JBM
The Journal of Business and Management
ISSN 2350-8868
Volume VII | *Issue* 1 | *May 2023*

The Influence of Traditional Exports on Economic Growth in Tanzania: The VECM Analysis

James Daniel Chindengwike
St. John's University of Tanzania, Dodoma, Tanzania

Received: 16 December 2022
Reviewed: 19 March 2023
Accepted: 27 March 2023
Published: 31 March 2023

Correspondence:
James Daniel Chindengwike
chindengwikejames@gmail.com

Citation: Chindengwike, J. D. (2023). The influence of traditional exports on economic growth in Tanzania: The VECM analysis. *The Journal of Business and Management, 7*(1),71-89. https://doi.org/10.3126/jbm.v7i01.54547

Abstract

Background: Tanzania, like other developing countries, sees commerce as one of the most important tools for the country's growth and progress. Given that export is one of Tanzania's primary economic sectors, several empirical studies on the relationship between international commerce and the country's economic growth have been conducted.

Objectives: The study looked primarily at the influence of traditional exports as the primary independent variable. Furthermore, the Natural Logarithm of Terms of Trade (TOT), the currency rate, and Foreign Direct Investment (FDI) are control variables, whereas GDP is the dependent variable.

Methods: The research employed time-series data from the World Bank, the Bank of Tanzania (BOT), and the United Nations Conference on Trade and Development (UNCTAD) that spans 31 years from 1991 to 2021 based on the Vector Error Correlation Model (VECM).

Results: The findings revealed a link between Tanzania's economic growth and traditional exports, trade terms and currency rate. Furthermore, studies have found a negative and substantial association between exchange rates and economic growth in both the short and long run.

Conclusion: The findings indicated that trade terms and traditional exports had a favorable and considerable influence on economic growth in the short run. In the long run, traditional exports and FDI had a negative and positive influence on economic growth, but trade terms had a considerable and positive effect. As a result, the study argues that Tanzania's government should prioritize export promotion measures above traditional exports to accelerate Tanzania's economic growth. The government should prioritize the establishment of factories that will add value to traditional export items.

Keywords: Developing countries, economic growth, Tanzania, Traditional Exports
JEL Classification: F43, N17, N70, O47

ISSN 2350-8868
Volume VII | *Issue* 1 | *May 2023*

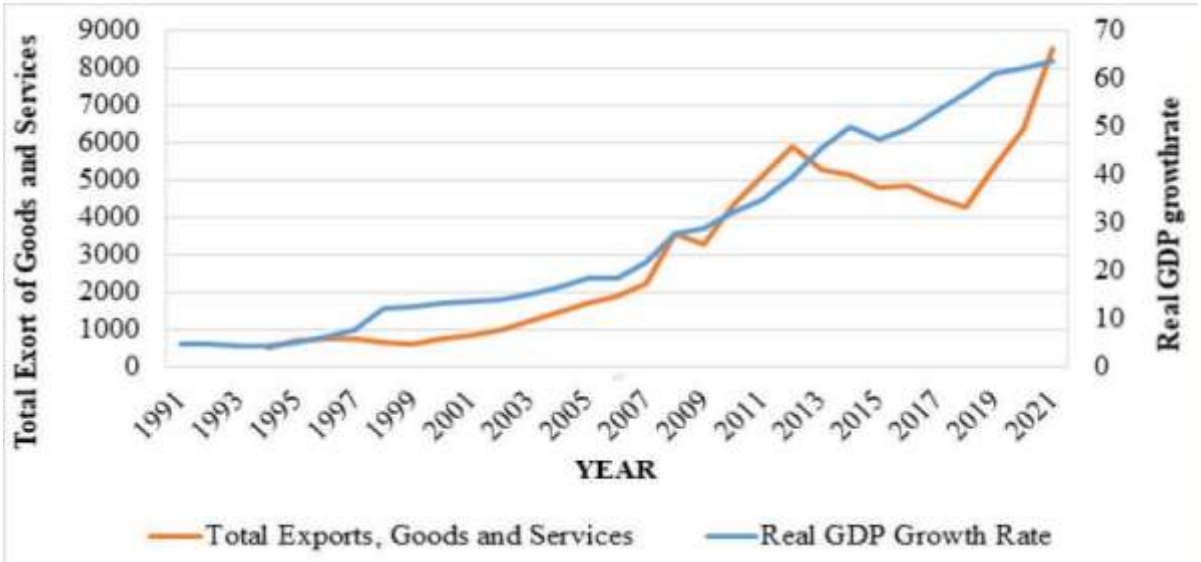
Introduction

Private domestic investment benefits a country's economy, society, and politics. Different economists are interested in the economic causes of country growth and wealth achievement at various levels. International commerce, among other things, has become a hot topic of discussion when it comes to economic growth drivers since it adds to GDP growth, exchange rate, current deficit correction, and Foreign Direct Investment (Dewi and Hung, 2019). Tanzania, for example, is a free market participant in overseas trade, accounting for 42% of GDP in 2021 (MoA, 2021). According to the most recent available country statistics from 2019, importers in Vietnam (2.1% of the global total), the Netherlands (2.1%), the United Arab Emirates (2.3%), Rwanda (2.7%), Uganda (3.1%), China (3.8%), the Democratic Republic of the Congo (3.8%), Kenya (5.8%), Belgium (6.3%), Switzerland (6.8%), India (19.2%), and South Africa purchased 77.4% of Tanzanian exports (UNCTAD, 2021). Tanzania's total export in 2020 is USD 1.7 billion (32.6% of total export of goods and services), with precious metals accounting for USD 1.7 billion (32.6% of total export of goods and services), copper accounting for USD 476.3 million (9.1%), ore, slag, and ash accounting for USD 416.9 million (8%), fruits and nuts accounting for USD 416.5 million (8%), and oil seeds accounting for USD 262.8 million (5%) (Nguto, 2020).

Tanzania initiated a variety of trade-related efforts, including trade liberalization in 1986, the establishment of the Tanzania Exporters Association (TANEXA), and the drafting of trade policy in 2003, among others (MoIT, 2013). Furthermore, Tanzania has signed a number of trade union agreements with other nations in order to boost its export performance, including the East African Community (EAC) in 1999 and the Southern Development Community (SADC) in 2003 (Nguto, 2020). Tanzania also benefits from trade agreements such as the African Growth and Opportunity Act (AGOA) of the United States and the European Union's Everything but Arms (EBA). These initiatives give the country duty-free access to the US and EU markets (Nguto, 2020). The goal is to reduce trade imbalances and alleviate economic issues. The most important characteristics of trade imbalance are worth of the country's export falls below the worth of its imports, the country will use more money to purchase imports rather than export goods (Mputu, 2016). In this circumstance, Terms of Trade are predictable to have a great effect on the rise of exports. Despite various programs, the contribution of export on the economic growth in Tanzania has been volatile as shown below in the Figure 1.

Figure 1

Tanzania Goods and Service Exports Trend from 1991 to 2021



ISSN 2350-8868
Volume VII | *Issue* 1 | *May 2023*

Traditional export contributes significantly to market expansion, income generation, competition facilitation, job creation, and information exchange. Even though foreign commerce is critical to economic progress, the market for traditional items is volatile in terms of volume and price, affecting Tanzania's economic growth (Tripathi et al., 2021). Tanzania has implemented several trade and fiscal policy reforms to enhance exports since independence (Nguto, 2020). However, the value of the export share has remained low throughout time. Tanzania has never enjoyed a trade surplus since the 1980s, as evidenced by the fact that (Nguto, 2020). For example, Tanzania's trade imbalance expanded to USD 1,784.7 million in 2021 from USD 1140.7 million in 2020, with total exports being USD 6,751.1 million and imports totaling USD 9,678.3 million.

However, while examining the influence of exports on economic growth, they did not distinguish the effect of traditional as the independent variable. Urriola and Baral (2018) discovered, using a VAR model, that traditional agricultural exports had a favorable but small influence on economic growth in the short run. In explaining the variance in economic growth, the study disregarded other key variables such as terms of trade and currency rate. As a result, it is critical to include the VECM approach in this study, which adjusts in both the short and long run using the Error Correction Term (ECT), which is a crucial requirement for long-run equilibrium (Kagoma, 2019). Therefore, this research aims to fill the knowledge gap that exists in the literature by investigating the impact of traditional export to economic growth in developing countries specifically Tanzania.

Review of Literature

Heckscher-Ohlin Trade Theory; Absolute advantage and comparative advantage theories, as well as the Heckscher-Ohlin Samuelson model, are utilized in international trade and growth literature. The Heckscher-Ohlin-Samuelson model, which is an extension of the comparative advantage idea proposed by Eli Heckscher (1991) and Bertil Ohlin in 1933, was refined in 1948 by Paul Samuelson (Mkubwa, 2019). Countries have a varied variety of factor endowments, according to these economists. As a result, worldwide inequalities in factor endowments (labor/capital) describe the foundation for specialization and comparative cost gaps. Prebisch-singer theory; classical economists such as Thomas Malthus, David Ricardo, and others anticipated that when land and other natural resources became scarce, the terms of trade for conventional products would rise, forcing their prices up.

According to Andenew and Woldeyohannes (2021) used econometric approaches to evaluate the impact of international trade performance on Ethiopian economic growth. The study used yearly time series data from 1989/90 to 2018/19 to examine the pattern of export agricultural goods and economic growth in Ethiopia. The autoregressive distributed lag (ARDL) model was used to regress the following variables: export value, gross capital creation, gross labor force, real exchange rate, and imports. The Granger causality approach was used to assess the direction of causation between export and economic growth. Long-term data suggest that agriculture export has a positive and significant effect on economic growth. Mlambo et al. (2019) studied the influence of processed and unprocessed export items on South Africa's GDP from 1896 to 2012.

According to Omanus and Utonga (2019) examined the link between exports and Tanzania's economic development using time series data from 1980 to 2015. Exports to other countries are assessed as a percentage change in products and services, whereas economic growth is recorded as a percentage change in GDP. As part of the econometrics investigation, the existence of unit root, cointegration, and causality were all examined. The Johansen cointegration and granger causality tests were used to evaluate the long-run relationship between variables. The results of co-integration demonstrate that there is only one co-integrating equation. Economic growth

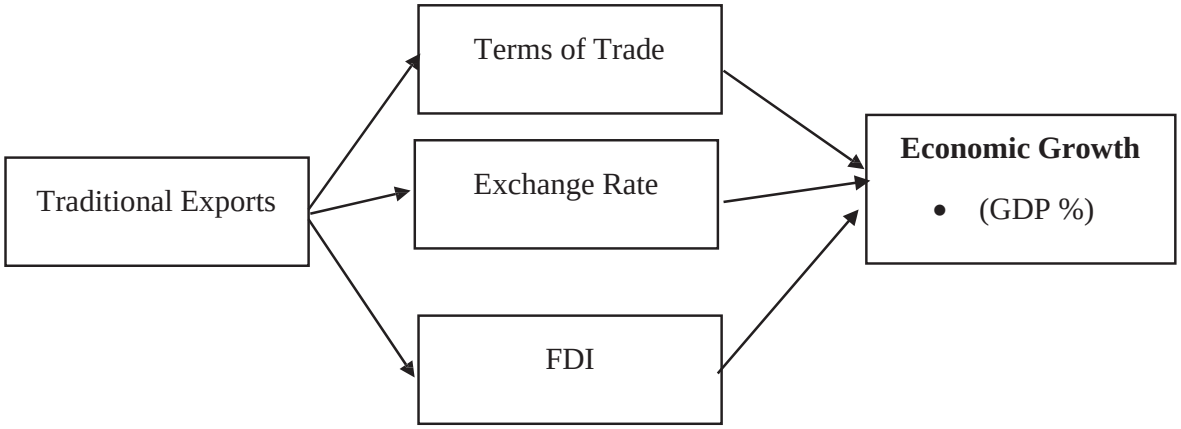
ISSN 2350-8868
Volume VII | *Issue* 1 | *May 2023*

and exports were found to be linked using the causality test. The regression results suggest that there is a long-term relationship between Tanzanian exports and economic development (Okyere & Mensah, 2020).

Previous studies similar to this study did not capture the terms of trade, exchange rate and FDI, most of studies which have already been conducted. In explaining the variance in economic growth, the study disregarded other key variables such as terms of trade and currency rate. As a result, it is critical to include the VECM approach in this study, which adjusts in both the short and long run using the Error Correction Term (ECT), which is a crucial requirement for long-run equilibrium (Kagoma, 2019).

Figure 2

Conceptual Framework



Source: Constructed from Kagoma, 2019.

Material and Methods

The annual time series research approach was employed because it permits statistical conclusions to be applied when analyzing the relationship between two or more variables (Mohamed, 2020). The research looked at annual repeated data from the same unit of analysis because they provide insight into the sources of trends or systematic patterns throughout time. The key factors of production in this model are capital and labor forces (Edeme et al., 2016), as specified in the function below.

$$Yt=f(lt, kt) \quad (1)$$

Where, Lt= Terms of Trade and Kt= Exchange Rate

To achieve the major goals of how traditional export and total export effect Tanzania's economic growth. It was important to integrate the study's goal variable and replace for lt, kt. The function presented as follows:

$$Yt=f(TXt, TOTt, EXt, FD!t) \quad (2)$$

However, the model with natural logarithm to evaluates the effect analysis of traditional export on the economic growths in Tanzania is presented as follows:

$$\log GDPt=\beta_0+f3_1\log TXt+f3_1\log TOTt+f3_2\log EXt+f3_3\log FD/t+Et \quad (3)$$

$$\log GDPt=\beta_0+f3_1\log TOTt+f3_2\log EXt+Et \quad (4)$$

Where, $GDPt$= natural logarithm of Gross Domestic Product, TX=natural logarithm of traditional export, TOT= natural logarithm of Terms of trade, Eβ0 toral logarithm of real exchange rate, FDI= natural logarithm of foreign direct investment and β_0 *to* β_5= coefficients.

ISSN 2350-8868
Volume VII | *Issue* 1 | *May 2023*

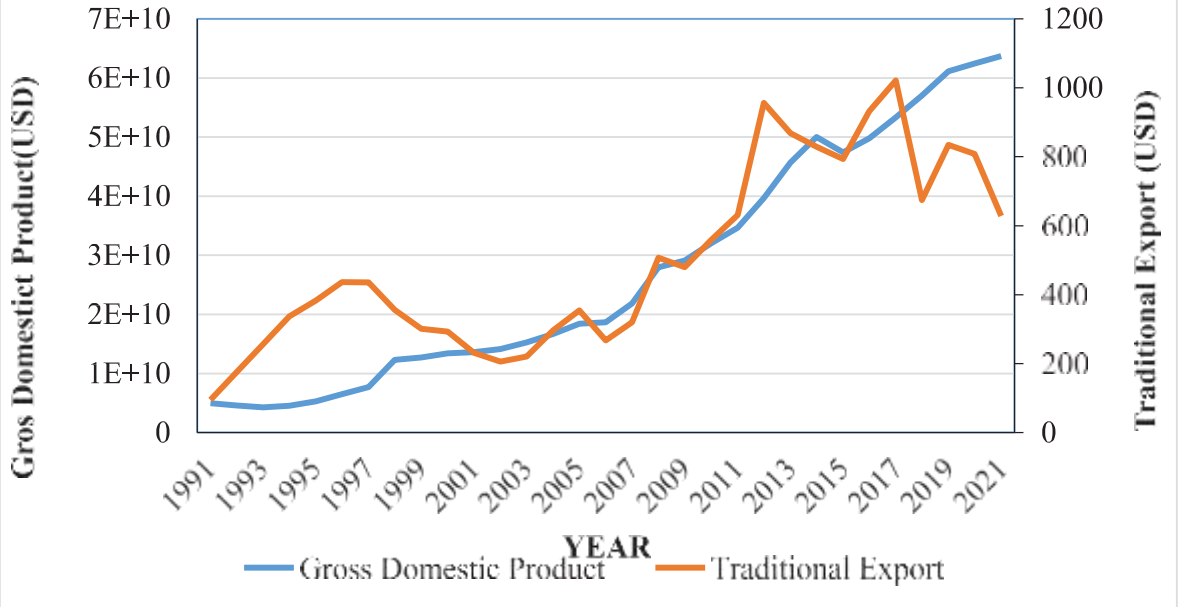
Results and Discussion

Traditional Exports (TX)

Figure 4 shows that traditional exports from 1991 to 2021 fluctuated with an upward trend. Figure 3 provides a summary of economic growth and traditional export trends from the year 1991 to 2021.

Figure 3

Trend of the Unit of GDP and Total Export



Source: BOT, 2022.

Figure 3 shows that the traditional exports (TX) reached maximum value of USD 1021.8 million in 2021 and minimum value is USD 94.91 million in 1991 and make the difference of USD 926.9 million from the maximum value to minimum value. In 1991 the value was USD 94.91 million, then in 1992 rose to USD 175 million. An upward trend with significant implication to country economic growth observed from 1993, 1994, 1995 and 1996 were the total value of traditional stand for USD256.19 million, USD 336.83 million, USD 383.55 million, and USD 436.31million. The consistent increase in the total value from 1991 to 1997 was associated with several reasons, accelerate reforms based on the tariffs was among of the reasons which act as catalyst for investment resulting to the increase of the exports. In the next years the decline of traditional exports was associated with a decline in production levels, poor strategies on export sector, resulted to downward trend of traditional exports from a total value of USD 435.34 million in 1997 to USD 220 million in 2003 (BOT, 2002).

Correlation Analysis

On this study correlation Analysis performed by Pairwise matrix**,** the correlation coefficient of the test reveal how strongly the chosen independent factors affects the outcome variable by explaining the relationship that persists between independent variable and dependent variable (Dangal & Gajurel, 2021). The purpose of the test was to determine whether the variable was perfectly collinear before running the test. A low correlation indicates that the variables are hardly related, while a high correlation means that two or more variables are highly related. The results of correlation matrix for all variables are presented in Table 1.

ISSN 2350-8868
Volume VII | *Issue* 1 | *May 2023*

Table 1
Correlation Matrix

Variable	GDP	TX	TOT	EX
GDP	1.000			
TX	0.795	1.000		
	0.000*			
	0.000*	0.000*		
	0.000*	0.000*		
TOT	0.852	0.795	1.000	
	0.000*	0.000*		
EX	-0.531	-0.443	-0.364	1.000
	0.002*	0.014*	0.478	
FDI	0.134	-0.182	-0.202	-0.016
	0.479	0.336	0.285	0.933

Source: Researcher Estimation Results, 2022.

Variance Inflation Factor Test (VIF)

The study employed the Variance Inflation Factor (VIF) as a correlation test to confirm. The VIF is proposed as a good indicator for multicollinearity because it gives the degree of collinearity of the predictors. According to Kagoma (2019) to the problem with collinearity to the independents variable it leads to the underestimation of the statistical significance of a given variable. The Rule of thumb of the VIF value suggested that, the value less than 10 has been justified as an indicator of the absence of multicollinearity among the independent.

Table 2
Variance Inflation Factor Test

Variable	VIF	1/VIF
EX	1.26	0.794
TOT	1.17	0.853
TX	1.16	0.865
FDI	1.04	0.946

Source: Researcher Estimation Results, 2022.

Unit Root Test

Test of unit root is an important concept in analysis process as it provides useful analytical tools and act as pre statistical tests. Stationarity means that the statistical properties of time series do not change over time (Mohamed, 2020). Augmented dickey fuller (ADF) and the Phillips - Perron (PP) tests were used for each variable in levels and differences to check the presence of the unit root. Unit root test as important test in time series analysis since it helps to avoiding spurious regression by applying the appropriate model. The best results were obtained from the ADF test and PP test and used to select the appropriate model (VECM) to be used. Table 3 shows the unit test for each variable.

ISSN 2350-8868
Volume VII | *Issue* 1 | *May 2023*

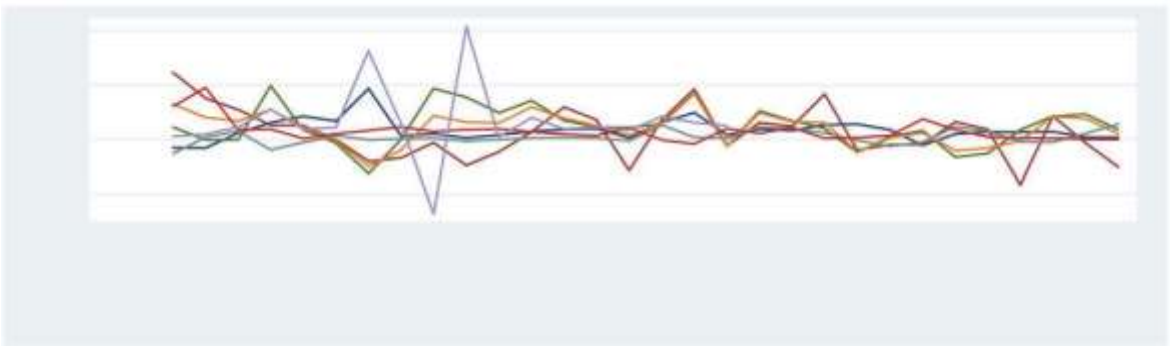
Table 3
Stationarity Test

ADF TEST					
Variable	**Level**		**First Difference**		**Order of Integration**
	Test Statistics	Critical Value	Test Statistics	Critical Value	
GDP	-1.434	-2.989	-3.489*	-2.992	*1*(1)
TX	-0.832	-2.989	-3.853*	-2.992	*1*(1)
TOT	0.565	-2.989	-4.669**	-2.992	*1*(1)
EX	-2.317	-2.989	-7.590*	-2.992	*1*(1)
FDI	-1.714	-2.989	-6.179*	-2.992	*1*(1)
The PP TEST					
Variable	**Level**		**First Difference**		**Order Of Integration**
	Test Statistics	Critical Value	Test Statistics	Critical Value	
GDP	-0.832	-2.986	-4.116*	-2.989	*1*(1)
TX	-2.692	-2.986	-4.625*	-2.989	*1*(1)
TOT	1.227	-2.986	-4.667*	-2.989	*1*(1)
EX	-3.979	-2.986	-3.729*	-2.989	*1*(1)
FDI	-1.673	-2.986	-8.409*	-2.989	*1*(1)

Source: Researcher Estimation Results, 2022.

Results in Table 3 revealed that all variables used in the study were non-stationary at their levels, as confirmed by their test statistics which are greater than their corresponding critical values at 5% levels of significance. However, after taking their first differences as way common way to transforming a non-stationarity series to be stationary, all variables became stationary. Results supported by their test statistics which are now less than their corresponding critical values at 5% levels of significance. Therefore, the null hypothesis of the unit root was rejected at 0.05 levels of significance; suggesting that all variables of interest are integrated of order one (*1(*1)) which means is stationary after first difference. Figure 4 below indicates that all variables are a stationary logarithm of FDI.

Figure 4
Time Series Plot for Smoothed Data



ISSN 2350-8868
Volume VII | *Issue* 1 | *May 2023*

Normality Test

The test for normality was performed to ensure that residuals follow a normal distribution. The common used normality test by different economist (Machumu, 2020; Kalaitzi & Chamberlain, 2020; Yusuf & Omar, 2019; Mputu, 2016) known as Jarque-Bera test. The data are said to be normally distributed if their overall probability is greater than 0.05. The hypothesis of the test is presented as; : normally distributed; : not normally distributed. Table 4 below presents the results of the test.

Table 4

Jarque- Bera Test

Equation	Chi2	Df	Pro>Chi2
GDP	3.133	2	0.209
TX	1.038	2	0.595
TOT	4.149	2	0.126
EX	1.060	2	0.589
FDI	0.167	2	0.920

Source: Researcher Estimation Results, 2022.

Results in Table 4 show results from Jarque-Bera test. From the table the overall probability values and probability value for each variable is greater than 0.05. The overall probability value is 0.58690 which is greater than 0.05 (5%) critical value, hence the null hypothesis was accepted that the residuals are normally distributed. The data used for analysis followed normal distribution which means that the number of shocks that occurred throughout the sample period did not impact the findings. Figure 5 shows normal distribution of the data used in the study.

Figure 5

Normal Distribution

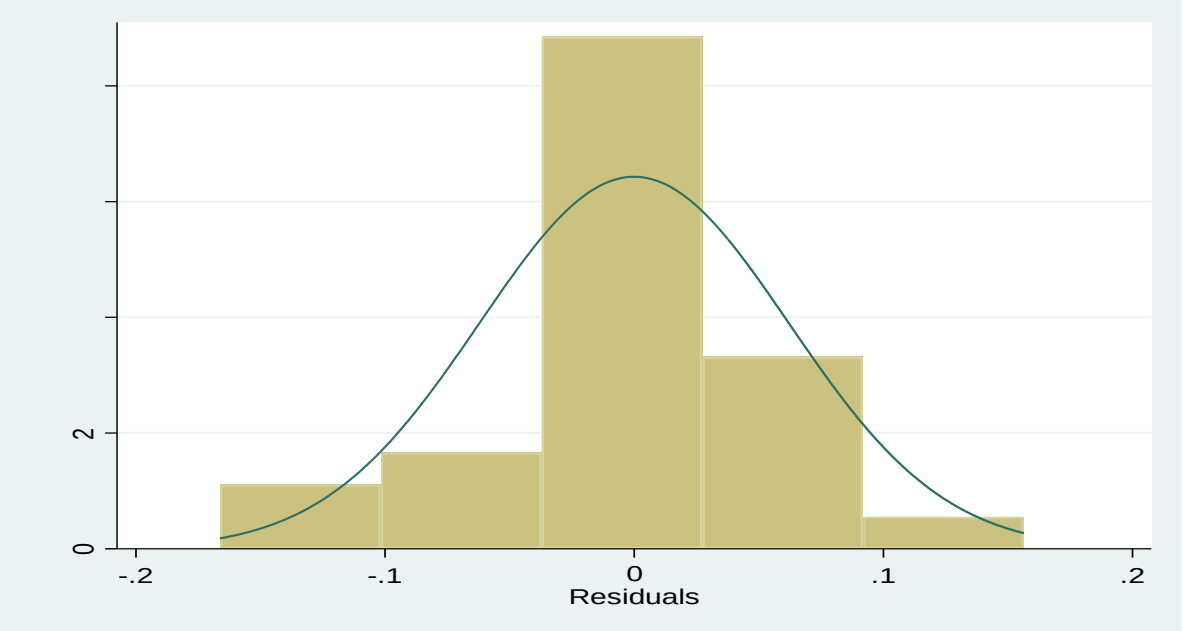


Figure 5 shows histogram is bell-shaped which implies the residual are normally distributed.

ISSN 2350-8868
Volume VII | *Issue* 1 | *May 2023*

Heteroscedasticity Test

The model was subjected to heteroscedasticity test using Cameron and Trivedi's decomposition of LM-test. The test considers the variation of mean and variance to endogenous variable over time (Mohamed, 2020). Table 5 below shows that the model is free with heteroscedasticity since the P-value for heteroscedasticity is greater than 5% of probability.

Table 4.5

Cameron and Trivedi's Decomposition of IM-Test

Source	Ch2	df	P-value
Heteroscedasticity	28.683	20	0.094
Skewness	6.941	5	0.225
Kurtosis	1.280	1	0.257

Source: Researcher Estimation Results, 2022.

Results in Table 5 show that, probability value was 0.094, which is greater than 0.05. Hence that, the null hypothesis of homoscedasticity was accepted and conclude the residual of series has a constant variance from 1991 to 2021. Also, residual is normally distributed since p-value for skewness and Kurtosis is greater than 5% probability level.

Autocorrelation Test

Autocorrelation is the correlation between the error term arising in time series data. Such correlation in the error terms often arises from the correlation of the omitted variables that the error term captures. The study employed Lagrange-multiplier test for autocorrelation in the residuals. Table 6 below shows results of LM test.

Table 4.6

Lagrange-Multiplier Test

Lag	Chi2	Difference	Prob > chi2
1	50.474	36	0.0553
2	40.926	36	0.2631
3	35.486	36	0.4929

Source: Researcher Estimation Results, 2022.

Table 6 above suggests that the model does not suffer from serial correlation problem for all three lags. The p-value was greater than the 5% level which stand as 0.05529, 0.26312 and 0.49287 for 1, 2 and 3 lag respectively. Hence the null hypothesis of no serial correlation cannot be rejected.

Lag Length Selection

Lag length selection by information criteria was used to avoid the risk of losing degree of freedom, statistical insignificant of coefficient, multicollinearity and miss specification of errors that occurred during selection of lags (Woldeyohannes, 2021). Akaike Information Criterion (AIC), Hannan and Quinn Information Criterion (HIQC), and Schwarz Bayesian Information Criterion (SIBC) were used to determine the optimal lag lengths. Table 7 shows the lag length criteria results for GDP, traditional exports, terms of trade, exchange rate and Foreign Direct Investment.

Table 7

Lag Length Selection

Lag	AIC	HQIC	SBIC
0	-.949	-.862	-.664
1	-9.867	-9.257	-7.869
2	-11.086	-9.951	-7.375
3	-16.917*	-15.259*	-14.493*

Source: Researcher Estimation Results, 2022.

ISSN 2350-8868
Volume VII | *Issue* 1 | *May 2023*

Results in Table 7 reveal that, the three optimal lags are the most appropriate lag to consider during analysis, because all three-selection criterion have minimum values of AIC, HQIC SBIC. From the rule of thumb "the lower the value the better the model". Hence lag 3 is preferred for this selection due to the fact that the smallest value of all three criterions lies at three lags.

Cointegration Test

All variables were thoroughly established and demonstrated to be integrated in same order I (1). This provide the rationale for conducting a cointegration test to determine whether the variables GDP, traditional exports (TX), terms of trade (TOT), exchange rate (EX) and Foreign Direct Investment (FDI) are abounded together in long-term or otherwise. The Johansen co-integration test was used in this analysis because it has many desirable statistical qualities and has been proven to be especially helpful in the number of comparatives investigations (Nguto, 2020; Rwenyagila, 2013). The Johansen cointegration test identifies all cointegration equations relevant to the variable employed in the investigation through comparing the trace statistics or max statistics. Rejected condition of the null hypothesis of no cointegration and acceptance of alternative hypothesis of cointegration exist if it is confirmed by test statistics which is greater than critical values. Table 8 below shows the results of trace statistics and Max-Eigen statistics.

Table 8

Trace Statistics and Max-Eigen Statistics

	Trace Statistics		**Max-Eigen Statistics**	
Maximum rank	Trace statistic	Critical value	Max-Statistics	Critical Value
r=0	275.908	94.152	93.476	39.372
r=1	182.432	68.521	80.753	33.460
r=2	101.679	47.213	41.985	27.075
r=3	59.694	29.684	38.899	20.971
r=4	20.266	15.410	20.266	14.073
r=5	0.529*	3.762	0.529*	3.764

Source: Researcher Estimation Results, 2022.

Results in Table 8 showed that the null hypothesis of no co-integration is rejected at r=5. Findings revealed that there were at least five significant integration equations based on trace statistics, the conclusion which is supported by Max-Eigen. The results show the variables which were used in this study have the long-run association. Consequently, it is crucial to recognize the equations in concern and conduct a causality test by granger causality test.

Vector Error Correction Model (VECM)

In order to compare traditional export's effects on economic growth, the study used VECM approach. According to findings of the cointegration test, a maximum of five cointegration equations were found. Cointegration meets the VECM's condition, hence it is obvious that the model is ideal for this inquiry because it can be adjusted for both long and short-run effects. Table 9 shows the short run results.

Table 9

Short-Run Results

Variable	**Coefficient**	**Std. Err**	**z**	**P-value**
R^2	0.799			
ECT	-0.198	0.053	-3.761	0.000*
GDP				
LD	-0.625	0.339	-1.840	0.066***

ISSN 2350-8868
Volume VII | *Issue* 1 | *May 2023*

L2D.	0.475	0.303	-1.564	0.118
TX				
LD	-0.100	0.103	-0.971	0.330
L2D.	0.158	0.129	-1.230	0.019**
TOT				
LD	0.646	0.401	1.612	0.107
L2D.	0.213	0.448	0.485	0.634
EX				
LD	-0.257	0.329	-1.712	0.086***
L2D.	-0.002	0.373	-2.320	0.020**
FDI				
LD	-0.020	0.079	-0.251	0.799
L2D.	0.023	0.079	0.293	0.773
Cons	0.063	0.061	1.031	0.303

Source: Researcher Estimation Results, 2022.

Table 9 showed the error correction terms (ECT) have a negative coefficient (-0.198508) and significance at 1% level. This means that the terms of trade, exchange rate and GDP are moving together in the long run. The ECT terms suggesting that previous years' error is corrected within the current year at a convergence speed of 19.85%. The R-squared value revealed that about 79.9% of the total variations in the dependent variable were explained by changes in the explanatory variables. Table 10 shows the results of Long Run Error Correction model for six variables.

Table 10

Long Run Results

Variable	**Coefficients**	**Std. Err**	**z**	**P>|Z|**
GDP	1			
TX	-0.141	0.165	-0.863	0.392
TOT	-0.961	0.412	-2.330	0.020**
EX	2.967	0.341	8.704	0.000*
FDI	-0.323	0.144	-2.241	0.025**

Source: Researcher Estimation Results, 2022.

The results in Table 10 revealed that traditional export had a positive effect and statically insignificant in the long run. The results a correspond with the theory of Prebisch (1950) who claimed on the deterioration conditions of trade for traditional products (Fahmy, 2021). The insignificant traditional export to economic growth is contrary to our expectation reflected in the hypothesis. This is because economic growth has a positive relationship with export value since increased production leads to surplus output in an open economy being exhausted on international market. The results in Table 9 further show that the second lag value of traditional export is positive and significant at 5% level. This implies that, traditional exports have a favorable impact on economic growth in the short run. Hence, on average an increase of a percentage in the traditional exports has resulted in an increase in economic growth by 0.1580969 percentage, under ceteris paribus. This result was the same with studies conducted by Urriola and Baral (2018) on the impact of traditional on economic growth of Peru.

Causality Test

The causal link between traditional export, grand total export, terms of trade, exchange rate,

ISSN 2350-8868
Volume VII | *Issue* 1 | *May 2023*

Foreign Direct Investment and economic growth was examined using the granger causality test. If there was causation effect from one variable to another, the estimates from VAR were used in the study. Variable X is said to have granger-caused variable Y in time series data if the current value of is dependent on previous value of X (, ...,), so that in that scenario the past value of X likely to aid in predict Y (Odetola & Etumnu, 2013). The results of the granger causality test for all variables are shown in Table 11.

Table 11

Granger Causality Test

Null Hypothesis	Prob > chi2	Decision
TX GDP	0.002	Causality
GDP TX	0.000	Causality
TOT GDP	0.000	Causality
GDP TOT	0.000	Causality
EX GDP	0.000	Causality
GDP EX	0.008	Causality
FDI GDP	0.041	Causality
GDP FDI	0.000	Causality

Source: Researcher Estimation Results, 2022.

Results Table 11 showed that traditional export granger cause GDP at 1% significance. Implies that GDP helps to predict the traditional export in Tanzania. On the other side, the test suggests that economic growth granger cause traditional export at 1% level of probability value. The non-traditional export, terms of trade and exchange rate granger cause economic growth 1% significance level. Foreign Direct Investment found statistical significance at 5% level, which means that FDI granger cause economic growth. The same results obtained by Nguto (2020), Shobande (2019), Umar (2022), Eliakim (2020), and Machumu (2020).

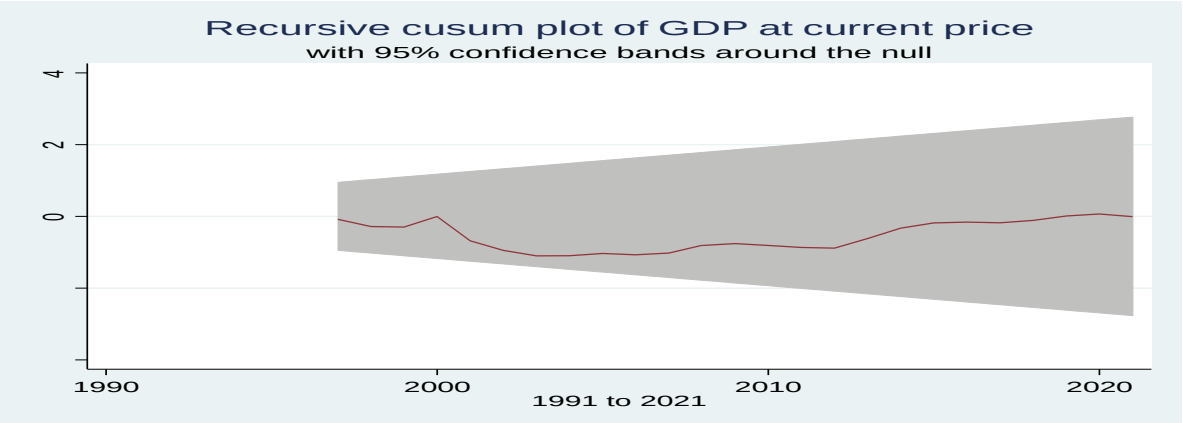
Diagnostic Check

Structural Break Test

The study employed cumulative sum square (CUSUM) as the structural break test of the economic growth equation. The guideline of CUSUM testing approach says that if the line of estimated model is within the CUSUM fixed lines, the estimated model will be stable. On the other hand, if the line of estimated model is out of the CUSUM fixed lines, the estimated model is not stable. The figure below shows CUSUM test result (Chindengwike, 2020; Chindengwike, 2021; Chindengwike, 2022 and Chindengwike, 2023).

Figure 6

CUSUM Test



ISSN 2350-8868
Volume VII | *Issue* 1 | *May 2023*

Results in Figure 6 the fitted line of the estimated model is in the CUSUM fixed two lines. Therefore, this estimated model is valid and can be used for prediction and planning in future series movement of traditional export, terms of trade and exchange rate.

Conclusion and Recommendations

According to the findings, the terms of trade have a positive and significant effect on GDP in both the long and short term. As a result, the lag value of conventional exports has a considerable and positive effect on economic growth in the short term but is minor and beneficial in the long run. According to the findings, traditional export has a positive and substantial influence on economic growth in Tanzania in the short term, but a negative and significant effect in the long run. Traditional export is critical to Tanzania's social and economic development since it generates foreign cash and creates jobs. Government subsidies can assist in lessening volume fluctuations. As a result, consistent contribution will be noted. In order for the country to enjoy regular trading conditions, the granger causality test suggested that there is two-way causation between terms of trade and economic growth in Tanzania at 1% percent level. This study revealed that the influence of the exchange rate on economic growth in Tanzania is significance and negative both the in long run and in the short run. Researchers out of the study may increase sample size and use other econometrics approach such as ARDL approach on the non-traditional exports.

References

Abu-lila, Z. M., Alghazo, A., & Ghazo, A. (2021). The impact of export instability on economic growth : Evidence from Jordan. *Journal of Asian Finance, Economics and Business,8*(8), 13–19. https://doi.org/10.13106/jafeb.2021.vol8.no8

Ally, M. (2021). Can governments enhance long-run growth by reallocating public expenditure ? empirical evidence from Tanzania. *Institutional Repository at The University of Dodoma*, *IX*(Ii). https://doi.org/20.500.12661/3038

Attiah, E. (2019). The role of manufacturing and service sectors in economic growth : An empirical study of developing countries. *European Research Studies Journal*, *XXII*(1), 112–127. https://doi.org/10.35808/ERSJ/1411

Avom, D., Kamguia, B., Ngameni, J. P., & Njangang, H. (2021). How does terms of trade volatility affect macroeconomic volatility ? The roles of fi nancial development and institutions. *International Economics Journal*, *168*(January), 98–114. https://doi.org/10.1016/j.inteco.2021.08.004

Barguellil, A., Ben-Salha, O., & Zmami, M. (2018). Exchange rate volatility and economic growth. *Journal of Economic Integration*, *33*(2), 1302–1336. https://doi.org/10.11130/jei.2018.33.2.1302

BOT. (2002). *Economic bulletin: Vol. XXXIII* (Issue September 3). https://doi.org/www.bot-tz.org

BOT. (2021). *Economic bulletin for The Quarter Ending September 2021 Vol. Liii No. 3: Vol. LIII* (Issue 3). https://doi.org/www.bot.go.tz

Carletto, C., & Winters, P. (2007). *Non-traditional crops , traditional constraints : The adoption and diffusion of export crops among Guatemalan smallholders* (No. 07–03; 4347, Issue September). https://doi.org/10.22004/ag.ecom.7962

Chile, N. I., Uzoechina, B. ., Eze, M. A., Joan, C. P. I., & Nwamaka, O. (2021). Does terms of trade matter for economic growth ? A focus on natural resource- rich Sub-Saharan African countries 1 . Background to the Study. *Economy*, *8*(2), 26–34. https://doi.org/10.20448/journal. 502.2021.82.26.34

Chindengwike, J., & Kira, A. R. (2022). The effect of tax rate on taxpayers' voluntary compliance

ISSN 2350-8868
Volume VII | *Issue* 1 | *May 2023*

in Tanzania. *Universal Journal of Accounting and Finance, 10*(5), 889-896.

Chindengwike, J., & Tyagi, R. (2022). The vector auto regressive analysis identifying government expenditure policy impact on sustainable economic development. *Journal of Global Economy, 18*(2), 110-122.

Chindengwike, J., Kira, A. R., & Mwambe, A. K. (2021). The influence of CAMEL ratios on credit rating evaluation in Tanzanian commercial banks: An empirical analysis. Available at SSRN 3983414.

Chindengwike, J. (2022). The influence of electronic tax administration system on taxpayers' voluntary compliance in Tanzania. Available at SSRN 4068579.

Chindengwike, J. (2022). Does external debts promote sustainable economic development in developing countries?. Available at SSRN 4031616.

Chindengwike, J. D. (2022). Impact of public spending in infrastructure on influencing economic development from East Africa countries: The vector auto regressive analysis. *Journal of Nepalese Business Studies*, *15*(1), 1-10.

Chindengwike, J., Kira, A. R., & Mkupaya, M. (2021). Effect of psychological factor on the individual investor's risk tolerance at listed service and manufacturing companies in Tanzania. Available at SSRN 3983410.

Chindengwike, J., & Kira, A. R. (2021). The relationship between tax transparency, trust and taxpayers' voluntary compliance in Tanzania. Trust and taxpayers' voluntary compliance in Tanzania (December 27, 2021).

Chindengwike, J. (2022). The effect of foreign direct investment on poverty alleviation in East Africa countries. *Journal of Global Economy, 18*(1), 53-66.

Chindengwike, J., & Mnyampanda, A. M. (2021). Relationship between asset quality and financial performance of commercial banks before and after shifting capital city located to Dodoma Region, Tanzania. Tanzania (December 20, 2021).

Chindengwike, J. D. (2020). Factors influencing taxpayers' voluntary compliance in Tanzania: A case of Dodoma region (Doctoral dissertation, The University of Dodoma).

Chindengwike, J. (2022). The effect of recurring expenditure financed by external grants on promoting sustainable economic development of Sub-Saharan Africa countries. *Journal of Global Economy, 18*(3), 209-221.

Chindengwike, J. (2021). Effect of equity on financial performance among small business firms in East Africa countries.

Chindengwike, J. D., & Kira, A. R. (2021). The impact of foreign debts on economic growth in tanzania: evidence from 1988-2020.

Chindengwike, J. (2022). The contribution of mobile banking informational service on customer satisfaction in Tanzanian commercial banks. *Journal of Global Economy, 18*(3), 189-197.

Chindengwike, J., Kira, A. R., & Manyanga, J. F. (2021). The influence of approved budget on promoting outsourced revenue collection performance of local government Authorities in Developing Countries. Available at SSRN 3989834.

Chindengwike, J. (2022). The influence of value added tax revenue on private domestic investment in developing countries. *Journal of Global Economy, 18*(4), 289-310.

Chindengwike, J. (2022). The nexus between money supply and economic development in East Africa countries: An empirical study using ARDL. *Journal of Global Economy, 18*(4), 237-250.

Chindengwike, J. (2022). The effect of tax compliance cost on taxpayer's voluntary compliance in Tanzania. Available at SSRN 4115252.

Chindengwike, J. D. (2022). Impact of Public Spending in Infrastructure on Influencing

ISSN 2350-8868
Volume VII | *Issue* 1 | *May 2023*

Economic Development from East Africa Countries: The Vector Auto Regressive Analysis. Journal of Nepalese Business Studies, 15(1), 1-10.

Chindengwike, J. (2022). The Nexus Between Money Supply and Economic Development in East Africa Countries: An Empirical Study using ARDL. Journal of Global Economy, 18(4), 237-250.

Chindengwike, J. (2023). The Effectiveness of Financial Planning on Public Sectors Performance in Tanzania. Journal of Global Economy, 19(1), 70-84.

Chindengwike, J. (2023). The Relationship between Public Expenditure and Economic Development in Sub-Saharan Africa Countries: The VECM. Journal of Global Economy, 19(1), 47-69.

Chindengwike, J. (2021). Tanzania's Budget Deficit and its Effect on Gross Domestic Product: Empirical Analysis. International Journal of Multidisciplinary Research and Explorer (IJMRE), Volume, (1).

Chindengwike, J. D. (2021). The Effect of cost on Taxpayers'voluntary Compliance in Tanzania. GSJ, 9(3).

Ciobanu, A. M. (2020). The impact of FDI on economic growth in case of Romania. *Economics and Finance*, *12*(12), 81–88. https://doi.org/10.5539/ijef.v12n12p81

Dabús, C., & Delbianco, F. (2019). Exports , terms of trade and economic growth : Evidence from countries with different level of openness exports, terms of trade and economic growth. *Journal of Reviews on Global Economics*, *July*, 327–336. https://doi.org/10.6000/1929-7092.2019.08.28

Dangal, D. N., & Gajurel, R. P. (2021). Public expenditure and economic growth of Nepal. *Rupantaran: A Multidisciplinary Journal*, *5*, 28–38. https://doi.org/10.3126/ rupantaran.v5i01.39830

Dewi, P., & Hung, M. (2019). The relationship between international trade and economic growth : An Empirical finding from ASEAN countries. *International Journal Of Applied Business Research*, *1*(2), 112–123. https://doi.org/10.35313/ijabr.v0i0.72

Dimoso, R. L., & Utonga, D. (2019). The nexus between export and economic growth in Tanzania. *International Business & Economics Studie*, *1*(2), 95–106. https://doi.org/10.22158/ibes.v1n2p95

Dinh, T. T., Vo, D. H., Vo, A. T., & Nguyen, T. C. (2019). Foreign direct investment and economic growth in the short run and long run : Empirical evidence from developing countries. *Risk and Financial Management*, *November*, 1–11. https://doi.org/10.3390/jrfm12040176

Edeme, R. K., Ifelunini, I. A., & Nkalu, N. C. (2016). A comparative analysis of the impact of agricultural exports on economic growth of ECOWAs countries. *Acta Oeconomica Pragensia*, *2016*(5), 31–46. https://doi.org/10.18267/j.aop.556

Egbetunde, T., & Obamuyi, T. (2022). Foreign trade and economic growth : A study of Nigeria and India foreign trade and economic growth. *ACTA UNIVERSITATIS DANUBIUS*, *December 2018*. https://doi.org/researchgate.net/publication/332029173

Eliakim, T. (2020). Effects of exchange rates and inflation rates on agricultural exports in Tanzania. *MSc Thesis, Institute of Accountancy Arusha*. https://doi.org/dspace.IAA.ac.tz.8080

Erkisi, K. (2019). International trade and economic growth in Middle East Countries : A panel data analysis international trade and economic growth in Middle East Countries. *International Conference on Economics, Finance and Management.*, *September*. https://doi.org/res10.15659/3.sektor-sosyal-ekonomi.19.07.1139

Fahmy, H. (2021). A reappraisal of the prebisch-singer hypothesis using wavelets analysis. *Risk*

ISSN 2350-8868
Volume VII | *Issue* 1 | *May 2023*

and Financial Management, 1–17. https://doi.org/https:// doi.org/10.3390/jrfm14070319

Garidzirai, R. (2020). The contribution of agricultural production on selected sustainable development goals in the BRICS: A panel analysis. *Eurasian Journal of Economics and Finance*, *8*(3), 154–167. https://doi.org/10.15604/ejef.2020.08.03.003

Gbetnkom, D., & Sunday, K. (2018). Determinants of agricultural exports : The case of Cameroon by Yaounde. *African Economic Research Consortium, January 2002*, 1–47. https://doi.org/ideas.repec.org

Getahun, S. (2014). The contribution of export earnings to economic growth of Ethiopia: A trend analysis Senait Getahun 1. *Journal of Agriculture and Development(JAD)*, *4*,(1), 1–30.

Gizaw, D. (2015). The impact of foreign direct investment on economic growth . The case of Ethiopia. *Journal of Poverty, Investment and Development*, *15*(1), 34–48. https://doi.org/www.iiste.org

Ha, D. T.-T., & Hoang, N. T. (2020). Exchange rate regime and economic growth in Asia : Convergence or divergence. *Risk and Financial Management*, *1961*. https://doi.org/10.3390/jrfm13010009

Heckscher, E. (1991). Factor endowments and trade II: The Heckscher-Ohlin Model. In *Internation Economics* (Vol. 21, Issue 1919, pp. 497–512). https://doi.org/scholar.harvard.edu

Ifa, K., & Yahdi, M. (2020). Trade openness and economic growth in Indonesia. *Penelitian Ilmu Ekonomi*, *10*(2), 163–170. https://doi.org/org/10.30741

Jawaid, T., Waheed, A., & Siddiqui, A. H. (2020). Terms of trade and economic growth in developing country: Evidence from bilateral and Commodity level analysis. *Journal of Chinese Economic and Foreign Trade Studies*, *13*(February), 1–19. https://doi.org/10.1108/JCEFTS-07-2019-0035

Johansen, S. (1987). Statistical analysis of cointegration vectors. *Institute of Mathematical Statistics*, *October*, 1–37.

Jonathan, E. (2020). Effects of industrialization on Tanzania s economic growth : A case of manufacturing sector. *University of Dodoma Institutional Repository*, 1–80. https://doi.org/repository.udom.ac.tz

Kagoma, J. (2019). *Economic growth and its relationship with export , foreign direct investment and government expenditure in Tanzania Master Dissertation]*. https://doi.org/repository.udom.ac.tz

Kalaitzi, A. S., & Chamberlain, T. W. (2020). Merchandise exports and economic growth : multivariate time series analysis for the United Arab Emirates. *Journal of Applied Economics*, *23*(1), 163–182. https://doi.org/10.1080/15140326.2020.1722384

Karahan, Ö. (2020). Influence of exchange rate on the economic growth in the Turkish Economy 1 Introduction 2 Literature Review. *Bandırma Onyedi Eylül University*, *1*, 21–34. https://doi.org/10.5817/FAI2020-1-2

Khan, F. H. (2021). Impact of exchange rate on economic growth of Bangladesh. *European Journal of Business and Management Research*, *6*(3), 173–175. https://doi.org/10.24018/ejbmr.2021.6.3.891

Koirala, S. (2018). An analysis of the impact of real effective exchange rate on economic growth of Nepal. *A Journal of Management*, 206–216. https://doi.org/10.3126

Kunwar, K. B. (2020). Money supply and economic growth of Nepal : ARDL approach 1. *An Interdisciplinary Academic Journal*, *4*(1), 76–94. https://doi.org/doi.org/10.3126/ craiaj.v4i1.32732

Lwin, T. S. (2017). An analysis of the relationship between exports and economic growth:

ISSN 2350-8868
Volume VII | *Issue* 1 | *May 2023*

Evidence from Myanmar (FY1990-2015). *Public Policy and Management*, 1–33.

Machumu, P. S. (2020). The effect of international trade on economic growth of the East African community. *Mzumbe University Repository*, 1–97. https://doi.org/www.Mzumbe.ed

Magese, E., & Chindengwike, J. (2021). The perceptions on usage of electronic fiscal devices among small business owners in Tanzania. I*nternational Journal of Multidisciplinary Research and Explorer (IJMRE)* October-2021.

Maria, D., & Andrei, L. C. (2015). Vector error correction model in explaining the association of some macroeconomic variables in Romania. *Procedia Economics and Finance*, *22*(November 2014), 568–576. https://doi.org/10.1016/S2212-5671(15)00261-0

Matteo, L. Di. (2013). *Measuring government in the twenty-first century*. Fraser Institute.

Mehrara, M., & Baghbanpour, J. (2016). The contribution of industry and agriculture exports to economic growth : The case of developing countries. *World Scientific News*, *46*, 100–111. https://doi.org/www.worldscientificnews. com

Mensah, A. C., & Okyere, E. (2020). Causality analysis on export and economic growth nexus in Ghana. *Open Journal of Statistics*, 872–888. https://doi.org/10.4236/ojs.2020.105051

Miao, M., Borojo, D. G., Yushi, J., Desalegn, T. A., Miao, M., Borojo, D. G., Yushi, J., & Desalegn, T. A. (2021). The impacts of Chinese FDI on domestic investment and economic growth for Africa. *Cogent Business & Management*, *8*, 1–29. https://doi.org/10.1080/23311975.2021.1886472

Mkubwa, M. (2019). The impact of trade liberalization on economic growth in Tanzania. *International Journal of Academic Research in Business and Social Sciences*, *4*, *No.5*(February). https://doi.org/10.6007/IJARBSS/v4-i5/879

Mlambo, C., Mukarumbwa, P., & Megbowon, E. (2019). An investigation of the contribution of processed and unprocessed agricultural exports to economic growth in South Africa. *Cogent Economics and Finance*, *7*(1). https://doi.org/10.1080/23322039.2019.1694234

MoA. (2021). *National sample census of agriculture 2019/20*.

MoFP. (2021). *The Economic survey 2020*.

Mohamed, K. (2020). Impact of foreign aid on economic growth in Tanzania(Master Dissertations). *University of Dodoma Institutional Repository*. https://doi.org/repository.udom.ac.tz

MoIT. (2013). *Tanzania trade integration strategy 2009-2013* (Issue March 2013).

Morina, F., & Hysa, E. (2020). The effect of exchange rate volatility on economic growth : Case of the CEE countries. *Risk and Financial Management*. https://doi.org/doi.org/10.3390/jrfm13080177

Mputu, C. L. (2016). Terms of trade , trade openness and economic growth in Sub-Saharan Africa. *Repository at St. Cloud State*, *3*, 1–65. https://doi.org/stcloudstate.edu.

Shayo, N. T., & Chindengwike, D. (2022). E-commerce applications on tourism industry performance in Tanzania.

Nguto, T. A. (2020). Impact of international trade on economic growth. *[Masters Thesis, Mzumbe University]*, *November*. https://doi.org/tinyurl.com/f9f8csrn

Nora, U. (2018). The impact of traditional and non-traditional agricultural exports on the economic growth of Peru : A short- and long-run analysis. *Research Institute for Agricultural Economics*, *120*, 157–165. https://doi.org/10.7896/j.1807

Odetola, T., & Etumnu, C. (2013). Contribution of agriculture to economic growth in Nigeria. *Social Science*, *1–28*. https://doi.org/doi.org/10.21467/ajss.5.1.18-25

Olagbaju, I. O. (2018). FDI and economic growth relationship in Sub-Saharan Africa : Is the domestic financial system a significant intermediator ? *Archives of Business Research*, *6*(5), 90–112. https://doi.org/DOI: 10.14738/abr.65.4540

ISSN 2350-8868
Volume VII | *Issue* 1 | *May 2023*

Ozata, E. (2020). The effect of exchange rate volatility on economic growth in Turkey. *Journal of Business, Economics and Finance*, *9*(1), 42–51. https://doi.org/10.17261/Pressacademia.2020.1191

Prebisch, R. (1950). The economic development of Latin America and its principal problems. *United National Derpartment of Economics Affairs, Economics Commission for Latin America (ECLA), New York*.

Rwenyagila, G. A. (2013). Determinants of export performance in Tanzania. *Mzumbe University Repository*, 1–75. https://doi.org/Mzumbe Repository

Salim, N. J., Mustaffa, R., & Hanafiah, N. J. A. (2015). FDI and economic growth linkages in Malaysia. *Mediterranean Journal of Social Sciences*, *6*(4), 652–657. https://doi.org/10.5901/mjss.2015.v6n4s2p652

Sekunmade, J. O. (2021). FDI , economic freedom and economic growth of Nigeria. *Management Science (MS)*, *2*, 01–16. https://doi.org/10.52417/ojms.v2i2.231

Shikalepo, E. E. (2020). *Defining a conceptual framework in educational research*. *June*. https://doi.org/10.13140/RG.2.2.26293.09447

Shobande, O. A. (2019). Effect of economic integration on agricultural export performance in selected West African countries. *Economies*, 1–14. https://doi.org/10.3390/economies7030079

Shrestha, M. B., & Bhatta, G. R. (2018). Science direct. *The Journal of Finance and Data Science*, *4*(2), 71–89. https://doi.org/10.1016/j.jfds.2017.11.001

Sibanda, K. (2013). Investigating the impacts of real exchange rates on economic growth : A Case study of South Africa. *Mediterranean Journal of Social Sciences*, *4*(13), 261–274. https://doi.org/10.5901/mjss.2013.v4n13p261

Singh, T. (2022). Do terms of trade affect economic growth ? Robust evidence from India. *Economics of Transition and Institutional Change*, *February*, 1–31. https://doi.org/10.1111/ecot.12339

Sousa, T. de O., da Silva Saraiva, A. F., da Silva, N. G., Lopes, W. S., & Bazzoli, J. A. (2020). Urban agriculture: Contributions to food security and the family income of horticulture families in Palmas. *Humanidades & Inovacao*, *7*(14).

Sulaiman, N. A., & Ramli, N. R. (2019). Effect of international trade to economic growth in Malaysia. *Academic Research in Business and Social Sciences*, *8*(12), 2278–2292. https://doi.org/10.6007/IJARBSS/v8-i12/5438

Sultanuzzaman, R., Fan, H., Akash, M., & Wang, B. (2018). The role of fdi inflows and export on economic growth in Sri Lanka: An ARDL approach. *Cogent Economics & Finance*, *6*(1), 1–17. https://doi.org/10.1080/23322039.2018.1518116

Touitou, M., Laib, Y., & Boudeghdegh, A. (2019). The impact of exchange rate on economic growth in Algeria. *International Conference on Innovations in Science and Education*, 323–330. https://doi.org/10.12955/cbup.v7.1381

Tripathi, H. G., Smith, H. E., Sait, S. M., Sallu, S. M., Whitfield, S., Jankielsohn, A., Kunin, W. E., Mazibuko, N., & Nyhodo, B. (2021). Impacts of COVID-19 on diverse farm systems in Tanzania and South Africa. *Sustainability[MDPI]*, 1–16. https://doi.org/10.3390/su13179863

Umar, A. (2022). Impact of nontraditional agricultural exports on Ghana's economic growth. *Faculty of Agriculture, Food and Consumer Sciences*, 1–206. https://doi.org/hdl.handle.net/123456789/3580

Umoh, O. (2021). Foreign direct investment and economic growth in Nigeria : An analysis of the endogenous effects. *Economic Theory*, *November*. https://doi.org/net/publication/356412179

ISSN 2350-8868
Volume VII | *Issue* 1 | *May 2023*

UN Comtrade. (2021). *International trade statistics yearbook: Vol. II*.

UNCTAD. (2021). *The effects of the COVID-19 pandemic on international trade*. https://doi.org/shop.un.org

Urriola, N. N., & Baral, P. (2018). The impact of traditional and non-traditional agricultural exports on the economic growth of Peru: A short- and long-run analysis. *Research Institute for Agricultural Economics*, *December*. https://doi.org/10.7896/j.1807

Usman, M. (2016). Contribution of agriculture sector in the GDP growth rate of Pakistan. *Journal of Global Economics*, *4*(2). https://doi.org/10.4172/2375-4389.1000184

Vianna, A. C., Mollick, A. V, Vianna, A. C., & Mollick, A. V. (2021). Threshold effects of terms of trade on Latin American growth. *Economic Systems*, *100882*(July), 1–41. https://doi.org/10.1016/j.ecosys.2021.100882

Woldeyohannes, B. (2021). The impact of agricultural export performance on economic growth of Ethiopia. *Integrated Markerting Communications and Digital Marketing*, *March*. https://doi.org/350062525

Wollie, G. (2018). The relationship between inflation and economic growth in Ethiopia. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, *I*(3), 264–271. https://doi.org/10.33258/birci.v1i3.73

Yasmeen, H., Wang, Y., Zameer, H., & Solangi, Y. A. (2019). Does oil price volatility influence real sector growth: Empirical Evidence from Pakistan. *Energy Reports*, *5*. https://doi.org/10.1016/j.egyr.2019.06.006

Yasmeen, R., Ul, I., & Padda, H. (2019). Terms of trade and economic growth in Pakistan: An empirical analysis. *University of Wah Journal of Social Sciences*, *2*(1), 21–41.

Yusuf, S., & Omar, M. R. (2019). Trade openness and economic growth of Tanzania external trade in Tanzania. *Asian Journal of Economics, Business and Accounting*, *12*(3), 1–10. https://doi.org/10.9734/AJEBA/2019/v12i330154

Zayone, T. I., Henneberry, S. R., & Radmehr, R. (2020). Effects of agricultural, manufacturing, and mineral exports on Angola's economic growth. *Energies*. https://doi.org/10.3390/en13061494