Liberalization of Trade in Services under ASEAN+n FTAs: A Mapping Exercise*

Hikari Ishido
Director, APEC Study Center and
Associate Professor, Faculty of Law and Economics, Chiba University
ishido@le.chiba-u.ac.jp.

This study maps out the degree of liberalization of trade in services under four ASEAN+n frameworks. After constructing a database showing the existence of limitations on market access and/or national treatment by each service sector, the study finds that the commitment level differs greatly between sensitive and less sensitive sectors, and that the commitment level under the ASEAN Framework Agreement (AFAS) is the highest among the four FTAs studied. It also finds that there are cross-country and sector-wide similarities in the pattern of service sector commitment under and across each of the FTAs; this implies that the shared domestic sensitivities can be overcome by a shared economic cooperation scheme for enhancing competitiveness in the ASEAN+n region.

Keywords: Trade in services, Restrictiveness, GATS, ASEAN+n FTAs, Liberalization, Harmonization

JEL Classification: F13, F14, F15

I. Introduction

While there has been a delay in the WTO-based liberalization of trade in services, East Asian countries are in the process of establishing preferential pluri-lateral free trade agreements (FTAs) with a wide coverage fit for regional community building. They have the potential of merging into a consolidated region-wide free trade framework. This study undertakes a mapping exercise

* This research has been conducted as part of the project entitled “Comprehensive Mapping of FTAs in ASEAN and East Asia” for the Economic Research Institute for ASEAN and East Asia (ERIA). The author wishes to acknowledge the valuable services of Nobushige Yonei, research assistant at Chiba University.

1 Hoekman, Martin and Mattoo (2009) address this issue in detail.

2 Fink and Molinuevo (2008), and Gootiiz and Mattoo (2009) are recent examples of study into preferential agreements covering trade in services.

© Korea Institute for International Economic Policy
of the ASEAN+n type FTAs (where “n” can be zero one or two countries) in terms of trade in services, which is an important and growing mode of international economic transaction. The study focuses on the four ASEAN-related free trade agreements covering the service sector, namely (1) the ASEAN Framework Agreement on Services (AFAS), (2) the ASEAN-Australia-New Zealand Free Trade Agreement (AANZFTA), (3) the ASEAN-China Free Trade Agreement (ACFTA), and (4) the ASEAN-Korea Free Trade Agreement (AKFTA). The structure of this paper is as follows. The next section makes an overview of GATS commitment tables. Section 3 addresses the method of indexing service trade liberalization from the database constructed. Section 4 presents correlation among the participating countries. Section 5 makes a cluster analysis of the commitment pattern. Section 6 is dedicated to indexation of commitments by country, mode and aspect. Section 7 concludes the paper with some policy implications.

II. An Overview of WTO/GATS Commitment Tables

Whereas WTO’s General Agreement on Trade in Services (GATS) is still ongoing under the current Doha Development Agenda for further multilateral liberalization, its basic framework of negotiation is fully taken into consideration and implemented under the four FTAs in the Asia Pacific region. It is therefore necessary first to give an overview of the framework of GATS. The most recent updated version of the GATS Commitment Tables available on-line is dated January 2003. In the case of “Revised Offer 2006”, only a limited number of countries have submitted their revised offers. Therefore the former tables are used in this study.

In a commitment table under GATS, four Modes 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 formats. In each service sector (see APPENDIX for the the GATS-based classification of service sectors), the four modes and two aspects of liberalization make eight “cells”, for each of which the existence of limitations is indicated in text. Such indication is created by

3 GATS Commitment Tables submitted in 2003 are downloadable at: http://tsdb.wto.org/default.aspx (Accessed on 1 March 2011).
4 Mode 1 refers to cross-border service provision; Mode 2, consumption abroad; Mode 3, service provision through establishing commercial presence; and Mode 4, service provision through movement of people (as suppliers).
filling in one of the following three indications: (1) “none” (in the case of no limitation), or (2) “unbound” (in the case where there is no legally binding commitment made), or (3) description of the limitation.

For the sake of analytical tractability, this study adopts the level of 55 sub-sectors. The further disaggregated 155 sectors have been considered at the database construction stage. Also, this study considers specific-commitments only. “Horizontal commitments”, or commitments applied to all the GATS service sectors are not considered in this study. This is because the way horizontal commitments are described is oftentimes rather complicated, making a clear-cut and consistent database construction extremely difficult.

The following three-fold symbolic classification is used for constructing a database for the commitment by each sub-sector, by mode and by aspect of liberalization, in each FTA

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 most disaggregated 155 service categories, one “conservative” (i.e. most restrictive) pattern is listed in the database constructed. In the case where the word “Unbound”, or “None” is followed by such phrases as “except...”, the label “U” or “N,” respectively, is simply applied. The situation of no description exists is considered as “U.” This simplified categorization allows for a “bird’s-eye view” analysis of an otherwise analytically intractable style of reporting observed in the original GATS commitment tables. The database has been constructed for the four East Asian free trade agreements, i.e. (1) the ASEAN Framework Agreement on Services (AFAS) package, (2) the ASEAN-Australia-New Zealand FTA, (3) the ASEAN-China FTA, and (4) the ASEAN-Korea FTA.

At the stage of reporting the Hoekman Index (mentioned in the next section), aggregation up to the 55 sectors is used. While each of the 155 sub-sectors has further subdivisions, the way each commitment table is described is not comparable with others due to idiosyncrasy in actual offer documents at the most detailed level (e.g. branching out with incomplete indications, incomplete listings, partial merging of different sub-divisions and the like).

The data will be published as part of ERIA FTA database at ERIA’s website (www.eria.org).
III. Indexation of Service Trade Liberalization from the Database

Indexation of service trade liberalization is a new research area, primarily because the trade in services has long been considered as “non-tradable” (which is currently not the case), and also because the modalities of trade in services differs greatly across different sub-sectors (as indicated by Adlung and Martin. 2005). Indeed, so much mention is made of the restricted status of trade in services (see, e.g. Fink and Molinuevo 2008; Gootiiz and Mattoo 2009; Hoekman, Martin and Mattoo 2009; and Urata, Ogawa and Sawada 2011).

Measurement of the degree of service trade liberalization, therefore, naturally faces methodological difficulty, hence the paucity of literature to empirically address indexation methods. Among the limited number of existing work, OECD (2003, 2009) offers the results of measuring service trade restrictiveness through undertaking subjective interviews to relevant business experts. Similarly, Ochiai, Dee and Findlay (2007) and Dee (2009) also make subjective evaluation of service trade restrictiveness using basically the same method. While the subjective way of evaluating service trade restrictiveness facing business sectors is a useful method in that attempts to capture the actual trade barriers are made, it also seems to face a difficulty especially in terms of constructing non-biased and comparable indices.

Hoekman (1995), on the other hand, proposes an objective indexation method for measuring the GATS-style degree of commitment in the service sector. The present paper draws on Hoekman’s approach since it remains the only indexation method that is objective in nature. This method assigns values to each of 8 cells (4 modes and 2 aspects—market access (MA) or National Treatment (NT)—), as follows: N=1, L=0.5, U=0; then calculates the average value by service sector and by country. Using the database constructed, the “Hoekman Index” has been calculated for each 155 sub-sectors. Then the simple average at the level of the 55 sectors is calculated. Tables 1-4 report the results by FTA.
| Country       | 01A | 01B | 01C | 01D | 01E | 01F | 02A | 02B | 02C | 02D | 02E | 03A | 03B | 03C | 03D | 03E | 04A | 04B |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Brunei       | 0.4 | 0.69| 0.56| 0   | 0.31| 0.34| 0   | 0   | 0.52| 0   | 0   | 0.31| 0.31| 0.31| 0.31| 0   | 0   | 0   |
| Cambodia     | 0.53| 0.75| 0   | 0   | 0.1 | 0.35| 0   | 0.75| 0.75| 0   | 0   | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.75| 0.75|
| Indonesia    | 0.39| 0.41| 0.23| 0   | 0.25| 0.3 | 0   | 0   | 0.79| 0   | 0   | 0.5 | 0.5 | 0.5 | 0.5 | 0   | 0.56|
| Laos         | 0.3 | 0.7 | 0.56| 0   | 0.3 | 0.2 | 0   | 0.88| 0.3 | 0.28| 0   | 0.75| 0.75| 0.75| 0.69| 0.56| 0.56|
| Malaysia     | 0.43| 0.75| 0.69| 0   | 0.41| 0.32| 0   | 0   | 0.78| 0.17| 0   | 0.5 | 0.5 | 0.5 | 0.5 | 0   | 0.56| 0.38|
| Myanmar      | 0.28| 0.75| 0   | 0   | 0.15| 0.2 | 0   | 0.75| 0.43| 0.5 | 0   | 0.63| 0.63| 0.63| 0.63| 0.63| 0.63| 0.63|
| Philippines  | 0.34| 0.86| 0.5 | 0.25| 0.16| 0.23| 0.69| 0.94| 0.73| 0.25| 0   | 0.31| 0.31| 0.31| 0.31| 0.31| 0.31| 0.88|
| Singapore    | 0.38| 0.6 | 0.75| 0.38| 0.4 | 0.49| 0   | 0.5 | 0.63| 0.75| 0   | 0.75| 0.75| 0.75| 0.75| 0.75| 0.75| 0.75|
| Thailand     | 0.35| 0.88| 0.83| 0.75| 0.55| 0.5 | 0   | 0   | 0.44| 0.46| 0   | 0.63| 0.63| 0.63| 0.63| 0.63| 0.63| 0.75|
| Vietnam      | 0.49| 0.15| 0.25| 0   | 0.1 | 0.37| 0   | 0.75| 0.75| 0.15| 0   | 0.56| 0.56| 0.56| 0.56| 0.56| 0.5 | 0   |
| **ASEAN Average** | 0.39| 0.65| 0.44| 0.14| 0.27| 0.33| 0.07| 0.46| 0.61| 0.26| 0   | 0.54| 0.54| 0.54| 0.54| 0.54| 0.55| 0.44 |
### Table 1. Continued

|          | 04C | 04D | 04E | 05A | 05B | 05C | 05D | 05E | 06A | 06B | 06C | 06D | 07A | 07B | 07C | 08A | 08B | 08C |
|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Brunei   | 0   | 0   | 0   | 0.56| 0.56| 0.56| 0.56| 0.56| 0   | 0   | 0   | 0.5 | 0   | 0   | 0   | 0   | 0   | 0   |
| Cambodia | 0.75| 0.75| 0.75| 0   | 0   | 0.75| 0.75| 0.75| 0.75| 0.75| 0.75| 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Indonesia| 0.5 | 0   | 0   | 0   | 0.63| 0.63| 0.56| 0.56| 0.5  | 0.69| 0   | 0.5 | 0   | 0   | 0   | 0.63| 0.75| 0.63|
| Laos     | 0   | 0.56| 0   | 0.56| 0.56| 0.56| 0.56| 0.56| 0.56 | 0.56| 0.56| 0   | 0   | 0   | 0.56| 0   | 0   | 0   |
| Malaysia | 0.38| 0.69| 0   | 0.44| 0.44| 0.19| 0.44| 0.44| 0.69 | 0   | 0   | 0.69| 0   | 0   | 0   | 0.63| 0   | 0.69|
| Myanmar  | 0.63| 0   | 0   | 0   | 0   | 0.63| 0.63| 0.63| 0.63 | 0.63| 0   | 0   | 0   | 0   | 0   | 0.63| 0.63| 0.75|
| Philippines | 0.25| 0   | 0.25| 0   | 0   | 0   | 0   | 0   | 0.56| 0   | 0   | 0.5 | 0   | 0   | 0   | 0.25| 0   | 0   |
| Singapore| 0.75| 0.75| 0   | 0   | 0   | 0   | 0.75| 0   | 0   | 0.5 | 0   | 0.5 | 0   | 0   | 0   | 0   | 0.25| 0.25| 0.5 |
| Thailand | 0   | 0.75| 0.75| 0.63| 0.81| 0.63| 0.63| 0   | 0.88| 0.63| 0.63| 0   | 0   | 0   | 0   | 0.75| 0.63| 0   |
| Vietnam  | 0   | 0.75| 0   | 0.25| 0.5 | 0.5 | 0.5  | 0.63| 0.63 | 0   | 0.63| 0   | 0   | 0   | 0   | 0.69| 0.69| 0.56|
| ASEAN Average | 0.33| 0.43| 0.18| 0.22| 0.33| 0.39| 0.54| 0.4  | 0.52| 0.39| 0.31| 0.48| 0   | 0   | 0   | 0.49| 0.29| 0.31 |
|            | 08D | 09A | 09B | 09C | 09D | 10A | 10B | 10C | 10D | 10E | 11A | 11B | 11C | 11D | 11E | 11F | 11G | 11H | 11I | Average |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|
| Brunei     | 0   | 0.56| 0   | 0   | 0   | 0.56| 0   | 0   | 0   | 0.28| 0   | 0   | 0.56| 0.45| 0   | 0   | 0.42| 0   | 0.18    |
| Cambodia   | 0   | 0.56| 0.75| 0.75| 0   | 0.75| 0   | 0   | 0.63| 0   | 0.09| 0   | 0   | 0.75| 0.63| 0.09| 0   | 0.36    |
| Indonesia  | 0.63| 0.63| 0.69| 0.5 | 0.56| 0   | 0   | 0   | 0.69| 0.5 | 0.6 | 0.63| 0   | 0.75| 0.56| 0   | 0.45| 0   | 0.35    |
| Laos       | 0.56| 0.56| 0.56| 0   | 0.56| 0   | 0   | 0   | 0   | 0   | 0.63| 0.31| 0   | 0   | 0   | 0.13| 0   | 0.31| 0.33    |
| Malaysia   | 0.56| 0.69| 0.75| 0   | 0   | 0.44| 0   | 0   | 0.69| 0   | 0.49| 0   | 0   | 0   | 0.14| 0   | 0.52| 0   | 0.31    |
| Myanmar    | 0.56| 0.75| 0.63| 0   | 0.63| 0   | 0.63| 0   | 0   | 0.11| 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0.56| 0.33    |
| Philippines| 0   | 0.88| 0.88| 0   | 0   | 0.5 | 0.5 | 0.25| 0.25| 0   | 0.79| 0   | 0   | 0   | 0.56| 0.61| 0.56| 0.73| 0   | 0.29    |
| Singapore  | 0.5 | 0.5 | 0.63| 0.75| 0.63| 0.75| 0   | 0.75| 0   | 0   | 0.38| 0   | 0   | 0   | 0   | 0   | 0   | 0.38| 0.19 | 0.36    |
| Thailand   | 0   | 0.88| 0.56| 0   | 0.88| 0.63| 0.75| 0.75| 0.63| 0.63| 0.48| 0   | 0   | 0   | 0   | 0.34| 0.53| 0   | 0.58 | 0.46    |
| Vietnam    | 0.69| 0.75| 0.75| 0   | 0.56| 0.38| 0   | 0   | 0.44| 0   | 0.54| 0.15| 0   | 0   | 0   | 0.2 | 0   | 0.45| 0.44| 0.33    |
| ASEAN       | 0.35| 0.68| 0.62| 0.2 | 0.38| 0.46| 0.13| 0.24| 0.33| 0.11| 0.44| 0.11| 0   | 0.06| 0.23| 0.33| 0.12| 0.43| 0.04 | 0.33    |

Source: Author’s calculation based on the commitment tables.
|                  | 01A | 01B | 01C | 01D | 01E | 01F | 02A | 02B | 02C | 02D | 02E | 03A | 03B | 03C | 03D | 03E | 04A | 04B |
|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Australia        | 0.61| 0.6 | 0.25| 0.63| 0.6 | 0.54| 0   | 0   | 0.7 | 0   | 0   | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.75| 0.75|
| New Zealand      | 0.55| 1   | 0   | 0.75| 0.6 | 0.32| 0   | 0   | 0.72| 0.29| 0   | 0.75| 0.75| 0.75| 0.75| 0.75| 0.75| 0.75|
| Brunei           | 0.15| 0.75| 0   | 0   | 0.09| 0   | 0   | 0   | 0.24| 0   | 0   | 0.31| 0.31| 0.31| 0.31| 0   | 0   | 0   |
| Cambodia         | 0.51| 1   | 0   | 0   | 0.15| 0.38| 0   | 0.75| 0.75| 0   | 0   | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.75| 0.75|
| Indonesia        | 0.27| 0.35| 0.21| 0   | 0   | 0.13| 0   | 0   | 0.32| 0   | 0   | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0   | 0   |
| Laos             | 0.14| 0.8 | 0   | 0   | 0   | 0   | 0   | 0   | 0.18| 0   | 0   | 0.75| 0   | 0   | 0   | 0.63| 0   | 0   |
| Malaysia         | 0.49| 0.8 | 0.23| 0   | 0.14| 0.27| 0   | 0   | 0.65| 0.04| 0   | 0.44| 0.44| 0.44| 0.44| 0   | 0   | 0   |
| Myanmar          | 0.24| 0.88| 0   | 0   | 0   | 0   | 0.1| 0   | 0   | 0.09| 0   | 0.5 | 0.5 | 0.5 | 0.5 | 0   | 0   | 0   |
| Philippines      | 0.17| 0   | 0   | 0   | 0.14| 0.04| 0   | 0.69| 0.36| 0.17| 0   | 0   | 0.38| 0   | 0   | 0   | 0   | 0   |
| Singapore        | 0.45| 1   | 0.75| 0.38| 0.3 | 0.33| 0   | 0.5 | 0.63| 0.25| 0   | 0.75| 0.75| 0.75| 0.75| 0.75| 0.75| 0.75|
| Thailand         | 0.23| 1   | 0   | 0   | 0.1 | 0.31| 0   | 0.27| 0.33| 0   | 0.5 | 0.5 | 0   | 0   | 0   | 0   | 0.5 | 0   |
| Vietnam          | 0.53| 0.2 | 0.25| 0   | 0.2 | 0.36| 0   | 0.75| 0.75| 0.15| 0   | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| ASEA Average     | 0.32| 0.68| 0.14| 0.04| 0.11| 0.19| 0   | 0.27| 0.42| 0.10| 0.00| 0.48| 0.44| 0.40| 0.35| 0.38| 0.25| 0.20|
| Total Average    | 0.36| 0.7 | 0.14| 0.15| 0.19| 0.23| 0   | 0.22| 0.46| 0.11| 0   | 0.5 | 0.47| 0.44| 0.4 | 0.42| 0.33| 0.29|
Table 2. Continued

|                  | 04C | 04D | 04E | 05A | 05B | 05C | 05D | 05E | 06A | 06B | 06C | 06D | 07A | 07B | 07C | 08A | 08B | 08C |
|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Australia        | 0.63| 0.75| 0   | 0   | 0.63| 0.63| 0   | 0.63| 0.75| 0.75| 0.75| 0.75| 0.13| 0.25| 0   | 0   | 0.5 | 0   |
| New Zealand      | 0.75| 0   | 0   | 0.75| 0.75| 0   | 0.75| 0   | 0.75| 0.75| 0.75| 0.75| 0.2 | 0.25| 0   | 0   | 0.75| 0.75|
| Brunei           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0.39| 0.01| 0   | 0   | 0   |
| Cambodia         | 0.75| 0.75| 0.75| 0   | 0   | 0.75| 0.75| 0.75| 0.75| 0.75| 0.75| 0.75| 0.72| 0.56| 0   | 0.75| 0   | 0   |
| Indonesia        | 0   | 0   | 0   | 0   | 0.56| 0.56| 0.56| 0.56| 0   | 0   | 0   | 0   | 0.28| 0.18| 0.63| 0.75| 0   | 0   |
| Laos             | 0   | 0   | 0   | 0   | 0.63| 0.13| 0.13| 0.13| 0.63| 0.63| 0.63| 0   | 0   | 0   | 0.31| 0   | 0   | 0   |
| Malaysia         | 0   | 0   | 0   | 0.44| 0.44| 0.19| 0   | 0.44| 0   | 0   | 0   | 0   | 0.36| 0.43| 0   | 0   | 0   | 0   |
| Myanmar          | 0   | 0   | 0   | 0   | 0   | 0   | 0.5 | 0   | 0.5 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Philippines      | 0   | 0   | 0   | 0   | 0   | 0.25| 0   | 0   | 0.44| 0   | 0   | 0   | 0.42| 0.47| 0   | 0   | 0   | 0   |
| Singapore        | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0.75| 0   | 0   | 0   | 0.5 | 0.47| 0.53| 0   | 0   | 0   | 0   |
| Thailand         | 0   | 0   | 0   | 0.5 | 0   | 0.5 | 0.25| 0   | 0.5 | 0   | 0.5 | 0.5 | 0.3 | 0.03| 0   | 0   | 0   | 0   |
| Vietnam          | 0.5 | 0.75| 0   | 0   | 0.25| 0.38| 0.38| 0.38| 0.5 | 0.38| 0   | 0.5 | 0.75| 0.47| 0.44| 0.69| 0.69| 0   |
| ASEAN Average    | 0.13| 0.15| 0.08| 0.09| 0.29| 0.30| 0.31| 0.33| 0.28| 0.23| 0.24| 0.23| 0.37| 0.30| 0.04| 0.21| 0.12| 0.05|
| Total Average    | 0.22| 0.19| 0.06| 0.14| 0.35| 0.36| 0.26| 0.39| 0.36| 0.31| 0.32| 0.31| 0.33| 0.29| 0.04| 0.17| 0.14| 0.04|
Table 2. Continued

| Country      | 08D | 09A | 09B | 09C | 09D | 10A | 10B | 10C | 10D | 10E | 11A | 11B | 11C | 11D | 11E | 11F | 11G | 11H | 11I | Average |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|
| Australia    | 0.5 | 0.63| 0.75| 0   | 0   | 0.75| 0   | 0.75| 0   | 0.17| 0   | 0.1 | 0.41| 0.4 | 0.75| 0.63| 0   | 0.38  |
| New Zealand  | 0.75| 0.75| 0.75| 0   | 0   | 0.75| 0   | 0.75| 0   | 0.17| 0   | 0.08| 0.75| 0.75| 0.38| 0.31| 0   | 0.39  |
| Brunei       | 0.44| 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0.19| 0   | 0.1 | 0   | 0   | 0   | 0   | 0   | 0.07  |
| Cambodia     | 0.31| 0.75| 0.75| 0   | 0.75| 0   | 0   | 0   | 0   | 0   | 0   | 0.15| 0   | 0.75| 0.63| 0   | 0   | 0.38  |
| Indonesia    | 0.63| 0.56| 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0.19| 0   | 0.41| 0   | 0   | 0   | 0   | 0   | 0.16  |
| Laos         | 0.63| 0.56| 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0.12  |
| Malaysia     | 0.63| 0.63| 0   | 0   | 0.44| 0   | 0   | 0   | 0   | 0.23| 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0.16  |
| Myanmar      | 0   | 0   | 0   | 0   | 0   | 0.14| 0   | 0   | 0.25| 0   | 0   | 0   | 0   | 0.38| 0   | 0.11 | |
| Philippines  | 0.38| 0.75| 0   | 0   | 0   | 0   | 0   | 0   | 0.45| 0   | 0.25| 0   | 0   | 0   | 0.28| 0.22| 0.38| 0.11 | |
| Singapore    | 0.63| 0.75| 0.75| 0.63| 0   | 0.75| 0   | 0   | 0.38| 0   | 0   | 0.3 | 0   | 0   | 0   | 0   | 0   | 0.32  |
| Thailand     | 0.5 | 0.44| 0   | 0.5 | 0   | 0   | 0   | 0.5 | 0   | 0.34| 0   | 0.24| 0   | 0.2 | 0.18| 0   | 0.13 | 0.22 |
| Vietnam      | 0.75| 0.75| 0   | 0.38| 0   | 0   | 0   | 0.44| 0   | 0.15| 0.15| 0.43| 0   | 0.1 | 0.2 | 0   | 0.47 | 0.32 |

ASEAN Average 0.00 | 0.49 | 0.52 | 0.15 | 0.05 | 0.22 | 0.00 | 0.08 | 0.09 | 0.00 | 0.21 | 0.02 | 0.16 | 0.00 | 0.14 | 0.09 | 0.14 | 0.00 | 0.20

Total Average 0 | 0.51 | 0.55 | 0.25 | 0.04 | 0.18 | 0.06 | 0.06 | 0.14 | 0   | 0.2 | 0.01 | 0.15 | 0 | 0.15 | 0.21 | 0.16 | 0.19 | 0.23

Source: Author’s calculation based on the commitment tables.
|                | 01A | 01B | 01C | 01D | 01E | 02A | 02B | 02C | 02D | 02E | 03A | 03B | 03C | 03D | 03E | 04A | 04B |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| China          | 0   | 0.46| 0   | 0.69| 0   | 0.15| 0   | 0   | 0   | 0   | 0.44| 0.44| 0.44| 0.44| 0   | 0   |
| Brunei         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Cambodia       | 0.51| 0.75| 0   | 0   | 0.15| 0.34| 0   | 0   | 0.75| 0   | 0   | 0.5 | 0.5 | 0.5 | 0.5 | 0.75| 0.75|
| Indonesia      | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0.5 | 0.38| 0.38| 0   | 0.38| 0   | 0   |
| Laos           | 0   | 0.3 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Malaysia       | 0.19| 0.6 | 0   | 0   | 0   | 0   | 0   | 0   | 0.69| 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Myanmar        | 0   | 0   | 0   | 0   | 0   | 0.03| 0   | 0   | 0   | 0.44| 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Philippines    | 0   | 0   | 0   | 0   | 0   | 0.15| 0   | 0   | 0   | 0.04| 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Singapore      | 0.22| 0.15| 0   | 0.38| 0.45| 0.29| 0   | 0   | 0   | 0.04| 0   | 0   | 0   | 0   | 0   | 0   | 0.5 | 0.5 |
| Thailand       | 0.22| 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0.17| 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Vietnam        | 0.53| 0.75| 0.25| 0   | 0.2 | 0.36| 0   | 0.75| 0.65| 0.15| 0   | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| ASEAN Average  | 0.17| 0.26| 0.03| 0.04| 0.08| 0.12| 0.00| 0.15| 0.22| 0.06| 0.00| 0.15| 0.14| 0.14| 0.10| 0.14| 0.18| 0.18|
| Total Average  | 0.15| 0.27| 0.02| 0.10| 0.07| 0.12| 0.00| 0.14| 0.20| 0.05| 0.00| 0.18| 0.17| 0.17| 0.13| 0.17| 0.16| 0.16|
| Country      | 04C | 04D | 04E | 05A | 05B | 05C | 05D | 05E | 06A | 06B | 06C | 06D | 07A | 07B | 07C | 08A | 08B | 08C |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| China        | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0.56| 0.56| 0.56| 0.56| 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Brunei       | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Cambodia     | 0.75| 0.75| 0.75| 0   | 0   | 0.75| 0.75| 0.75| 0.75| 0.75| 0.75| 0.75| 0.75| 0.73| 0.52| 0   | 0.75| 0   |
| Indonesia    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Laos         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0.5 | 0.19| 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Malaysia     | 0   | 0   | 0   | 0   | 0.06| 0   | 0   | 0   | 0   | 0   | 0.19| 0.69| 0   | 0   | 0.63| 0   | 0   | 0   |
| Myanmar      | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Philippines  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0.44| 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Singapore    | 0.5 | 0.75| 0   | 0   | 0   | 0   | 0   | 0.75| 0.75| 0   | 0   | 0   | 0.5 | 0.5 | 0.48| 0.51| 0   | 0   | 0.5 |
| Thailand     | 0   | 0   | 0   | 0   | 0.56| 0.31| 0   | 0   | 0.31| 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| Vietnam      | 0.5 | 0.75| 0   | 0   | 0.25| 0.44| 0.44| 0.44| 0.5 | 0.63| 0   | 0   | 0.5 | 0.75| 0.46| 0.44| 0.69| 0.69| 0   |
| ASEAN Average| 0.18| 0.23| 0.08| 0.00| 0.08| 0.16| 0.19| 0.23| 0.17| 0.14| 0.13| 0.18| 0.27| 0.24| 0.04| 0.21| 0.12| 0.05|
| Total Average| 0.16| 0.20| 0.07| 0.00| 0.07| 0.14| 0.18| 0.20| 0.20| 0.18| 0.16| 0.21| 0.24| 0.22| 0.04| 0.19| 0.11| 0.05|
| Country     | 08D | 09A | 09B | 09C | 09D | 10A | 10B | 10C | 10D | 10E | 11A | 11B | 11C | 11D | 11E | 11F | 11G | 11H | 11I | Average |
|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| China       | 0   | 0   | 0   | 0   | 0   | 0   | 0.06| 0   | 0   | 0   | 0.08| 0   | 0   | 0.69| 0   | 0.44| 0   | 0.13  |
| Brunei      | 0   | 0.06| 0   | 0   | 0   | 0   | 0   | 0.25| 0   | 0.15| 0   | 0   | 0.75| 0   | 0   | 0   | 0   | 0.02  |
| Cambodia    | 0.31| 0.75| 0.75| 0   | 0.75| 0   | 0   | 0   | 0   | 0   | 0.15| 0   | 0   | 0.63| 0   | 0   | 0   | 0.36  |
| Indonesia   | 0.63| 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0.04  |
| Laos        | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0.02  |
| Malaysia    | 0   | 0   | 0   | 0   | 0.19| 0   | 0   | 0   | 0   | 0   | 0.11| 0   | 0.1| 0   | 0   | 0   | 0   | 0   | 0.06  |
| Myanmar     | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0.15| 0   | 0.21| 0   | 0   | 0   | 0.13| 0   | 0   | 0   | 0.02  |
| Philippines | 0.63| 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0.04  |
| Singapore   | 0   | 0   | 0.75| 0.75| 0   | 0.75| 0   | 0.75| 0.5 | 0   | 0   | 0   | 0   | 0   | 0.5 | 0   | 0   | 0   | 0.23  |
| Thailand    | 0   | 0.56| 0.5 | 0   | 0.81| 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0.06  |
| Vietnam     | 0   | 0.75| 0.75| 0   | 0   | 0.38| 0   | 0   | 0.44| 0   | 0.15| 0.15| 0.41| 0   | 0.1| 0.2 | 0   | 0.47| 0   | 0.33  |
| ASEAN Average | 0.00| 0.29| 0.38| 0.15| 0.10| 0.19| 0.00| 0.08| 0.09| 0.00| 0.07| 0.02| 0.10| 0.05| 0.01| 0.15| 0.06| 0.06| 0.00| 0.12  |
| Total Average | 0.00| 0.27| 0.34| 0.14| 0.09| 0.17| 0.00| 0.07| 0.09| 0.00| 0.06| 0.01| 0.10| 0.05| 0.01| 0.19| 0.06| 0.09| 0.00| 0.12  |

Source: Author’s calculation based on the commitment tables.
|                | 01A | 01B | 01C | 01D | 01E | 01F | 02A | 02B | 02C | 02D | 02E | 03A | 03B | 03C | 03D | 03E | 04A | 04B |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Korea          | 0.45| 0.75| 0.58| 0.25| 0.68| 0.62| 0   | 0.5 | 0.68| 0.25| 0   | 0.5 | 0   | 0   | 0   | 0   | 0.63| 0   |
| Brunei         | 0.1 | 0.55| 0   | 0   | 0.09| 0   | 0   | 0.28| 0   | 0   | 0.31| 0.31| 0.31| 0.31| 0.31| 0   | 0   | 0   |
| Cambodia       | 0.51| 0.75| 0   | 0   | 0.15| 0.19| 0   | 0.75| 0.5 | 0   | 0   | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.75| 0.75|
| Indonesia      | 0.32| 0.41| 0.23| 0   | 0   | 0.14| 0   | 0   | 0.65| 0   | 0   | 0.5 | 0.5 | 0.5 | 0.5 | 0   | 0   | 0   |
| Laos           | 0.08| 0   | 0   | 0   | 0   | 0.02| 0   | 0   | 0   | 0   | 0.31| 0.56| 0.56| 0.31| 0.31| 0.19| 0   | 0   |
| Malaysia       | 0.49| 0.6 | 0.23| 0   | 0   | 0.41| 0.28| 0   | 0   | 0.55| 0.14| 0   | 0.44| 0.44| 0.44| 0.44| 0   | 0.38|
| Myanmar        | 0.11| 0   | 0   | 0   | 0   | 0.08| 0   | 0   | 0.1 | 0.11| 0   | 0.63| 0   | 0   | 0   | 0   | 0   | 0   |
| Philippines    | 0.15| 0   | 0.75| 0   | 0   | 0   | 0.03| 0.69| 0.69| 0.26| 0   | 0   | 0   | 0.56| 0   | 0   | 0   | 0   |
| Singapore      | 0.45| 0.6 | 0.25| 0.38| 0.45| 0.5 | 0   | 0.5 | 0.46| 0.63| 0   | 0.75| 0.75| 0.75| 0.75| 0.75| 0.75| 0.75|
| Thailand       | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  |
| Vietnam        | 0.53| 0.75| 0   | 0   | 0.2 | 0.36| 0   | 0.75| 0.75| 0.15| 0   | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0   | 0.5 |
| ASEAN Average  | 0.30| 0.41| 0.16| 0.04| 0.14| 0.18| 0.08| 0.30| 0.39| 0.11| 0.00| 0.37| 0.53| 0.40| 0.37| 0.37| 0.22| 0.29|
| (excl. Thailand) |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Total Average  | 0.32| 0.44| 0.2 | 0.06| 0.2 | 0.22| 0.07| 0.32| 0.42| 0.13| 0   | 0.38| 0.48| 0.36| 0.33| 0.33| 0.26| 0.26|
| (excl. Thailand) |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|                | 04C | 04D | 04E | 05A | 05B | 05C | 05D | 05E | 06A | 06B | 06C | 06D | 07A | 07B | 07C | 08A | 08B | 08C |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Korea          | 0.56| 0.75| 0   | 0   | 0   | 0.31| 0.31| 0   | 0.63| 0.63| 0   | 0.63| 0.31| 0.17| 0   | 0   | 0   | 0   |
| Brunei         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0.39| 0   | 0   | 0   | 0   | 0.75|
| Cambodia       | 0.75| 0.75| 0.75| 0   | 0   | 0.75| 0.75| 0.75| 0.75| 0.75| 0.75| 0.75| 0.73| 0.56| 0   | 0   | 0   | 0   |
| Indonesia      | 0   | 0   | 0   | 0   | 0.63| 0.56| 0.56| 0.56| 0   | 0   | 0   | 0   | 0.19| 0.32| 0   | 0.63| 0   | 0   |
| Laos           | 0   | 0   | 0   | 0   | 0.56| 0.44| 0   | 0   | 0.06| 0.06| 0.06| 0   | 0.03| 0   | 0.5 | 0   | 0   | 0   |
| Malaysia       | 0.5 | 0   | 0   | 0   | 0   | 0.19| 0   | 0   | 0   | 0   | 0   | 0   | 0.33| 0.05| 0   | 0.63| 0   | 0   |
| Myanmar        | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0.01| 0   | 0   | 0   | 0   |
| Philippines    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0.44| 0   | 0   | 0   | 0   | 0.42| 0.58| 0   | 0   | 0   | 0   |
| Singapore      | 0   | 0.75| 0   | 0   | 0   | 0   | 0.75| 0   | 0   | 0   | 0.5 | 0.5 | 0.47| 0.52| 0   | 0   | 0.5 | 0.5 |
| Thailand       | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  |
| Vietnam        | 0.5 | 0.75| 0   | 0   | 0.25| 0.25| 0.25| 0.25| 0.5 | 0.63| 0   | 0.5 | 0.75| 0.29| 0.44| 0.69| 0.69| 0   |
| ASEAN Average  | 0.19| 0.25| 0.08| 0.00| 0.16| 0.24| 0.26| 0.17| 0.19| 0.16| 0.15| 0.20| 0.36| 0.26| 0.05| 0.29| 0.20| 0.06|
| (excl.Thailand)| 0.19| 0.25| 0.08| 0.00| 0.16| 0.24| 0.26| 0.17| 0.19| 0.16| 0.15| 0.20| 0.36| 0.26| 0.05| 0.29| 0.20| 0.06|
| Total Average  | 0.23| 0.3  | 0.08| 0   | 0.14| 0.25| 0.26| 0.16| 0.24| 0.21| 0.13| 0.24| 0.36| 0.25| 0.04| 0.26| 0.18| 0.05|
| (excl. Thailand)| 0.23| 0.3  | 0.08| 0   | 0.14| 0.25| 0.26| 0.16| 0.24| 0.21| 0.13| 0.24| 0.36| 0.25| 0.04| 0.26| 0.18| 0.05|
Table 4. Continued

|         | 08D | 09A | 09B | 09C | 09D | 10A | 10B | 10C | 10D | 10E | 11A | 11B | 11C | 11D | 11E | 11F | 11G | 11H | 11I | Average |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|
| Korea   | 0   | 0.5 | 0.75| 0.75| 0   | 0.38| 0   | 0   | 0   | 0   | 0.52| 0   | 0.5  | 0   | 0.05| 0.38| 0.25| 0.59| 0.5  | 0.28    |
| Brunei  | 0   | 0.44| 0   | 0   | 0   | 0   | 0   | 0   | 0.25| 0   | 0.25| 0   | 0    | 0   | 0   | 0   | 0   | 0   | 0.08    |
| Cambodia| 0   | 0.31| 0.75| 0.75| 0   | 0   | 0   | 0   | 0   | 0   | 0.15| 0   | 0.75 | 0.63| 0   | 0   | 0   | 0.13| 0.18    |
| Indonesia| 0  | 0.69| 0.63| 0.63| 0   | 0   | 0   | 0   | 0   | 0.23| 0.14| 0   | 0    | 0   | 0   | 0   | 0   | 0   | 0.36    |
| Laos    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 0   | 0   | 0.07    |
| Malaysia| 0   | 0.69| 0.63| 0   | 0.69| 0.44| 0   | 0   | 0.44| 0   | 0.53| 0   | 0.1  | 0   | 0   | 0   | 0   | 0   | 0.17    |
| Myanmar | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0    | 0.19| 0   | 0.21| 0   | 0   | 0.25    |
| Philippines | 0 | 0.63| 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0.57| 0.53| 0.45| 0.43| 0.28| 0.63| 0   | 0.16    |
| Singapore| 0  | 0.63| 0.5 | 0.75| 0   | 0.75| 0   | 0   | 0   | 0   | 0.38| 0   | 0    | 0   | 0   | 0   | 0   | 0   | 0.31    |
| Thailand | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | NA  | -       |
| Vietnam | 0   | 0.75| 0.75| 0   | 0   | 0.38| 0   | 0   | 0.44| 0   | 0.15| 0.13| 0.43| 0   | 0.1 | 0.2 | 0   | 0   | 0.19    |

ASEAN Average (excl. Thailand) 0.00 0.46 0.47 0.24 0.08 0.26 0.00 0.00 0.10 0.00 0.26 0.01 0.20 0.00 0.06 0.15 0.10 0.15 0.00 0.19

Total Average (excl. Thailand) 0 0.46 0.5 0.29 0.07 0.27 0 0 0.09 0 0.28 0.01 0.23 0 0.06 0.18 0.12 0.2 0.05 0.2

Source: Author’s calculation based on the commitment tables.
Some observations can be made for each of the four FTAs, as follows.

1. The ASEAN Framework Agreement on Services (AFAS) by country and by sector

AFAS\(^7\) has the highest level of commitment among the ASEAN+n FTAs: Its average level of commitment by all the ASEAN member countries is 0.33. The sector 09A (Hotels and Restaurants) has the highest average commitment by participating countries, at 0.68. Following are the observations by country.

Brunei: The sector 01B (Computer and Related Services) has the largest degree of commitment of 0.69. The average level of commitment at 0.18.

Cambodia: The sectors 01B (Computer and Related Services), 02B (Courier Services), 02C (Telecommunication Services), 04A (Commission Agents’ Services), 04B (Wholesale Trade Services), 04C (Retailing Services), 04D (Franchising), 05C (Higher Education Services), 05D (Adult Education), 05E (Other Education Services), 06A (Sewage Services), 06B (Refuse Disposal Services), 06C (Sanitation and Similar Services), 06D (Other Environmental Services), 09B (Travel Agencies and Tour Operators Services), 09C (Tourist Guides Services), and 11F (Road Transport Services), all have the largest degree of commitment at 0.75. The average level of commitment is 0.36.

Indonesia: The sector 02C (Telecommunication Services) has the largest degree of commitment at 0.79. The average level of commitment is 0.35.

Laos: The sector 02B (Courier Services) has the largest degree of commitment at 0.88. The average level of commitment is 0.33.

Malaysia: The sectors 01B (Computer and Related Services) and 09B (Travel Agencies and Tour Operators Services) have the largest degree of commitment at 0.75. The average level of commitment is 0.31.

Myanmar: The sectors 01B (Computer and Related Services), 02B (Courier Services), 08C (Social Services) and 09A (Hotels and Restaurants) have the largest degree of commitment at 0.75. The average level of commitment is 0.33.

Philippines: The sector 02B (Courier Services) has the largest degree of

---

\(^7\) Eighth Package (2010) (information Available at: [http://www.aseansec.org/19087.htm](http://www.aseansec.org/19087.htm), Accessed March 31, 2011) is used in the database construction. Mutual Recognition Agreements in specific service sectors (Accountancy Services, Medical Practitioners, Dental Practitioners, Engineering Services, Nursing Services and Architectural services) exist under AFAS, giving these respective sectors more liberalization commitments. In this study, this aspect has not been covered.
commitment at 0.94. The average level of commitment is 0.29.

Singapore: The sectors 01C (Research and Development Services), 2D (Audiovisual Services), 03A (General Construction Work for Building), 03B (General Construction work for Civil Engineering), 03C (Installation and Assembly Work), 03D (Building Completion and Finishing Work), 03E (Other), 04A (Commission Agents’ Services), 04B (Wholesale Trade Services), 04C (Retailing Services), 04D (Franchising), 05D (Adult Education), 09C (Tourist Guides Services), 10A (Entertainment Services), 10C (Libraries, archives, museums and other cultural services), all have the largest degree of commitment at 0.75. The average level of commitment is 0.36.

Thailand: The sectors 01B (Computer and Related Services), 06A (Sewage Services), 09A (Hotels and Restaurants) and 09D (Other Health Related and Social Services) have the largest degree of commitment at 0.88. The average level of commitment is 0.46.

Vietnam: The sectors 02B (Courier Services), 02C (Telecommunication Services), 04D (Franchising), 09A (Hotels and Restaurants) and 09B (Travel Agencies and Tour Operators Services) have the largest degree of commitment at 0.75. The average level of commitment is 0.33.

As for ASEAN-wide integration of trade in services, it has “Declaration on the ASEAN Economic Community Blueprint,” in which targeting of some specific service sub-sectors and some aspects (including logistics services, market access limitations for Mode 3 and foreign equity participation for some sub-sectors) is made. It is expected that the use of Hoekman Index provides at least partial, but tangible information in this context.

2. The ASEAN-Australia-New Zealand Free Trade Agreement (AANZFTA) by country and by sector

The sector 01B (Computer and Related Services) has the highest average commitment by participating countries, at 0.70. The ASEAN average (total) is 0.20. The total average of commitment by country under AANZFTA is 0.23. Following are the observations by country.

Australia: The sectors 04A (Commission Agents’ Services), 04B (Wholesale Trade Services), 04D (Franchising), 06A (Sewage Services), 06B (Refuse

8 Available at: http://www.aseansec.org/5187-10.pdf (accessed on 4 July 2011).
Disposal Services), 06C (Sanitation and Similar Services), 06D (Other Environmental Services) have the largest degree of commitment at 0.75. The average level of commitment is 0.38.

Brunei: The sector 01B (Computer and Related Services) has the largest degree of commitment at 0.75. The average level of commitment is 0.07.

Cambodia: The sector 01B (Computer and Related Services) has the largest degree of commitment at 1.0 (full score). The average level of commitment is 0.38.

Indonesia: The sectors 08A (Hospital Services) and 09A (Hotels and Restaurants) have the largest degree of commitment at 0.63. The average level of commitment is 0.16.

Laos: The sector 01B (Computer and Related Services) has the largest degree of commitment at 0.80. The average level of commitment is 0.12.

Malaysia: The sector 01B (Computer and Related Services) has the largest degree of commitment at 0.80. The average level of commitment is 0.16.

Myanmar: The sector 01B (Computer and Related Services) has the largest degree of commitment at 0.88. The average level of commitment is 0.11.

New Zealand: The sector 01B (Computer and Related Services) has the largest degree of commitment at 1.0 (full score). The average level of commitment is 0.39.

Philippines: The sector 09B (Travel Agencies and Tour Operators Services) has the largest degree of commitment at 0.75. The average level of commitment is 0.11.

Singapore: The sector 01B (Computer and Related Services) has the largest degree of commitment at 1.0 (full score). The average level of commitment is 0.32.

Thailand: The sector 01B (Computer and Related Services) has the largest degree of commitment at 1.0 (full score). The average level of commitment is 0.22.

Vietnam: The sectors 02B (Courier Services), 02C (Telecommunication Services), 04D (Franchising), 07A (All Insurance and Insurance-related Services), 09A (Hotels and Restaurants), 09B (Travel Agencies and Tour Operators Services) have the largest degree of commitment at 0.75. The average level of commitment is 0.32.
3. ASEAN-China Free Trade Agreement (ACFTA) by country and by sector

The sector 09B (Travel Agencies and Tour Operators Services) has the highest average commitment by participating countries, at 0.34. The ASEAN average is 0.12. The total average of commitment by country under ACFTA is 0.12. Following are the observations by country.

Brunei: The sector 11F (Road Transport Services) has the largest degree of commitment at 0.75. The average level of commitment is 0.02.

Cambodia: The sectors 01B (Computer and Related Services), 02B (Courier Services), 04A (Commission Agents’ Services), 04B (Wholesale Trade Services), 04C (Retailing Services), 04D (Franchising), 04E (Other Distribution Services), 05C (Higher Education Services), 05D (Adult Education), 05E (Other Education Services), 06A (Sewage Services), 06B (Refuse Disposal Services), 06C (Sanitation and Similar Services), 06D (Other Environmental Services), 08A (Hospital Services), 09B (Travel Agencies and Tour Operators Services), 09C (Tourist Guides Services), 10A (Entertainment Services), all have the largest degree of commitment at 0.75. The average level of commitment is 0.36.

Indonesia: The sector 09A (Hotels and Restaurants) has the largest degree of commitment at 0.63. The average level of commitment is 0.04.

Laos: The sector 07A (All Insurance and Insurance-related Services) has the largest degree of commitment at 0.50. The average level of commitment is 0.02.

Malaysia: The sectors 02C (Telecommunication Services) and 07B (Banking and Other Financial Services) have the largest degree of commitment at 0.69. The average level of commitment is 0.06.

Myanmar: The sector 02D (Audiovisual Services) has the largest degree of commitment at 0.44. The average level of commitment is 0.02.

Philippines: The sector 09B (Travel Agencies and Tour Operators Services) has the largest degree of commitment at 1.0. The average level of commitment is 0.04.

China: The sectors 01D (Real Estate Services) and 11F (Road Transport Services) have the largest degree of commitment at 0.69. The average level of commitment at 0.75. The average level of commitment is 0.02.

It should be noted that China seems to omit, in the reporting under this FTA, its commitments already made under the GATS (as mentioned in section 7). A fair comparison among the participating countries can therefore be made only after making some adjustment or reconciliation work between the GATS commitment and the FTA commitment by China. (The same sort of reconciliatory work might possibly be needed for the other countries.)
of commitment is 0.13.

Singapore: The sectors 04D (Franchising), 05D (Adult Education), 05E (Other Education Services), 09B (Travel Agencies and Tour Operators Services), 09C (Tourist Guides Services), 10A (Entertainment Services) and 10C (Libraries, archives, museums and other cultural services) have the largest degree of commitment at 0.75. The average level of commitment is 0.23.

Thailand: The sector 09D (Tourist Guides Services) has the largest degree of commitment at 0.81. The average level of commitment is 0.06.

Vietnam: The sectors 01B (Computer and Related Services), 02B (Courier Services), 04D (Franchising), 07A (All Insurance and Insurance-related Services), 09A (Hotels and Restaurants), 09B (Travel Agencies and Tour Operators Services) have the largest degree of commitment at 0.75. The average level of commitment is 0.33.

4. ASEAN-Korea Free Trade Agreement (AKFTA) by country and by sector

The sector 09B (Travel Agencies and Tour Operators Services) has the highest average commitment by participating countries, at 0.50. The ASEAN average is 0.19. The total average of commitment by country under AKFTA is 0.20. Following are the observations by country.

Brunei: The sector 08A (Hospital Services) has the largest degree of commitment at 0.75. The average level of commitment is 0.08.

Cambodia: The sectors 01B (Computer and Related Services), 02B (Courier Services), 04A (Commission Agents’ Services), 04B (Wholesale Trade Services), 04C (Retailing Services), 04D (Franchising), 04E (Other Distribution Services), 05C (Higher Education Services), 05D (Adult Education), 05E (Other Education Services), 06A (Sewage Services), 06B (Refuse Disposal Services), 06C (Sanitation and Similar Services), 06D (Other Environmental Services), 09B (Travel Agencies and Tour Operators Services), 09C (Tourist Guides Services), 10A (Entertainment Services), 11F (Road Transport Services) have the largest degree of commitment at 0.75. The average level of commitment is 0.36.

Indonesia: The sector 09A (Hotels and Restaurants) has the largest degree of commitment at 0.69. The average level of commitment is 0.18.

Korea: The sectors 01B (Computer and Related Services), 04D (Franchising), 09B (Travel Agencies and Tour Operators Services), and 09C (Tourist Guides Services) have the largest degree of commitment at 0.75. The average level
of commitment is 0.28.

Laos: The sectors 03B (General Construction work for Civil Engineering), 03C (Installation and Assembly Work), and 05B (Secondary Education Services) have the largest degree of commitment at 0.56. The average level of commitment is 0.07.

Malaysia: The sectors 09A (Hotels and Restaurants) and 09D (Other Tourism and Travel Related Services) have the largest degree of commitment at 0.69. The average level of commitment is 0.19.

Myanmar: The sector 03B (General Construction work for Civil Engineering) has the largest degree of commitment at 0.63. The average level of commitment is 0.03.

Philippines: The sector 09B (Travel Agencies and Tour Operators Services) has the largest degree of commitment at 1.0. The average level of commitment is 0.16.

Singapore: The sectors 03A (General Construction Work for Building), 03B (General Construction work for Civil Engineering), 03C (Installation and Assembly Work), 03D (Building Completion and Finishing Work), 03E (Other Construction and Related Engineering Services), 04A (Commission Agents’ Services), 04B (Wholesale Trade Services), 04D (Franchising), 05D (Adult Education), 09C (Tourist Guides Services), 10A (Entertainment Services) have the largest degree of commitment at 0.75. The average level of commitment is 0.31.

Thailand: NA (due to lack of publicly available data)

Vietnam: The sectors 01B (Computer and Related Services), 02B (Courier Services), 02C (Telecommunication Services), 04D (Franchising), 07A (All Insurance and Insurance-related Services), 09A (Hotels and Restaurants), 09B (Travel Agencies and Tour Operators Services) have the largest degree of commitment at 0.75. The average level of commitment is 0.31.

IV. Correlation of commitments among the participating countries

After calculating the Hoekman Index, similarities among participating countries have been measured in the form of correlation coefficients. This has been done by comparing the calculated Hoekman Indices by country and by sector (as in Tables 1-4). The results are presented in Table 5-8.

Under AFAS (as shown in Table 5), high correlations can be observed between
(1) Malaysia and Vietnam (correlation coefficient=0.609); (2) Laos and Vietnam (correlation coefficient=0.608). There is no negative correlation\(^{10}\) observed among the ten ASEAN countries, indicating that they all have concern for common sensitive sectors as well as less-sensitive ones. Malaysia has the strongest positive correlation with the ASEAN average (correlation coefficient of 0.791). The simple average of all of the coefficients between different countries listed in the Table is calculated as 0.341 (not shown in the Table). This is the second highest among the four FTAs under coverage in this study, as seen below.

Under the ASEAN-Australia-New Zealand FTA (results are shown in Table 6), there is no correlation coefficient higher than 0.700, showing that under this FTA, each country has its own individual sensitivities.\(^{11}\) All the correlation coefficients are positive (with the highest one being 0.688 between Australia and New Zealand), with just one exception (between Myanmar and the Philippines, yet the coefficient, -0.053 is low in magnitude). Malaysia has the strongest positive correlation with the ASEAN average (correlation coefficient of 0.805). The simple average of all of the coefficients between different countries listed in the Table is calculated as 0.349 (not shown in the Table). This average is the highest, and a little higher than that for AFAS (i.e. 0.341), indicating that, relatively speaking, the member countries are similar in their service sector commitments.

\(^{10}\) A low positive value does not indicate sector-by-sector precise correlations, it only shows the overall tendency. In this sense, the result has a limited ramification. In general, the correlation value between -0.3 and -0.7 generally indicate a weak negative correlation, and if the value is more than -0.3, it is usually judged that there is no correlation. With this caveat, the use of correlation coefficient seems to be valid. Rather than making artificial distinction between sensitive sectors and less-sensitive ones, I have included all the sectors in the calculation.

\(^{11}\) The correlation value between 0.3 and 0.7 generally indicate a weak positive correlation, and if the value is less than 0.3, it is usually judged that there is no correlation. In view of this, if the correlation is between 0.3 and 0.7, there is some commonality among the participating countries with the commitment pattern. And if the correlation is less than 0.3, then each of the countries has its own “unique commitment pattern” determined mainly by its unique domestic sensitivities. I have check a source and found that the following relations hold: for \(r\) (correlation coefficient),

\[
|r|=0.3 \Leftrightarrow r^2 \geq 0.1 \quad \text{(that is, one variable has the power to explain 10% of the other variable’s variation)}; \\
|r|=0.7 \Leftrightarrow r^2 \geq 0.5 \quad \text{(that is, one variable has the power to explain 50% of the other variable’s variation)}.
\]

Of course there is no definite reason why 0.1 and 0.5 should be used as thresholds, but this seems to be the established interpretation.
Table 5. Correlation coefficients for the ASEAN Framework Agreement on Services (AFAS 7th package)

|          | Brunei | Cambodia | Indonesia | Laos | Malaysia | Myanmar | Philippines | Singapore | Thailand | Vietnam | ASEAN Average |
|----------|--------|----------|-----------|------|----------|---------|--------------|-----------|----------|---------|---------------|
| Brunei   | 1      |          |           |      |          |         |              |           |          |         |               |
| Cambodia | 0.027  | 1        |           |      |          |         |              |           |          |         |               |
| Indonesia| 0.221  | 0.222    | 1         |      |          |         |              |           |          |         |               |
| Laos     | 0.336  | 0.391    | 0.346     | 1    |          |         |              |           |          |         |               |
| Malaysia | 0.458  | 0.371    | 0.433     | 0.554| 1        |         |              |           |          |         |               |
| Myanmar  | 0.173  | 0.403    | 0.375     | 0.556| 0.402    | 1       |              |           |          |         |               |
| Philippines | 0.213 | 0.313    | 0.063     | 0.242| 0.395    | 0.213   | 1            |           |          |         |               |
| Singapore| 0.151  | 0.38     | 0.144     | 0.443| 0.468    | 0.542   | 0.245        | 1         |          |         |               |
| Thailand | 0.264  | 0.237    | 0.228     | 0.446| 0.417    | 0.298   | 0.248        | 0.339     | 1        |         |               |
| Vietnam  | 0.188  | 0.339    | 0.554     | 0.608| 0.609    | 0.56    | 0.295        | 0.338     | 0.28     | 1       |               |
| ASEAN Average | 0.443 | 0.602    | 0.551     | 0.769| 0.791    | 0.717   | 0.51         | 0.649     | 0.595    | 0.743   | 1            |

Source: Calculated from Table 1.
|                | New Zealand | Brunei | Cambodia | Indonesia | Laos | Malaysia | Myanmar | Philippines | Singapore | Thailand | Vietnam | ASEAN Ave. | Average | Total Ave. |
|----------------|-------------|--------|----------|-----------|------|----------|---------|------------|-----------|----------|---------|------------|---------|-----------|
| Australia      | 1           | 1      | 1        | 1         | 1    | 1        | 1       | 1          | 1         | 1        | 1       | 1          | 1       | 1         |
| New Zealand    | 0.698       | 1      | 0.43     | 0.121     | 0.362| 0.194    | 0.254   | 0.091      | 0.194     | 0.329    | 0.089   | 0.33      | 0.597   | 0.772     |
| Brunei         | 0.346       | 1      | 0.479    | 0.342     | 0.514| 0.483    | 0.574   | 0.166      | 0.336     | 0.502    | 0.287   | 0.221     | 0.666   | 0.655     |
| Cambodia       | 0.249       | 1      | 0.249    | 0.479     | 0.371| 0.68     | 0.186   | 0.161      | 0.499     | 0.295    | 0.482   | 0.498     | 0.666   | 0.701     |
| Indonesia      | 0.345       | 1      | 0.305    | 0.334     | 0.334| 0.287    | 0.397   | 0.502      | 0.355     | 0.552    | 0.482   | 0.482     | 0.666   | 0.739     |
| Laos           | 0.423       | 1      | 0.534    | 0.334     | 0.534| 0.664    | 0.576   | 0.295      | 0.279     | 0.519    | 0.424   | 0.424     | 0.666   | 0.635     |
| Malaysia       | 0.287       | 1      | 0.287    | 0.287     | 0.287| 0.355    | 0.291   | 0.295      | 0.279     | 0.519    | 0.424   | 0.424     | 0.666   | 0.635     |
| Myanmar        | 0.394       | 1      | 0.622    | 0.622     | 0.622| 0.622    | 0.39    | 0.39       | 0.39      | 0.39     | 0.39    | 0.39       | 0.666   | 0.666     |
| Philippines    | 0.053       | 1      | 0.329    | 0.177     | 0.177| 0.177    | 0.177   | 0.177      | 0.177     | 0.177    | 0.177   | 0.177      | 0.666   | 0.666     |
| Singapore      | 0.13        | 1      | 0.13     | 0.13      | 0.13| 0.13     | 0.13    | 0.13       | 0.13      | 0.13     | 0.13    | 0.13       | 0.666   | 0.666     |
| Thailand       | 0.442       | 1      | 0.442    | 0.442     | 0.442| 0.442    | 0.442   | 0.442      | 0.442     | 0.442    | 0.442   | 0.442      | 0.666   | 0.666     |
| Vietnam        | 0.333       | 1      | 0.333    | 0.333     | 0.333| 0.333    | 0.333   | 0.333      | 0.333     | 0.333    | 0.333   | 0.333      | 0.666   | 0.666     |

Source: Calculated from Table 2.
Table 7. Correlation coefficients for the ASEAN-China FTA

|            | China | Brunei | Cambodia | Indonesia | Laos | Malaysia | Myanmar | Philippines | Singapore | Thailand | Vietnam | ASEAN-Ave. | Total-Ave. |
|------------|-------|--------|----------|-----------|------|----------|---------|--------------|-----------|----------|---------|------------|------------|
| China      | 1     |        |          |           |      |          |         |              |           |          |         |            |            |
| Brunei     | 0.286 | 1      |          |           |      |          |         |              |           |          |         |            |            |
| Cambodia   | 0.157 | -0.202 | 1        |           |      |          |         |              |           |          |         |            |            |
| Indonesia  | 0.262 | -0.014 | 0.077    | 1         |      |          |         |              |           |          |         |            |            |
| Laos       | 0.013 | -0.046 | 0.222    | -0.069    | 1    |          |         |              |           |          |         |            |            |
| Malaysia   | -0.073| -0.032 | 0.239    | -0.112    | 0.449| 1        |         |              |           |          |         |            |            |
| Myanmar    | -0.055| 0.118  | -0.239   | -0.077    | -0.056| -0.033   | 1       |              |           |          |         |            |            |
| Philippines| -0.009| -0.011 | 0.173    | 0.246     | -0.055| -0.072   | -0.056  | 1            |           |          |         |            |            |
| Singapore  | -0.09 | 0.056  | 0.312    | -0.25     | 0.121| -0.076   | -0.198  | 0.105        | 1         |          |         |            |            |
| Thailand   | -0.211| -0.041 | -0.005   | 0.169     | -0.082| 0.069    | -0.092  | 0.462        | -0.052    | 1         |         |            |            |
| Vietnam    | 0.145 | -0.071 | 0.583    | 0.273     | 0.302| 0.326    | -0.076  | 0.316        | 0.12      | 0.113    | 1       |            |            |
| ASEAN Average | 0.092 | 0.028  | 0.752    | 0.233     | 0.36 | 0.39     | -0.142  | 0.502        | 0.454     | 0.326    | 0.789   | 1          |            |
| Total Average | 0.334 | 0.098  | 0.75     | 0.285     | 0.344| 0.351    | -0.148  | 0.473        | 0.408     | 0.257    | 0.783   | 0.969      | 1          |

Source: Calculated from Table 3.
|                | Korea | Brunei | Cambodia | Indonesia | Laos | Malaysia | Myanmar | Philippines | Singapore | Vietnam | ASEAN-Ave. | Total-Ave. |
|----------------|-------|--------|----------|-----------|------|----------|---------|-------------|-----------|---------|------------|------------|
| Korea          | 1     |        |          |           |      |          |         |             |           |         |            |            |
| Brunei        | 0.065 | 1      |          |           |      |          |         |             |           |         |            |            |
| Cambodia      | 0.422 | 0.06   | 1        |           |      |          |         |             |           |         |            |            |
| Indonesia     | 0.144 | 0.572  | 0.262    | 1         |      |          |         |             |           |         |            |            |
| Laos          | -0.274| 0.455  | 0.089    | 0.554     | 1    |          |         |             |           |         |            |            |
| Malaysia      | 0.212 | 0.431  | 0.105    | 0.369     | 0.14 | 1        |         |             |           |         |            |            |
| Myanmar       | 0.052 | 0.217  | -0.074   | 0.165     | 0.274| 0.204    | 1       |             |           |         |            |            |
| Philippines   | 0.304 | 0.087  | 0.048    | 0.166     | -0.127| 0.165    | 0.345   | 1           |           |         |            |            |
| Singapore     | 0.293 | 0.289  | 0.447    | 0.366     | 0.192| 0.422    | 0.138   | -0.008      | 1         |         |            |            |
| Vietnam       | 0.406 | 0.523  | 0.483    | 0.391     | 0.243| 0.499    | 0.09    | 0.181       | 0.459     | 1       |            |            |
| ASEAN Average | 0.386 | 0.623  | 0.581    | 0.711     | 0.444| 0.631    | 0.322   | 0.352       | 0.694     | 0.78    | 1          |            |
| Total Average | 0.553 | 0.577  | 0.611    | 0.671     | 0.345| 0.613    | 0.301   | 0.38        | 0.686     | 0.788   | 0.982      | 1          |

Source: Calculated from Table 4.
Under the ASEAN-China FTA (results are shown in Table 7), there is no correlation coefficient higher than 0.700, just as in the case of the ASEAN-Australia-New Zealand FTA. The highest coefficient is 0.588 (between Vietnam and Cambodia). Vietnam has the strongest positive correlation with the ASEAN average (correlation coefficient of 0.789). The simple average of all of the coefficients between different countries listed in the Table is calculated as 0.059 (not shown in the Table). This is the lowest among the four FTAs investigated in this study. This seems to signify that the participation by China as a big supplier and market for trade in services, is rather “sensitive” and therefore the commitments by individual countries are diverse, reflecting intensified sensitivities.

Under the ASEAN-Korea FTA (results are shown in Table 8), there is no correlation coefficient higher than 0.700, as in the ASEAN-Australia-New Zealand FTA and the ASEAN-China FTA. The highest coefficient is 0.572 (between Brunei and Indonesia). Vietnam has the strongest positive correlation with the ASEAN average (correlation coefficient of 0.780). The simple average of all of the coefficients between different countries listed in the Table is calculated as 0.241 (not shown in the Table). This is the second lowest correlation among the four FTAs at issue in this study.

Correlation among the ASEAN+n FTAs has also been measured, using the sector-average value of Hoekman Index in Tables 1-4. The result is shown in Table 9. The highest positive correlation of 0.870 is observed between the ASEAN-Australia-New Zealand FTA and the ASEAN-Korea FTA. The lowest correlation of 0.615 is observed between the ASEAN Framework Agreement on Services and the ASEAN-China FTA. This, though, is also a positive value. There is no negative correlation observed among the four FTAs. Since country-difference is not considered in this analysis (due to differing membership across different FTAs), sector-specific factors are relevant here: Sectors with open orientation and those with domestic sensitivities are more or less shared across all the four FTAs.

Overall, strong correlations (coefficients of over 0.8) are observed among the following three FTAs, i.e. among (1) the ASEAN-Australia-New Zealand FTA, (2) the ASEAN-China FTA, and (3) the ASEAN-Korea FTA. In other words, the ASEAN Framework Agreement on Services has an unusual commitment pattern, reflecting some degree of a unified ASEAN membership.
### Table 9. Correlation coefficients among the four FTAs

|                        | ASEAN Framework Agreement on Services | ASEAN-Australia-New Zealand FTA | ASEAN-China FTA | ASEAN-Korea FTA (Data for Thailand missing) |
|------------------------|--------------------------------------|---------------------------------|----------------|---------------------------------------------|
| ASEAN Framework Agreement on Services | 1                                   |                                 |                |                                             |
| ASEAN-Australia-New Zealand FTA | 0.718                               | 1                               |                |                                             |
| ASEAN-China FTA         | 0.615                                | 0.826                           | 1              |                                             |
| ASEAN-Korea FTA (Data for Thailand missing) | 0.704 | 0.870 | 0.830 | 1 |

Source: Calculated from Tables 1-4.

Next, correlation of commitments by the same country under different FTAs is calculated, as in Table 10-19. These Tables reveal that there is no “convergence” of country-level commitments under different FTAs observed as they currently stand, and that the degree of similarity differs greatly across different countries and also across different pairs of FTAs. Overall, however, most correlation coefficients are positive, revealing that each country generally expresses similar domestic concerns under the different FTAs.

### Table 10. Correlation of commitments by Brunei under the four different FTAs

|                        | Brunei (AFAS) | Brunei (AANZ) | Brunei (ASEAN-China) | Brunei (ASEAN-Korea) |
|------------------------|--------------|---------------|----------------------|----------------------|
| Brunei (AFAS)          | 1            |               |                      |                      |
| Brunei (AANZ)          | 0.401        | 1             |                      |                      |
| Brunei (ASEAN-China)   | -0.084       | 0.011         | 1                    |                      |
| Brunei (ASEAN-Korea)   | 0.43         | 0.742         | 0.026                | 1                    |

Source: Calculated from Tables 1-4.

### Table 11. Correlation of commitments by Cambodia under the four different FTAs

|                        | Cambodia (AFAS) | Cambodia (AANZ) | Cambodia (ASEAN-China) | Cambodia (ASEAN-Korea) |
|------------------------|-----------------|-----------------|------------------------|------------------------|
| Cambodia (AFAS)        | 1               |                 |                        |                        |
| Cambodia (AANZ)        | 0.852           | 1               |                        |                        |
| Cambodia (ASEAN-China) | 0.807           | 0.952           | 1                      |                        |
| Cambodia (ASEAN-Korea) | 0.886           | 0.947           | 0.907                  | 1                      |

Source: Calculated from Tables 1-4.
Table 12. Correlation of commitments by Indonesia under the four different FTAs

|                  | Indonesia (AFAS) | Indonesia (AANZ) | Indonesia (ASEAN-China) | Indonesia (ASEAN-Korea) |
|------------------|------------------|------------------|-------------------------|-------------------------|
| Indonesia (AFAS) | 1                |                  |                         |                         |
| Indonesia (AANZ) | 0.383            | 1                |                         |                         |
| Indonesia (ASEAN-China) | 0.203 | 0.505 | 1 |
| Indonesia (ASEAN-Korea) | 0.457 | 0.905 | 0.459 | 1 |

Source: Calculated from Tables 1-4.

Table 13. Correlation of commitments by Laos under the four different FTAs

|                  | Laos (AFAS) | Laos (AANZ) | Laos (ASEAN-China) | Laos (ASEAN-Korea) |
|------------------|-------------|-------------|--------------------|--------------------|
| Laos (AFAS)      | 1           |             |                    |                    |
| Laos (AANZ)      | 0.431       | 1           |                    |                    |
| Laos (ASEAN-China) | -0.09 | 0.164 | 1 |
| Laos (ASEAN-Korea) | 0.493 | 0.216 | -0.095 | 1 |

Source: Calculated from Tables 1-4.

Table 14. Correlation of commitments by Malaysia under the four different FTAs

|                  | Malaysia (AFAS) | Malaysia (AANZ) | Malaysia (ASEAN-China) | Malaysia (ASEAN-Korea) |
|------------------|-----------------|-----------------|------------------------|------------------------|
| Malaysia (AFAS)  | 1               |                 |                        |                        |
| Malaysia (AANZ)  | 0.484           | 1               |                        |                        |
| Malaysia (ASEAN-China) | 0.171 | 0.397 | 1 |
| Malaysia (ASEAN-Korea) | 0.396 | 0.599 | 0.211 | 1 |

Source: Calculated from Tables 1-4.

Table 15. Correlation of commitments by Myanmar under the four different FTAs

|                  | Myanmar (AFAS) | Myanmar (AANZ) | Myanmar (ASEAN-China) | Myanmar (ASEAN-Korea) |
|------------------|----------------|----------------|-----------------------|-----------------------|
| Myanmar (AFAS)   | 1              |                |                       |                       |
| Myanmar (AANZ)   | 0.336          | 1              |                       |                       |
| Myanmar (ASEAN-China) | -0.004 | 0.075 | 1 |
| Myanmar (ASEAN-Korea) | 0.085 | 0.308 | 0.345 | 1 |

Source: Calculated from Tables 1-4.
Table 16. Correlation of commitments by the Philippines under the four different FTAs

|                  | Philippines (AFAS) | Philippines (AANZ) | Philippines (ASEAN-China) | Philippines (ASEAN-Korea) |
|------------------|-------------------|-------------------|--------------------------|--------------------------|
| Philippines (AFAS) | 1                 |                   |                          |                          |
| Philippines (AANZ) | 0.529             | 1                 |                          |                          |
| Philippines (ASEAN-China) | 0.394         | 0.538             | 1                        |                          |
| Philippines (ASEAN-Korea) | 0.576          | 0.778             | 0.5                      | 1                        |

Source: Calculated from Tables 1-4.

Table 17. Correlation of commitments by Singapore under the four different FTAs

|                  | Singapore (AFAS) | Singapore (AANZ) | Singapore (ASEAN-China) | Singapore (ASEAN-Korea) |
|------------------|------------------|------------------|-------------------------|-------------------------|
| Singapore (AFAS) | 1                |                 |                         |                         |
| Singapore (AANZ) | 0.739            | 1                |                         |                         |
| Singapore (ASEAN-China) | 0.31          | 0.303            | 1                       |                         |
| Singapore (ASEAN-Korea) | 0.746          | 0.837            | 0.333                   | 1                       |

Source: Calculated from Tables 1-4.

Table 18. Correlation of commitments by Thailand under the three different FTAs

|                  | Thailand (AFAS) | Thailand (AANZ) | Thailand (ASEAN-China) |
|------------------|-----------------|-----------------|------------------------|
| Thailand (AFAS)  | 1               |                 |                        |
| Thailand (AANZ)  | 0.408           | 1               |                        |
| Thailand (ASEAN-China) | 0.237         | 0.345           | 1                      |

Note: Thailand’s commitment table under ASEAN-Korea is not available.
Source: Calculated from Tables 1-4.

Table 19. Correlation of commitments by Vietnam under the four different FTAs

|                  | Vietnam (AFAS) | Vietnam (AANZ) | Vietnam (ASEAN-China) | Vietnam (ASEAN-Korea) |
|------------------|----------------|----------------|-----------------------|-----------------------|
| Vietnam (AFAS)   | 1              |                |                       |                       |
| Vietnam (AANZ)   | 0.59           | 1              |                       |                       |
| Vietnam (ASEAN-China) | 0.567        | 0.951          | 1                     |                       |
| Vietnam (ASEAN-Korea) | 0.554        | 0.925          | 0.967                 | 1                     |

Source: Calculated from Tables 1-4.

© 2012 Journal of East Asian Economic Integration
V. Cluster Analysis

The next attempt is to highlight similarities in commitments among individual participating members by FTA. The standard pair-wise clustering method has been applied to the calculated Hoekman Indices (as in Tables 1-4). Figures 1-4 show the results of pair-wise clustering. Figure 1 shows the clustering of countries under AFAS in the form of a “dendrogram” (tree-shaped categorization). As shown, Malaysia is closest to the simple-average of commitments by all the signatory countries (labeled as “ASEAN Ave.” in the Figure). The commitment patterns do not seem to be categorized perfectly according to the level of economic development (in terms of per-capita GDP). Also, Cambodia, Laos, Myanmar and Vietnam (so-called “CLMV” countries as latecomer members of ASEAN) are not clustered close to one another, reflecting individual commitment patterns for each of them. Judging from the “distance” (measured by the horizontal axis in the Figure), the distances between ASEAN countries are closest under AFAS among the four FTAs studied, since all the ASEAN countries are clustered together within the distance of 2, whereas in the other Figures, the final clustering is done beyond the distance of 2. Figure 2 reveals that Australia and New Zealand are closest to the “Average”, which indicates that their commitment patterns are, interestingly, “typical” of ASEAN members. Figure 3 for the ASEAN-China FTA shows that China is clustered rather far away from the “Average” commitment pattern. Vietnam is closest to the “Average” just as in the case of Figure 1 (for the AFAS). Figure 4 for the ASEAN-Korea FTA shows that Korea is categorized rather close to the “Average” commitment pattern (although Vietnam is closest to the “Average”).

Clustering by sector of the country-average commitment under each FTA is shown in Figures 5-8. The upper part of the Figures show a group (or “cluster”) of rather highly committed sectors, while the bottom part groups those sectors less committed. Overall, idiosyncratic clustering of the neatly categorized

12 Cluster analysis is a method of grouping observations into subgroups (called clusters) so that observations in the same cluster are similar in terms of “distance”, which is Euclidean distance.

13 It seems that China has a rather closed trade policy, which is comparable to Brunei (which has the leading oil-related sector, hence less need to open up its market).

14 Cambodia, being aware of its rather less advanced domestic economic condition, has a quite open trade policy, which is comparable with Korea, in order to boost its economy through trade (including trade in services). In essence, both Korea and Cambodia are similar to each other in their open-trade inclination.
service sectors is observed, indicating that sensitivities differ even among similar service sectors. Since the more left-hand side of the Figures indicate shorter “distance” among the clustered pairs), so-called “cluster meeting” as seen in the GATS-based negotiations at the WTO, could also take place under these FTAs with a view to achieving cross-sector convergence in the future.

Figure 1. Clustering of countries under AFAS (in the form of a dendrogram)

![Figure 1](image1)

Source: Made from Table 1.

Figure 2. Clustering of countries under ASEAN-Australia-New Zealand FTA (in the form of a dendrogram)

![Figure 2](image2)

Source: Made from Table 2.
Figure 3. Clustering of countries under ASEAN-China FTA
(in the form of a dendrogram)

Figure 4. Clustering of countries under ASEAN-Korea FTA
(in the form of a dendrogram)
Figure 5. Clustering of sectors under AFAS (in the form of a dendrogram)
Figure 6. Clustering of sectors under ASEAN-Australia-New Zealand FTA
(in the form of a dendrogram)
Figure 7. Clustering of sectors under ASEAN-China FTA (in the form of a dendrogram)
Figure 8. Clustering of sectors under ASEAN-Korea FTA (in the form of a dendrogram)
VI. Hoekman Index by country, by mode and by aspect

The Hoekman Index has also been calculated by country, by Mode and by aspect. Results are shown in Tables 20-23. A cross-cutting observation on the level of commitment by Mode is that while Mode 1 through Mode 3 have various country- and sector-specific commitment patterns, Mode 4 shows least commitments among the four Modes (except for the case of the ASEAN-Korea

Table 20. Hoekman Index for the ASEAN Framework Agreement on Services (AFAS, 7th package) by country, by mode and by aspect

| Country     | Aspect, i.e. Market Access (MA) or National Treatment (NT) | Hoekman Index for Mode 1 | Hoekman Index for Mode 2 | Hoekman Index for Mode 3 | Hoekman Index for Mode 4 | Mode average |
|-------------|-----------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------|
| Indonesia   | MA                                                        | 0.24                     | 0.36                     | 0.19                     | 0.01                     | 0.2          |
|             | NT                                                        | 0.25                     | 0.36                     | 0.05                     | 0.01                     | 0.17         |
| Malaysia    | MA                                                        | 0.41                     | 0.53                     | 0.51                     | 0                        | 0.36         |
|             | NT                                                        | 0.42                     | 0.53                     | 0.48                     | 0                        | 0.36         |
| Philippines | MA                                                        | 0.48                     | 0.57                     | 0.24                     | 0.11                     | 0.35         |
|             | NT                                                        | 0.48                     | 0.57                     | 0.19                     | 0.15                     | 0.35         |
| Singapore   | MA                                                        | 0.54                     | 0.54                     | 0.28                     | 0.06                     | 0.35         |
|             | NT                                                        | 0.54                     | 0.53                     | 0.1                      | 0.07                     | 0.31         |
| Thailand    | MA                                                        | 0.3                      | 0.54                     | 0.32                     | 0.04                     | 0.3          |
|             | NT                                                        | 0.3                      | 0.52                     | 0.43                     | 0.03                     | 0.32         |
| Brunei      | MA                                                        | 0.4                      | 0.51                     | 0.3                      | 0.13                     | 0.34         |
|             | NT                                                        | 0.5                      | 0.51                     | 0.22                     | 0.11                     | 0.33         |
| Cambodia    | MA                                                        | 0.22                     | 0.54                     | 0.19                     | 0.16                     | 0.27         |
|             | NT                                                        | 0.24                     | 0.54                     | 0.21                     | 0.19                     | 0.3          |
| Laos        | MA                                                        | 0.39                     | 0.56                     | 0.43                     | 0                        | 0.34         |
|             | NT                                                        | 0.46                     | 0.56                     | 0.5                      | 0                        | 0.38         |
| Vietnam     | MA                                                        | 0.41                     | 0.66                     | 0.58                     | 0.2                      | 0.46         |
|             | NT                                                        | 0.4                      | 0.66                     | 0.59                     | 0.19                     | 0.46         |
| Myanmar     | MA                                                        | 0.24                     | 0.56                     | 0.43                     | 0.05                     | 0.32         |
|             | NT                                                        | 0.3                      | 0.56                     | 0.5                      | 0                        | 0.34         |
| Country average | MA                                               | 0.36                     | 0.54                     | 0.35                     | 0.08                     | 0.33         |
|             | NT                                                        | 0.39                     | 0.53                     | 0.33                     | 0.07                     | 0.33         |

Source: Calculated from the database constructed.
FTA, under which Mode 3 is least committed). Mode 2 shows most commitment overall. And there is not much difference between MA and NT for all the countries. While this study focuses on the mapping aspect, a detailed analysis

Table 21. Hoekman Index for the ASEAN-Australia-New Zealand FTA by country, by mode and by aspect

| Country     | Aspect, i.e. Market Access (MA) or National Treatment (NT) | Mode 1 | Mode 2 | Mode 3 | Mode 4 | Mode average |
|-------------|-----------------------------------------------------------|--------|--------|--------|--------|--------------|
| Australia   | MA 0.39, NT 0.42                                        | 0.55   | 0.57   | 0.01   | 0.38   |              |
|             |                                                           |        |        |        |        |              |
|             | New Zealand                                              | MA 0.49, NT 0.49 | 0.5   | 0.51   | 0.02   | 0.38   |              |
|             |                                                           |        |        |        |        |              |
|             | Brunei                                                   | MA 0.03, NT 0.05 | 0.12  | 0.06   | 0.02   | 0.06   |              |
|             |                                                           |        |        |        |        |              |
|             | Cambodia                                                 | MA 0.41, NT 0.43 | 0.54  | 0.51   | 0.02   | 0.37   |              |
|             |                                                           |        |        |        |        |              |
|             | Indonesia                                                | MA 0.17, NT 0.26 | 0.27  | 0.13   | 0.01   | 0.14   |              |
|             |                                                           |        |        |        |        |              |
|             | Laos                                                     | MA 0.17, NT 0.17 | 0.17  | 0.22   | 0.01   | 0.14   |              |
|             |                                                           |        |        |        |        |              |
|             | Malaysia                                                 | MA 0.1, NT 0.1 | 0.28  | 0.15   | 0.01   | 0.13   |              |
|             |                                                           |        |        |        |        |              |
|             | Myanmar                                                  | MA 0.1, NT 0.2 | 0.2   | 0.07   | 0.02   | 0.1    |              |
|             |                                                           |        |        |        |        |              |
|             | Philippines                                              | MA 0.05, NT 0.07 | 0.19  | 0.12   | 0      | 0.09   |              |
|             |                                                           |        |        |        |        |              |
|             | Singapore                                                | MA 0.3, NT 0.35 | 0.43  | 0.38   | 0.02   | 0.28   |              |
|             |                                                           |        |        |        |        |              |
|             | Thailand                                                 | MA 0.04, NT 0.03 | 0.41  | 0.36   | 0.02   | 0.21   |              |
|             |                                                           |        |        |        |        |              |
|             | Vietnam                                                  | MA 0.16, NT 0.19 | 0.58  | 0.44   | 0      | 0.3    |              |
|             |                                                           |        |        |        |        |              |
|             | Country average                                          | MA 0.2, NT 0.23 | 0.35  | 0.29   | 0.01   | 0.21   |              |

Source: Calculated from the database constructed.

ⓒ Korea Institute for International Economic Policy
of the determinants of service liberalization by mode would be desirable as a future research agenda.\textsuperscript{15}

Table 22. Hoekman Index for the ASEAN-China FTA by country, by mode and by aspect

| Country   | Aspect, i.e. Market Access (MA) or National Treatment (NT) | Mode 1 | Mode 2 | Mode 3 | Mode 4 | Mode average |
|-----------|----------------------------------------------------------|--------|--------|--------|--------|--------------|
| China     | MA                                                      | 0.05   | 0.24   | 0.13   | 0      | 0.1          |
|           | NT                                                      | 0.12   | 0.24   | 0.23   | 0.01   | 0.15         |
| Brunei    | MA                                                      | 0.03   | 0.03   | 0.03   | 0.01   | 0.02         |
|           | NT                                                      | 0.03   | 0.03   | 0.02   | 0.01   | 0.02         |
| Cambodia  | MA                                                      | 0.4    | 0.54   | 0.5    | 0      | 0.36         |
|           | NT                                                      | 0.42   | 0.54   | 0.51   | 0      | 0.37         |
| Indonesia | MA                                                      | 0.02   | 0.09   | 0.05   | 0.04   | 0.05         |
|           | NT                                                      | 0.02   | 0.04   | 0.05   | 0.04   | 0.03         |
| Laos      | MA                                                      | 0.01   | 0.03   | 0.03   | 0      | 0.02         |
|           | NT                                                      | 0.01   | 0.03   | 0.03   | 0      | 0.02         |
| Malaysia  | MA                                                      | 0.07   | 0.07   | 0.07   | 0.01   | 0.06         |
|           | NT                                                      | 0.08   | 0.08   | 0.1    | 0.01   | 0.07         |
| Myanmar   | MA                                                      | 0.01   | 0.04   | 0.01   | 0.01   | 0.02         |
|           | NT                                                      | 0.01   | 0.04   | 0      | 0.01   | 0.02         |
| Philippines | MA                                                  | 0.02   | 0.06   | 0.04   | 0.04   | 0.04         |
|            | NT                                                    | 0.02   | 0.06   | 0.05   | 0.04   | 0.04         |
| Singapore | MA                                                      | 0.19   | 0.38   | 0.35   | 0      | 0.23         |
|            | NT                                                      | 0.2    | 0.38   | 0.36   | 0      | 0.23         |
| Thailand  | MA                                                      | 0.03   | 0.12   | 0.07   | 0.06   | 0.07         |
|            | NT                                                      | 0.02   | 0.12   | 0.08   | 0      | 0.06         |
| Vietnam   | MA                                                      | 0.2    | 0.6    | 0.5    | 0      | 0.33         |
|            | NT                                                      | 0.22   | 0.6    | 0.55   | 0      | 0.34         |
| Country average | MA                        | 0.09   | 0.2    | 0.16   | 0.01   | 0.12         |
|            | NT                                                      | 0.1    | 0.2    | 0.18   | 0.01   | 0.12         |

Source: Calculated from the database constructed.

\textsuperscript{15} In the context of mode-by-mode determinants of trade in services, Urata \textit{et al.} (2011) indicate that endowment-based trade models (of Heckscher-Ohlin type) could explain Mode 1-based trade in services; Mode 2 tend to be determined by supply-side considerations as featured in the Ricardo model; Modes 3 and 4, being flow of factors of production, might be explained by the theory of foreign direct investment.
Table 23. Hoekman Index for the ASEAN-Korea FTA by country, by mode and by aspect

| Country  | Aspect, i.e. Market Access (MA) or National Treatment (NT) | Mode 1 | Mode 2 | Mode 3 | Mode 4 | Mode average |
|----------|----------------------------------------------------------|--------|--------|--------|--------|--------------|
| Korea    | MA                                                       | 0.46   | 0.41   | 0      | 0.17   | 0.26         |
|          | NT                                                       | 0.48   | 0.42   | 0      | 0.28   | 0.29         |
| Brunei   | MA                                                       | 0.18   | 0.09   | 0.01   | 0.06   | 0.08         |
|          | NT                                                       | 0.19   | 0.05   | 0.01   | 0.08   | 0.08         |
| Cambodia | MA                                                       | 0.53   | 0.49   | 0      | 0.38   | 0.35         |
|          | NT                                                       | 0.53   | 0.51   | 0      | 0.4    | 0.36         |
| Indonesia| MA                                                       | 0.3    | 0.15   | 0.06   | 0.2    | 0.18         |
|          | NT                                                       | 0.3    | 0.12   | 0.12   | 0.2    | 0.19         |
| Laos     | MA                                                       | 0.15   | 0.1    | 0      | 0.09   | 0.09         |
|          | NT                                                       | 0.17   | 0.01   | 0      | 0.07   | 0.06         |
| Malaysia | MA                                                       | 0.34   | 0.2    | 0.01   | 0.19   | 0.19         |
|          | NT                                                       | 0.32   | 0.3    | 0      | 0.16   | 0.2          |
| Myanmar  | MA                                                       | 0.05   | 0.02   | 0.02   | 0.02   | 0.03         |
|          | NT                                                       | 0.05   | 0.02   | 0.02   | 0.03   | 0.03         |
| Philippines| MA                                                   | 0.22   | 0.17   | 0.12   | 0.09   | 0.15         |
|          | NT                                                       | 0.22   | 0.22   | 0.14   | 0.14   | 0.18         |
| Singapore| MA                                                       | 0.46   | 0.42   | 0      | 0.31   | 0.3          |
|          | NT                                                       | 0.47   | 0.44   | 0      | 0.34   | 0.31         |
| Vietnam  | MA                                                       | 0.01   | 0.01   | 0      | 0      | 0.01         |
|          | NT                                                       | 0.01   | 0.01   | 0      | 0      | 0.01         |
| Country average | MA                        | 0.27   | 0.21   | 0.02   | 0.15   | 0.16         |
|          | NT                                                       | 0.27   | 0.21   | 0.03   | 0.17   | 0.17         |

Source: Calculated from the database constructed.

VII. Conclusions and Policy Implications

This study focuses on mapping the degree of liberalization of trade in services under four ASEAN+n FTAs. There remains much need to investigate causal links between restrictions on trade in services and the actual performances of service trade.\(^\text{16}\)

\(^{16}\) OECD (2003, 2009), for example, make systemic analyses of causal and/or correlation linkages between the restrictiveness and actual performance of trade in services.

ⓒ Korea Institute for International Economic Policy
There are several caveats to be made in interpreting the mapped data. Most notably, there should be a distinction drawn between actual policy provisions and the noted commitments: the former might be well above the latter, indicating that in the actual business setting, a particular country’s openness is more than the way the country makes its commitment under certain FTAs.

In addition, “enforcement” of the bound commitments is quite another issue: however deeply committed one country may be at the level of an FTA, such commitment might not be actually realized (enforced). Further, there is also a need to compare each country’s commitment under GATS with that under each of the FTAs. This comparison of GATS-based commitments and the FTA-based commitments would reveal whether the so-called “WTO-plus” feature exists or not.\(^\text{17}\)

And finally, this study exclusively focuses on the “outline description”, in the sense that the “Limitation” of individual service sectors is not quantified but simply denoted (in the database) as “L”. Measuring the contents of limitations out of the commitment tables (characterized by “positive lists” rather than negative ones) requires an overall picture of each sector’s legal framework. In this study, these aspects have not been considered, posing a limitation and at the same time providing an agenda for further study.\(^\text{18}\)

The mapping exercise in this study has overall revealed that:

(1) The commitment level differs greatly between “sensitive” sectors and “less sensitive” sectors; this means that there is much scope for further enhancing international division of labor in terms of trade in services, through utilizing FTAs;

\(^\text{17}\) While all the pluri-lateral FTAs are expected to have the WTO-plus feature, China’s commitment under the ASEAN-China FTA omits its commitment under the GATS, thus leading to the under-estimation of China’s bilateral commitment. There are, however, incidences in which China reports in its bilateral FTA the same commitment made under the GATS. A preliminary investigation has revealed this sort of “discrepancy” being observed with several other countries including Thailand. There is thus a need to make some “reconciliation work” between the GATS commitment and FTA commitment overall, as part of the sequel research project.

\(^\text{18}\) As a separate undertaking, the often used “coverage index” has been calculated (for the use of this index, see, e.g. Adlung and Roy 2005). This index measures “the ratio of countries committed in particular sectors (as N or L) to the total number of countries”. After calculating this index for each sector under each of the four FTAs at issue in this study, correlation coefficients between the Hoekman Index and the coverage index under each of the FTAs has been calculated. As a result, it is found that there is a high correlation of a little over 0.90 between these two indices, which implies that the Hoekman Index can serve as a representative index for measuring the commitment level of trade in services.
(2) The commitment level under the ASEAN Framework Agreement (AFAS) is the highest among the four FTAs studied; this means that the ASEAN member countries are rather highly consolidated among themselves, leading up to the formation of an ASEAN Economic Community (AEC);

(3) There are cross-country similarities in the pattern of service sector commitment under each of the FTAs; this implies that the shared domestic sensitivities can be overcome by a shared economic cooperation scheme for enhancing competitiveness (through FTA provisions);

(4) There are sector-specific similarities (high correlations) among the three FTAs, i.e. the ASEAN-Australia-New Zealand FTA, the ASEAN-China FTA and the ASEAN-Korea FTA; this signifies that in the face of extra-ASEAN market opening, the ASEAN members become more consolidated in terms of the pattern of service commitment;

(5) Overall, Mode 4 (movement of people) is least committed, whereas Mode 2 (consumption abroad) is most committed under all the four FTAs studied.

There are two possibilities on the sequence of further streamlining the four FTAs:

(1) Start within the same “clusters” among similarly committed countries under a particular FTA; then harmonize the level of commitments across all the signatory countries to the FTA; or

(2) Start with harmonizing rather dissimilar countries from different “clusters” of commitments under a particular FTA, which provides small-scale “social experimenting”; then scale up this line of effort at an acceptably later stage to the level of the whole FTA, then eventually attempt to harmonize across all the FTAs centering on ASEAN, if the region covered by ASEAN+n FTAs is to become a more seamless market in terms of trade in services.

Either avenue would generate some degree of domestic concern. Overall, though, the absolute degree of commitment in service sectors remains rather low, even under the FTAs with a preferential nature. Given that there are more benefits than costs arising from deepening trade in services, further harmonization of the service chapters under the four FTAs studied is economically valid for bringing about more benefit to the ASEAN members, as well as all the other participating countries in the Asia Pacific region. As
for the near-future research agenda, mapping of other FTAs involving some ASEAN member countries should be done as a sequel research effort, with a view to elucidating similarities and differences among existing FTAs in the Asia Pacific region.\(^{19}\)

\(^{19}\) Detailed sector-wise analysis with more elaborated and multi-dimensional quantification attempts (e.g. Dee and Findlay 2007 and Dee 2009) could also be an important future research agenda alongside the outline-mapping efforts made in this study. In the context of Ochiai, Dee and Findlay (2007), for example, the criteria for sorting out the extent of liberalization in service trade under each of some 80 FTAs studied are quite wide-ranging, as below: Scope, MFN, MFN Exemption, National Treatment, Market Access, Local Presence, Domestic Regulations, Transparency, Recognition, Monopolies, Business Practices, Transfer and Payments, Denial of Benefits, Safeguard, Subsidies, Government Procurement, Ratchet Mechanism, Telecommunication, Financial Services (in terms of form of FTAs); and Excluded Modes, Excluded Form, Sectoral Exclusions, Regional Measures, Land Acquisitions, Minority Affairs, and Number of Domestic Employees (in terms of contents of FTAs). Although appropriate selection of criteria and their scores for weighting is always a contentions issue, this sort of analytical effort with a more focus on recently forged FTAs involving ASEAN and East Asia should be a useful next step.
APPENDIX: List of 11 Sectors and 55 Sub-sectors of Service Trade Administered by GATS

**01. Business Services**

| Code | Service Type |
|------|--------------|
| 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**

| Code | Service Type |
|------|--------------|
| 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**

| Code | Service Type |
|------|--------------|
| 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**

| Code | Service Type |
|------|--------------|
| 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

References

Adlung, R. and M. Roy. 2005. “Turning Hills into Mountains? Current Commitments under the General Agreement on Trade in Services and Prospects for Change.” *Journal of World Trade*, vol. 39, no. 6, pp. 1161-1194.

Dee, P. 2009. “Services Liberalization toward the ASEAN Economic Community.” Chapter 2 in S. Urata et al. *Eria Research Project 2009 No. 1*, “Tracing the Progress toward the ASEAN Economic Community.” Available at http://www.eria.org/research/y2009-no3.html (Accessed March 12, 2011).

Fink, C. and M. Molinuevo. 2008. “East Asian Preferential Trade Agreements in Services: Liberalization Content and WTO Rules.” *World Trade Review*, Vol. 7, (issue no. 4), pp. 641-673.

Gootiiz, B. and A. Mattoo. 2009. “Services in Doha: What’s on the Table?” Policy Research Working Paper, WPS4903. Available at http://www-wds.worldbank.org/external/default/main?pagePK=64193027&piPK=64187937&theSitePK=523679&menuPK=64187510&searchMenuPK=64187283&theSitePK=523679&entityID=000158349_20090416133806&searchMenuPK=64187283&theSitePK=523679 (Accessed January 14, 2011).
Hoekman, B. 1995. “Assessing the General Agreement on Trade in Services.” World Bank Discussion Paper No. 307, World Bank, Washington D.C.

Hoekman, B., W. Martin and A. Mattoo. 2009. “Conclude Doha: It Matters!” World Bank Policy Research Working Paper 5135, World Bank, Washington D.C.

OECD. 2003. “Quantifying the Benefits of Liberalising Trade in Services.” Available at http://books.google.co.jp/books?id=eMP_d-_upbYC&pg=PA150&lpg=PA150&dq=Hoekman+Commitment+Index+(1995)&source=bl&ots=M0hjel7bXy&sig=_ic1rpqQ3aAb5xzbr2GhCaoGvXo&hl=ja&ei=o6-JS7-WLM-LkAX19-2TDw&sa=X&oi=book_result&ct=result&resnum=10&ved=0CEkQ6AEwCQ#v=onepage&q=Hoekman%20Commitment%20Index%20(1995)&f=false (Accessed January 14, 2011).

______. 2009. “Testing the Services Trade Restrictiveness Index: Gravity Regressions and Trade Costs Analysis.” A paper presented at OECD Experts Meeting on the Services Trade Restrictiveness Index (STRI), Paris, 2-3 July 2009. Available at http://www.oecd.org/document/9/0,3343,en_2649_36344374_41524105_1_1_1_37431,00.html (Accessed January 14, 2011).

Ochiai, R., P. Dee and C. Findlay. 2007. “Services in Free Trade Agreements” RIETI Discussion Paper Series 07-E-015. Available at http://www.rieti.go.jp/jp/publications/dp/07e015.pdf (Accessed March 23, 2011). (Also published as Ryo Ochiai, Philippa Dee and Christopher Findlay. 2010. “Services in Free Trade Agreements.” Christopher Findlay and Shujiro Urata eds. Free Trade Agreements in the Asia Pacific, World Scientific, Singapore.)

Urata, S., E. Ogawa and Y. Sawada. 2011. Hajimete Manabu Kokusai Keizai (Introduction to International Economics), Tokyo: Yuhikaku. (in Japanese)
About the Author

Hikari Ishido is currently an associate professor of international economics at the Faculty of Law and Economics of Chiba University (Japan). His previous positions include Programme Officer at the United Nations Development Programme (UNDP) and Research Fellow at the Institute of Developing Economies within Japan External Trade Organization. Dr. Ishido received his B.Sc. in engineering and B.A. in economics both from the University of Tokyo and Ph.D. in economics from the University of London.

First version received on 13 March 2012
Peer-reviewed version received on 2 May 2012
Final version accepted on 14 May 2012