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## **Further Analytical Study on the Likely Economic Impact of an FTAAP - Paper**

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**Further Analytical Study on  
the Likely Economic Impact of an FTAAP**

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Australia, China, Korea, New Zealand**

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## ABSTRACT

In Lima last year, the APEC Leaders gave instruction to conduct a research for “further analysis on the likely economic impact, benefits and challenges of an FTAAP” following their initial call for “further studies on ways and means to promote regional economic integration, including a Free Trade Area of the Asia-Pacific as a long-term prospect” at the 14<sup>th</sup> APEC Economic Leaders’ Meeting. In the course of serving these goals, the researchers for this paper concluded that the likely economic impact of an FTAAP possesses great potential to boost further economic growth in the region when service sector liberalization, trade facilitation schemes and rules of origin (RoO) standardization are embedded within. All APEC economies have already benefited from being within a mere liberalized trade zone, and the additional gains expected for all APEC members from further regional integration have been statistically verified by means of the most commonly used methods in examining the feasibilities of proposed FTAs – the gravity model and CGE analysis. Particularly, in terms of welfare, the magnitude of gains were found to increase as the scenario built up in both Static and Capital Accumulative models: 1) Basic Scenario of Trade Liberalization (US\$48 bil.+ / 114 bil.+), 2) Added Trade Facilitation through 5% trade cost reduction (US\$256 bil.+ / 504 bil.+), and 3) Added Liberalization of Trade in Services through 10% Trade Barrier Reduction (US\$271 bil.+ / 527 bil.+). Furthermore, the effects of standardization of the RoO have been estimated to be 32% net positive trade creation effects under full cumulation using Gravity analysis.

## I. Introduction

The Economic Leaders of APEC met in Lima, Peru, in November 2008, welcomed the progress report from Ministers and officials, and endorsed the 2009 work plan for the APEC Regional Economic Integration (REI) Agenda to accelerate efforts in all related areas by building upon past accomplishments. Leaders have also recognized that the goal of free and open trade and investment in the Asia-Pacific region will be achieved through a series of unilateral reform measures combined with bilateral, regional and multilateral liberalization. In line with that, Leaders commended the progress made in examining the options of a Free Trade Area of the Asia-Pacific (FTAAP) as a long-term prospect, and instructed Ministers and officials to continue with further analytical work on the likely economic impact of an FTAAP and a discussion on the possible capacity building requirements for future negotiations if any.

Responding to the Leaders' instruction, a research consortium composed of experts from Australia, China, Korea and New Zealand was launched in July 2009 to conduct further analytical work on, *inter alia*, the likely economic impact of an FTAAP. The objective of this consortium is to produce analytical research that will best deliver the intentions embodied in the 2008 Economic Leaders' Declaration.

The main purposes of this study are 1) to provide a more concrete rationale for APEC member economies discussing a possible FTAAP by addressing both the possible advantages and challenges, 2) to raise public awareness of APEC's work as the premier free trade advocate in the region with long-term objectives that include regional integration, and 3) to analyze the combined economic impacts of existing plurilateral FTAs in the APEC region (e.g. ASEAN, NAFTA, the three ASEAN<sup>1</sup>+1s for China, Japan and Korea, and the TPP). In serving these purposes, the researchers of this paper have emphasized the need to complete the work in an unbiased and transparent manner without favoring any specific option or model.

To provide policy makers more realistic and practical forecasts, the benefits linked to the core FTA chapters (liberalization for trade in goods and reduction of barriers in service trade) were analyzed in addition to the economic impact of trade facilitation and rules of origin (RoO) standardization either quantitatively or qualitatively. The same methods used in feasibility studies for proposed FTAs between much smaller groupings of economies – the Gravity model and CGE model (GTAP 7 database) – were adopted. The detailed methodology and scope are presented in the relevant chapters. In the course of analyzing the economic benefits, the study also attempted to identify challenges arising from an FTAAP.

Faced with the current economic crisis and the rapidly approaching Bogor Goal target year for the developed economies, the urgent task is to revive and expand the region's economic dynamism. The restoration of confidence is vital for reversing the recent steep setbacks. In this regard, the exploration of an FTAAP, coupled with other trade and investment liberalization efforts, may be able to capture APEC Leaders' political will to forge regional economic integration and, consequently, send a positive signal to the region's individual and collective markets.

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<sup>1</sup> For the purpose of the study, non-APEC ASEAN member economies (Cambodia, Laos and Myanmar) will be excluded from the analysis.

## **II. Regional Trade Agreements in the APEC Region**

This chapter briefly describes the existing plurilateral agreements in the APEC region. It also outlines the main features of possible agreements currently under consideration.

### **1. Overview of Existing Plurilateral Agreements**

#### *North American Free Trade Agreement (NAFTA)*

The North American Free Trade Agreement between the United States, Canada, and Mexico officially came into force on 1 January 1994. NAFTA created the world's largest free trade area, which now links 444 million people producing \$17 trillion worth of goods and services. The agreement has two supplements, the North American Agreement on Environmental Cooperation and the North American Agreement on Labor Cooperation.

The objectives of NAFTA are to eliminate trade barriers on goods and services within the continent and facilitate their movement across the borders; promote conditions of fair competition in the free trade area; increase substantially investment opportunities in the territories of the parties; provide adequate and effective protection and enforcement of intellectual property rights in each party's territory; create effective procedures for the implementation and application of the agreement, for its joint administration and for the resolution of disputes; and establish a framework for further trilateral, regional and multilateral cooperation to expand and enhance the benefits of the agreement.

All tariffs on trade between Canada and the United States were eliminated as of January 2008. As of January 2003 virtually all tariffs between Canada and Mexico were eliminated. NAFTA calls on each of the three partner nations to make no distinction between goods and services domestically produced and those originating from the other two partners and prohibits trade-distorting performance requirements. NAFTA coverage also extends to investments made by any company incorporated in a NAFTA economy, regardless of its economy of origin. NAFTA ensures secure access for exporters. The dispute settlement process is transparent and enforceable, so the interests of exporters and business investors can be effectively defended. NAFTA includes comprehensive protection of intellectual property, including patents, trademarks, copyrights and trade secrets.

#### *China–ASEAN Free Trade Agreement*

The ASEAN–China FTA is the first free-trade agreement launched by ASEAN collectively and a non-ASEAN economy. The negotiation process was initiated in November 2002, and it was conducted along sectoral lines. The agreements on goods and services came into effect in July 2005 and July 2007, respectively. The agreement on investment was signed in August 2009. This concluded the negotiation of the ASEAN–China FTA as a whole. Negotiations are under way on the second package which deals with market access on services and other amendments.

The objectives of the ASEAN–China FTA are to strengthen and enhance economic, trade and

investment co-operation between the parties; progressively liberalize and promote trade in goods and services as well as create a transparent, liberal and facilitative investment regime; explore new areas and develop appropriate measures for closer economic co-operation between the parties; and facilitate the more effective economic integration of the newer ASEAN member states and bridge the development gap among the parties.

Bilateral trade between China and ASEAN economies has rapidly expanded during the past two decades, reaching US\$231.1 billion in 2008. At present, the two sides are each other's fourth-largest trading partners. Starting on 1 January 2010, tariffs on about 93% of products traded between China and ASEAN will be lowered to zero. When completed, the China–ASEAN FTA will cover a total GDP of US\$5.2 trillion and a total trade volume of US\$4.5 trillion. This agreement will cover a combined population of 1.9 billion, more than any other free-trade agreement now existing.

### ***Japan–ASEAN Comprehensive Economic Partnership Agreement***

The Japan–ASEAN Comprehensive Economic Partnership Agreement (CEPEA) was signed in April 2008. It came into force on 1 December 2008. It covers, *inter alia*, trade in goods, services and investment; dispute settlement; sanitary and phytosanitary measures; technical barriers to trade; intellectual property rights; and economic cooperation. This agreement is in addition to the already existing and prospective bilateral EPAs/FTAs between Japan and individual ASEAN members.

The main objectives of the ASEAN-Japan CEPEA are to minimize barriers and deepen economic linkages between ASEAN and Japan, lower business costs, increase intra-regional trade and investment, increase economic efficiency, and create a larger market with greater opportunities and larger economies of scale for the businesses of both ASEAN and Japan.

The ASEAN-Japan CEPEA represents a market of 590 million people and a total GDP of US\$4.9 trillion. Within 10 years of the ASEAN-Japan CEPEA entering into force, Japan is to repeal tariffs on 93% of imports from ASEAN by value and six major ASEAN members – Brunei, Indonesia, Malaysia, the Philippines, Singapore and Thailand – are to eliminate tariffs on 90% of imports from Japan, including automobiles.

### ***Korea–ASEAN Free Trade Agreement***

The ASEAN–Korea FTA was also negotiated through a sectoral approach. The agreement on trade in goods was signed in August 2006, and the services trade agreement was signed in November 2007. The signing of the investment agreement in June 2009 marked the completion of the ASEAN-Korea FTA negotiation process.

The objectives of the ASEAN–Korea FTA are to move towards deeper economic integration between the two regions through progressive elimination of all forms of barriers to trade in goods, services and investment and through trade and investment facilitation and economic cooperation measures. The ASEAN–Korea FTA will include provision for flexibility, including special and differential treatment, such as technical assistance and capacity building programs, especially for the newer ASEAN Members to address the different levels of development among the member economies and enable them to participate fully and to obtain

full benefits from the ASEAN–Korea FTA.

In the past two decades, bilateral trade between ASEAN and Korea has risen from US\$8.2 billion in 1989 to \$90.2 billion in 2008. Korea's investment in ASEAN economies has also increased from \$200 million to \$6.8 billion. At present, ASEAN is Korea's fifth-largest trading partner, and Korea is ASEAN's third largest. By lowering trade barriers under the FTA framework, it is predicted that intra-trade and investment between ASEAN and Korea will rise to an equivalent of \$150 billion by 2015.

#### ***ASEAN – Australia – New Zealand Free Trade Agreement (AANZFTA)***

AANZFTA involves the 10 economies of ASEAN as well as Australia and New Zealand. Negotiations began in early 2005. After 16 rounds, the Agreement was signed in February 2009. New Zealand has now concluded the internal requirements necessary to bring AANZFTA into force. The agreement will enter into force 60 days after the date which Australia, New Zealand and at least four ASEAN Member Economies will have notified each other of the completion of their necessary requirements. The agreement creates a free trade area of more than 600 million people and an estimated GDP exceeding US\$2.7 trillion.

The key objectives of AANZFTA are to liberalize and facilitate trade in goods through progressive elimination of tariff and non-tariff barriers on substantially all goods traded among the parties; progressively liberalize trade in services among the parties, with substantial sectoral coverage; facilitate, promote and enhance investment opportunities among the parties through further development of favorable investment environments; establish a co-operative framework for strengthening, diversifying and enhancing trade, investment and economic links among the parties; and provide special and differential treatment to ASEAN member states, especially to the newer ASEAN member states to facilitate more effective economic integration.

The agreement binds current tariffs and achieves progressive tariff elimination from more developed ASEAN member economies and Viet Nam on between 90 and 100% of tariff lines. It supports the development of more efficient and competitive industries by facilitating the nature of global supply chains through regional rules of origin, and it brings commercially meaningful improvements to existing WTO commitments across a range of service sectors. The agreement establishes a significant regime of investment protections, an investor-state dispute resolution mechanism, and a forward work program for market access commitments on investments. It also creates a framework for economies to make commitments on temporary business entry of natural persons that include service suppliers, goods sellers and investors. Another feature of the agreement is an economic cooperation component to assist economies with the implementation of AANZFTA and to further economic integration, including the development of sound intellectual property systems and capacity to enforce intellectual property rights. The agreement also calls for built in agendas and review mechanisms in such areas as services, investment, rules of origin and non-tariff measures to ensure AANZFTA remains a “living document” that will have ongoing commercial relevance.

#### ***Trans-Pacific Strategic Economic Partnership Agreement (P4 Agreement)***

The P4 Agreement between New Zealand, Brunei Darussalam, Chile and Singapore was the first multi-party trade agreement linking Asia, the Pacific and Latin America. The

negotiations were launched at the APEC Leaders Summit in 2002. Negotiations concluded in April 2005 after five rounds, and the P4 Agreement entered into force in 2006. The P4 partners also entered into two associated agreements: an Environment Cooperation Agreement and a Labor Cooperation Memorandum of Understanding (MOU). The P4 Agreement builds on the high-quality New Zealand/Singapore Closer Economic Partnership. In 2008, Australia, Peru, the United States and Viet Nam agreed to enter into negotiations with the P4 partners to expand the P4 Agreement, now known as the Trans-Pacific Partnership, or TPP (see section B for details).

The objective of the agreement as elaborated more specifically through its principles and rules, including national treatment, most-favored-nation treatment and transparency is to encourage the expansion and diversification of trade among the parties, eliminate barriers to trade and facilitate the cross-border movement of goods and services among the parties, promote conditions of fair competition in the free trade area, substantially increase investment opportunities among the parties, provide adequate and effective protection and enforcement of intellectual property rights in each party, and create and effective mechanism to prevent and resolve trade disputes.

Key features of the P4 agreement include the progressive removal of trade barriers on *all* goods and the use of a “negative list” approach for scheduling services commitments among the member economies. It also includes a framework for resolving trade issues that may arise in the future; a framework (established by the Labor Cooperation MOU and the Environment Cooperation Agreement) for discussing labor and environmental issues; a focus on strategic cooperation and potential to leverage off the benefits of the three treaties by encouraging cooperation among the four partners in third markets; and the potential for expanding the membership of the P4 Agreement, Labor Cooperation MOU and Environment Cooperation Agreement in the future.

## **2. Overview of Suggested or Proposed Plurilateral Agreements**

### ***East Asia Free Trade Agreement between ASEAN-China, Japan and Korea (EAFTA)***

An academic study examining a possible EAFTA was launched in April 2005. Phase One of the study finished in July 2006 with a report which concluded that an EAFTA would create an 11.2% increase in GDP as a whole. Phase Two, focusing on the implications of EAFTA on sectors, started in 2008 and was concluded in June 2009 with the recommendation of launching the EAFTA before 2012.

EAFTA will comprise a wide mix of economies at different levels of development and industrial and technological competence. Complementarities and diversities would provide for efficient regional production. The removal of various trade and investment impediments would also facilitate the full realization of East Asian production networks and the potentials of intra-regional trade as well as make East Asian production more internationally competitive.

### ***Comprehensive Economic Partnership in East Asia (CEPEA)***

CEPEA was proposed by Japan with the aim of establishing a free-trade agreement between

ASEAN, Australia, China, India, Japan, Korea and New Zealand. Phase One of an academic study was launched in 2007. It identified economic cooperation, trade and investment facilitation, and trade and investment liberalization as three pillars for CEPEA. Phase Two was launched in 2008. It recommended that governments endorse the main objective and three pillars identified in the Phase One report and consider setting a schedule to launch negotiations.

Once established, CEPEA would form the largest economic region with 3 billion people, accounting for 49.6% of the world's population, and making up 26% of the world's GDP. According to the academic study's forecast, liberalizing trade among the 16 economies would increase their GDP by 1.3 percentage points. For ASEAN alone, GDP would soar by 3.83 percentage points.

### ***Expansion of the Trans-Pacific Strategic Economic Partnership Agreement (TPP)***

The P4 Agreement was negotiated with the objective of providing a vehicle for a high-quality framework for integration in the Asia-Pacific region. P4 was always envisaged as a building block, i.e. the Agreement is open to accession by APEC economies or other states. In February 2008, the P4 partners began negotiations over an investment and financial services chapter. Though at the time still merely considering whether to joining the P4 Agreement on a comprehensive basis, the United States participated in those negotiations. In September 2008, the United States announced it would enter into negotiations to join the Agreement, now known as the TPP. In November 2008, Australia and Peru announced they would join the expanded TPP negotiations. Since then, it has been announced that Viet Nam will also participate, initially observing the negotiations as an “associate member.” The first round of TPP negotiations was scheduled to take place in March 2009 but has been postponed to allow the United States' new Administration time to conduct a general review of trade policy.

## **III. Search of a Desirable FTAAP**

### **1. FTAAP Feasibility: Challenges and Opportunities**

APEC was founded in 1989 on a common commitment to cooperate in the pursuit of economic prosperity in the Asia-Pacific region by establishing a free and open trade and investment environment through effective regional economic integration. Although the multilateral trading system has remained the basic framework for the conduct of economic relations, regional trade agreements (RTAs) and free-trade agreements (FTAs) to pursue liberalization and economic engagement have also become popular among APEC member economies.

APEC's exploration of an FTAAP is seen as a possible means to accelerate regional economic integration in the Asia-Pacific region. The 2005 *Mid-Term Stocktaking of Progress towards the Bogor Goals* emphasised the constructive role that can be played by free trade agreements and regional trade agreements in contributing to the achievement of the Bogor Goals and accelerating the WTO processes. At the same time, it recognized the necessity for such agreements to be WTO-consistent, comprehensive, transparent and truly trade-liberalising, which are also applicable to large-scale free trade agreements. In this way, a

considerable extent of the perceived adverse effects identified by business as a factor in trade transaction costs, such as the spaghetti bowl phenomenon cited above, can be mitigated.

ABAC has for some years argued for the need to ensure a lowering of trade transaction costs in the Asia-Pacific region and neutralize possible negative effects of the spaghetti-bowl effect. ABAC sees a possible FTAAP as one way to solve these problems, and in 2005 it commissioned analytical work to examine potential issues and benefits. In a comprehensive analysis of issues associated with a possible FTAAP, Bergsten (2007) argues that an FTAAP will (i) create many positive gains from free trade induced by the largest single trade bloc, (ii) be a stepping stone from which free trade member and non-member economies alike can resume multilateral DDA negotiations, (iii) be the best available “Plan B” should the DDA negotiations fail,<sup>2</sup> (iv) prevent competitive liberalizations in the Asia-Pacific region and mitigate the negative effects from proliferating hub-and-spoke type overlapping RTAs by consolidating the sub-regional trade blocs into one large umbrella, (v) revitalize APEC, (vi) relax the China-U.S. economic conflict mainly caused by the trade imbalance between the two nations, and (vii) maintain U.S. engagement in Asia.

Bergsten (2009) also recommends an FTAAP as one of the ways to improve APEC under the changes in the international trade environment. Hatakeyama (2007), Stoler (2007), and Brilliant (2008) support Bergsten’s best Plan B suggestion from 2007. They back a region-wide larger-scale free trade area, predicting that from it APEC member economies can expect 1) a larger positive trade creation effect, 2) a systematic role as a stepping stone toward global free trade by minimizing negative effects from the region’s plethora of small competitively driven RTAs, and 3) an improved cooperative relationship between APEC members in the Asia and Pacific region.

The prospective membership of an FTAAP has not yet been discussed within APEC. Some have suggested that a proposed expanded Trans-Pacific Partnership (TPP) agreement might be the fore-runner of an FTAAP, but this proposition remains to be tested.

Some more practical factors should also be considered. The creation of large-scale free trade agreements will lead to much stronger economic effects. Economic theory shows that bigger free trade agreements can generate greater benefits. However, the magnitude and incidence of such effects depend to a large extent on the geographical coverage of an agreement and the depth and timetable for the liberalization of trade and investment. Economies, both large and small, therefore tend to make careful assessments of the likely implications of a proposed free trade agreement. In the end, a decision sometimes comes down to political considerations. The purpose of this study, of course, is to shed light on the economic aspects of a possible FTAAP.

Negotiations over a large-scale free trade agreement involve a massive undertaking and require adequate systems for the management and allocation of the finances, personnel and other logistical considerations needed. These systems must be capable of clearly identifying the subjects for negotiations in order to efficiently coordinate and resolve the conflicts among the differing standpoints of each stakeholder. Below that, within each individual economy, nearly all its government departments and ministries will, at one point or other, become involved in the negotiation process so each administration is simultaneously trying to balance

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<sup>2</sup> The DDA negotiations in Geneva in July 2008 have been failed to agree on a package deal for multilateral liberalization under the WTO.

divergent interests among its own agencies. Another key issue is the identification of a vehicle for conducting negotiations and negotiating modality. The main options in this case are negotiating a new agreement, enlarging an existing agreement, forming an association between two or more free trade agreements (a process called docking), and replacing two or more existing agreements with a single agreement (merging).

Given the amount of resources devoted to a comprehensive agreement, negotiations need to be conducted efficiently. Carefully targeted capacity-building would obviously have to be another key component throughout negotiations and into the implementation phase to ensure that negotiating parties are prepared for making the right decisions.

## **2. Necessary Conditions for a Desirable FTAAP**

This section proposes some necessary and feasible conditions for an FTAAP to be a comprehensive and high-quality RTA.<sup>3</sup> Scenarios involving the selected conditions will be quantitatively investigated in Chapter IV.

First, a desirable RTA should include some essential elements for deeper integration. As summarized in Elek (2005, p. 99), desirable RTAs in APEC should satisfy the following: have a WTO-plus approach; be comprehensive in scope by liberalizing all sectors and minimizing any phase-out periods for sensitive products; be compatible with multilateral liberalization; and back simple rules of origin (RoO), transparency, and openness. Soesastro (2003) also emphasizes open accession; an MFN-based multilateral liberalization approach and the harmonization of RoO. In particular, Plummer (2007) proposes “The Ten Commandments” for highly effective FTAs, e.g. comprehensive coverage within a reasonable period of time; low and symmetrical RoO; progress in trade facilitation, such as customs procedures, intellectual property protection, nondiscriminatory foreign direct investment-related provisions, transparent anti-dumping procedures and dispute resolution; open and nondiscriminatory government procurement; a defined competition policy; and low and standardized technical barriers to trade.

Second, because this research is an empirical investigation of the likely impact of an FTAAP, the selected conditions for the deeper integration of desirable RTAs should be quantitatively evaluated, especially by using an ex-ante simulation analysis methodology such as a computable general equilibrium (CGE). Thus, some of the above-mentioned conditions will be excluded because they cannot be assigned to a CGE model for quantitative analysis.

Third, feasible scenarios should be envisioned. As mentioned earlier, one such desirable way to promote an FTAAP is by supporting small-scale regional free trade agreements in a manner compatible with the WTO’s multilateralism and in alignment with APEC’s fundamental principles, such as open regionalism and non-binding voluntarism.

In this light, trade liberalization through the reduction or elimination of tariffs on traded goods needs to be prioritized for the implementation of comprehensive and specific measures. Considering APEC’s ongoing efforts to reduce trade costs, the combined effect of trade

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<sup>3</sup> APEC members agreed to strengthen APEC’s work promoting high-quality, comprehensive RTAs/FTAs since the opening of markets in general promotes economic integration while seeking to promote consistency among agreements and maximize their trade and economic benefits (2007/AMM/R/004).

liberalization through traditional tariff reduction and trade facilitation is suggested as another scenario to be tested.

Given the increasing importance of the service sector, the quantitative analysis of trade liberalization for services is one more important aspect to consider.

**Table III-1. Trade Effects of RTAs by Legal Provision**

Trade Effects (%)	Fixed Effect	
	Intra-Bloc Trade Creation	Extra-Bloc Trade Diversion
RTAs in General	3.5	-11.6
RTAs under GATT Article XXIV	8.2	-8.1

Note: All the estimated coefficients are statistically significant at 1 %.

Source: Park and Park (2009b).

In addition, harmonization of rules of origin by consolidating small-scale RTAs is another option. Given the existence of with the NAFTA (North American Free Trade Agreement), AFTA (ASEAN Free Trade Area), CER (Australia New Zealand Closer Economic Relations Trade Agreement) and many small-scale regional cooperative agreements within APEC, it seems clear that the harmonization of these is one of the most important considerations as the RTAs have exacerbated the gap in preferential clauses for RoOs and other items. The results of the research into these various scenarios are expected to explicitly prove the value to be gained from harmonizing complicated RoOs.

Below, four elements for a desirable RTA are introduced in the belief that they can deepen integration within APEC overall.

#### ***Comprehensive Application of Tariff Elimination for Goods Trade***

According to the fixed-effect Gravity model estimation by Park and Park (2009b, see Table III-1), a trade-enhancing effect is expected when GATT Article XXIV<sup>4</sup> is strictly applied. The researchers found that RTAs negotiated under GATT Article XXIV have created more intra-bloc trade (8.2%) and diverted less extra-bloc trade (-8.1%) than RTAs in general (3.5% and -11.6%, respectively). In accordance with this outcome, it is highly advisable to promote an FTAAP across all trade sectors.

#### ***Enhancing Trade Facilitation***

Trade facilitation improves the welfare of importing economies by narrowing the gap between the world market price and domestic price of the imported goods, leading to an increase in the volume of world trade. As Kim *et. al.* (2006) mentioned, APEC has chosen TILF (Trade and Investment Liberalization and Facilitation) and ECOTECH (Economic and Technical Cooperation) as core cooperation measures and improved the environment for trade facilitation to achieve sustainable market extension in the Asia-Pacific region by

<sup>4</sup> The most important requirements stipulated in GATT Article XXIV are that members (i) do not raise external trade barriers against nonmembers and (ii) eliminate duties and other restrictive regulations of commerce with respect to 'substantially all trade' within a reasonable length of time.

establishing the type of infrastructure that promotes greater economic welfare in the region without destroying the environment or widening the gap between the rich and poor. The economic effects of trade-facilitating efforts and the improved trade environment following trade liberalization are supplementary measures that should be weighed.

### *Liberalization of Trade in Services*

With telecommunication and information technology innovations, public sector deregulation, liberalization of capital flows, and facilitation of services trade through proliferating FTAs, more services are becoming tradable. The world's total amount of trade in services increased 10 times from US\$387 billion in 1980 to 3,730 billion in 2008. During the same period, the percentage of all trade attributed to the service sector showed a sluggish increase from 16.0% to 18.8% (see [Table III-2]). As in [Table III-3], the proportion of the service sector in some developed economies' total GDP has increased as well. In particular, in recognition of the fact that the service industry is believed to play a key role in producing final consumption goods and in enhancing productivity of the manufacturing sector as intermediate goods, the liberalization of services traded is expected to create an enormous economic welfare effect through the enhancement of productivity.

**Table III-2. World Share of Merchandise and Service Exports (Unit: bil. US\$, %)**

	1980	1990	2000	2002	2004	2006	2008
Merchandise (%)	2,032 (84.0)	3,479 (80.7)	6,364 (81.6)	6,455 (80.4)	9,153 (81.1)	12,083 (81.4)	16,127 (81.2)
Service (%)	387 (16.0)	930 (19.3)	1,435 (18.4)	1,577 (19.6)	2,125 (18.9)	2,755 (18.6)	3,730 (18.8)

Source: MOSF (Ministry of Strategy and Finance) as of August 11, 2008

**Table III-3. The Service Sector as a Percentage of GDP in 2007**

(Unit: %)

France	Germany	Japan	Korea	UK	U.S.
77.2	68.7	68.5	57.6	76.2	77.6

Source: MOSF (Ministry of Strategy and Finance) as of August 11, 2008

### *Simplifying Rules of Origin (RoO)*

The additional trade cost incurred by verifying rules of origin in the process of RTAs could act as a non-tariff barrier, and consequently a stumbling block to global trade liberalization, offsetting the initial trade creation effects generated from tariff reductions or elimination. In particular, the complexity and strictness used when applying rules of origin could amplify the negative trade diversion effect, especially due to the spaghetti bowl phenomenon. In order to resolve this issue, some alternative measures should be designed to harmonize or consolidate the rules of origin in the existing multiple RTAs. As a more specific way to resolve the problem, a systematic cumulation of rules of origin among member economies is highly

recommended in the development process of a large-scale FTA, such as an FTAAP, to unify existing small-scale FTAs in the Asia-Pacific region.

A number of economists, including Baldwin (2006); Estevadeordal, Harris, and Suominen (2008); Gasiorek, Augier, and Lai-Tong (2007); and, Harris (2008), have concluded after careful evaluation of the RoO-related costs that multilateralism-compatible RTAs could be achieved through RoO harmonization. In particular, Estevadeordal and Suominen (2003), Augier, Gasiorek, and Lai-Tong (2003), and Gasiorek, Augier, and Lai-Tong (2007) quantitatively estimated the trade effects of RoO. They focused on restrictiveness and different cumulation provisions by using Gravity regression analysis and found that a simple RoO and a diagonal cumulation of RoO increase intraregional trade. Additionally, Plummer (2007) identified the simplification of RoO as an essential top priority to maximize the benefits of RTAs via an evaluation of 11 inner-Asian FTAs. The 11 FTAs in this study passed most of his “Ten Commandments” – with the exception of a low and symmetrical RoO representing the simplification of RoO – nine of the 11 received a problematic ‘C’ grade in this category.

Having said that, the PECS (Pan European Cumulation System) accepted in Europe might be suggested as one method for RoO cumulation in APEC. RoO cumulation is possible through bilateral, diagonal, and full cumulation, as described in Gasiorek, Augier, and Lai-Tong (2007). Bilateral cumulation applies to a traditional bilateral FTA, which provides that materials originating in one economy be considered as materials originating in the partner economy and vice versa. Diagonal cumulation applies to trade between three or more trading partners linked by FTAs with common RoO. It provides that materials originating in one economy be considered materials originating in all of the partner economies. The full cumulation also applies to trade between three or more trading partners linked by FTAs with common RoO, but it is more flexible than the diagonal cumulation. It provides that all the materials used in the preferential area are to be considered as materials satisfying the RoO. Customs Unions are a good example of the full cumulation scheme. With the complexity of the rules of origin, the empirical analysis of the additional costs for trade was mainly conducted by the studies mentioned earlier, mostly through the Gravity model.<sup>5</sup> In particular, Medalla (2008) estimates that the administrative cost of rules of origin is 3% of the value of goods traded for EFTA, 4%-8% for the EU and 6% for NAFTA.

### **3. Scenarios for a Desirable FTAAP**

Considering the aforementioned necessary and feasible conditions for a desirable FTAAP to be tested by applying the CGE model estimation in Chapter IV, this research sets the following four scenarios identified and explained below:

- A. Scenario I: Basic Scenario for Trade Liberalization through Tariff Elimination
- B. Scenario II: (I) + Trade Facilitation
- C. Scenario III: (II) + Liberalization of Trade in Services
- D. Scenario IV: RoO Cumulation<sup>6</sup>

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<sup>5</sup> The economic effect created from the improvement in RoO has also been conducted by some CGE model analyses. However, most of the CGE model analyses assume tariff-equivalent cost of restrictive RoO rather than explicitly specifying the RoO cost into the model.

<sup>6</sup> This scenario IV will not be investigated in the CGE model simulation in the following Chapter IV. As an

## Scenario I: Basic Scenario for Trade Liberalization through Tariff Elimination

In order to analyze the effects of an FTAAP on both the members' and non-members' economies in general as a reference value, it is assumed that all tariffs on goods will be eliminated in all participating economies. In defining the participating economies for the modeling purposes, this study targets on the large-scale FTAs in APEC region and 16 APEC members of these FTAs with sufficient datasets for CGE analysis<sup>7</sup> are assumed as members of an FTAAP.

## Scenario II: (I) + Trade Facilitation

In addition to Scenario I, enhanced trade facilitation is reflected by reducing 5% of trade costs in four areas of trade facilitation – customs procedures, standard and conformity, business mobility, and electronic commerce – among the 16 FTAAP member economies.

In order to specify the relationship between trade facilitation and trade cost in a CGE model for a quantitative analysis on the enhanced trade facilitation, the indexation of the current level of trade facilitation in each member economy is required. For such purposes, this study adopted the method chosen by Kim *et. al.* (2006): Accordingly, the functional relationships between tariffs and the four areas of trade facilitation and trade cost are calibrated as follows.

- Elasticity of Tariff to trade cost = -0.038570465
- Elasticity of Customs Procedure to trade cost = -0.007971656
- Elasticity of Standard and Conformity to trade cost = -0.028518519
- Elasticity of Business Mobility to trade cost = -0.019244604
- Elasticity of E-Commerce to trade cost = -0.009929078

Step 1. *Indexation of trade facilitation by a survey analysis*: For the quantification of the trade costs in the four selected trade facilitation areas at the border of the subject economies, a survey analysis has been conducted to evaluate the degree of trade impediments in APEC economies where Korean companies entered as exporters. The surveyed degrees of trade impediments were indexed.

Step 2. *Gravity regression analysis*: For a Gravity regression analysis, three main sources of trade cost were adopted as independent variables: tariff barriers, transportation costs (represented by distance) and trade facilitation costs (represented by the aforementioned trade facilitation indices). From this analysis, economic effects from trade liberalization and facilitation on all subject economies ( $\beta_{10}\sim\beta_{14}$ ) were estimated.<sup>8</sup>

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alternative, we will introduce the empirical findings of RoO cumulation from a gravity analysis conducted by Park and Park (2009b).

<sup>7</sup> The scope of this study has been defined as all APEC member economies except Brunei Darussalam, Chinese Taipei, Hong Kong, China, Papua New Guinea, and Russia. Although Brunei Darussalam has been engaging in plurilateral FTAs in the APEC region, data deficiency disabled CGE analysis on this economy.

<sup>8</sup> See Lee and Park (2007), Kim *et. al.* (2006), and Wilson *et. al.* (2005).

$$\begin{aligned}
\ln(IM_{ijt}) = & \beta_0 + \beta_1 \ln GDP_{it} + \beta_2 \ln GDP_{jt} + \beta_3 \ln Pop_{it} + \beta_4 \ln Pop_{jt} \\
& + \beta_5 \ln Dist_{ij} + \beta_6 \ln(Area_i Area_j) \\
& + \beta_7 Border_{ij} + \beta_8 Language_{ijt} + \beta_9 RTA_{ijt} \\
& + \beta_{10} \ln Tariff_{it} + \beta_{11} \ln CP_{ijt} + \beta_{12} \ln SC_{ijt} + \beta_{13} \ln BM_{ijt} + \beta_{14} \ln EC_{ijt} \\
& + \delta YEAR_t + \varepsilon_{ijt}
\end{aligned}$$

where  $i$  and  $j$  denote countries,  $t$  denotes time, and the variables are defined as:

- $IM_{ijt}$  denotes imports from  $i$  to  $j$  at time  $t$ ,
- $GDP$  is real GDP,
- $Pop$  is Population,
- $Dist$  is the distance between  $i$  and  $j$ ,
- $Area$  is the land mass of the country,
- $Border$  is a binary variable which is unity if  $i$  and  $j$  share a land border,
- $Language$  is a binary variable which is unity if  $i$  and  $j$  have a common language,
- $Tariff$  is the bilateral import tax rate (per cent) imposed on imported products from  $i$  to  $j$  at time  $t$ ,
- $RTA$  is a binary variable which is unity if  $i$  and  $j$  belong to the same RTA,
- $CP$  ( $SC$ ,  $BM$ ,  $EC$ ) is trade facilitation index of customs procedures (standards and conformity, business mobility, and e-commerce),
- $Year$  is a set of binary variables which are unity in the specific year  $t$ .

Step 3. *Back-of-the-Envelope Strategy (Chain Rule)*: For the estimation of the trade cost (TC) elasticity of tariffs and trade facilitation indices, the estimated coefficients ( $\beta_5$ ,  $\beta_{10}\sim\beta_{14}$ ) of the Gravity regression analysis were applied to the following chain rules.<sup>9</sup>

$$\frac{\partial TC}{\partial Tariff} = \frac{\partial IM}{\partial Tariff} \cdot \frac{\partial Dist}{\partial IM} \cdot \frac{\partial TC}{\partial Dist} = \beta_{10} \cdot (1/\beta_5) \cdot 0.2^{10}$$

$$\frac{\partial TC}{\partial CP} = \frac{\partial IM}{\partial CP} \cdot \frac{\partial Dist}{\partial IM} \cdot \frac{\partial TC}{\partial Dist} = \beta_{11} \cdot (1/\beta_5) \cdot 0.2$$

$$\frac{\partial TC}{\partial SC} = \frac{\partial IM}{\partial SC} \cdot \frac{\partial Dist}{\partial IM} \cdot \frac{\partial TC}{\partial Dist} = \beta_{12} \cdot (1/\beta_5) \cdot 0.2$$

$$\frac{\partial TC}{\partial BM} = \frac{\partial IM}{\partial BM} \cdot \frac{\partial Dist}{\partial IM} \cdot \frac{\partial TC}{\partial Dist} = \beta_{13} \cdot (1/\beta_5) \cdot 0.2$$

<sup>9</sup> See Mann (2004).

<sup>10</sup> The value of 0.2 assigned to  $(\partial TC/\partial Dist)$ .

$$\frac{\partial TC}{\partial EC} = \frac{\partial IM}{\partial EC} \cdot \frac{\partial Dist}{\partial IM} \cdot \frac{\partial TC}{\partial Dist} = \beta_{14} \cdot (1/\beta_5) \cdot 0.2$$

Step 4. *Specification for a CGE model analysis*: The obtained elasticities from the chain rule were specified into a constructed CGE model for the analysis on aggregated macroeconomic effects of an FTAAP under trade cost of the four areas (CP, SC, BM and EC) reduced conditions.

Based on the estimated relationship between the four areas of trade facilitation and trade cost, the following quantitative measures were calibrated to reduce 5% of trade cost by an equal enhancement on the four areas of trade facilitation measures.<sup>11</sup> In simple words, each of the four subject areas were set to contribute equally 1.25% to the reduction of overall trade cost.

- Enhancing Customs Procedure to reduce 1.25% of trade cost = 156.8%
- Enhancing Standard and Conformity to reduce 1.25% of trade cost = 43.8%
- Enhancing Business Mobility to reduce 1.25% of trade cost = 65.0%
- Enhancing E-Commerce to reduce 1.25% of trade cost = 125.9%

### **Scenario III: (II) + Liberalization of Trade in Services**

Beyond the traditional FTA's scope, recent FTAs adopt comprehensive clauses, including investment, service, intellectual property, competition, government procurement, and E-commerce. Accordingly, in addition to Scenario I, we assume that the FTAAP member economies liberalize trade in services by reducing tariff-equivalent barriers (see [Table IV-2]) by 10% in construction, distribution, transportation and telecommunications, and business and financial services. The tariff-equivalent barriers in the service sectors of this research are adopted from Hoekman (1995).

### **Scenario IV: RoO Cumulation**

In addition to Scenario III, this scenario assumes that bilateral, diagonal, or full cumulation of RoO is agreed among FTAAP member economies. Faced with a limitation to empirical analysis to quantify the effects of RoO cumulation in a CGE model analysis, like other existing empirical studies, this study estimates the additional welfare-increasing effects created by the FTAAP's agreement on diagonal or full cumulation in RoO in the same manner as PECS, which can be analyzed with the trade-effect outcomes measured through Gravity regression analysis by Park and Park (2009b). In this research, it is assumed that the FTAAP members' additional gains from cumulated RoO will be the same as the reference case in Park and Park (2009b). The Gravity model analysis is as follows:

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<sup>11</sup> If the same methodology were used in tariff cases, 100% elimination of tariffs will only result in a 3.8% reduction in trade costs.

$$\begin{aligned} \ln (Trade_{ijt}) = & a_0 + a_1 \ln (GDP_{it} GDP_{jt}) + a_2 \ln (DIST_{ij}) + b'X' \\ & + g_7 RTA/Bilateral/Insiders_{ijt} \\ & + g_8 RTA/Bilateral/Outsiders_{ijt} + g_9 RTA/Diagonal/Insiders_{ijt} \\ & + g_{10} RTA/Diagonal/Outsiders_{ijt} + g_{11} RTA/Full/Insiders_{ijt} \\ & + g_{12} RTA/Full/Outsiders_{ijt} + d Year_t + e_{ijt} \end{aligned}$$

i and j represent economies and t denotes year

- ♦ *Trade<sub>ijt</sub>* denotes the value of the bilateral trade between i and j at time t,
- ♦ *GDP* is real GDP,
- ♦ *Dist* is the distance between i and j,
- ♦ *X* is a set of control variables that includes border, common language, and colony dummy,
- ♦ *Insiders* is a binary variable which is unity if i and j belong to the same RTA,
- ♦ *Outsiders* is a binary variable which is unity if i belongs to an RTA and j does not or vice versa,
- ♦ *Bilateral, Diagonal, and Full* denote the cumulation scheme applied to RTA,
- ♦ *Year* denotes a set of binary variables which is unity in the specific year *t*.

## IV. Measuring the Impact of an FTAAP: CGE Analysis

### 1. CGE Models

In order to provide quantitative assessment on the effects of an FTAAP on welfare and real GDP, the following three computable general equilibrium (CGE) models have been adopted. The first is the standard CGE model, in which the gains from trade liberalization stem mainly from the increased efficiency of resource allocation. It refers to the static CGE model. In particular, the GTAP (Global Trade Analysis Project) model – which has been extensively used in studies to examine a wide variety of trade policy issues – has been employed. The GTAP model is based on assumptions such as constant returns to scale, perfect competition and a global bank designed to mediate between world savings and investment. The Constant Difference of Elasticities (CDE) consumer demand system is designed to capture differential price and income responsiveness across economies.<sup>12</sup>

The second model is designed to capture not only the static effects, but also the capital accumulation effects. It refers to the capital accumulation CGE model. This model takes into account the positive relationship between trade, investment and growth (the so-called trade-induced investment-led growth) that is fairly well established in a number of empirical studies. The standard GTAP model has been modified in order to capture the medium-run growth effects of trade liberalization. Baldwin (1989, 1992) suggests that the static efficiency gains induce higher savings and investment, which in turn yield more output. Francois *et al.* (1999) present a useful approach for capturing the capital accumulation effects of trade

<sup>12</sup> See Hertel (1997) about the structure of the GTAP model.

liberalization in the context of the neoclassical growth model. Following Francois *et al.* (1999) it is assumed that economies are initially in a steady state even though it is not realistic. Under this assumption, the magnitudes of changes in the capital stock and output can be obtained by comparing them in two steady states. The relationship between capital stock (K) and investment (I) in the steady-state given as:

$$K = \frac{I}{\delta} \quad (1)$$

where  $\delta$  is the depreciation rate. Incorporating equation (1) into the CGE model gives a description of the relation between capital stock and investment and controls the closure, so that the changes in capital stock and investment converge. That is, this second CGE model is constructed to take into account possible changes in capital formation that may be generated by an FTAAP.

The third model is the recursive dynamic CGE model, which is the extension of the standard GTAP model to incorporate the dynamic behavior of capital. This dynamic GTAP model of Ianchovichina and McDougall (2000) preserves all the important features of the standard GTAP model and includes international capital mobility, capital accumulation and an adaptive expectations theory of investment.

## 2. Trade in Services and Trade Facilitation

An FTAAP is expected to be a comprehensive agreement which involves not only bilateral liberalization and facilitation of trade in goods through reduction of tariff and non-tariff barriers but also, *et alia*, through liberalization of trade in services, establishment of an investment agreement, and increased collaboration on intellectual property. Many previous studies<sup>13</sup> focus only on the tariff elimination in agricultural and manufactured goods. However, it is increasingly recognized that liberalization of trade in services will also be beneficial to an economy. The importance of services in global trade is increasing and an efficient service industry plays a vital role in the process of economic development as services are basic inputs or intermediates for industrial production. Thus, the analysis includes not only the liberalization of trade in goods but also in services.

Brown, *et al.* (1996) estimated the effects of services trade liberalization in the Uruguay Round by using the multi-economy Michigan CGE model. Dee and Hanslow (2001) quantified the effects of eliminating all post-Uruguay trade barriers and found that there are still considerable gains to be had from the liberalization of trade in goods, but the larger gains would come from the service sector. In particular, Konan and Maskus (2006) compared the liberalization impacts of trade with those of services in developing economies. With a CGE model, they showed that trade liberalization in goods yields a modest gain in aggregate welfare, while reducing service barriers generates relatively large welfare gains. These results imply the potential importance of liberalizing services on economic development.

In order to capture the effects of trade liberalization in services, the method of Hertel *et al.*

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<sup>13</sup> There are a lot of numerous studies, such as Harrison *et al.* (1995), that estimate the effects of tariff reduction in agriculture and manufactures using a CGE model. See Baldwin and Venables (1995)

(2000) and Anderson *et al.* (2000) has been used. A modeling method suggested by Brown *et al.* (1996), which constructs the base data to assume tariff equivalents, has been neglected because it generates tariff revenue from the trade liberalization in services when there is none in reality. The adopted methods of Hertel *et al.* (2000) and Anderson *et al.* (2000) assume that barriers to trade in services consume real resources when foreign consumers attempt to access the protected market. This reduces the actual volume of services that can be delivered at a given cost. In contrast, trade liberalization in services leads to an increase in services offered and a price reduction for imported services in the domestic market. These effects can be captured by introducing a services import-augmenting component into the CGE model.

For an estimation of such trade facilitation effects, the standard CGE model has been modified to adopt the simple “iceberg” model of trading costs introduced by Samuelson (1954). Some units of the good are lost in transit and can be thought of as a cost of trading that good.

Then, an effective price of the good  $i$  imported from economy  $r$  at domestic prices is introduced in destination economy  $s$ :  $P_{irs}^*$ . This is associated with the observed price,  $P_{irs}$ , as following:

$$P_{irs}^* = \frac{P_{irs}}{A_{irs}} \quad (2)$$

$A_{irs}$  reflects the trade costs for the good  $i$ . An increase in  $A_{irs}$  means a fall in the effective price of good  $i$  imported from  $r$  to  $s$ , thus encouraging an expansion of imports. To ensure a balanced data set, a quantity adjustment equation is required. Similar to the definition of the effective price, the adjusted effective quantity is as follows:

$$Q_{irs}^* = Q_{irs} \cdot A_{irs} \quad (3)$$

Incorporating equations (2) and (3) into the GTAP model, the effects of trade facilitation, which reduces trade costs, can be estimated.<sup>14</sup>

### 3. Data

The world economy was aggregated into 15 sectors within 18 regions for the CGE models analysis. They are described in [Table IV-1]. Social accounting data are based on the GTAP 7 database. Initial protection data are representative of the world as of 2004. Among APEC member economies engaged in existing plurilateral FTAs in the APEC region, a relevant data set (GTAP database) for Brunei Darussalam does not exist.

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<sup>14</sup> See Section 3 in Chapter III.

**Table IV-1 Model Aggregations**

Economies	Sectors
Australia	Agriculture/Fisheries
Canada	Food products
Chile	Textiles
China	Chemical products
Indonesia	Steel and metal products
Japan	Vehicles
Korea	Other Transport equipment
Malaysia	Electronic products
Mexico	Machinery
New Zealand	Other manufactured goods
Peru	Construction
Philippines	Trade
Singapore	Transportation/Communication
Thailand	Business/Financial services
United States	Other services
Viet Nam	
EU 25	
Rest of the World	

As the importance of services is increasing in global trade, economists have recently begun to pay more attention to this issue. However, it is not easy to analyze the effects of service sector liberalization because of the relative lack of information and the unavailability of cross-economy data on trade barriers. Impediments to trade in services do not take the form of import tariffs, but rather of a complex variety of quantitative restrictions, prohibitions and regulations. Quantitative restrictions may control the number of foreign providers or limit their market share. For this reason, it is very difficult to obtain systematic information on trade barriers in the service industry. Given the absence of detailed data on trade barriers, a CGE approach is not applicable to assess the impact of services traded.

In such circumstances, economists rely on indirect methods. There have been several attempts to measure trade barriers in services. Deardorff and Stern (2001) classify the methodologies for measuring three types of barriers: frequency measures, quantity-based measures and price-based measures.<sup>15</sup>

<sup>15</sup> Quantity-based measures of trade impediments are usually derived from standard models of trade determination. It estimates what trade would be in the absence of barriers. Trade barriers are measured in terms of the differences between the actual and the potential levels of trade. This approach is adopted by Francois (1999) and Park (2002). Price-based barriers are measured using the domestic and foreign price-wedges under the assumption that prices are equal to marginal costs in the absence of impediments to entry. Following this approach, Warren (2001) and Kalirajan *et al.* (2001) measure trade barriers in telecoms and banking services, respectively. Dee (2005) provided a comprehensive survey about available estimates of barriers to services trade and describes the general methodology used in those studies.

**Table IV-2 Tariff Equivalentents in Services**

	Construction	Trade	Communication/ Transportation	Business/ Finance
Australia	12	7.4	183.4	24.8
Canada	6	9	117.7	25.9
China	25	35.5	191.1	39.8
Chile	40	34.4	82.2	45.2
Indonesia	16	34.8	190.4	43.1
Japan	5	4.6	142	28.9
Korea	16	21.4	184.9	36.3
Malaysia	10	34.8	175.8	36.1
Mexico	24	21.3	152.3	40.9
New Zealand	5	13.4	181.5	30.5
Peru	40	30.3	190.9	48.7
Philippines	40	32.8	110.2	41.7
Singapore	12	34.4	138.8	35.9
Thailand	28	32.5	189.6	42.2
USA	5	4.6	111.4	21.7
Viet Nam	16	34.8	190.4	43.1

Note: As Hoekman does not provide tariff equivalentents for Viet Nam, tariff equivalentents of Indonesia have been used for Viet Nam as proxy.

The first approach, followed by Hoekman (1995), is to construct ‘guesstimates’ of relative restrictiveness across economies based on the assumption that each economy has revealed its policy stance in the commitments made in GATS. To quantify trade barriers in services across economies and industry-level, frequency ratios are constructed based on the number of commitments scheduled in GATS in each economy. After that, tariff equivalent benchmarks are assigned to each sector to reflect the degree of restriction with respect to market access. A benchmark tariff equivalent of 200% is assigned to sectors in which market access is most restricted (that is, maritime, air transport, postal services, etc.). Benchmark tariff equivalentents between 20% and 50% are designated for the remaining sectors. Hoekman (1995) then multiplies each coverage index by the tariff equivalent benchmark guesstimates to obtain a sector-specific tariff equivalent.<sup>16</sup>

The guesstimates have some limitations. Hardin and Holmes (1997) indicate that Hoekman’s estimation may not reflect the actual impediments because these measures are based on information contained in each economy’s schedule of GATS commitments. However, a lack of commitment to a GATS schedule does not necessarily mean that an economy imposes heavy restrictions. Many developing economies simply do not have available details that are required to meet the complexities of the GATS scheduling process and so left many industries

<sup>16</sup> As Hoekman (1995) does not supply with the information on trade barriers of Viet Nam, this research replaced the trade barriers of Viet Nam, this research substituted the trade barriers of Indonesia for those of Viet Nam with that of Indonesia.

unbounded, some of which may be quite open. Furthermore, Hoekman treats all commitments with equal weight and does not distinguish between barriers according to their economic impact, with minor impediments receiving the same weighting as an almost complete refusal of access. In summary, the guesstimates are much cruder and rely on assumptions about the level of prohibitive benchmark tariff equivalents, which are arbitrarily determined by the researcher. In spite of these limitations on Hoekman's approach, this paper use Hoekman's modified guesstimates to analyze the economic effects of an FTAAP, since they provide worldwide trade barriers in services. In fact, Hoekman's estimation covers 15 APEC member economies.

#### 4. Policy Experiments

*A Mid-term Stocktaking of Progress towards the Bogor Goals (2005/AMM/002anx1rev1)* assessed that average applied tariffs among APEC economies have been reduced significantly since APEC's inception, from 16.9 % in 1989 to 5.5 % in 2004. It also reports that almost half of all APEC economies' tariff lines are at less than 5%, and tariffs on many goods are now set at zero or negligible levels.

**Table IV-3 Policy Experiments**

Scenario I	Full elimination of tariffs in agricultural and manufactured goods
Scenario II	Scenario I + reduction of trade costs by 5 % through trade facilitation
Scenario III	Scenario II + reduction in trade barriers in services by 10 %

As tariffs have decreased, the focus of free trade agreements tends to be diversified. Trade and investment facilitation, transparency and behind-the-border regulations and administrative procedures are now acknowledged as important determinants of economic progress, because of their powerful impacts on the development of the private sector.<sup>17</sup> This highlights the significance of a business friendly environment that a 'comprehensive,' 'new age' or 'high level' FTA endeavors to achieve. However, since it is not easy to quantify the effects of the changes in all elements described above, the focus was on the elimination of tariff and non-tariff barriers in agricultural, manufactured goods and services and on trade facilitation. If an FTAAP is defined as a comprehensive and high-quality large-scale FTA in this analytical exercise, it is reasonable to assume a full elimination of tariffs in trading goods. However, it is difficult to expect that trade barriers in the service sector will be completely eliminated through an FTAAP. In real FTAs, including the Korea-U.S. FTA, NAFTA, and Japan-Mexico FTA, the extent of services liberalization through an FTA remains limited. Hence, only a 10% reduction of service-related trade barriers has been assumed. In this manner, this paper developed three sets of policy experiments: a full elimination of tariffs on trade in goods (Scenario I); Scenario I + the reduction of trade costs by 5 % through trade facilitation (Scenario II) and; and Scenario II + the reduction in trade barriers in services by 10 % (Scenario III).

<sup>17</sup> For more details see APEC (2005).

Trade liberalization in services can be applied in principle to all services sectors. However, there are in reality some services that are provided at non-market conditions. Article I(3) of the General Agreement on Trade in Services (GATS) excludes “services supplied in the exercise of governmental authority.” Thus, the public service sector has been excluded.

## 5. Empirical Outcomes

Since the static CGE model based on the traditional trade theory has been employed, the effects of an FTA on the GDP and welfare of economies arise from a mixture of terms-of-trade (ToT) effects<sup>18</sup> and efficiency gains from resource allocation. Resources are reallocated to those sectors in each economy where there is comparative advantage. Thus, it is expected on average that the economies participating in an FTAAP will gain. In the absence of terms-of-trade effects, national welfare increases due to the efficiency gains, although some factor owners within an economy may lose. However, it is possible for a particular economy whose net imports are concentrated in sectors with the greatest liberalization to lose overall, if the worsening of its terms of trade overwhelms these efficiency gains (Brown *et al.* 2003). In addition, there may be negative effects on the economic welfare of nonmember economies, while there may be trade creation and positive effects on the economic welfare of FTA member economies together with trade diversion.

It should be noted that the estimated results of CGE simulations are sensitive to the assumptions made in modeling. As Scollay (2004) indicated, one should be cautious in the interpretation of the results of CGE simulations. The relative effects of different agreements or different policy experiments are more important than the absolute size of economic effects. Thus this paper focuses on the relative effects gained by estimating three different Scenarios under the same CGE model.

The first one is the results of Scenario I in which tariffs between FTAAP members are removed. [Table IV-4] presents the economy-wide effects of the FTAAP under the assumption of a fixed capital stock. These involve changes in GDP, welfare and aggregated exports and imports; the result indicates overall benefits exceeding US\$48 billion from 16 APEC economies as a whole with tariff elimination of an FTAAP. In detail, the magnitude of GDP increase in developed economies, such as the U.S. and Japan, is found to be less than that in developing economies with the exception of Peru, Chile and Canada, whose GDPs actually showed decreases, albeit modest ones.

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<sup>18</sup>. Terms of trade are defined as the ratio of export prices relative to import prices.

**Table IV-4 Economic Effects of an FTAAP: Scenario I  
(Static Model)**

(Unit: %, mil.US\$)

	Real GDP	Welfare	Welfare (mil. US\$)	Export	Import
<b>16 APEC Economies</b>	<b>0.12</b>	<b>0.25</b>	<b>48,408.5</b>	<b>4.20</b>	<b>5.37</b>
Australia	0.11	0.37	2,133.7	3.80	6.31
Canada	0.04	-0.04	-355.1	1.53	1.11
Chile	0.06	-0.03	-22.4	0.97	1.12
China	0.21	0.56	8,557.8	7.74	10.78
Indonesia	0.16	0.08	184.7	4.97	6.61
Japan	0.12	0.32	12,896.0	5.15	8.12
Korea	1.54	1.82	10,875.2	5.00	8.40
Malaysia	1.52	1.65	1,859.7	3.40	6.56
Mexico	0.21	0.05	275.2	1.60	2.11
New Zealand	0.10	0.75	647.2	2.05	5.26
Peru	0.02	-0.22	-135.5	6.44	6.72
Philippines	0.16	0.73	551.4	4.01	5.49
Singapore	0.01	1.05	993.1	-0.34	0.25
Thailand	0.68	3.53	4,235.6	-3.42	19.32
USA	0.01	0.00	466.9	4.02	2.05
Viet Nam	2.32	14.07	5,245.0	10.30	35.43
EU25	-0.03	-0.08	-9,051.0	0.27	-0.45
ROW	-0.02	-0.32	-17,629.3	-0.01	-1.42

[Table IV-5] presents the economic effects of tariff elimination and reduction of trade costs by 5%. These effects are estimated also by using a static CGE model. All member economies of an FTAAP would experience the positive growth of real GDP and welfare. Moreover, the magnitudes of these positive effects are larger than those of Scenario I. These results imply that trade facilitation has significant impacts on GDP as well as the welfare of each member economy.

**Table IV-5 Economic Effects of an FTAAP: Scenario II  
(Static Model)**

(Unit: %, mil.US\$)

	Real GDP	Welfare	Welfare (mil. US\$)	Export	Import
<b>16 APEC Economies</b>	<b>1.08</b>	<b>1.31</b>	<b>256,155.0</b>	<b>8.48</b>	<b>10.50</b>
Australia	1.07	1.47	8,413.2	6.04	9.70
Canada	1.61	1.99	17,503.5	3.93	6.20
Chile	1.49	1.74	1,442.0	1.99	2.35
China	2.11	2.60	39,446.6	14.43	18.02
Indonesia	1.58	1.70	3,964.7	8.35	11.36
Japan	0.67	0.96	38,446.3	9.21	13.57
Korea	3.38	3.99	23,793.1	8.39	13.11
Malaysia	6.03	8.10	9,138.3	5.57	10.33
Mexico	2.17	2.50	15,114.4	3.26	8.16
New Zealand	1.40	2.41	2,081.3	3.58	8.90
Peru	0.85	0.70	428.4	11.54	12.80
Philippines	2.98	4.31	3,252.3	3.58	7.71
Singapore	6.44	9.36	8,836.7	3.97	5.97
Thailand	3.92	9.57	11,481.3	-9.53	27.18
USA	0.67	0.62	65,464.4	10.38	6.44
Viet Nam	7.19	19.71	7,348.7	11.82	41.27
EU25	-0.08	-0.13	-14,454.8	0.84	-0.70
ROW	-0.02	-0.28	-15,030.1	0.53	-1.35

This study discusses the results of the policy experiment Scenario III that includes Scenario II and a 10% reduction on trade barriers in service-sectors. The economic effects of an FTAAP under Scenario III, measured in terms of gains in welfare with a Static model are reported to exceed US\$271 billion from 16 participating economies as a whole (see Table IV-6).

Comparing these results with those of Scenario I and II, the magnitude of the increase in real GDP and welfare for all member economies was found to expand. This implies that trade liberalization in services is one of the most important catalysts of economic growth and its impacts on GDP and welfare are significant. Liberalization in services leads to an efficiency increase in service sectors. Since services are basic inputs or intermediates for industrial production, the competitiveness of manufacturing sectors would also improve.

**Table IV-6 Economic Effects of an FTAAP: Scenario III  
(Static Model)**

(Unit: %, mil.US\$)

	Real GDP	Welfare	Welfare (mil. US\$)	Export	Import
<b>16 APEC Economies</b>	<b>1.14</b>	<b>1.38</b>	<b>271,563.4</b>	<b>8.65</b>	<b>10.79</b>
Australia	1.18	1.64	9,360.6	6.51	10.46
Canada	1.74	2.14	18,841.2	4.11	6.52
Chile	1.59	1.86	1,539.3	2.15	2.61
China	2.17	2.67	40,537.3	14.57	18.20
Indonesia	1.68	1.81	4,216.7	8.52	11.61
Japan	0.72	1.03	40,922.3	9.44	13.97
Korea	3.65	4.27	25,454.3	8.53	13.28
Malaysia	6.23	8.35	9,428.0	5.63	10.43
Mexico	2.25	2.60	15,738.2	3.41	8.37
New Zealand	1.69	2.79	2,412.8	4.13	10.00
Peru	0.93	0.80	487.5	11.92	13.35
Philippines	3.05	4.41	3,330.7	3.58	7.79
Singapore	7.06	10.22	9,647.6	3.76	5.90
Thailand	4.11	9.98	11,978.5	-9.76	27.63
USA	0.70	0.66	70,213.1	10.62	6.77
Viet Nam	7.42	19.99	7,455.3	11.88	41.43
EU25	-0.08	-0.14	-15,955.5	0.90	-0.72
ROW	-0.03	-0.30	-16,166.9	0.56	-1.42

The capital accumulation effects of an FTAAP which capture not only static gains but also medium-run growth bonus, as suggested by Baldwin (1989, 1992), have also been analyzed. The effects of the economic welfare and GDP of economies stem from the traditional efficiency gains from resource allocation and additional gains from capital accumulation.

The result of the policy experiment under Scenario I with a Capital Accumulation CGE model is reported in [Table IV-7]. From the comparison of this result to that in [Table IV-4], evidence of a long-run growth bonus from trade liberalization can be found. It is expected that the real GDP for APEC members as a whole would increase by 0.59%, whereas only a 0.12 % increase in real GDP has been reported from the Static CGE model for APEC. Furthermore, the gains for Thailand and Viet Nam in terms of real GDP are higher than other member economies. This implies that traditional trade liberalization in market access still has important and significant impacts on real GDP and welfare in those economies.

**Table IV-7 Economic Effects of an FTAAP: Scenario I  
(Capital Accumulation Model)**

(Unit: %, mil.US\$)

	Real GDP	Welfare	Welfare (mil. US\$)	Export	Import
<b>16 APEC Economies</b>	<b>0.59</b>	<b>0.58</b>	<b>114,288.5</b>	<b>6.51</b>	<b>6.59</b>
Australia	0.89	1.00	5,727.9	5.64	6.78
Canada	-0.01	-0.06	-533.9	1.20	1.08
Chile	0.48	0.38	315.4	1.35	1.52
China	1.99	1.99	30,140.5	10.01	13.00
Indonesia	1.74	1.47	3,430.2	7.30	8.06
Japan	0.30	0.46	18,168.3	5.94	8.69
Korea	4.49	4.01	23,929.3	9.33	11.05
Malaysia	5.57	4.11	4,631.6	8.18	9.61
Mexico	0.90	0.58	3,501.4	3.22	2.50
New Zealand	1.50	1.91	1,652.0	4.07	6.16
Peru	0.19	-0.09	-53.6	6.88	6.81
Philippines	2.16	2.35	1,772.5	7.08	7.76
Singapore	1.26	2.10	1,982.1	1.19	1.74
Thailand	12.72	8.94	10,730.5	26.08	26.67
USA	-0.02	0.02	1,639.1	3.79	2.56
Viet Nam	13.91	19.46	7,255.3	35.20	44.85
EU25	-0.25	-0.22	-25,564.5	-0.37	-0.49
ROW	-0.50	-0.64	-35,108.9	-0.85	-1.50

**Table IV-8 Economic Effects of an FTAAP: Scenario II  
(Capital Accumulation Model)**

(Unit: %, mil.US\$)

	Real GDP	Welfare	Welfare (M. US\$)	Export	Import
<b>16 APEC Economies</b>	<b>2.79</b>	<b>2.57</b>	<b>504,451.7</b>	<b>15.05</b>	<b>14.34</b>
Australia	3.11	3.20	18,297.5	9.89	11.70
Canada	3.40	3.30	29,090.6	6.72	7.30
Chile	4.56	4.53	3,756.4	4.91	5.14
China	6.73	6.32	95,851.0	19.98	24.18
Indonesia	6.18	5.86	13,678.8	14.99	16.50
Japan	1.50	1.59	63,262.8	11.58	15.45
Korea	9.32	8.45	50,470.6	16.56	18.83
Malaysia	17.21	15.29	17,332.2	18.51	19.49
Mexico	6.35	5.80	35,162.6	11.86	11.00
New Zealand	5.75	6.04	5,224.5	9.25	12.06
Peru	1.58	1.30	794.4	12.95	13.64
Philippines	14.58	13.57	10,268.9	20.50	20.24
Singapore	18.30	16.45	15,527.7	17.64	17.23
Thailand	29.47	22.12	26,608.1	47.29	46.12
USA	1.15	1.02	107,977.7	11.95	7.98
Viet Nam	26.28	29.86	11,148.0	49.16	59.42
EU25	-0.12	-0.08	-8,681.9	-0.25	-0.23
ROW	-0.20	-0.19	-10,204.2	-0.46	-0.64

The results of the policy experiment Scenario II are reported in [Table IV-8]. Compared to Scenario I, an FTAAP according to Scenario II yields higher economic gains for individual APEC members as well as the economies as a whole in terms of real GDP and welfare. This suggests that trade facilitation plays an important role in driving increases in real GDP and welfare.

**Table IV-9 Economic Effects of an FTAAP: Scenario III  
(Capital Accumulation Model)**

(Unit: %, mil.US\$)

	Real GDP	Welfare	Welfare (mil. US\$)	Export	Import
<b>16 APEC Economies</b>	<b>2.90</b>	<b>2.69</b>	<b>526,938.3</b>	<b>15.42</b>	<b>14.73</b>
Australia	3.32	3.44	19,659.2	10.58	12.52
Canada	3.61	3.52	30,955.7	7.05	7.67
Chile	4.80	4.78	3,956.5	5.22	5.52
China	6.85	6.45	97,800.0	20.21	24.47
Indonesia	6.42	6.10	14,231.2	15.40	16.95
Japan	1.58	1.67	66,594.1	11.94	15.89
Korea	9.79	8.89	53,064.4	16.98	19.19
Malaysia	17.70	15.75	17,860.0	18.89	19.86
Mexico	6.46	5.93	35,951.8	12.07	11.24
New Zealand	6.41	6.73	5,821.3	10.36	13.41
Peru	1.68	1.41	865.8	13.40	14.22
Philippines	14.83	13.83	10,465.1	20.76	20.54
Singapore	19.76	17.78	16,788.9	18.28	17.81
Thailand	30.28	22.87	27,519.3	48.16	47.01
USA	1.20	1.07	114,094.7	12.28	8.32
Viet Nam	26.70	30.29	11,310.5	49.51	59.82
EU25	-0.15	-0.11	-12,021.6	-0.26	-0.26
ROW	-0.25	-0.24	-13,155.2	-0.51	-0.72

[Table IV-9] also shows that the long-run effects of an FTAAP under Scenario III, estimated with the capital accumulation CGE model, would be larger compared to the effects on GDP and welfare estimated with the static CGE model for the FTAAP participating economies. Moreover, the results indicate that the overall economic outcome is more favorable than any of the other Scenarios. More specifically, the outcome reports the highest GDP gains among the scenarios as it estimates improvement by 2.90%. The total welfare gains for 16 APEC economies amount to approximately US\$527 billion following the tariff elimination, trade facilitation and trade liberalization in services under the proposed desirable FTAAP. In addition, the outcome also yields relatively higher growth rates for some developing economies, including Thailand, Viet Nam and Malaysia. With this outcome, the following can be deduced: 1) when the GTAP database initially reports relatively high tariff rates for economies, the size of the impact will be greater and 2) the unique methodology for estimating the capital accumulation CGE model and assumptions used in this scenario may result in favorable outcomes for those economies with a large demand for capital.

**Table IV-10 Economic Effects of an FTAAP  
(Dynamic Model)**

(Unit: %)

	Scenario I	Scenario II	Scenario III
	Real GDP	Real GDP	Real GDP
<b>16 APEC Economies</b>	<b>0.55</b>	<b>2.26</b>	<b>2.33</b>
Australia	0.61	2.15	2.31
Canada	-0.19	2.69	2.81
Chile	0.38	2.99	3.27
China	2.53	7.73	7.86
Indonesia	2.14	6.97	7.21
Japan	0.48	1.09	1.10
Korea	4.42	8.31	8.57
Malaysia	4.03	14.04	14.48
Mexico	0.47	4.22	4.29
New Zealand	0.59	3.80	4.19
Peru	-0.04	0.47	0.97
Philippines	2.03	11.95	12.14
Singapore	0.71	17.15	18.69
Thailand	10.31	22.48	23.10
USA	-0.12	0.65	0.68
Viet Nam	13.47	24.16	24.55
EU25	-0.39	-1.05	-1.07
ROW	-0.53	-1.12	-1.18

[Table IV-10] summarizes the long-run GDP effects of the three examined scenarios among 16 FTAAP participating economies, estimated with the dynamic GTAP model. The outcomes show that the FTAAP under Scenario III (tariff elimination, trade facilitation and liberalization of services trade) yields the most favorable gains in terms of real GDP. Specifically, the GDP growth for the 16 APEC economies under Scenario III is more than four times that found under Scenario I, while all analyzed economies are expected to enjoy improvements in real GDP with an FTAAP under Scenario II and III.

In addition to the three scenario analysis, by applying CGE models in this chapter, the empirical evidence of gains from cumulated RoO for the Scenario IV designed in Chapter III has been employed. More specifically, according to a gravity model analysis with fixed effect by Park and Park (2009b), the expected positive trade-enhancing effect from the RoO cumulation is estimated to be significantly large compared to the bilaterally cumulated RTAs of which a cumulation scheme is not considered. The expected additional trade-enhancing effects generated from the cumulation of RoOs are figured in [Table IV-11].

The positive trade creation effect of different cumulation schemes ranges from the highest in full cumulation (35.8%) to the smallest in bilateral cumulation (0.9%) based on the fixed effect Gravity regression estimation by Park and Park (2009b). The negative trade diversion effect ranges from the highest in diagonal cumulation (16.0%) to the smallest in full cumulation (3.1%). [Table IV-11] also figures the relative size of the trade effects of different cumulation schemes, compared with all the RTAs in general. Based on the outcomes in [Table IV-11], a full cumulation scheme to consolidate existing small-scale RTAs in the Asia-Pacific region is one of the criteria for a desirable FTTAP. Such harmonization will realize significant enough welfare gains to members, without causing serious damage to nonmembers. Likewise, an FTAAP will be able to pave a way toward a global free trade area compatible with WTO multilateralism.

**Table IV-11 Trade Effects of RoO Cumulation: Scenario IV**

Trade Effect	Fixed Effect	
	Trade Creation Effect	Trade Diversion Effect
RTA in General (Absolute Effect, %)	3.5	-11.6
Bilateral Cumulation	0.9 <sup>#</sup>	-9.0
Diagonal Cumulation	16.0	-16.0
Full Cumulation	35.8	-3.1
RTA in General (Relative Effect, Ratio)	1.00	1.00
Bilateral Cumulation	0.26 <sup>#</sup>	0.78
Diagonal Cumulation	4.61	1.38
Full Cumulation	10.35	0.27

Note: All the estimated coefficients are statistically significant at 1% except where <sup>#</sup> indicates that the estimated coefficients are statistically insignificant.

Source: Park and Park (2009b).

## V. Summary and Policy Implications

The recent Global Financial Crisis seems to have enlightened the global Leaders of the fact that globalization has progressed too far for a single economy to breakthrough the current crisis alone. Under these circumstances and the rapidly approaching Bogor Goal target year for the developed economies (2010), the revival and expansion of the regional economic dynamism became one of APEC's top priorities. In reality, however, sub-regionalism has proliferated in the region, despite the continuous efforts to maintain the multilateral trading system as the basic framework for economic cooperation. Consequently, APEC has recently begun searching for comprehensive and high-quality RTAs in order to supplement the Bogor Goals. For this purpose, the establishment of a Free Trade Area of the Asia Pacific (FTAAP) is now being discussed among APEC member economies with a long term perspective as one of the possible options to deepen regional economic integration.

As mentioned in Chapter III, the formation of an FTAAP is a challenge to and an opportunity for the strengthening of the Asia-Pacific region. The positive gains from the larger free trade bloc are expected to be significant. At the same time, however, the trade and investment liberalization of APEC through such a second-best policy may encounter strong opposition from divergent interests among member economies as a group or from divergent interests within the individual economies. Lack of political will and problems of compatibility with multilateralism and the basic principles of APEC are also challenges.

Taking into account the difficulties in forming an FTAAP, this study designed a desirable FTAAP with four policy options: 1) comprehensive application of tariff elimination in goods trade under the legal provision of GATT Article XXIV, 2) enhancing trade facilitation, 3) liberalization of services traded, and 4) simplifying rules of origin (RoO) by adopting a full cumulation scheme. Believing these policy options as scenarios for an FTAAP shall create significant enough gains from the deeper integration in accordance with APEC's going activities such as TFAP II, LAISR, development of model measures and standardization of RoO, each was empirically tested in the previous chapters.

The empirical analysis employed two most commonly used statistical models in verifying the economic impacts of trade liberalization arrangements, Gravity and CGE. The results strongly supported the assumptions made in this paper: 1) the expected gains from trade liberalization increased positively in relation to compliance with GATT Article XXIV; 2) an additional transaction cost reduction, as a representation of trade facilitation efforts, bear more fruit than mere tariff reduction activities do; 3) the inclusion of the service sector into the scope enlarged the total pie considerably and made it easier for all economies to enjoy the extra gains; and 4) the marginal gains from standardized RoO escalated as rules simplify (bilateral to full cumulation). In this regard, an FTAAP would enable regionalism to be compatible with multilateralism and sustainable, ultimately leading the world economy to global free trade.

Likewise, an FTAAP has potential to supplement successful conclusion of both the Bogor Goals and WTO/DDA when developed as a building bloc in a WTO-consistent manner. However, there are challenges together with opportunities ahead. Hence, research into an FTAAP should continue, within the boundaries of APEC's REI, as one of the possible paths toward Asia-Pacific economic integration.

Although the research is still at the beginning stage and there has been no political decision, the results so far indicate that APEC should target a high quality and comprehensive FTAAP agreement for maximum economic output. Particularly in this paper, the modeling results show that trade facilitation and liberalization of the service sector could contribute largely towards increases in real GDP and trade volume. This, aligned with the instructions from Leaders and Ministers as reflected in various declarations over the past years, including the 2005 Busan Roadmap and 2007 Report on Strengthening Regional Economic Integration, implies that desirable FTAs/RTAs among APEC members should stem from high-quality, comprehensive agreements.

Therefore, continued commitment to REI activities, such as development of model measures, studies to identify convergences and divergences of existing RTAs/FTAs, trade facilitation schemes and structural reforms, should remain a top priority among the efforts to promote regional integration.

In addition, the standardization of RoO within APEC demands the continued attention of the member economies. As confirmed in this study, RoO is critical in determining the overall economic gains of trade liberalization arrangements and that an early implementation of standardized RoO in the region will enable each economy to better realize full gains from the existing free trade agreements.

Last but not least, the question of “how to assess the likely *capacity-building* requirement” for any future negotiations, raised last year during the REI progress report, must be addressed. Considering the time required, “capacity-building for large scale FTA negotiation” is recommended as a part of APEC’s work to support REI.

Likewise, there still are many more areas to be explored from the past three years of research despite the fact that this study aimed to provide a ‘further’ analysis on the economic impact of an FTAAP by quantifying the features of new-generation FTAs. For an FTAAP, which would be the world’s largest FTA in terms of membership and economic coverage, to be high quality and comprehensive by nature at its creation and for many years to follow, a thorough review of key success factors, including those identified in this study, must be conducted prior to actual development. In other words, a series of studies focusing on each critical factor should follow on the basis of this and other current studies to promote a general understanding and raise relevant issues.

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