

Exploring the Relationship Between International Trade and Economic Growth in China

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Abstract: This study investigates the relationship between international trade and economic growth in China from 1980 to 2018. Results from the cointegration test indicate that exports, imports, and FDI have positive relationships with economic growth, but oil price affects it negatively. Exports have the biggest effect on economic growth. Hence, it is important to improve the quantity and quality of exports, as well as motivate the local and foreign investment in the country. Besides, the Granger causality test results show bidirectional causality relationships between exports, imports, oil price, FDI and GDP in the short and long run.

Keywords: China, international trade, economic growth, foreign investment, VAR

JEL Code Classifications: O11, E20

1. Introduction

Discussions of the role that international trade plays in boosting economic growth have been ongoing since many years ago. Most of these studies show that internationally active countries that engaged in international trade and opened the door to foreign investment are more productive than countries that only produce for the domestic market. Exports support the state budget with foreign currency and increase investment in the country, and on the other hand, imports supply the country with machines and new technology (Feldstein, 1983; Oseghale and Amonkhienan, 1987; Choe, 2003; Khaliq and Noy, 2007; Omoju and Adesanya, 2012; Nasreen and Anwar, 2014; Bal et al., 2016; and Bayer and Marius, 2018). Besides, due to globalization and liberalization, a country's economy has become much more associated with external factors such as openness, oil price, and global markets. Thus, exploring the effect of international trade on economic growth is important.

Since China has pursued unparalleled trade liberalization and applied many other profound economic reforms in 1978, it has enjoyed in a fast-economic growth and spectacular economic transformations. The main feature of China's economy is that it depends heavily on international trade until it became the largest trading nation in the world (Chen et al., 2015). China is also the largest manufacturing economy and exporter of goods in the world, and it is the fastest-growing consumer market and the second-largest importer of goods in the world (Barnett, 2013). So, China plays a prominent role in

international trade. It became a member of the World Trade Organization in 2001, and also it engaged in free trade agreements with several countries, like ASEAN, Australia, Switzerland, New Zealand, South Korea, and Pakistan (Chen et al., 2015). However, with China's continuous economic growth and opening up, oil price fluctuations will have greater effect on its economic growth and stability, especially if we know that energy, oil, and petrochemicals have a big percentage share of the total imports in China (Qianqian, 2011).

Furthermore, China's integration into the global economy and adopting the open-door policy have played a vital role in its sustained economic growth through opening up new markets for Chinese products in different countries, and increasing the role of foreign investments in the country. Additionally, some of the local industries began to obtain a high level of specialization based on the comparative advantages, which uplifted the productivity of domestic industries and increased investment in China. Large imports of machinery goods also had a big impact on productivity through the application of technology embodied in them. Besides, FDI in China played a vital role in capital accumulation, as well as in the transfer of technology and management skills (Sun and Heshmati, 2010). On the other hand, the stable political system, huge natural resources and plentiful skilled labor in China made the country as a modern global factory targets the world as its market. China has achieved a high growth rate of GDP, increased the inflow of foreign currencies, and decreased unemployment (Sims, 2013). Given this backdrop, the aim of this study is to investigate the effect of international trade on the economic growth in China over the period 1980-2018.

2. Previous Studies

Many empirical studies have investigated the economic growth and the variables that affect it. Some of these studies tested the role of export and import in economic growth, while others studies tested the effect of other factors such as FDI and oil price.

Shahbaz et al. (2013), Jawaid and Raza (2013), Nasreen and Anwar (2014), Sebri and Ben-Salha (2014), Adeleye et al. (2015), Tahir and Azid (2015), Solarin and Shahbaz (2015), Bal et al. (2016), Hussain and Haque (2016), Leitao and Shahbaz (2016), XU (2016), and Iyke (2017) tried to explain the relationship between international trade and economic growth of different countries and concluded that international trade affects positively the economic growth. Besides, Tyler (1981), Ram (1987), Balassa (1985), Sengupta and Espana (1994), Krueger (1990), Al-Yousif (1997), Abou-Stait (2005), Shirazi and Abdul-Manap (2004), Khan and Saqib (1993), Alhajhoj (2007), Saad (2012), Hye and Bel Haj Boubaker (2011), Sharma and Kaur (2013), Hussaini et al. (2015), Albiman and Suleiman (2016), and Malhotra and Kumari (2016) all concluded that exports have a positive effect on economic growth. However, other researchers including Cetinkaya and Erdogan (2010) and Temiz and Gokmen (2010) of

Turkey, and Safdari et al. (2011) of many Asian countries explained that there is economic growth causes export and affect it positively. However, according to Hye (2012), and Hamuda et al. (2010), there is a bidirectional causality relationship between economic growth and exports. On the other hand, imports affect economic growth positively according to Shirazi and Abdul-Manap (2004), Thangavelu and Rajaguru (2004), Cetintas and Barisik (2009), Awokuse (2008), Cetinkaya and Erdogan (2010), Cetinkaya and Erdogan (2010), Zang and Baimbridge (2012), Hye and Bel Haj Boubaker (2011), Rahman and Shahbaz (2013), Alavinasab (2013), Gokmenoglu et al. (2015), Hussaini et al. (2015), Riyath and Jahfer (2016), and Berasaluce and Romero (2017).

Furthermore, the effect of oil price on economic growth has been investigated in many studies. For example, Gisser and Goodwin (1986), Hamilton (1983), Burbidge and Harrison (1984), and Darby (1982), they discovered that economic growth of oil-importing countries is affected negatively by oil price increases. Jimenez-Rodrigueza and Sanchez (2005), Lin and Mou (2008), Zhang and Xu (2010), Le and Chang (2013), and Morana (2013) also pointed out that economic growth of oil-importing countries suffers from increases in oil price. However, Du et al. (2010) and Chen et al. (2015) concluded that the output in China is positively correlated with oil price shocks. Besides, many studies tested the relationship between FDI and economic growth in different countries. Some of these studies, including Feldstein (1983), Oseghale and Amonkhienan (1987), Choe (2003), Bengoa and Sanchez (2003), Khaliq and Noy (2007), Omoju and Adesanya (2012), Fauzel (2016), Sunde (2017), and Bayer and Marius (2018) found that FDI has a positive effect on the economic growth. While, Kentor (1996), Agosin and Machado (2005), Adams (2009), and Jilenga et al. (2016) noted a negative relationship between FDI and economic growth.

3. Methodology

The vector autoregression (VAR) model will be used in this study to test the relationship between international trade and economic growth in China. Our model consists of five variables: the gross domestic product (GDP), exports (EXP), imports (IMP), oil price (OILP), and net inflow of foreign direct investment (FDI) in China. GDP is the dependent variable. The model is presented as follows:

$$\ln GDP = \alpha + \beta_1 \ln EXP + \beta_2 \ln IMP + \beta_3 \ln OILP + \beta_4 \ln FDI + \varepsilon_t \quad (1)$$

where α is the intercept, β_1 , β_2 , β_3 , and β_4 are the coefficients of the model, $\ln GDP$ is the natural log of gross domestic product, $\ln EXP$ is the natural log of exports, $\ln IMP$ is the natural log of imports, $\ln OILP$ is the natural log of oil price per barrel, $\ln FDI$ is the natural log of net inflow of foreign direct investment, and ε_t is the error term.

Annual time series data of China during the period from 1980 to 2018 are used in this study. These data were collected from the World Bank (WB). Since

time-series data will be used in this study, we will start the analysis with the unit root tests to determine whether the variables in our model are stationary at the level or first difference. If the variables in the model are not stationary at the level but become stationary at the first level, the Johansen cointegration test will be used to test the long-run relationship among the variables. If there was a cointegration relationship between the variables in the model, the Granger causality tests based on the VECM will be used to determine the long- and short-run causality relationships among the variables. However, if there was no cointegration among the variables in the model, then the Granger causality test will be based on the VAR model to determine only the short-run causality relationships between the variables. Lastly, Impulse response functions (IRFs) will be used to test the effect of independent variables' shocks on the economic growth in our model, over a ten-year forecast horizon.

4. Empirical Results and Discussion

Based on the ADF unit root tests, all the variables in the model are integrated of order one I(1), which means that all the variables in the model are not stationary at the level, but become stationary at the first difference.

4.1. Johansen Cointegration Test Results

Because all the variables in the model are integrated of order one, we can run the Johansen cointegration test, but before we must run VAR model to determine the optimal lag length. Based on the AIC, the optimal lag length is four. Table 1 shows that there is a long-run relationship among the variables in the model based on the trace test and the maximum eigenvalue test. Hence, the cointegration equations normalized with respect to lnGDP can be written as:

$$\ln GDP = 1.5714 + 3.4419 \ln EXP + 4.3748 \ln IMP - 0.3731 \ln OILP + 0.1575 \ln FDI \quad (2)$$

It is clear from equation (2) that lnGDP is positively related to lnEXP, lnIMP and lnFDI, but negatively related to lnOILP.

Table 1
Johansen cointegration test results

No. of CE(s)	Trace Statistic	0.05 Critical Value	Max-Eigen Statistic	0.05 Critical Value
r = 0	309.7424***	0.0001	132.4746***	0.0000
r ≤ 1	177.2678***	0.0000	94.32864***	0.0000
r ≤ 2	82.93917***	0.0000	45.19530***	0.0000
r ≤ 3	37.74386***	0.0001	24.61911***	0.0017
r ≤ 4	13.12475***	0.0085	13.12475***	0.0085

Note: *** Denotes significance at the 1 percent level, and ** at the 5 percent level

The coefficient of lnEXP indicates that GDP will increase by 3.44 percent for every one percent increase in exports. An increase in exports boosts

investments in the country and motivates producers to rise the quality and quantity of their production. Besides, exports great earnings and supply the state budget with foreign currency that can be used to finance production activities, which help in increasing and improving output growth in the country. Hence, exports play a vital role in promoting the country's economic growth. This finding agrees with Tyler (1981), Al-Yousif (1997), Alhajhoj (2007), Sharma and Kaur (2013), Hussaini et al. (2015), and Malhotra and Kumari (2016). Besides, the coefficient of $\ln IMP$ indicates that for every one percent increase in imports, the GDP will increase by 4.37 percent. This suggests that imports play a vital role in boosting the economic growth in the country through supporting it with investment goods such as machinery and new technology that can be used in increasing country's productivity, and motivating producers to increase and improve their production. Besides, imports are the main source of goods and services that cannot be produced in the country or the cost of producing is very high. This result agrees with Shirazi and Abdul-Manap (2004), Cetintas and Barisik (2009), Zang and Baimbridge (2012), Alavinasab (2013), Gokmenoglu et al. (2015), and Berasaluce and Romero (2017).

The coefficient of $\ln OP$ denotes that GDP will decrease by 0.37 percent when oil price increases by one percent. This outcome is as expected since oil price fluctuation affects the production, consumption, and investment in the country. Factories require fuel for production activities as well as transportation of raw materials to it, and the final products to the markets. Therefore, high oil price increases the cost of transportation and production activities, and that will increase the overall price and reduce the real income in the country. The high prices of local products will reduce the consumption in the country, and also it will decline the international competitiveness and external demand for these products in the global market. This will decrease the investment and production, so the national output will fall. Hence, the high oil price will reduce the output and slow down the economic growth in the country. This finding agrees with Hamilton (1983), Gisser and Goodwin (1986), Jimenez-Rodrigueza and Sanchez (2005), Lin and Mou (2008), Zhang and Xu (2010), and Morana (2013). However, the coefficient of $\ln FDI$ indicates that GDP will increase by 0.15 percent for every one percent increase in FDI. Foreign investment supports the local economy by creating new job opportunities, producing different goods and services, and enhancing international trade in the country. Besides, an increase in FDI creates a high degree of competition in the local market, which motivates producers to improve the quality and quantity of their production by adopting modern management and using new technology in their production activities. The same results are obtained by Feldstein (1983), Oseghale and Amonkhienan (1987), Choe (2003), Khaliq and Noy (2007), Omoju and Adesanya (2012), Fauzel (2016), and Bayer and Marius (2018).

4.2. Granger Causality Tests Results

Since the variables in the model are cointegrated, we use Granger causality tests based on the VECM to determine the causality relationships among the variables in the short and long run. Table 2 shows that there are bidirectional causality relationships between $\ln EXP$, $\ln IMP$, $\ln OP$, $\ln FDI$ and $\ln GDP$ in the short and long run. This result implies that when exports increase that will motivate producers to increase their production, which in turn will increase the output and support the country's economic growth, and higher economic growth, on the other hand, will engorge producers to produce more and export their production. Imports also support producers with machines and raw materials that can be used in production activities, which increase the output in the country. Besides, a higher economic growth increases production activity in the country, than the importing will increase too. Furthermore, FDI causes economic growth through increasing the production in the country, and economic growth, in turn, increases the country's ability to improve the investment climate, which motivates foreign producers to invest and increase their investments in the country.

Table 2
Granger causality test results

Dependent variables	Independent variables					
	$\Sigma \Delta \ln GDP$	$\Sigma \Delta \ln EXP$	$\Sigma \Delta \ln IMP$	$\Sigma \Delta \ln OILP$	$\Sigma \Delta \ln FDI$	$ect(-1)$
$\Delta \ln GDP$	-	7.72 (4)**	7.93 (5)**	12.11 (4)*	14.08 (3)*	-0.62**
$\Delta \ln EXP$	3.17 (4)**	-	0.43 (2)	3.21 (2)**	0.14 (2)*	-0.72*
$\Delta \ln IMP$	6.87 (3)*	4.04 (4)**	-	2.64 (3)	5.17(5)**	-0.325**
$\Delta \ln OILP$	2.27 (2)*	1.52 (4)*	0.89 (2)	-	3.16 (4)	-0.98**
$\Delta \ln FDI$	4.13 (4)**	3.28 (5)**	2.38 (2)*	6.68 (4)	-	-0.71**

Notes: $ect(-1)$ shows the long-run causal effect. ** denotes significance at the 5 percent level and * indicates significance at the 10 percent level.

4.3. Impulse Response Functions (IRFs) Results

Impulse response functions (IRFs) are used in this study to test the effect of exports, imports, FDI, and oil price's shocks on the economic growth of China over a ten-year forecast horizon. It is clear from Figure 1 that exports, imports and FDI's shocks have a positive and long-run effect on GDP, which shows the important role that trade and investment play in supporting China's economic growth. However, GDP will respond positively to the oil price shock in the first seven years, but after that, it will respond negatively.

5. Conclusion

This study investigated the effect of international trade on the economic growth in China using annual time series data from 1980 to 2018. The model consists

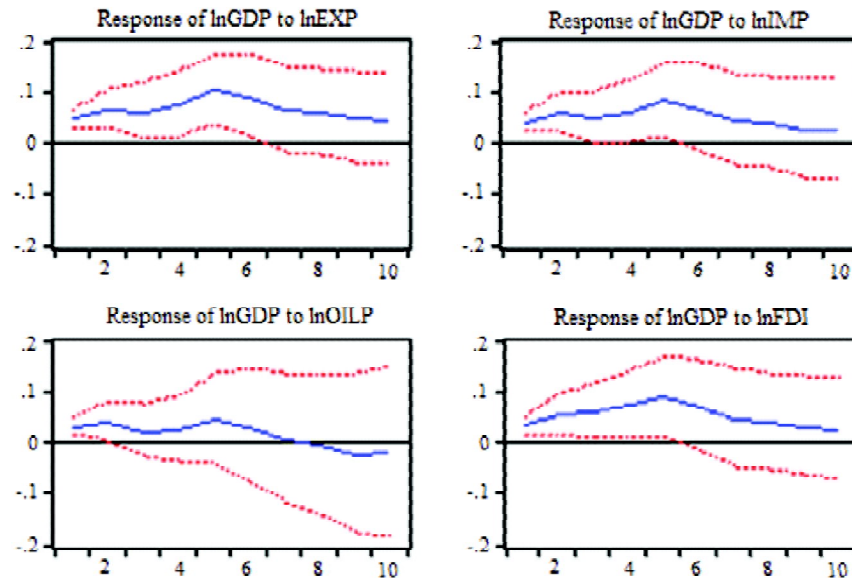


Figure 1: Impulse response functions (IRF) results

of five variables, with the GDP as the dependent variable and exports, imports, oil price, and FDI as the independent variables. The ADF unit root test, Johansen cointegration test, Granger causality tests, and impulse response functions (IRFs) were used in this study.

The ADF test results indicate all variables are $I(1)$. The Johansen cointegration test showed that exports, imports, and FDI have positive relationships with GDP, but oil price affects economic growth negatively. Furthermore, from the Granger causality tests, we found that there are bidirectional causality relationships between exports, imports, oil price, FDI and GDP in the short and long run. The impulse response functions (IRFs) indicated that when there is a shock to exports, imports, and FDI, GDP will respond positively in the following years. However, when there is a shock to oil price, GDP will respond positively in the first seven years, then it will respond negatively in the following years.

Based on the findings of this study, it is recommended that the Chinese government should encourage the local and foreign investment in the country, and improve the quality and quantity of the local products in order to increase the level of its competitiveness in local and global markets. It is also important that the government works to improve the living standard of its citizens, and that will encourage the local consumption in the country, which in turn will motivate the local and foreign producers to increase their production and investment in the country, and that will be reflected positively on the economic growth in China.

References

- Abou-Stait, F. (2005). *Are Exports the Engine of Economic Growth? An Application of Cointegration and Causality Analysis for Egypt, 1977-2003*. Tunis: African Development Bank.
- Adams, S. (2009). Foreign direct investment, domestic investment and economic growth in Sub-Saharan Africa. *Journal Policy Modeling*, 31 (6), pp. 939-949.
- Adeleye, J. O., Adeteye, O. S., & Adewuyi, M. O. (2015). Impact of International Trade on Economic Growth in Nigeria (1988-2012). *International Journal of Financial Research*, 6 (3).
- Agosin, M., & Machado, R. (2005). Foreign investment in developing countries. Does it crowd in domestic investment? *Oxford Development studies*, 33 (2), pp. 149-162.
- Alavinasab, S. M. (2013). Foreign Trade and Economic Growth in Iran: An Empirical Study. *International Journal of Academic Research in Business and Social Sciences*, 3 (11).
- Albiman, M., & Suleiman, N. (2016). The Relationship among Export, Import, Capital Formation and Economic Growth in Malaysia. *J Glob Econ*, 4 (186). doi:10.4172/2375-4389.1000186.
- Alhajhoj, H. (2007). Exports and Economic Growth in Saudi Arabia: A VAR Model Analysis. *Journal of Applied Sciences*, 7 (23), pp. 3649-3658.
- Al-Yousif, Y. K. (1997). Exports and Economic Growth: Some Empirical Evidence from the Arab Gulf Countries. *Applied Economics*, 29 (6), pp. 693- 697.
- Awokuse, T. O., (2008). Trade Openness and Economic Growth: Is Growth Export- Led or Import-Led? *Applied Economics*, 40 (2), pp. 161-173.
- Bal, D. P., Dash, D. P., & Subhasish, B. (2016). The Effects of Capital Formation on Economic Growth in India: Evidence from ARDL-bound Testing Approach. *Global Business Review*, 17 (6), pp. 1-13.
- Balassa, B. (1985). Exports, Policy Choices, and Economic Growth in Developing Countries After the 1973 Oil Shock. *Journal of Development Economics*, 18, pp. 23-35.
- Barnett, S. (2013). China: Fastest Growing Consumer Market in the World [online]. [Accessed 20th July 2019]. Available from World Wide Web: <https://blogs.imf.org/2013/12/02/china-fastest-growing-consumer-market-in-the-world/>
- Bayer, Y., & Marius, D. G. (2018), FDI inflows and financial development in central and Eastern EU Union countries: A panel co integration and causality. *International Journal of Financial Studies*, 6 (55), pp. 1-13.
- Berasaluce, J., & Romero, J. (2017). Economic Growth and the External Sector: Evidence from Korea, Lessons for Mexico. *Estudios Economicos*, 32 (1), pp. 95-131.
- Bongoa, M., & Sanchez-Robles, B. (2003). Foreign direct investment, economic freedom and growth: New evidence from Latin America. *European Journal of Political Economy*, 19 (3), pp. 529-545.
- Burbidge, J., & Harrison, A. (1984). Testing for the Effects of Oil-Price Rises Using Vector Autoregressions. *International Economic Review*, 25, pp. 459-484.
- Cetinkaya, M., & Erdogan, S. (2010). VAR Analysis of the Relation between GDP, Import and Export: Turkey Case. *International Research Journal of Finance and Economics* (55), pp. 135-145.

- Cetintas, H., & Barisik, S. (2009). Export, Import and Economic Growth: The Case of Transition Economies. *Transition Studies Review*, 15 (4), pp. 636-649.
- Chen, D., Chen, S., & Härdle, W. (2015). The influence of oil price shocks on china's macro-economy: A perspective of international trade. *Journal of Governance and Regulation*, 4 (1), pp. 178-189.
- Choe, J.I. (2003). Do foreign direct investment and gross domestic investment promote economic growth? *Review of Development Studies*, 7 (1), pp. 44-57.
- Darby, M. R. (1982). The Price of Oil and World Inflation and Recession. *American Economic Review*, 72, pp. 738-751.
- Du, L. M., He, Y. N., & Wei, C. (2010). The Relationship between Oil Price Shocks and China's Macro-economy: An Empirical Analysis. *Energy policy*, 38 (8), pp. 4142-4151.
- Fauzel, S. (2016). Relationship between FDI and financial development in small Island economies: A PVAR Approach. *Theoretical Economics Letters*, 6, pp. 367-375.
- Feldstein, M. (1983). Domestic saving and international capital movements in the long run and the short run. *European Economic Review*, 21, pp. 129-151.
- Gisser, M., & Goodwin, T. H. (1986). Crude Oil and the Macroeconomy: Tests of Some Popular Notions. *Journal of Money, Credit and Banking*, 18, pp. 95-103.
- Gokmenoglu, K. K., Amin, M. Y., & Taspinar, N. (2015). The Relationship among International Trade, Financial Development and Economic Growth: The Case of Pakistan. *Procedia Economics and Finance*, 25, pp. 489 – 496.
- Hamilton, J. D. (1983). Oil and the Macroeconomy Since World War II. *Journal of Political Economy*, 91, pp. 593-617.
- Hamuda, A. M., Elbeidi, R. M., & Gazda, V. (2010). The Relationship between Export and Economic Growth in Libya Arab Jamahiriya. *Theoretical and Applied Economics*, XVII (1 (542)), pp. 69-76.
- Hussain, M. E., & Haque, M. (2016). Foreign Direct Investment, Trade, and Economic Growth: An Empirical Analysis of Bangladesh. *Economies*, 4 (7). doi: 10.3390/economies4020007.
- Hussaini, S. H., India, C., Abdullahi, B. A., & India, C. (2015). Exports, Imports and Economic Growth in India: An Empirical Analysis. *Proceedings of the International Symposium on Emerging Trends in Social Science Research (IS15Chennai Symposium)*, 3-5 April 2015 Paper ID: C542.
- Hye, Q. M. (2012). Exports, Imports and Economic Growth in China: An ARDL Analysis. *Journal of Chinese Economic and Foreign Trade Studies*, 4 (1), pp. 42-55.
- Hye, Q. M., & Bel Haj Boubaker, H. (2011). Exports, Imports and Economic Growth: An Empirical Analysis of Tunisia. *The IUP Journal of Monetary Economics*, IX (1), pp. 6-21.
- Iyke, B. N. (2017). Does Trade Openness Matter for Economic Growth in the CEE Countries? *Review of Economic Perspectives*. 17 (1), pp. 3-24. DOI: 10.1515/revexp-2017-0001.
- Jawaid, S. T., & Raza, S. A. (2013). Effects of terms of trade on growth performance of India. *Economic Modelling*, 33, pp. 940-946.

- Jilenga, M., Helen, X., & Igor, M. (2016). The impact of external debt and FDI on economic growth: Empirical evidence from Tanzania. *International Journal of Financial Research*, 7 (2), pp. 154-162.
- Jimenez-Rodríguez, R., & Sanchez, M. (2005). Oil Price Shocks and Real GDP Growth: Empirical Evidence for Some OECD Countries. *Applied Economics*, 37 (2), pp. 201-228.
- Kentor, J. (1998). The long-term effects of foreign investment dependence on economic growth 1940-1990. *American Journal of Sociology*, 103 (4), pp. 1024-1046.
- Khaliq, A., & Noy, I. (2007). Foreign Direct Investment and Economic Growth: Empirical Evidence from Sectoral Data in Indonesia. *Working Papers 200726, University of Hawaii at Manoa, Department of Economics*. Available from: <https://econpapers.repec.org/paper/haiwpaper/200726.htm>
- Khan, A., & Saqib, N. (1993). Exports and Economic Growth: The Pakistan Experience. *International Economic Journal*, 7 (3), pp. 53-64.
- Krueger, A. (1990). Asian Trade and Growth Lessons. *AEA Papers and Proceedings*, 80, pp. 108-112.
- Le, T. H., & Chang, Y. H. (2013). Oil Price Shocks and Trade Imbalances. *Energy Economics*, 36 (3), pp. 78-96.
- Leitao, N. C., & Shahbaz, M. (2016). Economic Growth, Tourism Arrivals and Climate Change. *Bulletin of Energy Economics*, 4 (1), pp. 35-43.
- Lin, B. Q., & Mou, D. G. (2008). The Impact of Energy Price Increases on Macro-economy: An Analyses Based on CGE Method. *Economic Research Journal*, 11 (8), pp. 88-101.
- Malhotra, N., & Kumari, D. (2016). Export Performance and Economic Growth in East Asian Economies – Application of Cointegration and Vector Error Correction Model. *Eurasian Journal of Business and Economics*, 9 (18), pp. 135-152.
- Morana, C. (2013). The Oil Price-Macro-economy Relationship since the Mid-1980s: A Global Perspective. *The Energy Journal*, 34 (3), pp. 153-189.
- Nasreen, S., & Anwar, S. (2014). Causal relationship between trade openness, economic growth and energy consumption: A panel data analysis of Asian countries. *Energy Policy*, 69, pp. 82-91.
- Omoju, O., & Adesanya, O. (2012). Does trade promote growth in developing countries: Empirical evidence from Nigeria. *International Journal of Development and Sustainability*, 1, pp. 743-753.
- Osaghale, B.D., & Amonhienan, E.E. (1987), Foreign debt, oil export and FDI and economic performance in nigeria. *Nigerian. Journal of Economic and Social Studies*, 29, pp. 359-380.
- Qianqian, Z. (2011). The Impact of International Oil Price Fluctuation on China's Economy. *Energy Procedia*, 5, pp. 1360-1364.
- Rahman, M. M., & Shahbaz, M. (2013). Do Imports and Foreign Capital Inflows Lead Economic Growth? Cointegration and Causality Analysis in Pakistan. *South Asia Economic Journal*, 14 (1), pp. 59-81.
- Ram, R. (1987). Exports and Economic Growth in Developing Countries: Evidence from Time-Series and Cross-Section Data. *Economic Development and Cultural Change*, 36, pp. 51-72.

- Riyath, M. I., & Jahfer, A. (2016). Exports, Imports and Economic Growth in Sri Lanka: Evidence from Causality and Co-Integration Analysis. *5th Annual International Research Conference- 2016*. Faculty of Management and Commerce- SEUSL.
- Saad, W. (2012). Causality between Economic Growth, Export, and External Debt Servicing: The Case of Lebanon. *International Journal of Economics and Finance*, 4 (11), pp. 134-143.
- Safdari, M., Mahmoodi, M., & Mahmoodi, E. (2011). The Causality Relationship between Export and Economic Growth in Asian Developing Countries. *American Journal of Scientific Research*, 25, pp. 40-45.
- Sebri, M., & Ben-Salha, O. (2014). On the causal dynamics between economic growth, renewable energy consumption, CO2 emissions and trade openness: Fresh evidence from BRICS countries. *Renewable and Sustainable Energy Reviews, Elsevier*, 39 (C), pp. 14-23.
- Sengupta, J., & Espana, J. (1994). Exports and Economic Growth in Asian NICS: An Econometric Analysis for Korea. *Applied Economics*, 26, pp. 41-51.
- Shahbaz, M., Khan, S., & Tahir, M. I. (2013). The dynamic links between energy consumption, economic growth, financial development and trade in China: Fresh evidence from multivariate framework analysis. *Energy Economics*, 40, pp. 8–21.
- Sharma, R., & Kaur, M. (2013). Causal Links between Foreign Direct Investments and Trade: A Comparative Study of India and China. *Eurasian Journal of Business and Economics*, 6 (11), pp. 75-91.
- Shirazi, N. S., & Abdul-Manap, T. A. (2004). Exports and Economic Growth Nexus: The Case of Pakistan. *The Pakistan Development Review*, 43 (4), pp. 563-581.
- Sims, D. (2013). China Widens Lead as World's Largest Manufacturer [online]. [Accessed 20th July 2019]. Available from World Wide Web: <https://www.thomasnet.com/insights/imt/2013/03/14/china-widens-lead-as-worlds-largest-manufacturer#>
- Solarin, S. A., & Shahbaz, M. (2015). Natural gas consumption and economic growth: The role of foreign direct investment, capital formation and trade openness in Malaysia. *Renewable and Sustainable Energy Reviews*, 42, pp. 835–845.
- Sun, P., & Heshmati, A. (2010). International Trade and its Effects on Economic Growth in China. *IZA Discussion Paper No. 5151*.
- Sunde, T. (2017). Foreign direct investment and economic growth: ADRL and causality analysis for South Africa. *Research in International Business and Finance*, 41, pp. 434-44.
- Tahir, M., & Azid, T. (2015). The relationship between international trade openness and economic growth in the developing economies: Some new dimensions. *Journal of Chinese Economic and Foreign Trade Studies*, 8 (2).
- Temiz, D., & Gokmen, A. (2010). An Analysis of the Export and Economic Growth in Turkey Over the Period of 1950-2009. *International Journal of Economic and Administrative Studies*, 3 (5), pp. 123-142.
- Thangavelu, S., & Rajaguru, G., (2004). Is there An Export or Import-Led Productivity Growth in Rapidly Developing Asian Countries? A Multivariate VAR Analysis, *Applied Economics*, 36 (10), pp. 1083-1093.

- Tyler, W. (1981). Growth and Export Expansion in Developing Countries. *Journal of Development Economics*, 9, pp. 121-130.
- Xu, H. (2016). Financial Intermediation and Economic Growth in China: New Evidence from Panel Data. *Emerging Markets Finance and Trade*, 52 (3), pp. 724-732. DOI: 10.1080/1540496X.2016.1116278.
- Zang, W., & Baimbridge, M. (2012). Exports, Imports and Economic Growth in South Korea and Japan: A Tale of Two Economies. *Applied Economics*, 44 (3), pp. 361-372.
- Zhang, B., & Xu, J. W. (2010). Oil Price Shocks and China's Macro-economy: Mechanism, Effects and Policy. *Management World*, 11 (4), pp. 18-27.