

Establishing global value chains through the liberalization of trade in services

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March 2015

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This paper addresses the importance of establishing global value chains through the liberalization of trade in services. A database has revealed rather disconnected policy arrangements across APEC members in terms of service trade liberalization. While the economic benefits arising from harmonized and liberalized policy across APEC members are widely recognized in the business sector, relevant policy coordination seems to be missing. With this in mind, APEC could work on establishing its own harmonized “service trade commitment table” that would be centered on simple foreign capital participation criteria. This would surely contribute to forming an APEC-wide global value chain.

Keywords: Global Value Chain, trade in services, connectivity

JEL classification: F13, F15

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This paper addresses the importance of establishing global value chains through the liberalization of trade in services. A database has revealed rather disconnected policy arrangements across APEC members in terms of service trade liberalization. While the economic benefits arising from harmonized and liberalized policy across APEC members are widely recognized in the business sector, relevant policy coordination seems to be missing. With this in mind, APEC could work on establishing its own harmonized “service trade commitment table” that would be centered on simple foreign capital participation criteria. This would surely contribute to forming an APEC-wide global value chain.

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1. Introduction: Supply chains and trade in services

“Establishing Reliable Supply Chains and Service Trade Liberalization” has been one of the main items on APEC’s policy/research agenda. This is a sound and necessary issue, considering the fact that APEC launched the “Supply Chain Connectivity Initiatives” (in 2010). As is well known at a conceptual level, global value chains (or, more conventionally, “global supply chains¹”) add to decentralized production activities in trade as well as in investment. While securing physical connectivity—be it in the form of developing train systems, loading (shipping) docks or airports—reduces business transaction costs, institutional efforts in the form of liberalizing trade in services contributes significantly to an even more enhanced connectivity throughout the Pacific Rim. ASEAN economies, as well as Northeast Asian economies, such as China, Japan and Korea, and all the other Pacific Rim economies, including the US in its efforts to forge a Trans-Pacific Partnership, are in the process of establishing this institutional aspect of supply chain connectivity.

APEC can be an even more comprehensive institutional platform from which to address this aspect, especially through the liberalization of regulations on trade in services. So far, each APEC economy has tended to focus on facilitating the flow of bilateral commodity trade. However, in the 21st century modality of multiple-location and segmented production activities, securing an across-the-border policy framework is much needed for a seamless APEC community in which a common set of rules of origin and service-related supporting industries could enhance decentralized manufacturing activities. Thus, this research attempts to make concrete APEC’s above-mentioned initiatives in connection to liberalizing the trade in services. More

¹ In this paper, the terms “value chains” and “supply chains” are treated interchangeably; the main difference between these two closely related concepts is that the former (value chains) are a little more concerned with value-creation through the enhancement of logistical linkages.

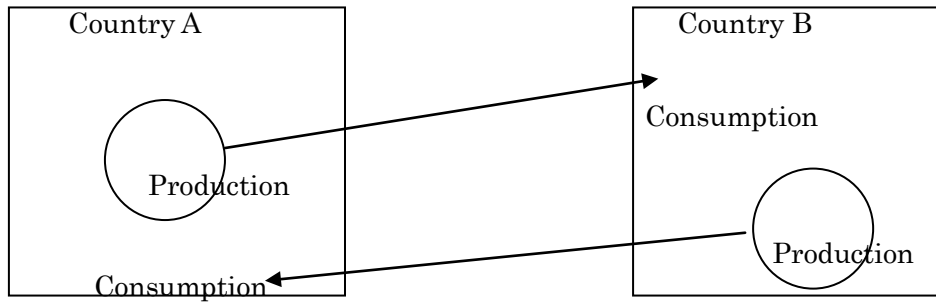
specifically, the study addresses the importance of enhancing such supply chain connectivity through liberalizing regulations on trade in services. It also highlights some important service sectors (including logistics and maritime services) and thereby substantiates APEC's future policy directions toward establishing reliable supply chains.

This paper is structured as follows. The next section addresses the conceptual framework for discussing reliable supply chains. Section 3 discusses the situation regarding service trade liberalization in some APEC member economies both under the GATS (General Agreement on Trade in Services), which is administered by the WTO, and ASEAN+n type FTAs. The fourth section discusses an expert's view on supply chains and APEC's policy in this regard. The final section suggests some concrete and practical policy options toward establishing reliable APEC-wide supply chains.

2. Conceptual framework for establishing reliable supply chains

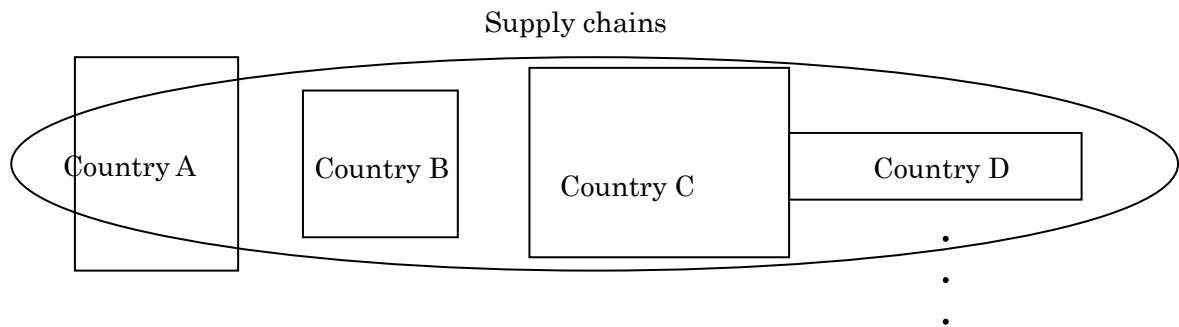
The underlying economic background for the need to establish APEC-wide reliable supply chains is the growing significance of multiple-location, and multiple-stage value adding activities. Whereas Figure 1 depicts a conventional "supply chain" in the form of the international trade in goods (with the services being treated as "non-tradables"), Figure 2 describes the "21st century" type of supply chain, which is characterized by simultaneous value production and consumption across national borders with multiple business locations and the multiple-stage production of goods and services.

Figure 1. Conventional “supply chain” (international trade in goods)



Source: The author.

Figure 2. Multiple-location and multiple-stage production



Source: The author.

In view of this dynamic shift in business modality in favor of trading services, establishing reliable supply chains (which itself is a “service”) in the APEC region requires cross-border policy coordination. APEC as a premier organization in the Asia Pacific region has a significant role to play in this regard.

According to Gonzalez, Guasch and Serebrisky (2007), a complex logistics system, composed of transport infrastructure and services, business logistics practices and trade facilitation procedures, is key to facilitating the physical flow of goods and services. They also stress that the three following major areas have to be dealt with in order to optimize the flow of goods throughout the logistics chain: (1) transportation, (2) business logistics, and (3) trade facilitation. They point out that “[t]his

conceptualization of the factors involved in the flow of goods makes clear that the analysis and policy options should not be limited exclusively to infrastructure bottlenecks (infrastructure being considered the hard component of logistics) but should also consider the rules and procedures regulating the services (soft component)". In brief, the performance of an APEC-wide supply chain rests with the cross-border streamlining of both the public and the private sectors involved.

Figure 3 shows conceptualization of supply chains by focusing on the movement of international. As featured in the figure, various activities are involved under the broad categories of "Physical transportation", "Trade Facilitation" and "Logistics Services". Liberalization and the harmonization of trade in services, especially in the international transportation sector, is an important policy issue when it comes to realizing reliable supply chains.

Figure 3: Conceptualization of supply chains: the case of the movement of international freight transportation

	Activities	Function	Components	Infrastructure	Regulation	Private sector Performance
Physical Transportation	Internal Flows	Freight movements Within national territory	Roads, vehicle transport, Railroads, river navigation	H	H	M
	Nodes of transference	Transfer nodes for Foreign trade	Ports, airports, Border crossing	H	H	L
	External Flows	Freight movements Outside national	Sea transport, intl. Road transport	L	M	L
	Interfaces and	Commer&operational Coord.between modes	Reception and Delivery coordination	L	H	M
Trade Facilitation	Inspections	Fiscal, custom and para-custom control	Custom, phytosanitary, And migration control	L	H	L
	Security	Security control in supply	Control in port, scanners and control through chain	L	M	M
Logistic Services	Organization of supply	Design and operation in Chain of supply	Inventory and material Management, distribution	L	M	H
	Logistic operators and intermediaries	Provision of integrated Logistic services	Logistic and multimodal Operators	L	M	H

Note: H means “high relevance”; M means “medium relevance”; L means “low relevance”

Source: Adapted from Gonzalez, Guasch and Serebrisky (2007), Figure 2.

3. Supply chains and service trade liberalization: GATS and ASEAN+n FTAs compared

Trade in services is an important and growing mode of international economic transaction. This section maps out the degree of liberalization in the trade in services by APEC members under the GATS (General Agreement on Trade in Services) and under four ASEAN+n type (where “n” can be zero, one or two countries) free trade agreements (FTAs). While there has been a delay in the WTO-based liberalization of the trade in services, Asia-Pacific economies are in the process of establishing preferential pluri-lateral FTAs with a wide coverage that is suited to regional community building. Thus, these FTAs have the potential of merging into a consolidated region-wide free trade framework. This study undertakes a mapping exercise of both APEC members’ commitment to the GATS as a basis for a future FTAAP (Free Trade Area of the Asia-Pacific), and of the ASEAN+n type FTAs in terms of the trade in services.

After constructing a database showing the existence of limitations on market access and/or nations’ handling of each service sector, the study finds that the commitment level differs greatly among APEC members, and that the levels of commitment under the ASEAN+n FTAs are higher than APEC members’ commitment to the GATS. It also finds that there are cross-economy and cross-sectoral similarities in the pattern of service sector commitment under the GATS by APEC members. This implies that shared domestic sensitivities can be overcome by a scheme of shared economic cooperation aimed at enhancing competitiveness in the APEC region. These observations suggest that for a wider FTAAP to be a reality in the foreseeable future, an ambitious commitment to liberalization is needed by each APEC member within a suitable, integrating framework, including most notably the Trans Pacific Strategic Economic Partnership (TPP).

Whereas WTO’s General Agreement on Trade in Services (GATS) is still a work-in-progress inside the current Doha Development Agenda for further multilateral liberalization, its basic framework of negotiation is being taken into full consideration and implemented in the four FTAs in the Asia-Pacific region. It is therefore necessary, at first, to provide an overview of the GATS framework. The most recent updated version of the GATS Commitment Tables available on-line is dated January 2003. In

the case of the “Revised Offer 2006”, only a limited number of countries have submitted their revised offers.¹ Therefore the earlier (2003) tables are used in this study.

In a commitment table under GATS, four Modes² i.e., Mode 1 up to Mode 4, and two aspects of liberalization, i.e., market access (MA) and national treatment (NT), are listed in tabular form. In each service sector (see the Appendix for the full list of GATS-based service classification), the four modes and two aspects of liberalization make eight “cells”, for each of which the existence of limitations is indicated in the text. Such an indication is created by filling in one of the following three indications: (1) “none” (in the case of no limitation), or (2) “unbound” (where there is no legally binding commitment made), or (3) a description of the limitation.

This study considers specific commitments only. “Horizontal commitments”, or commitments that apply to all the GATS service sectors are not considered in this study. This is because the way horizontal commitments are described is often rather complicated, and constructing a clear-cut and consistent database is extremely difficult.

The following three-fold symbolic classification is used for constructing a database regarding the commitment by each of the sub-sectors involved, by mode and by aspect of liberalization, in each GATS table:

- N: No limitation (and bound);
- L: Limited (or restricted) but bound;
- U: Unbound.

Since there are sub-categories with slightly different patterns of commitments in each of the 155 most disaggregated service categories, one "conservative" (i.e., the most restrictive) pattern is listed in the database.³ Where the words "Unbound", or “None” are followed by such phrases as "except...," the label "U" or “N,” respectively, is applied. A situation where no description exists is categorized as "U". This simplified categorization allows for a "bird's-eye view" of an otherwise analytically intractable style of reporting observed in the original GATS commitment tables. The database has been constructed for the APEC member economies. For comparison’s, a database is also constructed for ASEAN+n type FTAs

As for the contents of L (limitation), further a categorization has been made, as follows:

A: limitations on the number of service suppliers whether in the form of numerical quotas, monopolies, exclusive service suppliers or the requirements of an economic needs test;

¹ GATS Commitment Tables submitted in 2003 are downloadable at: <http://tsdb.wto.org/default.aspx> (accessed on 1 March 2011).

² Mode 1 refers to cross-border service provision; Mode 2, consumption abroad; Mode 3, service provision through establishing a commercial presence; and Mode 4, service provision through the movement of people (as suppliers).

³ The data will be published as part of an ERIA FTA database at ERIA’s website (www.eria.org).

- B: limitations on the total value of service transactions or assets in the form of numerical quotas or the requirement of an economic needs test;
- C: limitations on the total number of service operations or on the total amount of service output expressed in terms of designated numerical units in the form of quotas or the requirement of an economic needs test;
- D: limitations on the total number of natural persons that may be employed in a particular service sector or that a service supplier may employ and who are necessary for, and directly related to, the supply of a specific service in the form of numerical quotas or the requirement of an economic needs test;
- E: measures which restrict or require specific types of legal entity or joint venture through which a service supplier may supply a service;
- F: limitations on the participation of foreign capital in terms of a maximum percentage allowed on foreign shareholdings or the total value of an individual or aggregate foreign investment (the figure following this symbol indicates the upper bound for foreign equity participation);
- G: limitations related to government approval (indicated explicitly);
- T: restrictions related to the payment of taxes or fees.

Since this paper focuses on supply chains, Tables 1-6 show the database for APEC members' commitments under transportation-related service activities, namely, "Transport Services", with the contents of L being specified according to the above further categorization A through T. As shown, there is *no seamless connectivity* between and within these tables' economies. In other words, there is much need for APEC-wide policy coordination in harmonizing maritime-based, air-based and inland-mediated logistics services. What is also notable is that the contents of the limitations differ across the APEC economies. In these circumstances, an APEC-wide supply chain would be unreliable due to business climates that vary depending on each economy's service trade limitations. Considering the fact that trade in services on the whole has a "supporting industry" role for manufacturing activities, further service liberalization, not just in the logistics (transportation) sector but in the service sector as a whole (see Appendix), would significantly

increase business transaction costs.

Table 1. Commitment regarding “11Ab Freight transportation” (CPC code:

7212) within “11A Maritime Transport Services” under the GATS

Economy	Aspect	Mode 1	Mode 2	Mode 3	Mode 4
Brunei	MA	U	U	U	U
	NT	U	U	U	U
Indonesia	MA	N	N	E	E
	NT	E	N	T	U
Malaysia	MA	U	U	U	U
	NT	U	U	U	U
Philippines	MA	U	U	U	U
	NT	U	U	U	U
Singapore	MA	N	N	N	U
	NT	N	N	N	U
Thailand	MA	N	N	U	U
	NT	N	N	U	U
Vietnam	MA	N	N	N	U
	NT	N	N	N	U
Papua New Guinea	MA	N	N	N	U
	NT	N	N	N	U
China	MA	E	N	DEF49	U
	NT	N	N	U	U
Hong Kong China	MA	N	N	N	U
	NT	U	U	N	U
Chinese Taipei	MA	U	U	U	U
	NT	U	U	U	U
Japan	MA	U	U	U	U
	NT	U	U	U	U
Korea	MA	U	U	U	U
	NT	U	U	U	U
Australia	MA	DEG	N	E	U
	NT	AG	N	U	U
New Zealand	MA	N	N	U	U
	NT	N	N	U	U
Canada	MA	U	U	U	U
	NT	U	U	U	U
USA	MA	U	U	U	U
	NT	U	U	U	U
Mexico	MA	U	U	U	U
	NT	U	U	U	U
Chile	MA	U	U	U	U
	NT	U	U	U	U
Peru	MA	U	U	U	U
	NT	U	U	U	U

Source: GATS commitment tables (offered in 2003).

Table 2. Commitment regarding “11Bb Freight transportation” (CPC code: 7222) within “11B Internal Waterways Transport” under the GATS

Economy	Aspect	Mode 1	Mode 2	Mode 3	Mode 4
Brunei	MA	U	U	U	U
	NT	U	U	U	U
Indonesia	MA	U	U	U	U
	NT	U	U	U	U
Malaysia	MA	U	U	U	U
	NT	U	U	U	U
Philippines	MA	U	U	U	U
	NT	U	U	U	U
Singapore	MA	U	U	U	U
	NT	U	U	U	U
Thailand	MA	U	U	U	U
	NT	U	U	U	U
Vietnam	MA	U	N	U	U
	NT	U	N	N	U
Papua New Guinea	MA	U	U	U	U
	NT	U	U	U	U
China	MA	E	N	U	U
	NT	E	N	U	U
Hong Kong China	MA	U	U	U	U
	NT	U	U	U	U
Chinese Taipei	MA	U	U	U	U
	NT	U	U	U	U
Japan	MA	U	U	U	U
	NT	U	U	U	U
Korea	MA	U	U	U	U
	NT	U	U	U	U
Australia	MA	U	U	U	U
	NT	U	U	U	U
New Zealand	MA	U	U	U	U
	NT	U	U	U	U
Canada	MA	U	U	U	U
	NT	U	U	U	U
USA	MA	U	U	U	U
	NT	U	U	U	U
Mexico	MA	U	U	U	U
	NT	U	U	U	U
Chile	MA	U	U	U	U
	NT	U	U	U	U
Peru	MA	U	U	U	U
	NT	U	U	U	U

Source: GATS commitment tables (offered in 2003).

Table 3. Commitment regarding “11Cb Freight transportation” (CPC code: 732) within “11C Air Transport Services” under the GATS

Economy	Aspect	Mode 1	Mode 2	Mode 3	Mode 4
Brunei	MA	U	U	U	U
	NT	U	U	U	U
Indonesia	MA	U	U	U	U
	NT	U	U	U	U
Malaysia	MA	U	U	U	U
	NT	U	U	U	U
Philippines	MA	U	U	U	U
	NT	U	U	U	U
Singapore	MA	U	U	U	U
	NT	U	U	U	U
Thailand	MA	U	U	U	U
	NT	U	U	U	U
Vietnam	MA	U	U	U	U
	NT	U	U	U	U
Papua New Guinea	MA	U	U	U	U
	NT	U	U	U	U
China	MA	U	U	U	U
	NT	U	U	U	U
Hong Kong China	MA	U	U	U	U
	NT	U	U	U	U
Chinese Taipei	MA	N	N	N	U
	NT	N	N	N	U
Japan	MA	U	U	U	U
	NT	U	U	U	U
Korea	MA	U	U	U	U
	NT	U	U	U	U
Australia	MA	U	U	U	U
	NT	U	U	U	U
New Zealand	MA	U	U	U	U
	NT	U	U	U	U
Canada	MA	U	U	N	U
	NT	U	U	N	U
USA	MA	U	U	U	U
	NT	U	U	U	U
Mexico	MA	U	U	U	U
	NT	U	U	U	U
Chile	MA	U	U	U	U
	NT	U	U	U	U
Peru	MA	U	U	U	U
	NT	U	U	U	U

Source: GATS commitment tables (offered in 2003).

Table 4. Commitment regarding “11Eb Freight transportation” (CPC code: 7112) within “11E Rail Transport Services” under the GATS

Economy	Aspect	Mode 1	Mode 2	Mode 3	Mode 4
Brunei	MA	U	U	U	U
	NT	U	U	U	U
Indonesia	MA	U	U	U	U
	NT	U	U	U	U
Malaysia	MA	U	U	U	U
	NT	U	U	U	U
Philippines	MA	U	U	U	U
	NT	U	U	U	U
Singapore	MA	U	U	U	U
	NT	U	U	U	U
Thailand	MA	U	U	U	U
	NT	U	U	U	U
Vietnam	MA	U	N	U	U
	NT	U	N	U	U
Papua New Guinea	MA	U	U	U	U
	NT	U	U	U	U
China	MA	N	N	U	U
	NT	N	N	U	U
Hong Kong China	MA	U	U	U	U
	NT	U	U	U	U
Chinese Taipei	MA	U	N	N	U
	NT	U	N	N	U
Japan	MA	U	U	U	U
	NT	U	U	U	U
Korea	MA	U	U	U	U
	NT	U	U	U	U
Australia	MA	U	U	U	U
	NT	U	U	U	U
New Zealand	MA	N	N	N	U
	NT	N	N	N	U
Canada	MA	N	N	N	U
	NT	N	N	N	U
USA	MA	N	N	L	U
	NT	N	N	N	N
Mexico	MA	U	U	U	U
	NT	U	U	U	U
Chile	MA	U	U	U	U
	NT	U	U	U	U
Peru	MA	U	U	U	U
	NT	U	U	U	U

Source: GATS commitment tables (offered in 2003).

Table 5. Commitment regarding “11Fb Freight transportation” (CPC code: 7123) within “11F Rail Transport Services” under the GATS

Economy	Aspect	Mode 1	Mode 2	Mode 3	Mode 4
Brunei	MA	U	U	U	U
	NT	U	U	U	U
Indonesia	MA	U	U	U	U
	NT	U	U	U	U
Malaysia	MA	U	U	U	U
	NT	U	U	U	U
Philippines	MA	U	U	U	U
	NT	U	U	U	U
Singapore	MA	U	U	U	U
	NT	U	U	U	U
Thailand	MA	U	N	N	DE
	NT	U	N	N	N
Vietnam	MA	U	U	U	U
	NT	U	U	U	U
Papua New Guinea	MA	U	U	U	U
	NT	U	U	U	U
China	MA	N	N	U	U
	NT	N	N	U	U
Hong Kong China	MA	U	U	U	U
	NT	U	U	U	U
Chinese Taipei	MA	U	N	N	U
	NT	U	N	N	U
Japan	MA	U	N	AC	U
	NT	U	N	N	U
Korea	MA	U	N	G	U
	NT	U	N	E	U
Australia	MA	U	N	N	U
	NT	U	N	N	U
New Zealand	MA	N	N	N	U
	NT	N	N	N	U
Canada	MA	N	N	N	U
	NT	N	N	N	U
USA	MA	U	N	U	U
	NT	N	N	N	N
Mexico	MA	U	U	U	U
	NT	U	U	U	U
Chile	MA	U	U	U	U
	NT	U	U	U	U
Peru	MA	U	U	U	U
	NT	U	U	U	U

Source: GATS commitment tables (offered in 2003).

Table 6. Commitment regarding “11Hc Freight transport agency services” (CPC code: 748) within “11H Services Auxiliary to All Modes of Transport” under the GATS

Economy	Aspect	Mode 1	Mode 2	Mode 3	Mode 4
Brunei	MA	U	U	U	U
	NT	U	U	U	U
Indonesia	MA	U	U	U	U
	NT	U	U	U	U
Malaysia	MA	U	U	U	U
	NT	U	U	U	U
Philippines	MA	N	N	N	N
	NT	N	N	N	N
Singapore	MA	U	U	U	U
	NT	U	U	U	U
Thailand	MA	U	U	U	U
	NT	U	U	U	U
Vietnam	MA	U	U	U	U
	NT	U	U	U	U
Papua New Guinea	MA	U	U	U	U
	NT	U	U	U	U
China	MA	U	N	EF50	U
	NT	U	N	N	U
Hong Kong China	MA	U	U	U	U
	NT	U	U	U	U
Chinese Taipei	MA	N	N	N	U
	NT	N	N	N	U
Japan	MA	U	U	U	U
	NT	U	U	U	U
Korea	MA	N	N	E	U
	NT	N	N	N	U
Australia	MA	N	N	N	U
	NT	N	N	N	U
New Zealand	MA	U	N	N	U
	NT	U	N	N	U
Canada	MA	N	N	N	U
	NT	N	N	N	U
USA	MA	U	U	U	U
	NT	U	U	U	U
Mexico	MA	U	U	U	U
	NT	U	U	U	U
Chile	MA	U	U	U	U
	NT	U	U	U	U
Peru	MA	U	U	U	U
	NT	U	U	U	U

Source: GATS commitment tables (offered in 2003).

Tables 7 through 12 show nations' commitments regarding "Maritime Transport Services" under the ASEAN Framework Agreement on Services (or AFAS, package 7).⁴ In the case of this pluri-lateral free trade agreement on service trade among the ten ASEAN members, the number of "N"s (i.e., no limitation) is much bigger, meaning that the ASEAN region is much more seamless and connected than is the case with APEC members' commitments under the GATS. This will give ASEAN a competitive edge when it comes to realizing of a reliable supply chain. With the WTO Doha Development Agenda stagnant, service trade liberalization under the GATS is also stagnant. What this implies is that APEC's vision of establishing a Free Trade Area of the Asia Pacific (FTAAP) can be seen as a "de-facto WTO." In this region-wide agreement, supply chains could indeed be a key advantage, since, as shown above in Tables 1-6, an FTAAP would provide participating economies with significant "WTO-plus" elements in terms of both depth of liberalization and service sector coverage. This point is further discussed in section 4.

⁴ The AFAS (ASEAN Framework Agreement on Services), as a living agreement, moves toward deeper commitments by releasing new "packages" almost every year. AFAS package 7 is the latest for which commitment data is publicly available.

Table 7. Commitment regarding “11Ab Freight transportation” (CPC code: 7212) within “11A Maritime Transport Services” under AFAS package 7

ASEAN member	Aspect	Mode 1	Mode 2	Mode 3	Mode 4
Brunei	MA	N	N	U	N
	NT	N	N	U	N
Cambodia	MA	U	N	N	U
	NT	U	N	G	U
Indonesia	MA	N	N	EF60	D
	NT	N	N	DT	DT
Laos	MA	N	N	EF49G	U
	NT	N	N	ET	U
Malaysia	MA	N	N	EF49G	U
	NT	N	N	N	U
Philippines	MA	U	U	U	U
	NT	U	U	U	U
Singapore	MA	N	N	N	U
	NT	N	N	N	U
Thailand	MA	N	N	U	U
	NT	N	N	U	U
Vietnam	MA	N	N	EF49	U
	NT	N	N	N	U

Source: ASEAN Framework Agreement on Services (AFAS) commitment tables (package 7).

Table 8. Commitment regarding “11Bb Freight transportation” (CPC code: 7222) within “11B Internal Waterways Transport” under AFAS package 7

ASEAN member	Aspect	Mode 1	Mode 2	Mode 3	Mode 4
Brunei	MA	U	U	U	U
	NT	U	U	U	U
Cambodia	MA	U	U	U	U
	NT	U	U	U	U
Indonesia	MA	N	N	EF49	D
	NT	N	N	DT	DT
Laos	MA	N	N	EF49G	U
	NT	N	N	ET	U
Malaysia	MA	U	U	U	U
	NT	U	U	U	U
Philippines	MA	U	U	U	U
	NT	U	U	U	U
Singapore	MA	U	U	U	U
	NT	U	U	U	U
Thailand	MA	U	U	U	U
	NT	U	U	U	U
Vietnam	MA	U	N	EF49	U
	NT	U	N	N	U

Source: ASEAN Framework Agreement on Services (AFAS) commitment tables (package 7).

Table 9. Commitment regarding “11Cb Freight transportation” (CPC code: 732) within “11C Air Transport Services” under AFAS package 7

ASEAN member	Aspect	Mode 1	Mode 2	Mode 3	Mode 4
Brunei	MA	U	U	U	U
	NT	U	U	U	U
Cambodia	MA	U	U	U	U
	NT	U	U	U	U
Indonesia	MA	U	U	U	U
	NT	U	U	U	U
Laos	MA	U	U	U	U
	NT	U	U	U	U
Malaysia	MA	U	U	U	U
	NT	U	U	U	U
Philippines	MA	U	U	U	U
	NT	U	U	U	U
Singapore	MA	U	U	U	U
	NT	U	U	U	U
Thailand	MA	U	U	U	U
	NT	U	U	U	U
Vietnam	MA	U	U	U	U
	NT	U	U	U	U

Source: ASEAN Framework Agreement on Services (AFAS) commitment tables (package 7).

Table 10. Commitment regarding “11Eb Freight transportation” (CPC code: 7112) within “11E Rail Transport Services” under AFAS package 7

ASEAN member	Aspect	Mode 1	Mode 2	Mode 3	Mode 4
Brunei	MA	N	N	F49	U
	NT	N	N	U	U
Cambodia	MA	U	U	U	U
	NT	U	U	U	U
Indonesia	MA	N	N	EF49	D
	NT	N	N	DT	DT
Laos	MA	U	U	U	U
	NT	U	U	U	U
Malaysia	MA	U	U	U	U
	NT	U	U	U	U
Philippines	MA	U	N	F40	N
	NT	U	N	N	N
Singapore	MA	U	U	U	U
	NT	U	U	U	U
Thailand	MA	U	U	U	U
	NT	U	U	U	U
Vietnam	MA	N	N	U	U
	NT	N	N	U	U

Source: ASEAN Framework Agreement on Services (AFAS) commitment tables (package 7).

Table 11. Commitment regarding “11Fb Freight transportation” (CPC code: 7123) within “11F Road Transport Services” under AFAS package 7

ASEAN member	Aspect	Mode 1	Mode 2	Mode 3	Mode 4
Brunei	MA	U	U	U	U
	NT	U	U	U	U
Cambodia	MA	N	N	N	U
	NT	N	N	N	U
Indonesia	MA	N	N	EF49	D
	NT	N	N	DT	DT
Laos	MA	U	U	U	U
	NT	U	U	U	U
Malaysia	MA	N	N	F49	U
	NT	N	N	N	U
Philippines	MA	U	N	F40	N
	NT	U	N	N	N
Singapore	MA	U	N	N	U
	NT	N	N	N	U
Thailand	MA	U	N	DE	U
	NT	U	N	N	U
Vietnam	MA	U	N	N	U
	NT	U	N	N	U

Source: ASEAN Framework Agreement on Services (AFAS) commitment tables (package 7).

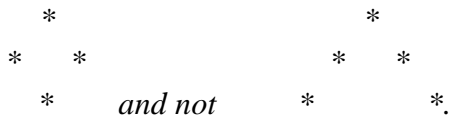
Table 12. Commitment regarding “11Hc Freight transport agency services” (CPC code: 748) within “11H Services Auxiliary to All Modes of Transport” under AFAS package 7

ASEAN member	Aspect	Mode 1	Mode 2	Mode 3	Mode 4
Brunei	MA	N	N	F49	U
	NT	N	N	U	U
Cambodia	MA	U	U	U	U
	NT	U	U	U	U
Indonesia	MA	U	U	U	U
	NT	U	U	U	U
Laos	MA	U	U	U	U
	NT	U	U	U	U
Malaysia	MA	N	N	EF49	U
	NT	N	N	N	U
Philippines	MA	N	N	EF**	N
	NT	N	N	N	N
Singapore	MA	U	U	U	U
	NT	U	U	U	U
Thailand	MA	U	N	N	U
	NT	U	N	N	U
Vietnam	MA	U	N	N	U
	NT	U	N	N	U

Source: ASEAN Framework Agreement on Services (AFAS) commitment tables (package 7).

4. An expert's view on supply chains and APEC's action on supply chains

*Parts suppliers and buyers in Japan are can be characterized as forming a "diamond" shape, rather than a "pyramid" shape, meaning that one supplier (indicated as * at the bottom and in the middle) is tasked with supplying for more than one "parent" company (also indicated as * at the top):*



*Once the bottom * (third-tier supplier) is hit by a tsunami or else, the 1st and 2nd tiers have much trouble, unable to find out an alternative supply source. There is a trade-off between resilience and low cost.*

In response to the author's email above describing the concept of a diamond-shaped supply chain, an auto expert, Michael Smitka, (professor at Washington and Lee University in the US) offered the following comments⁵ on global supply chains.

Diamond -- it used to be the "Alps" model with a broad base with lots of firms supporting the OEM peaks. More and more, it's suppliers who have the technology -- any firm that doesn't purchase from the top global suppliers restricts its technology base. Car companies don't have great strengths in electronics, they're not good at basic materials, and so on -- they're integrators. And while the IT revolution is well known, the materials revolution is at least as important -- wiring is very different than 10 years ago, because of copper alloys and insulators and now aluminum wire (cheaper and lighter but new and because copper is still everywhere in the car, issues of joining dissimilar metals).

Now new materials and IT mean patents, so finding multiple suppliers is hard. Supposedly OEMs were tracking that, in part because of NAFTA tariff requirements. Obviously they either weren't, or that information never made its way to purchasing departments. But that's another reason to mandate "global" supply capability on a local basis, so that you're not dependent on a single factory.

What the above email means is that the concept of supply chains is not just about physical connectivity, it is also about institutional and business-oriented connectivity. As for institutional connectivity, APEC has its "Supply-Chain Connectivity Initiative." APEC's Committee on Trade and Investment (CTI) agreed to adopt 10 percent as the overarching target for improving supply-chain performance in terms of time, cost and uncertainty by 2015.⁶

⁵ The email communication occurred on December 27-28, 2011.

⁶ The following are the eight "chokepoints" that work against reliable supply chains as pointed out by the APEC Supply-Chain Initiative:

This target is related entirely to regulatory impediments, customs inefficiencies and inadequate transport networks and infrastructure. A simulation⁷ under this initiative reveals that the reduction in lead time is equivalent to 1.1 days of lead time on average, the reduction in the “safety stock” of parts and components by 1.6 day-worth amount on average, a 9%-30% reduction in the export-related workload, a 10%-25% reduction in the import-related workload (at the government’s end) and a 30%-60% reduction in business workload (on the business side). Indeed, these potential reductions are significantly larger than tariff reductions.

In connection with the institutional and business aspects of enhanced supply-chain connectivity, what follows is the continuation of Michael Smitka’s email.

In terms of the auto industry, China is now showing up as a substantive supplier horizons: 2 of the 3 finalists I'm visiting this year as a judge of the Automotive News PACE innovation competition flew presenters over from Shanghai, because a substantial part of the work was done there. When I visit European and American suppliers, there are always engineers from multiple countries in the room, often management as well. That's true for German suppliers, French suppliers, Italian suppliers, and US and Canadian suppliers. I don't sense that's the case for Japanese suppliers, and yet the number of newly minted Japanese college grads is declining. If the number of engineers hasn't fallen off in absolute terms (the MEXT data I looked at was ambiguous), then surely the average quality must have fallen.

Lots of things regarding supply chains, especially the automotive sector. The base requirement for most non-Japanese OEMs is full support in all major markets, which can mean EU / NAFTA / East Asia but in many cases includes Latin America (Brazil). That means both manufacturing and full engineering support, because at Ford and GM, for example, vehicles are developed in multiple places. So if you're a small supplier, they're less and less willing to deal with you, unless you're a small supplier with a truly global footprint. In addition, Cummins and John Deere and Caterpillar

Chokepoint 1: A lack of transparency/awareness of the full scope of regulatory issues affecting logistics, a lack of awareness and coordination among government agencies on policies affecting the logistics sector; and an absence of a single contact point or champion agency on logistics matters.

Chokepoint 2: Inefficient or inadequate transport infrastructure, and a lack of cross-border physical linkages (e.g. roads and bridges).

Chokepoint 3: A lack of capacity among local/regional logistics sub-providers.

Chokepoint 4: The inefficient clearance of goods at the border, a lack of coordination among border agencies, especially relating to the clearance of regulated goods at the border.

Chokepoint 5: Burdensome procedures for customs documentation and other procedures (including for preferential trade).

Chokepoint 6: Underdeveloped multi-modal transport capabilities, and inefficient air, land, and multi-modal connectivity.

Chokepoint 7: Variations in cross-border standards and regulations on the movement of goods, services and business travelers.

Chokepoint 8: A lack of regional cross-border customs and transit arrangements.

⁷ Based on a report written for the “APEC Supply Chain Visibility Initiative,” which is administered by Japan.

and others on the truck and heavy equipment end are likewise global. If you're not, you're stuck with but one slice of the pie, your primary auto OEM.

Now Honda develops vehicles in the US, Toyota is well along in that process but their US operation is fighting for autonomy (e.g., being asked to use parts developed in Japan without much input from the US end). No particular knowledge of Nissan but it is very international in management and has a much broader supplier base than in the past. Toyota also has a big engineering center outside Paris but I've been able to find very, very little information on it.

From a supply chain perspective this of course increases risks (a point that doesn't need much elaboration, Honda in particular was hit by both the Thai floods and the Tohoku earthquake⁸). But it also results in an insularity that means they aren't always on top of technology. Again, both companies purchase from a much wider array of suppliers than in the past, so it's much less of an issue than 5 years ago. Of course you can also emphasize the cost risk from not having suppliers located where vehicles are sold, a blip in exchange rates can render a company out-of-line with competitors with a stronger local supply base, for better (when the yen was weak) and for worse (now -- and with the capital account surplus much larger than the trade surplus, I don't see that changing anytime soon).

What the above comment on supply chains signifies is the inseparability when it comes to considering both innovative business strategies and dynamic supply chains. Given that APEC 2012 (in Russia) had both supply chains and innovation on the main agenda, a large-scale APEC initiative linking these two issues (innovation and supply chains) could be formulated this year.

Table 13 shows macro-level total logistics costs (as a proportion to GDP) for four APEC members: the USA, China, Japan and Korea. As shown, the level of logistics costs is still high, standing at around or over 10 percent of total GDP. At this macro-level, also, enhancing both *physical* and *institutional/business*-related connectivity is important, especially in terms of transport, inventory and management costs. In other words, comprehensive action is needed to assure reliable supply chains. Since the logistics sector as a service sector contributes to all other cross-border economic activities, service trade liberalization should be undertaken as a core component of the Supply-Chain Connectivity Initiative.

⁸ The Great East Japan Earthquake hit Japan's Tohoku area (northern part) on March 11, 2011.

Table 13. Macro-level total logistics costs (as a proportion of GDP) for selected APEC economies

		(percent)		
		1991	2000	2008
China	Total logistics costs	-	-	17.4
	-Transport costs	-	-	9.1
	-Inventory costs	-	-	6.0
	-Management costs	-	-	2.2
Japan	Total logistics costs	10.5	8.7	8.9
	-Transport costs	6.5	5.8	5.4
	-Inventory costs	3.5	2.5	3.1
	-Management costs	0.5	0.4	0.4
Korea	Total logistics costs	-	-	12.5
	-Transport costs	-	-	-
	-Inventory costs	-	-	-
	-Management costs	-	-	-
USA	Total logistics costs	10.6	10.2	9.4
	-Transport costs	5.9	6.0	6.1
	-Inventory costs	4.3	3.8	2.9
	-Management costs	0.4	0.4	0.4

Note : - n.a.

Source: *Teikoku Data Bank TDB Gyokai Doko* (business trend) 2012-F', 2011.8 VOL.111.

5. Policy suggestion for realizing more reliable supply chains

The APEC Policy Support Unit (2009) indicated the following four strategies for APEC economies to further reduce the time, cost, and uncertainty involved in moving goods and services along the entire supply chain.

STRATEGIC OBJECTIVE 1: Provide the necessary infrastructure to remove physical chokepoints along the entire supply chain;

STRATEGIC OBJECTIVE 2: Improve policy and regulatory frameworks that will enhance the performance of the logistics sector and/or logistics service providers;

STRATEGIC OBJECTIVE 3: Streamline trade procedures so that transactions between business and government agencies are easier, quicker, and more economical than before; and

STRATEGIC OBJECTIVE 4: Establish effective institutions and/or institutional

arrangements to support efficient market exchanges.

Table 14 is a list of policy options aimed at more reliable supply chains from a report funded by the World Bank. Here, also, both the physical (infrastructural) as well as the institutional/business aspects of the policy options are highlighted. What is noteworthy is the highest potential (viewed from the highest internal rate of return⁹) of the latter, i.e., the institutional/business aspect of policy coordination. Indeed, the internal rate of return of over 50 percent is projected as being possible when policies aimed at improving the efficiency of logistics service providers and policies aimed at trade facilitation are implemented. This directly translates into the high potential arising from further service trade liberalization, especially in the transportation sectors.

Table 14. Summary of policy options toward more reliable Global supply chains

Solutions/Recommendation	Internal rate of return	Potential if implemented
More and better investment in infrastructure	Between 25-50% (World Bank investment projects)	Medium/high
Policies aimed at improving the efficiency of logistics service providers	Higher than 50% (due to the very low monetary cost of implementation and enforcement) Costs significantly lower than investment in	High

⁹ Internal rate of return (IRR) can be defined as “”.

	infrastructure)	
Policies to improve trade facilitation	Higher than 50% (due to the very low monetary cost of implementation and enforcement) Costs significantly lower than investment in infrastructure)	Very High

Source: Adapted from Gonzalez, Guasch and Serebrisky (2007), Table 15.

As the current Doha Development Agenda of the WTO is stagnates, APEC, as a premier institutionally motivated forum, could implement its own service trade liberalization, most probably in the form of APEC’s new Individual Action Plan (IAP), which includes the issue of service sector liberalization. As mentioned in Section 3, the current situation concerning liberalization under the GATS is far from satisfactory. The “WTO-plus” status of the ASEAN Framework Agreement on Services (AFAS) has as its goal the establishment of the ASEAN Economic Community in 2015. APEC could do the same. That is, APEC could formulate its own version of a target for service trade liberalization target, within the vision to establish the Free Trade Area of the Asia Pacific (FTAAP). More concretely, Ishido and Fukunaga (2012) propose the harmonization of service trade restrictions with capital participation (the “F” category in the analysis in Section 3) at the center, since allowing for a certain level of foreign equity participation would reduce uncertainty and provide transparency in terms of restrictions arising from policy.

Once a harmonized restriction (with “F” at its center) in the transportation sector is secured under Mode 3 (commercial presence), an integrated (seamless) and IT-based supply chain would be established across the APEC region, and this is precisely the sort of “APEC-style innovation” that stresses the business-oriented approach to innovation. An “APEC Model Measure for Service Trade Liberalization” could be proposed with regard to the new IAP process with a view to enabling reliable APEC-wide reliable supply chains. Since APEC possesses the rare advantage of possessing the business-oriented ABAC (APEC Business Advisory Council), APEC’s policy making in the field of supply chains could be directly utilized by the innovative business sector of the region. What we need is de-facto seamless supply chains underpinned by APEC-wide service trade liberalization which secures high-level and harmonized foreign equity participation.

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- Gonzalez, Julio A., Jose Luis Guasch and Tomas Serebrisky (2007), “Latin America: Addressing High Logistics Costs and Poor Infrastructure for Merchandise Transportation and Trade Facilitation”, The World Bank (downloadable at <http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=1186233>).
- Ishido, Hikari and Yoshifumi Fukunaga (2012), “Liberalization of Trade in Services: Toward a Harmonized ASEAN++FTA,” *Policy Brief*, No.2012-02 (<http://www.eria.org/publications/policy.html>).

**APPENDIX: List of 11 sectors and 55 sub-sectors of the service
trade administered by GATS**

01. Business Services

- 01.A. Professional Services
- 01.B. Computer and Related Services
- 01.C. Research and Development Services
- 01.D. Real Estate Services
- 01.E. Rental/Leasing Services without Operators
- 01.F. Other Business Services

02. Communication Services

- 02.A. Postal Services
- 02.B. Courier Services
- 02.C. Telecommunication Services
- 02.D. Audiovisual Services
- 02.E. Other

03. Construction and Related Engineering Services

- 03.A. General Construction Work for Building
- 03.B. General Construction Work for Civil Engineering
- 03.C. Installation and Assembly Work
- 03.D. Building Completion and Finishing Work
- 03.E. Other

04. Distribution Services

- 04.A. Commission Agents' Services
- 04.B. Wholesale Trade Services
- 04.C. Retailing Services
- 04.D. Franchising
- 04.E. Other

05. Educational Services

- 05.A. Primary Education Services
- 05.B. Secondary Education Services
- 05.C. Higher Education Services
- 05.D. Adult Education
- 05.E. Other Education Services

06. Environmental Services

- 06.A. Sewage Services
- 06.B. Refuse Disposal Services
- 06.C. Sanitation and Similar Services
- 06.D. Other

07. Financial Services

- 07.A. All Insurance and Insurance-related Services
- 07.B. Banking and Other Financial Services
- 07.C. Other

08. Health Related and Social Services

- 08.A. Hospital Services
- 08.B. Other Human Health Services
- 08.C. Social Services
- 08.D. Other

09. Tourism and Travel Related Services

- 09.A. Hotels and Restaurants
- 09.B. Travel Agencies and Tour Operators Services
- 09.C. Tourist Guides Services
- 09.D. Other

10. Recreational, Cultural and Sporting Services

- 10.A. Entertainment Services
- 10.B. News Agency Services
- 10.C. Libraries, Archives, Museums and Other Cultural Services
- 10.D. Sporting and Other Recreational Services
- 10.E. Other

11. Transport Services

- 11.A. Maritime Transport Services
- 11.B. Internal Waterways Transport
- 11.C. Air Transport Services
- 11.D. Space Transport
- 11.E. Rail Transport Services
- 11.F. Road Transport Services
- 11.G. Pipeline Transport
- 11.H. Services Auxiliary to All Modes of Transport
- 11.I. Other Transport Services