

ERIA Discussion Paper Series**Values and Limitations of the ASEAN Agreement
on the Movement of Natural Persons**

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Abstract: *ASEAN Economic Ministers signed the Agreement on the Movement of Natural Persons (MNP) in 2012. This is a new instrument potentially facilitating the free flow of goods, services, investment, and skilled labour, thus contributing to the establishment of an ASEAN single market and production base. The objective of this paper is to assess the benefits and limitations of this new instrument. The MNP Agreement is an independent Mode 4 services agreement. Actual commitments cover business visitors (seven ASEAN Member States, or AMSs), intra-corporate transferees (all the AMSs), and contractual services suppliers (three AMSs). In general, the commitments add value to predated agreements (namely, AFAS 8 and AANZFTA) for many AMSs in terms of wider sectoral coverage and/or new categories of commitment. However, the commitments vary widely across countries regarding sectoral coverage, committed categories of MNP, and lengths of initial periods of stay. A stand-alone MNP Agreement may result in Mode 4 commitments inconsistent with Mode 3 commitments. Furthermore, the current agreement does not cover non-services sectors at all.*

Keywords: ASEAN, movement of natural persons, AANZFTA, AFAS, GATS

JEL Classification: F13, F15, F16

1. Background and Introduction

The 10 countries of the Association of Southeast Asian Nations (ASEAN) aim to usher in the ASEAN Economic Community (AEC) at the end of 2015. The first pillar of AEC 2015 is the single market and production base, which envisions the free flow of goods, services, investment, and skilled labour, as well as the freer flow of capital. The ASEAN Agreement on the Movement of Natural Persons (the MNP Agreement) signed by the ASEAN Economic Ministers on 19 November 2012 is expected to contribute to both the free flow of services and the free flow of skilled labour.¹

The MNP Agreement is by no means the first instrument to facilitate movement of natural persons in ASEAN. First, the ASEAN Framework Agreement on Services (AFAS)² in 1995 allowed for Mode 4 (presence of natural persons) liberalization for trade in services. The initial (first) package (1997) already covered Mode 4 specific commitments. So far, eight packages have been signed for AFAS.³ Started in 2005, ASEAN has developed mutual recognition arrangements for eight professions.⁴ In 2006, ASEAN Foreign Ministers signed the ASEAN Framework Agreement on Visa Exemption,⁵ which should allow, once in force, 14-day stays for ASEAN citizens. Unfortunately, the Framework Agreement is not effective at the time of writing. In the AEC Blueprint⁶ adopted in 2007,⁷ “free flow of skilled labour” is recognized as one of the core elements of a single market and production base.⁸ Notably, the Blueprint

¹ The Agreement’s effectuation requires ratification from all the AMS, which was aimed to be done within 180 days (by November 2013) (Art. 16.1). However, a few AMS are still working on ratification.

² ASEAN Framework Agreement on Services signed in Bangkok on 15 December 1995.

³ The Ninth Package was signed in August 2014 by nine member states, excluding the Philippines.

⁴ The mutual recognition arrangements (MRAs) cover engineers, architects, nurses, doctors, dentists, accountants, surveyors, and tourism professionals. They, however, are often criticized for slow implementation.

⁵ ASEAN Framework Agreement on Visa Exemption signed in Kuala Lumpur on 25 July 2006. There is no limitation in terms of the purposes of visit, e.g., tourism, commercial.

⁶ ASEAN Economic Community Blueprint signed in Singapore on 20 November 2007. ‘Free flow of skilled labour’ is in Section A.5. Another section relevant to the movement of natural persons is ‘free flow of services’ in Section A.2 which included Mode 4 services negotiation and mutual recognition arrangement for professional qualifications.

⁷ In the same year, (2007), ASEAN leaders adopted the ASEAN Declaration on the Protection and Promotion of the Rights of Migrant Workers but is also criticized for lack of implementation.

⁸ Bali Concord II (2003) already recognized the facilitation of movement of business persons, skilled labour and talents as one element of AEC. Declaration of ASEAN Concord II, 7 October 2003, Bali, Indonesia.

states that the aim is to “allow for managed mobility or facilitated entry for the movement of natural persons engaged in trade in goods, services and investment”, and hence placed important conditions on the “free flow of skilled labour.” The 2009 ASEAN Comprehensive Investment Agreement (ACIA)⁹ aimed to facilitate entry, temporary stay and work of investors, which is applicable to executives, managers and members of boards of directors (Art. 22). In 2010, the Master Plan on ASEAN Connectivity (MPAC) proposed the concept of people-to-people connectivity with many policy measures. None of them, however, specifically referred to the MNP Agreement.

The MNP Agreement discussion, which started in 2010, was triggered by the negotiation of the ASEAN-Australia New Zealand Free Trade Agreement (AANZFTA),¹⁰ signed in 2009. The AANZFTA has a special chapter on the movement of natural persons (Chapter 9: MNP) for the first time in the history of ASEAN agreements.¹¹ ASEAN started negotiations on its own MNP Agreement in 2010 and the Agreement was signed in November 2012. At the time of writing, only seven countries have either ratified or notified completion of necessary domestic procedures,¹² and thus the agreement has not come into force.¹³

Currently no academic papers closely analyse the scope and limitations of the MNP Agreement.¹⁴

⁹ ASEAN Comprehensive Investment Agreement signed on 26 February 2009 in Cha-am, Thailand.

¹⁰ The Agreement Establishing the ASEAN-Australia-New Zealand Free Trade Area, signed on 27 February 2009, Hua Hin, Thailand.

¹¹ Some FTAs of individual ASEAN member countries had a special chapter of MNP but not the ones of ASEAN as a group (i.e., ASEAN+1 FTAs). Those bilateral FTAs are: Japan-Indonesia FTA (Chapter 7), Japan-Philippines FTA (Chapter 9), Japan-Singapore EPA (Chapter 9), Japan-Thailand EPA (Chapter 9), Japan-Viet Nam EPA (Chapter 8), Malaysia-Australia FTA (Chapter 10), Singapore-Australia FTA (Chapter 11: “Movement of Business Persons”), and Thailand-Australia FTA (Chapter 10). In addition, Singapore-US FTA has a chapter on temporary entry of business persons (Chapter 11) which largely overlaps with the MNP in substance.

¹² ASEAN Secretariat’s website (http://agreement.asean.org/search/by_pillar/2.html) (last visited on 7 January 2014). The seven countries are Brunei Darussalam, Cambodia, Malaysia, Myanmar, Singapore, Thailand, and Viet Nam.

¹³ Art. 16.1 of the MNP Agreement requires all member countries’ ratification/notification for entry into force.

¹⁴ Manning and Bhatnagar (2004) is an early study focusing on the Mode-4 liberalization of AFAS. Firdausy (2005) predated the AEC Blueprint and thus does not cover the MNP Agreement. Chia (2011) is a recent and comprehensive literature on the free flow of skilled labour in the context of ASEAN which unfortunately does not cover the MNP Agreement due to the timing of the paper. Another comprehensive study on the implication of AEC 2015 on jobs which

This paper aims to contribute to the academic and policy discussion in the following manner. First, it reveals the current status of the ASEAN MNP Agreement. With less than one year to go before the target of AEC (i.e., 31 December 2015), some countries have started to become concerned over the “free flow of skilled labour”. Thus, a precise understanding of the current status of the MNP Agreement is greatly important to the ongoing policy debate. Second, ASEAN is discussing its post-2015 Vision,¹⁵ including the economic aspects. To what degree will the new MNP Agreement be useful in further liberalizing the movement of natural persons, if ASEAN so wants? What are the limits of this tool, if any, in its framework and institutional mechanism?

This paper is structured as follows. It starts with an assessment of the scope, limits and features of the MNP Agreement by analyzing the legal text and commitment schedules of each country (Section II). Second, it evaluates the value-added of the MNP Agreement vis-à-vis Mode 4 commitments in the ASEAN Framework Agreement on Services Eighth Package (AFAS 8),¹⁶ and the MNP commitments of AMSs) in the AANZFTA (Section III). Section IV concludes with a policy discussion.

2. Scope and Features of the MNP Agreement

This section discusses the scope, limits, and features of the MNP Agreement by looking at both the legal text and the commitment schedules. As this section reveals, the MNP Agreement is a Mode 4 services agreement and, in this respect, is similar to the AANZFTA (Chapter 9) and AFAS (Mode 4). Thus, these agreements, and many others when appropriate, are used as benchmarks to determine the value added of the MNP Agreement. Country-specific analysis is provided in the next section (Section III).

also cover the movement of skilled labour is ILO/ADB (2014) which does not cover the MNP Agreement. More recent papers and presentations started to cover the MNP Agreement in the discussion but only briefly (e.g., Capannelli (2013) and Jurje and Lavenex (2015)).

¹⁵ Bandar Seri Begawan Declaration on the ASEAN Community’s Post-2015 Vision, adopted at the 23rd ASEAN Summit on 9-10 October 2013, Bandar Seri Begawan, Brunei Darussalam.

¹⁶ The MNP Agreement is to provide “rights and obligations additional to those in the AFAS” (Art. 1[a]).

2.1. Legal Text Analysis

There are many notable features of the MNP Agreement. In short, it is a comprehensive Mode 4 services agreement. Crucially, it does not allow migrant workers and, hence, is quite different from the European Schengen scheme.

First, the MNP Agreement does not provide for the “free movement of labour”. In its preamble, the agreement reiterates an important reservation concerning the “free movement of skilled labour” stated in the AEC Blueprint (“managed mobility or facilitated entry for the movement of natural persons”). Art. 2.2 further clarifies that the Agreement:

...shall not apply to measures affecting natural persons seeking access to the employment market of another Member State, nor shall it apply to measures regarding citizenship, residence or employment on a permanent basis.” (Art. 2.2)

This wording is exactly the same as the General Agreement on Trade in Services (GATS) Annex on the Movement of Natural Persons Supplying Services.¹⁷ Thus, the ASEAN MNP Agreement should be interpreted as a Mode 4 services agreement.¹⁸

Second, the MNP Agreement specifies four types of movement of natural persons that can be potentially permitted under the Agreement (Art. 2): (a) business visitors, (b) intra-corporate transferees, (c) contractual service suppliers, and (d) other categories as specified in the commitment schedules. These are the typical categories of Mode 4 commitments as they appear in the GATS (METI, 2013, p.586). Some WTO members also include “independent professionals”. Interestingly, AANZFTA provides two more types: “installers and servicers” and “investors” (Ch. 9, Art. 2.1). Investors are covered in ACIA (Art. 22) in the ASEAN context, while “installers and servicers” are merged into “others” in the ASEAN MNP Agreement.¹⁹ However, as a later section of this paper shows, most of the actual commitments are even more narrowly

¹⁷ The wordings are also similar to those of AANZFTA (Ch. 9, Art. 2.2).

¹⁸ Unlike some bilateral FTAs signed by ASEAN countries, the MNP Agreement does not set any mechanism to allow immigrant workers for specific professions. To give an example, the Japan-Philippines FTA has a special provision for nurses and care workers which allows employment in Japan (Section 6 of Annex 8). The ASEAN MNP Agreement does not have such provisions.

¹⁹ Australia and New Zealand made commitments on “installers and servicers”, but none of AMS committed for this category and, hence, there is no need for a special category in the ASEAN context.

focused on business visitors and intra-corporate transferees, with only three countries having commitments on contractual services suppliers.

Third, the MNP Agreement covers the various services sub-sectors. AFAS has special packages for financial services and air transport services. Also, some services sub-sectors, such as those that are “incidental to manufacturing”, fall within the sponsorship of the ASEAN Comprehensive Investment Agreement (ACIA). But the MNP Agreement has comprehensive coverage of services sub-sectors.

Fourth, the agreement does not cover any non-services sectors. Art. 1 (Objective) provides that the agreement is to facilitate the movement of natural persons “engaged in the conduct of trade in goods, trade in services and investment”. Here, trade in goods and investment is mentioned separately from trade in services. Thus, one might expect that the preferential treatment on MNP is extended to non-services sectors such as manufacturing, which sits at the core of trade in goods.²⁰ However, it would appear that the MNP Agreement does not cover these sectors. In 2011, ASEAN Economic Ministers tasked officials to expedite the work on the MNP Agreement.²¹ This paragraph (para. 20) was assigned in the “trade in services” section. As such, the principal sectoral body of ASEAN in charge of MNP is the ASEAN Coordinating Committee on Services (Art. 14.3). A close look at the commitment schedules supports this finding: i.e., there is no commitment made for non-services sectors by any country.

Fifth, as a trade in services agreement, the MNP Agreement follows the GATS classification (W/120) of services sub-sectors and applies a positive list approach (similarly to AFAS and AANZFTA). This allows us to compare the MNP Agreement with these agreements for detailed analysis.

Sixth, the MNP Agreement makes several provisions for procedural improvements in addition to liberalization commitments. These provisions are Arts. 5 (processing of applications) and 8 (transparency). While they resemble relevant provisions in the AANZFTA, there are additional rules laid down in the MNP Agreement. Art. 5 of the agreement sets out an obligation, upon a request from an applicant, to provide all the additional information in cases where applications are incomplete. As for transparency, the MNP Agreement introduces two new paragraphs that did not exist in the

²⁰ Manufacturing is also treated in the ACIA.

²¹ Joint Media Statements of the 43rd ASEAN Economic Ministers (AEM) Meeting Manado, Indonesia, 10-11 August 2011, para. 20.

AANZFTA: contact points and reasonable time for the advanced publication of relevant regulatory changes.

Seventh, there is an indication that Mode 4 of the services trade will be handled solely by the MNP Agreement. Art. 6.2 states that the MNP commitments supersede AFAS commitments. It is probably natural to understand the MNP Agreement supersedes all the other existing AFAS-related commitments, i.e., up to AFAS 8. However, this provision simply refers to AFAS without specifying the package number. The important implication here is that the AFAS Ninth Package (and other following packages) will not cover Mode 4, because such commitments will have been superseded by the MNP commitments. However, the relationship with the proposed ASEAN Trade in Services Agreement (ATISA) is unknown.²² ATISA is a new agreement meant to replace AFAS, and may merge AFAS and the MNP Agreement into one comprehensive services agreement.

Lastly, the MNP Agreement is to be reviewed for further liberalization (Art. 7.1). Such discussion should take place one year from the Agreement coming into force. This provision probably comes from the successful experience of a package structure approach in AFAS, which led to a progressive liberalization of services.

2.2. Analysis of Commitment Schedule

This sub-section discusses the cross-regional features of the MNP Agreement in terms of country commitments, rather than the legal text. **Tables 1 and 2** provide a summary.²³

2.2.1. Summary of Country-wide Commitments of MNP

First, actual commitments are narrower than the four categories of possible commitments provided in Art. 2.1. Most commitments focus on business visitors

²² Chairman's Statement of the 24th ASEAN Summit: "Moving forward in Unity to a Peaceful and Prosperous Community," 11 May 2014, Nay Pyi Taw, Myanmar, par. 29. The negotiation is expected to be completed by the end of 2015. The substance of negotiation is not publicly communicated.

²³ For the summary of commitments under AANZFTA and AFAS 8, see Appendix A. For the level of MNP commitments in terms of the Hoekman Index by 55 sub-sectors, see Appendix B. For the job categories covered under AFAS 8, AANZ and MNP, see Appendix C.

(category a) and intra-corporate transferees (category b), which are closely linked to foreign direct investment. All countries made commitments for intra-corporate transferees and seven of them committed for business visitors, not including Brunei, Myanmar, and Singapore. Only three countries (Cambodia, the Philippines, and Viet Nam) made commitments in contractual services suppliers (category c). None of them are committed to other categories (category d).

Second, the number of committed sectors varies across countries. Out of 154 services sub-sectors, Brunei and Cambodia made commitments in as many as 153 sub-sectors, while Myanmar committed in only 59 sub-sectors. On average, ASEAN countries made liberalization commitments in 110.9 sub-sectors out of 154 (i.e., 72 percent sectoral coverage). This is much broader than the sectoral coverage in AANZFTA (79.9 sub-sectors on average) and AFAS 8 (80.8 sectors on average).

Third, the substance (depth) of commitments differs by country in addition to the differences in terms of committed sub-sectors. For example, the initial length of stay allowed for business visitors ranges from 30 days (Cambodia and Lao PDR) to 90 days (Malaysia, Thailand, and Viet Nam).²⁴ The initial length of stay for intra-corporate transferee ranges between one month (Lao PDR, albeit renewable) to three years (Brunei and Viet Nam), while Malaysia's commitment is not clear ("do not exceed 10 years", see the note under Table 1).²⁵

²⁴ As explained above, Brunei Darussalam, Myanmar, and Singapore do not commit at all for business visitors. Thus, the length of stay allowed is "0 days" for these AMSs.

²⁵ For the types and frequency of restrictions (for intra-corporate transferees only), see Appendix D.

Table 1. Summary of National Commitments of the ASEAN MNP Agreement

	a. Business visitors			b. Intra-corporate transferees			c. Contractual service suppliers			d. Others		
	Sectoral coverage, %	Committed sectors, number (max. 154)	Initial length of stay	Sectoral coverage, %	Committed sectors, number (max. 154)	Initial length of stay	Sectoral coverage, %	Committed sectors, number (max. 154)	Initial length of stay	Sectoral coverage, %	Committed sectors, number (max. 154)	Initial length of stay
Brunei Darussalam	0.0	0	N/A	99.4	153	3 years	0.0	0	N/A	0	0	N/A
Cambodia	99.4	153	30 days	99.4	153	2 years	99.4	153	2 years	0	0	N/A
Indonesia	61.0	94	60 days	61.0	94	2 years	0.0	0	N/A	0	0	N/A
Lao PDR	68.8	106	30 days	68.8	106	1 month	0.0	0	N/A	0	0	N/A
Malaysia	70.8	109	90 days	70.8	109	Not to exceed 10 years ^a	0.0	0	N/A	0	0	N/A
Myanmar	0.0	0	N/A	38.3	59	1 year	0.0 ^a	0 ^a	N/A ^b	0	0	N/A
Philippines	59.1	91	59 days	59.1	91	1 year	59.1 ^b	91 ^b	1 year ^c	0	0	N/A
Singapore	0.0	0	N/A	98.7	152	2 years	0.0	0	N/A	0	0	N/A

Thailand	55.2	85	90 days	55.2	85	1 year	0.0	0	N/A	0	0	N/A
Viet Nam	70.1	108	90 days	70.1	108	3 years	70.1	108	90 days	0	0	N/A

Notes: “Individual service providers” are considered equivalent to “contractual service suppliers. Also, “experts” are considered equivalent to “specialists”.

^a Malaysia, two years or so, in practice (results of an interview with a Malaysian economist).

^b The following sentence seems related to contractual service suppliers, yet somewhat unclearly so. “Individual services providers who work with the approval of respective authorities shall register themselves with the Department of Labour, the Ministry of Labour.” It has therefore been judged in this study that Myanmar does not explicitly commit to c. contractual service suppliers.

^c Natural persons of each party who engage in supplying services, which require technology or knowledge at an advanced level or which require specialized skills belonging to particular fields of industry, on the basis of a contract with public or private organizations in the Philippines.

Source: Authors’ database (version updated on 11 December 2014) based on the ASEAN MNP Agreement.

2.2.2. Level of MNP Commitments (in terms of the Hoekman Index)

In order to capture the features and degrees to which the ASEAN MNP is a commitment to liberalization, we constructed a database applying the Hoekman Index and analyzed the level of MNP commitments across sectors and countries.²⁶ Hoekman (1995) proposes an indexation method for measuring the GATS-style degree of commitments in the services sector. In this study, we apply the same methodology for the MNP commitments (i.e., Mode 4). First, we assign the value 1 when the sub-sector at issue is “fully liberalized”; 0.5 when “limited” (but bound); 0 when “unbound” (government has not committed to liberalize) by sub-sector, and take the simple average for aggregation; then calculate the average value by services sub-sector and by country. Unlike the original Hoekman Index, we did not differentiate between commitments for market access and those for national treatment for MNP commitments because the ways in which most countries report their commitments simply do not make separate use of these two aspects (e.g., the section for national treatment simply repeats the commitment under market access). Some countries (including Indonesia) do not even have the two aspects in their respective schedules, i.e., market access and national treatment.²⁷ The higher the figure, the more liberal the country’s service trade commitments are to FTA members. By using the database that we construct, the Hoekman Index is derived for each of the 155 sub-sectors, drawing on the specific-commitment tables of the FTA members.²⁸ Then the simple average at the levels of the 55 sub-sectors and finally 11 sub-sectors presented in **Table 2** are calculated in a step-by-step manner.²⁹

The database includes the ASEAN MNP, as well as GATS under the WTO,

²⁶ The efforts to initially construct such a database by Robertus Herdiyanto are cordially acknowledged.

²⁷ As a result of this limitation (some countries do not provide market access and national treatment separately), and in order to make a compatible calculation result, in the calculation here, the values of 0.75 (average of 1.0, no limitation, and 0.5, limitation) and 0.25 (average of 0.5, limitation, and 0 no commitment), both of which cannot happen in the single entry, are both changed to 0.5.

²⁸ The horizontal commitments of FTA members are referred to in the specific commitment tables where mention is made of, e.g., “as specified in the horizontal commitments”. In this sense, this approach takes into account the horizontal commitments through specific commitments. However, horizontal commitments themselves are not directly considered in this indexation exercise. We therefore confine our analysis to the discussion of sector-wise, specific, commitments only. This way of calculating the Hoekman Index for ASEAN+1 FTAs is based on Ishido (2011).

²⁹ The 11-sector average was calculated as the simple-average aggregation of the 154 sub-sectors; for details, see the WTO’s “Services Sectoral Classification List” (MTN.GNS/W/120) which can readily be viewed through online searching.

AANZFTA, and the AFAS 8.³⁰ As for “financial sub-sectors” under AFAS, there is a separate specific commitment table, and its Fifth Package has incorporated to the AFAS 8 scores.

The database construction, however, faces some difficulties: most importantly, the text-based stipulation of services trade liberalization (“commitment” in the horizontal and/or specific tables) suffers from a large degree of ambiguity or nebulosity. Also, while horizontal commitment tables are by definition supposed to relate to all the services sub-sectors, the way they are used in actuality is different: the horizontal commitment tables are somewhat selective, relating to only some sectors in the specific commitment tables. Therefore, conservative interpretations have been applied to the database construction: Horizontal commitment tables are considered only where there are expressions such as “As indicated in the Horizontal Commitment”. In this connection, the expression “Unbound, except as...” is treated as committed partially. Unclear descriptions (e.g., commitments in domestic categorization without classification codes) are left unrecorded in the database.³¹ Thus, the database constructed for this study is rather sensitive to the interpretation of the text (wording) of horizontal and/or specific commitments at issue. With these as limitations and caveats, the results of database-oriented analyses are presented in what follows.

When we look at the aggregate level,³² all the AMSs make commitments in most of the 11 sub-sectors. Out of the 11, “Construction and Related Engineering Services” receives the highest level of commitment at 0.55. On the other hand, “Recreational, Cultural, and Sporting Services” receives the lowest score (0.26) with around half of its sub-sectors committed overall. Lao PDR and Myanmar did not commit at all in this category, while Brunei Darussalam, Cambodia, and Singapore committed in all of the

³⁰ Only the 10 ASEAN members have been considered in the database.

³¹ Some countries do not have the two aspects, i.e., market access (MA) and national treatment (NT). In the calculation, the values of 0.75 (average of 1.0, –no limitation, and 0.5, limitation) and 0.25 (average of 0.5, limitation, and 0, no commitment), both of which cannot happen in the single entry, are both changed to 0.5, to make a compatible calculation result. Also, commitment in “others” in each of the service sub-sector is rather ambiguous; necessary adjustments have been made to make for this aggregate tabulation only.

³² Appendix E has attempted to incorporate the initial period of stay for business visitors, intra-corporate transferees and contractual service suppliers by applying the standard principal component analysis. Since the Hoekman Index–based analysis does not capture the “depth” of commitment, e.g., the length of initial stay, the principal component analysis complements the analytical lacuna (i.e., lack of attention to the “depth” of commitments).

sub-sectors in this category (note, however, that Brunei is committed only in intra-corporate transferees).

Table 2. Level of MNP Commitments in terms of the Hoekman Index

	01. Business	02. Communi- cation	03. Const- ruction	04. Distri- bution	05. Edu- cation	06. Envi- ronment	07. Finance	08. Health	09. Tourism	10. Recre- ation	11. Trans- port	Total
Brunei												
Darussalam	0.50	0.50	0.50	0.50	0.50	0.50	0.47	0.50	0.50	0.50	0.50	0.50
Cambodia	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.38	0.50	0.50	0.49
Indonesia	0.21	0.73	1.00	0.40	0.50	0.00	0.38	0.38	0.25	0.10	0.33	0.39
Lao PDR	0.30	0.38	0.50	0.00	0.50	0.50	0.44	0.13	0.38	0.00	0.39	0.32
Malaysia	0.45	0.33	0.50	0.50	0.50	0.25	0.38	0.38	0.50	0.30	0.19	0.39
Myanmar	0.23	0.40	0.50	0.00	0.50	0.00	0.06	0.00	0.13	0.00	0.11	0.17
Philippines	0.35	0.48	0.50	0.40	0.10	0.38	0.00	0.25	0.38	0.30	0.56	0.33
Singapore	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.47	0.50
Thailand	0.26	0.35	0.50	0.00	0.50	0.50	0.41	0.13	0.25	0.20	0.17	0.30
Viet Nam	0.30	0.40	0.50	0.40	0.40	0.50	0.50	0.50	0.38	0.20	0.29	0.40
Average	0.36	0.46	0.55	0.32	0.45	0.36	0.36	0.33	0.36	0.26	0.35	0.38

Source: Authors' calculation based on commitment schedules of the ASEAN MNP Agreement.

3. Country-specific Analysis of MNP Commitments

This section discusses in detail the MNP commitments of each AMS in comparison with the Mode 4 commitments in GATS (hereafter, “GATS” for this section), MNP commitments in the AANZFTA (hereafter, “AANZFTA” for this section), and Mode 4 commitments in the AFAS 8.

For each country, we present two tables. One shows the results of calculating the Hoekman Index³³ for each of the 10 ASEAN member countries under the GATS,³⁴ AANZFTA, AFAS 8,³⁵ and the ASEAN MNP. The other shows “sectoral coverage”, i.e., the count of how many sub-sectors out of the total number (154) are covered under each agreement.

3.1. Brunei Darussalam

The result for Brunei (Table 3) shows that under ASEAN MNP, the number of sub-sectors with no restriction is nil (0), as was the case in GATS, AANZFTA, and AFAS 8. Brunei made “no limitation” commitments only in intra-corporate transferees in AFAS 8 in four sub-sectors.³⁶ At the aggregate level, therefore, there is no “no limitation” sub-sector under AFAS 8 (i.e., “1” in the Hoekman Index). Almost all the sub-sectors are committed with restrictions (153 sub-sectors), under both AANZFTA and the ASEAN MNP. The number of unbound sub-sectors under AANZFTA and the ASEAN MNP is as low as 1.³⁷

³³ Hoekman (1995) proposes an indexation method for measuring the degree of commitment in the service sector. This method assigns values to each of the eight fields (4 modes times 2 categories, market access (MA) and national treatment (NT)), as follows: N=1, L=0.5, U=0; then calculates simple average values by service sector and by country. Using the database constructed, the Hoekman Index has been calculated for each sub-sector. It should be noted that, by its nature, this index measures the inter-sectoral degree of commitments (“horizontal coverage” so to speak), not the intra-sectoral degree (“vertical coverage” or “depth of coverage”).

³⁴ The year in which the country’s most updated offer was made is indicated in parentheses.

³⁵ While the Protocol to Implement the Eighth Package was signed in October 2010, the country schedules became complete only in August 2012. As a result, there is no information as to when each country submitted her commitment schedules. Thus, we presumed that the AFAS 8 schedules were submitted in 2012 instead of 2010.

³⁶ These four sub-sectors are: “11Aa Passenger transportation”, “11Ab Freight transportation”, “11Ba Passenger transportation”, and “11Bb Freight transportation”. On the other hand, the commitment for the business visitor category is “unbound”. Thus, we counted the sectors as “with restrictions”.

³⁷ Brunei remains unbound with respect to “07Bk. Banking and Other Financial Services (provision and transfer of financial information, financial data processing and related software providers of other financial services)” (CPC 8131).

In terms of the Hoekman Index (**Table 4**), GATS commitment is nil (hence, the score of 0 for all the sectors). AANZFTA and the ASEAN MNP³⁸ have exactly the same Hoekman Index values for all the sub-sectors, indicating the existence of a common template for both of these agreements.³⁹ Under AFAS 8, the index values remain lower than those under AANZFTA and the ASEAN MNP, which implies that the AEC for Mode 4 becomes complete only with the inclusion of the ASEAN MNP. Almost all the sub-sectors are committed deeply under the ASEAN MNP (the Hoekman Index values of 0.50 and near 0.50 are observed across sectors) although Brunei’s commitments cover only intra-corporate transferees and not business visitors or contractual service suppliers.

Table 3. Number of Sub-sectors by Type of Commitments (Brunei Darussalam)

Type of commitments	GATS (1995)	AANZFTA (2009)	AFAS8 (2012)	ASEAN MNP (2012)
Number of sub-sectors with no restriction	0	0	0	0
Number of sub-sectors with restrictions	0	153	28	153
Number of unbound sub-sectors	154	1	126	1
Total	154	154	154	154

Source: Calculated from the database constructed for this study.

³⁸ As for its commitment under the ASEAN MNP, Brunei's commitment style is interpreted as “negative listing” (no positive listing of committed sectors); also, the commitment table focuses exclusively on intra-corporate transferees (with no mention of business visitors, contractual service suppliers, and other categories). A sector-wise observation is that under the ASEAN MNP, Brunei’s commitment table mentions that: “With respect to rental/leasing services relating to aircraft without operators (CPC 83104), only up to 80 percent foreign workers is allowed”, while under AANZFTA, Brunei’s commitment states that: “With respect to rental/leasing services relating to aircraft without operators (CPC 83104), this is subject to local availability test and designation of specified number of Brunei Darussalam trainees and in order to practice a licensed profession in Brunei Darussalam the following conditions must be met: (a) residency and (b) registration”. Otherwise, Brunei’s commitments under the ASEAN MNP and AANZFTA have the same text (wording).

³⁹ The uncommitted sectors are different between the two agreements. For AFAS 8, Brunei did not make commitments for “07Bk. Banking and Other Financial Services (provision and transfer of financial information, financial data processing and related software providers of other financial services)” (CPC 8131), while the only uncommitted sub-sector for the ASEAN MNP (in terms of national treatment) was “01Ad. Architectural Services”.

Table 4. Brunei Darussalam’s Hoekman Index by 11 Sub-sectors

Sector	GATS (1995)	AANZFTA (2009)	AFAS8 (2012)	ASEAN MNP (2012)
01. Business services	0.00	0.49	0.04	0.49
02. Communication services	0.00	0.50	0.00	0.50
03. Construction and related engineering services	0.00	0.50	0.00	0.50
04. Distribution services	0.00	0.50	0.00	0.50
05. Educational services	0.00	0.50	0.00	0.50
06. Environmental services	0.00	0.50	0.00	0.50
07. Financial services	0.00	0.47	0.15	0.47
08. Health-related and social services	0.00	0.50	0.06	0.50
09. Tourism and travel-related services	0.00	0.50	0.00	0.50
10. Recreational, cultural, and sporting services	0.00	0.50	0.00	0.50
11. Transport services	0.00	0.50	0.19	0.50
Simple average of 1-11	0.00	0.50	0.04	0.50

Notes: Aggregation from the 154 sub-sectors directly to 11 sub-sectors has been made. Where there is ambiguity of commitments (especially “other sectors” usually at the end of the sub-sector at issue), reconciliation is made among the agreements).

Source: Calculated from the database constructed for this study.

3.2. Cambodia

The sectoral coverage for Cambodia (Table 5) shows that the number of sub-sectors with no restriction is nil. Almost all the sub-sectors are committed with restrictions under both AANZFTA and the ASEAN MNP. The number of unbound sub-sectors under both AANZFTA and the ASEAN MNP is as low as 1.

Cambodia has expanded its commitments to new categories. While having only intra-corporate transferees in its AFAS 8 commitments, Cambodia’s commitments in the ASEAN MNP also cover business visitors and contractual services suppliers. Contractual services suppliers also add value to AANZFTA.

In terms of the Hoekman Index (Table 6), the index values are zero for all the sectors under the GATS. AANZFTA and the ASEAN MNP⁴⁰ have the same

⁴⁰ Under ASEAN MNP, there is no restriction on “Tour Guides” (CPC 7472), while under AANZFTA, Cambodian nationality is required for tourist guides.

commitment values, indicating, just as in the case of Brunei, that a common template is used for the two agreements in terms of the business visitors and intra-corporate transferees. The index values under AFAS 8 are mostly lower than those under AANZFTA and the ASEAN MNP. By sub-sector, “09. Tourism and Travel-related Services” has, overall, a low score. Even under the ASEAN MNP, International Transport under Maritime Services (Freight and Passengers) excludes Cabotage (supply of domestic transport services by foreign suppliers).

Table 5. Number of Sub-sectors by Type of Commitments (Cambodia)

Type of commitments	GATS (2004)	AANZFTA (2009)	AFAS8 (2012)	ASEAN MNP (2012)
Number of sub-sectors with no restriction	0	0	0	0
Number of sub-sectors with restrictions	0	153	102	153
Number of unbound sub-sectors	154	1	52	1
Total	154	154	154	154

Source: Calculated from the database constructed for this study.

Table 6. Cambodia's Hoekman Index by 11 Sub-sectors

Sector	GATS (2004)	AANZFTA (2009)	AFAS8 (2012)	ASEAN MNP (2012)
01. Business services	0.00	0.50	0.26	0.50
02. Communication services	0.00	0.50	0.33	0.50
03. Construction and related engineering services	0.00	0.50	0.50	0.50
04. Distribution services	0.00	0.50	0.50	0.50
05. Educational services	0.00	0.50	0.30	0.50
06. Environmental services	0.00	0.50	0.50	0.50
07. Financial services	0.00	0.47	0.47	0.47
08. Health-related and social services	0.00	0.50	0.13	0.50
09. Tourism and travel-related services	0.00	0.38	0.38	0.38
10. Recreational, cultural,-and sporting services	0.00	0.50	0.20	0.50
11. Transport services	0.00	0.50	0.33	0.50
Simple average of 1-11	0.00	0.49	0.35	0.49

Notes: Aggregation from the 154 sub-sectors directly to 11 sub-sectors has been made. Where there is ambiguity of commitments (especially “other sectors” usually at the end of the sub-sector at issue), reconciliation is made among the agreements).

Source: Calculated from the database constructed for this study.

3.3. Indonesia

Counting the coverage in Indonesia reveals that under the ASEAN MNP, the number of sub-sectors with no restriction in terms of intra-corporate transferees and business visitors is 20, while there is no commitment in terms of contractual service suppliers and others. Hence, the number of sub-sectors with no restriction is 0 in Table 7. The number of sub-sectors with restrictions is 94, while that of unbound sub-sectors is 60, the lowest figure (i.e., most liberal commitments) among the four agreements analyzed in this paper.

Indonesia's commitments cover both business visitors and intra-corporate transferees. The business visitor category was not covered in AFAS 8 but was already committed to in AANZFTA.

In terms of the Hoekman Index (Table 8), the index values under the GATS are mostly lower than those under AANZFTA and the ASEAN MNP (with the exception of “02 Communication Services”). There is a rather clear progression of commitment seen: the simple average Hoekman Index values are: 0.09 (under the GATS), 0.16 (AANZFTA), 0.27 (AFAS 8) and 0.40 (ASEAN MNP). The commitment under sub-sector “10. Recreational, Cultural, and Sporting Services” is low overall. Under the ASEAN MNP, the restriction of “employing indigenous understudies” is observed in some sectors (as in the case of the Philippines).

Table 7. Number of Sub-sectors by Type of Commitments (Indonesia)

Type of commitments	GATS (1995)	AANZFTA (2009)	AFAS8 (2012)	ASEAN MNP (2012)
Number of sub-sectors with no restriction	0	0	0	0
Number of sub-sectors with restrictions	37	48	86	94
Number of unbound sub-sectors	117	106	68	60
Total	154	154	154	154

Source: Calculated from the database constructed for this study.

Table 8. Indonesia’s Hoekman Index by 11 Sub-sectors

Sector	GATS (1995)	AANZFTA (2009)	AFAS8 (2012)	ASEAN MNP (2012)
01. Business services	0.07	0.14	0.26	0.25
02. Communication services	0.31	0.31	0.31	0.44
03. Construction and related engineering services	0.40	0.50	0.50	0.50
04. Distribution services	0.00	0.00	0.10	0.20
05. Educational services	0.00	0.25	0.40	0.40
06. Environmental services	0.00	0.00	0.25	0.25
07. Financial services	0.09	0.21	0.21	0.21
08. Health-related and social services	0.00	0.00	0.00	0.38
09. Tourism and travel-related services	0.06	0.25	0.25	0.25
10. Recreational, cultural, and sporting services	0.00	0.00	0.15	0.20
11. Transport services	0.03	0.07	0.29	0.33
Simple average of 1-11	0.09	0.16	0.27	0.31

Notes: Aggregation from the 154 sub-sectors directly to 11 sub-sectors has been made. Where there is ambiguity of commitments (especially “other sectors” usually at the end of the sub-sector at issue), reconciliation is made among the agreements).

Source: Calculated from the database constructed for this study.

3.4. Lao PDR

The sectoral coverage for Lao PDR (**Table 9**) shows that under the ASEAN MNP the number of sub-sectors with restrictions is the highest (106), and that of unbound sub-sectors is the lowest (48) among the four agreements (i.e., most liberal), while there is no sub-sector with no restriction.

Lao PDR provides commitments on two categories: business visitors and intra-corporate transferees. For business visitors, Lao PDR has significantly expanded sectoral coverage in the ASEAN MNP. However, it shortened the initial period of stay from 60 days (AANZFTA) to 30 days (ASEAN MNP). The Hoekman Index is shown in Table 10. The commitment under the ASEAN MNP is the deepest overall, and the simple average Hoekman Index stands at 0.31. Progressive liberalization can be

observed from AANZFTA (Hoekman Index value of 0.13), through AFAS 8 (0.24) to the ASEAN MNP (0.31). By sub-sector, commitments under “04. Distribution Services”, and “10. Recreational, Cultural, and Sporting Services” are nil.

Table 9. Number of Sub-sectors by Type of Commitments (Lao PDR)

Type of commitments	GATS (2013)	AANZFTA (2009)	AFAS8 (2012)	ASEAN MNP (2012)
Number of sub-sectors with no restriction	0	0	0	0
Number of sub-sectors with restrictions	0	29	77	106
Number of unbound sub-sectors	154	125	77	48
Total	154	154	154	154

Source: Calculated from the database constructed for this study.

Table 10. Lao PDR’s Hoekman Index by 11 Sub-sectors

Sector	GATS (2013)	AANZFTA (2009)	AFAS8 (2012)	ASEAN MNP (2012)
01. Business services	0.00	0.07	0.26	0.30
02. Communication services	0.00	0.15	0.31	0.38
03. Construction and related engineering services	0.00	0.20	0.50	0.50
04. Distribution services	0.00	0.00	0.10	0.00
05. Educational services	0.00	0.40	0.50	0.50
06. Environmental services	0.00	0.38	0.38	0.38
07. Financial services	0.00	0.15	0.44	0.44
08. Health-related and social services	0.00	0.00	0.00	0.13
09. Tourism and travel-related services	0.00	0.13	0.00	0.38
10. Recreational, cultural, and sporting services	0.00	0.00	0.00	0.00
11. Transport services	0.00	0.00	0.11	0.39
Simple average of 1-11	0.00	0.13	0.24	0.31

Notes: Aggregation from the 154 sub-sectors directly to 11 sub-sectors has been made. Where there is ambiguity of commitments (especially “other sectors” usually at the end of the sub-sector at issue), reconciliation is made among the agreements).

Source: Calculated from the database constructed for this study.

3.5. Malaysia

The sectoral coverage for Malaysia (Table 11) shows that under the ASEAN MNP, the number of sub-sectors with no restriction is 1, and that of sub-sectors with restrictions is 108, the highest, while that of unbound sub-sectors is 45, the lowest figure among the four agreements.

In terms of commitment categories, Malaysia covers both business visitors and intra-corporate transferees, similarly to its commitments in AANZFTA and AFAS 8.

Malaysia's Hoekman Index values (Table 12) show progressive deepening of liberalization commitment, from GATS (0.00) through AANZFTA (0.17) and AFAS 8 (0.36) and finally to the ASEAN MNP (0.38). "11. Transport Services" stands out with low score of commitments at 0.19.

Table 11. Number of Sub-sectors by Type of Commitments (Malaysia)

Type of commitments	GATS (2006)	AANZFTA (2009)	AFAS8 (2012)	ASEAN MNP (2012)
Number of sub-sectors with no restriction	0	0	1	0
Number of sub-sectors with restrictions	1	39	96	109
Number of unbound sub-sectors	153	115	57	45
Total	154	154	154	154

Source: Calculated from the database constructed for this study.

Table 12. Malaysia's Hoekman Index by 11 Sub-sectors

Sector	GATS (2006)	AANZFTA (2009)	AFAS8 (2012)	ASEAN MNP (2012)
01. Business services	0.01	0.10	0.39	0.45
02. Communication services	0.00	0.02	0.25	0.31
03. Construction and related engineering services	0.00	0.50	0.50	0.50
04. Distribution services	0.00	0.00	0.30	0.40
05. Educational services	0.00	0.30	0.50	0.50
06. Environmental services	0.00	0.00	0.25	0.25
07. Financial services	0.00	0.38	0.38	0.38
08. Health-related and social services	0.00	0.13	0.38	0.38
09. Tourism and travel-related services	0.00	0.25	0.50	0.50
10. Recreational, cultural, and sporting services	0.00	0.20	0.30	0.30
11. Transport services	0.00	0.04	0.16	0.19
Simple average of 1-11	0.00	0.17	0.36	0.38

Notes: Aggregation from the 154 sub-sectors directly to 11 sub-sectors has been made. Where there is ambiguity of commitments (especially “other sectors” usually at the end of the sub-sector at issue), reconciliation is made among the agreements).

Source: Calculated from the database constructed for this study.

3.6. Myanmar

The sectoral coverage for Myanmar (Table 13) shows that under the ASEAN MNP, the number of sub-sectors with no restrictions is 2, while that of sub-sectors with restriction is 57 and that of unbound sub-sectors is 95, almost the same as the case of AFAS 8.

Myanmar's commitments in the ASEAN MNP cover the two categories of business visitors and intra-corporate transferees, just as its commitments in AANZFTA and AFAS 8. However, the wording of specific commitments of contractual services is not entirely clear with regard to sectoral coverage.

In terms of the Hoekman Index (Table 14), the commitment under the GATS is meagre (the simple average of all the sub-sectors is 0.01). The scores have improved over time with 0.06 (AANZFTA), 0.17 (AFAS 8), and 0.17 (ASEAN MNP). When we look at the details, the “AFAS minus” is observed in “07 Financial Services” under the ASEAN MNP, i.e., commitments in AFAS 8 were higher than those in the ASEAN MNP. This is because of the commitment of “Average and loss adjustment services” under AFAS (financial package) and non-commitment of the sub-sector under ASEAN

MNP. By sub-sector, “04. Distribution Services”, “06. Environmental Services”, “08. Health-related and Social Services”, and “10. Recreational, Cultural, and Sporting Services” are nil or negligible.

Table 13. Number of Sub-sectors by Type of Commitments (Myanmar)

Type of commitments	GATS (1995)	AANZFTA (2009)	AFAS8 (2012)	ASEAN MNP (2012)
Number of sub-sectors with no restriction	1	0	2	2
Number of sub-sectors with restrictions	0	27	58	58
Number of unbound sub-sectors	153	127	94	94
Total	154	154	154	154

Source: Calculated from the database constructed for this study.

Table 14. Myanmar’s Hoekman Index by 11 Sub-sectors

Sector	GATS (1995)	AANZFTA (2009)	AFAS8 (2012)	ASEAN MNP (2012)
01. Business services	0.00	0.10	0.22	0.22
02. Communication services	0.00	0.02	0.40	0.40
03. Construction and related engineering services	0.00	0.50	0.50	0.50
04. Distribution services	0.00	0.00	0.00	0.00
05. Educational services	0.00	0.00	0.35	0.50
06. Environmental services	0.00	0.00	0.00	0.00
07. Financial services	0.00	0.00	0.10	0.06
08. Health-related and social services	0.00	0.00	0.00	0.00
09. Tourism and travel-related services	0.13	0.13	0.13	0.13
10. Recreational, cultural, and sporting services	0.00	0.00	0.10	0.00
11. Transport services	0.00	0.07	0.11	0.11
Simple average of 1-11	0.01	0.07	0.17	0.19

Notes: Aggregation from the 154 sub-sectors directly to 11 sub-sectors has been made. Where there is ambiguity of commitments (especially “other sectors” usually at the end of the sub-sector at issue), reconciliation is made among the agreements).

Source: Calculated from the database constructed for this study.

3.7. Philippines

The sectoral coverage for the Philippines (Table 15) shows that under the ASEAN MNP, the number of sub-sectors with no restriction is 2, which is smaller than AFAS 8 (its financial package incorporated into the AFAS 8 scoring). While the Philippines made Mode 4 commitments in the Fifth Financial Package of AFAS, there are no corresponding commitments in the MNP Agreement.⁴¹ The number of sub-sectors with restrictions is 89, while that of unbound sub-sectors is 63 (although there are ambiguities in the text).

The Philippines' commitments in the ASEAN MNP cover three categories: business visitors, intra-corporate transferees, and contractual services suppliers. These three are covered in AANZFTA and AFAS 8 as well.

In terms of the Hoekman Index (Table 16), the commitment under the GATS is low at 0.11. AANZFTA's commitment level stands at 0.13 while under both AFAS 8 and the ASEAN MNP, the Hoekman Index value is 0.29. As there is no clear-cut indication of commitment in financial services under the ASEAN MNP, the value for the sub-sector is 0.00. Such "AFAS minus" phenomenon is also observed in "09. Tourism and Travel-related Services." Its sub-sector "Professional Congress Organizer" does not have any restriction ("None") under the market access aspect of AFAS 8, while under ASEAN MNP, horizontal commitments stipulating, for example the length of stay, apply.⁴²

AFAS plus is observed in "11 Transport Services" under the ASEAN MNP. By sub-sector, commitments under "05. Educational Services", "07. Financial Services", and "08. Health-related and Social Services" are rather low. In the case of the Philippines, "reciprocity of commitment"⁴³ is a major feature of regulations, especially under the ASEAN MNP. Also, the restriction of having to employ indigenous understudies (an obligation to employ one or two understudy[ies] for every foreigner)

⁴¹ As the MNP Agreement supersedes AFAS commitments (Art. 6.2), the financial package commitments in Mode 4 will be practically revoked with the effectuation of the MNP Agreement.

⁴² When market access and national treatment are combined, both are seen to have the Hoekman Index value of 0.5, hence, the same overall (simple average) score of 0.25 (this is because other sub-sectors, including "09. C Tourist Guide Services", have no commitment [i.e., the score of the Hoekman Index is 0]).

⁴³ For instance, the following provision applies to the personnel in the field of "geology" (as part of 01. Business Services): "Foreign applicants shall satisfy exam requirements for Filipinos, provided the foreign country accords the same reciprocity with the Philippines".

is observed in some sub-sectors (as in the case of Indonesia).

Table 15. Number of Sub-sectors by Type of Commitments (Philippines)

Type of commitments	GATS (1995)	AANZFTA (2009)	AFAS8 (2012)	ASEAN MNP (2012)
Number of sub-sectors with no restriction	12	0	12	2
Number of sub-sectors with restrictions	14	44	84	89
Number of unbound sub-sectors	128	110	58	63
Total	154	154	154	154

Source: Calculated from the database constructed for this study.

Table 16. The Philippines' Hoekman Index by 11 Sub-sectors

Sector	GATS (1995)	AANZFTA (2009)	AFAS8 (2012)	ASEAN MNP (2012)
01. Business services	0.02	0.04	0.24	0.34
02. Communication services	0.04	0.23	0.40	0.40
03. Construction and related engineering services	0.00	0.10	0.50	0.50
04. Distribution services	0.00	0.00	0.25	0.40
05. Educational services	0.00	0.10	0.00	0.10
06. Environmental services	0.00	0.13	0.25	0.38
07. Financial services	0.57	0.38	0.24	0.00
08. Health-related and social services	0.00	0.00	0.25	0.25
09. Tourism and travel-related services	0.25	0.25	0.25	0.25
10. Recreational, cultural, and sporting services	0.00	0.00	0.15	0.30
11. Transport services	0.19	0.19	0.33	0.33
Simple average of 1-11	0.11	0.13	0.29	0.29

Notes: Aggregation from the 154 sub-sectors directly to 11 sub-sectors has been made. Where there is ambiguity of commitments (especially "other sectors" usually at the end of the sub-sector at issue), reconciliation is made among the agreements).

Source: Calculated from the database constructed for this study.

3.8. Singapore

The coverage for Singapore (Table 17) shows that under the ASEAN MNP, the number of sub-sectors with no restriction is nil, while that of sub-sectors with restrictions is 152 (just the same number as under AANZFTA) and that of unbound sub-sectors is 2 (the same number as under AANZFTA).⁴⁴

In terms of the Hoekman Index (Table 18), the commitment under the GATS is nil (0.00), while under AANZFTA and the ASEAN MNP, the simple average Hoekman Index value is as high as 0.50. Under AFAS 8, the simple average index value is 0.23. Almost all the sub-sectors are deeply committed, since Singapore's non-commitment is through negative listing, i.e., meaning only mentioning excluded (unbound) sub-sectors. In the case of Singapore, there is no mention of business visitors, contractual service suppliers and other categories. The ASEAN MNP and AANZFTA for Singapore have exactly the same text (wording).⁴⁵

Table 17. Number of Sub-sectors by Type of Commitments (Singapore)

Type of commitments	GATS (2005)	AANZFTA (2009)	AFAS8 (2012)	ASEAN MNP (2012)
Number of sub-sectors with no restriction	0	0	0	0
Number of sub-sectors with restrictions	1	152	103	152
Number of unbound sub-sectors	153	2	51	2
Total	154	154	154	154

Source: Calculated from the database constructed for this study.

⁴⁴ Singapore remains unbound with respect to national treatment (for all sub-sectors) and Market Access for ships' crews (two sub-sectors, i.e., "Rental of vessels with crew" under 11A. Maritime Transport Services, and 11B. Internal Waterways Transport).

⁴⁵ Under both ASEAN MNP and AANZFTA, the commitment style of one of negative listing, and the only sub-sector not committed is "ships' crews" (i.e., the text says: "Notwithstanding the commitments set out above, Singapore remains unbound with respect to national treatment and ships' crews).

Table 18. Singapore’s Hoekman Index by 11 Sub-sectors

Sector	GATS (2005)	AANZFTA (2009)	AFAS8 (2012)	ASEAN MNP (2012)
01. Business services	0.01	0.50	0.18	0.50
02. Communication services	0.00	0.50	0.24	0.50
03. Construction and related engineering services	0.00	0.50	0.25	0.50
04. Distribution services	0.00	0.50	0.25	0.50
05. Educational services	0.00	0.50	0.05	0.50
06. Environmental services	0.00	0.50	0.13	0.50
07. Financial services	0.00	0.50	0.50	0.50
08. Health-related and social services	0.00	0.50	0.38	0.50
09. Tourism and travel-related services	0.00	0.50	0.31	0.50
10. Recreational, cultural, and sporting services	0.00	0.50	0.10	0.50
11. Transport services	0.00	0.47	0.09	0.47
Simple average of 1-11	0.00	0.50	0.23	0.50

Notes: Aggregation from the 154 sub-sectors directly to 11 sub-sectors has been made. Where there is ambiguity of commitments (especially “other sectors” usually at the end of the sub-sector at issue), reconciliation is made among the agreements).

Source: Calculated from the database constructed for this study.

3.9. Thailand

The sectoral coverage for the Thailand (Table 19) shows that under the ASEAN MNP, the number of sub-sectors with no restriction is nil, while that of sub-sectors with restrictions is 85 (the largest among the four agreements) and that of unbound sub-sectors is 69 (the smallest among the four agreements).

Thailand commits to the business visitor and intra-corporate transferee categories, just like its earlier commitments in AANZFTA and AFAS 8.

In terms of the Hoekman Index (Table 20), while the overall scores improved in the ASEAN MNP (0.26) compared with AANZFTA (0.20) and AFAS 8 (0.19), substantial improvement is observed: 01. Business Services, 02. Communication Services, 03. Construction and Related Engineering Services, and 05. Educational Services. The commitment in “04. Distribution Services” is nil (i.e., the index value is 0.00) under all of the four agreements.

Table 19. Number of Sub-sectors by Type of Commitments (Thailand)

Type of commitments	GATS (2005)	AANZFTA (2009)	AFAS8 (2012)	ASEAN MNP (2012)
Number of sub-sectors with no restriction	0	0	0	0
Number of sub-sectors with restrictions	43	60	63	85
Number of unbound sub-sectors	111	94	91	69
Total	154	154	154	154

Source: Calculated from the database constructed for this study.

Table 20. Thailand's Hoekman Index by 11 Sub-sectors

Sector	GATS (2005)	AANZFTA (2009)	AFAS8 (2012)	ASEAN MNP (2012)
01. Business services	0.16	0.16	0.18	0.27
02. Communication services	0.16	0.19	0.19	0.35
03. Construction and related engineering services	0.30	0.30	0.30	0.50
04. Distribution services	0.00	0.00	0.00	0.00
05. Educational services	0.00	0.50	0.10	0.50
06. Environmental services	0.25	0.25	0.25	0.25
07. Financial services	0.22	0.29	0.38	0.38
08. Health-related and social services	0.00	0.00	0.13	0.13
09. Tourism and travel-related services	0.25	0.25	0.25	0.25
10. Recreational, cultural, and sporting services	0.15	0.15	0.20	0.20
11. Transport services	0.13	0.14	0.14	0.17
Simple average of 1-11	0.15	0.20	0.19	0.26

Notes: Aggregation from the 154 sub-sectors directly to 11 sub-sectors has been made. Where there is ambiguity of commitments (especially "other sectors" usually at the end of the sub-sector at issue), reconciliation is made among the agreements).

Source: Calculated from the database constructed for this study.

3.10. Viet Nam

The sectoral coverage for the Viet Nam (Table 21) shows that under the ASEAN MNP, the number of sub-sectors with no restriction is nil, while that of sub-sectors with restrictions is 108 (the highest among the four agreements) and that of unbound sub-sectors is 46 (the smallest among the four agreements).

Viet Nam's commitments cover not only business visitors and intra-corporate transferees but also contractual services, which is new compared with AANZFTA and AFAS 8.

In terms of the Hoekman Index (Table 22), the commitment under the GATS is nil (0.00). The commitments under AANZFTA, AFAS 8, and the ASEAN MNP are

mostly similar. By sub-sector, the commitment under “10. Recreational, Cultural, and Sporting Services” remains low (the index values under the GATS, AANZFTA, AFAS 8, and the ASEAN MNP are 0.00, 0.20, 0.20, and 0.20, respectively).

Table 21. Number of Sub-sectors by Type of Commitments (Viet Nam)

Type of commitments	GATS (2007)	AANZFTA (2009)	AFAS8 (2012)	ASEAN MNP (2012)
Number of sub-sectors with no restriction	0	0	0	0
Number of sub-sectors with restrictions	0	95	101	108
Number of unbound sub-sectors	154	59	53	46
Total	154	154	154	154

Source: Calculated from the database constructed for this study.

Table 22. Viet Nam’s Hoekman Index by 11 Sub-sectors

Sector	GATS (2007)	AANZFTA (2009)	AFAS8 (2012)	ASEAN MNP (2012)
01. Business services	0.00	0.27	0.27	0.30
02. Communication services	0.00	0.40	0.40	0.40
03. Construction and related engineering services	0.00	0.50	0.50	0.50
04. Distribution services	0.00	0.40	0.40	0.40
05. Educational services	0.00	0.40	0.40	0.40
06. Environmental services	0.00	0.38	0.50	0.50
07. Financial services	0.00	0.47	0.47	0.47
08. Health-related and social services	0.00	0.13	0.38	0.38
09. Tourism and travel-related services	0.00	0.25	0.38	0.38
10. Recreational, cultural, and sporting services	0.00	0.20	0.20	0.20
11. Transport services	0.00	0.19	0.23	0.29
Simple average of 1-11	0.00	0.31	0.38	0.38

Notes: Aggregation from the 154 sub-sectors directly to 11 sub-sectors has been made. Where there is ambiguity of commitments (especially “other sectors” usually at the end of the sub-sector at issue), reconciliation is made among the agreements).

Source: Calculated from the database constructed for this study.

4. Conclusion and Policy Recommendations

The MNP Agreement is an independent Mode 4 services agreement. Actual commitments cover business visitors (seven AMSs), intra-corporate transferees (all

the AMSs), and contractual services suppliers (three AMSs). In general, the commitments add value to the predated agreements (i.e., AFAS 8 and AANZ) for many AMSs in terms of wider sectoral coverage and/or new categories of commitment. However, there has been no progress in terms of the initial length of stay.

From an economic development perspective, inclusion and the opening up of unskilled labour markets through free trade agreements would be a useful policy option, given the relative abundance of unskilled labour in developing countries including ASEAN countries. Scholars including Stiglitz and Charlton (2005) and Broude (2007) point out that the GATS Mode 4 (together with its derivative free trade agreements) does not encourage global distributive justice in that it does not cover market opening for unskilled labour. This, arguably, also seems to be a major limitation of the current ASEAN MNP.

Based on the analyses above, four policy recommendations are made below.

(1) Synchronize commitments of Modes 3 and 4

One of the major users of Mode 4 services commitments are foreign direct investment firms (i.e., Mode 3 commercial presence), especially in terms of business visitors and intra-corporate transferees, which dominate a major portion of the MNP commitments. Once a subsidiary is established, the parent company tends to send its employees as managers and executives of the foreign subsidiary. Also, the parent company sends its technical staff on a temporary basis to train the local employees in the host country. These activities encourage technology and management skills transfers across borders. This is why Mode 3 and 4 commitments should go hand-in-hand with each other. While the MNP Agreement marks good progress with broader commitments in most countries' commitments, it is also a product of divorce from the Mode 3 liberalization. The separation may lead us to inconsistent outcomes between the two agreements (MNP and AFAS). So far, the MNP commitments (i.e., Mode 4) and Mode 3 commitments in the AFAS 8th Package are positively correlated with each other, but the absolute value is not very high. Thus, there is a risk that Mode 4 commitments could actually function as barriers to commercial presence, just like non-tariff measures that practically nullify the potential benefits of tariff liberalization. ASEAN members should consider a systematic mechanism to ensure consistency

between the MNP commitments and Mode 3 commitments.⁴⁶

(2) Set certain minimum standards for commitments

The ASEAN MNP Agreement is a critical initial step in ASEAN's facilitation of the movement of people. As for now, however, national commitments largely vary across the member states, in terms of both width (sectoral coverage and types of commitment) and depth (initial period of stay). Thus, one possible way forward would be to set certain *minimum* standards for such commitments. Actually, the AEC Blueprint aspired to set parameters of liberalization for Mode 4 commitments "by 2009". The idea was to have a Mode 4 version of formula approach for services liberalization. While the movement of natural persons is a politically sensitive policy area, there may be room for standardization. One idea, for example, is to set a minimum initial period of stay for business visitors (e.g., 60 days), which currently varies from "0 days" (no commitments), 30 days, 60 days to 90 days. In the experience of the APEC Business Travel Card (ABTC), APEC members including seven AMSs successfully provide 59 days to 90 days stay to cardholders. Thus, the minimum standard approach seems feasible at least for the initial length of stay for business visitors. This is a prerequisite for the success of the ABTC initiative (see later section of this paper for details). Such an approach could be extended further to the initial length of stay in other areas of commitment especially intra-corporate transferees, and even sectoral coverage as was adopted in the Mode 3 services liberalization in AFAS.

(3) Extend the benefits to manufacturing sectors

Currently, the ASEAN MNP Agreement covers only the services sector. This means that a large missing element of the Agreement is the manufacturing sector. Given that the AEC Blueprint's first pillar is titled "Single Market and Production Base", manufacturing sits at the core of AEC. However, the current ASEAN MNP Agreement does not extend its benefits to the manufacturing sector. While "investors"

⁴⁶ One possibility is to remarry the two agreements at the adoption of ATISA. However, if ATISA remains a pure services agreement without merging the non-services investment, it will reduce the potential opportunity to extend the MNP benefits to manufacturing sectors. Thus, a preferable way is to set some disciplines for Mode 4 commitments. For example, "a member shall make commitments for business visitors and intra-corporate transferees when making commitments in Mode 3."

are technically covered by the ACIA (Art. 22), there are many other kinds of movement of people in the manufacturing sector. For example, sales persons of manufacturing companies travel within the region. When expanding production networks from one country to another, e.g., Thailand to Lao PDR, managers and experienced skilled workers need to move to the new country for the initial years to set up and fully operationalize the manufacturing process. Thus, one valuable policy option is to extend the benefits of the ASEAN MNP Agreement (especially business visitors and intra-corporate transferees) to the manufacturing sector. It will further strengthen ASEAN's competitiveness in manufacturing and the geographical expansion of the production bases in the region.

(4) Introduce an ASEAN Business Travel Card

The ASEAN Business Travel Card (ABTC) is an instrument to facilitate business travel for ASEAN citizens and is under consideration.⁴⁷ Modelled after an APEC Business Travel Card, it is expected to give cardholders a visa-free visit to other member countries for commercial purposes.⁴⁸ In the APEC context, the period of stay is two to three months. Cardholders also enjoy the expeditious special lanes at immigration. These two benefits are already achieved, to some extent, within the current scheme. For the former (visa exemption), while the 2006 ASEAN Framework Agreement on Visa Exemption has not taken effect, most ASEAN countries, except Myanmar, give visa exemption to citizens of other AMSs of 14 days, 21 days, or 30 days, except for Myanmar. The ABTC could extend the period of stay to two to three months. Also, the ASEAN MNP Agreement provides some assurance for business visitors for certain services sub-sectors. However, it does not cover non-services sectors, especially the manufacturing sector. The APEC Business Travel Card covers a bona fide business person who is engaged in the trade of goods, the provision of

⁴⁷ Chairman's Statement of the 2nd ASEAN Summit, "Our People, Our Future Together", Bandar Seri Begawan, 24-25 April 2013, para. 23. Available at: <http://www.asean.org/news/asean-statement-communicues/item/chairmans-statement-of-the-22nd-asean-summit-our-people-our-future-together>

⁴⁸ As Cambodia, Lao PDR, and Myanmar are not members to the APEC, they are not eligible for the APEC Business Travel Card. In this, the ASEAN version of ABTC will have large potential benefits to the CLM countries. On the other hand, a Singaporean businessman, for example, may prefer using APEC Business Travel Card if he/she has a business visits to non-ASEAN countries such as the China and Japan.

services, or the conduct of investment activities. In practice, this covers manufacturing industry business executives as well. For the latter (expeditious lane at the immigration), most ASEAN countries have voluntarily set up ASEAN lanes for ASEAN citizens but some of these are not fully operational. Of course, expeditious treatment should not be narrowed down only to the ABTC holders. Yet, the ABTC establishment process may help the ASEAN lane operationalization by starting small.

ABTC has significant potential benefits. First, it will enhance intra-regional economic activities. This benefit depends on how ASEAN defines ABTC eligibility.⁴⁹ ABTC could also have a symbolic effect, as immigration is one of the rare highly-visible facilitation measures.

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⁴⁹ Interpretation of "bona fide business person" is a point of intensive discussion at the APEC Business Mobility Group as there is no detailed definition.

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Appendix A. Summary of Commitments under AANZFTA and AFAS 8

Table A1. Summary of Commitments under AANZFTA

	a. Business visitors			b. Intra-corporate transferees			c. Contractual service providers			d. Others		
	% of sectoral coverage	# of committed sectors (max. 154)	Initial length of stay	% of sectoral coverage	# of committed sectors (max. 154)	Initial length of stay	% of sectoral coverage	# of committed sectors (max. 154)	Initial length of stay	% of sectoral coverage	# of committed sectors (max. 154)	Initial length of stay
Brunei Darussalam	0.0	0	N/A	99.4	153	3 years	0.0	0	N/A	0.0	0	N/A
Cambodia ^c	31.2	48	30 days	99.4	153	2 years	0.0	0	N/A	0.0	0	N/A
Indonesia	0.0	0	60 days	31.2	48	2 years	0.0	0	N/A	0.0	0	N/A
Lao PDR	0.0	0	60 days	18.8	29	6 months	0.0	0	N/A	0.0	0	N/A
Malaysia	25.3	39	90 days	25.3	39	Not to	0.0	0	N/A	0.0	0	N/A
Myanmar	0.0	0	N/A	13.6	21	1 year	0.0 ^a	0 ^a	N/A ^a	0.0	0	N/A
Philippines	0.0	0	59 days	29.9	46	1 year	0.0	0	1 year ^b	0.0	0	N/A
Singapore	0.0	0	N/A	98.7	152	2 years	0.0	0	N/A	0.0	0	N/A
Thailand	0.0	0	90 days	39.0	60	1 year	0.0	0	N/A	0.0	0	N/A
Viet Nam	61.0	94	90 days	63.6	98	3 years	0.0	0	N/A	0.0	0	N/A

Notes: ^a The following sentence seems to be related to contractual service suppliers, yet somewhat unclearly so. “Individual services providers who work with the approval of respective authorities shall register themselves with the Department of Labour, the Ministry of Labour.” It has therefore been judged in this study that Myanmar does not explicitly commit to c. contractual service suppliers.

^b Natural Persons of each Party who Engage in Supplying Services, which Require Technology or Knowledge at an Advanced Level or which Require Specialised Skills belonging to Particular Fields of Industry, on the Basis of a Contract with Public or Private Organizations in the Philippines.

^c Cambodia’s MNP Agreement lacks this but its AANZFTA and AFAS 8 both include “07Bf” (Trading for own account or for account of customers, whether on an exchange, in an over-the-counter market or otherwise, the following:

- money market instruments (cheques, bills, certificate of deposits, etc.)
- foreign exchange
- derivative products incl., but not limited to, futures and options
- exchange rate and interest rate instruments, including products such as swaps, forward rate agreements, etc.
- transferable securities
- other negotiable instruments and financial assets, including bullion

Source: Authors’ database (version updated on 11 December 2014) based on the AANZFTA.

Table A2. Summary of Commitments under AFAS 8

	a. Business visitors			b. Intra-corporate transferees			c. Contractual service providers			d. Others		
	% of sectoral coverage	# of committed sectors (max. 154)	Initial length of stay	% of sectoral coverage	# of committed sectors (max. 154)	Initial length of stay	% of sectoral coverage	# of committed sectors (max. 154)	Initial length of stay	% of sectoral coverage	# of committed sectors (max. 154)	Initial length of stay
Brunei Darussalam	0.0	0	N/A	18.2	28	3 years	0.0	0	N/A	0.0	0	N/A
Cambodia	0.0	0	30 days	66.2	102	2 years	0.0	0	N/A	0.0	0	N/A
Indonesia	0.0	0	60 days	55.2	85	2 years	0.0	0	N/A	0.0	0	N/A
Lao PDR	0.0	0	N/A ^a	50.0	77	N/A ^a	0.0	0	N/A ^a	0.0	0	N/A
Malaysia	0.0	0	90 days	60.4	93	Not to exceed 5 years	0.0	0	N/A	0.0	0	N/A
Myanmar	0.0	0	N/A	38.3	59	1 year	0.0	0	N/A	0.0	0	N/A
Philippines	0.0	0	N/A ^b	62.3	96	N/A ^b	0.0	0	N/A ^b	0.0	0	N/A
Singapore	0.0	0	N/A	66.9	103	2 years	0.0	0	N/A	0.0	0	N/A
Thailand	0.0	0	90 days	41.6	64	1 year	0.0	0	N/A	0.0	0	N/A
Viet Nam	65.6	101	90 days	65.6	101	3 years	0.0	0	N/A	0.0	0	N/A

Notes: ^a There is a text “service suppliers” (no distinction of business visitors, intra-corporate transferees and so on), which seems to be the commitment by Lao PDR.

^b There is a text “Non-resident aliens may be admitted to the Philippines for the supply of a service after a determination of the non-availability of a person in the Philippines who is competent, able and willing, at the time of application, to perform the services for which the alien is desired”, which seems to be the commitment by the Philippines.

Source: Authors’ database (version updated on 11 December 2014) based on AFAS 8.

Appendix B. Level of MNP Commitments in Terms of the Hoekman Index (55 Sub-sectors)

Table B1. Level of MNP Commitments in Terms of the Hoekman Index (55-sectors)

	Brunei Darussalam	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam
01.A. Professional services	0.45	0.50	0.23	0.32	0.45	0.18	0.32	0.50	0.18	0.45
01.B. Computer and related services	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
01.C. Research and development services	0.50	0.50	0.17	0.50	0.50	0.00	0.50	0.50	0.33	0.17
01.D. Real estate services	0.50	0.50	0.00	0.00	0.00	0.00	0.50	0.50	0.00	0.00
01.E. Rental/leasing services without operators	0.50	0.50	0.10	0.30	0.40	0.30	0.40	0.50	0.20	0.20
01.F. Other business services	0.50	0.50	0.18	0.25	0.48	0.23	0.28	0.50	0.28	0.25
02.A. Postal services	0.50	0.50	0.00	0.00	0.50	0.50	0.50	0.50	0.00	0.00
02.B. Courier services	0.50	0.50	0.00	0.50	0.50	0.50	0.50	0.50	0.00	0.50
02.C. Telecommunication services	0.50	0.50	0.70	0.43	0.37	0.47	0.60	0.50	0.43	0.50
02.D. Audiovisual services	0.50	0.50	1.00	0.33	0.25	0.25	0.25	0.50	0.33	0.25
02.E. Other	0.50	0.50	1.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00
03.A. General construction work for building	0.50	0.50	1.00	0.50	0.50	0.50	0.50	0.50	0.50	0.50
03.B. General construction work for civil engineering	0.50	0.50	1.00	0.50	0.50	0.50	0.50	0.50	0.50	0.50
03.C. Installation and assembly work	0.50	0.50	1.00	0.50	0.50	0.50	0.50	0.50	0.50	0.50
03.D. Building completion and finishing work	0.50	0.50	1.00	0.50	0.50	0.50	0.50	0.50	0.50	0.50
03.E. Other	0.50	0.50	1.00	0.50	0.50	0.50	0.50	0.50	0.50	0.50
04.A. Commission agents' services	0.50	0.50	1.00	0.00	0.50	0.00	0.50	0.50	0.00	0.50
04.B. Wholesale trade services	0.50	0.50	1.00	0.00	0.50	0.00	0.50	0.50	0.00	0.50
04.C. Retailing services	0.50	0.50	0.00	0.00	0.50	0.00	0.50	0.50	0.00	0.50

04.D. Franchising	0.50	0.50	0.00	0.00	0.50	0.00	0.50	0.50	0.00	0.50
04.E. Other	0.50	0.50	0.00	0.00	0.50	0.00	0.00	0.50	0.00	0.00
05.A. Primary education services	0.50	0.50	0.00	0.50	0.50	0.50	0.00	0.50	0.50	0.00
05.B. Secondary education services	0.50	0.50	1.00	0.50	0.50	0.50	0.00	0.50	0.50	0.50
05.C. Higher education services	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
05.D. Adult education	0.50	0.50	0.50	0.50	0.50	0.50	0.00	0.50	0.50	0.50
05.E. Other education services	0.50	0.50	0.50	0.50	0.50	0.50	0.00	0.50	0.50	0.50
06.A. Sewage services	0.50	0.50	0.00	0.50	0.50	0.00	0.50	0.50	0.50	0.50
06.B. Refuse disposal services	0.50	0.50	0.00	0.50	0.50	0.00	0.50	0.50	0.50	0.50
06.C. Sanitation and similar services	0.50	0.50	0.00	0.50	0.00	0.00	0.00	0.50	0.50	0.50
06.D. Other	0.50	0.50	0.00	0.50	0.00	0.00	0.50	0.50	0.50	0.50
07.A. All insurance and insurance-related services	0.50	0.50	0.50	0.38	0.50	0.00	0.00	0.50	0.38	0.50
07.B. Banking and other financial services	0.46	0.50	0.33	0.50	0.38	0.08	0.00	0.50	0.46	0.50
07.C. Other	0.50	0.50	0.50	0.00	0.00	0.00	0.00	0.50	0.00	0.50
08.A. Hospital services	0.50	0.50	0.50	0.50	0.50	0.00	0.50	0.50	0.50	0.50
08.B. Other human health services	0.50	0.50	0.50	0.00	0.50	0.00	0.50	0.50	0.00	0.50
08.C. Social services	0.50	0.50	0.50	0.00	0.50	0.00	0.00	0.50	0.00	0.50
08.D. Other	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.50
09.A. Hotels and restaurants	0.50	0.00	0.50	0.50	0.50	0.50	1.00	0.50	0.50	0.50
09.B. Travel agencies and tour operators services	0.50	0.50	0.50	0.50	0.50	0.00	0.50	0.50	0.50	0.50
09.C. Tourist guides services	0.50	0.50	0.00	0.00	1.00	0.00	0.00	0.50	0.00	0.00
09.D. Other	0.50	0.50	0.00	0.50	0.00	0.00	0.00	0.50	0.00	0.50
10.A. Entertainment services	0.50	0.50	0.00	0.00	0.50	0.00	0.50	0.50	0.50	0.50
10.B. News agency services	0.50	0.50	0.00	0.00	0.00	0.00	0.50	0.50	0.00	0.00
10.C. Libraries, archives, museums, and other cultural services	0.50	0.50	0.00	0.00	0.50	0.00	0.00	0.50	0.00	0.00

10.D. Sporting and other recreational services	0.50	0.50	0.50	0.00	0.50	0.00	0.50	0.50	0.50	0.50
10.E. Other	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00
11.A. Maritime transport services	0.50	0.50	0.42	0.50	0.42	0.42	0.83	0.42	0.33	0.42
11.B. Internal waterways transport	0.50	0.50	0.42	0.33	0.00	0.00	0.33	0.42	0.00	0.33
11.C. Air transport services	0.50	0.50	0.10	0.40	0.20	0.00	0.10	0.50	0.10	0.20
11.D. Space transport	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00
11.E. Rail transport services	0.50	0.50	0.50	0.50	0.00	0.00	0.80	0.50	0.20	0.30
11.F. Road transport services	0.50	0.50	0.40	0.50	0.30	0.00	0.90	0.50	0.20	0.20
11.G. Pipeline transport	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00
11.H. Services auxiliary to all modes of transport	0.50	0.50	0.38	0.38	0.38	0.38	0.88	0.50	0.38	0.50
11.I. Other transport services	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00

Source: Made by the authors based on the ASEAN MNP Agreement.

Appendix C. Job Categories Covered under AFAS 8, AANZ and MNP

Table C1. Job Categories Covered under AFAS 8, AANZ and MNP

	(a) Business visitors									(b) Intra-corporate transferees									(c) Contractual service suppliers			(d) Other categories		
	A representative of a goods seller/service supplier			An employee of a juridical person			For the purpose of participating in business negotiations or meetings			For the purpose of establishing an investment or setting up a commercial presence			Managers			Executives			Specialist					
	AFAS 8	AANZ	MNP	AFAS 8	AANZ	MNP	AFAS 8	AANZ	MNP	AFAS 8	AANZ	MNP	AFAS 8	AANZ	MNP	AFAS 8	AANZ	MNP	AFAS 8	AANZ	MNP	AFAS 8	AANZ	MNP
Brunei Darussalam												*	*	*	*	*	*	*	*	*				
Cambodia							*	*	*	*	*	*	*	*	*	*	*	*	*	*	*			*
Indonesia	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*			
Lao PDR		*	*		*	*		*	*		*		*	*		*	*		*	*				
Malaysia	*	*	*			*	*	*	*		*					*	*	*	*	*				
Myanmar													*	*		*	*		*	*				
Philippines		*	*		*	*		*	*		*		*	*		*	*		*	*		*	*	*
Singapore												*	*	*	*	*	*	*	*	*				
Thailand		*	*		*		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*			
Viet Nam							*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

Notes: “Experts” are considered as equivalent to “specialists”.

Source: Made by the authors based on the ASEAN MNP Agreement.

Appendix D. Frequency of Restrictions (for Intra-corporate Transferees Only)

Descriptions of restrictions in the specific commitment tables can be captured by the following GATS-style categorization:

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

Type B restriction: restriction on the total value of service transactions or assets in the form of numerical quotas or the requirement of an economic needs test;

Type C restriction: restriction on the total number of service operations or on the total quantity of service output expressed in terms of designated numerical units in the form of quotas or the requirement of an economic needs test;

Type D restriction: on the total number of natural persons that may be employed in a particular services sector or that a service supplier may employ and who are necessary for, and directly related to, the supply of a specific service in the form of numerical quotas or the requirement of an economic needs test;

Type E restriction: measures which restrict or require specific types of legal entity or joint venture through which a service supplier may supply a service;

Type F restriction: on the participation of foreign capital in terms of maximum percentage limit on foreign shareholding or the total value of individual or aggregate foreign investment;

Type G restriction: restriction related to government approval (indicated explicitly);

Type T restriction: restriction related to paying taxes or fees.

Tables D1 through D3 show the result of categorization in terms of frequency counts, under each of the three agreements at issue, i.e., ASEAN MNP, AANZFTA and AFAS 8. (Note that the categorization below suffers from some degree of ambiguity and subject to interpretation.)

**Table D1. ASEAN MNP Frequency of Limitations
(for Intra-corporate Transferees Only)**

	A	B	C	D	E	F	G	T
Brunei Darussalam	0	0	0	153	1	0	1	0
Cambodia	0	0	0	152	0	0	0	0
Indonesia	0	0	0	42	5	0	4	0
Lao PDR	0	0	0	105	105	0	105	105
Malaysia	0	0	0	105	0	0	6	0
Myanmar	0	0	0	56	6	0	58	7
Philippines	0	0	0	89	89	0	89	0
Singapore	0	0	0	152	0	0	152	0
Thailand	0	0	0	82	0	0	82	0
Viet Nam	0	0	0	107	91	0	28	0

Source: Made by the authors based on the ASEAN MNP Agreement.

**Table D2. AANZ MNP Frequency of Limitations
(for Intra-corporate Transferees Only)**

	A	B	C	D	E	F	G	T
Brunei Darussalam	0	0	0	153	0	0	0	0
Cambodia	0	0	0	152	0	0	0	0
Indonesia	0	0	0	47	4	0	22	0
Lao PDR	0	0	0	29	0	0	2	0
Malaysia	0	0	0	38	38	0	38	0
Myanmar	0	0	0	21	2	0	21	1
Philippines	0	0	0	45	42	0	44	0
Singapore	0	0	0	152	0	0	152	0
Thailand	0	0	0	60	14	0	60	0
Viet Nam	0	0	0	98	93	0	26	0

Source: Made by the authors based on the ASEAN MNP Agreement.

**Table D3. AFAS 8 Frequency of Limitations
(for Intra-corporate Transferees Only)**

	A	B	C	D	E	F	G	T
Brunei Darussalam	0	0	0	24	0	0	18	0
Cambodia	0	0	0	102	0	0	0	0
Indonesia	0	0	0	85	0	0	1	0
Lao PDR	0	0	0	77	0	0	15	0
Malaysia	0	0	0	92	15	0	0	0
Myanmar	0	0	0	52	2	0	4	0
Philippines	0	0	0	83	17	0	16	0
Singapore	0	0	0	103	0	0	0	0
Thailand	0	0	0	64	57	0	59	0
Viet Nam	0	0	0	101	100	0	0	0

Source: Made by the authors based on the ASEAN MNP Agreement.

Appendix E. Scoring of the Initial Period of Stay: A Principal Component Analysis

Based on the 154 sub-sector-level database concerning the initial period of stay⁵⁰ (annualized figures are used) under the three categories, i.e., business visitors, intra-corporate transferees, and contractual service suppliers (to the exclusion of “others” due to the absence of commitments in this category), a scoring is made in this appendix. In the absence of an external criterion, the standard principal component analysis is usually applied in coming up with total scoring and ranking. In the standard principal component analysis, the first principal component is determined by the axis along which the variance of observed data takes the maximum value. Then the second and third principal components are set orthogonal to each other. After the principal component analysis, simple averages have been taken for 11-sector aggregation and 55-sector aggregation, both directly from the 154 sub-sector results (not reported here).

Tables E1 through E10 report the results of the principal component analysis at the 11 sub-sector aggregation level. Tables E11 through E20 list the results at the 55 sub-sector aggregation level. Based on the value of the first principal component (which usually has a balanced set of weights for each of the measurements), a ranking has been done, as in the column (in bold). The weights for the first principal component are endogenously determined to be 0.7453 (for business visitors), 0.7740 (for intra-corporate transferees), and 0.8155 (for contractual service suppliers).⁵¹

⁵⁰ Malaysia’s initial period of stay is set at 2 years (see the note for Table 1).

⁵¹ For the second principal component, the weights for business visitors, intra-corporate transferees, and contractual service suppliers are determined to be -0.6320, 0.4952, and 0.1076, respectively. As for the third principal component, the weights are 0.2124 (for business visitors), 0.3947 (for intra-corporate transferees), and -0.5687 (for contractual service suppliers). The interpretation of these weights on the basis of economic theory remains to be done.

<11-sector results>

Table E1. Principal Component Analysis and Ranking for Brunei Darussalam (11 Sub-sectors)

Sector	Country-sector ranking based on Principal Component 1 (out of 110 in total)^a	Principal Component 1	Principal Component 2	Principal Component 3
01. Business services	45	0.09	1.47	0.93
02. Communication services	35	0.12	1.50	0.96
03. Construction and related engineering services	35	0.12	1.50	0.96
04. Distribution services	35	0.12	1.50	0.96
05. Educational services	35	0.12	1.50	0.96
06. Environmental services	35	0.12	1.50	0.96
07. Financial services	35	0.12	1.50	0.96
08. Health-related and social services	35	0.12	1.50	0.96
09. Tourism and travel-related services	35	0.12	1.50	0.96
10. Recreational, cultural, and sporting services	35	0.12	1.50	0.96
11. Transport services	35	0.12	1.50	0.96
Average	-	0.12	1.50	0.96

Notes: ^a The same ranking number is used for the sectors with equal scores.

Source: Made by the authors based on the ASEAN MNP Agreement.

**Table E2. Principal Component Analysis and Ranking for Cambodia
(11 Sub-sectors)**

	Country- sector ranking based on Principal Component 1 (out of 110 in total)^a	Principal Component 1	Principal Component 2	Principal Component 3
01. Business services	10	1.37	0.58	-0.97
02. Communication services	10	1.37	0.58	-0.97
03. Construction and related engineering services	10	1.37	0.58	-0.97
04. Distribution services	10	1.37	0.58	-0.97
05. Educational services	10	1.37	0.58	-0.97
06. Environmental services	10	1.37	0.58	-0.97
07. Financial services	10	1.37	0.58	-0.97
08. Health-related and social services	10	1.37	0.58	-0.97
09. Tourism and travel-related services	24	0.67	0.40	-0.85
10. Recreational, cultural, and sporting services	10	1.37	0.58	-0.97
11. Transport services	10	1.37	0.58	-0.97
Average	-	1.31	0.57	-0.96

Notes: ^a The same ranking number is used for the sectors with equal scores.

Source: Made by the authors based on the ASEAN MNP Agreement.

**Table E3. Principal Component Analysis and Ranking for Indonesia
(11 Sub-sectors)**

	Country-sector ranking based on Principal Component 1 (out of 110 in total)^a	Principal Component 1	Principal Component 2	Principal Component 3
01. Business services	70	-0.44	-0.25	0.23
02. Communication services	33	0.29	-0.33	0.78
03. Construction and related engineering services	25	0.54	-0.36	0.97
04. Distribution services	79	-0.64	-0.23	0.08
05. Educational services	34	0.15	-0.32	0.67
06. Environmental services	70	-0.44	-0.25	0.23
07. Financial services	83	-0.84	-0.34	-0.09
08. Health-related and social services	46	0.05	-0.31	0.60
09. Tourism and travel-related services	70	-0.44	-0.25	0.23
10. Recreational, cultural, and sporting services	92	-1.03	-0.18	-0.21
11. Transport services	54	-0.13	-0.29	0.46
Average	-	-0.27	-0.28	0.36

Notes: ^a The same ranking number is used for the sectors with equal scores.

Source: Made by the authors based on the ASEAN MNP Agreement.

**Table E4. Principal Component Analysis and Ranking for Lao PDR
(11 Sub-sectors)**

	Country-sector ranking based on Principal Component 1 (out of 110 in total)^a	Principal Component 1	Principal Component 2	Principal Component 3
01. Business services	97	-1.11	-0.51	-0.33
02. Communication services	94	-1.04	-0.60	-0.29
03. Construction and related engineering services	84	-0.91	-0.75	-0.22
04. Distribution services	103	-1.42	-0.14	-0.51
05. Educational services	84	-0.91	-0.75	-0.22
06. Environmental services	94	-1.04	-0.60	-0.29
07. Financial services	89	-0.95	-0.68	-0.28
08. Health-related and social services	99	-1.29	-0.29	-0.43
09. Tourism and travel-related services	94	-1.04	-0.60	-0.29
10. Recreational, cultural, and sporting services	103	-1.42	-0.14	-0.51
11. Transport services	92	-1.03	-0.61	-0.28
Average	-	-1.11	-0.52	-0.33

Notes: ^a The same ranking number is used for the sectors with equal scores.

Source: Made by the authors based on the ASEAN MNP Agreement.

**Table E5. Principal Component Analysis and Ranking for Malaysia
(11 Sub-sectors)**

	Country-sector ranking based on Principal Component 1 (out of 110 in total)^a	Principal Component 1	Principal Component 2	Principal Component 3
01. Business services	23	0.73	-0.94	1.02
02. Communication services	51	-0.01	-0.65	0.50
03. Construction and related engineering services	21	1.00	-1.02	1.21
04. Distribution services	27	0.52	-0.84	0.87
05. Educational services	21	1.00	-1.02	1.21
06. Environmental services	56	-0.21	-0.58	0.35
07. Financial services	30	0.43	-0.81	0.81
08. Health-related and social services	31	0.40	-0.80	0.78
09. Tourism and travel- related services	31	0.40	-0.80	0.78
10. Recreational, cultural, and sporting services	48	0.03	-0.67	0.53
11. Transport services	77	-0.52	-0.47	0.13
Average		0.34	-0.78	0.75

Notes: ^a The same ranking number is used for the sectors with equal scores.

Source: Made by the authors based on the ASEAN MNP Agreement.

**Table E6. Principal Component Analysis and Ranking for Myanmar
(11 Sub-sectors)**

	Country-sector ranking based on Principal Component 1 (out of 110 in total)^a	Principal Component 1	Principal Component 2	Principal Component 3
01. Business services	98	-1.21	0.08	-0.31
02. Communication services	90	-1.01	0.29	-0.12
03. Construction and related engineering services	84	-0.91	0.41	-0.02
04. Distribution services	103	-1.42	-0.14	-0.51
05. Educational services	84	-0.91	0.41	-0.02
06. Environmental services	103	-1.42	-0.14	-0.51
07. Financial services	102	-1.36	-0.07	-0.45
08. Health-related and social services	103	-1.42	-0.14	-0.51
09. Tourism and travel-related services	99	-1.29	0.00	-0.38
10. Recreational, cultural, and sporting services	103	-1.42	-0.14	-0.51
11. Transport services	101	-1.30	-0.01	-0.39
Average	-	-1.24	0.05	-0.34

Notes: ^a The same ranking number is used for the sectors with equal scores.

Source: Made by the authors based on the ASEAN MNP Agreement.

**Table E7. Principal Component Analysis and Ranking for the Philippines
(11 Sub-sectors)**

	Country-sector ranking based on Principal Component 1 (out of 110 in total)^a	Principal Component 1	Principal Component 2	Principal Component 3
01. Business services	52	-0.02	-0.55	-0.42
02. Communication services	49	0.01	-0.67	-0.12
03. Construction and related engineering services	49	0.01	-0.89	0.47
04. Distribution services	57	-0.28	-0.74	0.27
05. Educational services	90	-1.01	-0.26	-0.48
06. Environmental services	55	-0.19	-0.66	0.01
07. Financial services	103	-1.42	-0.14	-0.51
08. Health-related and social services	81	-0.71	-0.51	-0.02
09. Tourism and travel-related services	59	-0.38	-0.44	-0.44
10. Recreational, cultural, and sporting services	78	-0.56	-0.59	0.08
11. Transport services	58	-0.34	-0.55	-0.25
Average	-	-0.44	-0.54	-0.13

Notes: ^a The same ranking number is used for the sectors with equal scores.

Source: Made by the authors based on the ASEAN MNP Agreement.

**Table E8. Principal Component Analysis and Ranking for Singapore
(11 Sub-sectors)**

	Country-sector ranking based on Principal Component 1 (out of 110 in total)^a	Principal Component 1	Principal Component 2	Principal Component 3
01. Business services	60	-0.39	0.96	0.47
02. Communication services	60	-0.39	0.96	0.47
03. Construction and related engineering services	60	-0.39	0.96	0.47
04. Distribution services	60	-0.39	0.96	0.47
05. Educational services	60	-0.39	0.96	0.47
06. Environmental services	60	-0.39	0.96	0.47
07. Financial services	60	-0.39	0.96	0.47
08. Health-related and social services	60	-0.39	0.96	0.47
09. Tourism and travel-related services	60	-0.39	0.96	0.47
10. Recreational, cultural, and sporting services	60	-0.39	0.96	0.47
11. Transport services	73	-0.45	0.89	0.41
Average	-	-0.40	0.95	0.47

Notes: ^a The same ranking number is used for the sectors with equal scores.

Source: Made by the authors based on the ASEAN MNP Agreement.

**Table E9. Principal Component Analysis and Ranking
for Thailand (11 Sub-sectors)**

	Country- sector ranking based on Principal Component 1 (out of 110 in total)^a	Principal Component 1	Principal Component 2	Principal Component 3
01. Business services	76	-0.50	-0.81	0.09
02. Communication services	53	-0.07	-1.15	0.37
03. Construction and related engineering services	28	0.49	-1.57	0.73
04. Distribution services	103	-1.42	-0.14	-0.51
05. Educational services	28	0.49	-1.57	0.73
06. Environmental services	74	-0.47	-0.85	0.11
07. Financial services	47	0.04	-1.23	0.44
08. Health-related and social services	88	-0.94	-0.50	-0.20
09. Tourism and travel-related services	74	-0.47	-0.85	0.11
10. Recreational, cultural, and sporting services	80	-0.66	-0.71	-0.01
11. Transport services	82	-0.73	-0.68	-0.06
Average	-	-0.38	-0.91	0.16

Notes: ^a The same ranking number is used for the sectors with equal scores.

Source: Made by the authors based on the ASEAN MNP Agreement.

**Table E10. Principal Component Analysis and Ranking for Viet Nam
(11 Sub-sectors)**

	Country- sector ranking based on Principal Component 1 (out of 110 in total)^a	Principal Component 1	Principal Component 2	Principal Component 3
01. Business services	9	1.52	-0.04	-0.72
02. Communication services	6	2.45	-0.06	-0.76
03. Construction and related engineering services	1	3.47	-0.04	-0.83
04. Distribution services	4	2.49	-0.06	-0.77
05. Educational services	4	2.49	-0.06	-0.77
06. Environmental services	1	3.47	-0.04	-0.83
07. Financial services	3	3.18	-0.05	-0.81
08. Health-related and social services	7	2.24	-0.07	-0.75
09. Tourism and travel-related services	7	2.24	-0.07	-0.75
10. Recreational, cultural, and sporting services	26	0.53	-0.10	-0.64
11. Transport services	10	1.37	-0.09	-0.69
Average	-	2.31	-0.06	-0.76

Notes: ^a The same ranking number is used for the sectors with equal scores.

Source: Made by the authors based on the ASEAN MNP Agreement.

**Table E11. Principal Component Analysis and Ranking for Brunei Darussalam
(55 Sub-sectors)**

Serial no.	Sector	Country-sector ranking based on Principal Component 1 (out of 550 in total) ^a	Principal Component 1	Principal Component 2	Principal Component 3
1	01A. Professional services	270	-0.02	1.35	0.83
2	01B. Computer and related services	192	0.12	1.50	0.96
3	01C. Research and development services	192	0.12	1.50	0.96
4	01D. Real estate services	192	0.12	1.50	0.96
5	01E. Rental/leasing services without operators	192	0.12	1.50	0.96
6	01F. Other business services	192	0.12	1.50	0.96
7	02A. Postal services	192	0.12	1.50	0.96
8	02B. Courier services	192	0.12	1.50	0.96
9	02C. Telecommunication services	192	0.12	1.50	0.96
10	02D. Audiovisual services	192	0.12	1.50	0.96
11	02E. Other	192	0.12	1.50	0.96
12	03A. General construction work for building	192	0.12	1.50	0.96
13	03B. General construction work for civil engineering	192	0.12	1.50	0.96

14	03C. Installation and assembly work	192	0.12	1.50	0.96
15	03D. Building completion and finishing work	192	0.12	1.50	0.96
16	03E. Other	192	0.12	1.50	0.96
17	04A. Commission agents' services	192	0.12	1.50	0.96
18	04B. Wholesale trade services	192	0.12	1.50	0.96
19	04C. Retailing services	192	0.12	1.50	0.96
20	04D. Franchising	192	0.12	1.50	0.96
21	04E. Other	192	0.12	1.50	0.96
22	05A. Primary education services	192	0.12	1.50	0.96
23	05B. Secondary education services	192	0.12	1.50	0.96
24	05C. Higher education services	192	0.12	1.50	0.96
25	05D. Adult education	192	0.12	1.50	0.96
26	05E. Other education services	192	0.12	1.50	0.96
27	06A. Sewage services	192	0.12	1.50	0.96
28	06B. Refuse disposal services	192	0.12	1.50	0.96
29	06C. Sanitation and similar services	192	0.12	1.50	0.96
30	06D. Other	192	0.12	1.50	0.96
31	07A. All insurance and insurance- related services	192	0.12	1.50	0.96

32	07B. Banking and other financial services	192	0.12	1.50	0.96
33	07C. Other	192	0.12	1.50	0.96
34	08A. Hospital services	192	0.12	1.50	0.96
35	08B. Other human health services	192	0.12	1.50	0.96
36	08C. Social services	192	0.12	1.50	0.96
37	08D. Other	192	0.12	1.50	0.96
38	09A. Hotels and restaurants	192	0.12	1.50	0.96
39	09B. Travel agencies and tour operators services	192	0.12	1.50	0.96
40	09C. Tourist guides services	192	0.12	1.50	0.96
41	09D. Other	192	0.12	1.50	0.96
42	10A. Entertainment services	192	0.12	1.50	0.96
43	10B. News agency services	192	0.12	1.50	0.96
44	10C. Libraries, archives, museums and other cultural services	192	0.12	1.50	0.96
45	10D. Sporting and other recreational services	192	0.12	1.50	0.96
46	10E. Other	192	0.12	1.50	0.96
47	11A. Maritime transport services	192	0.12	1.50	0.96
48	11B. Internal waterways transport	192	0.12	1.50	0.96
49	11C. Air transport services	192	0.12	1.50	0.96

50	11D. Space transport	192	0.12	1.50	0.96
51	11E. Rail transport services	192	0.12	1.50	0.96
52	11F. Road transport services	192	0.12	1.50	0.96
53	11G. Pipeline transport	192	0.12	1.50	0.96
54	11H. Services auxiliary to all modes of transport	192	0.12	1.50	0.96
55	11I. Other transport services	192	0.12	1.50	0.96

Notes: ^a The same ranking number is used for the sectors with equal scores.

Source: Made by the authors based on the ASEAN MNP Agreement.

**Table E12. Principal Component Analysis and Ranking for Cambodia
(55 Sub-sectors)**

Serial no.	Sector	Country-sector ranking based on Principal Component 1 (out of 550 in total) ^a	Principal Component 1	Principal Component 2	Principal Component 3
1	01A. Professional services	36	1.37	0.58	-0.97
2	01B. Computer and related services	36	1.37	0.58	-0.97
3	01C. Research and development services	36	1.37	0.58	-0.97
4	01D. Real estate services	36	1.37	0.58	-0.97
5	01E. Rental/leasing services without operators	36	1.37	0.58	-0.97
6	01F. Other business services	36	1.37	0.58	-0.97
7	02A. Postal services	36	1.37	0.58	-0.97
8	02B. Courier services	36	1.37	0.58	-0.97
9	02C. Telecommunication services	36	1.37	0.58	-0.97
10	02D. Audiovisual services	36	1.37	0.58	-0.97
11	02E. Other	36	1.37	0.58	-0.97
12	03A. General construction work for building	36	1.37	0.58	-0.97

13	03B. General construction work for civil engineering	36	1.37	0.58	-0.97
14	03C. Installation and assembly work	36	1.37	0.58	-0.97
15	03D. Building completion and finishing work	36	1.37	0.58	-0.97
16	03E. Other	36	1.37	0.58	-0.97
17	04A. Commission agents' services	36	1.37	0.58	-0.97
18	04B. Wholesale trade services	36	1.37	0.58	-0.97
19	04C. Retailing services	36	1.37	0.58	-0.97
20	04D. Franchising	36	1.37	0.58	-0.97
21	04E. Other	36	1.37	0.58	-0.97
22	05A. Primary education services	36	1.37	0.58	-0.97
23	05B. Secondary education services	36	1.37	0.58	-0.97
24	05C. Higher education services	36	1.37	0.58	-0.97
25	05D. Adult education	36	1.37	0.58	-0.97
26	05E. Other education services	36	1.37	0.58	-0.97
27	06A. Sewage services	36	1.37	0.58	-0.97
28	06B. Refuse disposal services	36	1.37	0.58	-0.97
29	06C. Sanitation and similar services	36	1.37	0.58	-0.97
30	06D. Other	36	1.37	0.58	-0.97

31	07A. All insurance and insurance-related services	36	1.37	0.58	-0.97
32	07B. Banking and other financial services	36	1.37	0.58	-0.97
33	07C. Other	36	1.37	0.58	-0.97
34	08A. Hospital services	36	1.37	0.58	-0.97
35	08B. Other human health services	36	1.37	0.58	-0.97
36	08C. Social services	36	1.37	0.58	-0.97
37	08D. Other	36	1.37	0.58	-0.97
38	09A. Hotels and restaurants	402	-1.42	-0.14	-0.51
39	09B. Travel agencies and tour operators services	36	1.37	0.58	-0.97
40	09C. Tourist guides services	36	1.37	0.58	-0.97
41	09D. Other	36	1.37	0.58	-0.97
42	10A. Entertainment services	36	1.37	0.58	-0.97
43	10B. News agency services	36	1.37	0.58	-0.97
44	10C. Libraries, archives, museums, and other cultural services	36	1.37	0.58	-0.97
45	10D. Sporting and other recreational services	36	1.37	0.58	-0.97
46	10E. Other	36	1.37	0.58	-0.97
47	11A. Maritime transport services	36	1.37	0.58	-0.97
48	11B. Internal waterways transport	36	1.37	0.58	-0.97

49	11C. Air transport services	36	1.37	0.58	-0.97
50	11D. Space transport	36	1.37	0.58	-0.97
51	11E. Rail transport services	36	1.37	0.58	-0.97
52	11F. Road transport services	36	1.37	0.58	-0.97
53	11G. Pipeline transport	36	1.37	0.58	-0.97
54	11H. Services auxiliary to all modes of transport	36	1.37	0.58	-0.97
55	11I. Other transport services	36	1.37	0.58	-0.97

Notes: ^a The same ranking number is used for the sectors with equal scores.

Source: Made by the authors based on the ASEAN MNP Agreement.

**Table E13. Principal Component Analysis and Ranking for Indonesia
(55 Sub-sectors)**

Serial no.	Sector	Country-sector ranking based on Principal Component 1 (out of 550 in total) ^a	Principal Component 1	Principal Component 2	Principal Component 3
1	01A. Professional services	189	0.18	-0.32	0.70
2	01B. Computer and related services	134	0.54	-0.36	0.97
3	01C. Research and development services	340	-0.77	-0.21	-0.02
4	01D. Real estate services	402	-1.42	-0.14	-0.51
5	01E. Rental/leasing services without operators	387	-1.03	-0.18	-0.21
6	01F. Other business services	339	-0.74	-0.22	0.01
7	02A. Postal services	402	-1.42	-0.14	-0.51
8	02B. Courier services	402	-1.42	-0.14	-0.51
9	02C. Telecommunication services	134	0.54	-0.36	0.97
10	02D. Audiovisual services	134	0.54	-0.36	0.97
11	02E. Other	402	-1.42	-0.14	-0.51
12	03A. General construction work for building	134	0.54	-0.36	0.97

13	03B. General construction work for civil engineering	134	0.54	-0.36	0.97
14	03C. Installation and assembly work	134	0.54	-0.36	0.97
15	03D. Building completion and finishing work	134	0.54	-0.36	0.97
16	03E. Other	134	0.54	-0.36	0.97
17	04A. Commission agents' services	134	0.54	-0.36	0.97
18	04B. Wholesale trade services	134	0.54	-0.36	0.97
19	04C. Retailing services	402	-1.42	-0.14	-0.51
20	04D. Franchising	402	-1.42	-0.14	-0.51
21	04E. Other	402	-1.42	-0.14	-0.51
22	05A. Primary education services	402	-1.42	-0.14	-0.51
23	05B. Secondary education services	134	0.54	-0.36	0.97
24	05C. Higher education services	134	0.54	-0.36	0.97
25	05D. Adult education	134	0.54	-0.36	0.97
26	05E. Other education services	134	0.54	-0.36	0.97
27	06A. Sewage services	134	0.54	-0.36	0.97
28	06B. Refuse disposal services	134	0.54	-0.36	0.97
29	06C. Sanitation and similar services	402	-1.42	-0.14	-0.51
30	06D. Other	402	-1.42	-0.14	-0.51

31	07A. All insurance and insurance-related services	274	-0.20	-0.57	0.36
32	07B. Banking and other financial services	385	-1.01	-0.28	-0.21
33	07C. Other	402	-1.42	-0.14	-0.51
34	08A. Hospital services	134	0.54	-0.36	0.97
35	08B. Other human health services	134	0.54	-0.36	0.97
36	08C. Social services	134	0.54	-0.36	0.97
37	08D. Other	402	-1.42	-0.14	-0.51
38	09A. Hotels and restaurants	134	0.54	-0.36	0.97
39	09B. Travel agencies and tour operators services	134	0.54	-0.36	0.97
40	09C. Tourist guides services	402	-1.42	-0.14	-0.51
41	09D. Other	402	-1.42	-0.14	-0.51
42	10A. Entertainment services	402	-1.42	-0.14	-0.51
43	10B. News agency services	402	-1.42	-0.14	-0.51
44	10C. Libraries, archives, museums and other cultural services	402	-1.42	-0.14	-0.51
45	10D. Sporting and other recreational services	134	0.54	-0.36	0.97
46	10E. Other	402	-1.42	-0.14	-0.51
47	11A. Maritime transport services	185	0.21	-0.32	0.72
48	11B. Internal waterways transport	185	0.21	-0.32	0.72

49	11C. Air transport services	387	-1.03	-0.18	-0.21
50	11D. Space transport	402	-1.42	-0.14	-0.51
51	11E. Rail transport services	134	0.54	-0.36	0.97
52	11F. Road transport services	191	0.15	-0.32	0.67
53	11G. Pipeline transport	402	-1.42	-0.14	-0.51
54	11H. Services auxiliary to all modes of transport	247	0.05	-0.31	0.60
55	11I. Other transport services	402	-1.42	-0.14	-0.51

Notes: ^a The same ranking number is used for the sectors with equal scores.

Source: Made by the authors based on the ASEAN MNP Agreement.

**Table E14. Principal Component Analysis and Ranking for Lao PDR
(55 Sub-sectors)**

Serial no.	Sector	Country-sector ranking based on Principal Component 1 (out of 550 in total) ^a	Principal Component 1	Principal Component 2	Principal Component 3
1	01A. Professional services	394	-1.10	-0.53	-0.32
2	01B. Computer and related services	356	-0.91	-0.75	-0.22
3	01C. Research and development services	356	-0.91	-0.75	-0.22
4	01D. Real estate services	402	-1.42	-0.14	-0.51
5	01E. Rental/leasing services without operators	395	-1.12	-0.51	-0.33
6	01F. Other business services	398	-1.17	-0.45	-0.36
7	02A. Postal services	402	-1.42	-0.14	-0.51
8	02B. Courier services	356	-0.91	-0.75	-0.22
9	02C. Telecommunication services	382	-0.98	-0.67	-0.26
10	02D. Audiovisual services	392	-1.08	-0.55	-0.31
11	02E. Other	402	-1.42	-0.14	-0.51
12	03A. General construction work for building	356	-0.91	-0.75	-0.22

13	03B. General construction work for civil engineering	356	-0.91	-0.75	-0.22
14	03C. Installation and assembly work	356	-0.91	-0.75	-0.22
15	03D. Building completion and finishing work	356	-0.91	-0.75	-0.22
16	03E. Other	356	-0.91	-0.75	-0.22
17	04A. Commission agents' services	402	-1.42	-0.14	-0.51
18	04B. Wholesale trade services	402	-1.42	-0.14	-0.51
19	04C. Retailing services	402	-1.42	-0.14	-0.51
20	04D. Franchising	402	-1.42	-0.14	-0.51
21	04E. Other	402	-1.42	-0.14	-0.51
22	05A. Primary education services	356	-0.91	-0.75	-0.22
23	05B. Secondary education services	356	-0.91	-0.75	-0.22
24	05C. Higher education services	356	-0.91	-0.75	-0.22
25	05D. Adult education	356	-0.91	-0.75	-0.22
26	05E. Other education services	356	-0.91	-0.75	-0.22
27	06A. Sewage services	356	-0.91	-0.75	-0.22
28	06B. Refuse disposal services	356	-0.91	-0.75	-0.22
29	06C. Sanitation and similar services	356	-0.91	-0.75	-0.22
30	06D. Other	402	-1.42	-0.14	-0.51

31	07A. All insurance and insurance-related services	381	-0.96	-0.58	-0.39
32	07B. Banking and other financial services	356	-0.91	-0.75	-0.22
33	07C. Other	402	-1.42	-0.14	-0.51
34	08A. Hospital services	356	-0.91	-0.75	-0.22
35	08B. Other human health services	402	-1.42	-0.14	-0.51
36	08C. Social services	402	-1.42	-0.14	-0.51
37	08D. Other	402	-1.42	-0.14	-0.51
38	09A. Hotels and restaurants	356	-0.91	-0.75	-0.22
39	09B. Travel agencies and tour operators services	356	-0.91	-0.75	-0.22
40	09C. Tourist guides services	402	-1.42	-0.14	-0.51
41	09D. Other	356	-0.91	-0.75	-0.22
42	10A. Entertainment services	402	-1.42	-0.14	-0.51
43	10B. News agency services	402	-1.42	-0.14	-0.51
44	10C. Libraries, archives, museums and other cultural services	402	-1.42	-0.14	-0.51
45	10D. Sporting and other recreational services	402	-1.42	-0.14	-0.51
46	10E. Other	402	-1.42	-0.14	-0.51
47	11A. Maritime transport services	356	-0.91	-0.75	-0.22
48	11B. Internal waterways transport	392	-1.08	-0.55	-0.31

49	11C. Air transport services	386	-1.01	-0.63	-0.27
50	11D. Space transport	402	-1.42	-0.14	-0.51
51	11E. Rail transport services	356	-0.91	-0.75	-0.22
52	11F. Road transport services	356	-0.91	-0.75	-0.22
53	11G. Pipeline transport	402	-1.42	-0.14	-0.51
54	11H. Services auxiliary to all modes of transport	391	-1.04	-0.60	-0.29
55	11I. Other transport services	402	-1.42	-0.14	-0.51

Notes: ^a The same ranking number is used for the sectors with equal scores.

Source: Made by the authors based on the ASEAN MNP Agreement.

**Table E15. Principal Component Analysis and Ranking for Malaysia
(55 Sub-sectors)**

Serial no.	Sector	Country-sector ranking based on Principal Component 1 (out of 550 in total) ^a	Principal Component 1	Principal Component 2	Principal Component 3
1	01A. Professional services	123	0.74	-0.99	1.01
2	01B. Computer and related services	92	1.00	-1.02	1.21
3	01C. Research and development services	92	1.00	-1.02	1.21
4	01D. Real estate services	402	-1.42	-0.14	-0.51
5	01E. Rental/leasing services without operators	160	0.52	-0.84	0.87
6	01F. Other business services	122	0.88	-0.98	1.13
7	02A. Postal services	92	1.00	-1.02	1.21
8	02B. Courier services	92	1.00	-1.02	1.21
9	02C. Telecommunication services	248	0.03	-0.67	0.53
10	02D. Audiovisual services	275	-0.21	-0.58	0.35
11	02E. Other	402	-1.42	-0.14	-0.51
12	03A. General construction work for building	92	1.00	-1.02	1.21

13	03B. General construction work for civil engineering	92	1.00	-1.02	1.21
14	03C. Installation and assembly work	92	1.00	-1.02	1.21
15	03D. Building completion and finishing work	92	1.00	-1.02	1.21
16	03E. Other	92	1.00	-1.02	1.21
17	04A. Commission agents' services	92	1.00	-1.02	1.21
18	04B. Wholesale trade services	92	1.00	-1.02	1.21
19	04C. Retailing services	92	1.00	-1.02	1.21
20	04D. Franchising	92	1.00	-1.02	1.21
21	04E. Other	402	-1.42	-0.14	-0.51
22	05A. Primary education services	92	1.00	-1.02	1.21
23	05B. Secondary education services	92	1.00	-1.02	1.21
24	05C. Higher education services	92	1.00	-1.02	1.21
25	05D. Adult education	92	1.00	-1.02	1.21
26	05E. Other education services	92	1.00	-1.02	1.21
27	06A. Sewage services	92	1.00	-1.02	1.21
28	06B. Refuse disposal services	92	1.00	-1.02	1.21
29	06C. Sanitation and similar services	402	-1.42	-0.14	-0.51
30	06D. Other	402	-1.42	-0.14	-0.51

31	07A. All insurance and insurance-related services	92	1.00	-1.02	1.21
32	07B. Banking and other financial services	179	0.40	-0.80	0.78
33	07C. Other	402	-1.42	-0.14	-0.51
34	08A. Hospital services	92	1.00	-1.02	1.21
35	08B. Other human health services	92	1.00	-1.02	1.21
36	08C. Social services	92	1.00	-1.02	1.21
37	08D. Other	402	-1.42	-0.14	-0.51
38	09A. Hotels and restaurants	92	1.00	-1.02	1.21
39	09B. Travel agencies and tour operators services	92	1.00	-1.02	1.21
40	09C. Tourist guides services	92	1.00	-1.02	1.21
41	09D. Other	402	-1.42	-0.14	-0.51
42	10A. Entertainment services	92	1.00	-1.02	1.21
43	10B. News agency services	402	-1.42	-0.14	-0.51
44	10C. Libraries, archives, museums and other cultural services	92	1.00	-1.02	1.21
45	10D. Sporting and other recreational services	92	1.00	-1.02	1.21
46	10E. Other	402	-1.42	-0.14	-0.51
47	11A. Maritime transport services	133	0.60	-0.87	0.93

48	11B. Internal waterways transport	402	-1.42	-0.14	-0.51
49	11C. Air transport services	331	-0.45	-0.49	0.18
50	11D. Space transport	402	-1.42	-0.14	-0.51
51	11E. Rail transport services	402	-1.42	-0.14	-0.51
52	11F. Road transport services	248	0.03	-0.67	0.53
53	11G. Pipeline transport	402	-1.42	-0.14	-0.51
54	11H. Services auxiliary to all modes of transport	179	0.40	-0.80	0.78
55	11I. Other transport services	402	-1.42	-0.14	-0.51

Notes: ^a The same ranking number is used for the sectors with equal scores.

Source: Made by the authors based on the ASEAN MNP Agreement.

Table E16. Principal Component Analysis and Ranking for Myanmar (55 Sub-sectors)

Serial no.	Sector	Country-sector ranking based on Principal Component 1 (out of 550 in total) ^a	Principal Component 1	Principal Component 2	Principal Component 3
1	01A. Professional services	399	-1.23	0.06	-0.33
2	01B. Computer and related services	342	-0.91	0.41	-0.02
3	01C. Research and development services	402	-1.42	-0.14	-0.51
4	01D. Real estate services	402	-1.42	-0.14	-0.51
5	01E. Rental/leasing services without operators	396	-1.16	0.13	-0.26
6	01F. Other business services	400	-1.24	0.05	-0.33
7	02A. Postal services	342	-0.91	0.41	-0.02
8	02B. Courier services	342	-0.91	0.41	-0.02
9	02C. Telecommunication services	380	-0.94	0.37	-0.05
10	02D. Audiovisual services	396	-1.16	0.13	-0.26
11	02E. Other	402	-1.42	-0.14	-0.51
12	03A. General construction work for building	342	-0.91	0.41	-0.02

13	03B. General construction work for civil engineering	342	-0.91	0.41	-0.02
14	03C. Installation and assembly work	342	-0.91	0.41	-0.02
15	03D. Building completion and finishing work	342	-0.91	0.41	-0.02
16	03E. Other	342	-0.91	0.41	-0.02
17	04A. Commission agents' services	402	-1.42	-0.14	-0.51
18	04B. Wholesale trade services	402	-1.42	-0.14	-0.51
19	04C. Retailing services	402	-1.42	-0.14	-0.51
20	04D. Franchising	402	-1.42	-0.14	-0.51
21	04E. Other	402	-1.42	-0.14	-0.51
22	05A. Primary education services	342	-0.91	0.41	-0.02
23	05B. Secondary education services	342	-0.91	0.41	-0.02
24	05C. Higher education services	342	-0.91	0.41	-0.02
25	05D. Adult education	342	-0.91	0.41	-0.02
26	05E. Other education services	342	-0.91	0.41	-0.02
27	06A. Sewage services	402	-1.42	-0.14	-0.51
28	06B. Refuse disposal services	402	-1.42	-0.14	-0.51
29	06C. Sanitation and similar services	402	-1.42	-0.14	-0.51
30	06D. Other	402	-1.42	-0.14	-0.51

31	07A. All insurance and insurance-related services	402	-1.42	-0.14	-0.51
32	07B. Banking and other financial services	401	-1.34	-0.05	-0.42
33	07C. Other	402	-1.42	-0.14	-0.51
34	08A. Hospital services	402	-1.42	-0.14	-0.51
35	08B. Other human health services	402	-1.42	-0.14	-0.51
36	08C. Social services	402	-1.42	-0.14	-0.51
37	08D. Other	402	-1.42	-0.14	-0.51
38	09A. Hotels and restaurants	342	-0.91	0.41	-0.02
39	09B. Travel agencies and tour operators services	402	-1.42	-0.14	-0.51
40	09C. Tourist guides services	402	-1.42	-0.14	-0.51
41	09D. Other	402	-1.42	-0.14	-0.51
42	10A. Entertainment services	402	-1.42	-0.14	-0.51
43	10B. News agency services	402	-1.42	-0.14	-0.51
44	10C. Libraries, archives, museums and other cultural services	402	-1.42	-0.14	-0.51
45	10D. Sporting and other recreational services	402	-1.42	-0.14	-0.51
46	10E. Other	402	-1.42	-0.14	-0.51
47	11A. Maritime transport services	383	-0.99	0.32	-0.10
48	11B. Internal waterways transport	402	-1.42	-0.14	-0.51

49	11C. Air transport services	402	-1.42	-0.14	-0.51
50	11D. Space transport	402	-1.42	-0.14	-0.51
51	11E. Rail transport services	402	-1.42	-0.14	-0.51
52	11F. Road transport services	402	-1.42	-0.14	-0.51
53	11G. Pipeline transport	402	-1.42	-0.14	-0.51
54	11H. Services auxiliary to all modes of transport	389	-1.04	0.27	-0.14
55	11I. Other transport services	402	-1.42	-0.14	-0.51

Notes: ^a The same ranking number is used for the sectors with equal scores.

Source: Made by the authors based on the ASEAN MNP Agreement.

**Table E17. Principal Component Analysis and Ranking for the Philippines
(55 Sub-sectors)**

Serial no.	Sector	Country-sector ranking based on Principal Component 1 (out of 550 in total) ^a	Principal Component 1	Principal Component 2	Principal Component 3
1	01A. Professional services	271	-0.10	-0.52	-0.42
2	01B. Computer and related services	124	0.66	-0.74	-0.37
3	01C. Research and development services	124	0.66	-0.74	-0.37
4	01D. Real estate services	124	0.66	-0.74	-0.37
5	01E. Rental/leasing services without operators	183	0.24	-0.62	-0.40
6	01F. Other business services	277	-0.38	-0.44	-0.44
7	02A. Postal services	124	0.66	-0.74	-0.37
8	02B. Courier services	124	0.66	-0.74	-0.37
9	02C. Telecommunication services	182	0.30	-0.75	-0.10
10	02D. Audiovisual services	337	-0.71	-0.51	-0.02
11	02E. Other	402	-1.42	-0.14	-0.51
12	03A. General construction work for building	253	0.01	-0.89	0.47
13	03B. General construction work for civil engineering	253	0.01	-0.89	0.47
14	03C. Installation and assembly work	253	0.01	-0.89	0.47
15	03D. Building completion and finishing work	253	0.01	-0.89	0.47
16	03E. Other	253	0.01	-0.89	0.47
17	04A. Commission agents' services	253	0.01	-0.89	0.47
18	04B. Wholesale trade services	253	0.01	-0.89	0.47
19	04C. Retailing services	253	0.01	-0.89	0.47
20	04D. Franchising	253	0.01	-0.89	0.47
21	04E. Other	402	-1.42	-0.14	-0.51
22	05A. Primary education services	402	-1.42	-0.14	-0.51
23	05B. Secondary education services	402	-1.42	-0.14	-0.51

24	05C. Higher education services	124	0.66	-0.74	-0.37
25	05D. Adult education	402	-1.42	-0.14	-0.51
26	05E. Other education services	402	-1.42	-0.14	-0.51
27	06A. Sewage services	124	0.66	-0.74	-0.37
28	06B. Refuse disposal services	253	0.01	-0.89	0.47
29	06C. Sanitation and similar services	402	-1.42	-0.14	-0.51
30	06D. Other	253	0.01	-0.89	0.47
31	07A. All insurance and insurance-related services	402	-1.42	-0.14	-0.51
32	07B. Banking and other financial services	402	-1.42	-0.14	-0.51
33	07C. Other	402	-1.42	-0.14	-0.51
34	08A. Hospital services	253	0.01	-0.89	0.47
35	08B. Other human health services	253	0.01	-0.89	0.47
36	08C. Social services	402	-1.42	-0.14	-0.51
37	08D. Other	402	-1.42	-0.14	-0.51
38	09A. Hotels and restaurants	124	0.66	-0.74	-0.37
39	09B. Travel agencies and tour operators services	124	0.66	-0.74	-0.37
40	09C. Tourist guides services	402	-1.42	-0.14	-0.51
41	09D. Other	402	-1.42	-0.14	-0.51
42	10A. Entertainment services	253	0.01	-0.89	0.47
43	10B. News agency services	253	0.01	-0.89	0.47
44	10C. Libraries, archives, museums, and other cultural services	402	-1.42	-0.14	-0.51
45	10D. Sporting and other recreational services	253	0.01	-0.89	0.47
46	10E. Other	402	-1.42	-0.14	-0.51
47	11A. Maritime transport services	252	0.01	-0.78	-0.20
48	11B. Internal waterways transport	338	-0.73	-0.34	-0.46
49	11C. Air transport services	384	-1.01	-0.26	-0.48
50	11D. Space transport	402	-1.42	-0.14	-0.51
51	11E. Rail transport services	269	-0.02	-0.68	-0.06

52	11F. Road transport services	178	0.40	-0.80	-0.04
53	11G. Pipeline transport	402	-1.42	-0.14	-0.51
54	11H. Services auxiliary to all modes of transport	181	0.33	-0.82	0.05
55	11I. Other transport services	402	-1.42	-0.14	-0.51

Notes: ^a The same ranking number is used for the sectors with equal scores.

Source: Made by the authors based on the ASEAN MNP Agreement.

Table E18. Principal Component Analysis and Ranking for Singapore (55 Sub-sectors)

Serial no.	Sector	Country-sector ranking based on Principal Component 1 (out of 550 in total) ^a	Principal Component 1	Principal Component 2	Principal Component 3
1	01A. Professional services	278	-0.39	0.96	0.47
2	01B. Computer and related services	278	-0.39	0.96	0.47
3	01C. Research and development services	278	-0.39	0.96	0.47
4	01D. Real estate services	278	-0.39	0.96	0.47
5	01E. Rental/leasing services without operators	278	-0.39	0.96	0.47
6	01F. Other business services	278	-0.39	0.96	0.47
7	02A. Postal services	278	-0.39	0.96	0.47
8	02B. Courier services	278	-0.39	0.96	0.47
9	02C. Telecommunication services	278	-0.39	0.96	0.47
10	02D. Audiovisual services	278	-0.39	0.96	0.47
11	02E. Other	278	-0.39	0.96	0.47
12	03A. General construction work for building	278	-0.39	0.96	0.47
13	03B. General construction work for civil engineering	278	-0.39	0.96	0.47
14	03C. Installation and assembly work	278	-0.39	0.96	0.47
15	03D. Building completion and finishing work	278	-0.39	0.96	0.47
16	03E. Other	278	-0.39	0.96	0.47
17	04A. Commission agents' services	278	-0.39	0.96	0.47
18	04B. Wholesale trade services	278	-0.39	0.96	0.47
19	04C. Retailing services	278	-0.39	0.96	0.47

20	04D. Franchising	278	-0.39	0.96	0.47
21	04E. Other	278	-0.39	0.96	0.47
22	05A. Primary education services	278	-0.39	0.96	0.47
23	05B. Secondary education services	278	-0.39	0.96	0.47
24	05C. Higher education services	278	-0.39	0.96	0.47
25	05D. Adult education	278	-0.39	0.96	0.47
26	05E. Other education services	278	-0.39	0.96	0.47
27	06A. Sewage services	278	-0.39	0.96	0.47
28	06B. Refuse disposal services	278	-0.39	0.96	0.47
29	06C. Sanitation and similar services	278	-0.39	0.96	0.47
30	06D. Other	278	-0.39	0.96	0.47
31	07A. All insurance and insurance-related services	278	-0.39	0.96	0.47
32	07B. Banking and other financial services	278	-0.39	0.96	0.47
33	07C. Other	278	-0.39	0.96	0.47
34	08A. Hospital services	278	-0.39	0.96	0.47
35	08B. Other human health services	278	-0.39	0.96	0.47
36	08C. Social services	278	-0.39	0.96	0.47
37	08D. Other	278	-0.39	0.96	0.47
38	09A. Hotels and restaurants	278	-0.39	0.96	0.47
39	09B. Travel agencies and tour operators services	278	-0.39	0.96	0.47
40	09C. Tourist guides services	278	-0.39	0.96	0.47
41	09D. Other	278	-0.39	0.96	0.47
42	10A. Entertainment services	278	-0.39	0.96	0.47
43	10B. News agency services	278	-0.39	0.96	0.47
44	10C. Libraries, archives, museums, and other cultural services	278	-0.39	0.96	0.47
45	10D. Sporting and other recreational services	278	-0.39	0.96	0.47
46	10E. Other	278	-0.39	0.96	0.47

47	11A. Maritime transport services	332	-0.57	0.77	0.31
48	11B. Internal waterways transport	332	-0.57	0.77	0.31
49	11C. Air transport services	278	-0.39	0.96	0.47
50	11D. Space transport	278	-0.39	0.96	0.47
51	11E. Rail transport services	278	-0.39	0.96	0.47
52	11F. Road transport services	278	-0.39	0.96	0.47
53	11G. Pipeline transport	278	-0.39	0.96	0.47
54	11H. Services auxiliary to all modes of transport	278	-0.39	0.96	0.47
55	11I. Other transport services	278	-0.39	0.96	0.47

Notes: ^a The same ranking number is used for the sectors with equal scores.

Source: Made by the authors based on the ASEAN MNP Agreement.

**Table E19. Principal Component Analysis and Ranking for Thailand
(55 Sub-sectors)**

Serial no.	Sector	Country-sector ranking based on Principal Component 1 (out of 550 in total) ^a	Principal Component 1	Principal Component 2	Principal Component 3
1	01A. Professional services	341	-0.90	-0.53	-0.17
2	01B. Computer and related services	187	0.21	-1.17	0.58
3	01C. Research and development services	272	-0.15	-1.09	0.31
4	01D. Real estate services	402	-1.42	-0.14	-0.51
5	01E. Rental/leasing services without operators	334	-0.66	-0.71	-0.01
6	01F. Other business services	276	-0.37	-0.92	0.17
7	02A. Postal services	402	-1.42	-0.14	-0.51
8	02B. Courier services	402	-1.42	-0.14	-0.51
9	02C. Telecommunication services	184	0.24	-1.38	0.56
10	02D. Audiovisual services	272	-0.15	-1.09	0.31
11	02E. Other	402	-1.42	-0.14	-0.51
12	03A. General construction work for building	161	0.49	-1.57	0.73
13	03B. General construction work for civil engineering	161	0.49	-1.57	0.73
14	03C. Installation and assembly work	161	0.49	-1.57	0.73
15	03D. Building completion and finishing work	161	0.49	-1.57	0.73
16	03E. Other	161	0.49	-1.57	0.73

17	04A. Commission agents' services	402	-1.42	-0.14	-0.51
18	04B. Wholesale trade services	402	-1.42	-0.14	-0.51
19	04C. Retailing services	402	-1.42	-0.14	-0.51
20	04D. Franchising	402	-1.42	-0.14	-0.51
21	04E. Other	402	-1.42	-0.14	-0.51
22	05A. Primary education services	161	0.49	-1.57	0.73
23	05B. Secondary education services	161	0.49	-1.57	0.73
24	05C. Higher education services	161	0.49	-1.57	0.73
25	05D. Adult education	161	0.49	-1.57	0.73
26	05E. Other education services	161	0.49	-1.57	0.73
27	06A. Sewage services	161	0.49	-1.57	0.73
28	06B. Refuse disposal services	161	0.49	-1.57	0.73
29	06C. Sanitation and similar services	402	-1.42	-0.14	-0.51
30	06D. Other	402	-1.42	-0.14	-0.51
31	07A. All insurance and insurance-related services	250	0.01	-1.21	0.42
32	07B. Banking and other financial services	190	0.17	-1.33	0.52
33	07C. Other	402	-1.42	-0.14	-0.51
34	08A. Hospital services	161	0.49	-1.57	0.73
35	08B. Other human health services	402	-1.42	-0.14	-0.51
36	08C. Social services	402	-1.42	-0.14	-0.51
37	08D. Other	402	-1.42	-0.14	-0.51
38	09A. Hotels and restaurants	161	0.49	-1.57	0.73
39	09B. Travel agencies and tour operators services	161	0.49	-1.57	0.73

40	09C. Tourist guides services	402	-1.42	-0.14	-0.51
41	09D. Other	402	-1.42	-0.14	-0.51
42	10A. Entertainment services	161	0.49	-1.57	0.73
43	10B. News agency services	402	-1.42	-0.14	-0.51
44	10C. Libraries, archives, museums, and other cultural services	402	-1.42	-0.14	-0.51
45	10D. Sporting and other recreational services	161	0.49	-1.57	0.73
46	10E. Other	402	-1.42	-0.14	-0.51
47	11A. Maritime transport services	246	0.09	-1.42	0.44
48	11B. Internal waterways transport	402	-1.42	-0.14	-0.51
49	11C. Air transport services	390	-1.04	-0.42	-0.26
50	11D. Space transport	402	-1.42	-0.14	-0.51
51	11E. Rail transport services	334	-0.66	-0.71	-0.01
52	11F. Road transport services	334	-0.66	-0.71	-0.01
53	11G. Pipeline transport	402	-1.42	-0.14	-0.51
54	11H. Services auxiliary to all modes of transport	250	0.01	-1.21	0.42
55	11I. Other transport services	402	-1.42	-0.14	-0.51

Notes: ^a The same ranking number is used for the sectors with equal scores.

Source: Made by the authors based on the ASEAN MNP Agreement.

**Table E20. Principal Component Analysis and Ranking for Viet Nam
(55 Sub-sectors)**

Serial no.	Sector	Country-sector ranking based on Principal Component 1 (out of 550 in total) ^a	Principal Component 1	Principal Component 2	Principal Component 3
1	01A. Professional services	32	2.89	0.13	-0.87
2	01B. Computer and related services	1	3.47	-0.04	-0.83
3	01C. Research and development services	188	0.21	-0.11	-0.61
4	01D. Real estate services	402	-1.42	-0.14	-0.51
5	01E. Rental/leasing services without operators	157	0.53	-0.10	-0.64
6	01F. Other business services	90	1.02	-0.09	-0.67
7	02A. Postal services	402	-1.42	-0.14	-0.51
8	02B. Courier services	1	3.47	-0.04	-0.83
9	02C. Telecommunication services	1	3.47	-0.04	-0.83
10	02D. Audiovisual services	90	1.02	-0.09	-0.67
11	02E. Other	402	-1.42	-0.14	-0.51
12	03A. General construction work for building	1	3.47	-0.04	-0.83
13	03B. General construction work for civil engineering	1	3.47	-0.04	-0.83
14	03C. Installation and assembly work	1	3.47	-0.04	-0.83
15	03D. Building completion and finishing work	1	3.47	-0.04	-0.83
16	03E. Other	1	3.47	-0.04	-0.83

17	04A. Commission agents' services	1	3.47	-0.04	-0.83
18	04B. Wholesale trade services	1	3.47	-0.04	-0.83
19	04C. Retailing services	1	3.47	-0.04	-0.83
20	04D. Franchising	1	3.47	-0.04	-0.83
21	04E. Other	402	-1.42	-0.14	-0.51
22	05A. Primary education services	402	-1.42	-0.14	-0.51
23	05B. Secondary education services	1	3.47	-0.04	-0.83
24	05C. Higher education services	1	3.47	-0.04	-0.83
25	05D. Adult education	1	3.47	-0.04	-0.83
26	05E. Other education services	1	3.47	-0.04	-0.83
27	06A. Sewage services	1	3.47	-0.04	-0.83
28	06B. Refuse disposal services	1	3.47	-0.04	-0.83
29	06C. Sanitation and similar services	1	3.47	-0.04	-0.83
30	06D. Other	1	3.47	-0.04	-0.83
31	07A. All insurance and insurance-related services	1	3.47	-0.04	-0.83
32	07B. Banking and other financial services	1	3.47	-0.04	-0.83
33	07C. Other	402	-1.42	-0.14	-0.51
34	08A. Hospital services	1	3.47	-0.04	-0.83
35	08B. Other human health services	1	3.47	-0.04	-0.83
36	08C. Social services	1	3.47	-0.04	-0.83
37	08D. Other	402	-1.42	-0.14	-0.51
38	09A. Hotels and restaurants	1	3.47	-0.04	-0.83
39	09B. Travel agencies and tour operators services	1	3.47	-0.04	-0.83

40	09C. Tourist guides services	402	-1.42	-0.14	-0.51
41	09D. Other	1	3.47	-0.04	-0.83
42	10A. Entertainment services	1	3.47	-0.04	-0.83
43	10B. News agency services	402	-1.42	-0.14	-0.51
44	10C. Libraries, archives, museums and other cultural services	402	-1.42	-0.14	-0.51
45	10D. Sporting and other recreational services	1	3.47	-0.04	-0.83
46	10E. Other	402	-1.42	-0.14	-0.51
47	11A. Maritime transport services	33	2.65	-0.06	-0.78
48	11B. Internal waterways transport	34	1.84	-0.08	-0.72
49	11C. Air transport services	157	0.53	-0.10	-0.64
50	11D. Space transport	402	-1.42	-0.14	-0.51
51	11E. Rail transport services	35	1.51	-0.08	-0.70
52	11F. Road transport services	157	0.53	-0.10	-0.64
53	11G. Pipeline transport	402	-1.42	-0.14	-0.51
54	11H. Services auxiliary to all modes of transport	1	3.47	-0.04	-0.83
55	11I. Other transport services	402	-1.42	-0.14	-0.51

Notes: ^a The same ranking number is used for the sectors with equal scores.

Source: Made by the authors based on the ASEAN MNP Agreement.

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