

Trade Policy Drivers and Economic Performance of Opec Member States

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Abstract: *This study examined linkage between Trade Policy Drivers and Economic Performance of OPEC Member States spanning from 1991 to 2021. The regressor is Trade Policies measured by: (i) Import Penetration Policy; (ii) Export Penetration Policy; (iii) Degree of trade openness; (iv) Exchange Rate Policy; (v) Inflation Rate Policy; and (vi) Interest Rate Policy while the regressand is Economic Performance measured by (i) gross domestic product per capital-GDPC. Data for the study were sourced from both the World Bank Data Base and the annual reports of the ten sampled OPEC member countries. Prequel to presenting the main result, the model was subjected to Panel unit root test, Kao Cointegration test, Hausman Test, and Breusch Pagan Test. Having subjected the model to series of analysis, the robust random effect model was found most appropriate model for the study. The study found that Import Penetration Policy, Export Penetration Policy, Degree of trade openness, and Interest Rate Policy all exerted positive significant effects on GDPC. Meanwhile, Exchange Rate Policy exerted negative significant effects on GDPC. However, Inflation Rate Policy exerted negative insignificant effects on GDPC. Hence, concludes that higher import penetration, export penetration, degree of trade openness, stable interest rate, and low exchange rate are instrumental to the GDPC in OPEC member states. As such, for OPEC member states to reap the benefits inherent in trade and at the same time achieve higher GDPC, policy makers in OPEC member states must ensure that the gains accruable from exports are used for productive purposes and that individual involves in smuggling should be apprehended and punished dully.*

Keywords: Trade Policy drivers, Economic Performance, OPEC member States

1. Introduction

Trade policies remains one of the greatest policy options policy makers all over the world uses to build a resilient economic system that devoid of macroeconomic vagaries. This is justified on the ground that, a country's level of economic performance is dependent on the degree its trade policies. To further buttress these assertions, the World Bank (2021) reported that, the significance of trade from the global perspective is justified on the ground that, countries differs in terms of division of labour, specialization, natural endowment, and technology. As such, international trade affords countries, the opportunity to counterbalance their various deficiencies (Jiyng, Eric & Adjei, 2020). More so, the emergence of Covid-19 Pandemic in human history has made OPEC member states' policy makers have a long-term trade-related technological investment that is targeted at improving the economic prowess of both members and non-member states are not distorted (Bunje, Abendin, & Wang, 2022).

Abendin and Duan (2021) added that, the policy directives of OPEC since the emergence of the pandemic has been centered on minimizing trade imbalance and oil price volatility with a view to improve the economic performance of member states. Worthy to note is that, initial policy options adopted by most developed and developing economies (OPEC Member states inclusive) during the first wave of the Covid-19 Pandemic in were: trade restriction, shutdown of ports, borders, businesses, and airlines alongside non-pharmaceutical practices (Abendin & Duan, 2021). This in turn disrupted the trading activities across the OPEC Member states to be specific and the global economy at large (Abendin & Duan, 2021).

A run through extant trade-related studies measured trade policies using parameters such as: (i) Import Penetration Policy; (ii) Export Penetration Policy; (iii) Degree of trade openness; (iv) Exchange Rate Policy; (v) Inflation Rate Policy; and (vi) Interest Rate Policy (Sayed & Vishwanatha, 2021, Ogunsanwo, Obisesan, & Olowo, 2021, Mohsen, 2019; Dumani, Nelson, & Siaisia, 2018). According to Ogunsanwo, Obisesan, and Olowo (2021), low level of inflation rate, stable interest rate, high export volumes, low import volumes, relatively stable exchange rate, and high degree of trade openness lead to sustainable economic growth. To further buttress this, Mohsen (2019) argued trade policies provides new opportunities for global economies especially OPEC member states, helps the OPEC member states solve issues related to inefficient transport system, poor connectivity, complicated regulatory environments, alongside anti-competitive behaviour by key players in the market. However, considering the fact most of the OPEC Member states are oil producing countries, most of the member state are yet to cope with crude oil price volatility especially in the light of the challenging realities. This has affected the ability of the organization to fulfill its core mandate of minimizing crude oil price volatility while ensuring that the economic performance of its member states are improved upon via trade policies.

Again, since most of the policy targets of many OPEC member states like Saudi Arabia and Nigeria are centered on domestic petroleum consumption growth and are highly dependent on imported consumable goods which does not match their primary products, most of the OPEC member states are yet to fulfill enjoy the gains inherent in trade. This to a large extent has contributed

to the dismal performance recorded by these countries over the years. In like manner, for several decades, there has been a growing concern among OPEC members as to challenges posed by international markets and technology and on how best the organization can control prices of crude oil product via agreed outputs.

Even till date, theorists are yet to come to a stand-still conclusion as to whether trade policies are growth inducing or growth retarding. In like manner, extant studies on the subject matter are still conflicting in that, while some empirical studies like the studies such as Manwa, Wijeweera, and Kortt (2019); Doan (2019); Manwa and Wijeweera (2016) reported that trade is an economic performance booster, other empiricists such as Abeliansky, Martínez-Zarzoso, and Prettnner (2020); & Zheng and Walsh (2019) reported that trade policies deter economic performance. These inconclusive (contradictory) findings justify the need for this study. More so, most of these trade-growth studies seem to silence the role of exchange rate policies, and inflation rate policies on economic performance. Summarily, the problem statement is put around the following trade policies areas:

1. Import Penetration Policy-IMP and economic performance-GDPC;
2. Export Penetration Policy-EXP and economic performance-GDPC;
3. Degree of trade openness-DOP and economic performance-GDPC;
4. Exchange Rate Policy-EXRP and economic performance-GDPC;
5. Inflation Rate Policy-IFRP and economic performance-GDPC; and
6. Interest Rate Policy and economic performance-GDPC.

2. Literature Reviews and Hypotheses Formulation

2.1. Conceptual Linkages

The term trade policies are viewed as policies that centers on the flow/exchange of capital resources, goods and services between and among countries in the world (Sayed & Vishwanatha, 2021). According to Afolabi, Danladi and Azeez (2017), trade policies are policies which guide the flows of capital resources, goods and services within and outside OPEC member states. More so, trade policies as policies which guide the imports and exports. More specifically, countries are not equally endowed in resources; science and technology. As such, international trade affords these countries to counterbalance their various deficiencies via trade.

Ugwu (2017) defined trade policies as the policy concerning the flow of goods and services within the African economy. Bakari (2017) conceptualized trade policies as the flows of capital goods. Ajayi and Araoye (2019) averred that international trade/regional integration appears to be a logical way to enable an economy to produce at lower unit costs for a larger (regional) market. Within the context of this study, trade policies are policies which guide the flows of goods and services within the OPEC member states.

Meanwhile, economic performance is simply defined as the state at which an economy is prospering. According to Afolabi, Danladi and Azeez (2017), economic performance is the extent to which an economy uses its trade policy to achieve macroeconomic objectives. Put differently, it is the extent to which an economy is resilient to economic shock. More so, economic performance is the state at which an economy achieve its economy policy that is built around stable economic growth, low inflation rate, stable exchange rate, low unemployment rate, favourable balance of payment, and price stability.

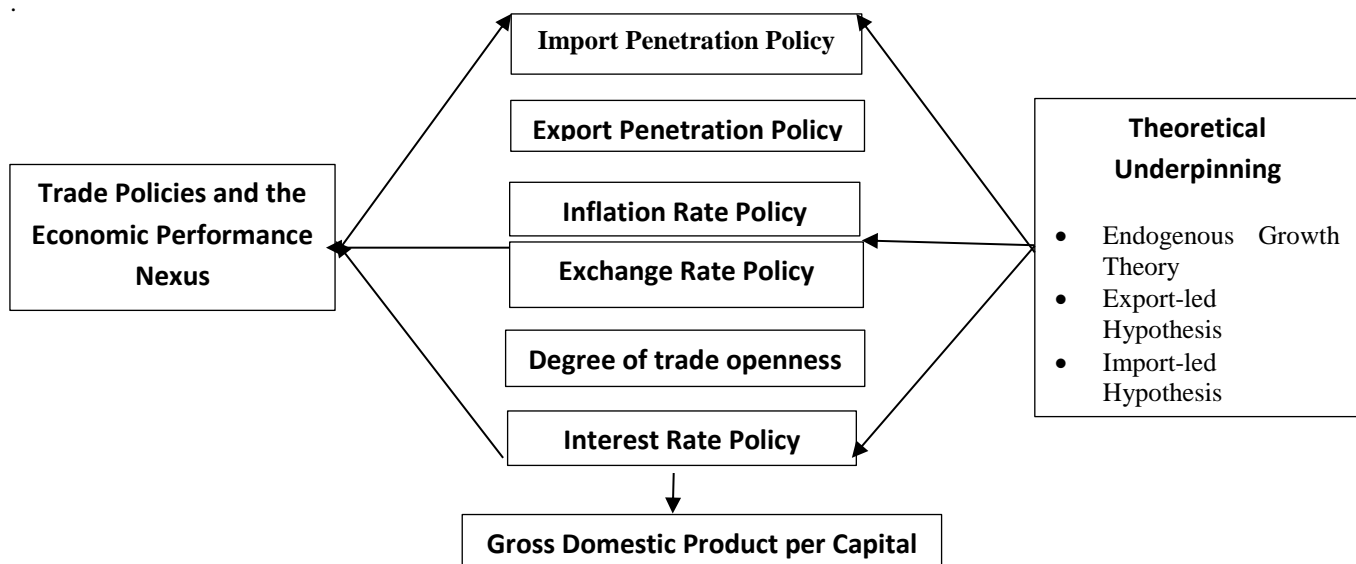


Figure 1: Trade Policy Drivers and the Economic Performance Nexus

Source: Researcher's Model, 2022

2.2. THEORETICAL REVIEW

There have been considerable debates on the existence and nature of the trade policies and the economic performance. Firstly, the endogenous growth theory which emerged during the late 1980s and early 1990s as observed by Baldwin (2003), was led by Romer in 1986; then Lucas in 1988; and then Grossman, & Helpman in 1991 emphasizes on the desirability of vertical diversification that entails a diversifying a country's production and export structure from primary commodities to manufactured goods. Justifiably, this theory was used to underpin this study based on the fact that, it stresses that; high economic performance can only be achieved through efficient trade policies in place. As such, for OPEC member states to compete favourably with non-OPEC member states, there is need for the OPEC member states to drift from production of primary products say oil explorative, production, and marketing towards both primary and secondary production i.e. they should diversify their trade. Meanwhile, the export-led hypothesis holds that, a country's level of development/performance is dependent on its export policies. This theory further hold that, the higher/lower the degree of export, the higher/lower a country's economic prowess/performance provided the imported goods are held constant. Meanwhile, the import led hypothesis hold that, a country's economic is dependent on the volumes of imports and not the volumes of exports.

2.3. Extant Studies and Hypotheses Formulation

2.3.1. Import Penetration Policies-IMP and Economic Performance-GDPC

A lot of studies have been devoted on the nexus between IMP and GDPC. Specifically, various outcomes are recorded in this respect. Firstly, Sayed and Vishwanatha (2021) attributed the economic instability of Afghanistan from 2002 to 2018 to higher volumes of imports inflows. However, Ogunsanwo, Obisesan, and Olowo (2021) and Mohsen (2019) reported that, volumes of imports are positive drivers of economic activities. Similarly, Ahamad (2018) affirmed that imports improve the Bangladesh economy significantly. However, Dumani, Nelson, and Siaisai (2018) and Lawal and Ezeuchenne (2017) both reported that, oil imports exerted positive/direct minimal impacts on the Nigerian economy from: 1981 to 2016; and 1985 to 2015, respectively. Meanwhile, Abiodun (2017) established that a uni-directional relationship exist between imports and economic growth. Hence, the study hypothesizes:

H0₁: IMP exert no significant effects on GDPC of OPEC member states

2.3.2. Export Penetration Policies-EXOP and Economic Performance-GDPC

As in case the case of IMP and GDPC, empiricists are yet to come to a standstill agreement as to the directional relationship between EXOP and GPDC. Firstly, Jiying, Eric and Adjei (2020) reported that both the past values of exports and imports have high positive impact on the growth of Burundi from 1989 to 2018. However, Kartikasari (2017) reported that both exports and imports have high negative impact on the growth of Indonesia from Indonesia from 2009 to 2016. However, the Bakari and Mabrouki (2017) and Ali, Yassin, Ali, and Dalmar (2018) in separate studies reaffirmed that, a bidirectional causality exists among imports, exports, and economic growth of Panama and Somalia respectively. However, Saaed and Hussain (2017) reported that, economic growth uni-granger causes both imports and exports. Hence, the study hypothesizes:

H0₂: EXOP exert no significant effects on GDPC of OPEC member states

2.3.3 Degree of trade openness-DOP and Economic Performance-GDPC

Existing studies on DOP and GDPC are conflicting event till date. For example, Aremo and Arambada (2021); Olugbenga and Oluwabunmi (2020); Maliszewska, Mattoo, and Mensbrugge (2020) using different methodological approach and time scope reported that, the more an economy is open to trade, the higher the economic performance. However, Bunje, Abendin, and Wang (2022); Abendin and Duan (2021) found that, trade openness has a mixed influence on economic growth. Hence, the study hypothesizes:

H0₃: DOP exert no significant effects on GDPC of OPEC member states

2.3.4. Exchange Rate Policies-EXRP and Economic Performance-GDPC

Existing studies on EXRP and GDPC are conflicting event till date. For example, Anifowose (2021) exchange rate improves the growth of the Nigerian economy positively while inflation rate have adverse non-contemporaneous effect on growth from 1981 to 2020 as stated by the ARDL methodology. This was reaffirmed by Rapetti (2020); Alasha (2020); Long, Ignatius, and Yang (2019). However, Tule, Oboh, Ebuh, Onipede and Gbadeb (2020) reported that, exchange-rate volatility was found to exhibit short-term unidirectional causality for economic growth from 2003 to 2017. Meanwhile, Morina, Hysa, Ergün, Panait, and Voica (2020) affirmed that exchange rate amongst others have a high impact on Cambodia's economy. Hence, the study hypothesizes:

H0₄: EXRP exert no significant effects on GDPC of OPEC member states

2.3.5. Inflation Rate Policies-IFRP and Economic Performance-GDPC

Existing studies on IFRP and GDPC are conflicting event till date. For example, Taderera, Runganga, Mhaka, and Mishi (2021); Coulibaly (2021) and Salami (2018); Ayomitunde, Olaniyi, Zannu and Stephen (2018) affirmed that inflation has a positive impact on economic growth while lending rate has a negative impact on growth in the long run. However, Pellegrino, Ravenna, and Züllig (2020) reported that, inflation rate had negative effect on the Euro area during the periods. This was reaffirmed by Anidiobu, Okolie,

and Oleka (2018). In another light, Bonga-Bonga and Simo-Kengne (2018) reported that, inflation rate reduce the South African economy minimally. Hence, the study hypothesizes:

H0₅: IFRP exert no significant effects on GDPC of OPEC member states

2.3.6. Interest Rate Policy-ITRP and Economic Performance-GDPC

Existing studies on IFRP and GDPC are conflicting event till date. For example, Inedu (2020) showed that interest rate and liquidity ratio reduce economic growth minimally. Hence, advocated for a stable rate at single digit. However, Meyer, Chipeta, and Camel (2018) reported that interest rate decrease the South African economy to a very large extent. This result was reaffirmed by Akinwale (2018); Fatoumata (2017). Hence, the study hypothesizes:

H0₆: ITRP exert no significant effects on GDPC of OPEC member states

2.4. Gaps in Literature

Having extensively reviewed and at the same time summarized extant empirically above, the followings gaps in literature/knowledge were identified:

1. This study seems to be the first of its kind to examine the effect of Trade Policies on economic performance in OPEC member states.
2. This study unlike the studies reviewed above seems to be more robust since using it covered wider trade policy parameters and at the same time subjected the model to panel corrected standard error being a more analytical tool than the conventional panel data technique.

3. Research Methodology

This paper adopted the expost facto research design since the targeted variables are existing data and cannot be manipulated. Also, this type of research explains how a study provides insight into cause-and-effect relationships. The study population was confined to all the thirteen OPEC member states as at 31st December, 2021. The ten OPEC member states as at 31st December, 2021 are: Venezuela, United Arab Emirates, Saudi Arabia, Nigeria, Libya, Kuwait, Iran, Irak, Gabon, Equatorial Guinea, Congo, Angola, and Algeria. For purposes of convenience and data consistency, the study sampled ten OPEC member states. These are: Venezuela, United Arab Emirates, Saudi Arabia, Nigeria, Libya, Kuwait, Equatorial Guinea, Congo, Angola, and Algeria. These sampled OPEC member states have been consistent from 1991 to 2021. The sample size was arrived at using the convenience sampling. Meanwhile, the paper sourced data majorly from the Apex banks of the sampled OPEC member states (2021), and World Bank Data Base, 2021 using the secondary source of data collection. Also, the paper consulted finance, economics, and accounting journals and publications.

The study adopted the Panel Regression Methodology. The choice of this methodology is informed on its robustness, reliability, and statistical properties coupled with its suitability to data having both time-series and cross-sectional data characteristics. Meanwhile, both the Langragian Multiplier test for Random effect- Breusch pagan test and the Hausman test were used to determine the panel data variant that is most feasible for the study. Their decision rules are stated below:

Table 1: Model Estimation Test Decision rules

Model Estimation Test	Decision Rules	
	Null Hypothesis	Alternative Hypothesis
Langragian Multiplier test for Random effect- Breusch pagan test	Pooled ordinary Least Square is appropriate if the P-value of the Breusch pagan test is >5%	Fixed effect Model is appropriate if the P-value of the Breusch pagan test is <5%
Hausman Test	Random effect Model is appropriate if the P-value of the Hausman test is >5%	Fixed effect Model is appropriate if the P-value of the Hausman test is <5%

Source: Torres-Reyna, O. (2007).

To address the issue of over parameterization of study variables due to variable perturbations, the model was further subjected to panel corrected standard error. Meanwhile, the model was first subjected the model to various pre-estimation /diagnostic tests such as Variance Inflation Factor, Levin-Lin-Chu Test, and Kao cointegration test. Although, our model patterned after the studies of Sayed and Vishwanatha (2021); Morina, Hysa, Ergün, Panait, and Voica (2020); Dumani, Nelson, and Siaisia (2018) but differs from their model since they did not capture all the trade policy variables. Hence, the expanded trade policy model is stated as:

$$GDPC_{it} = \beta_0 + \beta_1 IMP_{it} + \beta_2 EXOP_{it} + \beta_3 DOP_{it} + \beta_4 EXRP_{it} + \beta_5 IFRP_{it} + \beta_6 ITRP_{it} + U_t \text{-----} (1)$$

Where:

- GDPC* = Real Gross Domestic Product per Capital
- IMP* = Import Penetration Policies
- EXOP* = Export Penetration Policies
- DOP* = Degree of Trade Openness

IMP	=	Import Penetration Policies
EXRP	=	Exchange Rate Policies
IFRP	=	Inflation Rate Policies
ITRP	=	Interest Rate Policies
ITRP	=	Interest Rate Policy.
β_0	=	Constant Value
$\beta_1 - \beta_6$	=	Parameter Estimate
Ut	=	Error Term

Note: All variables used under research were later normalized.

Table 1: Operationalization of Target Variables

Sign	Nature of Variable	Measurement	Apriori Expectation
GDPC	Dependent	Proportion of Annual GDP to population rate	Nil
IMP	Independent	Import volume index (2000 = 100)	Positive
EXOP	Independent	Export volume index (2000 = 100)	Positive
DOP	Independent	Aggregate Exports + Imports / GDP	Positive
EXRP	Independent	Price of domestic currency to foreign currency.	Negative
IFRP	Independent	Annual consumer price index	Negative
ITRP	Independent	Real Interest Rate	Positive

Source: Researcher's Compilation (2022)

4. Results and Discussions

This section covered the descriptive statistics, correlation analysis, pre-estimation tests (Variance Inflation Factor, Levin-Lin-Chu Test, and Kao cointegration test), model estimation and discussion of regressed results. While both the descriptive statistics, correlation analysis are stated in table 2 and 3, the pre-estimation tests are stated in table 4 to 6. More so, the model estimation and discussions are stated and extensively discussed alongside.

Table 2: Summarized Descriptive Statistics

Targeted Variables	Mean	Std. Dev.	Maximum	Minimum	Observations
GDPC	10467.28	12399.52	44498.94	554.0400	310
IMP	258.4065	231.7102	1643.570	5.160000	310
EXOP	124.7634	73.02535	410.2400	4.260000	310
DOP	300.3840	296.4658	1774.100	10.19461	310
EXRP	138.1944	213.5230	732.4000	0.000000	310
IFRP	94.61981	645.3723	9585.500	-2.09	310
ITRP	18.12639	28.59320	217.8800	0.050000	310

Source: E-Views Version 9 (2022)

Table 2 evidenced that GDPC, IMP, EXOP, DOP, EXRP, IFRP, and ITRP reported average values of 10467.28, 258.4065, 124.7634, 300.3840, 138.1944, 94.61981, and 18.12639 respectively. Meanwhile, they deviated by 12399.52, 231.7102, 73.02535, 296.4658, 213.5230, 645.3723, and 28.59320. This signals that, only IMP, EXOP, and DOP clustered around their mean values since their mean values were higher than their standard deviation values. To avoid the issue of spuriousity, the variables were normalized before running the main regressions.

Furthermore, GDPC, IMP, EXOP, DOP, EXRP, IFRP, and ITRP reported maximum values of 44498.94, 1643.570, 410.2400, 1774.100, 732.4000, 9585.500, and 217.8800 throughout the studied periods. Meanwhile, they reported minimum values of 554.0400, 5.160000, 4.260000, 10.19461, 0.000000, -2.09, and 0.050000.

Table 3: Summary of Correlation Matrix

Targeted Variables	GDPC	IMP	EXOP	DOP	EXRP	IFRP	ITRP
GDPC	1.000000						
IMP	0.919740	1.000000					
EXOP	0.705223	0.458359	1.000000				
DOP	0.600436	0.351903	0.356914	1.000000			
EXRP	-0.745191	0.336094	0.223473	0.408865	1.000000		
IFRP	-0.391633	-0.114008	-0.130431	-0.083565	-0.082758	1.000000	
ITRP	-0.309027	-0.087267	-0.089091	0.003283	0.048977	0.354102	1.000000

Source: E-Views Version 9 (2022)

The correlation matrix in table 3 shows that IMP and EXOP are positively correlated with GDPC and that such relationships are strong. This is because their respective coefficient values stated above are above 70%. Meanwhile, DOP exerted positive moderate relationship with GDPC since its coefficient value stated in table 3 above is above 30% but not up to 70%. However, EXRP is negatively correlated with GDPC and that such relationship is strong. Again, both IFRP and ITRP EXRP are negatively correlated with GDPC and that such relationships are moderate. This is because their respective coefficient values are above 30% but not up to 70%. Lastly, regressand exhibit low correlations, an indication of possibility of low multi-collinearity problems. To affirm this claim, the paper conducted the variance inflation factor (VIF) and tolerance (TOL) value. The result is presented in table 4:

Table 4: Multi-collinearity Tests

Targeted Variables	VIF	TOL
IMP	1.023628	0.976917
EXOP	1.005936	0.994099
DOP	1.019649	0.980730
EXRP	2.605290	0.383834
IFRP	1.180690	0.846962
ITRP	1.511164	0.661742
Average Values	1.391060	0.807381

Source: Researcher's Compilation (2022)

Table 4 stated an average VIF and TOL values of 1.391060 and 0.807381. Since none of the targeted variables reported a VIF values are above 10 and that none of the TOL values are above 5, implies that our model is free from multi-collinearity problems.

Table 5: Panel Unit Root Test

AT LEVEL (1(0))			
Targeted Variables	Levin, Lin & Chu t-Statistics	P-value	Decision
GDPC	-0.96780	0.8334	Non-stationary
IMP	-1.04379	0.1483	Non-stationary
EXOP	-0.37155	0.3551	Non-stationary
DOP	-1.31684	0.0939	Non-stationary
EXRP	-1.27249	0.8984	Non-stationary
IFRP	-3.48102	0.0002	Stationary
ITRP	-3.74556	0.0001	Stationary
AT FIRST DIFFERENCE (1(0))			
Targeted Variables	Levin, Lin & Chu t-Statistics	P-value	Decision
GDPC	-3.77163	0.0001	Stationary
IMP	-3.03361	0.0012	Stationary
EXOP	-4.01476	0.0000	Stationary
DOP	-2.04769	0.0203	Stationary
EXRP	-5.23035	0.0000	Stationary
IFRP	-10.2436	0.0000	Stationary
ITRP	-3.74556	0.0001	Stationary

Source: Econometric Views version 9.0 (2022)

The panel unit root in table 4.4 above reaffirmed that all the study variables are integrated both at levels and first difference. This is because the p-values of IFRP, and ITRP at their natural levels alongside that of GDPC, IMP, EXOP, DOP, and EXRP at first differencing are less than 5%. This justifies that the study variable are not spurious.

Table 6: Kao Residual Cointegration Test

Series: GDPC IMP EXOP DOP EXRP IFRP ITRP

Included observations: 310

	t-Statistic	Prob.
ADF	-1.730511	0.0418
Residual variance	4001896.	
HAC variance	3666206.	

Source: Econometric Views version 9.0 (2022)

Table 6 confirms that, trade policy drivers on the overall, has high/statistical significance effects on economic performance in OPEC member states on the long run.

4.3. Model Estimation and Discussion

Both the Langragian Multiplier test for Random effect- Breusch pagan test and the Hausman test were used to determine the most appropriate panel data variant feasible for the study. The abridge results are in table 7:

Table 7: Model Estimates

Dependent Variable: Economic Performance-Gross Domestic per Capital (GDPC)

Regressand: GDPC			Periods covered: 31
Cross-sections units:10			Total observations: 310
Selected Variables	Pooled OLS POLs	Random Effect Model- REM	Fixed Effect Model- FEM
Constant (C)	9.822452 (8.032630) {0.0000}	8.331723 (2.192206) {0.0291}	8.229142 (11.754790) {0.0000}
Import Penetration Policies (IMP)	0.539813 (2.078508) {0.0385}	0.664352 (5.636074) {0.0000}	-0.662527 (5.546567) {0.0000}
Export Penetration Policies (EXOP)	0.545369 (5.741005) {0.0000}	0.593264 (4.024410) {0.0001}	0.590352 (3.957653) {0.0001}
Degree of Trade Openness (DOP)	-0.602856 (-2.676122) {0.0079}	-0.629453 (-4.661301) {0.0000}	-0.627285 (-4.556180) {0.0000}
Exchange Rate Policies (EXRP)	-0.671406 (-9.360896) {0.0000}	-0.037611 (-1.282775) {0.2006}	-0.030559 (-1.028524) {0.3045}
Inflation Rate Policies (IFRP)	-0.057782 (-0.061425) {0.9511}	-0.039466 (-1.065912) {0.2873}	-0.039996 (-1.080112) {0.2810}
Interest Rate Policies (ITRP)	-0.738337 (-4.856088) {0.0000}	0.042479 (-0.390601) {0.6964}	-0.029225 (-0.267938) {0.7889}
R-squared	0.676619	0.188509	0.909806
Adjusted R-squared	0.564274	0.172440	0.905204
Durbin-Watson stat.	1.082034	0.032099	0.305163
LM test for Random Effect		P-value=0.0129	
Hausman Test		Chi-Sq. Statistic= 5.470077 and p-value =0.4851	

Note: () denotes t-statistics while { } denotes p-value for each study variables

The Breusch-Pagan test reported a P-value of 0.0129 implying that the FEM is preferred over the POLS. However, the Hausman test chooses the REM over the FEM since its p-value (0.4851) is within the 5% benchmark for acceptance of the REM. However, the Durbin Watson Statistics of the REM estimated at 0.305163 is faced with the serial correlation problem. To address this major challenge, the model was subjected the panel standard error corrected model-robust random effect model. The result is presented in table 6:

Table 8: Robust REM

Regressand: ROA				Periods covered: 31
Cross-sections units:10				Total observations: 310
Variables	Coefficient values	Std. Error Values	t-Statistic Values	Prob. Values
C	8.848738	1.409809	6.276550	0.0000
IMP	0.641583	0.080284	7.991436	0.0000
EXOP	0.929467	0.192674	4.824029	0.0000
DOP	0.922128	0.134824	6.839486	0.0000
EXRP	-0.684979	0.337332	-2.030577	0.0432
IFRP	-0.195232	0.164709	-1.185315	0.2368
ITRP	0.699398	0.335860	2.082408	0.0483
Effect Specification				
R-squared	0.688665	Durbin-Watson stat		2.197866
Adj. R-squared	0.572599	F-statistic = 11.74310		Prob(F-statistic)= 0.000000

Source: E-Views Version 9.0 Output (2022)

Table 8 reported an r-squared statistic value of 0.688665, adjusted r-squared value of 0.572599, and a Durbin Watson Statistics value of 2.197866. This suggests that the model has a high explanatory power and that the model is free from serial auto-correlation. Meanwhile, the Prob. (F-statistic)= 0.000000 indicates that, trade policies on the overall improves economic performance of OPEC member state to a very large extent.

The Robust REM reported a direct coefficient value of 0.641583 depicts that, IMP is positively related to economic performance of OPEC member states in Nigeria. The signals that, a unit rise in IMP will increase by GDP of OPEC Member States by 64.16%. By implication, the more the flow of imported goods within the OPEC Member states, the higher the economic performance of the member states. This is in tandem with the apriori expectation of this paper. In term of statistical significance, IMP passed the test of significance meaning that IMP is high instrumental to economic performance of OPEC member states. This reaffirmed the imported hypothesis and supports the findings of Ogunsanwo, Obisesan, and Olowo (2021); Mohsen (2019); Ahamad (2018); Dumani, Nelson, and Siaisai (2018); Stephen and Obah (2017); Lawal and Ezeuchenne (2017) but deviated from the findings of Sayed and Vishwanatha (2021) whom reported that the volumes of imports were relatively unstable throughout the study periods. Again, Kartikasari (2017) reported that both exports and imports have high negative impact on the growth of Indonesia.

In like manner, table 8 reported that, a rise in EXOP will increase the economic performance (GDP) of OPEC Member States by a significant value of 92.95% which is in line with the findings of Jiying, Eric and Adjei (2020); Bakari and Mabrouki (2017). However, it deviated from the findings of Kartikasari (2017) whom reported that both exports and imports have high negative impact on the growth of Indonesia. Similarly, Ali, Yassin, Ali, and Dalmar (2018) Kartikasari (2017) reported that both exports and imports have high negative impact on the growth of Indonesia. Furthermore, Saaed and Hussain (2017) evidenced that economic growth granger causes both imports and exports but imports and exports did not granger cause economic growth.

Additionally, the result evidenced that, the trade openness and interest rate policies are critical drivers of economic performance. This is evidenced by the positive coefficient of 0.922128 and 0.699398 and the estimated p-values of 0.0000 and 0.0483 < 5% significant level. This however, supports the Aremo and Arambada (2021); Olugbenga and Oluwabunmi (2020); Maliszewska, Mattoo, and Mensbrugge (2020) but deviated from Bunje, Abendin, and Wang (2022); Abendin and Duan (2021) findings.

Conversely, the Robust REM reported that, a unit rise/fall in EXRP, the economic performance of OPEC member states will reduce by a significant value of -0.684979. In terms of IFRP, a unit rise/fall in IFRP, will increase/decrease the economic performance of OPEC member states by an insignificant value of 19.52%. This is in tandem with Pellegrino, Ravenna, and Züllig (2020); Anidiobu, Okolie, and Oleka (2018); Bonga-Bonga and Simo-Kengne (2018); Ayomitunde, Olaniyi, Zannu and Stephen (2018); Enejoh and Tsauni (2017) but deviated sharply from the findings of Taderera, Runganga, Mhaka, and Mishu (2021); Coulibaly (2021); Salami (2018).

5. Conclusion, Policy Recommendations, Contribution to Knowledge, and suggestions for Further Studies

5.1. Conclusion

This paper fundamentally centered on Trade Policy drivers and Economic Performance of OPEC Member States with data spanning from 1991 to 2021. The independent variable is Trade Policies measured by: (i) Import Penetration Policies; (ii) Export Penetration Policies; (iii) Degree of trade openness; (iv) Exchange Rate Policies; (v) Inflation Rate Policies; and (vi) Interest Rate Policies while the regressand is Economic Performance measured by (i) gross domestic product per capita. The study was adopted the panel regression methodology. Having subjected the model to series of analysis, the robust random effect model became the most appropriate model for the study. Arising from the several findings, the study concludes that higher import penetration, export penetration, degree of trade openness, stable interest rate, and low exchange rate are instrumental to the economic performance of the OPEC member states in the periods under investigation.

5.2. Policy Recommendations

For OPEC member states to reap the benefits inherent in trade and at the same time achieve higher Economic performance (GDPC), policy makers of the OPEC member states should:

1. Ensure that the gains accruable from exports are used for productive purposes and that individual involves in smuggling are apprehended and punished dully.
2. Dissuade the infiltrations of sub-standard products and that consumption products are heavily tax since consumption products.
3. Ensure that their policies are tailored towards trade liberalism.
4. Develop a more effective exchange rate policy as this would help to boost the explorative and production capacity of OPEC member states.
5. Maintain inflation rate at a low level instead of putting too much pressure on these variables in the long-run.
6. Focus on maintaining a single digit interest rate.

5.3. Contribution to Knowledge

1. The study was able to expand existing literature on Trade policies and economic performance nexus within the OPEC member states by including inflation rate, interest rate, and exchange rate into the Trade policies model.
2. The study contributed to the ongoing research by scholars in OPEC member states searching for the direction of linearity between trade policy variables and economic performance.

5.4. Suggestions for Further Studies

1. Future research could be expanded beyond the OPEC member states.
2. Other methods of analysis may also be used to further analyse the hypotheses formulated in this study.
3. The effect of Terms of trade on economic performance of OPEC member states.

REFERENCES

- Abendin, S., & Duan, P. (2021). International trade and economic growth in Africa: the role of the digital economy. *Cogent Economics & Finance*, 9, Article ID: 1911767.
- Abiodun, K. (2017). Contribution of International Trade to Economic Growth in Nigeria. 2017 Awards for Excellence in Student Research and Creative Activity – Documents, 1. Eastern Illinois University, Spring, 4-21. http://thekeep.eiu.edu/lib_awards_2017_docs/1.
- Ahamad, M. .H. (2018).Impact of International Trade on Economic Growth in Bangladesh. *International Journal of Science and Research (IJSR)*, 7(11), 1624–1627.
- Akinwale, S. O. (2018). Bank lending rate and economic growth: evidence from Nigeria. *International Journal of Academic Research in Economics and Management Sciences*, 7(3), 111–122.
- Ali, A. A., Yassin, A., Ali, S., & Dalmar, M. S. (2018). The impact of imports and exports performance on the economic growth of Somalia. *International Journal of Economics and Finance*, 10(1), 110–119.
- Anidiobu, G. A., Okolie, P. I. P., & Oleka, D. C. (2018). Analysis of inflation and its effect on economic growth in Nigeria. *Journal of Economics and Finance*, 9(1), 28-36
- Anifowose, A. D (2021) Economic growth and exchange rate dynamics in Nigeria; Imo State University /Business & Finance Journal, 12 No: 1 March 2021
- Aremo, A.G & Arambada, OD, (2021). Effect of trade openness and financial openness on economic growth in Sub-Saharan African countries. *African Journal of Economic Review*, 9(1), 109-130.
- Ayomitunde A.T, Olaniyi O.O, Zannu, S.M, Stephen, B.A (2018). Monetary policy and economic growth in Nigeria: an ARDL-bound testing and ECM approach. *European Journal of Economics, Law and Politics*, 6(4), 1–11
- Bakari, S., & Mabrouki, M. (2017). Impact of exports and imports on economic growth : new evidence from Panama. *Journal of Smart Economic Growth*, 2(1), 67–79.
- Baldwin, R.E. (2003). Openness and growth: What’s the empirical relationship? NBER Working Paper. W9578:1-34. Available: <http://www.nber.org/Papers/W9578> (08/05/11). Accessed on 8th April, 2022.
- Bonga-Bonga, L. & Simo-Kengne, B.D., (2018). Inflation and Output Growth Dynamics in South Africa: Evidence from the Markov Switching Vector Autoregressive Model. *Journal of African Business*, 19(1), 143-154.
- Bunje, M. Y., Abendin, S., & Wang, Y. (2022). The Effect of Trade Openness on Economic Growth in Africa. *Open Journal of Business and Management*, 10, 614-642.
- Dumani, M.; Nelson, J. & Siaisai, S. T. (2018). Foreign Trade and its Impact on Economic Growth in Nigeria. *International Journal of Economics, Commerce and Management*, 6 (4), 748-761.
- Enejoh, S. Y., & Tsauni, A. M. (2017). An analytical study of the impact of inflation on economic growth in Nigeria (1970–2016). *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 7(4), 110-120.
- Fatoumata, K.M. (2017). Impact of interest rate of economic growth in Nigeria. *Journal of Business and Finance Management Research*, 3(3), 98-111

- Grossman, G.M. & Helpman, E. (1991). Innovation and growth in the global economy. Cambridge: MIT Press. Nigerian economy. *Journal of Management and Strategy*, 4(3), 81-93.
- Inedu H. (2020). The Effect of Lending Interest Rate on Economic Growth of Nigeria. *International Business Management*, 4 (2), 41-46.
- Jiyang W., Eric N. & Adjei B. K (2020). Impact of exports and imports on the economic growth in Burundi. *EPRA International Journal of Economic Growth and Environmental Issues*, 8(2), 1-14.
- Kartikasari (2017). The Effect of Export, Import and Investment to Economic Growth of Riau Islands Indonesia International Journal of Economics and Financial Issues
- Lawal, E. O., & Ezeuchenne, K. (2017). International trade and economic growth in Nigeria. *OSR Journal of Humanities and Social Science*, 22(6), 35–43.
- Lucas, R.E (1988). On the mechanics of economic development. *Journal of Monetary Economics*, 1(22), 33-42.
- Maliszewska, M, Mattoo, A, & Mensbrugge, D, (2020). The potential impact of Covid-19 on GDP and trade: A preliminary Assessment' as at April 2020, Policy Research Working Paper 9211.
- Meyer, D.F., Chipeta, C. & Camel, R.T. (2018). An analysis of the effectiveness of interest rates to facilitates price stability and economic growth in South Africa. *Studia Universitatis Babeş-Bolyai Val Economica*, 63(3), 68-90.
- Mohsen, A.S. (2019). Effect of exports and imports on the economic growth of Syria. *Euro-Asian Journal of Economics and Finance*, 3(4), 253-261.
- Morina, F. Hysa, E. Ergün, U. Panait, M. & Voica, C. (2020). The effect of exchange rate volatility on economic growth: case of the CEE Countries, 13(8), 1-13.
- Ogunsanwo, O.F. Obisesan, G.O. & Olowo, S.O. (2021). Short-run and long-run effect of non-oil trade export on economic growth in Nigeria. *Æconomica*, 16, (2), 239-254
- Olugbenga, A.A. & Oluwabunmi, D. (2020). Impact of inflation on economic growth: evidence from Nigeria. *Investment Management and Financial Innovations*, 17(2), 1-13.
- Pellegrino G, Ravenna F, & Züllig G. (2020). The cost of coronavirus uncertainty: The high returns to clear policy plans. *The Australian Economic Review*, 53(3), 397-401.
- Rapetti, M., (2020). The real exchange rate and economic growth: a survey. *Journal of Globalization and Development*, 11(2), 1-054.
- Saaed, A. A. J., & Hussain, M. A. (2017). Impact of Exports and Imports on Economic Growth : Evidence from Tunisia. *Scholarlink Research Institute Journals*, 6(1), 13–21.
- Salami, F.K., (2018). Effect of interest rate on economic growth: Swaziland as a case study. *Journal of Business Finance*, 7(3), 1-5.
- Sayed, A.R.A. & Vishwanatha, K. (2021). Trend, direction, and performance of Afghanistan's international trade. *Australian Finance and Banking Review*, 5(1), 40-49.
- Stephen, E. A. & Obah, O. D. (2017). The Impact of International Trade on Economic Growth in Nigeria: An econometric analysis. *Asian Finance & Banking Review*, 1 (1), 28-47.
- Taderera, C. Runganga, R. Mhaka, S. & Mishi, S. (2021). Inflation, interest rate and economic growth nexuses in SACU countries. MPRA Paper No. 105419. Available at <https://mpra.ub.uni-muenchen.de/105419/>.
- Torres-Reyna, O. (2007) Panel Data Analysis Fixed and Random Effects Using Stata (v. 4.2). Data & Statistical Services, Princeton University.
- Tule K.M, Oboh U. V, Eboh G. U, Onipede S. F & Gbadebo N (2020) "Does Exchange Rate Volatility Affect Economic Growth in Nigeria? *International Journal of Economics and Finance, Canadian Center of Science and Education*, 12(7), 1-54.
- Ugwu, O. J. (2017). Foreign exchange rate dynamics and manufacturing firms' performance in Nigeria. *International Journal of Humanities and Social Science Invention*, 6(9), 9-14.