Iranian Journal of Economic Studies
Vol. 1, No. 1, Spring 2012, 91-110

The Gains of Economic Integration: Substantive Evidence for an Australia-Korea Free Trade Agreement

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Abstract

On 6 December 2006, Australia and Korea announced a joint study on a possible Australia-Korea free trade agreement (AKFTA) to promote trade and economic relations between the two countries. The paper provides empirical evidence on the possible gains and their transmission mechanism from this agreement. Significantly, it uses a new economic policy modelling approach, the endogenous gravity theory (Tran Van Hoa, 2004) to provide credible and substantive causal findings and subsequent forecasts, as distinct from geopolitical economy arguments and scenarios, to evaluate the possible gains of the AKFTA to inform discussion and policy advice.

Keywords: Economic integration, Australia-Korea free trade agreement, economic modelling, endogenous growth and trade theory, economic and trade policy.
JEL Classification: F13, F43, C54

1. Introduction

Regional trade agreements that consist of free trade agreements (FTAs) and customs unions (e.g., the European Union), have proliferated in recent years, especially in the Asia and Oceania regions (ASEAN, 2012).

Received:25/1/2012 Accepted: 23/5/2012

Significant bilateral FTAs for Australia include, for example, the Australia-US, Australia-Thailand, Australia-Singapore, Australia-New Zealand Closer Economic Relations, and the currently under negotiation or consideration FTA proposals such as the Australia-China, Australia-Japan and AKFTA (DFAT, 2012a). Korea which, like China and Japan in East Asia, traditionally has had reservations about FTAs, has recently shown interest to participate in FTAs. In this context, it has completed or been in negotiations for a number of FTAs. These include the Korea-Chile (2004), Korea-Singapore (2005), Korea-Europe (2005), Korea-US (2007), Korea-Canada, Korea-India, Korea-Mexico, and Korea-ASEAN (Ahn, 2007). A number of reasons have been put forward to explain a new and important regional development, namely the AKFTA, which is under the acceptable flexibilities of the World Trade Organisation principle of the most-favoured-nation rules and their extensions (WTO, 2012), and which has the objective of liberalising trade in goods, services and investment for member countries for mutual economic (growth) benefits. The AKFTA is an important regional trade agreement within this development between Australia and Korea and has government support at the highest level. One important reason for it is that the two countries have, over the past 50 years or so, had growing and strong trade, economic, cultural and military relations (DFAT, 2012a).

Previous studies on the AKFTA consist mainly of government policy papers, survey-based industry submissions and commissioned computable general equilibrium (CGE) and global trade analysis project (GTAP) reports (see details in DFAT, 2012b). As the CGE/GTAP analysis is restricted by its assumed causal structure and scenario set-up nature, its confidence in practical policy study is sometimes questioned (see comments in Hertel et al. 2007). The paper is a rigorous study on trade-growth causality with practical and credible policy implications to contribute to the AKFTA causal analysis and policy debate. It carries out research into these causality questions in two parts. First, it analyses the major economic and trade patterns between the two countries over the past two decades or so for relevant historical correlative support of an AKFTA. Second, it significantly uses a new economic policy modelling approach, the endogenous gravity theory (e.g., Tran Van Hoa, 2004 for an earlier application), to provide substantive causal empirical evidence, as distinct from descriptive, scenario-based and geopolitical economy arguments, as important inputs to evaluate the potential predictive

benefits and risks of the AKFTA and to improve informed discussion and policy advice.

The plan of the paper is as follows. Section 2 surveys Australia-Korea's historical trade in the past two decades or so and its correlation to growth in the two countries. Section 3 describes a new model of endogenous growth-trade and the data used. Section 4 reports and evaluates the empirical findings. Section 5 discusses a number of major policy implications relevant to the AKFTA. Conclusions are given in Section 6.

2. The AKFTA and Historical Evidence

The AKFTA emerges at the end of a long historical relationship between Australia and Korea. The relationship started with the participation of Australia in the 1950-51 Korea War where more than 10,000 Australian soldiers were sent to Korea and more than 300 of them lost their lives to defend the country's nascent democracy and to support a strong international coalition then. While it is well-known that Korea and Japan had been reluctant in signing an FTA with any country until very recently, the AKFTA, in a similar context to the currently negotiated Australia-China and Australia-Japan FTAs, is a persistent effort of recent Australian Prime Ministers who see a useful role for Australia to engage more in the economic and trade growth path of the region. An AKFTA has the potential of significant economic benefits to both countries. In addition, an AKFTA is claimed to be a continuing effort to build a strong commercial relationship and is based on the two countries' *complementary* economies, both being developed, and Organisation for Economic Co-operation and Development members (DFAT, 2012a).

The strong commercial relationship alluded to by the political leaders of Australia and Korea above refers to the growing trend in exports and imports between the two countries which started in the 1960s but especially since the early 1980s when data were first collected. Since the early 1990s, this trend has generally shown a consistent growth path (Figure 1) in which essentially imports from (and less for exports to) Australia were seriously interrupted briefly by the contagion of the 1997 Asian financial crisis, and more recently, during 2008/09, by the global financial crisis (GFC). More specifically, the deficit for Korea of the Korea-Australia total trade started at $A1186 in 1990, rose to $A9185 in 2008, but fell to $A6286 in 2009. This deficit as a ratio of Korea-

Australia total trade fell to 14.42 per cent in 1998 but peaked at 43.23 per cent in 2008. The average deficit for 1990-2009 was 32.56 per cent. In spite of this growing trend, the share of Australia-Korea trade in relation to Korea's total global trade had been small (Figure 2) ranging only from 1.11 per cent in 1994 to 2.28 per cent in 2008, and with an average of 1.47 per cent for the period 1990-2009. This relative small trade share is expected to reflect the impact of the AKFTA on trade and growth in the two countries.

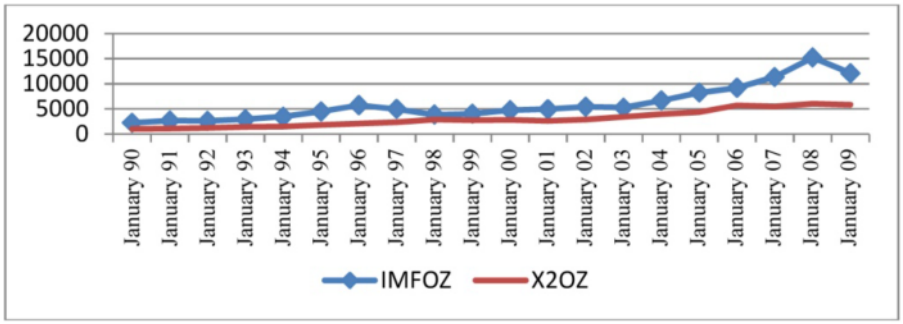

Figure 1: Australia's Exports and Imports with Korea, 1990 to 2009, USD Mil

Source to Figures 1 and 2: ADB (2012).
Note: IMFOZ=Korea's imports from Australia, X2OZ=Korea's exports to Australia.

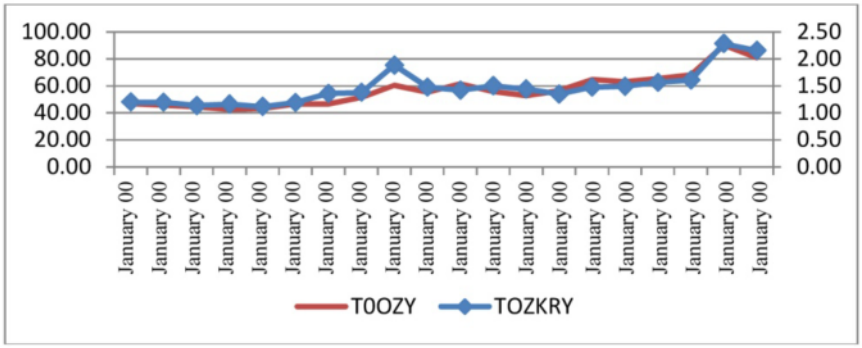

Figure 2: Korea Trade and Korea-to-Australia Trade Share,1990-2009,%

Note: TOZKRY=Korea-Australia's total trade/GDP (second axis). T0OZY=Korea's total trade/GDP (excluding Korea-Australia share, primary axis).

At the commodity level, the official economic and trade data in Australia show at face value however that, Australian exports of resources and energy, it is claimed, already made a significant contribution to Korea's economy and its export growth (DFAT, 2012a). Korea is Australia's fourth-largest export market (goods and services exports came to $A18.4bn in 2009-10) and fourth-largest overall trading partner (total two-way trade was $A25.8bn in 2009-10). Resource commodities (energy and mineral products) plus simply-transformed metals such as aluminium and copper accounted for over 70 per cent of Australian merchandise exports to Korea. The largest export items in 2009-10 were coal ($A4.3bn), iron ore ($A2.9bn), crude petroleum ($A.9bn) and aluminium ($A780m). The largest agricultural exports were beef ($A599m in 2009-10), sugar ($A465m in 2009) and wheat ($A218m in 2009-10). Education and recreational travel exports (worth $A1.1bn and $A589m respectively in 2009-10) were Australia's largest services exports. Passenger motor vehicles, refined petroleum, and telecommunications equipment were Australia's largest import items from Korea.

In contrast and from a Korean perspective, Korea has continually and dismally had a trade deficit in favour of Australia. As mentioned earlier, Australia's trade with Korea is dominated by the former's strength in exports of resources, energy, education and tourism, while Korea's strength is in exports of manufactured goods to Australia. The trade imbalance is growing unabated, it seems (Figure 1). A comprehensive AKFTA would, it is claimed, further strengthen and deepen the bilateral commercial relationship by lowering input costs through reduced tariffs and multiply the contribution of Australian exports to Korea's economic and trade performance. Finally, this FTA would allow Australian service providers to play a great role in assisting Korea to achieve its ambition of becoming a North Asia services hub (DFAT, 2012a).

It is within this trade environment that an AKFTA was contemplated. And it is perhaps this environment, in addition to Korea's well-known domestic opposition to trade agreements, that an AKFTA has been advocated generally at the behest of the Australian government. It can be argued that an FTA is mutually beneficial whether it is with a surplus or deficit trading partner. But this argument assumes essentially that an FTA is expected to liberalise trade and an enhanced trade (in goods, services and investment) is expected to increase development, growth and living

standard for FTA members (or even for countries outside the FTA – see Wan and Zhou, 2005). How credible is this causal trade-growth assumption in rigorous analysis in practice in the case of an AKFTA? The sections below use a new and appropriate approach, the endogenous gravity theory (EGT), to modelling and testing this research question or assumed causality between trade and growth for the two countries, Australia and Korea. The objective is to provide substantive empirical support (or a lack of it) and subsequently a credible forecasting or predictive model to study a viable AKFTA, and to improve debates, discussion and negotiations on the major aspects of the AKFTA.

3. A New Egt Model of Australia-Korea Trade and Growth

In a number of recent papers, Tran Van Hoa (e.g., 2002a, 2007, 2008, 2010) uses a new, effective and general modelling approach (the EGT) to empirically study comprehensive trade and economic 'conditions' and their causal link to growth in major developing countries in Asia. This kind of model is built on the work of gravity (Frankel and Romer, 1999), economic integration (ASEAN, 2012) and non-steady-state theories (Kong, 2007), and is more appropriate for regional FTAs (or AKFTA) where more considerations (e.g., foreign direct investment and services) than just WTO-focused merchandise trade are involved.

The major and novel features of an EGT trade-growth model which are major improvements in comparison to existing popular models are: it incorporates explicitly the interdependence (reverse causality or endogeneity) between trade, growth and major macroeconomic conditions or activities in the trading economies (Krueger, 2007; Kilian 2009); it takes into account the simultaneous influence of a country's macroeconomic conditionality in growth and trade; it assumes no *a priori* (eg, linear or log-linear as conventionally used in CGE/GTAP/DSGE models) functional form; it incorporates FDI, services (two FTA major focuses), and other events (crises and domestic reforms) that have affected trade and growth in the region in recent years. Other existing modelling approaches for this kind of 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 DSGE is restricted by consumption preferences, production process, and log-linear functional form that may not be empirically credible. The gravity

theory (Frankel and Romer, 1999) is beset with serious cross-country heterogeneity and lack of reverse causality. 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). Importantly, previous EGT studies have also demonstrated the excellent modelling performance of the EGT model when this performance is assessed by the Friedman (1953) "fruitfulness" or Kydland data-model consistency (2006) criteria. Finally, as the economic variables in the EGT model are expressed as their rates of change (see the derivation in Tran Van Hoa, 2004), 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-run outcomes in the sense of Granger if all of these variables are integrated on degree zero.

The Model

The EGT trade-growth model for Australia and Korea to study the causal aspects of trade and growth in an AKFTA in an economic integration theory (FTA) and microeconomic framework and with features relevant to the two countries in their development in the past 20 years so can be briefly described as follows:

We assume, for an open economy with FTA commitments, an implicit function between trade (T), income (real GDP), foreign direct investment (FDI), services (F), shock or crisis or reform events (S), trade partner GDP (GDPT), real exchange rate (XR), terms of trade (TT), other economic (X) and non-economic variables (W), then (GDP,GDPT,T,FDI,F,XR,TT,X,W)=0. Normalising this system to focus on GDP and T and their conventional growth and trade theory postulates, we then have in implicit form GDP(.) and T(.)

$$GDP=GDP(T,FDI,F,S) \quad (1)$$
$$T=T(GDP,GDPT,XR,TT,S) \quad (2)$$

As (1)-(2) are not statistically estimable, we can use their planar approximations (Tran Van Hoa, 1992; Baier and Bergstrand, 2008) and

invariant transformations for empirical implementation as

$$y=a1 + a2t + a3fdi + a4f + a5S + u1 \quad (3)$$
$$t=p1 + p2y + p3yt + p4xr + p5tt + p6S + u2 \quad (4)$$

Where the u's denote error terms or neglected variables (Frankel and Romer, 1999) and y, yt, t, fdi, f, xr and tt are the rates of change of GDP (growth), GDPT, T, FDI, F, XR and TT respectively.

The model's rationale can be described as follows. In equation (3), Korea's GDP growth (y) is assumed to be or to be tested as being dependent on its trade in goods with Australia and other trading partners (T), FDI and financial services (F), crises, shocks or policy reforms (S). But this trade is endogenous in (4) where it is assumed to be affected by conventional gravity factors such as y (and implicitly by FDI and F) and yt (Korea's main trading partners' GDP) and other economic activities (see below), trade-related policies (XR and TT) – see Coe and Helpman, 1993 – and external or internal shocks or structural change (S) – Johansen, 1982; Tran Van Hoa, 2004, 2008, 2010) in Korea and its trading partners.

Assuming for convenience and for lack of sufficient sampling sizes for the data, that GDP of Korea's major trade partner (i.e., Australia) is a proxy for all variables reflecting its own economic activities in addition to policies and shocks, then equation (4) for T in our two-simultaneous equation model simply assumes more specifically that Korea's trade with Australia is affected by the exogenous factors such as the GDP of Australia and other trade partners (named YT), exchange rates (XR) – see Rose (2000), and S – see Johansen (1982) and Tran Van Hoa (2004). Equation (4) is in fact a derived demand equation for tradable goods (or even transacted services and investment) reflecting essentially its demand [by its trading partner(s)] and Korea's domestic supply conditions, as postulated in standard microeconomic and international trade theory. The model's exogenous variables explicitly constitute Korea's domestic and international macroeconomic conditioning environment (the so-called instrumental variables IVs) that simultaneously affect Korea's GDP and T. These IVs include also fiscal, monetary, industry policy, inflation pressure, population (a gravity theory proxy, Frankel and Romer, 1999), events such as FTA and WTO memberships. The tests for significant causality between Korea's trade with Australia and its impact on Korea's

growth are then based on the estimation and testing of equation (3) above by appropriate limited-information (i.e., 2SLS) or more appropriately system estimation methods (i.e., 3SLS or GMM) and conventional testing procedures. In these estimations, we assume that the IVs satisfy the relevance and exogeneity tests.

An EGT model of growth and trade for Australia from an Australian perspective is similarly specified and data-sourced.

The Data

Data for the estimation were obtained from the Asian Development Bank, US Department of Agriculture-Economic Research Service, and national statistical offices. For consistency with previous studies, all economic data (except for growth calculation) 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 goods (exports + imports), FDI, financial services, money supply, and government budget (B), all divided by Korea's GDP. Other non-ratio variables include population and binary variables representing the occurrence of the economic, financial and other major crises, policy shift or reforms over the period 1990 to 2009. 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, Korea's trade with Australia and its possible causal impact on Korea's growth, and vice versa for Australia. This bilateral causality is the fundamental foundation of an AKFTA as discussed earlier.

4. Substantive Empirical Findings and Empirical Fit

The empirical findings for the structural equations (3) and (4) in the two-simultaneous equation model of Korea's growth as a result of trade with Australia, and vice versa for Australia, and their testable determinants as postulated are given in detail in Table 1. 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 parameters. Or it can be regarded as a structural equation in a simultaneous equation model with circular causality. As a result and for consistency in efficient impact studies, an IV system estimator such as the 3SLS or GMM has to be used for the estimation. The IVs in this case are all the exogenous variables incorporated or assumed for the model. As discussed above, these IVs reflect the macroeconomic conditioning environment of Korea and its major trading economy in an AKFTA focus, namely Australia. In addition, all IVs are assumed to satisfy the relevance and exogeneity tests. In the table, the model's statistically significant empirical findings for Australia's growth and trade as a result of trade with Korea are also reported. In the Australian model, all variables are similarly defined and sourced.

Table 1. Korea-Australia Trade and Its Impact on Korea-Australia Growth
EGT Modelling in Flexible Structural Form – GMM Estimation
1990-2009

	Korea		Australia	
	Growth	Korea-to-Australia Trade	Growth	Australia-to-Korea Trade
Const	7.729**	-31.113**	1.618**	-33.422**
Korea-Australia Trade/GDP	-0.097**		-0.105**	
Other Trade/GDP	0.155**		0.071**	
FDI/GDP	NS		NS	
Services/GDP	0.014**		NS	
Real Exchange Rate	0.147**	0.241*	NS	0.929**
Terms of Trade	NS	-1.305**	0.673**	4.886**
Australia Growth		4.480**		NS
Korea Growth				1.717**
US Growth		-4.159**		
Japan Growth		6.223**		4.207**
China Growth		1.531**		2.098**
Gulf War 93	NS		3.302**	
Asia Crisis 97/98	-6.693**	51.643**		25.463**
Post Asia Crisis 99	6.579**	-54.375**		-29.643**
Terrorist Attacks 01	NS		-2.892**	
Iraq War 03	-4.709**			6.224
Reform 04			1.728**	

	Korea		Australia	
	Growth	Korea-to-Australia Trade	Growth	Australia-to-Korea Trade
Pre GFC 07	1.988**	-11.949**	NS	NS
Mid-GFC 08		52.448**		25.698**
GFC 09	-1.778**	NS	-4.494**	-15.055*
R-Squared	0.952	0.940	0.901	0.880
DW	2.498	3.163	2.770	2.660

Note. *=significand at 10%, **=significant at 5%. NS=not significant. The p-value for overidentifying restrictions test is 0.588 for Korea and 0.078 for Australia.

Judged from the table, the statistical performance of the estimated EGT models for growth and trade in Korea and Australia above appears good in terms of the conventional R^2 and DW values. The performance of the models can also be evaluated, more appropriately for realism (or credibility), by the Friedman (1953)-Kydland (2006) data-model consistency criteria where the trend gap and discrepancy between historical data and their model-based predictions have to be tight and small. This performance is given in Figures 3-4 for Korea's growth and trade with Australia, and in Figures 5-6 for Australia's growth and trade with Korea. A visual observation indicates that the models emulate very well the troughs, peaks and turning points of output and trade fluctuations in the two countries over the whole period. The credibility of our policy implications is based on this empirical fit of the estimated models (see Hertel et al., 2007 for this argument).

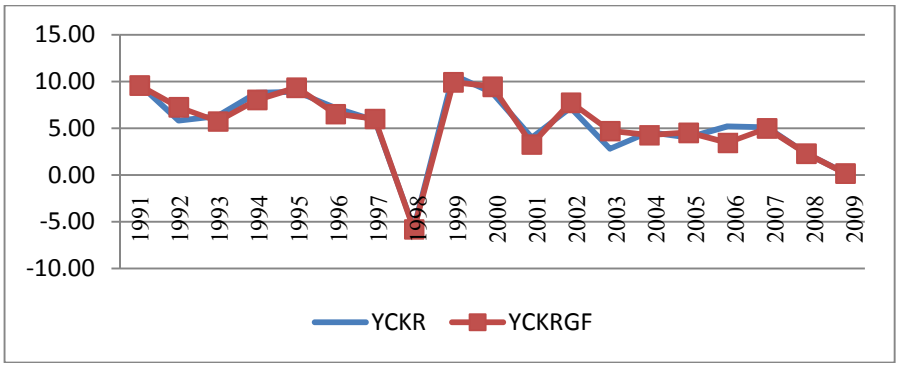

Figure 3: EGT Modelling Performance of Korea's Growth - Friedman and Kydland (2006) Evaluation Criterion

eNote: YCKR=Korea's growth, YCKRGF=YCKR as predicted from the EGTmodel.

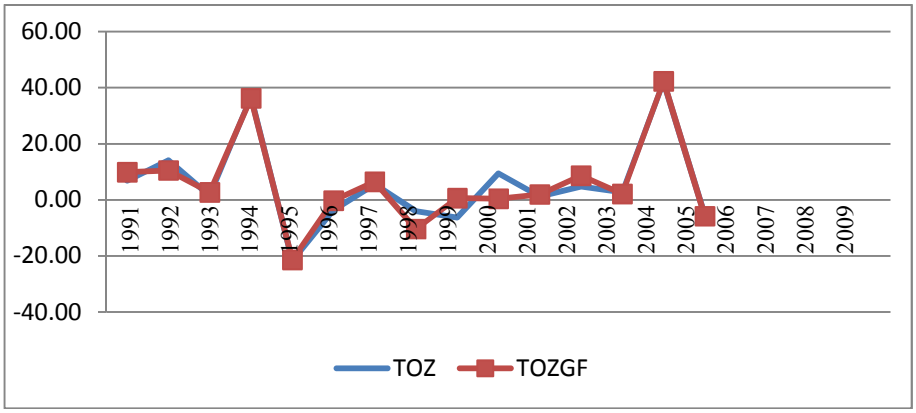

Figure 4: EGT Modelling Performance of Korea-to-Australia's Trade - Friedman and Kydland (2006) Evaluation Criterion

Note: TOZ=Korea-Australia trade/GDP, TOZGF=TOZ as predicted from the EGT model.

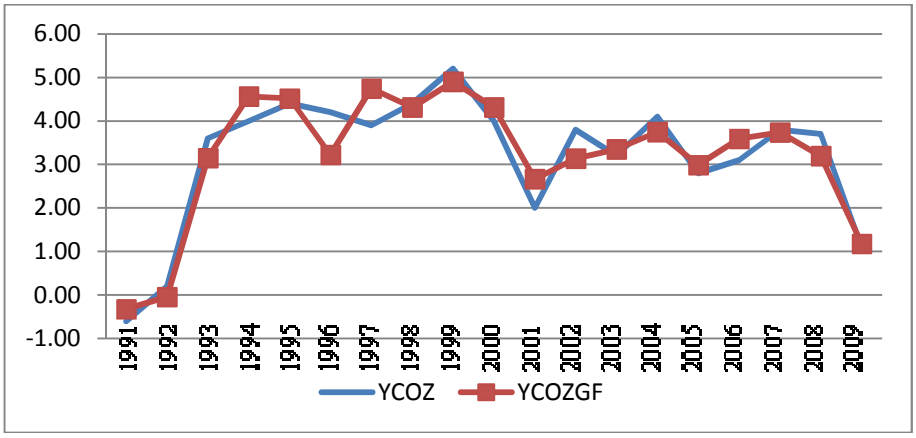

Figure 5: EGT Modelling Performance of Australia's Growth - Friedman and Kydland (2006) Evaluation Criterion

Note: YCOZ=Australia's growth, YCOZGF=YCOZ as predicted from the EGT model.

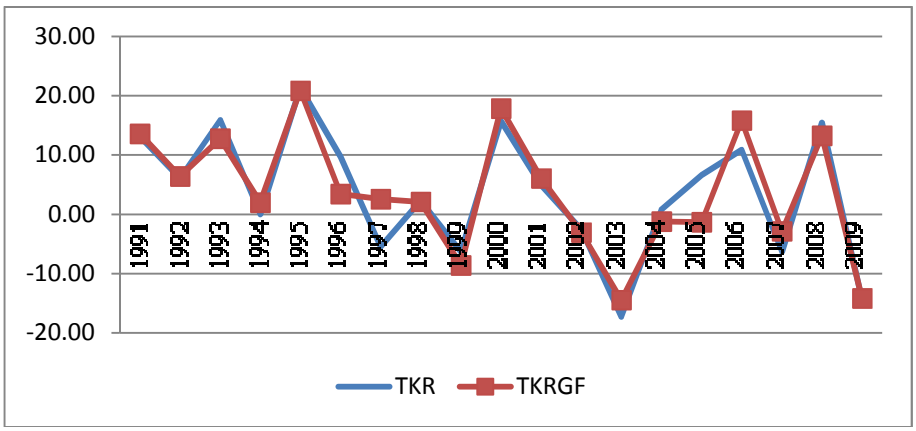

Figure 6: EGT Modelling Performance of Australia-to-Korea's Trade - Friedman and Kydland (2006) Evaluation Criterion

Note: TKR=Australia-Korea trade/GDP, TKRGF=TKR as predicted from the EGT model.

5. Policy Implications

The findings above reflect the empirical structure of growth and trade in Korea and Australia in the context of EGT modelling; they can be used as a so-called forecasting model for predictive policy analysis by means of conventional deterministic and stochastic simulation. What are then the implications of our substantive empirical findings on trade-growth causality for discussion, debate or even negotiations or trade policy formulation relevant to an AKFTA?

Does Australia-Korea Trade Significantly Affect Korea's and Australia's Growth? - The major claim by Australia in pushing for an AKFTA and based on CGE/GTAP analysis for example is that this FTA will enhance Korea's economic performance and export growth (DFAT, 2012a, 2012b). Our empirical findings from the growth equation where the trade determinant is endogenised in an economic integration framework as reported above appear not to support this assertion while they, however, indicate a significant positive impact of Korea's total trade (excluding Australia) on its growth. In fact, there is evidence that Australia-Korea openness [i.e., (exports+imports)/GDP] has a small but damaging effect (with a statistically significant elasticity of -0.097) on

Korea's growth. The findings are robust with respect to several modelling specifications [or 'computational experiments' as advocated by Kydland (2006) recently] of a bilateral kind between Korea and Australia. There are two important policy implications. First, a mere observation of Australia's export surge to Korea and Korea's high growth indicates at best a descriptive or correlational relationship and surely not a causal one for credible policy use. Second, substantive empirical support that is based on rigorous econometric research may indicate the opposite. The findings of a negative impact of trade on growth would also not be surprising in two aspects. First, the impact of trade on growth is still controversial in the international literature. Second, a careful study of Australia's export share to Korea data over the past 20 years shows the relatively small proportion of Australia's trade to Korea and *a fortiori* to its economic growth (see Figures 1 and 2). In 1995 for example, Korea's share of exports plus imports to and from Australia amounted to a mere 1.19 per cent of its GDP, as compared to 46.61 per cent for Korea's trade with other partners. While this trade share has improved to 2.15 per cent in 2009, it was still negligible as Korea's total trade has also increased and reached 80.95 per cent of its GDP in the same year.

Interestingly, the findings reported in the table also show similar findings on the contribution of Australia-to-Korea trade to Australia's growth (with a statistically significant elasticity of -0.105) from an Australia's perspective. The reasons for these findings can be similarly advanced as above for Korea. For the relative trade for example, the Australia-to-Korea trade share was 1.01 per cent in 1990, and peaked at 2.14 per cent in 2008. In 2009, this share fell to 1.83 per cent as a result of the GFC. The effects of Australia's total trade on its growth (0.071) are however much weaker than those found for Korea (0.155). These reflect, to some extent, Korea's higher dependence on trade to drive its growth.

What determines Korea's and Australia's Trade? - The model of trade (which is endogenised in our EGT approach) for Korea and Australia above is a structural equation whose elastities and impact parameters are simultaneously affected by traditional demand factors (e.g., local and international demand, exchange rates, and terms of trade) and the two countries' economic conditionality, regional and global contagion. The findings in the table lend strong statistical support to the

relevance of these contributing factors. More specifically, while a depreciation of the local currencies has the effect of boosting, as expected, both Korea's and especially Australia's bilateral trade (0.241 and 0.929 respectively), their terms of trade have opposite causal effects and also different impact size (i.e., -1.305 versus 4.886). The discrepancy here may be explained to some extent by the structure of the economy (e.g., principally manufacturing in Korea and resources-based in Australia) and its impact on its terms of trade.

Are Services and FDI Important Determinants of Korea's and Australia's Growth? – Services are a sector that Australia expects to increase substantially in an AKFTA (DFAT, 2012b). Surprisingly, the empirical findings reported in Table 1 show that both services and FDI do not significantly contribute (and not reported) to the two countries' economic performance as traditionally expected and in an FTA. While services were found to significantly affect Korea's growth, they were not in the case of Australia. FDI was found insignificant in the growth equation for both Korea and Australia. This can be explained on two grounds. First, the finding is consistent with the results of previous studies on FDI in general or in Korea in particular that indicate that, apart from the findings by Levine and Renelt (1992) and other related studies (Minier, 2007) that found capital accumulation, development stages and labour skills as three main causes of growth, the link of FDI to economic performance is still elusive in empirical studies. Second, the FDI data for both countries show great fluctuations of a non-stationary type during the period in focus. This would make a statistical study of its causal link to growth more difficult.

The Role of Crises in Korea's and Australia's Economic Performance - While sudden crises, shocks and major gradual policy reforms have been acknowledged as important sources of fluctuations in economic performance worldwide (see Johansen, 1982; Tran Van Hoa, 2004), they have rarely been incorporated in such well-known economic policy modelling studies as the CGE/GTAP, gravity theory, growth 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. The findings from the table above indicate that all shocks and reforms incorporated in our study do have a

statistically strong impact on Korea's and Australia's economic growth (and trade), and point to the importance of effective crisis avoidance and management strategy through appropriate national policy or regional and global co-operation to maintain development and growth. The specific finding that the 1997/98 Asian financial crisis negatively affected Korea but not Australia is particularly interesting: it supports the view of Australian economists (Tran Van Hoa, 2002b) that with its redirection of trade away from Asia to the European markets during the crisis, the severely damaging effects of the crisis on its growth were to some large extent avoided. The GFC however affected both Korea's and Australia's growth. 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 for informed debate and credible policy analysis.

6. Conclusion

In the previous sections, we have focused on an important regional development in East Asia and Oceania within the context of globalisation and bilateral trade liberalisation. This development, namely an AKFTA, has necessitated numerous studies on its aspects, features, and expected outcomes (DFAT, 2012b). The paper provides, from a rigorous econometric perspective, additional substantive evidence and useful insights to improve the quality of debate and discussion and subsequent policy analysis. Our findings indicate that, based on historical data and credible modelling, Australia-Korea trade share is relatively small when compared to that of Korea's and Australia's other major trade partners, and that, econometrically, this trade impact on the Korean and Australian economy is negative but fortunately small. Perhaps, Australia-Korea trade may enhance Korea's manufacturing exports (as claimed by Australia) which are then transmitted into the country's higher growth, but this transmission mechanism, effective or not, is an unknown quantity at the moment and needs further research. Services and especially FDI appear not to be important sources of Korea's and Australia's economic performance, and also need further research. However, the findings caution against the risks to expected benefits from an AKFTA in the sense that crises, shocks, 'bad' policy reforms, and adverse geopolitical developments of trade partners (see for example Toner, 2007 for political

concerns on an Korea-US FTA) in the region or globally, can hamper or even undo the benefits of an AKFTA or other decades-long achievements of the economies in the region.

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