

Impact of Oil, Crises and Economic Integration on Growth: A Causal Analysis of Major East-West Asia Economies

Tran Van Hoa*

Professor, Centre for Strategic Economic Studies, Victoria University, Australia

Abstract:

While energy especially oil, crises and economic integration have been playing an important role in development and growth in East West Asia economies and their intertwining relations, only limited quantitative research on their impact has been carried out and reported for improved debate and credible policy use. This paper uses an econometric modeling innovation with features superior to existing methodologies, namely the generalized or endogenous gravity theory (eg, Tran Van Hoa, 2004), to provide rigorous substantive evidence satisfying Kydland (2006) data-model consistency criterion to this impact study for reliable regional policy analysis.

The paper first analyses the major economic and trade patterns between the Gulf States and Asian NIEs over the past three decades for relevant historical correlative support. Second, a new endogenous growth model for these economies is constructed and estimated to provide substantive causal evidence on the impact. Implications of the findings for economic and trade policy development between the Gulf States and Asian NIEs are then discussed for possible uses by academic, business and government decision-makers.

Keywords: Oil Economics, Gulf States, Asian NIEs, Crises and Shocks, Economic Integration, Economic Modeling and Forecasts, Kydland Data-model Consistency, Regional Economic and Trade Policy.

JEL Classification: C30, C51, F13, F43

* Correspondent Author: (+61) 3 9919 1047, Email: Jimmy.Tran@vu.edu.au

1. Introduction:

Extensive empirical research studies have found that, among 145 or so alternative theories of growth, only three major determinants of growth robustly stand out: capital formation, secondary school enrolments, and the stage of the country's development (Levine and Renelt, 1992). In the economic-theoretic and actual developments since after the World War II or specifically after the first oil shocks of 1974 however, oil and crises have been recognized additionally in economic modeling and policy studies (eg, Johansen, 1982) as major engines and obstacles respectively of growth in the world economy. We also note that the formation of the WTO in 1995 has compelled the world (or WTO members) to focus on free or freer trade in goods globally as a significant impetus to domestic and international growth (WTO, 2008). With the emergence of regional trade agreements (RTAs) or bilateral and plurilateral free trade agreements (FTAs) with even among the WTO members which are supposed to gain all they have negotiated for before joining the WTO, other well-known contributors to and facilitators of growth have been expanded to include not only trade in goods but also in foreign direct investment (FDI), services (notably, education, finance, tourism, labor), and competition policy (ASEAN, 2008; DFAT, 2008).

In the current literature, numerous influential studies using conventional econometric modeling methodologies (see Rose, 2007; Tomz et al., 2007; see however Tran Van Hoa, 2008a) have shown that the causal nexus between the WTO, RTAs, FTAs and merchandise trade to growth in both developed and developing economies is still empirically controversial or not clear-cut. The nexus in an 'icy waters' or neo-classical context in the sense of Murray Kemp or in the confirmatory context of the CGE/GTAP modelling approach has however been claimed, not unexpectedly, to be less controversial. In the special case of high growth economies of the ASEAN where oil imports from the Gulf economies, regional and global economic integration and crises seem to have been

significant factors of development and growth in recent years, no substantial quantitative study of their impact has been undertaken or reported for information and for informed debate on the role of the Gulf to ASEAN economies and also on the merit of an enlargement of an ASEAN Plus FTA.

The paper is an empirical paper to study the role of the Gulf oil exports to the ASEAN, economic integration and regional and global crises on the ASEAN economies. The findings that are based on a new economic and trade policy modeling approach, the endogenous gravity theory (Tran Van Hoa, 2004, 2005, 2007, 2008a, 2008b), and with tested, efficient and credible outcomes, will provide a better understanding on the significance of economic and trade relations between the Gulf and ASEAN, and on how economic integration and crises have contributed to the these relations and recent growth of the ASEAN. The findings will provide inputs to a feasibility study on a possible Gulf-ASEAN FTA for mutual benefits in the same way as an Australia-Emirates FTA which is being considered by the two governments (DFAT, 2008).

2. Recent Trends in the Oil and Other Trade with the ASEAN and World

The historical trend of trade and growth between the Gulf economies and their major trade partners including the ASEAN is given in Charts 1-3. From Chart 1, we note the almost parallel trend and wide fluctuations over more than 30 years of oil exports from the Gulf and its seven major partners, NAFTA, EU, Japan, Korea, India, ASEAN, and China. We note notably five structural breaks in this period, 1974 (first oil crisis), 1981 (second oil crisis), 1987 (stock market crash), 1991 (the first Gulf War), and 1997 (the Asia economic and financial crisis). While the EU was the largest oil importer during the mid-1970s to mid-1980s, its demand had fallen sharply since. Japan had followed below the EU for much of the period, but it seemed to overtake the EU in Gulf oil imports in the late 1990s. China was a negligible importer of the Gulf

oil during this period and its import of Gulf oil suffered, as expected, a severe collapse (from \$US641.73 million in 1989 to \$US200.00 million in 1990) after the internal turmoil of 1989. It is interesting

to note that Gulf oil exports had formed a major component of total trade between the Gulf and all its major partners (Chart 2).

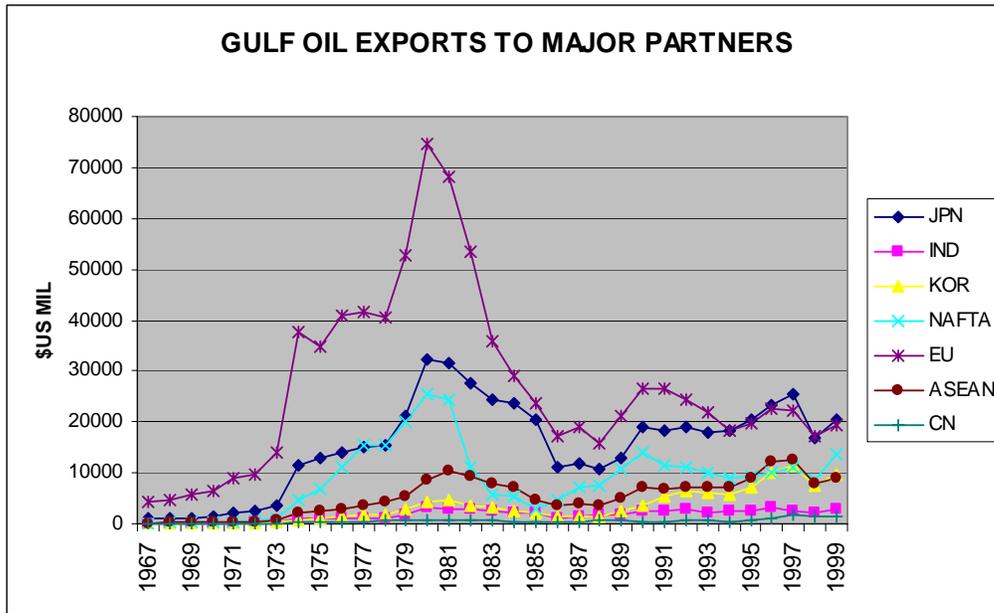


Chart 1. Gulf Oil Exports to Major Trade Partners, 1967-1999

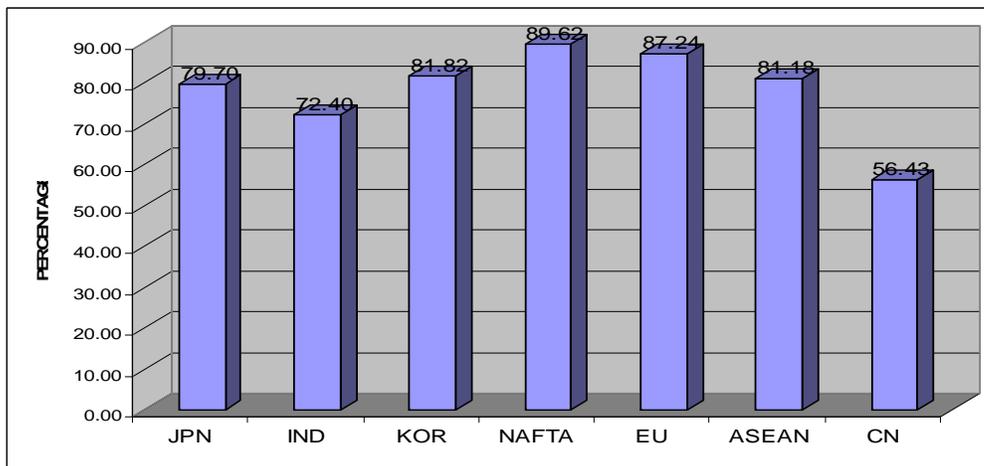


Chart 2. Shares of Gulf Oil/Total Trade by Major Partners, 1967-1999

Source of data to Charts 1-2: CHELEM 2001. Access to CHELEM 2008 is not available.

Note: By CHELEM 2001 classification, the Gulf economies include: Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates.

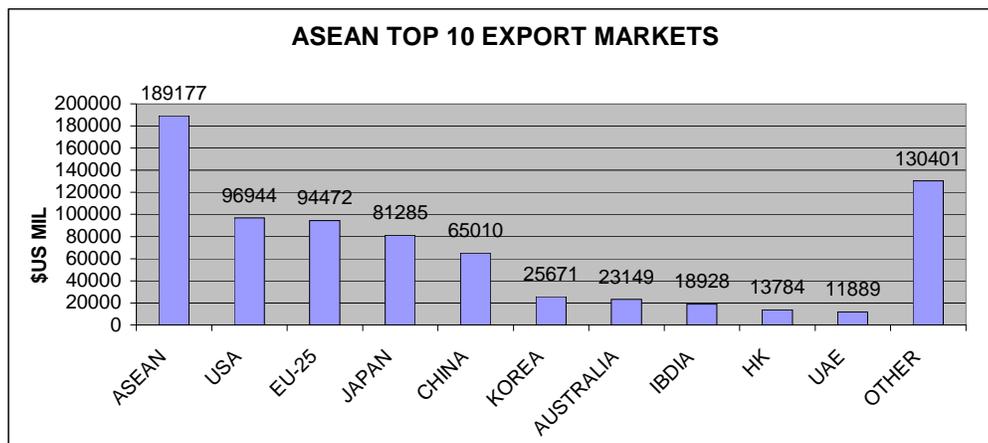


Chart 3. Gulf Ranking in ASEAN World Export Markets, 2006

Source of data: ASEAN, 2008.

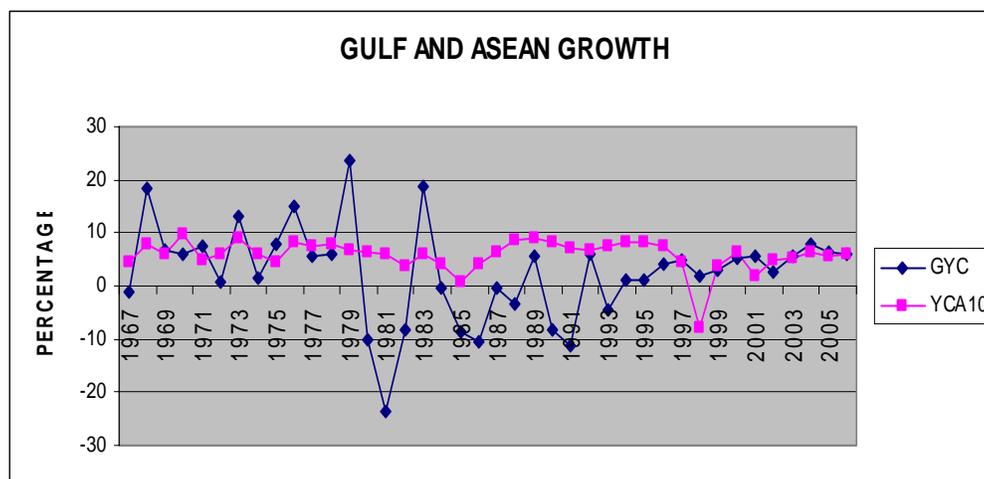


Chart 4. Growth in the Gulf and ASEAN Economies

Source of data: CHELEM, 2008

Chart 3 reports the graphical ranking (in \$US million) of ASEAN world export markets where only the UAE appears to be in the top ten (ranked 10). This signifies an opportunity for the ASEAN if their trade with the Gulf is found to be a beneficial component of their growth. The growth path of the Gulf and ASEAN economies is depicted in Chart 4 where we note the discrepancy in the fluctuating behavior of the oil-dependent economy of the Gulf and the more stable fundamental development economies of the ASEAN. The ASEAN economies had not escaped however the damaging impact of the economic and financial crisis of 1997 which still exerts lingering effects and contagion on the region eleven years on (Tran Van Hoa, 2008c).

In the following sections, we will develop a new model of oil imports, merchandise trade, FDI, services and economic integration and growth for the ASEAN to study the impact of these factors on economic and trade relations between the Gulf and the ASEAN. The model will produce more credible outputs in the sense of data-model consistency or nearness (Kydlund, 2006) for more reliable policy analysis of trade and growth between these two partners. The outcomes will be used as substantive or evidence-based inputs to informed discussions and practical negotiations if necessary on the future plurilateral FTA between the Gulf and the ASEAN and within the geo-political framework of the currently proposed EAS FTA by 16 countries in the Asia-Pacific and South Asia regions (ASEAN, 2008).

2.1. Model of Gulf-ASEAN Trade and Growth for Policy Analysis:

In a number of recent papers, Tran Van Hoa (eg, 2002a, 2002b, 2005, 2007a, 2007b, 2008a, 2008b) uses a simple, new, effective and general modeling approach, the endogenous gravity theory (EGT), to empirically study trade and its causal link to growth in major developing countries in Asia. The major and novel features of an EGT trade-growth model are: unlike other modeling studies in this genre (eg, CGE/GTAP and growth regression), it assumes no a priori (eg, linear or log-linear) functional form; it incorporates FDI, services (ASEAN, 2008), and other reform and non-economic events (Johansen, 1982) that have affected trade and growth in the region in recent years; and it incorporates explicitly the interdependence between trade, growth and major macroeconomic conditions or activities in the trading economies (Krueger, 2007).

Other existing modeling approaches for this kind of trade-growth impact study are inappropriate or not credible for policy uses because of their structural and econometric limitations. For example, the CGE/GTAP is essentially confirmatory with its assumed causal relationships and given impact parameters. The gravity theory (Frankel and Romer, 1999) deals only with cross-section data and is beset with serious cross-country heterogeneity. The growth regression is econometrically fragile (Levine and Renelt, 1992) and lacks the well-known circular causality in the sense of Marshall or Haavelmo among economic (eg, trade, growth, monetary, fiscal and industry policies) activities (see also Krueger, 2007). The specification of a linear function for empirical trade-growth studies has been increasingly regarded as unsuitable (Minier, 2007). Previous EGT studies have also demonstrated the excellent modeling performance of the EGT model when this performance is assessed by the Friedman or Kydland data-model consistency (2006) criterion. Finally, as the economic variables in the EGT model (being planar approximations to any functional form) are expressed as their rates of change, the model's findings can be regarded as long-run outcomes in the sense of Engle and Granger causality if all of these variables are integrated of degree one or as short-term Granger causality if they are I(0).

3. The Model :

The EGT trade-growth model for Gulf-ASEAN trade (oil) and growth to explore the causal aspects of trade and growth relationship from the ASEAN's perspective, and with features relevant to the two countries in their development in the past 30 years can be written arbitrarily (or in function-free form without a priori assumptions about the exact functional forms) as two implicit functions [for GDP and trade (T)] and their testable economic and trade, FDI and service (SV) determinants as

$$GDP = GDP(T, FDI, SV) \quad (1)$$

$$T = T(GDP, FDI, SV) \quad (2)$$

Using Taylor's series expansions for the functions and neglecting second and higher-order differentials (see Baier and Berstrand, 2008, for a recent use of this approach to deal with possible nonlinearity), the 2-equation model for GDP and T above can be written equivalently and including comprehensive trade (see below) and crises (SH) and for empirical implementation as

$$Y\% = a1 + a2T\% + a3FDI\% + a4SV\% + a5SH + u1 \quad (3)$$

$$T\% = p1 + p2YT\% + p3FP\% + p4AMP\% + p5INF\% + p6XR\% + p7IP\% + p8POP\% + p9SH + u2 \quad (4)$$

Where the u 's denote error terms. The model's rationale can be briefly described as follows. In equations (3)-(4), ASEAN's GDP growth ($Y\%$) is assumed to be or to be tested as being dependent on its trade in goods (oil) with the Gulf (T), FDI and financial services (SV), crises, shocks or policy reforms (SH). But this Gulf-ASEAN endogenous trade for example is also affected by economic activities (see below), trade-related policies (XR) – see Coe and Helpman, 1993 – and external or internal shocks (SH) – Johansen, 1982; Tran Van Hoa, 2002a, 2002b, 2005, 2007a, 2007b, 2008a, 2008b) in the ASEAN and their trading partners. Assuming for convenience and for lack of sufficient sampling sizes for the data, that GDP of ASEAN's major trade partners (ie, the GULF) is a proxy for all variables reflecting its own economic activities in addition to policies and shocks, then equation (4) for T, in its reduced form of our two-simultaneous equation model, simply assumes more specifically that ASEAN's trade with the Gulf is

affected by the exogenous factors such as the Gulf's GDP (named YT), fiscal policy (FP), monetary policy (MP), inflation pressure (INF) – see Romer (1993), exchange rates (XR) – see Rose (2000), industry policy (IP) – see Otto et. al. (2002), population (POP) – see Frankel and Romer (1999), and SH – see Johansen (1982) and Tran Van Hoa (2004) in the ASEAN.

Equation (4) is in fact a derived demand equation for tradable goods (oil, or similarly for even transacted services and FDI) reflecting essentially its demand [by the trading partner(s)] and the Gulf's domestic supply conditions, as postulated in standard microeconomic and international trade theory. The model's exogenous variables explicitly constitute ASEAN's domestic and international micro and macroeconomic conditioning environment. The tests for significant causality between ASEAN's trade with the Gulf and its impact on ASEAN's growth are then based on the testing of equation (3) above by appropriate estimation and conventional testing procedures.

Data for the estimation were obtained from France-CHELEM, Japan-ICSEAD and International Energy Association (IEA) databases. For consistency with previous studies, all economic data are in current value. In our study, all original data are obtained as annual and then transformed to their ratios (when appropriate). The ratio variables include trade (T) in oil, FDI, financial services (SV), money supply (MB), and government budget (G), all divided by ASEAN's GDP. Other non-ratio variables include population (a gravity factor proxy), terms of trade, exchange rates, inflation, and binary variables representing the occurrence of the economic, financial and other major crises, policy shift or reforms over the period 1967 to 2005. All non-binary variables are then converted to their percentage rate of changes. The use of this percentage measurement is a main feature of our EGT approach and avoids the problem of a priori known functional forms (see above) and also of logarithmic transformations for negative data [such as budget (fiscal) or current account deficits]. In this paper, we have focused on a unidirectional direction of trade and growth below in a 'dual' context, that is, ASEAN's trade with the Gulf and its possible causal impact on ASEAN's growth. This causality is the fundamental foundation of trade agreements or relations as discussed.

4. Substantive Empirical Findings and Their Modeling Reliability Properties:

The empirical findings for the structural equation (3) in the two-simultaneous equation model of ASEAN's growth as a result of oil trade with the Gulf are given in the table below. Conceptually interpreted, equation (3) can be implicitly regarded as a growth regression when it is estimated by the OLS or maximum-likelihood method that will produce, as is well-known, biased impact or elasticity parameters. Or it can be regarded as a structural equation in a simultaneous equation model with circular causality or endogeneity. As a result and for consistency in efficient impact studies, an instrumental-variables estimator such as the 2SLS has to be used for this estimation. The instrumental variables in this case are all the exogenous variables explicitly incorporated or assumed for the model. As discussed above, these instrumental variables reflect the micro and macroeconomic conditioning environment of the ASEAN (ASEAN's perspective) and its major trading economy, namely the Gulf. The trade-growth causality issues are similar when reversed and viewed from say a Gulf's perspective.

Judged from the table, the standard statistical performance of the estimated EGT models for Gulf-ASEAN oil trade and growth above appears acceptable in terms of the R², F-statistics, and DW value. The performance of the models can also be evaluated by the Kydland data-model consistency (2006) criterion where the trend gap (or discrepancy) between historical data and model predictions have to be tight and small. The criterion was advocated earlier by Milton Friedman in the sense of model (theory) and reality consistency and it seems to be overlooked by modelers and policy-makers alike in recent years. This performance is given in Charts 5-6 for ASEAN's growth and the Gulf oil trade with the ASEAN. A visual indicates that the models emulate well the troughs, peaks and turning points of Gulf's growth and trade even during the highly volatile period of late 1990s to early-2000's in the economy of the two trading partners.

**Table 1. Gulf Oil Trade with ASEAN and Its Impact on ASEAN Growth
EGT Modelling in Flexible Structural Form, 1967-2006**

	OLS	2SLS
	Growth Regression	EGT Structural
Const	7.548**	7.996**
Gulf-ASEAN Oil Trade/GDP	0.019**	0.042**
FDI/GDP	0.035**	0.089**
Services/GDP	0.001	0.001
Oil Crisis 1974	-0.712	-1.093
Oil Crisis 1981	-2.438*	-2.260
Stock Market Crash Oct 1987	3.560**	3.161*
First Gulf War 1991	-0.399	-0.300
Asia Financial Crisis 1997	-5.796**	-5.497**
Asia Post-crisis Recovery	3.780**	3.531**
R-squared	0.572	0.481
F	4.311**	3.279**
DW	2.424	2.447
CuSumSq	0.392**	

Notes. **=Significant at 5%, *=Significant at 10%. CuSumSq: Test for variable coefficients in the model.

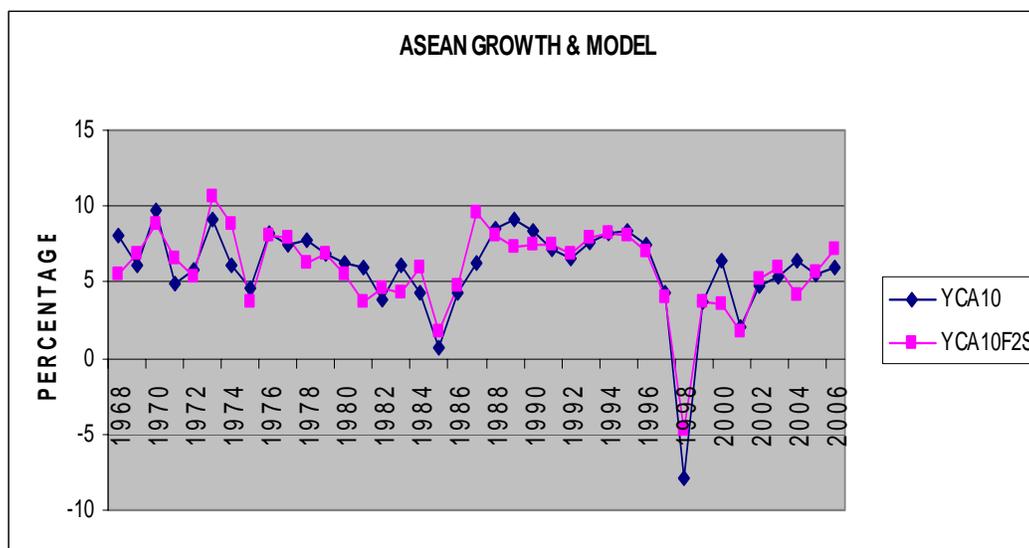


Chart 5. EGT Modelling Performance of ASEAN's Growth: Friedman-Kydland Criterion

Note: YCA10 and YCA10F2S=ASEAN10 growth and its predicted value

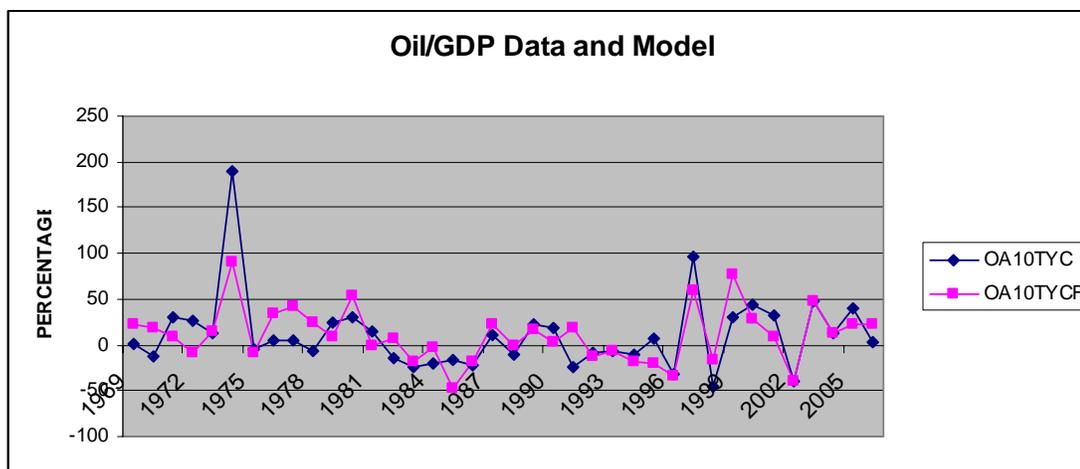


Chart 6. EGT Modeling Performance of Gulf-ASEAN Oil Trade: Friedman-Kydland Criterion

Note: OA10TYC and OA10TYCF=Gulf oil trade/GDP to ASEAN10 and its predicted value

5. Implications for Gulf-ASEAN Economic and Trade Policy and Relations:

What are then the implications of our substantive empirical findings relevant to economic and trade relations policy between the Gulf and ASEAN in particular?

5.1. Does Gulf's Oil Trade with ASEAN Significantly Affect ASEAN's Growth?

The major claim by supporters and exponents of free (or freer) trade and regional RTAs and FTAs is that this kind of engagement between the ASEAN and the Gulf will enhance the two trading partners' economic performance and export growth, in addition to regional political and energy security stability and co-operation. Our empirical findings by two different kinds (growth regression and EGT structural equation) of model specification and estimation (ie, OLS and 2SLS) reported above appear to support this assertion strongly statistically as seen nearly 40 years of data. The findings are robust with respect to several modeling specifications [or 'computational experiments' as advocated by Kydland (2006) recently] of a bilateral kind between the Gulf and its Asian trading bloc, ASEAN. Three important policy implications can be derived from the findings here. First, previous studies have shown that a mere observation of association

(used mostly by consultants or decision-makers for example) of a country's export surge (oil in this case) to its trade partners may indicate only descriptive or correlational relationship and surely not a causal one for credible policy use. Our empirical findings support this heuristic causal observation between Gulf's oil exports to the ASEAN and ASEAN's growth. Second, the Gulf's oil exports to the ASEAN, while being relatively small, had played a significant role in promoting ASEAN's development and high-growth 'economic miracles'. Third, the findings also support the policy of close engagement between ASEAN and the Gulf not only in terms of economic performance but also of energy security concerns for the ASEAN.

5.2. Are FDI and Services Important Factors of ASEAN's Growth?

The findings reported show that FDI into the ASEAN does make a positively strong and statistically significant contribution to ASEAN's economic performance (with the elasticities of about twice the oil trade impact on both the growth regression and EGT models). Not unlike the ASEAN's main rival in recent regional development, namely China (see Tran Van Hoa, 2008a), our results in Table 1 strongly support the claim of the ASEAN's status as an officially recognized bloc of FDI-led economies. As far as FDI

attraction is concerned, this is an area that economic planners and trade policy-makers in the ASEAN should pay more attention and focus to in order to improve the bloc's competitiveness. A recent ASEAN ministerial delegation to Dubai to woo Gulf investors to the ASEAN is a timely and appropriate action (ASEAN, 2008). Another surprising result from our estimated EGT trade-growth model for the ASEAN is that, when both FDI and services are incorporated, the impact of net services is also positive but statistically insignificant. This lends strong empirical support to the view that, unlike India, the services sector is not a chief engine of growth in the ASEAN economies and the ASEAN's main advantage in regional, if not global, competitiveness. A remedial policy in the form of improved education expenditure and its effectiveness has been suggested by a number of writers on public services in developing Asia (see for example Tran Van Hoa, 2008b).

5.3. The Role of Reforms and Crises in ASEAN's Economic Performance:

While sudden crises, shocks and major gradual policy reforms have been acknowledged (even by CGE pioneers) as important sources of fluctuations in economic performance worldwide (see Johansen, 1982; Tran Van Hoa, 2002a, 2002b, 2004; Edwards, 2007), they have rarely been incorporated in such well-known economic policy modeling studies as the CGE/GTAP, gravity theory, growth or panel regression, or in a more realistic (or multiple structural breaks and with temporary or non-decaying effects) manner in the often-used cointegration or unit root analysis. A feature of the EGT approach is in its flexibility in accommodating these events. The findings from the table above indicate that all six crises or shocks and policy reforms over the four decades in our study (ie, the oil crises or price hikes of 1974 and 1981, the Black Friday stock market crash of October 1987, the first Gulf War of 1991, the 1997 Asia economic and financial crisis, and Asia's post-crisis recovery reforms in the early 2000s) do have an impact on the ASEAN's economic growth. The findings of a severe adverse and strongly significant impact of the 2 July 1997 Asia crisis and the benefits of 'good'

economic policy since 2002 in the ASEAN are only to confirm the well-supported views and facts on these regional and global crises' serious contagion on the ASEAN economies (Tran Van Hoa, 2001, 2002c) or the beneficial effects of good economic governance or constructive and 'correct' policy reforms. These lend credibility to our modeling study. Another implication of the findings is that, due to the far-reaching effects of crises, shocks and policy change on a large number of sectors in an economy, the need to specify these aspects of structural change in a multi-equation or even single-equation policy model is clearly desirable and appropriate. This casts doubts on quantitative studies of trade and growth that ignore these factors in their modeling specification.

5.4. Growth Regressions versus EGT Simultaneous-Equations Modelling:

Most contemporary quantitative trade-growth studies are based on CGE/GTAP or growth and panel regression analysis. The reliability problems with these methodologies are well-known as mentioned earlier. The findings in the table show the difference in impact parameter estimates though not in sign (a reversal in sign had also been obtained for a number of modelling experiments tested) but in magnitude and in significance level between the OLS and 2SLS estimation methods being applied to equation (3). An implication is that OLS estimates here may be regarded as estimates from a growth regression where the impact of interrelated economic activities on the included explanatory (especially endogenous) variables is ignored or overlooked. The volatility or fragility of this kind of growth study is well-known (Levine and Renelt, 1992; Minier, 2007; Tran Van Hoa, 2007a, 2007b). The use of growth regression in this context is also not consistent with realistic economic conditions that are necessary for credible economic policy study supported earlier by Marshall and Haavelmo and currently by new-thinking experienced economists (eg, Krueger, 2007). From another perspective, various researchers on high-growth economies such as Korea (eg, Harvie and Lee, 2002) have claimed that Korea's growth had been supported by the so-called East Asia Economic Model (EAEM). This model is not a big-

bang framework where all economic, trade, industry and administration reforms emerge in a very short time span (eg, in one government election term), but it consists in fact of a sequence of policy reforms (of for example the monetary, fiscal and industry kind), that were gradually introduced over a number of years and deeply imprinted in the activities or infrastructure of the economy. This aspect of policy modeling cannot be captured by a growth regression approach where it is deliberately overlooked. In this context, the 2SLS-based findings are more appropriate for econometric analysis and efficient policy study as it has taken into account this aspect in the form of an auxiliary structural equation for the endogenous variable or for a series of auxiliary structural equations (eg, for T, FDI and services in our model).

5.5. Implications for ASEAN RTAs, bilateral FTAs and East Asia Summit FTA:

The findings as obtained above (Table 1) reveal conceptually and, importantly, empirically the foundation of economic successes and slowdowns of one important regional economy in Asia, namely the ASEAN. The findings show the importance of oil imports from the Gulf as an important contributor to ASEAN's growth. They show the importance of FDI inflows into the ASEAN as their other growth accelerator. They also show that economic and financial crises and energy shocks can impede the bloc's economic development and that appropriate policy reform provides a strong impetus to faster development and growth in the region. In this context, a Gulf-ASEAN FTA, an ASEAN Plus FTA and an APEC or EASFTA are all important regional and institutional arrangements that the ASEAN should participate to achieve their economic, trade and geopolitical benefits. From our substantive findings supported by their historical realism or consistency, the arrangements will have the strong potential to promote enhanced trade (in oil and other goods), higher FDI inflows and more service penetration of all kinds, to emulate good reforms via bilateral and plurilateral cooperation and to exchange ideas to avoid economic and financial crises and their contagion in order to promote development and growth for mutual benefits for all members. Importantly, the arrangements will provide

ample opportunities for leaders or ministerial dialogues to avoid unnecessary competition or even unhelpful friction in the economic as well as geopolitical sense. The endorsement of the world's leaders at the First East Asia Summit for an enlarged ASEAN FTA or similar frameworks where ASEAN+East Asia, ASEAN+India, ASEAN+Russia, ASEAN+US, ASEAN+EU and ASEAN+Gulf (ASEAN, 2008) or even Australia+Gulf (DFAT, 2008) trade agreements may be studied, negotiated and signed for operation appears to have the empirical support from our study.

6. Conclusion:

The paper develops a new endogenous growth-trade-gravity theory model with improved theoretical and modelling features in comparison to such standard approaches as growth regression, panel regression and CGE/GTAP, to empirically study Gulf-ASEAN oil trade and its impact on ASEAN's growth, trade and external relations. Using historical economic and oil data, the estimated model has provided useful insights and credible findings into Gulf-ASEAN oil trade and growth where credibility is measured by standard statistical diagnostic tests and, more significantly, by the Friedman-Kydland data-model consistency in the time domain. Our findings show the important effects of Gulf oil trade, FDI, regional reforms and crises on ASEAN development and growth. They also lend evidence-based support to a policy of enhanced economic and trade relation between the two regions for mutual benefits. A similar rigorous econometric study of the bilateral impact of oil trade between major GULF members and their major ASEAN trading partners would be a desirable study for more detailed bilateral policy analysis.

References:

1. ASEAN (2008), RTAs and FTAs, <http://www.aseansec.org/> and [press-8oct08-3.htm](http://www.aseansec.org/press-8oct08-3.htm).
2. Coe, D. and E. Helpman (1993), International R&D Spillovers, National Bureau of Economic Research Working paper, Cambridge, MA, No. 4444, August 1993.

3. DFAT (Department of Foreign Affairs and Trade) (2002), <http://www.dfat.gov.au/-publications/stats-pubs/DOTTS.pdf>.
4. DFAT (2008), <http://www.dfat.gov.au/publications/stats-pubs/>.
5. Frankel, J. A. and D. Romer (1999), "Does Trade Cause Growth?", *American Economic Review*, 89, 379-99.
6. Harvie, C. and Lee, H-H (2002), "New Regionalism in East Asia: How Does It Relate to the East Asia Economic Model?", *ASEAN Economic Bulletin*, 19, 123-40.
7. ICSEAD (International Center for the Study of East Asian Development) (2006 and 2007), http://www.icsead.or.jp/index_e.html.
8. Johansen, L. (1982), "Econometric Models and Economic Planning and Policy: Some Trends and Problems," in M. Hazewinkle and A. H. G. Rinnooy Kan (eds.), *Current Developments in the Interface: Economics, Econometrics, Mathematics*, Boston: Reidel, 1982, 91-122.
9. Krueger, A. O. (2007), *Understanding Context and Interlinkages in Development Policy: Policy Formulation and Implementation*, American Economic Association Meeting, 5-7 January 2007, Chicago.
10. Kydland, F. E. (2006), "Quantitative Aggregate Economics", *American Economic Review*, 96 (5), 11373-1383.
11. Levine, R. and Renelt, D. (1992), "A Sensitivity Analysis of Cross-Country Growth Regressions", *American Economic Review*, 82 (4), 942-63.
12. Minier, J. (2007), *Nonlinearities and Robustness in Growth Regressions*, American Economic Association Meeting, 5-7 January 2007, Chicago.
13. OECD (2007), http://www.oecd.org/-document/9/0,2340,en_2649_34447_1893129_1_1_1,00.html.
14. Otto, G., G. Voss and L Willard (2002), *Understanding OECD Output Correlation*, Seminar paper, Department of Economics, University of Wollongong, May 2002.
15. Reserve Bank of India (2007), <http://www.rbi.org.in/scripts/Statistics.aspx>.
16. Romer, D. (1993), "Openness and Inflation: Theory and Evidence", *Quarterly Journal of Economics*, 108, 869-903.
17. Rose, A.K. (2000), "One Money, One Market: The effects of Common Currencies on Trade", *Economic Policy*, 30, 9-30.
18. Rose, A. K. (2007) "Do We Really Know That the WTO Increases Trade? Reply", *American Economic Review*, 97(5): 2019-25.
19. Thirlwell, M. P. (2007), "India: The Next Economic Giant", Lowy Institute Paper 01, <http://lowyinstitute.org/Publication.asp?pid=154>.
20. Tomz, M, J.L Goldstein and D Rivers (2007) "Do We Really Know That the WTO Increases Trade? Comment", *American Economic Review*, 97(5): 2005-2018.
21. Tran Van Hoa (2001), *The Asia Recovery*, London: Edward Elgar.
22. Tran Van Hoa (2002a), *New Asian Regionalism: Evidence on ASEAN+3 Free Trade Agreement from Extended Gravity Theory and New Modelling Approach*, Department of Economics, University of Wollongong, mimeo.
23. Tran Van Hoa (2002b), "New Asian Regionalism and ASEAN+3 Free Trade Agreement: Theoretical and Empirical Foundation, Policy Challenges and Growth Prospects", *Chulalongkorn Journal of Economics* (Thailand), 14 (3), 366-384.
24. Tran Van Hoa (2002c) (ed.) *Economic Crisis Management*, Mass: Edward Elgar.
25. Tran Van Hoa (2004), "Korea's Trade, Growth of Trade and the World Economy in Post-crisis ASEAN+3 Free Trade Agreement: An Econometric and Policy Analysis", *Journal of the Korean Economy*, 5 (2), 73-108.
26. Tran Van Hoa (2005), "New Asian Regionalism: Evidence on the Impact of ASEAN+3 Free Trade Agreement on Its Member Countries", *Journal of Quantitative Economics*, 3 (2), July 2005, 98-109.
27. Tran Van Hoa (2007a), "Causal Empirics and Political Economy of Official Development Assistance and Development in Asia: The Case

- of Vietnam”, *Journal of the Korean Economy*, 8, 91-119.
28. Tran Van Hoa (2007b), *Foreign Aid and Development in Thailand: Causality and Political Economy*, CSES Working Paper, Victoria University, Australia.
 29. Tran Van Hoa (2008a), “Australia-China Free Trade Agreement: Causal Empirics and Political Economy”, *Australian Economic Papers*, 27 (1), 19-29.
 30. Tran Van Hoa (2008b), “Education and Economic Development in East Asia Summit Economies: A Study in China-India Public Service Efficiency and Competitiveness”, *AFBE Journal*, online access: <http://www.afbe.com/>.
 31. Tran Van Hoa (2008c), “Recent Economic Trends in the Asia-Pacific Region”, in L. Daniel (ed) *The Far East and Australasia*, London: Taylor & Francis, 2008.
 32. Tran Van Hoa and C Harvie (eds.) (2008), *Regional Trade Agreements in Asia*, London: Edward Elgar.
 33. WTO (2008), http://www.wto.org/english/res_e/statis_e/its2006_e/its06_bysubject_e.htm.