

A RECONSIDERATION OF THE EXPORT-LED GROWTH PARADIGM IN NAMIBIA DURING 1990:Q1-2016:Q4

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—Abstract —

A large volume of empirical studies have conceded that international trade can propel development in various ways. This study evaluates the impact of trade on economic growth in the context of Namibia for the period 1990:Q1 to 2016:Q4. The study employed modern time series analysis technique (vector autoregression method) as against the direct application of the method of ordinary least squares regression. The annual data collated by the study were first transformed into quarterly data before estimating the model. The study was driven by four specific objectives. The empirical results arising from the study found that exports, real exchange rate and net foreign direct investment were positively related to economic growth as suggested by the estimated long-run equation. Moreover, the results obtained from the forecast error variance decomposition suggest that fluctuations in economic growth as a result of shocks were mainly explained by economic growth itself. This is not unusual. Moreover, amongst the three explanatory variables used in the model, real exchange rate and net foreign direct investment contributed more towards explaining changes pertaining to economic growth during the forecast horizon compared to exports. The findings of the study support a number of empirical studies that were reviewed. The study, inter alia, recommends the need for Namibia to put in place appropriate exports' incentives that can potentially assist in boosting the country's exports in regional and foreign markets. Besides, the study recommends the need for Namibia to invest enormously in transport and communications' infrastructures, including renewable and non-renewable energy supplies. The study concludes by providing directions on further research opportunities pertaining to the issue under consideration.

Key Words: Exports, cointegration, growth indicators, empirical, causality, shocks, Namibia.

JEL Classification: C5, C13, C22, C51, E6, O5.

INTRODUCTION

Economists have long implicated a number of factors that contributes to economic growth. One of such factors is trade. Indeed, the role of trade in the developmental agendas of countries will remain an important subject matter for a long time to come amongst economists, development experts, policymakers, as well as countries that are still in dire need of greater economic prosperity. The importance of trade in modern economies is further boosted by the phenomenon of globalisation. Nowadays, trade is considered as a potent tool in the process of promoting and stimulating economic growth. Thirwall (2011) in his study of 133 countries covering the period stretching from 1995 to 2006, observed the growth rates of individual countries to be positively related to their export performance than with any other single economic parameter. Contemporaneously, he noted that for a greater part of the period after 1950, the export performance of developing countries lagged behind that of the developed industrial countries, with their market share of the global trade declining. He, however, acknowledged that in recent years a number of developing countries, especially the Asian economic miracle countries have successfully reversed this trend due mainly to a “big push” in their manufacturing activities, which has been propelled mainly by huge government incentives.

In early times, trade contributed significantly to the effectiveness and efficiency of allocation of resources, as well as, transmitting growth from one part of the world to another (Thirwall, 2012). For instance, the strong demand in Europe, and in Britain in particular, for food and raw materials in the nineteenth century led to a big push in economic activities on the part of countries such as Canada, Argentina, South Africa, Australia and New Zealand just to mention a few (Love, 1994). Further, he also observed that as the demand for these countries’ exports increased, investment in these economies also rose. Trade was considered to be beneficial to both countries that are involved in international trade. Schipke (2005) also widely

acknowledged these facts in his works. Unfortunately, a number of countries belonging to the southern hemisphere are still not getting a fair share of benefits arising from trade. This is mainly due to a weakening demand for developing countries' traditional exports, including the uncompetitive nature of a majority of their exports in foreign markets.

Other studies in the literature have attempted to investigate the possibility of a relation between exports, in particular and economic growth in general. Most of the early studies in this regard, linked various measures of export growth with growth in income, suggesting that these two variables were significantly positively correlated. In fact, exports are often regarded as a potential source of growth in modern economies (Appleyard, Field and Cobb, 2008). Correspondingly, several other studies that focussed on individual countries over time using econometric time series techniques have suggested statistically significant relationships between growth in both exports and imports, including income growth (Greenaway, Morgan and Wright, 2002). In a number of such studies, particularly for middle-income countries' seems to suggest a strong positive correlation between trade and economic growth. This is as a result of the direct effect of export earnings on Gross National Product (GNP), as well as, the indirect effects arising from balance-of-payments often associated with the increased capacity to import needed capital and intermediate inputs.

There is also the possibility that increased income could lead to greater imports and increased efficiency could also lead to greater exports. Thus, the causality may run from growth to trade rather than from trade to growth (Chow, 1987). Another argument in the literature concerning the relationship between trade and growth points to the fact that growth in exports generally has a positive effect on a country's growth and development, since it stimulates increased saving and investment. These effects on aggregate saving could arise in two ways. Firstly, it could arise from a higher inclination to save in the export sector. Secondly, it could also result from the impacts on total saving of any changes in the distribution of income tied to the growth in the export sector (Krueger, 1998).

Since the attainment of Namibia's independence in 1990, trade continues to play the following important functions in its economy. Firstly, trade is pertinent to Namibia in view of the wealth it generates through receipts and

various specialized taxes for the state treasury. Besides, it creates jobs for a number of people, and therefore supports livelihood for many households. With the concepts of globalisation and export-led industrialism gaining increased popularity in the world, there is the urgent need for Namibia to give more vigorous and appropriate attention to its export sector. Therefore, the main question that the study investigates is ‘What is the impact of foreign trade on Namibia’s growth for the period 1990Q:1 to 2016:Q4?’ In light of this, the study was aimed at realising the following interrelated objectives:

- To test the relevance of the export-led growth model in respect of Namibia
- To carry out a causality test between foreign trade and economic growth in respect of Namibia
- To estimate a long-run relationship between trade and economic growth in Namibia
- To recommend strategies that can assist policy makers in maximising Namibia’s benefits from participating in international trade

The study employed the Vector Autoregression (VAR) approach to assess the relationship between foreign trade and economic growth in Namibia for the period under consideration.

The study period of 1990:Q1 to 2016:Q4 was chosen owing to the following factors: Firstly, macroeconomic data pertaining to the variables used in the model were easily accessed for the chosen period of study. Furthermore, the impact of the country various industrialisation policies on economic growth, especially the export processing zone schemes that were implemented a few years after the attainment of independence are yet to be estimated. Although a number of studies on trade and economic growth pertaining to Namibia have been undertaken in the past, only a few of them did employ modern econometric time series cointegration techniques. Therefore, a research gap does exist.

Although this study uses Namibia as a test centre; it nevertheless anticipates that the recommendations arising from the study will also be applicable to other developing countries on similar pathway, when it comes to employing trade to stimulate economic growth in their various economies. The rest of the research article is organised in the following way. Section 2 presents the empirical literature, while section 3 details data sources and research methods. Section 4

estimates and discusses results, while section 5 concludes, recommends and directs on further research.

1. EMPIRICAL LITERATURE

Selected empirical studies pertaining to the issue under consideration are reviewed in this section in a chronological sequence.

Williamson (1993) probed into the impact of exports, foreign capital, as well as investment on economic growth in 22 Latin American countries for the period stretching from 1960 to 1974. He made use of both time series and cross sectional data sets in his study. His results show that exports, foreign capital, and investment have a positive impact on economic growth. However, this study suggested that, in order for a country to expand its economic growth, at least one of the explanatory variables under investigation should expand. The use of both time series and cross sectional data by the researcher is highly acknowledged.

Ayatepe-Coo (1996) assessed the impact of external shocks on current account balances, using Nigeria and Indonesia as case studies. The study confirmed that terms-of-trade influenced the current accounts' balances of both countries positively. Further, the current accounts' balances of the two countries under consideration were positively affected by the growth rate of industrialised countries. This result is not surprising, since developments in the international arena, especially in highly developed countries, have an impact on the rest of the world as a result of the phenomenon of globalisation.

Frankel and Romer (1999) also contributing to the empirical literature evaluated the impact of trade on growth using OLS procedures. The researchers found a positive correlation between trade and growth for a number of countries that were investigated. In addition, the study found that, controlling for international trade countries that are larger have more opportunities for trade within their borders.

Fountas (2000) investigated the export-led growth hypothesis for Ireland by using annual data from 1950 to 1990, as well as monthly data from 1981 to 1994. There was no long-run relationship in the period, 1950 to 1990 between real GDP and export volume. Thus, this case did not support the export-led growth hypothesis. However, a strong evidence of long-run was found between industrial production and export volume, and Granger causality runs from export to output during the period under investigation.

Palley (2003) tested the validity of the export displacement hypothesis based on data obtained from Mexico. He found that Mexico is increasingly displacing the United States of America's imports from four Asian economic miracle countries (Hong Kong, Singapore, Korea and Taiwan). The study also found that products from China are specifically threatening in terms of global development. The study concludes that this is because the export-led growth paradigm works in line with hierarchical processes. The developing countries, which are entering international markets, are displacing those countries, which have been in exporting business for a very lengthy period of time. This is so, because such countries supplies have been exhausted and simultaneously wages are increasing.

Hossain and Karunaratne (2004) carried out a study to test the export-led growth hypothesis in Bangladesh, using a quarterly time series data for the period 1974 to 1999. The results indicate that both total exports and manufacturing exports are significant and positively related to economic growth. Further, there is a long-run relationship between exports and economic growth in the case of Bangladesh. In addition, the outcome of the study confirmed that Granger causality runs from exports to GDP.

Al-Mamun and Nath (2005) employed cointegration procedures to test the validity of the export-led growth hypothesis using Bangladesh as a test centre. The study reported the following findings: Firstly, the study found a long-run relationship between exports and industrial production. Secondly, the study found a unidirectional relationship running from exports to economic growth, as well as from exports to industrial production. However, the study did not find evidence of a short-run causal relationship between exports and industrial production.

Yang (2008) examined the relationship between exports and economic growth over the period 1958 to 2004 based on 44 countries. The results from most of the countries used in the study gave credence to the export-led growth hypothesis, while a few of them proved otherwise. The author also observed that due to the problem of data availability in the developing countries, the real exchange rate can serve as a good tool for distinguishing between situations of exports-driving growth and growth-driving exports' situations.

Cui and Shen (2011) assessed the relationship of international trade in financial services and economic growth in China through the use of multiple regression models, cointegration and error correction procedures. The results are that there is a long-run equilibrium relationship between the two modes of financial service

trade, and that both of them improved the economic growth of China during the period under examination.

Bojanic (2012) in similar fashion analysed the relationship between economic growth, financial development and trade openness using annual macroeconomic time series data for Bolivia during the period stretching from 1940 to 2010. The study tested the possibility of a long-run relationship among the variables specified in the econometric model. Secondly, the study carried out a causality analysis among the variables used in the econometric model. Thirdly, the study estimated an error correction model in order to correct for long-run disequilibrium in the econometric model. The econometric results, indeed, suggests the existence of long-run relationships among the variables used in the study. In addition, the study found a unidirectional relationship running from the indicators of financial development and trade openness to economic growth.

Adeleye, Adeteye and Adewuyi (2015) probed into the impact of international trade on economic growth in Nigeria using cointegration and error correction modelling techniques. The authors used net export and balance-of-payment as proxies to international trade, while gross domestic product represented economic growth. Only net export was found to granger-cause economic growth. The study maintained that in order for Nigeria to realise the full benefits from participating in international trade, the need to introduce incentives for purposes of encouraging non-oil exports, as well as manufacturing activities cannot be overemphasised.

Obadan and Okojie (2016) attempted to measure the impact of trade on economic growth in Nigeria for the period 1970-2007 by employing Ordinary Least Squares approach. The study found trade openness to have a positive impact on Nigeria's economic growth, while political instability had a contradictory impact on growth. The study recommends the need for Nigeria to diversify her export base to include agricultural exports and solid minerals, instead of depending exclusively on petroleum.

Based on the empirical literature reviewed the following inferences are worth noting. Differences in findings did arise mainly as a result of environmental factors, data availability, as well as differences in the choice of methodological techniques. Nevertheless, most of the studies that were reviewed seems to suggest that trade is a potent tool, when it comes to the promotion of economic growth in country's economy.

2. DATA SOURCES AND METHODOLOGY

3.1 Data sources

The annual macroeconomic data used in the study were obtained mainly from the Bank of Namibia's macroeconomic database, the Namibia Statistical Agency's Bulletins, as well as the World Bank publications. The annual macroeconomic data used in the study covered the period 1990 to 2016. Prior to estimation the datasets were first converted into quarterly datasets. Thereafter, the datasets were transformed into their respective natural log forms as a matter of econometric necessity. Whenever transformed data are used for the estimation of an econometric model it facilitates the process of determining the responsiveness of the regressands (dependent variables) to changes in respect of the regressors (independent or explanatory variables). Besides, transforming data into their natural logarithms forms is a way of improving upon the estimated results from an econometric standpoint. Furthermore, all the data used in the study have been deflated so as to minimise or control the negative effect of inflation on the estimated model. Real gross domestic product (Real GDP) serves as the dependent variable, while exchange rate (EXr), exports (EXPs) and foreign direct investment (FDi) are considered as the explanatory variables in the model.

3.2 Methodology

The study employed a simple version of the vector autoregression model that accommodates four variables. The model is expressed as:

$$Z_t = \alpha + \sum_{i=1}^k B_i Z_{t-1} + \mu_t$$

(1)

Where:

$Z_t = (RGDP, EXP, FDI, EXr)$ is the vector of real gross domestic product, exports, foreign direct investment and real exchange rate

α = intercepts of autonomous variables

B_i = matrix of coefficients of all the variables in the model

Z_{t-1} = vector of the lagged variables

μ_t = vector of the shock error terms

Real gross domestic product (*RGDP*) is a macroeconomic measure of the value of economic output in respect of a country for a given period adjusted for price changes, while real Exchange rate (*EXr*) refers to the value of a country's currency in relation to that of another country's currency adjusted for inflation or price disturbances. The value of a country's currency can either appreciate or depreciate depending mainly on market forces. Exports (*EXPs*) consists of goods that a country produces and in turn sells in foreign markets, while foreign direct investment (*FDi*) is used to describe the movement of capital that involves ownership and control. It could take the form of either joint ventures or through the establishment of a subsidiary or associate company in the foreign country, as well as acquiring shares of an overseas company.

For purposes of estimating the model, the study complied with the following steps: Unit roots test, cointegration tests, estimation of the long-run equation, pairwise causality test, as well as the forecast error variance decomposition (FEVD). The unit root test is a test for nonstationary or the univariate characteristics of time series. When variables in a model are nonstationary, estimating with such variables will lead to spurious or misleading results. Several ways of testing for unit roots are available in the literature. Examples of such tests are the Dickey-Fuller (DF) test, augmented Dickey-Fuller (ADF) test, cointegration regression Durbin-Watson (CRDW) test, Phillips-Perron (PP) test, Kahn and Ogaki test, Leyborne-McCabetest test, as well as the Kwiatkowski, Phillips, Schmidt and Shin (KPSS) tests. The DF, ADF, PP and KPSS tests are the popular types of unit root tests applied in empirical works. Further, the DF and ADF tests are the two most commonly used in empirical studies. The study utilized the Kwiatkowski, Phillips, Schmidt and Shin (KPSS) procedures in testing for unit roots because of its efficiency over most of the other approaches (Johansen, 1988). Next, the study performs the cointegration test. The main function of the cointegration test is to establish whether the variables used in the model do exhibit long-run relationships. Cointegration is generally defined as a concept, which mimics the existence of the long-run equilibrium relationship among variables (Gujarati, 2004). The test assists in determining whether there is convergence to some sort of equilibrium in the long-run. There are several ways suggested by empirical econometric literature on how to perform the cointegration test. The study used the Johansen cointegration test.

Upon the completion of the cointegration test, the study proceeds with the estimation of long-run equation since the cointegration test was on the affirmative. Thereafter, the study proceeds with the Pairwise Granger-causality test so as to determine causality occurrences amongst the variables used in the model, as well as the direction of causalities.

A causality test is necessitated by the fact that economic models often assume different hypotheses in discussing variables' relationships and unsure about variables' cause-and-effect relationships. Granger (1969) developed a technique based on lead and lag relations in forecasting. This technique is useful in determining whether one variable is potent for predicting the other. In general, Granger-causality analysis helps in determining the nature of relationships among the variables under investigation. In this regard, the following options are available for purposes of causality tests and analysis: One option is to test for a simple bivariate Granger causality, where there are two variables and their respective lags. The second option is to test for a simple unidirectional causality involving two variables and their respective lags. The third option concerns multivariate Granger causality, where more than two variables are simultaneously considered. This option is most appropriate where more than one variable can influence the results. Further, Granger causality can also be tested in a VAR framework in which case a multivariate model is extended to test for simultaneity of all included variables in the model.

The Granger causality test can be used to establish causal relationship among the variables within the VAR framework. It assumes two series X_t and Y_t that define those messages set.

$$X_t = \alpha_0 + \sum_{i=1}^k \alpha_{1i} X_{t-1} + \sum_{i=1}^k \alpha_{2i} Y_{t-1} + \varepsilon_{1t} \quad \dots \quad (2)$$

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$$Y_t = \beta_0 + \sum_{i=1}^k \beta_{1i} X_{t-1} + \sum_{i=1}^k \beta_{2i} Y_{t-1} + \varepsilon_{2t} \quad \dots \quad (3)$$

In order to determine the variables' relationships the following tests are conducted on the coefficients:

- (i) $\alpha_{2i} \neq 0$ and $\alpha_{1i} = 0$: meaning Y lead X or X lag Y.

- (ii) $\beta_{1i} \neq 0$ and $\beta_{2i} = 0$: meaning X lead Y or Y lag X.
- (iii) $\alpha_{2i} = 0$ and $\beta_{1i} = 0$: meaning both variables are independent.
- (iv) $\alpha_{2i} \neq 0$ and $\beta_{1i} \neq 0$: meaning both variables are interactive of each other and have feedback relationship.

The study utilised the Pair-wise Granger causality test, since this technique is widely used in empirical econometric time series studies. However, before embarking upon Granger-causality analysis, the study undertook certain diagnostic checks for serial correlation, conditional heteroscedasticity and normality. Thereafter, the study implemented the forecast error variance decomposition (FEVD). The variance decomposition indicates the amount of information each variable contributes to the other variables in the autoregression. More specifically, it allows the study to determine how much of the forecast error variance of each of the variables can be explained by exogenous shocks to the other variables in the autoregression.

3. RESULTS AND DISCUSSION

4.1 Unit root tests

The study used the Kwiatkowski, Phillips, Schmidt and Shin (KPSS) procedures in testing for unit roots. Table 1 summarises the unit root test results.

Table 1: Unit root tests KPSS in levels and difference

Variable	Model specification			
		Levels	First difference	Order of integration
lnRGDP _t	Intercept and trend	0.220	0.0587**	1
	Intercept	1.316	0.089**	1
lnEXP _{st}	Intercept and trend	0.423	0.185**	1
	Intercept	0.137	0.182**	1
lnFD _{it}	Intercept and trend	0.012	0.045**	1
	Intercept	0.267	0.059**	1
lnEX _{rt}	Intercept and trend	0.081	0.017**	1

	Intercept	0.045	0.061**	1
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Note that ** implies rejection of the null hypothesis at the 5% level.

Source: Author's compilation

Table 1 shows that all the variables used in the study, namely foreign direct investment, real gross domestic product, real exchange rates and exports attained stationarity after first differencing.

4.2 Cointegration tests

The study resorted to the use of the Johansen cointegration test in determining the existence of long-run relationships among the variables in the model. That is, the existence of a long-run equilibrium to which an economic system converges over time. Table 2 displays the cointegration test results.

Table-2. Cointegration check: Johansen cointegration test

Maximum Eigen test				Trace test			
H0: rank = r	Ha: rank =	Statistic	95% Critical value	H0: rank = r	Ha: rank =	Statistic	95% Critical value
r = 0	r = 1	36.26311	25.11573	r = 0	r = 1	67.23378	53.77341
r ≤ 1	r = 2	24.69219	23.72215	r ≤ 1	r = 2	33.74429	31.44296
r ≤ 2	r = 3	10.37782	15.66834	r ≤ 2	r = 3	11.663277	18.53372
r ≤ 3	r = 4	0.089261	6.427449	r ≤ 3	r = 4	1.804472	4.781285

Note: Both Maximum-Eigen test and Trace test shows two cointegrating equations at the 5% level.

Source: Author's compilation

The presence of two cointegrating equations as reported in Table 2 provides justification to estimate the long-run equation for the four variables under scrutiny.

4.3 Estimating the long-run equation

In light of the cointegration results displayed in Table 2, the study progressed with the estimation of the long-run equation which yielded the following:

$$\Delta \ln \text{RGDP} = -2.385002 + 0.061201 \Delta \ln \text{NFDI} + 1.061525 \Delta \ln \text{EXPs} + 0.354589 \Delta \ln \text{RER} \quad (4)$$

The equation (4) confirms a long-run relationship amongst the dependent and independent variables used in the study. Indeed, all the independent variables were positively related to real gross domestic product. A further scrutiny of the estimated model suggests that a 1 percent increase in net foreign direct investment leads to approximately 0.06 percent increase in economic growth, while a 1 percent increase in exports is also expected to lead to approximately 1 percent rise in economic growth. In the same way, a 1 percent increase in real exchange rate is expected to lead to about 0.4 percent increase in economic growth.

4.4 Diagnostic check

The study also tested for serial correlation, conditional heteroscedasticity and normality. The results confirm the absence of both serial correlation and heteroscedasticity. Besides, the model was also found to be normally distributed. This is so since all the computed probability values are consistently greater than 0.05. Therefore, the results obtained are, at least robust from an econometric perspective. The results are reported in Table 3.

Table-3. Diagnostic tests for serial correlation, conditional heteroscedasticity and normality

Test	Null hypothesis	t-statistic	Probability
Lagrange Multiplier	No serial correlation	14.82761	0.9617
Jarque-Bera (JB)	There is normality	9.532	0.216
White (Chi-square)	No conditional heteroscedasticity	23.74195	0.017

Source: Author's compilation

4.5 Causality tests

The study also reports on the pairwise Granger-causality tests. The Granger-causality results are displayed in Table 4.

Table-4. Pairwise Granger-causality test

Null Hypothesis	Observation	Probability
LnRER does not Granger Cause LnRGDP	104	0.2119
LnRGDP does not Granger Cause LnRER	104	0.9426
LnNFDI does not Granger Cause LnRGDP	104	0.3166
LnRGDP does not Granger Cause LnNFDI	104	0.2633
LnEXPs does not Granger Cause LnRGDP	104	0.1186
LnRGDP does not Granger Cause LnEXPs	104	0.0174
LnNFDI does not Granger Cause LnRER	104	0.1727
LnRER does not Granger Cause LnNFDI	104	0.5926
LnEXPs does not Granger Cause LnRER	104	0.7593
LnRER does not Granger Cause LnEXPs	104	0.7190
LnEXPs does not Granger Cause LnNFDI	104	0.2749
LnNFDI does not Granger Cause LnEXPs	104	0.3118

Note that ** means the rejection of the null hypothesis at the 5% level

Source: Author's compilation

Upon inspection of Table 4, none of the pairs demonstrated causality relationships between themselves. This is rather very surprising considering the fact that most of the related literatures that the study reviewed alluded to a positive and causal relationship between FDI and growth, especially for developing countries.

Thereafter, the study reports on the forecast error variance decomposition. The variance decomposition results are displayed in Table 5.

Table-5. Forecast error variance decomposition results

Variance Decomposition of LOGRGDP				
PERIOD	LnRGDP	LnRER	LnEXPs	LnNFDI
1	100.00	0	0	0
2	98.73512	0.284237	0.064321	0.398452
3	96.62496	1.557290	0.157432	1.143253
4	95.83621	2.735104	0.157562	2.293575
5	93.05283	4.941303	0.268996	3.768423
6	89.94752	6.978413	0.253329	5.182341
7	86.96426	7.903352	0.257332	6.373452
8	84.86351	9.299864	0.278426	7.153221
9	82.64972	10.53982	0.219573	7.486775
10	81.46210	10.87692	0.192431	7.510984

Source: Author's compilation

Table 5 presents forecast error variance decompositions for each variable in the model over a 10-period forecast horizon. The results depict that consistently, economic growth itself accounted for most of the changes or innovations that occurred with respect to economic growth for the period under consideration. Indeed, the results show that in the first period the fluctuations in economic growth are 100 percent purely driven or explained by economic growth itself. This result conforms to theoretical expectations. Amongst the three explanatory variables used in the model, real exchange rate and net foreign direct investment contributed more towards innovations in economic growth during the forecast horizon. The openness variable consistently made the weakest contribution towards explaining economic growth for the forecast period.

4. CONCLUSION, POLICY IMPLICATION AND FURTHER RESEARCH OPPORTUNITIES

This study investigated the impact of trade on economic growth in Namibia for the period stretching from 1990:Q1 to 2016:Q4. The study employed vector autoregression approach as against the direct application of the method of ordinary least squares regression. The annual data collated by the study were first transformed into quarterly data before estimating the model. The study was driven by four specific objectives. The empirical results arising from the study found that exports contributed significantly to Namibia's economic growth during the period under consideration. Moreover, the results obtained from the forecast error variance decomposition suggest that the fluctuations in economic growth were one hundred percent explained by economic growth itself. This conforms to a priori expectations. Moreover, amongst the three explanatory variables used in the model, real exchange rate and net foreign direct investment contributed more towards innovations in economic growth during the forecast horizon compared to exports. The findings of the study support a number of empirical studies that were reviewed. Examples of such studies are (Hossain and Karunaratne 2004; Cui and Shen 2011; Adeleye, Adeteye and Adewuyi 2015; Obadan and Okojie 2016).

The study, inter alia, recommends the need for Namibia to put in place appropriate exports' incentives that can potentially assist in boosting the country's exports in regional and foreign markets. Besides, the study recommends the need for Namibia to invest enormously in transport and communications' infrastructures, including renewable and non-renewable energy supplies. Moreover, the need to promote value-addition activities cannot be overemphasised. Some of the empirical literature reviewed supports the findings arising from this study.

Future research pertaining to the issue under consideration should direct its attention particularly to causality analysis. In addition, the use of disaggregated data sets should also be explored in future studies.

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