

Imports, Exports And GDP Of Oman : A Case Study

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Abstract:

The role of international trade is increasing day by day and its impact on economic growth is also crucial. This study examines both exports and imports and its impact on GDP as exports alone cannot contribute to GDP as import also contributes to the domestic demand growth of the economy. The results show that import and export accelerates GDP contributing to economic growth.

Keywords: Co integration, exports, GDP, Granger Causality, Imports, Oman, Relationship

Introduction:

The Omani economy is one of the fastest growing economy of the Arab world. The country lacks in oil and natural resources when compared with neighbouring gulf countries, still its growth is spectacular. The economy is heavily dependent on the country's decreasing oil reserves. The Omani's entering the workforce is increasing steadily. In order to reduce the oil sector's contribution to GDP and to create more jobs, Omani Government came out with a development plan that concentrates on diversification, industrialisation and privatisation.

Due to these efforts, Oman's non-oil export revenues saw a substantial increase of 8.4% achieving RO 4.12 Billion in 2014 when compared with Omani Rial 3.80 Billion in 2013. GDP growth rate is dependent on long term and short term foreign trade.

In spite of low oil prices, the Country's economic growth shows a favourable trend. The major support for economic growth comes from huge public expenditure and amenable monetary policy followed by the Central bank of Oman.

If exports exceed imports the net exports figure would be positive indicating that the nation has a trade surplus and vice versa. Positive net exports contribute to economic growth however imports are not detrimental to the economic growth. If the imports are high, it may also indicate domestic demand and growing economy. If imports of productive assets like machinery and equipment are more, it indicates the domestic productivity will improve in the long run. So for a healthy economy, both imports and exports play a vital role.

Review of Literature

According to Arshia Amiri, Ulf-G Gerdtham (2012), there is a strong unidirectional relationship from GDP to trade. There is also a strong evidence for the existence of unidirectional causality from GDP to exports and imports.

Export-led growth is empirically proven and export and GDP causes more import. GDP or export is not caused by import (Md. Gazi Salah Uddin, Shibli A. Khan, Md. Mahnudul Alam (2010). Exports and imports have significant impact on GDP (Rummana Zaheer, Sanam Wagma Khattak, Huma Ashar and Khanzaib (2011)). Exports and imports are co-integrated in the long run but it requires the adoption of imports as the dependent variable. However empirical evidences showed short-run imbalances between exports and imports. The influence of oil exports and imports are much higher than the impact of non-oil imports and over non-oil exports. (Musibaa Adetunji Babatunde (2014).

Exports, imports and Real output growths are co-integrated, which shows that long run equilibrium relationship exists between these variables. A uni-directional causality from real output growth to exports and a bi-directional causality between exports and investment is revealed by Granger Causality test. It also shows a uni-directional causality from economic growth to exports which has no support for Export led growth hypothesis. (Olabanji olukayode Ewetun, Henry Okodua).

Export growth is supported by increased import of raw materials, intermediate and capital goods.(Giorgio Di Pietro). Economic growth is caused by exports (Hassan Alhajhoj, 2007).

Reasons for the study

The role of international trade to a country's development can never be under estimated. It acts as an engine of growth to a country. The literature collected for the study reveals that studies about Oman are very less or nearly zero. So, an attempt has been made to study the impact of imports and exports on GDP with the following objectives:

Objectives of the study:

1. To find out the general tendency of GDP, imports and exports
2. To find out the relationship between import, export and GDP

Analysis and interpretation

Analysis of data is done by using the data set which consists of real GDP, real exports and real imports of Sultanate of Oman. The data used for this analysis is obtained from the Globaleconomy.com database which is yearly and covers the periods from 1970 – 2014.

Table no. 1 Augmented dickey fuller test

ADF	Level			First difference		
	Intercept	Trend and intercept	None	Intercept	Trend and intercept	None
Export	2.2818924	1.471295	**2.390966	0.65794	** -8.411096	1.319076
Import	2.853879	2.055024	**3.122193	-0.635052	-1.635379	-0.004209
GDP	**3.233781	0.894158	**4.551120	** -7.237474	** -8.740890	0.485107

** denotes rejection of null hypothesis at 5% level

First in order to check the stationarity of data the Augmented Dickey and Fuller(ADF) test for the null hypothesis of non-stationary has been used. Table no. 1 shows the results of the Augmented Dickey and Fuller test results and it suggests that the variables are stationary.

Table no. 2 Johansen Co integration test

Hypothesised No. Of CE(s)	Trace Statistic	Probability	Max-Eigen Statistic	Probability
None	** 65.26614	0.0000	** 47.51891	0.0000
At most 1	** 17.74723	0.0225	** 16.08018	0.0255
At most 2	1.667052	0.1967	1.667052	0.1967

** denotes rejection at 5% level (there is long run cointegration)

After determining stationarity, Johansen Cointegration test to check the presence of cointegration or long run relationship is applied as the application of Johansen cointegration test requires the optimal lag selection, VAR model was used. The optimal length based on the minimum Akaiken information criteria(AIC) was determined to be 2. After finding out lag length, Johansen cointegration test was used and the result proves that there are 2 cointegration equations on the basis of Trace and Maximum Eigen values. Table no. 2 results also prove that there exists long run relationship between GDP, Exports and imports.

Table no. 3 Granger Causality test based on ECM

Dependent variables	Independent Variables		
	GDP	Exports	Imports
GDP		2.505307 (0.05290)	6.707421 (0.00029)
Export	2.407061 (0.06007)		3.865993 (0.00831)
Import	5.849178 (0.00074)	3.897280 (0.00798)	
Lagged ECT	[-0.312236]	[0.220499]	[0.206004]

t-stastics are shown in ().

Table 3 shows the outcomes of Granger Causality tests based on Error Correction model (ECM). Short run Granger Causality based on (F – Statistics) and Long run Causality based on Lagged Error Correction term (t-statistics) is established. A significant lagged Error correction term states that past equilibrium errors impacts current outcomes. The Granger causality F-statistics shows that short run Granger causality from GDP to Exports ($p = 0.06077$) and Exports to GDP ($p = 0.05290$) is absent. But Short run Granger Causality from GDP to imports ($p = 0.0029$) and from imports to GDP (0.00074) is supported. The Lagged ECT shows that there is Long run relationship between GDP, exports and imports.

Table no. 4 Forecast Error Variance Decomposition Analysis

Period	S.E.	GDP	Exports	Imports
1	3.650681	100.0000	0.000000	0.000000
2	4.385504	99.60906	0.365460	0.025480
3	5.457647	81.39031	8.175862	10.43382
4	5.884145	83.38479	7.052531	9.562674
5	7.014250	63.55292	29.30386	7.143222
6	7.583904	63.08803	30.55166	6.360302
7	8.914836	48.13093	46.94330	4.925767
8	9.492031	46.17656	49.47805	4.345398
9	10.83882	36.28251	60.33627	3.381217
10	11.64759	33.04004	63.89980	3.060154

The Variance Decomposition (Table 4) has been performed for a 10 year period to depict how much of the uncertainty regarding the forecasting of the dependent variable can be explained by the uncertainty encompassing the other variables in the same model within the given time period. In the short run, GDP's own shocks contribute to the forecast error variance. But in the long run, Shocks in exports contributes 63.89% forecast error variance. But shock in imports does not contribute much to GDP in both short and long run. This shows that though increase or decrease in export does not effect much in the short run but it certainly affects GDP in the long run.

Conclusion:

The study shows that there exists a long run relationship between exports, imports and GDP. There also exists short run relationship between these three variables. Regarding the trend of GDP in the long run, it is certainly influenced by exports. This can be supported from the variance decomposition model which shows that in the short run GDP is not affected by exports, but in the long run exports definitely has its impact. To conclude, the study shows that exports play a pivotal role but still the role of imports and its contribution to GDP can never be undermined.

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