).

Referring to the statistical results in table 6, the regression equation that can be written is as follows:

ITRD = 4.264141 + 6.335415(FD) - 0.945932(FM) - 1.109440(FI) + 0.033397(FER) + 0.055469(FDI) - 0.269239(RGDP).

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Table 7 Hypothesis Test Results

R-squared	0.900532	Mean dependent var	1.656338
Adjusted R-squared	0.891059	S.D. dependent var	0.227308
S.E. of regression	0.075026	Akaike info criterion	-2.247325
Sum squared resid	0.354621	Schwarz criterion	-2.022476
Log likelihood	85.65638	Hannan-Quinn criter.	-2.158012
F-statistic	95.06154	Durbin-Watson stat	1.002047
Prob(F-statistic)	0.000000		

Source: Data processed Eviews 10, 2023.

Table 7 describes the results of the hypothesis test, for testing the coefficient of determination (R2) can be seen from the adjusted R-squared value of 0.891059 or 89.10%. Thus it can be said that international trade (ITRD) can be explained by FD, FM, FI, FER, FDI, RGDP by 89.10% and while the remaining 10.90% can be influenced by other factors or variables that were not included in this study.

Then the partial test (t), can be known if the probability value of all variables is smaller than the alpha specified except foreign exchange reserves (FER). So it can be concluded that partially the variables FD, FM, FI, FDI and RGDP have an influence on international trade, while foreign exchange reserves do not have a partial influence on international trade.

Furthermore, the simultaneous test (F), can be seen from the F-statistic probability value of 0.0000. The value is smaller than the alpha determined, so it can be concluded that the independent variable has a simultaneous effect on the dependent variable used in this study.

Discussion

The Effect of Financial Development (FD) on International Trade (ITRD) in D-8 countries

The results of testing the financial development index (FD) variable in this study are the positive and significant influence on international trade (ITRD) in developing eight countries (D-8). These results state conformity with the first hypothesis that H1 is accepted, meaning that if financial developments on the index scale increase it can increase the value of international trade. The financial development index (FD) is an index developed by the IMF that has a broader assessment covering the depth, access, and efficiency of financial institutions and financial markets, so it can be said that this financial development index is quite capable of representing how a country's financial condition (Svirydzenka, 2016).

The results of this study are also supported by research (Iqbal et al., 2019) which shows that financial development as measured by indices has a positive and significant impact on international trade in the Asian region. According to him, using financial developments only as a tool to increase exports or correct trade imbalances that benefit one country in the rest of Asia is unlikely to work, inversely for countries that already have high trade surpluses. Therefore, financial development is the most suitable tool to increase the overall volume of international trade with other Asian countries (Iqbal et al., 2019).

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The Effect of Financial Market (FM) on International Trade (ITRD) in D-8 countries

The results of testing the financial market index (FM) variable in this study are negative and significant influences on international trade (ITRD) in D-8 countries. This result states conformity with the second hypothesis even though the negative value of H2 is accepted, meaning that if the development of financial markets on the index scale increases it can decrease international trade. The financial market development index (FM) is an index developed by the IMF that has a broader assessment covering the depth, access, and efficiency of financial markets such as capital markets, bonds, and other investment purposes (Caporale et al., 2022). Thus, it can be said that this financial market development index is quite capable of representing how a country's financial situation is.

The results of this study are different from research (Iqbal et al., 2019) which states that financial market developments have a positive and significant influence on international trade. The difference in the results of this study implies that the state of financial markets in D-8 countries is still not developed as a whole, especially the countries that join the developing eight countries have government characteristics, different geographical locations that affect the level of economic income generated is also not the same. This is also why the financial market (FM) has a negative but significant effect on international trade in D-8 countries. According to (Iqbal et al., 2019) argues, that the development of financial markets is good for achieving overall trade openness for a country, but cannot be applied as a policy tool to increase exports alone or increase trade surplus or reduce trade deficit.

The Effect of Financial Institutions (FI) on International Trade (ITRD) in D-8 countries

The results of testing the financial institutional index (FI) variable in this study are negative and significant influences on international trade (ITRD) in D-8 countries. This result states conformity with the third hypothesis even though the negative value of H3 is accepted, meaning that if the development of financial institutions on the index scale increases it can decrease international trade. The financial institution development index (FI) is an index developed by the IMF which has a broader assessment covering the depth, access, and efficiency of financial institutions, especially in terms of mobilizing all matters related to trade business between countries that establish trade cooperation (Caporale et al., 2022). Thus, it can be said that the development index of this financial institution is quite capable of representing how the financial state of a country.

The results of this study show a negative but significant influence on the development of financial institutions on international trade in D-8 countries. This result is different from research Iqbal et al., (2019) which shows that the development of financial institutions has a positive and significant effect on international trade in the Asian region. The difference in the results of this study is because countries that are members of the developing eight countries (D-8) have different state characteristics and geographical locations that affect the level of economic income received, it can even be seen in figure 1 above that there is a considerable gap in the level of exports produced in each D-8 country. Meanwhile Iqbal et al., (2019) stated that the

development of financial institutions is often associated with the availability of increased and efficient credit/financing for exporters in need, therefore the development of these financial institutions is a very important implication for trade deficit countries, including for countries that are members of the OIC or known as developing eight countries (D-8).

CONCLUSION

Based on the results of testing and discussion, it can be concluded that the financial development index (FD) has a positive and significant effect on international trade (ITRD) in D-8 countries, while the financial market index (FM) and financial institutional index (FI) have a negative and significant effect on international trade (ITRD) in D-8 countries. Meanwhile, the addition of the three control variables, namely foreign exchange reserves, foreign direct investment, and real income per capita, also has a significant relationship with international trade, this is because these three variables imply having a direct or indirect linkage effect between financial developments and international trade.

This research did not escape the limitations of the study. This study only focuses on the main variables of financial development index, financial market index, and financial institution index which is a composite index developed by the IMF to measure the level of financial development of a country. There is still little research found using the index by the IMF as an indicator of financial development measurement, because generally previous research used four indicators including credit by banks to the private sector, domestic credit, stock market capitalization, and bond market capitalization. In addition, it is recommended in future studies to try to test granger's causality relationship to explore the two-way relationship between financial development-international trade or international trade and financial development.

REFERENCES

Bayar, Y., Akyuz, F., & Erem, I. (2017). Openness and Financial Development in Central and Eastern European Countries. *Studies in Business and Economics*, *12*(3), 5–16. https://doi.org/10.1515/sbe-2017-0032

Beck, T. (2002). Financial development and international trade Is there a link ? *Journal of International Economics*, *57*, 107–131.

Bilas, V., Bosnjak, M., & Novak, I. (2017). Examining the Relationship between Financial Development and International Trade in Croatia. *South East European Journal of Economics and Business*, *12*(1), 80–88. https://doi.org/10.1515/jeb-2017-0009

Caporale, G. M., Sova, A. D., & Sova, R. (2022). The direct and indirect effects of financial development on international trade: Evidence from the CEEC-6. *Journal of International Financial Markets, Institutions and Money*, *78*, 101550. https://doi.org/10.1016/j.intfin.2022.101550

IMF. (2023). *Financial Development Index*. IMF.Org. https://data.imf.org/?sk=F8032E80-B36C-43B1-AC26-493C5B1CD33B&sId=1485894037365&ref=mondato-insight

Iqbal, N., Ju, X. F., Fareed, Z., & Sheikh, S. A. (2019). Financial Development and International Trade inside Asia. *European Journal of Business and Management*, *11*(11), 23–32. https://doi.org/10.7176/EJBM

Kinuthia, B. (2015). Technology spillovers: Kenya and Malaysia compared. *The Journal Of International Trade & Economic Development*, *25*(4), 536–569. https://doi.org/doi: 10.1080/09638199.2015.1084524

Ladolo, A., Husen, S. R., & Zakaria, S. (2022). Pengaruh Perdagangan Internasional Terhadap Pertumbuhan Ekonomi Indonesia Tahun 2010-2018 Effect Of International Trade On Indonesia ' s Economic Growth In 2010-2018. *Jurnal Ilmiah Produktif*, *10*(1), 6–10. https://ojs-untikaluwuk.ac.id/index.php/jip

Leibovici, F. (2021). Financial development and international trade. In *Economic Research Federal Reserve Bank of St. Louis* (No. 2018-015C; Working Paper Series, Vol. 129, Issue 12). https://doi.org/https://doi.org/10.20955/wp.2018.015

Pertiwi, R. S., Herianingrum, S., Mustofa, M. U. Al, & Muhammad, M. (2019). Studi Empiris Government Effectiveness dan Trade Openness terhadap Perdagangan Internasional. *Jurnal Ekonomi*, *24*(3), 350. https://doi.org/10.24912/je.v24i3.598

Qiu, X., Lu, X., & Wang, K. (2022). Effect of Financial Development on Export Trade in China. *Journal of Advanced Computational Intelligence and Intelligent Informatics*, *26*(4), 609–618. https://doi.org/10.20965/jaciii.2022.p0609

Sare, Y. A. (2021). Threshold Effects of Financial Sector Development on International Trade in Africa. *International Journal of Finance and Economics*, *26*(1), 515–541. https://doi.org/10.1002/ijfe.1802

Svirydzenka, K. (2016). *Introducing a New Broad-based Index of Financial Development*.

Titus, O. M., Wagala, A., & Muriithi, D. K. (2022). Foreign Exchange Rate Volatility and Its Effect on International Trade in Kenya. *European Journal of Humanities and Social Sciences*, *2*(4), 47–56. https://doi.org/10.24018/ejsocial.2022.2.4.182

Wajda-Lichy, M., Kawa, P., Fijorek, K., & Denkowska, S. (2020). Trade Openness and Financial Development in the New EU Member States: Evidence from a Granger Panel Bootstrap Causality Test. *Eastern European Economics*, *58*(3), 242–263. https://doi.org/10.1080/00128775.2019.1701498

Widarjono, A. (2005). *EKONOMETRIKA: Teori dan Aplikasi untuk Ekonomi dan Bisnis*. Ekonisia.

Zahroh, F., Zainuri, Z., & Purtomo, R. (2019). Pengaruh Volatilitas Nilai Tukar terhadap Volume Perdagangan Internasional di ASEAN-3. *E-Journal Ekonomi Bisnis Dan Akuntansi*, *6*(1), 28. https://doi.org/10.19184/ejeba.v6i1.11071