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EXPORTS, DOMESTIC DEMAND AND ECONOMIC GROWTH: SOME EMPIRICAL EVIDENCE OF THE MIDDLE EAST COUNTRIES*

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This study examines the nexus of exports, domestic demand and economic growth in the Middle East countries, namely Bahrain, Iran, Oman, Qatar, Saudi Arabia, Syria and Jordan. The results of the Granger causality test and Geweke (1982) decomposition of causality show that exports, consumption and investment are important to economic growth and also economic growth is important to exports, consumption and investment. Nonetheless, the findings vary across countries in the region. There is a tendency that exports have a stronger impact on economic growth when a country has a higher ratio of openness to international trade. Nonetheless, there is no strong evidence that consumption or investment has a stronger impact on economic growth when a country has a higher ratio of consumption to gross domestic product (GDP) or investment to GDP. Consumption is found to be more important than investment in contributing to economic growth. A sustained economic growth requires growth in both exports and domestic demand. Moreover, economic growth will increase exports and domestic demand.

1. Introduction

The relationship between exports and economic growth is one of the important topics in international economics. Exports are said to have contributed to economic growth and industrialisation of Asian newly industrialised economies (NIEs), namely South Korea, Taiwan, Hong Kong and Singapore and also the second tier of Asian NIEs such as Malaysia and Thailand. Moreover, domestic markets of these economies are generally small and therefore, international markets are very

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important to their exports (The World Bank, 1993). Nonetheless, it is questioned whether international markets in developed economies are large enough for more exports from less developing economies (LDEs) (Palley, 2002; Felipe, 2003). The experiences of Asian NIEs and also the second tier of Asian NIEs are unique in many ways and might not be replicable in other countries. It is questioned whether a reliance on the export-led growth (ELG) strategy will result in sustained long-run economic growth in LDEs due to volatility and unpredictability in international markets (Jaffee, 1985).

Moreover, the ELG strategy is blamed for many weaknesses. It prevents economic growth and development of domestic markets. It put LDEs in a race to the bottom among themselves. It put workers in LDEs in conflict with workers in developed economies. It reinforces the dependency of LDEs on developed economies. Export-oriented economies are dependence on foreign demand. The problem is that recessions in international markets translate slow economic growth in LDEs (Felipe, 2003: 4). The ELG strategy is also blamed for mainly contributed to the Asian financial crisis, 1997-1998. During the crisis, countries such as Korea, Thailand, Indonesia and the Philippines were very much affected. The response of governments in the crisis-hit countries was the attempt to switch from the ELG strategy to the domestic demand-led growth (DDLG) strategy, that is, to promote domestic demand (Palley, 2002: 2-3; ADB, 2005).

There is possibility of feedback effects from economic growth to exports and domestic demand. An increase in domestic production could promote more exports. Also, it could promote more domestic demand (Liu, Haiyan and Romily, 1997: 1680). Thus, the above arguments suggest that a better understanding of economic growth is therefore required to examine the nexus of exports, domestic demand and economic growth.

The main aim of this study is to examine the nexus of exports, domestic demand and economic growth in the Middle East countries, namely

Bahrain, Iran, Oman, Qatar, Saudi Arabia, Syria and Jordan.[2,3] On the whole, exports to gross domestic product (GDP) in these countries were low, except Bahrain (1990 - 2004), Oman and Qatar. On the other hand, consumption to GDP was high, that is, more than 60 per cent, except Jordan, which was about 10 per cent. Nonetheless, investment to GDP was low, about 20 per cent (Table 1). Generally, consumption is more important than investment to GDP in these countries. The growth rates of economy, exports to GDP, consumption to GDP and investment to GDP in these countries were fluctuated. For 1980-1989, 1990-1999 and 2000-2004 periods, the standard deviation of the average economic growth rates was high, especially for Iran, Syria and Jordan. The standard deviation of the average export to GDP growth rates was high for Iran, Qatar, Saudi Arabia and Jordan. The standard deviation of the average consumption to GDP growth rates was high for Qatar and Saudi Arabia. Finally, the standard deviation of the average investment to GDP growth rates was high for Bahrain, Oman, Qatar and Syria (Table 2). The plots of logarithm of GDP per capita, exports to GDP, consumption to GDP and investment to GDP are given in Figure 1. Generally, these series tended to move in one direction, except there were some sifts in logarithm of GDP per capita for Iran. Thus, this study provides some evidence if the ELG hypothesis holds for these countries. Also, this study examines the relevance of the growth-led export (GLE), DDLG and growth-led domestic demand (GLDD) hypotheses to these countries.

The Granger causality is used to examine the nexus of exports, domestic demand and economic growth. The Geweke (1982) methodology, which allows to estimate and to compare the relative magnitude of causality between two series, is also used. The Elliot, Rothenberg and Stock (1996) (ERS) and Phillips and Perron (1988) (PP) unit root test statistics are used to examine the stationarity of the data. The Pesaran, Shin and Smith (2001) (PSS) bounds testing approach is used to test the long-run relationship of exports, domestic demand and economic growth. The measures of domestic demand are consumption to GDP and investment to GDP. The sample is typically over the period from 1960 to 2004.

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[2]Yemen is not examined because of the relatively short sample period availability. Kuwait and Iraq are not examined mainly for the same reason.

[3]These countries export mainly oil, which accounts about 35 per cent of their GDP (Zind, 1999: 59).

The rest of this study is structured as follows. Section 2 provides a literature review of ELG and DDLG. Section 3 explains the data and methodology used in this study. Section 4 discusses the empirical results. Section 5 gives some concluding remarks.

2. Literature Review

Export-Led Growth, Growth-Led Export and Feedback

The ELG hypothesis implies that an increase in exports would lead to an increase in economic growth. There are many reasons to explain the ELG hypothesis. An increase in exports could imply that the demand of the country has risen. Thus, this could serve to increase output. An increase in exports could promote specialisation in the production of export products, which in turn might increase the productivity of the export sector. This might then lead to a reallocation of resources from the relatively inefficient non-trade sector to the higher productive export sector. The productivity change might lead to economic growth. Exports that based on comparative advantage would allow the exploitation of economies of scale. This could lead to an increase in economic growth (Giles and Williams, 2000a, 2000b; ADB, 2005). An increase in exports could earn more foreign exchange, which makes it easier to import inputs to meet domestic production and output expansion (Chenery and Strout, 1966). Generally, foreign exchange is important to LDEs for their development needs. Exports are more efficient means to development needs than foreign debt since the latter is subject to adverse shocks of currency that might lead to debt default (ADB, 2005). Exports might also give access to advanced technologies, learning-by-doing gains and better management practices, which in turn will stimulate technological diffusion into the economy (Hart, 1983; Ben-David and Loewy, 1998). Thus, exports will increase output. The promotion of exports might also eliminate controls that result in an overvaluation of the domestic currency. Moreover, the ELG hypothesis could be seen as part of the product and industry life-cycle hypothesis. This hypothesis describes economic growth as a cycle that begins with exports of commodities. The success of Asian NIEs and also the second tier of Asian NIEs in promoting their economic growth through exports provide some evidence to support the ELG hypothesis (Giles and Williams, 2000a, 2000b; ADB, 2005).

There is also possible for the GLE hypothesis, that is, an increase in economic growth would lead to more exports. Bhagwati (1988) postulates that the GLE hypothesis is likely, unless antitrade bias results from the economic growth-induced supply and demand. Neoclassical trade theory supports this notion, as it suggests that other factors aside from exports are responsible for economic growth. Economic growth leads to enhancement of skills and technology, with this increased efficiency creating a comparative advantage for the country that facilitates exports. Market failure, with subsequent government intervention, might also result in the GLE hypothesis (Giles and Williams, 2000a, 2000b).

A feedback relationship between exports and economic growth is possible. Helpman and Krugman (1985) postulate that exports might rise from the realisation of economies of scale due to productivity gains. The rise in exports might further enable cost reductions, which might result in further productivity gains. Bhagwati (1988) argues that increased trade produces more income, which leads to more trade. Nonetheless, there is, potential for no causal relationship between exports and economic growth when the growth paths of the two time series are determined by other, unrelated variables such as investment in the economy (Giles and Williams, 2000a, 2000b).

Kónya (2006) investigates the possibility of Granger causality between the logarithms of real exports and real GDP in twenty-four Organization for Economic Cooperation and Development (OECD) countries over the period from 1960 to 1997. The study uses two different models, namely, a bivariate model (GDP–exports) and a trivariate model (GDP–exports–openness to international trade), both without and with a linear time trend. The panel data is estimated using the Seemingly Unrelated Regressions (SUR) estimator. Wald tests with country specific bootstrap critical values are used to examine the hypothesis. On the whole, the results are mixed. For Belgium, Denmark, Iceland, Ireland, Italy, New Zealand, Spain and Sweden, exports are found to Granger cause GDP. For Austria, France, Greece, Japan, Mexico, Norway and Portugal, there is bidirectional Granger causality between exports and GDP. However, for Australia, Korea, Luxembourg, Switzerland, the United Kingdom and the United States, there is no evidence of Granger causality.

Mookerjee (2006) uses a meta-analysis on a sample of seventy-six studies for the ELG hypothesis. The results show that the use of aggregate exports reduces the evidence of the ELG hypothesis. Conversely, the use of manufactured exports and oil exports increase the evidence of the ELG hypothesis. The study also shows that the definition of economic growth, the functional form, the use of variables measured in logarithms, the frequency of the data and the regional location of countries matter. The study also documents the presence of publication bias in the literature. Thus, the empirical evidence in the literature is less conclusive.

Domestic Demand and Economic Growth

The DDLG hypothesis implies that an increase in domestic demand would lead to an increase in economic growth. There are two categories of the DDLG hypothesis, that is, the DDLG hypothesis in the sense of the strictly speaking and the DDLG hypothesis in the sense of weakly speaking. The former refers to an increase in domestic demand that lead to an increase in economic growth at the same time net-exports decreased. The latter refers to an increase in domestic demand that is greater than an increase in net-exports and therefore, it leads to economic growth (ADB, 2005). Palley (2002) proposes the shifting paradigm from the ELG strategy to one that emphasises domestic demand as the ELG strategy embodies many weaknesses. The core theoretical criticism of the simplistic ELG is that it suffers from a fallacy of composition, that is, it assumes that all countries can grow by depending on demand growth in other countries. In a global context, there is a danger of a beggar-thy-neighbour outcome in which all try to grow on the back of demand expansion in other countries. As a result is global excess supply and deflation. For individual country, export growth represents a way of growing demand. If export growth comes at the expense of international demand growth, then it might just shift the country composition of growth without raising overall world economic growth.

Ahmad and Harnhirun (1996) investigate Granger causality between exports growth and economic growth in five member countries of ASEAN, namely Indonesia, Malaysia, the Philippines, Singapore and Thailand. The findings support the GLE hypothesis in all the countries, rather than the ELG hypothesis. Lai (2004) examines the role of exports and domestic demand in the economic growth of Malaysia over the period from 1961 to 2000. Domestic demand is expressed by private consumption expenditure. However, investment is not considered as domestic demand in the study. The Johansen (1988) cointegration methodology is used. The results show that there exists short run bidirectional Granger causality among exports, domestic demand and economic growth. Thus, the results support the ELG and DDLG hypotheses. Moreover, the results are not supportive for the ELG hypothesis in the long run. The study concludes that the use of domestic demand as the catalyst for economic growth is important as highly significant positive impact of domestic expenditure on economic growth.

ADB (2005) conducts a simple analysis based on national account identity and reported that over-expansionary in the private sector and growing trade deficits are among the major factors that have contributed to the Asian financial crisis, 1997-1998. These results are contradicted to the arguments of Palley (2002) that the ELG strategy was partly to blame for the crisis and led to bias against the domestic demand sector. Thus, the ELG strategy is not a cause for the crisis.

3. Data and Methodology

Nominal GDP, population, exports, private consumption, government consumption, investment and GDP deflator (2000 = 100) were obtained from *International Financial Statistics*, International Monetary Fund (IMF).[4] GDP per capita is expressed by nominal GDP divided by GDP deflator (2000 = 100) and then divided by population (millions). Consumption is expressed by private consumption plus government consumption. The data are annually over the period generally from 1960 to 2004. More specifically, the sample for Bahrain and Oman is over the period from 1975 to 2004, respectively. The sample for Iran is over the period from 1966 to 2004. The sample for Qatar is over the period from 1980 to 2003. The sample for Saudi Arabia is over the period from 1968 to 2004. The sample for Syria is over the period from 1963 to 2002. The sample for Jordan is over the period from 1976 to 2003. All data were transformed into logarithms.

This study estimates two models:

$$\ln Y_t = \beta_{11} \ln XY_t + \beta_{12} \ln CY_t + u_{1,t} \quad (1)$$

[4]Investment is expressed by total gross fixed capital formation.

$$\ln Y_t = \beta_{21} \ln XY_t + \beta_{22} \ln IY_t + u_{2,t} \quad (2)$$

where ln is logarithm; Y_t is GDP per capita; XY_t is exports to GDP; CY_t is consumption to GDP; IY_t is investment to GDP and $u_{i,t}$ (i = 1, 2) is a disturbance term. For the convenience of referring, the abovementioned models are named as Model 1 and Model 2.

The empirical estimation in this study begins with the unit root test. The ERS and PP unit root test statistics are employed. The ERS unit root test statistic is shown to have a higher power for small sample size (Elliot, Rothenberg and Stock, 1996). The PPS bounds testing approach is used to examine the long-run relationship among variables in the model. The PPS bounds testing approach is said to have superior properties in small sample size and does not impose restrictive assumption that all the regressors are to be integrated of the same order, that is, regressors could be the mixture of I(0) or I(1). More specifically, the bounds testing approach is conducted in the following way. Firstly, the unrestricted error correction model is estimated:[5]

$$\Delta \ln Z_t = \beta_{30} + \sum_{i=0}^{a} \beta_{31i} \Delta \ln X_{t-i} + \sum_{i=0}^{a} \beta_{32i} \Delta \ln W_{t-i} + \sum_{i=1}^{a} \beta_{33i} \Delta \ln Z_{t-i} + \beta_{34} \ln X_{t-1} + \beta_{35} \ln W_{t-1} + \beta_{36} \ln Z_{t-1} + u_{3,t} \quad (3)$$

where Δ is the first differenced operator; Z_t, X_t and W_t are a series, respectively and $u_{3,t}$ is a disturbance term. Secondly, the Wald or F-statistic is computed to test the null hypothesis, H_0: $\beta_{34} = \beta_{35} = \beta_{36} = 0$ against the alternative hypothesis, H_a: $\beta_{34} \neq \beta_{35} \neq \beta_{36} \neq 0$. The critical bounds values can be obtained from Pesaran, Shin and Smith (2001). If the Wald or F-statistic falls outside the upper bound, the null hypothesis of no cointegration is rejected. In other words, $\ln Z_t$, $\ln X_t$ and $\ln W_t$ are said to be cointegrated. However, no conclusive inference could be made for the Wald or F-statistic falls inside the critical bounds, unless the order of integration of the regressors is known. If the Wald or F-statistic falls below the lower bound, the null hypothesis of no cointegration can not be rejected.

In the Granger (1969) sense of a variable X causes another variable Y if the current value of Y can better be predicted by using the past values of X.[6] When series are cointegrated, the simple Granger causality test

[5]In this study, a in equation (3) is set to three at the beginning of the estimation.
[6]See Granger (1988) for more explanation of causality.

becomes inappropriate and the testing of Granger causality shall be in the error correction models (ECMs). For Model 1, the ECMs are:

$$\Delta \ln Y_t = \beta_{40} + \sum^{a}_{i=1} \beta_{41i} \, \Delta \ln X_{t-i} + \sum^{b}_{i=1} \beta_{42i} \, \Delta \ln C_{t-i} + \sum^{c}_{i=1} \beta_{43i} \, \Delta \ln Y_{t-i} + \beta_{44} \, EC_{1,t-1} + u_{4,t} \quad (4)$$

$$\Delta \ln X_t = \beta_{50} + \sum^{d}_{i=1} \beta_{51i} \, \Delta \ln X_{t-i} + \sum^{e}_{i=1} \beta_{52i} \, \Delta \ln C_{t-i} + \sum^{f}_{i=1} \beta_{53i} \, \Delta \ln Y_{t-i} + \beta_{54} \, EC_{2,t-1} + u_{5,t} \quad (5)$$

$$\Delta \ln C_t = \beta_{60} + \sum^{g}_{i=1} \beta_{61i} \, \Delta \ln X_{t-i} + \sum^{h}_{i=1} \beta_{62i} \, \Delta \ln C_{t-i} + \sum^{j}_{i=1} \beta_{63i} \, \Delta \ln Y_{t-i} + \beta_{64} \, EC_{3,t-1} + u_{6,t} \quad (6)$$

where $EC_{i,t-1}$ (i = 1, 2, 3) is the first lagged value of the disturbance, which is obtained from the following cointegrating regression, respectively:

$$\ln Y_t = \beta_{71} \ln X_t + \beta_{72} \ln C_t + EC_{1,t} \quad (7)$$

$$\ln X_t = \beta_{81} \ln Y_t + \beta_{82} \ln C_t + EC_{2,t} \quad (8)$$

$$\ln C_t = \beta_{91} \ln X_t + \beta_{92} \ln Y_t + EC_{3,t} \quad (9)$$

where $EC_{i,t}$ (i = 1, 2, 3) is a disturbance term. The joint test of lagged variables, that is, $\Delta \ln Y_t$, $\Delta \ln X_t$ and $\Delta \ln C_t$, by mean of the F-statistic is significantly different from zero, implies the presence of Granger causality. For example, if the joint test of lagged variables of $\Delta \ln X_t$ in equation (4) is significantly different from zero, then it implies that exports growth Granger causes economic growth. The minimum final prediction error (FPE) criterion proposed by Akaike (1970) is used to determine the optimal lags of the model.

The Granger (1969) approach for causality does not allow to estimate and to compare the relatively magnitude of causality between two series. On the other hand, Geweke (1982) suggests a methodology to distinguish causality between two series, for example, X and Z into three components, namely causality from X to Z, causality from Z to X and contemporaneous causality between X and Z, while controlling for other variable. For the series that are cointegrated, the methodology shall be carried out using the error correction models (ECMs). Otherwise, the vector autoregressive models shall be used. For a three variables case, the ECMs are as follows:[7]

$$\Delta \ln Z_t = \beta_{100} + \sum^{p}_{i=0} \beta_{101i} \Delta \ln X_{t-i} + \sum^{p}_{i=1} \beta_{102i} \Delta \ln W_{t-i} + \sum^{p}_{i=1} \beta_{103i} \Delta \ln Z_{t-i} + \beta_{104} EC_{1,t-1} + u_{10,t} \quad (10)$$

$$\Delta \ln Z_t = \beta_{110} + \sum^{p}_{i=1} \beta_{111i} \Delta \ln X_{t-i} + \sum^{p}_{i=1} \beta_{112i} \Delta \ln W_{t-i} + \sum^{p}_{i=1} \beta_{113i} \Delta \ln Z_{t-i} + \beta_{114} EC_{1,t-1} + u_{11,t} \quad (11)$$

$$\Delta \ln Z_t = \beta_{120} + \sum^{p}_{i=1} \beta_{121i} \Delta \ln W_{t-i} + \sum^{p}_{i=1} \beta_{122i} \Delta \ln Z_{t-i} + \beta_{123} EC_{1,t-1} + u_{12,t} \quad (12)$$

$$\Delta \ln X_t = \beta_{130} + \sum^{p}_{i=1} \beta_{131i} \Delta \ln X_{t-i} + \sum^{p}_{i=1} \beta_{132i} \Delta \ln W_{t-i} + \sum^{p}_{i=1} \beta_{133i} \Delta \ln Z_{t-i} + \beta_{134} EC_{2,t-1} + u_{13,t} \quad (13)$$

$$\Delta \ln X_t = \beta_{140} + \sum^{p}_{i=1} \beta_{141i} \Delta \ln X_{t-i} + \sum^{p}_{i=1} \beta_{142i} \Delta \ln W_{t-i} + \beta_{143} EC_{2,t-1} + u_{14,t} \quad (14)$$

where W_t is a control variable; $EC_{i,t-1}$ (i = 1, 2) is the first lagged value of the disturbance from cointegrating regression and $u_{i,t}$ (i = 10, 11, 12, 13, 14) is a disturbance term. The total measure of linear dependence between the two series, that is, X and Z ($F_{X,Z}$) is given as:

$$F_{X,Z} = F_{X\rightarrow Z} + F_{Z\rightarrow X} + F_{X\bullet Z} \quad (15)$$

where $F_{X\rightarrow Z}$ denotes causality from X to Z; $F_{Z\rightarrow X}$ denotes causality from Z to X and $F_{X\bullet Z}$ denotes contemporaneous causality between X and Z. Geweke (1982) concludes that $F_{X\rightarrow Z} = \log [\text{var}(u_{12,t}) / \text{var}(u_{11,t})]$, $F_{Z\rightarrow X} = \log [\text{var}(u_{14,t}) / \text{var}(u_{13,t})]$ and $F_{X\bullet Z} = \log [\text{var}(u_{11,t}) / \text{var}(u_{10,t})]$.

4. Empirical Results and Discussions

The results of the ERS and PP unit root test statistics are reported in Table 3. The lag length used to estimate the ERS unit root test statistic is based on Akaike (1973) information criterion, which initially is set to four. For the PP unit root test statistic, it is computed based on three truncation lags after considering truncation lags one, two and three.

Generally, the results of the ERS and PP unit root test statistics show that all the variables are non-stationary in their levels but become

[7]Calderon and Liu (2003) and Aizenman and Noy (2004), amongst others, used the methodology.

stationary after taking the first differences, except exports to GDP of Bahrain, exports to GDP and investment to GDP of Iran, GDP per capita of Saudi Arabia and GDP per capita and consumption to GDP of Jordan. For exports to GDP of Bahrain, the ERS unit root test statistic shows that it is a stationary series whilst the PP unit root test statistic shows that it is a unit root process. For exports to GDP and investment to GDP of Iran, the ERS unit root test statistic shows no evidence of a unit root process but and PP unit root test statistic shows that it is a unit root process. For GDP per capita of Saudi Arabia, the ERS and PP unit root test statistics show no evidence of a unit root process. Finally, for GDP per capita and consumption to GDP of Jordan, the ERS unit root test statistic shows that it is a unit root process whilst the PP unit root test statistic shows no evidence of a unit root process.

The PSS bounds testing approach is used to examine the long-run relationship among GDP per capita, exports and domestic demand. The results of the PSS bounds testing approach are reported in Table 4.

On the whole, at least one of the estimated models, the F-statistic falls outside the upper bound and statistically significant at the 5 per cent level except Model 2 of Syria, which all the F-statistic falls inside the lower bound. Thus, there is at least one cointegrating vector among the variables is not rejected.

The findings above suggest that there is a long-run equilibrium relationship among exports, domestic demand and economic growth. In other words, they are moving together and would not move too far from each other in the long run. Thus, the analysis of Granger causality should be in the ECMs.[8] The results of the Granger causality test are reported in Table 5.[9] For Model 1, the result of the F-statistic shows that there is bidirectional Granger causality between exports and economic growth for Bahrain, Oman, Qatar and Jordan, bidirectional Granger causality between consumption and economic growth for Bahrain, Oman and Qatar, and bidirectional Granger causality between exports and consumption for Bahrain, Iran and Qatar. For Model 2, the result of the F-statistic shows that there is bidirectional Granger causality

[8]The analysis of Granger causality should be in the vector autoregressive models if no cointegration among variables is found.
[9]The plots of cumulative sum of recursive errors (CUSUM) and cumulative sum of squares of recursive errors (CUSUMSQ) statistics, which are not reported, show no evidence of the ECMs instability.

between exports and economic growth for Saudi Arabia, bidirectional Granger causality between investment and economic growth for Bahrain and Saudi Arabia and bidirectional Granger causality between exports and investment for Saudi Arabia. Generally, there is more evidence of the ELG hypothesis when consumption is used as a proxy for domestic demand than when domestic demand is proxied by investment. Moreover, when domestic demand is proxied by investment, most Granger causality is unilateral whereas most Granger causality is bidirectional Granger causality when consumption is used as a proxy for domestic demand.

The results of Geweke (1982) decomposition of causality are given in Table 6. The choice of the lag length in equations (10) to (14), that is, p is determined by Schwarz Bayesian criterion. In this study, $p = 1$ is used for all the models.[10] On the whole, the results are mixed. For Model 1, most of linear dependence between exports and GDP per capita for Bahrain, Saudi Arabia, Syria and Jordan can be accounted by causality from GDP per capita to exports. For Oman and Qatar, most of linear dependence between exports and GDP per capita can be accounted by contemporaneous of causality between these variables. For consumption and GDP per capita, most of linear dependence can be accounted by causality from GDP per capita to consumption for Iran, Saudi Arabia and Jordan. For Bahrain and Syria, most of linear dependence can be accounted by causality from consumption to GDP per capita. For Oman, Qatar and Syria, most of linear dependence can be accounted by contemporaneous of causality between these variables. For Model 2, most of linear dependence between exports and GDP per capita for Qatar and Syria can be accounted by causality from GDP per capita to exports. For Bahrain, Iran, Oman, Saudi Arabia and Jordan, most of linear dependence between exports and GDP per capita can be accounted by contemporaneous of causality between these variables. For investment and GDP per capita, most of linear dependence can be accounted by causality from GDP per capita to investment for Iran, Qatar and Saudi Arabia. For Bahrain, Oman, Syria and Jordan, most of linear dependence can be accounted by contemporaneous of causality between these variables. There is no evidence that most of linear dependence can be accounted by causality from investment to GDP per capita.

[10]The conclusions are about the same for $p = 4$, which is used in the estimation.

Generally, the results of the Granger causality test and Geweke (1982) decomposition of causality show that exports, consumption and investment are important to economic growth and also economic growth is important to exports, consumption and investment. Nonetheless, the findings vary across countries in the region. There is a tendency that a country has a higher ratio of openness to international trade, exports are found to have a stronger impact on economic growth than a country has a lower ratio of openness to international trade. There is no strong evidence that countries have a higher ratio of consumption to GDP or investment to GDP, consumption or investment is found to have a stronger impact on economic growth. Furthermore, consumption is found to be more important than investment in contributing to economic growth. The finding that exports and economic growth reinforce each other is consistent with the argument in the literature of the ELG hypothesis. The finding that domestic demand and economic growth reinforce each other is consistent with the argument of Palley (2002), amongst others. Palley (2002) argues the important role of domestic demand in promoting economic growth. However, this study finds no strong evidence to support the DDLG hypothesis is preferred than the ELG hypothesis, which is claimed by Palley (2002). Generally, there is some evidence of the important role of the ELG, GLE, DDLG and GLDD hypotheses to the Middle East countries.

5. Concluding Remarks

This study has investigated the nexus of exports, domestic demand and economic growth in the Middle East countries. On the whole, the results of the Granger causality test and Geweke (1982) decomposition of causality show that exports, consumption and investment are important to economic growth and also economic growth is important to exports, consumption and investment. However, the findings vary across countries in the region. Moreover, there is a tendency that exports have a stronger impact on economic growth when a country has a higher ratio of openness to international trade. Furthermore, there is no strong evidence that consumption or investment has a stronger impact on economic growth when a country has a higher ratio of consumption to GDP or investment to GDP. There is some evidence that consumption is more important than investment in contributing to economic growth. A sustained economic growth requires growth in both exports and domestic demand. Moreover, economic growth will increase exports and domestic demand.

Table 1: Exports, consumption and investment to GDP (%)

Year	Exports	Consumption	Investment
Bahrain			
1980-1989	1.1	0.5	0.3
1990-1999	0.8	0.8	0.2
2000-2004	0.8	0.6	0.2
Iran			
1980-1989	0.1	0.8	0.3
1990-1999	0.2	0.6	0.3
2000-2004	0.3	0.6	0.3
Oman			
1980-1989	0.5	0.6	0.2
1990-1999	0.5	0.7	0.2
2000-2004	0.6	0.7	0.1
Qatar			
1980-1989	0.5	0.6	0.2
1990-1999	0.5	0.6	0.2
2000-2003	0.6	0.3	0.3
Saudi Arabia			
1980-1989	0.4	0.6	0.2
1990-1999	0.4	0.7	0.2
2000-2004	0.4	0.6	0.2
Syria			
1980-1989	0.2	0.9	0.2
1990-1999	0.3	0.8	0.2
2000-2002	0.4	0.7	0.2
Jordan			
1980-1989	0.4	1.1	0.3
1990-1999	0.5	1.0	0.3
2000-2003	0.4	1.0	0.2

Source: IMF.

Table 2:The average growth rates of economy, exports to GDP, consumption to GDP and investment to GDP in the Middle East countries (%, 2000 = 100)

Year	Economy	Exports	Consumption	Investment
Bahrain				
1980-1989	4.5	0.1	2.0	-3.8
1990-1999	5.5	-1.7	2.0	-2.6
2000-2004	5.5	1.1	-4.8	10.3
SD	0.6	1.4	3.9	7.8
Iran				
1980-1989	-1.1	-1.6	1.8	-1.0
1990-1999	-6.7	12.6	-2.4	3.0
2000-2004	-14.7	7.0	-2.4	0.2
SD	6.9	7.1	2.4	2.0
Oman				
1980-1989	2.5	-2.3	3.3	-4.7
1990-1999	0.7	1.6	0.7	2.8
2000-2004	5.1	3.7	-1.4	6.0
SD	2.2	3.1	2.4	5.5
Qatar				
1980-1989	2.1	-5.5	8.6	0.6
1990-1999	5.6	4.2	-3.6	4.6
2000-2003	6.7	1.7	-6.5	11.0
SD	2.4	5.0	8.0	5.2
Saudi Arabia				
1980-1989	-1.7	-6.4	4.5	-3.6
1990-1999	3.1	1.4	0.1	2.0
2000-2004	3.7	9.2	-4.2	-3.0
SD	2.9	7.8	4.4	3.0
Syria				
1980-1989	-4.5	7.5	-0.6	-4.2
1990-1999	6.0	1.1	-0.3	2.3
2000-2002	2.4	1.1	-2.2	6.0
SD	5.4	3.7	1.0	5.1
Jordan				
1980-1989	10.6	6.5	-2.2	-2.3
1990-1999	6.6	-2.4	0.2	1.1
2000-2003	4.3	1.0	1.4	-2.9
SD	3.2	4.5	1.8	2.2

Source: IMF.

Note: SD denotes standard deviation over the average growth rate of the 1980-1989, 1990-1999 and 2000-2004 periods.

Table 3: The results of the Elliot, Rothenberg and Stock (1996) (ERS) and Phillips and Perron (1988) (PP) test statistics

	$t_{\gamma 1}$	$t_{\gamma 2}$
Bahrain		
$\ln Y_t$	-2.2553(0)	-2.8124(3)
$\Delta \ln Y_t$	-3.8129***(0)	-5.9045***(3)
$\ln XY_t$	-4.5611***(1)	-3.1049(3)
$\Delta \ln XY_t$	-5.7445***(1)	-4.9336***(3)
$\ln CY_t$	-1.1748(0)	-1.2186(3)
$\Delta \ln CY_t$	-4.5396***(0)	-4.3884***(3)
$\ln IY_t$	-2.6431(1)	-2.1842(3)
$\Delta \ln IY_t$	-3.6902**(0)	-4.1613**(3)
Iran		
$\ln Y_t$	-1.6529(0)	-1.8850(3)
$\Delta \ln Y_t$	-5.9706***(0)	-5.8239***(3)
$\ln XY_t$	-1.5422(4)	-2.0171(3)
$\Delta \ln XY_t$	-2.1917(4)	-5.4799***(3)
$\ln CY_t$	-2.7550(3)	-2.3790(3)
$\Delta \ln CY_t$	-3.5121**(3)	-6.9620***(3)
$\ln IY_t$	-1.4962(4)	-2.4123(3)
$\Delta \ln IY_t$	-3.0086(4)	-5.8612***(3)
Oman		
$\ln Y_t$	-2.6963(1)	-2.0718(3)
$\Delta \ln Y_t$	-4.6283***(0)	-4.3904***(3)
$\ln XY_t$	1.9147(0)	-1.7933(3)
$\Delta \ln XY_t$	-7.1651***(0)	-7.2972***(3)
$\ln CY_t$	-2.4089(0)	-2.2430(3)
$\Delta \ln CY_t$	-7.2740***(0)	-8.2699***(3)
$\ln IY_t$	-2.9423(1)	-2.1644(3)
$\Delta \ln IY_t$	-5.1003***(0)	-4.9373***(3)
Qatar		
$\ln Y_t$	-1.6842(2)	-2.0408(3)
$\Delta \ln Y_t$	-3.5508**(0)	-3.6896**(3)
$\ln XY_t$	-1.8564(0)	-2.2042(3)
$\Delta \ln XY_t$	-3.9764***(3)	-4.6479***(3)
$\ln CY_t$	-1.7625(0)	-2.8416(3)
$\Delta \ln CY_t$	-5.2572***(0)	-5.1799***(3)
$\ln IY_t$	-3.0399(0)	-2.2707(3)
$\Delta \ln IY_t$	-3.9655***(0)	-3.6440**(3)

Table 3: (Contunue)

	$t_{\gamma 1}$	$t_{\gamma 2}$
Saudi Arabia		
ln Y_t	-2.8029(2)	-2.4661(3)
Δ ln Y_t	-2.4219(0)	-2.4957(3)
ln XY_t	-2.3001(0)	-2.2555(3)
Δ ln XY_t	-7.0871***(0)	-6.9701***(3)
ln CY_t	-2.0687(0)	-2.0119(3)
Δ ln CY_t	-7.7036***(0)	-7.5646***(3)
ln IY_t	-2.5332(0)	-2.5278(3)
Δ ln IY_t	-6.8580***(0)	-6.8391***(3)
Syria		
ln Y_t	-1.5126(0)	-1.8171(3)
Δ ln Y_t	-5.5346***(0)	-5.4037***(3)
ln XY_t	-1.8809(0)	-2.2247(3)
Δ ln XY_t	-5.8129***(0)	-5.9046***(3)
ln CY_t	-2.6644(0)	-2.5652(3)
Δ ln CY_t	-5.5239***(2)	-7.9881***(3)
ln IY_t	-2.0816(1)	-1.9161(3)
Δ ln IY_t	-5.0106***(0)	-5.0677***(3)
Jordan		
ln Y_t	-2.5272(1)	-1.8185(3)
Δ ln Y_t	-3.5826**(3)	-3.5307(3)
ln XY_t	-2.5110(1)	-2.1079(3)
Δ ln XY_t	-4.9156***(0)	-4.7785***(3)
ln CY_t	-1.7931(2)	-4.2482***(3)
Δ ln CY_t	-7.1652***(1)	-11.375***(3)
ln IY_t	-1.8150(0)	-1.9319(3)
Δ ln IY_t	-5.7211***(0)	-6.3009***(3)

Notes: $t_{\gamma 1}$ denotes the ERS t-statistic. $t_{\gamma 2}$ denotes the PP t-statistic. All the unit root test statistics are estimated based on the model with a drift and a time trend. Values in parentheses are the lag length used in the estimation of the unit root test statistics. *** Denotes significance at the 1% level. ** Denotes significance at the 5% level.

Table 4: The results of the Pesaran, Shin and Smith (2001) (PPS) bounds testing approach for cointegration

	F-statistic				
Model 1	Bahrain	Iran	Oman	Qatar	Saudi Arabia
Δ ln Y_t	2.6719	1.7093	6.3123**	0.4065	10.0801**
Δ ln XY_t	2.3252	3.9479	4.5879	14.5177**	6.2288**
Δ ln CY_t	10.7980**	7.6885**	2.1732	20.0360**	6.3247**
Model 2					
Δ ln Y_t	1.6107	4.9694**	17.1160**	4.0107	8.8370**
Δ ln XY_t	9.9099**	3.9793	11.3140**	22.2735**	1.6662
Δ ln IY_t	6.5713**	4.1666	4.7513	6.3795**	10.6610**

Model 1	Syria	Jordan
Δ ln Y_t	2.3860	13.7450**
Δ ln XY_t	3.2976	1.0737
Δ ln CY_t	5.7507**	1.0283
Model 2		
Δ ln Y_t	2.1558	0.4889
Δ ln XY_t	2.0678	3.0981
Δ ln IY_t	2.3994	10.5427**

Notes: The critical values for the PPS bounds testing approach were obtained from Pesaran, Shin and Smith (2001). The critical values for unrestrictive intercept and no trend case with two regressors at the 5% level are 3.79 for lower critical bound and 4.85 for upper critical bound. ** Denotes cointegrated and significance at the 5% level.

Table 5: The results of the Granger causality test

Bahrain					
Model 1	EC_{t-1}	$\Delta \ln Y_{t-i}$	$\Delta \ln XY_{t-i}$	$\Delta \ln CY_{t-i}$	$\Delta \ln IY_{t-i}$
$\Delta \ln Y_t$	-	-	11.3786***	13.7628***	-
$\Delta \ln XY_t$	-5.4995***	9.2740**	-	5.5735**	-
$\Delta \ln CY_t$	-	5.4760*	4.0706**	-	-
Model 2					
$\Delta \ln Y_t$	-	-	2.0931	-	4.9856*
$\Delta \ln XY_t$	-4.4033***	3.6927*	-	-	1.6759
$\Delta \ln IY_t$	-3.7295***	4.7795*	8.0922***	-	-
Iran					
Model 1	EC_{t-1}	$\Delta \ln Y_{t-i}$	$\Delta \ln XY_{t-i}$	$\Delta \ln CY_{t-i}$	$\Delta \ln IY_{t-i}$
$\Delta \ln Y_t$	-	-	3.1079	3.2285	-
$\Delta \ln XY_t$	-	1.8616	-	7.2421***	-
$\Delta \ln CY_t$	-2.7843**	.50376	8.6040**	-	-
Model 2					
$\Delta \ln Y_t$	-.65816	-	.69555	-	.54539
$\Delta \ln XY_t$	-	.57379	-	-	2.1146
$\Delta \ln IY_t$	-	12.0712**	6.2394**	-	-
Oman					
Model 1	EC_{t-1}	$\Delta \ln Y_{t-i}$	$\Delta \ln XY_{t-i}$	$\Delta \ln CY_{t-i}$	$\Delta \ln IY_{t-i}$
$\Delta \ln Y_t$	-.39494	-	9.1795***	9.9232***	-
$\Delta \ln XY_t$	-	9.8992***	-	6.6093**	-
$\Delta \ln CY_t$	-	8.3350**	1.2618	-	-
Model 2					
$\Delta \ln Y_t$	-.66400	-	3.1815	-	1.0942
$\Delta \ln XY_t$	1.7616*	7.4525**	-	-	7.6828
$\Delta \ln IY_t$	-	1.5457	21.1492***	-	-
Qatar					
Model 1	EC_{t-1}	$\Delta \ln Y_{t-i}$	$\Delta \ln XY_{t-i}$	$\Delta \ln CY_{t-i}$	$\Delta \ln IY_{t-i}$
$\Delta \ln Y_t$	-	-	8.3513**	5.8179**	-
$\Delta \ln XY_t$	-3.2290***	23.8487***	-	11.1351***	-
$\Delta \ln CY_t$	4.2212***	51.9790***	12.1889***	-	-
Model 2					
$\Delta \ln Y_t$	-	-	.85804	-	11.9315***
$\Delta \ln XY_t$	2.8821**	384.761***	-	-	10.5718***
$\Delta \ln IY_t$	-2.1134*	1.0744	.45355	-	-

Table 5: (Continue)

Saudi Arabia					
Model 1	EC_{t-1}	$\Delta \ln Y_{t-i}$	$\Delta \ln XY_{t-i}$	$\Delta \ln CY_{t-i}$	$\Delta \ln IY_{t-i}$
$\Delta \ln Y_t$	-4.9405***	-	10.9627***	2.2658	-
$\Delta \ln XY_t$	-2.2283**	3.0462	-	.15425	-
$\Delta \ln CY_t$	-.0082762	.0016021	26.0969***	-	-
Model 2					
$\Delta \ln Y_t$	-3.5518***	-	2.9911*	-	.89250
$\Delta \ln XY_t$	-	2.8992	-	-	2.0367
$\Delta \ln IY_t$	-7.7252***	4.3133**	3.6394*	-	-
Syria					
Model 1	EC_{t-1}	$\Delta \ln Y_{t-i}$	$\Delta \ln XY_{t-i}$	$\Delta \ln CY_{t-i}$	$\Delta \ln IY_{t-i}$
$\Delta \ln Y_t$	-	-	.69441	2.1263	-
$\Delta \ln XY_t$	-	13.1023***	-	6.0690***	-
$\Delta \ln CY_t$	-2.2838**	8.5382***	2.3938	-	-
Model 2					
$\Delta \ln Y_t$	-	-	3.2531	-	6.5981**
$\Delta \ln XY_t$	-	22.0871***	-	-	3.1959*
$\Delta \ln IY_t$	-	3.2290*	3.9030**	-	-
Jordan					
Model 1	EC_{t-1}	$\Delta \ln Y_{t-i}$	$\Delta \ln XY_{t-i}$	$\Delta \ln CY_{t-i}$	$\Delta \ln IY_{t-i}$
$\Delta \ln Y_t$	-.45174	-	15.2110***	10.4674***	-
$\Delta \ln XY_t$	-	23.6706***	-	12.8336***	-
$\Delta \ln CY_t$	-	.99003	.6983E-3	-	-
Model 2					
$\Delta \ln Y_t$	-	-	10.1344***	-	4.5968
$\Delta \ln XY_t$	-1.8095*	2.2960	-	-	11.5616***
$\Delta \ln IY_t$	-	2.8615	3.1514	-	-

Notes: Values under column EC_{t-1} are t-statistic. Values under columns $\Delta \ln Y_{t-i}$, $\Delta \ln XY_{t-i}$, $\Delta \ln CY_{t-i}$ and $\Delta \ln IY_{t-i}$ are the F-statistic. *** Denotes significance at the 1% level. ** Denotes significance at the 5% level. * Denotes significance at the 10% level.

Table 6: The results of Geweke (1982) decomposition of causality

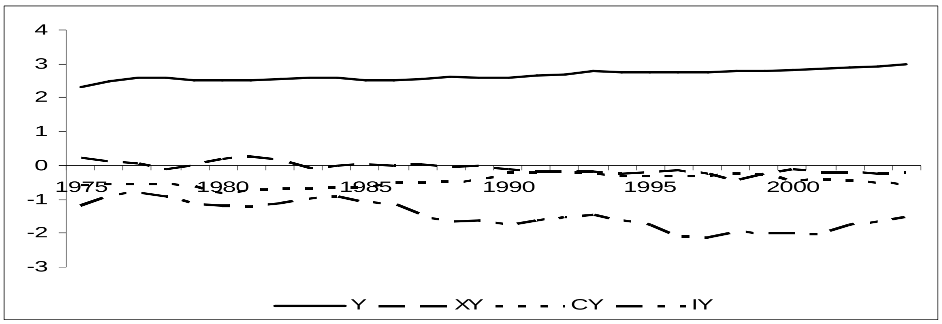
Model 1	Bahrain	Iran	Oman	Qatar	Saudi Arabia
$\Delta \ln Y_t \rightarrow \Delta \ln XY_t (F_{Y \rightarrow XY})$	49.1	2.2	1.0	34.1	78.1
$\Delta \ln XY_t \rightarrow \Delta \ln Y_t (F_{XY \rightarrow Y})$	42.1	6.1	2.1	27.6	2.6
$\Delta \ln XY_t \leftrightarrow \Delta \ln Y_t (F_{Y \bullet XY})$	8.8	91.7	96.9	38.3	19.3
Total $(F_{Y,XY})$	100.0	100.0	100.0	100.0	100.0
$\Delta \ln Y_t \rightarrow \Delta \ln CY_t (F_{Y \rightarrow CY})$	23.8	69.2	1.1	11.8	86.8
$\Delta \ln CY_t \rightarrow \Delta \ln Y_t (F_{CY \rightarrow Y})$	64.1	12.1	0.2	34.6	8.0
$\Delta \ln CY_t \leftrightarrow \Delta \ln Y_t (F_{Y \bullet CY})$	12.1	18.7	98.7	53.6	5.2
Total $(F_{Y,CY})$	100.0	100.0	100.0	100.0	100.0
Model 2					
$\Delta \ln Y_t \rightarrow \Delta \ln XY_t (F_{Y \rightarrow XY})$	24.1	0.4	0.9	52.6	5.7
$\Delta \ln XY_t \rightarrow \Delta \ln Y_t (F_{XY \rightarrow Y})$	14.2	1.4	2.8	1.3	32.4
$\Delta \ln XY_t \leftrightarrow \Delta \ln Y_t (F_{Y \bullet XY})$	61.7	98.2	96.3	46.1	61.9
Total $(F_{Y,XY})$	100.0	100.0	100.0	100.0	100.0
$\Delta \ln Y_t \rightarrow \Delta \ln IY_t (F_{Y \rightarrow IY})$	5.2	63.9	0.6	98.1	76.5
$\Delta \ln IY_t \rightarrow \Delta \ln Y_t (F_{IY \rightarrow Y})$	15.4	7.5	2.9	0.1	17.3
$\Delta \ln IY_t \leftrightarrow \Delta \ln Y_t (F_{Y \bullet IY})$	79.4	28.6	96.5	1.8	6.2
Total $(F_{Y,IY})$	100.0	100.0	100.0	100.0	100.0

Model 1	Syria	Jordan
$\Delta \ln Y_t \rightarrow \Delta \ln XY_t (F_{Y \rightarrow XY})$	75.5	74.7
$\Delta \ln XY_t \rightarrow \Delta \ln Y_t (F_{XY \rightarrow Y})$	18.8	12.6
$\Delta \ln XY_t \leftrightarrow \Delta \ln Y_t (F_{Y \bullet XY})$	5.7	12.7
Total $(F_{Y,XY})$	100.0	100.0
$\Delta \ln Y_t \rightarrow \Delta \ln CY_t (F_{Y \rightarrow CY})$	43.1	92.8
$\Delta \ln CY_t \rightarrow \Delta \ln Y_t (F_{CY \rightarrow Y})$	54.5	7.2
$\Delta \ln CY_t \leftrightarrow \Delta \ln Y_t (F_{Y \bullet CY})$	2.4	0.0
Total $(F_{Y,CY})$	100.0	100.0
Model 2		
$\Delta \ln Y_t \rightarrow \Delta \ln XY_t (F_{Y \rightarrow XY})$	74.6	8.7
$\Delta \ln XY_t \rightarrow \Delta \ln Y_t (F_{XY \rightarrow Y})$	20.3	42.3
$\Delta \ln XY_t \leftrightarrow \Delta \ln Y_t (F_{Y \bullet XY})$	5.1	49.0
Total $(F_{Y,XY})$	100.0	100.0
$\Delta \ln Y_t \rightarrow \Delta \ln IY_t (F_{Y \rightarrow IY})$	14.8	26.8
$\Delta \ln IY_t \rightarrow \Delta \ln Y_t (F_{IY \rightarrow Y})$	37.6	11.9
$\Delta \ln IY_t \leftrightarrow \Delta \ln Y_t (F_{Y \bullet IY})$	47.6	61.3
Total $(F_{Y,IY})$	100.0	100.0

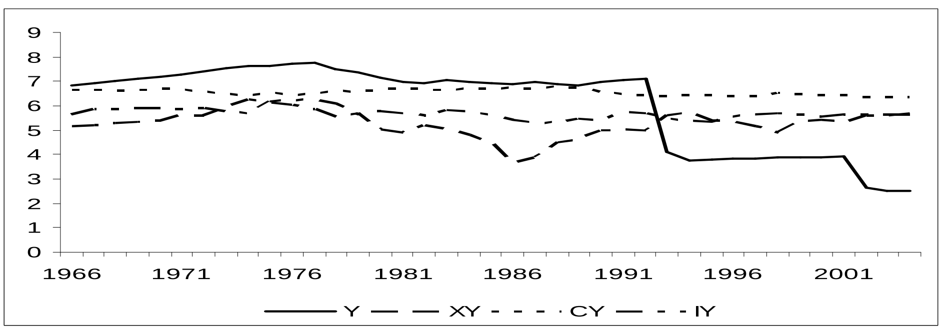
Notes: $\rightarrow$ Denotes causality. $\leftrightarrow$ Denotes contemporaneous causality.

Figure 1: Plots of logarithm of GDP per capita (Y), exports to GDP (XY), consumption to GDP (CY) and investment to GDP (IY)

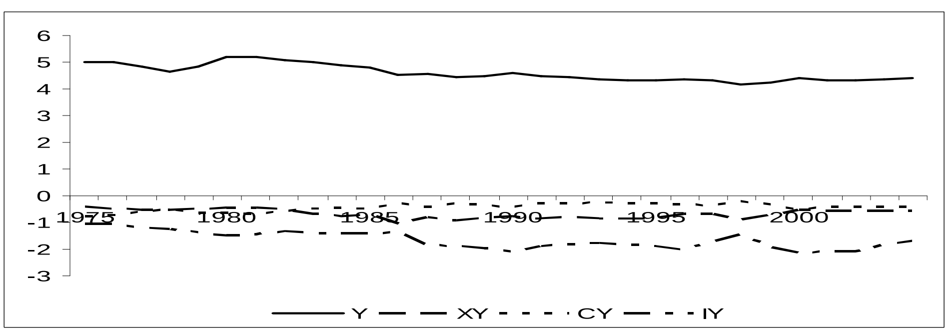
Bahrain



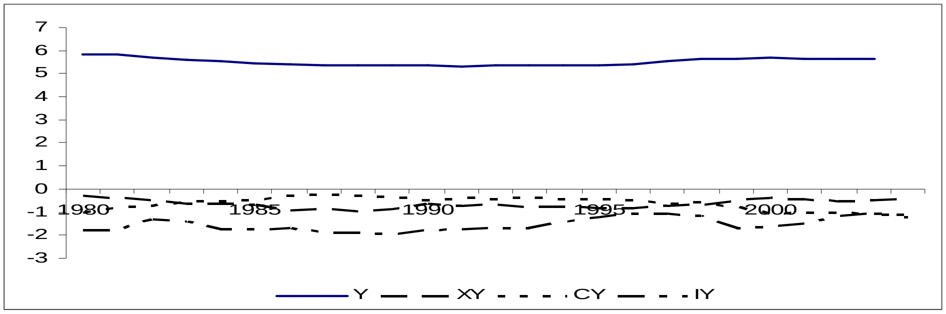
Iran



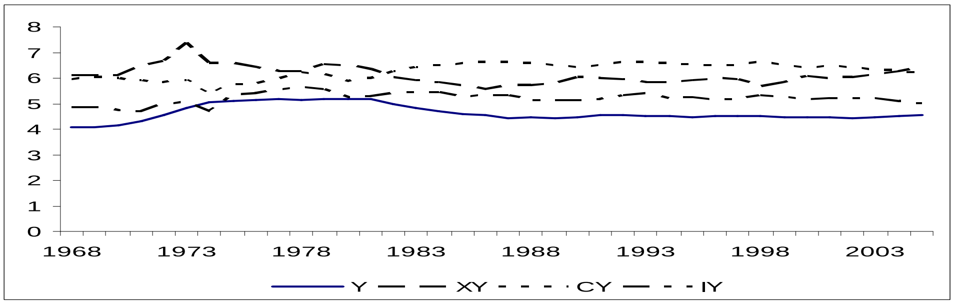
Oman



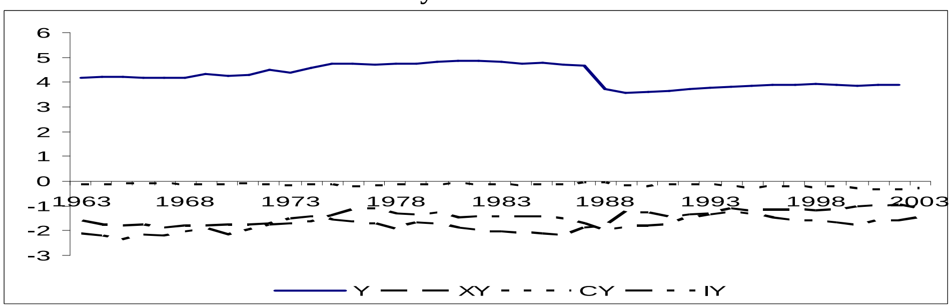
Qatar



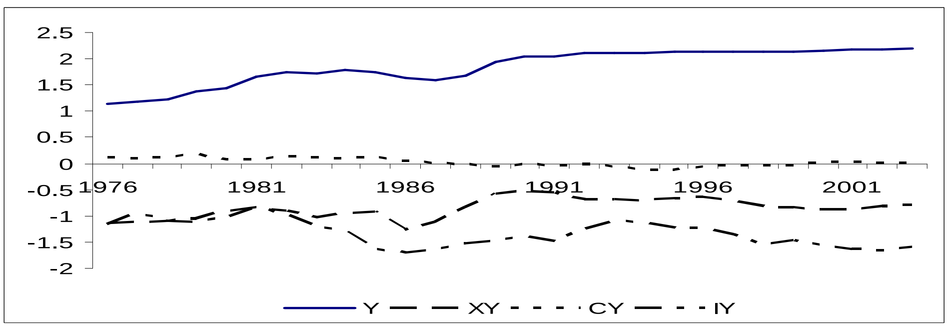
Saudi Arabia



Syria



Jordan



References

Ahmad, J. and S. Harnhirun, “Cointegration and Causality between Exports and Economic Growth: Evidence from the ASEAN Countries”, *Canadian Journal of Economics* 96, 1996, pp. S413-S416.

Aizenman, J. and I. Noy, “Endogenous Financial and Trade Openness Efficiency and Political Economy Considerations”, Economics Department, *University of Hawaii, Manoa Saunders Hall Working Paper No. 04-4*, 2004.

Akaike, H., “Maximum Likelihood Identification of Gaussian Autoregressive Moving Average Models”, *Biometrika* 60, 1973, pp. 255-265.

Akaike, H., “Statistical Predictor Identification”, *Annals of the Institute of Statistical Mathematics*, 22, 1970, pp. 203-217.

Asia Development Bank (ADB), *Asian Development Outlook 2005*, Asia Development Bank, 2005.

Ben-David, D. and M. B. Loewy, “Free-Trade, Growth, and Convergence”, *Journal of Economic Growth*, 3, 1998, 143-170.

Bhagwati, J. N., *Protectionism*, Cambridge Massachusetts, The United States: The MIT Press, 1988.

Calderon, C. and L. Liu, “The Direction of Causality between Financial Development and Economic Growth”, *Journal of Development Economics*, 72, 2003, pp. 321-334.

Chenery, H. B. and A. Strout, “Foreign Assistance and Economic Development”, *American Economic Review*, 56, 1966, pp. 679-732.

Elliot, G., T. J. Rothenberg and J. H. Stock, “Efficient Tests for an Autoregressive Unit Root”, *Econometrica*, 64, 1996, pp. 813-836.

Felipe, J., “Is Export Led-Growth Passe? Implications for Developing Asia”, *Economic Research Department, Asian Development Bank Working Paper No. 48*, 2003.

Geweke, J., "Measurement of Linear Dependence and Feedback between Multiple Time Series", *Journal of the American Statistical Association*, 77(378), 1982, pp. 304-313.

Giles, J. A. and C. L. Williams, "Export-Led Growth: A Survey of the Empirical Literature and some Non-Causality Results, Part 1", *Journal of International Trade and Economic Development*, 9(4), 2000a, pp. 265-341.

Giles, J. A. and C. L. Williams, "Export-Led Growth: A Survey of the Empirical Literature and some Non-Causality Results, Part 2", *Journal of International Trade and Economic Development*, 9(4), 2000b,pp. 445-470.

Granger, C. W. J., "Investigating Causal Relations by Econometric Models and Cross Spectral Models", *Econometrica*, 37(3), 1969, pp. 424-438.

Granger, C. W. J., "Some Recent Development in a Concept of Causality", *Journal of Econometrics,* 39, 1988, pp. 199-211.

Hart, O., "The Market Mechanism as an Incentive Scheme", *Bell Journal of Economics,* 14, 1983, 366-382.

Helpman, E. and P. R. Krugman, *Market Structure and Foreign Trade*, Cambridge Massachusetts, The United States: The MIT Press, 1985.

Jaffee, D., "Export Dependence and Economic Growth: A Reformulation and Respecification", *Social Forces*, 64, 1985, pp. 102-118.

Johansen, S., "Statistical Analysis of Cointegration Vectors," *Journal of Economic Dynamics and Control*, 12(2-3), 1988, pp. 231-254.

Kónya, L., "Exports and Growth: Granger Causality Analysis on OECD Countries with a Panel Data Approach", *Economic Modelling*, 23, 2006, pp. 978-992.

Lai, Y. W., “The Role of Domestic Demand in the Economic Growth of Malaysia: A Cointegration Analysis,” *International Economic Journal*, 18(3), 2004, pp. 337-352.

Liu, X., S. Haiyan and P. Romily, “An Empirical Investigation of the Causal Relationship between Openness and Economic Growth in China”, *Applied Economics*, 29(12), 1997, pp. 1679-1687.

Mookerjee, R., “A Meta-Analysis of the Export Growth Hypothesis”, *Economics Letters*, 91, 2006, pp. 395-401.

Palley, T. I., “A New Development Paradigm: Domestic Demand-Led Growth”, *Discussion Paper, Foreign Policy in Focus, Albuquerque, New Mexico*, 2002.

Pesaran, M. H., Y. Shin and R. J. Smith, “Bounds Testing Approaches to the Analysis of Level Relationships”, *Journal of Applied Econometrics*, 16, 2001, pp. 289-326.

Phillips, P. C. B. and P. Perron, “Testing for a Unit Root in Time Series Regression”, *Biometrika*, 75(2), 1988, pp. 335-346.

The World Bank, “The East Asian Miracle: Economic Growth and Public Policy”, *A World Bank Policy Research Report*, 1993.

Zind, R. G., “Oil Price Movements and the Arabian Gulf Economies: A Sectoral Analysis”, *Resources Policy*, 25, 1999, pp. 59-67.