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ANALYZING THE NEXUS BETWEEN FOREIGN TRADE AND ECONOMIC GROWTH IN DJIBOUTI THROUGH THE APPLICATION OF A VAR MODEL (1989-2021)

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ABSTRACT

Purpose- Economic growth and foreign trade are among the most important macroeconomic objectives of all countries in the world. The concept of foreign trade is considered as the engine of economic growth, consisting of imports and exports. Therefore, countries engage in commercial relations with other countries through economic policies tailored to their own economic and political situations. Since there are few studies on the economy of Djibouti, this study investigates the Djiboutian economy using the variables of growth, imports, and exports. The study aims to identify the degree to which foreign trade has affected economic growth in Djibouti, as well as to analyze the short-term and long-term dynamics of this relationship.

Methodology-This study employs a Vector Autoregression (VAR) model to investigate the nexus between foreign trade and economic growth in Djibouti over the period of 1989-2021. The data used in this study is sourced from the Organisation of Islamic Cooperation (OIC) database, which provides extensive information on Djibouti's foreign trade and economic indicators.

Findings- The findings indicate that foreign trade has a strong positive impact on economic growth in Djibouti, underscoring the critical role of foreign trade in driving the country's economic performance.

Conclusion-This study is significant as it adds to the limited literature on the relationship between foreign trade and economic growth in Djibouti, offering policymakers and stakeholders valuable insights into the significance of foreign trade in promoting economic development in the country. These results could guide the development and implementation of policies aimed at promoting and sustaining foreign trade, leading to further growth and development of the Djiboutian economy.

Keywords: Economic growth, foreign trade, VAR Model, Djibouti.
JEL Codes: F10, O41, C31

1. INTRODUCTION

Trade, an important factor in macroeconomics, has been present since the emergence of economics itself. The origin of international trade dates back to 2500 BC, and its nature and scope have expanded significantly over the years(Curtin, P. D. (1984). The theoretical debate on the relationship between foreign trade and economic growth can be traced back to the mid-15th century, when mercantilists emphasized the importance of valuable metals and exports for economic growth. Classical economists later argued that imports could also significantly impact economic growth(Krueger.,(1978). Empirical studies on this relationship gained momentum after the Second World War, particularly with the liberalization of foreign trade. Countries have turned to liberal foreign trade policies to develop their economies, and today, liberalization of foreign trade has become a popular economic policy for both developed and developing countries. In the context of globalization, countries actively seek to reduce trade barriers with the ultimate goal of achieving macroeconomic objectives(.

Foreign trade is a vital component of a country's economic growth and development. International trade allows countries to access goods and services that are not available locally and enables them to specialize in the production of goods and services for which they have a comparative advantage. This specialization and increased production lead to greater economic growth and improved living standards. Additionally, foreign trade helps countries to diversify their economies and reduce their dependence on a single industry or sector.

Foreign trade is an essential driver of economic growth and development, particularly for small, open economies like Djibouti.

Djibouti is a small nation situated in the Horn of Africa, bounded by Eritrea, Ethiopia, and Somalia. The country's populace is about one million, with the majority residing in the capital city of Djibouti. Djibouti has a diverse population comprising Afars, Somalis, and Arabs, and French and Arabic are the official languages, while Somali and Afar are widely spoken.

Djibouti's economy is primarily reliant on services, thanks to its strategic location on the Red Sea, which makes it an important hub for international trade and commerce. The country has one of the busiest ports in Africa, with significant investments in infrastructure and logistics in recent times. Additionally, the country hosts several foreign military bases, contributing to its economy.

Despite Djibouti's strategic location and immense potential for economic growth, it remains one of the world's poorest countries, with a high poverty rate and low levels of human development. The nation faces numerous challenges, including limited access to education and healthcare, environmental degradation, and political instability in the region.

This study aims to analyze the relationship between foreign trade and economic growth in Djibouti, utilizing a Vector Autoregression (VAR) model for the period of 1989-2021.

2. LITERATURE REVIEW

The existing scholarly work on the relationship between international trade and economic growth has presented a range of theoretical explanations. One commonly proposed explanation by researchers studying the effect of exports on economic growth suggests that this relationship is influenced by the productivity and scale effects resulting from increased exports. Conversely, scholars exploring the correlation between imports and economic growth argue that the importation of intermediate and capital goods can lead to appropriate diversification of input types, ultimately reducing investment costs by lowering the relative price of capital. This diversification can have a positive impact on an economy's growth. Overall, numerous studies have been conducted on the link between international trade and economic growth, providing valuable insights into the mechanisms and factors underlying this relationship.

Durbarry et al., (1998) assess the impact of foreign aid on growth for developing countries by using an augmented Fischer-Easterly type model and estimate this using both cross-section and panel data techniques. The results strongly support the view that foreign aid does have some positive impact on growth, conditional on a stable macroeconomic policy environment. They also find that these results vary according to income level, levels of aid allocation and geographical location.

Feeny S (2005) investigates the impact of foreign aid on economic growth in Papua New Guinea using timeseries data for the period 1965 to 1999. He examines whether aid effectiveness is conditional on levels of economic policy and governance using the Autoregressive Distributed Lag (ARDL) approach to cointegration proposed by Pesaran and Shin [1995]. His finding provides that little evidence that aid and its various components have contributed to economic growth in Papua New Guinea. There is some evidence that aid is more effective during periods when the country has undertaken a World Bank Structural Adjustment Program (SAP). An alternative interpretation is that a SAP may be more effective at spurring growth when supported by foreign aid.

Elbeydi and colleagues (2010) conducted an empirical investigation to examine the interdependence between exports and economic growth in Libya over the period spanning from 1980 to 2007. The results of the analysis revealed that income, exports, and relative prices were co-integrated, implying that they move together in the long run. Moreover, the study identified a bidirectional causal relationship between exports and economic growth in the long term. Furthermore, the analysis established that an upsurge in exports contributed to the acceleration of economic growth.

Kumari and Malhotra (2014) explored the connection between exports and economic growth in India from 1980 to 2012 using Johansen cointegration and Granger causality analysis. The results of the analysis indicated that there was no long-term equilibrium relationship between exports and per capita GDP.

The study conducted by Akıncı , Akıncı & Yılmaz (2014)investigates the determinants of financial development in Turkey using a VAR (Vector Autoregression) model. The analysis is based on annual data from the period 1986-2012, aiming to identify the factors that significantly influence financial markets during this timeframe. The findings of the study indicate several important determinants of financial development in Turkey. The first key determinant is national income, which highlights the importance of economic growth in fostering financial development. Higher levels of national income are associated with increased financial development.

Saleem and Sial (2015) conducted research on the relationship between exports and economic growth in Pakistan from 1973 to 2013. They used the ARDL bounds testing approach to examine the short- and long-term relationships and conducted the Granger causality test to investigate the causal relationship between variables. The findings indicated that exports, human capital, and capital formation played a significant role in Pakistan's economic growth. Moreover, the Granger causality analysis showed a bidirectional causal relationship between exports and economic growth in both the short and long run.

Pata (2017) investigated the causal relationship between exports, imports, total foreign trade, and economic growth over the period 1971-2014 by employing the Toda-Yamamoto causality test, generalized impulse-response analysis, and variance decomposition analysis. The analytical results demonstrated that there was a significant and positive unidirectional causal relationship from exports, imports, and foreign trade towards economic growth in the short term

Raza and Ying (2017) assessed the validity of the export-led growth hypothesis in Pakistan from 1967 to 2015 using the Toda-Yamamoto Granger causality analysis. The results showed a unidirectional causal link running from exports to economic growth, from exports to investment, and from economic growth to investment.

Tasew T (2010) examined the impact of foreign aid on investment and economic growth in Ethiopia over the period 1970 to 2009 using multivariate co-integration analysis. The empirical result from the investment equation shows that aid has a significant positive impact on investment in the long run. On the other hand, volatility of aid by creating uncertainty in the flow of aid has a negative influence on domestic capital formation activity. Foreign aid is effective in enhancing growth. However, the aid-policy interaction term has produced a significant negative effect on growth implying that bad policies can constrain aid effectiveness. The growth equation further revealed that rainfall variability has a significant negative impact on economic growth as the economy. His study indicated also that the country has no problem of capacity constraint as to the flow of foreign aid.

3. DATA AND METHODOLOGY

This study aims to analyze the relationship between foreign trade and economic growth in Djibouti, utilizing a Vector Autoregression (VAR) model for the period of 1989-2021. The names of the variables used in the study and their data sources are presented in the table below;

Table 1: Variables of the Study

Variable Name	Description	Source
GDP_Djibout	Gross domestic product of Djibouti	Organisation of Islamic Cooperation (OIC) database
Export__Djibout	Total Export of Djibouti	Organisation of Islamic Cooperation (OIC) database
İmport__Djibout	Total İmport of Djibouti	Organisation of Islamic Cooperation (OIC) database

3.1. Unit Root Analysis

In cases where time series data is non-stationary, standard regression analysis can produce erroneous results. This problem is commonly referred to as "spurious regression" in the literature. Stationarity of a time series implies that it has a constant mean, constant variance, and a covariance that depends on the lagged levels. However, in practice, most time series contain trends and are therefore non-stationary. Therefore, before proceeding with time series analysis, it is essential to conduct unit root tests to determine the stationarity of the variables. Knowing the degree of stationarity through preliminary tests is crucial for subsequent analyses. The most commonly used unit root test in the literature is the Augmented Dickey-Fuller (ADF) test. Depending on whether the series includes a constant and a trend, three ADF models can be established (Enders, 2010).

$$\Delta Y_t = \gamma Y_{t-1} + \sum_{i=2}^{p} \beta \Delta Y_{t-i+1} + \varepsilon_t \quad (1)$$

$$\Delta Y_t = \alpha_0 + \gamma Y_{t-1} + \sum_{i=2}^{p} \beta \Delta Y_{t-i+1} + \varepsilon_t \quad (2)$$

$$\Delta Y_t = \alpha_0 + \alpha_2 t + \gamma Y_{t-1} + \sum_{i=2}^{p} \beta \Delta Y_{t-i+1} + \varepsilon_t \quad (3)$$

In the above models, α_0 represents the constant term, α_1 represents the coefficient on the first lagged difference, α_2 represents the coefficient on the trend, and p represents the lag length. In these models, the null hypothesis (H_0) states that γ=0, indicating that the series is non-stationary and contains a unit root. The alternative hypothesis (H_1) states that γ<0, indicating that the series is stationary and does not contain a unit root. To determine the appropriate lag length in the ADF equation, criteria such as the Akaike Information Criterion (AIC), Schwarz Criterion (SC), or Hannan-Quinn (HQ) criterion can be used. Typically, the lag length with the lowest value according to these criteria is considered as the appropriate lag length.

3.2. VAR Model

The field of econometrics uses VAR (Vector Autoregression) models to reveal the interaction between variables and make forecasts for the future. The VAR modeling approach differs from other models in three main aspects: i) There is no distinction between endogenous and exogenous variables. ii) There are no zero restrictions. iii) There is no strong economic theory guiding the model construction. A VAR model is a set of k time series regressions, where k represents the number of series, and the lagged values of the variables serve as the explanatory variables. A VAR model with two time series or two variables can be represented as follows:

$$Y_t = a_{10} + \sum_{i=1}^{p} a_{11.i} Y_{t-i} + \sum_{i=1}^{p} a_{12.i} X_{t-i} + \varepsilon_{1t} \quad (4)$$

$$X_t = a_{20} + \sum_{i=1}^{p} a_{21.i} Y_{t-i} + \sum_{i=1}^{p} a_{22.i} X_{t-i} + \varepsilon_{2t} \quad (5)$$

Here, Y and X represent the time series variables under investigation, $a_{11.i}, a_{12.i}, a_{21.i}$ and $a_{22.i}$ are the unknown coefficients, p is the lag length, a_{10} ve a_{20} are the constant terms, andε_{1t} and ε_{2t} are the white noise error terms, which have a constant mean, varying variance, are serially uncorrelated, and have probability distributions.

3.3. Granger Causality Test

To conduct the standard "Granger Causality" test based on the VAR model, it is necessary for all variables to be stationary at the same level or at the same and higher degrees. If the stationarity condition is satisfied, the causal relationship can be tested using the standard F-test. The Granger causality test can be performed by estimating the following regression equations:

$$Y_t = a_0 + \sum_{i=1}^{p} \phi_i Y_{t-i} + \sum_{i=1}^{q} \delta_i X_{t-i} + \varepsilon_t \quad (6)$$

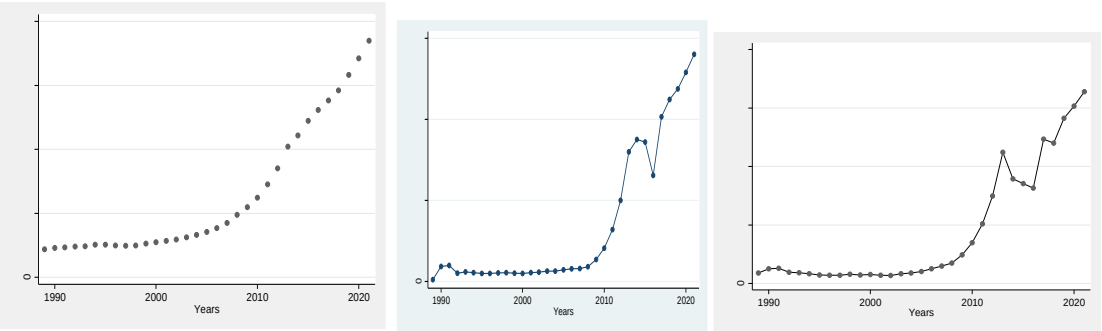
$$X_t = \beta_0 + \sum_{i=1}^{q} \pi_i X_{t-i} + \sum_{i=1}^{q} \lambda_i Y_{t-i} + \mu_t \quad (7)$$

In the above models, p and q represent the optimal lag lengths. In both models, the coefficients of the lagged values of the independent variables are tested to determine if they are equal to zero ($\delta_1 = \delta_2 = \cdots = \delta_i = 0; \lambda_1 = \lambda_2 = \cdots = \lambda_i = 0$) .The F-test is used to test the hypothesis. If the hypothesis is rejected in Equation (6), it is concluded that X is the Granger cause of Y. If the hypothesis is rejected in Equation (7), it is concluded that Y is the Granger cause of X.

4. EMPIRICAL ANALYSIS

This empirical analysis focuses on investigating the nexus between foreign trade and economic growth in Djibouti by utilizing a Vector Autoregressive (VAR) model. The study covers the period from 1989 to 2021, aiming to explore the dynamic interactions and causal relationships between key foreign trade variables, such as exports and imports, and Djibouti's economic growth. By applying the VAR model, this analysis seeks to provide empirical evidence on the short- and long-term effects of changes in foreign trade on the country's economic performance.

Figure 1: Graphical Detection of Stationarity



The time series graph exhibits a clear trend, indicating the presence of unit roots in the variables under analysis. Unit roots imply a non-stationary behavior, where the variables show systematic and persistent long-term movements over time. The trend observed in the graph suggests that both foreign trade variables and economic growth in Djibouti have experienced consistent changes and growth throughout the examined period.

Table 2: Results of ADF Unit Root Test (Original Level)

Variables	Test Statistic	1%Critical Value	5%Critical Value	10% Critical Value	p-value for Z(t)
GDP_Djibout	8.055	-3.702	-2.980	-2.624	1.0000
Export__Djibout	1.601	-3.702	-2.980	-2.622	0.9979
İmport__Djibout	1.408	-3.702	-2.980	-2.622	0.9972

The table presents the results of the ADF (Augmented Dickey-Fuller) unit root test in its original level for three variables: GDP_Djibout, Export_Djibout, and Import_Djibout. The ADF test is used to determine whether a time series is stationary or not, and the p-values for the test statistics are shown in the last column.

In the given table, the p-values for the test statistics of all three variables (GDP_Djibout, Export_Djibout, and Import_Djibout) are greater than 0.05. This suggests that we reject can not reject the null hypothesis of a unit root, and the series are non-stationary. Specifically, the p-values are 1.0000, 0.9979, and 0.9972 for GDP_Djibout, Export_Djibout, and Import_Djibout, respectively.

If the variables exhibit non-stationarity in their original levels, differencing can be applied to transform them into stationary time series.

Table 4: Results of ADF Unit Root Test (1st Difference)

Variables	Test Statistic	1%Critical Value	5%Critical Value	10% Critical Value	p-value for Z(t)
D(1)GDP_Djibout	-0.723	-3.709	-2.983	--2.623	0.8406
D(1)Export__Djibout	-4.580	-3.709	-2.983	-2.623	0.0001
D(1)İmport__Djibout)	-5.258	-3.709	-2.983	-2.623	0.0000

Based on the ADF unit root test results for the first difference of the variables, we can conclude that D(Export_Djibout) and D(Import_Djibout) are stationary, while D(GDP_Djibout) is non-stationary.

To make GDP_Djibout stationary, we will take the second difference and also interpret the result.

The second difference of GDP_Djibout will be taken to obtain a stationary series, and the result will be interpreted to determine if the series is stationary.

Table 5: Results of ADF Unit Root Test (Second Difference)

Variables	Test Statistic	1%Critical Value	5%Critical Value	10% Critical Value	p-value for Z(t)
D(2)GDP_Djibout	-7.182	-3.716	-2.986	-2.624	0.0000

According to the ADF unit root test, the second difference of GDP_Djibout yielded a test statistic of -7.182 and a p-value of 0.0000. The test statistic is smaller than the 1% critical value of -3.716, providing evidence that the second difference of GDP_Djibout is stationary at a 1% level of significance. Furthermore, the p-value being less than 0.05 supports the rejection of the null hypothesis of non-stationarity.

Therefore, it is reasonable to assert that the second difference of GDP_Djibout is stationary, which indicates its viability for further analysis.

Table 6: Phillips-Perron Test for Unit Root

Variables	P-value for Z(t)
Original Level	
GDP_Djibout	1.0000
Export__Djibout	0.9986
İmport__Djibout	0.9987
1st Difference	
D(1)GDP_Djibout	0.8893
D(1)Export__Djibout	0.0001
D(1)İmport__Djibout)	0.0000
D(1)GDP_Djibout	
2nd Difference	
D(2)GDP_Djibout	0.0000

The Phillips-Perron test is another commonly used test for checking the stationarity of a time series. The test results in Table 4 show that the original levels of GDP_Djibout, Export_Djibout, and Import_Djibout are non-stationary as their p-values are greater than 0.05. However, the first difference of the data Export_Djibout and Import_Djibout variables are stationary, as evidenced by the p-values being less than 0.05. Furthermore, the second difference of GDP_Djibout is also stationary with a p-value of 0.0000, which is less than 0.05. Therefore, we can conclude that the variables have been made stationary by taking the first and second differences, and they can be used for further analysis.

Table 7: Results of the Lag Length Selection

lag	LL	LR	FPE	AIC	HQIC	SBIC
0	-1589.12	NA	3.1e+49	122.471	122.513	122.616
1	-1566.65	44.953	1.1e+49	121.434	121.602	122.015
2	-1535.14	63.006	2.0e+48	119.703	119.996	120.72
3	-1518.89	32.512	1.3e+48	119.145	119.563	120.597

4	-1494.32	49.142	4.5e+47	117.948	118.491	119.835
5	-1478.05	32.54*	3.5e+47*	117.388*	118.057*	119.711*

The lag length selection suggests that a lag of 5 is the optimal choice based on AIC, HQIC and SBIC

Table 8: Johansen Tests for Cointegration

Rank	Parms	LL	Eigenvalue	Trace Statistic	5% Critical Value
0	39	-1503.6291	-	51.1625	29.68
1	44	-1489.6948	0.65763	23.2940	15.41
2	47	-1478.0874	0.59052	0.0792*	3.76
3	48	-1478.0478	0.00304		

The results of the Johansen tests suggest that there is evidence of cointegration among the variables being analyzed.

Table 9: VAR Model Estimation

Depedent variables	D(2)GDP_Djibout		D(1)Export__Djibout		D(1)İmport__Djibout)	
	Coefficients	P>|z|	Coefficient	P>|z|	Coefficient	P>|z|
D(2)GDP_Djibout	.9112389	0.009	-.1748536	0.262	.1914563	0.375
_cons	3.23e+07	0.000	R-sq = 0.7847 P>chi2 = 0.0000			
D(1)Export__Djibout	6.352807	0.002	.1491466	0.870	-.3044769	0.809
_cons	3.98e+07	0.399	R-sq = 0.9098 P>chi2 = 0.0000			
D(1)İmport__Djibout)	10.6813	0.015	-.408113	0.835	.4338732	0.873
_cons	2.09e+08	0.040	R-sq = 0.7297 P>chi2 = 0.0000			

The results indicate that the lagged values of D(2)GDP_Djibout have a positive and significant effect on itself, while the lagged values of D(1)Export__Djibout and D(1)Import__Djibout have a positive effect, but not significant. Moreover, the R-squared values for Model relatively high, indicating that the model can explain a large portion of the variability in these variables.

The lagged values of D(2)GDP__Djibout have a statistically significant effect on D(1)Export__Djibout, with a coefficient of 6.352807 and a p-value of 0.002. However, the lagged values D(1)Export__Djibout, and D(1)İmport__Djibout do not have a significant effect on D(1)Export__Djibout, as their coefficients have p-values greater than 0.05. The overall model has a high R-squared value of 0.9098, indicating a good fit, and a statistically significant chi-square test with a p-value of 0.0000, indicating that the model is a good fit for the data. For the dependent variable D(1)İmport__Djibout, these results suggest that changes in D(1)Import__Djibout are positively associated with changes in D(2)GDP, changes in D(1)Import__Djibout are not significantly associated with changes in D(1)Export__ Djibout and D(1)İmport__Djibout

Table 10: Correlation Test

lag	chi2	Prob > chi2
1	5.4271	0.79560
2	6.6263	0.67597
3	12.6004	0.18154
4	6.2739	0.71222
5	10.1620	0.33753
6	4.5396	0.87245
7	5.6492	0.77445
8	1.4310	0.99763
9	9.9866	0.35157
10	10.1081	0.34181
11	8.5053	0.48414
12	16.8360	0.05135

The table displays the lag number, the chi-squared test statistic, and the associated p-value. The null hypothesis for the test is that there is no serial correlation in the residuals (i.e., the errors are independently distributed), and the alternative hypothesis is that there is serial correlation.

Looking at the table, we can see that for each lag, the p-value is quite high, indicating that we cannot reject the null hypothesis of no serial correlation in the residuals. Therefore, we can conclude that there is no evidence of serial correlation in the residuals of the VAR model.

Table 11: Jarque-Bera Test for Normality of Residuals

Equation	chi2	df	Prob
D(2)GDP_Djibout	0.014	2	0.99325
D(1)Export__Djibout	5.245	2	0.07261
D(1)İmport__Djibout)	0.153	2	0.92630
ALL	5.412	6	0.49217

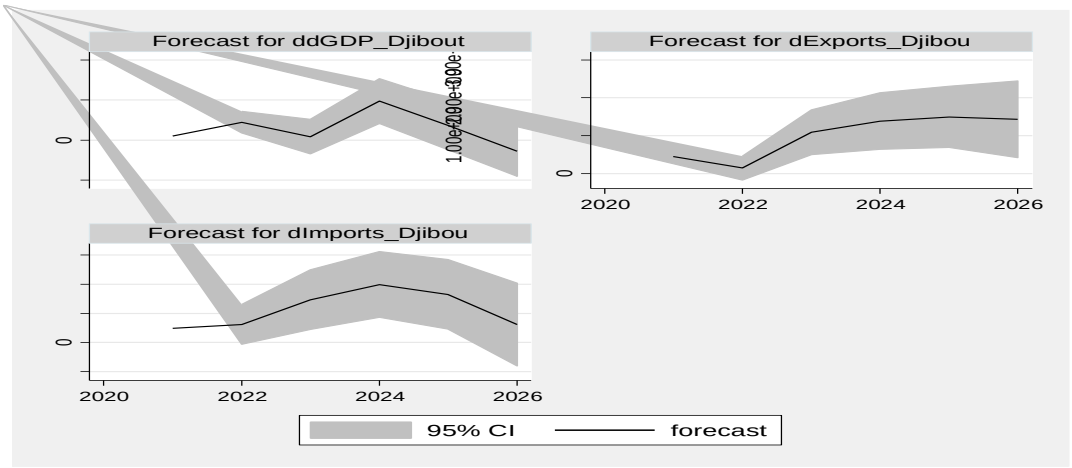
The Jarque-Bera test is a test for normality of residuals. The null hypothesis of the test is that the residuals are normally distributed. However, the p-value of variables greater than 0.05, so we can not reject the null hypothesis of normality for that variable.

Table 12: Granger Causality Wald Tests

Equation	chi2	Prob > chi2
GDP ➡ Export	31.407	0.000
GDP ➡ İmport	31.136	0.000
Export ➡ GDP	21.676	0.001
Export ➡ Export	22.209	0.000
İmport ➡ GDP	20.121	0.001
İmport ➡ Export	15.829	0.007

The Granger causality Wald tests show the results of testing whether one variable Granger-causes the other variable in a VAR model. The test is based on comparing the fit of two VAR models, one with both variables included and the other with the variable of interest excluded. The null hypothesis is that the excluded variable does not Granger-cause the other variable. The results suggest that there are causal relationships between the variables in the model, with the GDP variable being the strongest causal variable.

Figure 2: A VAR Model Forecast for the Next Five Years



Based on the information about the forecasted VAR model for the next five years (2022-2026), the export graph shows an increase, indicating a positive trend in the value of goods and services exported by Djibouti. The GDP graph shows fluctuations, indicating that Djibouti's economic growth may experience varying levels of expansion and contraction during this period. In terms of imports, the graph shows an initial increase followed by a slight decrease. This pattern suggests that Djibouti's imports may initially rise.

5. CONCLUSION

The relationship between foreign trade and economic growth has been a subject of theoretical debate for centuries. Mercantilists emphasized the importance of valuable metals and exports, while classical economists argued that imports could also impact economic growth. Today, empirical evidence suggests that international trade plays a significant role in

promoting economic growth, and policymakers around the world have implemented policies aimed at increasing exports and imports.

The study examining the relationship between foreign trade and economic growth in Djibouti using a VAR model (1989-2021) has provided significant insights into the interdependence of these variables. The results indicate a positive and substantial correlation between foreign trade and economic growth in Djibouti, with exports and imports exerting a considerable influence on GDP, highlighting the critical role of international trade in the country's economic development.

The implications of the study's findings are significant for policymakers and businesses operating in Djibouti. The results suggest that policies aimed at promoting international trade and increasing exports and decreasing imports could significantly contribute to the country's economic growth. The study also underscores the need for further research to explore the complex relationships between foreign trade and economic growth in Djibouti and identify the most effective policies to foster sustainable economic development in the country.

REFERENCES

Akıncı, G. Y., Akıncı, M., & Yılmaz, Ö. (2014). Determinants of financial development: a VAR Model for Turkey. International Journal of Alanya Faculty of Business, 6(1), 1-15.

Arodoye, N. L., & Iyoha, M. A. (2014). Foreign trade-economic growth nexus: evidence from Nigeria. CBN Journal of Applied Statistics, 5(1), 121-141.

Dickey, D. A. and Fuller, W. A. (1981). Likelihood ratio statistics for autoregressive time series with a unit root. Econometrica, 49(4), 1057-1072.

Girma, H. (2015). The impact of foreign aid on economic growth: Empirical evidence from Ethiopia (1974-2011) using ARDL approach. Journal of Research in Economics and International Finance, 4(1), 1-12.

Hassan , S. M., & Mohamed, M. J. (2022). Comparison of Somalia and the East Africa Community in terms of economy and competition. Daha International University Academic Journal (DIUAJ), 1(1), 1–10.

Hassan, S. M. (2022). A causal analysis on foreign trade and economic growth: the case of Somalia. (2022). International Journal of Scientific Research and Management (IJSRM), 10(08), 3725-3731.

Kumari, D., & Malhotra, N. (2014). Trade-led growth in India and China: A comparative analysis. Journal of International and Global Economic Studies, 7(2), 68-88.

Li, Z., & Yang, D. (2015, March). The study on the ınfluence of fixed asset ınvestment and foreign trade to the economic growth of ningbo---based on VAR Model. In 2015 International Conference on Education Technology, Management and Humanities Science (ETMHS 2015) (pp. 341-345). Atlantis Press.

lin Guan, J., & Hong, Y. (2012). An empirical analysis on US foreign trade and economic growth. Aasri Procedia, 2, 39-43.

Pradhan, R. P. (2009). The nexus between financial development and economic growth in India: Evidence from multivariate VAR model. International Journal of Research and Reviews in Applied Sciences, 1(2), 68-79.

Radford, J. P. (1990). [Review of Cities and Economic Development: From the Dawn of History to the Present, by P. Bairoch & C. Braider]. Geographical Review, 80(3), 336–338.

Raza, M., & Ying, X. Z. (2017). The causal relationship between export and economic growth of Pakistan. International Journal of Economics, Commerce and Management, 5(2), 210-230.

Shaikh, F. M. (2010, August). Causality relationship between foreign direct investment, trade and economic growth in Pakistan. In International Conference on Applied Economics ICOAE (Vol.2010, pp. 717-722).

Tadesse, T. (2011). Foreign aid and economic growth in Ethiopia: A cointegration analysis. The Economic Research Guardian, 1(2), 88-108.

van Den Berg, H. (1997). The relationship between international trade and economic growth in Mexico. The North American Journal of Economics and Finance, 8(1), 1-21.