A VAR ANALYSIS ON RELATIONSHIP OF INTERNATIONAL TRADE, FDI AND ECONOMIC GROWTH IN CHINA

By

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ABSTRACT

The role of foreign direct investment (FDI) and exports continues to be debated and tested in the literature on international economics and development economies. This paper extends the previous empirical studies on the issue by providing some evidence from time-series data period over 1980-2010 of People's Republic of China. In this study, the dependent variables were economic growth. The model tested using unit root test, Granger causality, Vector Autoregressive (VAR) and Impulse Response Function (IRF) to analysis that dynamic relationship between economic growth, FDI, export and import. In terms of causality the result shows economic growth will provide a positive influence on the level of FDI, that is, economic growth (GDP) granger causes on Foreign Direct Investment (FDI), and there is a mutual influence between export and import because of intra-trade and imports of intermediate goods. The Vector Autoregressive (VAR) and Impulse Response Function (IRF) approach is to investigate the response of the system to economic shocks; the results showed that, the country's economic growth is influenced by its lagged values of GDP. Finally this paper draws some policy implications for the further studies to focus on the economic growth in China, to ensure that economic growth would not be drop.

ABSTRAK

Peranan pelaburan langsung asing (FDI) dan eksport terus dibahaskan dan dipersoalkan dalam konteks ekonomi antarabangsa dan pembangunan. Penyelidikan ini meliputi kajian empirikal terdahulu dengan menyediakan beberapa bukti data dari tempoh masa sepanjang tahun 1980-2010 di Republik Rakyat Cina. Dalam kajian ini, pembolehubah bersandar adalah pertumbuhan ekonomi. Model yang diuji menggunakan “unit root test”, “Granger casuality”, “Vector Autoregressive (VAR)” dan “Impulse Response Function (IRF)” untuk menganalisa hubungan dinamik antara pertumbuhan ekonomi, FDI, eksport dan import. Dari segi sebab-musabab hasilnya menunjukkan pertumbuhan ekonomi akan memberikan pengaruh positif terhadap FDI iaitu pertumbuhan ekonomi (GDP) Granger penyebab kepada FDI, dan terdapat pengaruh di antara eksport dan import disebabkan oleh perdagangan dan import barangan pengantara. Pendekatan VAR dan IRF adalah untuk mengkaji tindakbalas sistem terhadap kejutan ekonomi dan keputusan menunjukkan bahawa pertumbuhan ekonomi negara adalah dipengaruhi oleh nilai-nilai yang tertinggal daripada GDP. Akhir sekali, kertas ini menarik beberapa dasar polisi untuk kajian lanjut terhadap pertumbuhan ekonomi di Cina disamping memastikan pertumbuhan ekonomi tidak akan menurun.

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ABBREAVIATIONS

WTO	World Trade Organization
SEZs	Special Economic Zones
GDP	Gross Domestic Product
FDI	Foreign Direct Investment
MOC	Ministry Of Commerce
ELG	Export Led Growth
PPP	Purchasing Power Parity
IMF	International Monetary Fund
ADF	Augmented Dickey Fuller
ECM	Error Correction Model
VAR	Vector autoregressive
IRF	Impulse Response Function
FCI	Foreign Capital Inflow

CHAPTER ONE

INTRODUCTION

1.1 Background

Trade openness plays an importance role in economic growth in many countries. International trade in the nineteenth century and early twentieth century, generally encouraged the growth of the development countries of today, and it often been referred to as the “engine of growth”. The growth of domestic demand, rapid expansion of trade, particularly in the export sector, led to the creation of large-scale industry to provide a further stimulus.

Openness in trade refers to the degrees to which countries or economies permit or have trade with other countries or economies. The trading activities include export and import, foreign direct investment (FDI), borrowing and lending, and repatriation of funds abroad. Open economies generally have greater market opportunities, at the same time they also face greater competition from foreign businesses. In terms of financial development international trade enables a channel to obtain funds from other countries, and also invest its surplus funds in other countries.

International and domestic trade across Chinese provinces appears to be high and rising even as China has become more integrated with the global economy (Young, 2000; Poncet, 2003). China’s rapid GDP growth in recent decades has been impressive, averaging 10.3% per year from 1978 to 2010. Since 1978, the adoption of “reform and opening” policy initiated by Deng

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REFERENCES

A.H Baharom, Muzafar Shah Habibullah and R.C Royfaizal, (2008). *"The relationship between trade openness, foreign direct investment and growth: Case of Malaysia"* MPRA Paper No. 11928

Alan Krueger and Mikael Lindahl, (2000). *"Education for Growth: Why and For Whom?"* Working Papers 808, Princeton University, Department of Economics, Industrial Relations Section.

Andong Zhu and David M. Kotz, (2010). *"The Dependence of China's Economic Growth on Exports and Investment"* Beijing, China Amherst, MA, USA Codes: O53, F43, O11.

Anne O. Krueger, (2009). *"Trade Openness Is Now More Important Than Ever"* Special Report, World Bank Institutions.

Arjan De Haan, (2010). *"Will China Change International Development As We Know It?"* Journal of International Development. Int. Dev. 23, 881–908.

Arora,Vivek and Vamvakidis, Athanasios(2010). *"China's Economic Growth: International Spillovers"* IMF Working Paper WP/10/165.

Athukorala, P (2009). *"The Rise of China and East Asian Export Performance: Is the Crowding-Out Fear Warranted?"* The World Economy 2008.01151.x

Berdell, John (2002). *"International Trade and Economic Growth in Open Economies"* Cheltenham, Glos GL50 1UA, UK.

Borensztein, E et al (1998) *"How does Foreign Direct Investment Affect Economic Growth?"* Journal of International Economics, vol. 45.

China Statistical Yearbook 2011. China Statistics Press, National Bureau of Statistics, China.

Coxhead, Ian and Jayasuriya Sisira,(2010). *"China, India and the Commodity Boom"* The World Economy, 2009.01232.x

Debra A. Miller, (2009). *"Importing from China" Cengage* Learning, Green haven Press.

Eduardo B, Jong-Wha Lee and Jose De G., (1994).*"How Does Foreign Direct Investment Affect Economic Growth"* IMF Working Papers 94/110, International Monetary Fund.

Ericsson, J. and Irandoust, M. (2001), *"On the causality between foreign direct investment and output: a comparative study"* International Trade Journal, 15, 1-26.

Farhat Rashid, (2012). *"Effects of Exports Instability on Economic Growth in SAARC Region Countries"* Pak. J. Commer. Soc. Sci. 2012 Vol. 6 (1), 97-120

Feder, G. (1982) *"On Exports and Economic Growth"* Journal of Development Economics, Vol. 12: 59-73.

Garnaut, Ross (1996). "*Open Regionalism and Trade Liberalization"* St Leonards NSW 2065 Australia.

Grossman,M. and Elhanan Helpman.(1991).*"Innovation and Growth in the Global Economy"* Cambridge: MIT Press.

Gylfason, Thorvaldur.(1998). *"Exports, Inflation, and Growth"* University of Iceland; Sweden; and CEPR.

Halit Yanikkaya, (2002). "*Trade openness and economic growth: a cross-country empirical investigation"* Celal Bayar University, Turkey.

Hamilton, N. and Thompson, C. (1994) *"Export Promotion in a Regional Context: Central America and Southern Africa"* World Development, 22:1379-1392.

Hansen, Henrik and Rand, John (2004).*"On the Causal Links between FDI and Growth in Developing Countries"* Discussion Papers 04-30, University of Copenhagen. Department of Economics.

Jung, W.S. and P.J. Marshall (1985) *"Exports, Growth and Causality in Developing Countries"* Journal of Development Economics, Vol. 18: 1-12.

K.C. Fung, HitomiIizaka, Sarah Tong, (2002). *"Foreign Direct Investment in China: Policy, Trend and Impact"* University of Hong Kong.

Ku 'Azam Tuan Lonik, (2006).*"On the Relationship between Export and Economic Growth - A Look at Malaysian Experience"* Universiti Sains Malaysia.

Lardy, Nicholas R. (1995). "The *role of foreign trade and investment in China's economic transformation"* the China Quarterly, 144: 1065-1082.

Li Cui, Chang Shu and Xiaojing Su, (2009). *"How Much Do Exports Matter for China's Growth?"* Hong Kong Monetary Authority, No. 1/09

Liu, Xiaming and Wei, Yingqi, (2001). *"Causal links between foreign direct investment and trade in China,"* China Economic Review, Elsevier, vol. 12(2-3).

Lutkepohl, H. (1991). *"Introduction to Multiple Time Series Analysis"* Springer-Verlag, Berlin.

Michael R. Czinkota, (1982). "*Export Development Strategies: U.S. Promotion Policy*" United States.

Moran H. Theodore, (1998). *"Foreign Direct Investment and Development: A Reassessment of the Evidence and Policy Implications"* School of Foreign Service, Georgetown University Washington, D.C.

Muhammad S. Anwer& R.K. Sampath, (1997). *"Exports and Economic Growth"* Western Agricultural Economics Association, Nevada.

Nicholas R. Lardy, (1992). *"Foreign Trade and Economic Reform in China, 1978-1990"* Cambridge CB2 1RP, University of Cambridge.

Ostry,Sylvia. Alan S. Alexandroffand Rafael Gomez (2002). "*China and the Long March to Global Trade"* 11 New Fetter Lane, London EC4P 4EE.

Parikh, Ashok (2007). *"TRADE LIBERALIZATION: Impact on Growth and Trade in Developing Countries"* World Scientific Publishing, Singapore.

Peng, Fuwei (1999), "*The Role of Foreign Trade in the China's Economy"* Journal of International Trade, Jan. 1999.Vol. 193.

Peter K. Schott, (2008). "The relative sophistication of Chinese exports" CEPR, CES, MSH, 2008.

Poncet, S. (2003). "*Measuring Chinese domestic and international integration*" China Economic Review, 14, 1-22.

Prasad, Eswar (2004). *"China's Growth and Integration into the World Economy: Prospects and Challenges"* Washington,D.C. International Monetary Fund, 2004.

Ram, R. (1985) *"Exports and Economic Growth: Some Additional Evidence"* Economic Development and Cultural Change, Vol. 33: 415-425.

Richard E. Baldwin and Rikard Forslid, (1996). *"Trade Liberalization and Endogenous Growth: A q-Theory Approach"* NBER Working Papers 5549, National Bureau of Economic Research.

Richard, D.G. (2001). *"Exports as a Determinant of Long-Run Growth in Paraguay: 1966-1996"* Journal of Development Studies, Vol. 34:128-146.

Sharma, S.C. and D. Dhakal (1994). *"Casual Analyses between Exports and Economic Growth in Developing Countries"* Applied Economics, Vol. 26: 1145-1157

Shuanglin Lin, (1999). *"Export Expansion And Economic Growth: Evidence from Chinese Provinces"* Pacific Economic Review, 4: 1 pp. 65±77

Sinha,Dipendra. (1999). *"Export Instability, Investment and Economic Growth in Asian Countries: A Time Series Analysis"* Economic Growth Center Yale University, Center Discussion Paper No. 799

Stock, J.H. and M.W. Watson (2001). *“Vector Autoregressions”* Journal of Economic Perspectives, 15, 101-115.

Trevino, Len J. and K. P. Upadhyaya (2003) *“Foreign aid, FDI and economic growth: Evidence from Asian countries”* Transnational Corporations. 12 (2): 119-135
Wang, Z. (1998), *“Rethinking the Role of Foreign Trade in the China’s Economy” Intertrade*, Oct. 1998, Vol.202.

Watson, M. (1994).*“Vector Autoregressions and Cointegration”* in Handbook of Econometrics, Volume IV.R.F. Engle and D. McFadden.Elsevier Science Ltd., Amsterdam.

Wong Hock Tsen, (2010). *“Exports, Domestic Demand, and Economic Growth in China: Granger Causality Analysis”* Review of Development Economics, 14(3), 625–639.

Xiaming Liu , Haiyan Song and Peter Romilly, (1997). *"An empirical investigation of the causal relationship between openness and economic growth in China"* Applied Economics, Taylor and Francis Journals, vol. 29(12).

Y.C. Jao, C.K. Leung, (1986). *“China’s Special Economic Zones: Policies, Problems and Prospects”* Oxford University Press.

Yang Yao, (2010). *“The Double Transition and China’s Export-led Growth”* National School of Development (NSD), Peking University, China.

Yao Limin, (2011). *“Comparison of Internationalization Promotion Patterns of Region Economic Growth in China”* International Journal of Business and Social Science Vol. 2 No. 13

Yılmaz Akyüz, (2011). *“Export Dependence and Sustainability of Growth in China”* China &World Economy / 1 – 23, Vol. 19, No. 1.

Young, Alwyn (2000). *“The razor's edge: Distortions and incremental reform in the People's Republic of China”* Quarterly Journal of Economics, 115(4), 1091-1135.

Zhang, Kevin H. (2006). *“FDI and host countries’ exports: the case of China”* International economies, LVIV (1): 50-55.