

## ERIA Discussion Paper Series

Coverage of Trade in Services under ASEAN+1 FTAs<sup>†</sup>Hikari ISHIDO<sup>‡</sup>*Faculty of Law, Politics and Economics, Chiba University*

December 2014

---

**Abstract:** *This paper examines how ASEAN-centered free trade agreements (FTAs) or so-called ASEAN+1 FTAs are correlated among themselves and thus have the potential to be merged into one single commitment toward the establishment of a Regional Comprehensive Economic Partnership (RCEP). The “Coverage Index” defined in this paper highlights similarities and differences among the ASEAN+1 FTAs (i.e., ASEAN Framework Agreement on Services 8<sup>th</sup> package [AFAS-8], ASEAN-China Free Trade Area 2<sup>nd</sup> package [ACFTA-2], ASEAN-Australia-New Zealand Free Trade Agreement [AANZFTA], and ASEAN-Korea Free Trade Agreement [AKFTA]). It has been found that the degree of liberalization in terms of the Coverage Index is highest under AFAS-8, which could serve as the focal point for the convergence of the ASEAN+1 FTAs which are positively correlated with AFAS-8. Also, the ASEAN priority integration sectors are making progress (with the exception of transport-related sectors). While the Coverage Index shows rather low levels of commitment by the member countries, a feasible policy suggestion is to further prioritize the priority integration sectors, including transport-related sectors, for a seamless ASEAN Economic Community as well as for a well-connected RCEP.*

**Keywords:** Trade in services, RCEP, liberalization

**JEL Classification:** F13, F15

---

---

<sup>†</sup> This paper was prepared for the ERIA Project entitled “Study on FTA Comparison (Phase 3) + RCEP.”

<sup>‡</sup> Director of APEC Study Center and Professor, Faculty of Law, Politics and Economics, Chiba University, 1-33 Yayoicho, Inage-ku, Chiba-shi, Chiba 263-8522, Japan. Phone: 81-43-290-2424; Fax: 81-43-290-2424. E-mail: ishido@faculty.chiba-u.jp.

## **1. Introduction**

This paper deals with how ASEAN-centered FTAs (the so-called “ASEAN+1 FTAs<sup>1</sup>) are correlated among themselves and thus have the potential to be merged into one single commitment in terms of how many of the member countries cover each of the service subsectors in their commitments. This attempt is expected to clarify what more could be done in the actual policy arena toward the establishment of a Regional Comprehensive Economic Partnership (RCEP).

The structure of this paper is as follows. The next section defines “Coverage Index” and makes some discussions on the similarities and differences among the four ASEAN+1 FTAs (i.e., the ASEAN Framework Agreement on Services [AFAS], ASEAN-China Free Trade Area [ACFTA], ASEAN-Australia-New Zealand Free Trade Agreement [AANZFTA], and ASEAN-Korea Free Trade Agreement [AKFTA]).<sup>2</sup> Section 3 makes an extension analysis with an exclusive focus on the ASEAN countries. A comparison with GATS commitment is also made. Section 4 makes some policy suggestions and concludes this paper.

## **2. Overall comparison of the ASEAN+1 FTAs using the “Coverage Index” Convergence of the ASEAN+1 FTAs**

For the convergence of the ASEAN Framework Agreement on Services (AFAS), ASEAN-China Free Trade Area (ACFTA), ASEAN-Australia-New Zealand Free Trade Agreement (AANZFTA), and ASEAN-Korea Free Trade Agreement (AKFTA), an overall comparison of service trade commitments would be needed. In this section, one such comparison is made through the introduction of the “Coverage Index.” It is expected that this sort of analysis will shed some new light on the realization of the

---

<sup>1</sup> In this paper, the ASEAN Framework Agreement on Services (AFAS) and the ASEAN-Australia-New Zealand FTAs are included as part of the ASEAN+1 FTAs.

<sup>2</sup> Under the ASEAN-Japan Comprehensive Economic Partnership Agreement (AJCEP), negotiations on market access are ongoing as of this writing; as for the ASEAN-India Free Trade Area (AIFTA), negotiations on trade in services are reportedly progressing, but relevant information is not yet publicly available.

Regional Comprehensive Economic Partnership (RCEP) among the ASEAN members and their dialogue partners in the near future.

### **Definition of the “Coverage Index”**

The “Coverage Index” (introduced and discussed in, for example, Adlung and Roy, 2005) attempts to capture the extent to which the sectors are covered by the participating countries. It is defined as “the share of commitments by FTA members in a certain sector.” When all the participating countries are committed to the service sector at issue, the value of the Coverage Index takes a maximum value of 1.0. When no participating countries are committed, the value is 0.0. When the commitment is made by some (not all) the countries, the Coverage Index takes a value between 0.0 and 1.0, depending on the number of countries with commitments. For instance, when half of the FTA member countries are committed to a service sector, the sector’s Coverage Index takes a value of 0.5. Since there are three broad types of commitments (i.e., “No limitation” [symbolized as “N”], “Limited commitment”<sup>3</sup> [symbolized as “L”], and “Unbound” [symbolized as “U”]), the Coverage Index can be calculated for each of these three commitments (or noncommitment in the case of “U”).

The Coverage Index and the Hoekman Index<sup>4</sup> (Hoekman, 1995) are complementary in the sense that the former index measures the “horizontal” coverage of FTA member countries’ commitments in a particular service sector while the latter index measures the “vertical” depth of each member country’s commitment in a particular service sector. It is expected that with the calculation of this Coverage Index, some convergence scenarios for the four existing ASEAN+1 FTAs--AFAS (package 8, abbreviated in this paper as AFAS-8), ACFTA (package 2, abbreviated as ACFTA-2), AANZFTA, and AKFTA--are facilitated.

### **Results of the Coverage Index calculations**

---

<sup>3</sup> Under this commitment pattern, there are some legal descriptions stipulating the restrictions in terms of market access or national treatment.

<sup>4</sup> The Hoekman Index method of calculation assigns the value of 1.0 for the sectors with “None” or no limitation, the value of 0.5 for those with “Limited” or some legal restriction, and the value of 0 for those sectors with “Unbound” or no promise of market openings. In this sense, the “depth” of limitation in a particular sector is not captured. See Ishido (2011) for an application of the Hoekman Index calculation to the commitment level under ASEAN+1 FTAs.

The results of Coverage Index calculations in terms of the “N-commitment,” “L-commitment,” and “U-commitment” are listed in the database constructed for this study at the back of this paper (note that these three types of indices add up to 1.0). Since the most disaggregated information seems to be useful for actual negotiations for convergence, the full listing is made. It is, however, rather hard to get an overall sense of similarities among the four ASEAN+1 FTAs.

Table 1 lists the Coverage Index calculation results at the 55-sector level. In the calculation, the simple average of the values for the most detailed 154 subsectors under the same 55-sector classification code is taken. This table reveals the following observations. In the spirit of increasing the number of sectors with “N-commitment” away from “U-commitment” and through “L-commitment,” the focus is first placed only on “N-commitment.”

AFAS-8 has an average Coverage Index value of 0.38 (the highest among the four ASEAN+1 FTAs), with “01.B Computer and Related Services” taking the highest value of 0.71. ACFTA-2 has an average Coverage Index value of 0.20, with “09.B. Travel Agencies and Tour Operators services” taking the highest value of 0.57. AANZFTA has an average Coverage Index value of 0.25, with the sector “01.B. Computer and Related Services” taking the highest value of 0.58. AKFTA has an average Coverage Index value of 0.19, with the sector “09.B. Travel Agencies and Tour Operators services” taking the highest index value of 0.56.

AFAS-8 has relatively high values of Coverage Index in the ASEAN Economic Community (AEC) “priority integration sectors” of e-ASEAN, air transport, healthcare, logistics, and tourism. In air transport, the N-commitment value is 0.13 for “11.C. Air Transport Services.” In e-ASEAN (01.B. Computer and Related Services), the value is 0.71. In healthcare, “08.A. Hospital Services” has a value of 0.56 while “08.B. Other Human Health Services” has a value 0.41. For tourism, “09.B. Travel Agencies and Tour Operators services” has a value 0.63 while “09.C. Tourist Guides Services” has a value of 0.30. In logistics, “04.B. Wholesale Trade Services” has an N-commitment Coverage Index value of 0.48; “11.B. Internal Waterways Transport,” 0.26; “11.E. Rail Transport Services,” 0.32; “11.F. Road Transport Services,” 0.42; and

“11.H. Services Auxiliary to All Modes of Transport,” 0.39.<sup>5</sup> The ASEAN priority integration sectors are shadowed in the table. It also seems that these priority integration sectors are, relatively speaking, making progress (with the exception of transport-related sectors). That said, since the corresponding values under the other ASEAN+1 FTAs are lower overall, more convergence efforts would be needed toward establishing an RCEP.

---

<sup>5</sup>This is due to lack of detailed official definition of the priority integration sectors. Thus, in this paper, we take the following sectors as the priority integration sectors: 01.B. Computer and Related Services, 02.C. Telecommunication Services, 04.B. Wholesale Trade Services, 08.A. Hospital Services, 09.B. Travel Agencies and Tour Operators services, 09.C. Tourist Guides Services, 11.A. Maritime Transport Services, 11.B. Internal Waterways Transport, 11.C. Air Transport Services, 11.E. Rail Transport Services, and 11.F. Road Transport Services.

**Table 1. List of the Coverage Index calculations at the 55-sector level**

Sector	AFAS-8			ACFTA-2			AANZFTA			AKFTA		
	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment
01.A. Professional Services	<b>0.41</b>	<b>0.13</b>	0.45	0.27	0.07	0.66	<b>0.34</b>	<b>0.25</b>	0.41	0.27	0.09	0.64
01.B. Computer and Related Services	<b>0.71</b>	<b>0.15</b>	0.15	<b>0.44</b>	<b>0.07</b>	0.49	<b>0.58</b>	<b>0.28</b>	0.14	0.43	0.04	0.53
01.C. Research and Development Services	0.43	0.07	0.50	0.18	0.03	0.80	0.14	0.26	0.60	0.21	0.02	0.78
01.D. Real Estate Services	0.14	0.00	0.86	0.13	0.01	0.86	0.14	0.27	0.59	0.06	0.00	0.94
01.E. Rental/Leasing Services without Operators	0.34	0.09	0.58	0.16	0.02	0.83	0.23	0.26	0.52	0.18	0.02	0.80
01.F. Other Business Services	0.41	0.06	0.54	0.22	0.03	0.75	0.24	0.26	0.51	0.24	0.02	0.74
02.A. Postal Services	0.11	0.11	0.78	0.03	0.06	0.91	0.00	0.25	0.75	0.03	0.06	0.91
02.B. Courier Services	<b>0.61</b>	<b>0.11</b>	0.28	0.32	0.02	0.66	0.24	0.24	0.52	0.24	0.10	0.66
02.C. Telecommunication Services	<b>0.61</b>	<b>0.20</b>	0.18	<b>0.36</b>	<b>0.17</b>	0.47	<b>0.43</b>	<b>0.32</b>	0.25	<b>0.41</b>	<b>0.12</b>	0.47
02.D. Audiovisual Services	0.28	0.06	0.66	0.13	0.02	0.85	0.11	0.27	0.62	0.13	0.02	0.85
02.E. Other	0.06	0.01	0.93	0.00	0.00	1.00	0.00	0.25	0.75	0.00	0.00	1.00
03.A. General Construction Work for Building	<b>0.48</b>	<b>0.18</b>	0.35	0.31	0.08	0.61	<b>0.48</b>	<b>0.30</b>	0.22	0.36	0.09	0.55
03.B. General Construction work for Civil Engineering	<b>0.48</b>	<b>0.18</b>	0.35	<b>0.36</b>	<b>0.15</b>	0.49	<b>0.44</b>	<b>0.32</b>	0.24	<b>0.45</b>	<b>0.16</b>	0.39
03.C. Installation and Assembly Work	<b>0.48</b>	<b>0.18</b>	0.35	0.34	0.10	0.56	<b>0.42</b>	<b>0.30</b>	0.28	0.38	0.10	0.52
03.D. Building Completion and Finishing Work	<b>0.46</b>	<b>0.18</b>	0.36	0.27	0.02	0.70	<b>0.36</b>	<b>0.31</b>	0.32	0.26	0.08	0.66
03.E. Other	<b>0.46</b>	<b>0.18</b>	0.36	0.26	0.09	0.65	<b>0.40</b>	<b>0.30</b>	0.30	0.30	0.09	0.61
04.A. Commission Agents' Services	<b>0.59</b>	<b>0.08</b>	0.34	0.32	0.05	0.64	<b>0.33</b>	<b>0.25</b>	0.42	0.28	0.00	0.72
04.B. Wholesale Trade Services	<b>0.48</b>	<b>0.06</b>	0.46	0.22	0.01	0.77	<b>0.29</b>	<b>0.25</b>	0.46	0.25	0.01	0.74
04.C. Retailing Services	0.38	0.05	0.58	0.19	0.01	0.80	0.22	0.25	0.53	0.19	0.03	0.77
04.D. Franchising	<b>0.49</b>	<b>0.03</b>	0.49	0.27	0.00	0.73	0.19	0.25	0.56	0.27	0.00	0.73
04.E. Other	0.25	0.00	0.75	0.11	0.02	0.86	0.06	0.25	0.69	0.07	0.00	0.93

05.A. Primary Education Services	0.26	0.10	0.64	0.07	0.03	0.90	0.14	0.26	0.60	0.05	0.00	0.95
05.B. Secondary Education Services	0.34	0.15	0.51	0.09	0.03	0.88	<b>0.35</b>	<b>0.27</b>	0.38	0.16	0.03	0.81
05.C. Higher Education Services	0.36	0.10	0.54	0.20	0.06	0.74	<b>0.34</b>	<b>0.29</b>	0.36	0.20	0.05	0.75
05.D. Adult Education	<b>0.54</b>	<b>0.10</b>	0.36	0.24	0.03	0.73	<b>0.24</b>	<b>0.28</b>	0.48	0.27	0.02	0.70
05.E. Other Education Services	<b>0.44</b>	<b>0.11</b>	0.45	0.23	0.06	0.72	<b>0.36</b>	<b>0.29</b>	0.34	0.14	0.01	0.85
06.A. Sewage Services	<b>0.50</b>	<b>0.14</b>	0.36	0.25	0.03	0.72	<b>0.36</b>	<b>0.25</b>	0.39	0.26	0.03	0.70
06.B. Refuse Disposal Services	<b>0.51</b>	<b>0.11</b>	0.38	0.24	0.02	0.74	<b>0.35</b>	<b>0.24</b>	0.41	0.25	0.02	0.73
06.C. Sanitation and Similar Services	0.44	0.06	0.50	0.22	0.02	0.76	<b>0.33</b>	<b>0.24</b>	0.43	0.17	0.02	0.81
06.D. Other	<b>0.55</b>	<b>0.09</b>	0.36	0.26	0.02	0.72	<b>0.32</b>	<b>0.24</b>	0.44	0.28	0.02	0.69
07.A. All Insurance and Insurance-related Services	<b>0.47</b>	<b>0.12</b>	0.41	<b>0.38</b>	<b>0.15</b>	0.47	<b>0.34</b>	<b>0.37</b>	0.29	0.32	0.15	0.53
07.B. Banking and Other Financial Services	0.38	0.10	0.52	0.32	0.11	0.57	<b>0.34</b>	<b>0.31</b>	0.35	0.24	0.09	0.67
07.C. Other	0.05	0.05	0.90	0.02	0.00	0.98	0.03	0.26	0.71	0.03	0.01	0.95
08.A. Hospital Services	<b>0.56</b>	<b>0.16</b>	0.28	0.17	0.03	0.80	0.20	0.30	0.50	0.33	0.06	0.61
08.B. Other Human Health Services	<b>0.41</b>	<b>0.11</b>	0.48	0.15	0.03	0.82	0.14	0.26	0.60	0.09	0.00	0.91
08.C. Social Services	0.36	0.05	0.59	0.05	0.00	0.95	0.04	0.25	0.71	0.05	0.00	0.95
08.D. Other	0.25	0.04	0.71	0.11	0.00	0.89	0.00	0.25	0.75	0.00	0.00	1.00
09.A. Hotels and Restaurants	<b>0.70</b>	<b>0.10</b>	0.20	<b>0.55</b>	<b>0.09</b>	0.36	<b>0.54</b>	<b>0.27</b>	0.19	<b>0.50</b>	<b>0.10</b>	0.40
09.B. Travel Agencies and Tour Operators Services	<b>0.63</b>	<b>0.09</b>	0.29	<b>0.57</b>	<b>0.07</b>	0.36	<b>0.61</b>	<b>0.28</b>	0.10	<b>0.56</b>	<b>0.06</b>	0.39
09.C. Tourist Guides Services	0.30	0.00	0.70	0.19	0.01	0.80	0.25	0.25	0.50	0.20	0.00	0.80
09.D. Other	<b>0.48</b>	<b>0.09</b>	0.44	0.09	0.02	0.89	0.05	0.24	0.71	0.11	0.02	0.86
10.A. Entertainment Services	<b>0.54</b>	<b>0.05</b>	0.41	0.28	0.02	0.69	0.18	0.26	0.56	0.24	0.01	0.75
10.B. News Agency Services	0.18	0.00	0.83	0.00	0.00	1.00	0.06	0.25	0.69	0.00	0.00	1.00
10.C. Libraries, archives, museums and other cultural services	0.29	0.04	0.68	0.07	0.00	0.93	0.06	0.25	0.69	0.07	0.00	0.93
10.D. Sporting and Other Recreational Services	0.35	0.04	0.61	0.24	0.03	0.73	0.18	0.26	0.56	0.14	0.03	0.83
10.E. Other	0.16	0.08	0.76	0.05	0.00	0.95	0.00	0.25	0.75	0.00	0.00	1.00
11.A. Maritime Transport Services	<b>0.55</b>	<b>0.16</b>	0.29	0.23	0.04	0.73	0.21	0.27	0.51	0.24	0.05	0.71

11.B. Internal Waterways Transport	0.26	0.08	0.66	0.04	0.01	0.95	0.01	0.25	0.74	0.01	0.00	0.99
11.C. Air Transport Services	0.13	0.01	0.87	0.16	0.03	0.82	0.09	0.25	0.66	0.18	0.02	0.80
11.D. Space Transport	0.06	0.01	0.93	0.00	0.00	1.00	0.00	0.25	0.75	0.00	0.00	1.00
11.E. Rail Transport Services	0.32	0.12	0.56	0.07	0.00	0.93	0.13	0.25	0.63	0.07	0.00	0.93
11.F. Road Transport Services	0.42	0.07	0.51	0.31	0.02	0.67	0.21	0.24	0.55	0.16	0.01	0.83
11.G. Pipeline Transport	0.14	0.09	0.78	0.05	0.02	0.93	0.17	0.27	0.56	0.07	0.02	0.91
11.H. Services Auxiliary to All Modes of Transport	0.39	0.09	0.52	0.24	0.05	0.71	0.22	0.25	0.53	0.20	0.04	0.75
11.I. Other Transport Services	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.25	0.75	0.05	0.00	0.95
Average	0.38	0.09	0.53	0.20	0.04	0.76	0.23	0.27	0.51	0.19	0.04	0.77

Source: Calculated from the database constructed for this study (version updated on October 3, 2013).



Next, what could be the similarity of the overall coverage patterns among the ASEAN+1 FTAs away from U-Commitment? In order to see this point, the combination of “N-Commitment” and “L-Commitment” is made: where the summation of the N-Commitment and L-commitment values takes the value of more than 0.5 (i.e., where the U-commitment value is less than 0.5), the N-Commitment and L-Commitment figures are highlighted in bold. As shown in the table, AFAS-8 is the most highly committed while the commitment of AANZFTA is a bit lower but still similar to AFAS-8. ACFTA-2 and AKFTA are rather similarly committed at a lower level than under AFAS-8 and AANZFTA. Indeed, there is a wedge between the groups of “AFAS-8 and AANZFTA” and “ACFTA-2 and AKFTA,” which should be addressed in future policy negotiations for convergence

Table 2 lists the Coverage Index calculations at the most aggregated 11-sector level. Again, this consists of the simple average for the values under the same 11-sector classification. Figures 1 to 3 graphically compare the levels of the Coverage Index by each of the commitment patterns (N, L, or U). This level of aggregation shows the following. In the spirit of increasing the number of sectors with “N-commitment” away from “U-commitment” and through “L-commitment,” the focus is placed only on “N-commitment.”

AFAS-8 has an average Coverage Index value of 0.39, with “09. Tourism and Travel Related Services” taking the largest Coverage Index value (0.53) for N-commitment while “11. Transport Services” has the smallest Coverage Index value (0.25). ACFTA-2 has an average Coverage Index value of 0.21, with “09. Tourism and Travel Related Services” having the largest Coverage Index value (0.35) and “08. Health Related and Social Services” and “11. Transport Services” having the lowest Coverage Index value of 0.12 for N-commitment.

AANZFTA has an average Coverage Index value of 0.24, with “03. Construction and Related Engineering Services” taking the highest value of 0.42. The sector “08. Health Related and Social Services” has the lowest Coverage Index value of 0.09. AKFTA has an average Coverage Index value of 0.20, with “09. Tourism and Travel Related Services” taking the highest sectoral value of 0.34 while “10. Recreational, Cultural and Sporting Services” has the lowest value of 0.09. It should be noted that since this FTA has a separate chapter on Mode 4, which covers almost all the

subsectors, the index tends to be overvalued.

An interesting observation is that “there are smaller variations in terms of liberalization level across sectors in AFASs.”<sup>8</sup> This observation might suggest that AFAS-8 is rather “harmonized,” an encouragement for boosting relevant policy coordination toward an RCEP.

---

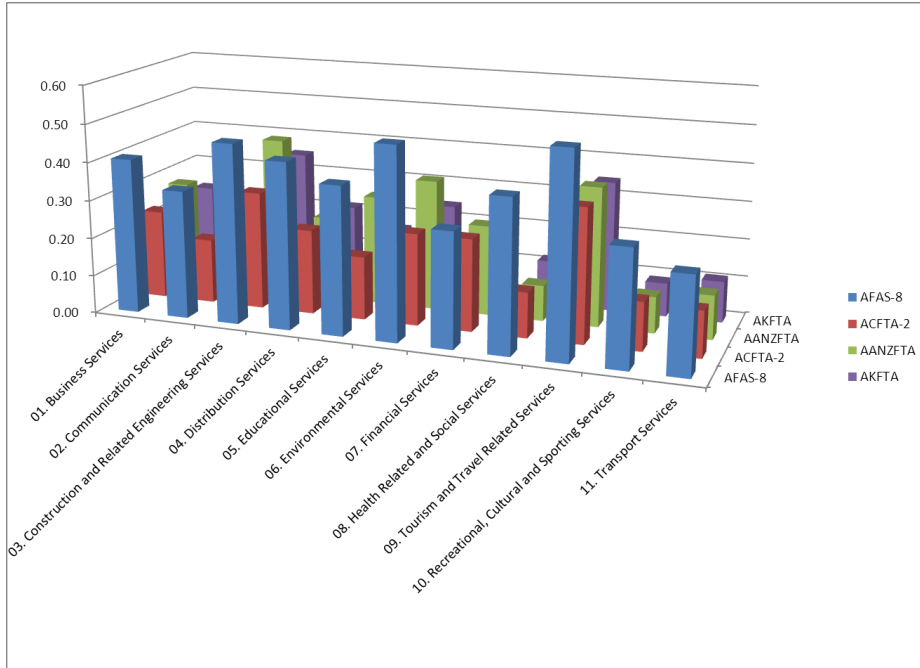
<sup>8</sup>This is a comment from Mr. Yoshifumi Fukunaga (ERIA).

**Table 2. List of the Coverage Index calculations at the 11-sector level**

Sector	AFAS-8			ACFTA-2			AANZFTA			AKFTA		
	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment
01. Business Services	0.41	0.08	0.51	0.23	0.04	0.73	0.28	0.26	0.46	0.23	0.03	0.74
02. Communication Services	0.34	0.10	0.56	0.17	0.05	0.78	0.16	0.26	0.58	0.16	0.06	0.78
03. Construction and Related Engineering Services	0.47	0.18	0.36	0.31	0.09	0.60	0.42	0.31	0.27	0.35	0.10	0.55
04. Distribution Services	0.44	0.04	0.52	0.22	0.02	0.76	0.22	0.25	0.53	0.21	0.01	0.78
05. Educational Services	0.39	0.11	0.50	0.17	0.04	0.79	0.29	0.28	0.43	0.16	0.02	0.81
06. Environmental Services	0.50	0.10	0.40	0.24	0.03	0.73	0.34	0.24	0.41	0.24	0.03	0.73
07. Financial Services	0.30	0.09	0.61	0.24	0.09	0.67	0.24	0.31	0.45	0.20	0.08	0.72
08. Health Related and Social Services	0.40	0.09	0.51	0.12	0.02	0.86	0.09	0.27	0.64	0.12	0.01	0.87
09. Tourism and Travel Related Services	0.53	0.07	0.41	0.35	0.05	0.60	0.36	0.26	0.38	0.34	0.05	0.61
10. Recreational, Cultural and Sporting Services	0.30	0.04	0.66	0.13	0.01	0.86	0.10	0.25	0.65	0.09	0.01	0.90
11. Transport Services	0.25	0.07	0.68	0.12	0.02	0.86	0.12	0.25	0.63	0.11	0.02	0.87
Average	0.39	0.09	0.52	0.21	0.04	0.75	0.24	0.27	0.49	0.20	0.04	0.76

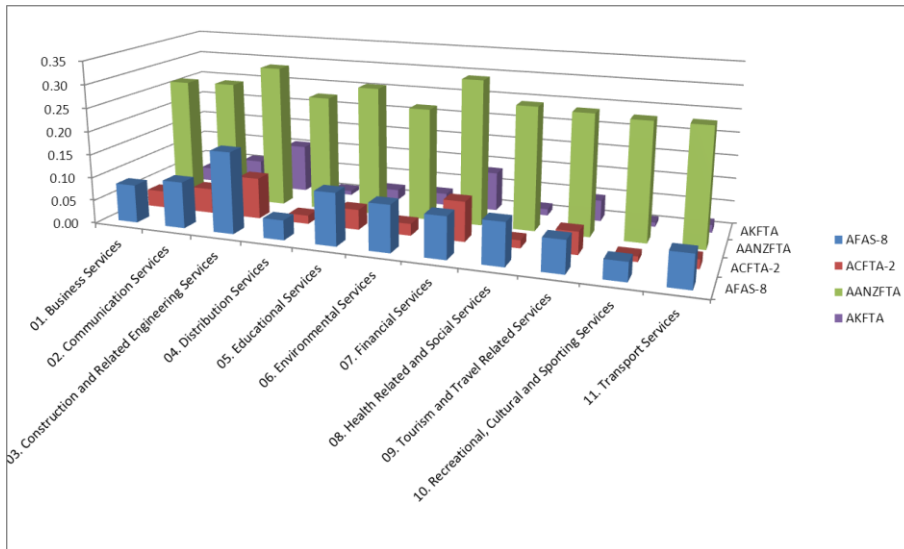
Source: Calculated from the database constructed for this study (version updated on October 3, 2013).

**Figure 1. Comparison of N-commitment under the ASEAN+1 FTAs (by 11 sectors)**



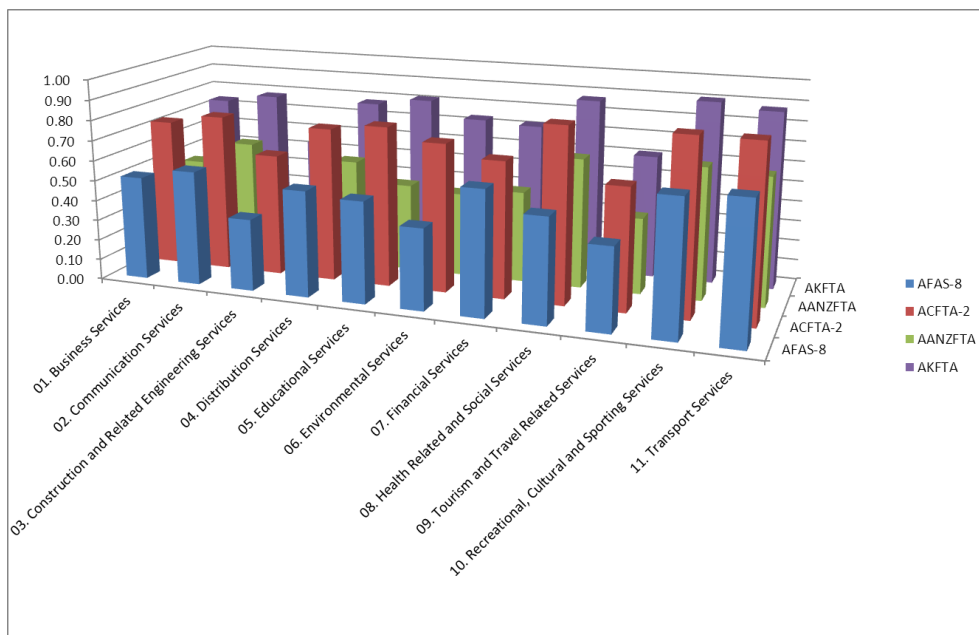
Source: Data from table 2.

**Figure 2. Comparison of L-commitment under the ASEAN+1 FTAs (by 11 sectors)**



Source: Data from table 2.

**Figure 3. Comparison of U-commitment under the ASEAN+1 FTAs (by 11 sectors)**



Source: Data from table 2.

A summary result is shown in table 3. This table calculates correlation coefficient between all the pairs of the ASEAN+1 FTAs based on the database constructed for this study (i.e., calculation is made at the most disaggregated 154-sector level).

As shown in table 3, AFAS-8 has rather high correlations with ACFTA-2 and AKFTA; on the other hand, its correlation with AANZFTA is not so high. The highest level of correlation (0.98) is observed between ACFTA-2 and AKFTA, indicating that both of these FTAs are actually highly converged with each other. AANZFTA is somewhat exceptional in the sense that it has a separate chapter on the movement of people (corresponding to Mode 4 of service supply). When Mode 4 is excluded in the calculation of coefficients involving AANZFTA, the FTA (AANZFTA) is also rather highly correlated with the other three FTAs.

Overall, all the correlation coefficients are positive, indicating that industry-level commitment patterns are more or less shared among all the ASEAN+1 FTAs.

**Table 3. Correlation coefficient between all the pairs of the ASEAN+1 FTAs**

	AFAS-8	ACFTA-2	AANZFTA(1-4)	AANZFTA(1-3)	AKFTA
AFAS-8	-				
ACFTA-2	0.76	-			
AANZFTA(1-4)	0.32	0.40	-		
AANZFTA(1-3)	0.70	0.95	-	-	
AKFTA	0.76	0.98	0.41	0.96	-

*Notes:* AANZFTA (1-4) means that all the four modes have been considered in the calculation for this FTA; AANZFTA (1-3) means that only modes 1-3 have been considered; this is because AANZFTA is unique in that it has a separate chapter on mode 4, which might be a source of deflated correlation. The correlation coefficients involving AANZFTA (1-3) use data on modes 1-3 only (excluding data on mode 4).

*Source:* Calculated from the database constructed for this study (version updated on October 3, 2013).

It would be useful to make a by-mode analysis of the Coverage Index. For ease of viewing, only the 11-sector disaggregation results are shown in tables 4 to 8 for Modes 1 to 4, respectively. In the following, N-commitment is the sole focus. In Mode 1 (table 4), AFAS-8 has an average Coverage Index value of 0.48, while ACFTA-2 has 0.19; AANZFTA, 0.24; and AKFTA, 0.19. Thus, AFAS-8 has the highest average commitment level among the four ASEAN+1 FTAs. In Mode 2 (table 5), AFAS-8 has the highest average index value of 0.66 while ACFTA-2 has 0.36; AANZFTA, 0.40; and AKFTA, 0.36. In Mode 3 (table 6), AFAS-8 has the highest index value of 0.39 while ACFTA-2 has an average value of 0.25; AANZFTA, 0.29; and AKFTA, 0.24. In Mode 4 (table 7), AFAS-8 has the highest (albeit low in absolute terms) average value of 0.04 while ACFTA-2 has 0.03; AANZFTA, 0.02; and AKFTA, 0.02. Also, AANZFTA has the highest L-commitment value (since it has a separate service chapter in which almost all the sectors are committed).

**Table 4. Coverage Indices of the ASEAN+1 FTAs in Mode 1**

Sector	AFAS-8			ACFTA-2			AANZFTA			AKFTA		
	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment
01. Business Services	0.59	0.01	0.40	0.30	0.01	0.69	0.36	0.01	0.62	0.29	0.01	0.69
02. Communication Services	0.46	0.04	0.50	0.20	0.05	0.75	0.19	0.02	0.79	0.20	0.05	0.75
03. Construction and Related Engineering Services	0.25	0.00	0.75	0.10	0.00	0.90	0.28	0.00	0.72	0.15	0.00	0.85
04. Distribution Services	0.56	0.00	0.44	0.21	0.01	0.78	0.24	0.00	0.76	0.22	0.00	0.78
05. Educational Services	0.54	0.00	0.46	0.11	0.00	0.89	0.32	0.00	0.68	0.17	0.00	0.83
06. Environmental Services	0.63	0.00	0.38	0.16	0.00	0.84	0.33	0.00	0.67	0.16	0.00	0.84
07. Financial Services	0.30	0.05	0.65	0.23	0.05	0.72	0.20	0.06	0.73	0.19	0.05	0.76
08. Health Related and Social Services	0.56	0.00	0.44	0.14	0.00	0.86	0.10	0.00	0.90	0.16	0.00	0.84
09. Tourism and Travel Related Services	0.71	0.00	0.29	0.44	0.00	0.56	0.42	0.01	0.57	0.38	0.00	0.63
10. Recreational, Cultural and Sporting Services	0.36	0.00	0.64	0.09	0.00	0.91	0.08	0.00	0.92	0.06	0.00	0.94
11. Transport Services	0.32	0.01	0.67	0.12	0.01	0.88	0.12	0.01	0.88	0.09	0.01	0.90
Average	0.48	0.01	0.51	0.19	0.01	0.80	0.24	0.01	0.75	0.19	0.01	0.80

*Source:* Calculated from the database constructed for this study (version updated on October 3,2013).

**Table 5. Coverage Indices of the ASEAN+1 FTAs in Mode 2**

Sector	AFAS-8			ACFTA-2			AANZFTA			AKFTA		
	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment
01. Business Services	0.64	0.00	0.36	0.35	0.00	0.65	0.40	0.01	0.59	0.35	0.00	0.65
02. Communication Services	0.54	0.00	0.46	0.28	0.00	0.72	0.24	0.00	0.76	0.28	0.00	0.72
03. Construction and Related Engineering Services	1.00	0.00	0.00	0.67	0.00	0.33	0.83	0.00	0.17	0.80	0.00	0.20
04. Distribution Services	0.70	0.00	0.30	0.36	0.00	0.64	0.32	0.00	0.68	0.33	0.00	0.67
05. Educational Services	0.71	0.00	0.29	0.36	0.00	0.64	0.54	0.00	0.46	0.35	0.00	0.65
06. Environmental Services	0.80	0.00	0.20	0.41	0.00	0.59	0.52	0.00	0.48	0.39	0.00	0.61
07. Financial Services	0.52	0.04	0.44	0.42	0.04	0.54	0.41	0.04	0.55	0.34	0.04	0.62
08. Health Related and Social Services	0.69	0.00	0.31	0.20	0.00	0.80	0.17	0.00	0.83	0.20	0.00	0.80
09. Tourism and Travel Related Services	0.78	0.00	0.23	0.50	0.00	0.50	0.56	0.00	0.44	0.55	0.00	0.45
10. Recreational, Cultural and Sporting Services	0.52	0.00	0.48	0.24	0.00	0.76	0.17	0.00	0.83	0.16	0.00	0.84
11. Transport Services	0.41	0.00	0.59	0.20	0.00	0.80	0.19	0.00	0.81	0.18	0.00	0.81
Average	0.66	0.00	0.33	0.36	0.00	0.63	0.40	0.00	0.60	0.36	0.00	0.64

Source: Calculated from the database constructed for this study (version updated on October 3, 2013).



**Table 6. Coverage Indices of the ASEAN+1 FTAs in Mode 3**

Sector	AFAS-8			ACFTA-2			AANZFTA			AKFTA		
	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment
01. Business Services	0.38	0.18	0.45	0.26	0.10	0.65	0.32	0.07	0.60	0.27	0.06	0.66
02. Communication Services	0.30	0.19	0.51	0.17	0.10	0.72	0.18	0.06	0.77	0.16	0.11	0.73
03. Construction and Related Engineering Services	0.60	0.30	0.10	0.44	0.24	0.33	0.53	0.26	0.21	0.43	0.28	0.29
04. Distribution Services	0.47	0.14	0.39	0.31	0.05	0.64	0.32	0.00	0.68	0.31	0.03	0.66
05. Educational Services	0.30	0.27	0.43	0.19	0.09	0.72	0.29	0.12	0.59	0.13	0.08	0.79
06. Environmental Services	0.53	0.25	0.23	0.35	0.06	0.59	0.48	0.01	0.51	0.38	0.06	0.57
07. Financial Services	0.33	0.17	0.50	0.28	0.19	0.54	0.29	0.20	0.52	0.25	0.20	0.56
08. Health Related and Social Services	0.34	0.28	0.39	0.14	0.07	0.80	0.10	0.06	0.83	0.10	0.06	0.84
09. Tourism and Travel Related Services	0.49	0.20	0.31	0.36	0.14	0.50	0.42	0.09	0.49	0.36	0.13	0.51
10. Recreational, Cultural and Sporting Services	0.31	0.09	0.60	0.17	0.04	0.79	0.13	0.03	0.85	0.12	0.03	0.85
11. Transport Services	0.23	0.16	0.61	0.13	0.05	0.82	0.14	0.03	0.83	0.12	0.03	0.84
Average	0.39	0.20	0.41	0.25	0.10	0.64	0.29	0.08	0.63	0.24	0.10	0.66

Source: Calculated from the database constructed for this study (version updated on October 3, 2013).

**Table 7. Coverage Indices of the ASEAN+1 FTAs in Mode 4**

Sector	AFAS-8			ACFTA-2			AANZFTA			AKFTA		
	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment
01. Business Services	0.03	0.14	0.84	0.02	0.04	0.94	0.02	0.95	0.03	0.01	0.04	0.95
02. Communication Services	0.04	0.17	0.79	0.02	0.06	0.92	0.02	0.98	0.00	0.00	0.08	0.92
03. Construction and Related Engineering Services	0.03	0.40	0.57	0.03	0.12	0.85	0.03	0.98	0.00	0.03	0.14	0.84
04. Distribution Services	0.01	0.03	0.96	0.01	0.01	0.98	0.00	1.00	0.00	0.00	0.01	0.99
05. Educational Services	0.00	0.18	0.82	0.00	0.08	0.92	0.00	1.00	0.00	0.00	0.01	0.99
06. Environmental Services	0.05	0.15	0.80	0.05	0.05	0.91	0.04	0.96	0.00	0.05	0.05	0.91
07. Financial Services	0.05	0.09	0.86	0.04	0.06	0.90	0.05	0.95	0.00	0.01	0.05	0.94
08. Health Related and Social Services	0.00	0.09	0.91	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
09. Tourism and Travel Related Services	0.13	0.08	0.80	0.09	0.06	0.85	0.06	0.94	0.00	0.09	0.06	0.85
10. Recreational, Cultural and Sporting Services	0.02	0.07	0.91	0.01	0.01	0.98	0.01	0.99	0.00	0.01	0.01	0.98
11. Transport Services	0.05	0.11	0.84	0.03	0.02	0.94	0.02	0.98	0.00	0.04	0.02	0.94
Average	0.04	0.14	0.83	0.03	0.05	0.93	0.02	0.98	0.00	0.02	0.04	0.94

Source: Calculated from the database constructed (version updated on October 3,2013).

Tables 8 to 11 show the correlation coefficient of the Coverage Index among the ASEAN+1 FTAs under Modes 1 to 4, respectively. Table 8 shows that in Mode 1, ACFTA-2 and AKFTA have the highest correlation value of 0.97 while table 9 shows that ACFTA-2, AANFTA, and AKFTA have a common correlation value of 0.96. Table 10 indicates that ACFTA-2 and AKFTA have a correlation value of 0.96, and table 11 shows that AFAS-8, ACFTA-2, and AKFTA share a common correlation value of 0.96. In Modes 1 to 3, AFAS-8 has positive correlations with all the other ASEAN+1 FTAs, and in Mode 4, AFAS has strong, positive correlations with ACFTA-2 and AKFTA. Since AFAS-8 will be at the center of the RCEP in the near future, the remaining three ASEAN+1 FTAs (ACFTA-2, AANZFTA, and AKFTA) should ensure that each service sector be covered by as many member countries as possible.

**Table 8. Correlation Coefficient of the Coverage Indices among the ASEAN+1 FTAs (Mode 1)**

ASEAN+1 FTA	AFAS-8	ACFTA-2	AANZFTA	AKFTA
AKFTA	-			
ACFTA-2	0.64	-		
AANZFTA	0.70	0.95	-	
AKFTA	0.65	0.97	0.96	-

*Source:* Calculated from the database constructed for this study.

**Table 9. Correlation Coefficient of the Coverage Indices among the ASEAN+1 FTAs (Mode 2)**

ASEAN+1 FTA	AFAS-8	ACFTA-2	AANZFTA	AKFTA
AKFTA	-			
ACFTA-2	0.68	-		
AANZFTA	0.71	0.96	-	
AKFTA	0.66	0.96	0.95	-

*Source:* Calculated from the database constructed for this study.

**Table 10. Correlation Coefficient of the Coverage Indices among the ASEAN+1 FTAs (Mode 3)**

ASEAN+1 FTA	AFAS-8	ACFTA-2	AANZFTA	AKFTA
AKFTA	-			
ACFTA-2	0.67	-		
AANZFTA	0.70	0.94	-	
AKFTA	0.66	0.96	0.95	-

*Source:* Calculated from the database constructed for this study.

**Table 11. Correlation Coefficient of the Coverage Indices among the ASEAN+1 FTAs (Mode 4)**

ASEAN+1 FTA	AFAS-8	ACFTA-2	AANZFTA	AKFTA
AKFTA	-			
ACFTA-2	0.96	-		
AANZFTA	-0.35	-0.46	-	
AKFTA	0.96	1.00	-0.46	-

*Source:* Calculated from the database constructed for this study.

### **3. An extension analysis: Focus on the ASEAN countries only**

This section makes the same analysis as the previous section but with an exclusive focus on the ASEAN member countries. Table 12 lists the Coverage Index calculations at the 55-sector level, with an exclusive focus on the ASEAN countries. China under ACFTA, Australia and New Zealand under AANZFTA, and Korea under AKFTA were excluded. Likewise, table 13 lists the Coverage Index calculations at the 11-sector level, again with an exclusive focus only on the ASEAN member countries. As is shown in table 13, AFAS-8 has the highest Coverage Index for N (0.39) followed by AANZFTA (0.23), ACFTA-2 (0.22), and AKFTA (0.20). As for individual sectors, “09. Tourism and Travel Related Services” has the highest N-commitment at 0.53, signifying that more than half of the ASEAN member countries have confirmed full liberalization. On the other hand, both “10. Recreational, Cultural and Sporting Services” and “11. Transport Services” under AANZFTA and AKFTA have the lowest N-commitment value of 0.09. Figures 4, 5, and 6 graphically show the commitments under each of the four FTAs.

The N-Commitment and L-Commitment figures combined are highlighted in bolded red. As discussed in table 1 (which includes non-ASEAN members’ commitments), there

is a similarity between AFAS-8 and AANZFTA. The commitment patterns are also similar between ACFTA-2 and AKFTA. As in the case of table 1, the pair of “AFAS-8 and AANZFTA” is more highly committed than the pair of “ACFTA-2 and AKFTA.” The average figures imply that, overall, ASEAN member countries are most widely committed under AFAS-8. Also, the ASEAN priority integrated sectors (defined in this paper as the shadowed sectors in the table) are rather well covered by the ASEAN member countries, judging from the overall correspondence of the red-colored figures and the red-colored sectors (with the exception of transport-related sectors toward the bottom of the table).

**Table 12. List of the Coverage Index calculations at the 55-sector level (focus on the ASEAN countries only)**

Sector	AFAS-8			ACFTA-2			AANZFTA			AKFTA		
	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment
01.A. Professional Services	<b>0.41</b>	<b>0.13</b>	0.45	0.26	0.06	0.68	<b>0.29</b>	<b>0.26</b>	0.45	0.25	0.09	0.66
01.B. Computer and Related Services	<b>0.71</b>	<b>0.15</b>	0.15	<b>0.44</b>	<b>0.07</b>	0.49	<b>0.56</b>	<b>0.29</b>	0.16	0.40	0.05	0.56
01.C. Research and Development Services	0.43	0.07	0.50	0.17	0.03	0.80	0.14	0.26	0.60	0.16	0.02	0.82
01.D. Real Estate Services	0.14	0.00	0.86	0.08	0.00	0.93	0.04	0.25	0.71	0.04	0.00	0.96
01.E. Rental/Leasing Services without Operators	0.34	0.09	0.58	0.17	0.02	0.81	0.15	0.26	0.59	0.14	0.01	0.85
01.F. Other Business Services	0.41	0.06	0.54	0.21	0.02	0.77	0.19	0.26	0.55	0.20	0.02	0.78
02.A. Postal Services	0.11	0.11	0.78	0.04	0.06	0.90	0.00	0.25	0.75	0.04	0.06	0.90
02.B. Courier Services	<b>0.61</b>	<b>0.11</b>	0.28	0.29	0.01	0.70	<b>0.29</b>	<b>0.24</b>	0.48	0.24	0.06	0.70
02.C. Telecommunication Services	<b>0.61</b>	<b>0.20</b>	0.18	<b>0.35</b>	<b>0.16</b>	0.49	<b>0.38</b>	<b>0.32</b>	0.30	<b>0.38</b>	<b>0.13</b>	0.49
02.D. Audiovisual Services	0.28	0.06	0.66	0.13	0.02	0.85	0.10	0.26	0.64	0.11	0.02	0.86
02.E. Other	0.06	0.01	0.93	0.00	0.00	1.00	0.00	0.25	0.75	0.00	0.00	1.00
03.A. General Construction Work for Building	<b>0.48</b>	<b>0.18</b>	0.35	0.30	0.08	0.63	<b>0.45</b>	<b>0.31</b>	0.24	0.35	0.10	0.55
03.B. General Construction work for Civil Engineering	<b>0.48</b>	<b>0.18</b>	0.35	<b>0.36</b>	<b>0.15</b>	0.49	<b>0.40</b>	<b>0.34</b>	0.26	<b>0.46</b>	<b>0.16</b>	0.38
03.C. Installation and Assembly Work	<b>0.48</b>	<b>0.18</b>	0.35	0.34	0.10	0.56	<b>0.38</b>	<b>0.31</b>	0.31	0.38	0.10	0.53
03.D. Building Completion and Finishing Work	<b>0.46</b>	<b>0.18</b>	0.36	0.26	0.01	0.73	<b>0.31</b>	<b>0.33</b>	0.36	0.29	0.09	0.63
03.E. Other	<b>0.46</b>	<b>0.18</b>	0.36	0.25	0.09	0.66	<b>0.35</b>	<b>0.31</b>	0.34	0.29	0.09	0.63
04.A. Commission Agents' Services	<b>0.59</b>	<b>0.08</b>	0.34	0.31	0.04	0.65	0.25	0.25	0.50	0.25	0.00	0.75

04.B. Wholesale Trade Services	<b>0.48</b>	<b>0.06</b>	0.46	0.20	0.00	0.80	0.20	0.25	0.55	0.24	0.00	0.76
04.C. Retailing Services	0.38	0.05	0.58	0.18	0.00	0.83	0.13	0.25	0.63	0.16	0.03	0.81
04.D. Franchising	<b>0.49</b>	<b>0.03</b>	0.49	0.23	0.00	0.78	0.15	0.25	0.60	0.23	0.00	0.78
04.E. Other	0.25	0.00	0.75	0.08	0.00	0.93	0.08	0.25	0.68	0.08	0.00	0.93
05.A. Primary Education Services	0.26	0.10	0.64	0.05	0.01	0.94	0.09	0.26	0.65	0.05	0.00	0.95
05.B. Secondary Education Services	0.34	0.15	0.51	0.08	0.01	0.91	<b>0.28</b>	<b>0.28</b>	0.45	0.18	0.04	0.79
05.C. Higher Education Services	0.36	0.10	0.54	0.20	0.04	0.76	<b>0.28</b>	<b>0.30</b>	0.43	0.20	0.04	0.76
05.D. Adult Education	<b>0.54</b>	<b>0.10</b>	0.36	0.24	0.01	0.75	<b>0.29</b>	<b>0.29</b>	0.43	0.28	0.01	0.71
05.E. Other Education Services	<b>0.44</b>	<b>0.11</b>	0.45	0.23	0.04	0.74	<b>0.30</b>	<b>0.30</b>	0.40	0.15	0.01	0.84
06.A. Sewage Services	<b>0.50</b>	<b>0.14</b>	0.36	0.23	0.03	0.75	<b>0.29</b>	<b>0.25</b>	0.46	0.23	0.04	0.74
06.B. Refuse Disposal Services	<b>0.51</b>	<b>0.11</b>	0.38	0.21	0.01	0.78	<b>0.28</b>	<b>0.24</b>	0.49	0.21	0.03	0.76
06.C. Sanitation and Similar Services	0.44	0.06	0.50	0.19	0.01	0.80	0.25	0.24	0.51	0.19	0.03	0.79
06.D. Other	<b>0.55</b>	<b>0.09</b>	0.36	0.24	0.01	0.75	0.24	0.24	0.53	0.24	0.03	0.74
07.A. All Insurance and Insurance-related Services	<b>0.47</b>	<b>0.12</b>	0.41	<b>0.38</b>	<b>0.14</b>	0.48	<b>0.33</b>	<b>0.37</b>	0.30	0.33	0.15	0.53
07.B. Banking and Other Financial Services	0.38	0.10	0.52	0.32	0.10	0.57	<b>0.32</b>	<b>0.32</b>	0.36	0.25	0.10	0.66
07.C. Other	0.05	0.05	0.90	0.03	0.00	0.98	0.04	0.26	0.70	0.04	0.01	0.95
08.A. Hospital Services	<b>0.56</b>	<b>0.16</b>	0.28	0.19	0.04	0.78	<b>0.24</b>	<b>0.31</b>	0.45	0.36	0.06	0.58
08.B. Other Human Health Services	<b>0.41</b>	<b>0.11</b>	0.48	0.16	0.04	0.80	0.11	0.26	0.63	0.10	0.00	0.90
08.C. Social Services	0.36	0.05	0.59	0.05	0.00	0.95	0.05	0.25	0.70	0.05	0.00	0.95
08.D. Other	0.25	0.04	0.71	0.13	0.00	0.88	0.00	0.25	0.75	0.00	0.00	1.00
09.A. Hotels and Restaurants	<b>0.70</b>	<b>0.10</b>	0.20	<b>0.54</b>	<b>0.09</b>	0.38	<b>0.53</b>	<b>0.28</b>	0.20	<b>0.50</b>	<b>0.11</b>	0.39

09.B. Travel Agencies and Tour Operators services	<b>0.63</b>	<b>0.09</b>	0.29	<b>0.56</b>	<b>0.06</b>	0.38	<b>0.60</b>	<b>0.28</b>	0.13	<b>0.54</b>	<b>0.06</b>	0.40
09.C. Tourist Guides Services	0.30	0.00	0.70	0.21	0.01	0.78	0.15	0.25	0.60	0.15	0.00	0.85
09.D. Other	<b>0.48</b>	<b>0.09</b>	0.44	0.10	0.03	0.88	0.06	0.24	0.70	0.13	0.03	0.85
10.A. Entertainment Services	<b>0.54</b>	<b>0.05</b>	0.41	0.25	0.01	0.74	0.21	0.26	0.53	0.23	0.01	0.76
10.B. News Agency Services	0.18	0.00	0.83	0.00	0.00	1.00	0.00	0.25	0.75	0.00	0.00	1.00
10.C. Libraries, archives, museums and other cultural services	0.29	0.04	0.68	0.08	0.00	0.93	0.08	0.25	0.68	0.08	0.00	0.93
10.D. Sporting and Other Recreational Services	0.35	0.04	0.61	0.19	0.04	0.78	0.14	0.26	0.60	0.15	0.04	0.81
10.E. Other	0.16	0.08	0.76	0.05	0.00	0.95	0.00	0.25	0.75	0.00	0.00	1.00
11.A. Maritime Transport Services	<b>0.55</b>	<b>0.16</b>	0.29	0.23	0.04	0.73	0.21	0.27	0.52	0.22	0.05	0.73
11.B. Internal Waterways Transport	0.26	0.08	0.66	0.04	0.01	0.96	0.01	0.25	0.73	0.01	0.00	0.99
11.C. Air Transport Services	0.13	0.01	0.87	0.17	0.03	0.81	0.09	0.26	0.66	0.14	0.02	0.84
11.D. Space Transport	0.06	0.01	0.93	0.00	0.00	1.00	0.00	0.25	0.75	0.00	0.00	1.00
11.E. Rail Transport Services	0.32	0.12	0.56	0.06	0.00	0.94	0.07	0.24	0.69	0.07	0.00	0.93
11.F. Road Transport Services	0.42	0.07	0.51	0.32	0.01	0.67	0.17	0.24	0.59	0.17	0.01	0.82
11.G. Pipeline Transport	0.14	0.09	0.78	0.05	0.03	0.93	0.05	0.28	0.68	0.05	0.03	0.93
11.H. Services Auxiliary to All Modes of Transport	0.39	0.09	0.52	0.17	0.04	0.80	0.17	0.25	0.58	0.13	0.04	0.83
11.I. Other Transport Services	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.25	0.75	0.00	0.00	1.00
Average	0.38	0.09	0.53	0.26	0.06	0.68	0.29	0.26	0.45	0.25	0.09	0.66

Source: Calculated from the database constructed for this study (version updated on October 3, 2013).



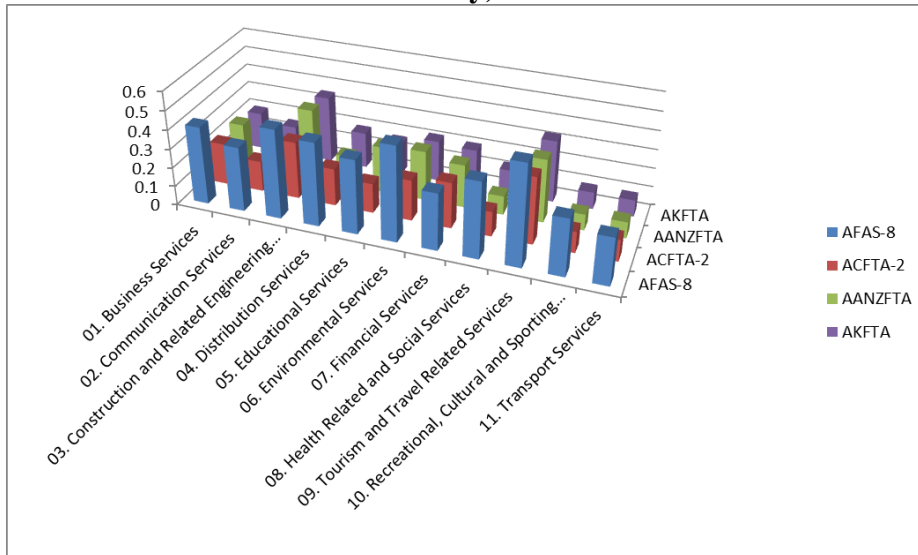
**Table 13. List of the Coverage Index calculations at the 11-sector level (focus on the ASEAN countries only)**

Sector	AFAS-8			ACFTA-2			AANZFTA			AKFTA		
	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment
01. Business Services	0.41	0.08	0.51	0.22	0.03	0.75	0.23	0.26	0.51	0.20	0.03	0.77
02. Communication Services	0.34	0.10	0.56	0.16	0.05	0.79	0.15	0.26	0.58	0.15	0.06	0.79
03. Construction and Related Engineering Services	0.47	0.18	0.36	0.30	0.09	0.61	0.38	0.32	0.30	0.35	0.11	0.54
04. Distribution Services	0.44	0.04	0.52	0.20	0.01	0.80	0.16	0.25	0.59	0.19	0.01	0.81
05. Educational Services	0.39	0.11	0.50	0.16	0.02	0.82	0.25	0.29	0.47	0.17	0.02	0.81
06. Environmental Services	0.50	0.10	0.40	0.22	0.02	0.77	0.26	0.24	0.50	0.22	0.03	0.76
07. Financial Services	0.30	0.09	0.61	0.24	0.08	0.68	0.23	0.32	0.45	0.20	0.09	0.71
08. Health Related and Social Services	0.40	0.09	0.51	0.13	0.02	0.85	0.10	0.27	0.63	0.13	0.02	0.86
09. Tourism and Travel Related Services	0.53	0.07	0.41	0.35	0.05	0.60	0.33	0.26	0.41	0.33	0.05	0.62
10. Recreational, Cultural and Sporting Services	0.30	0.04	0.66	0.11	0.01	0.88	0.09	0.26	0.66	0.09	0.01	0.90
11. Transport Services	0.25	0.07	0.68	0.12	0.02	0.87	0.09	0.25	0.66	0.09	0.02	0.90
Average	0.39	0.09	0.52	0.22	0.03	0.75	0.23	0.26	0.51	0.20	0.03	0.77

Source: Calculated from the database constructed for this study (version updated on October 3, 2013).

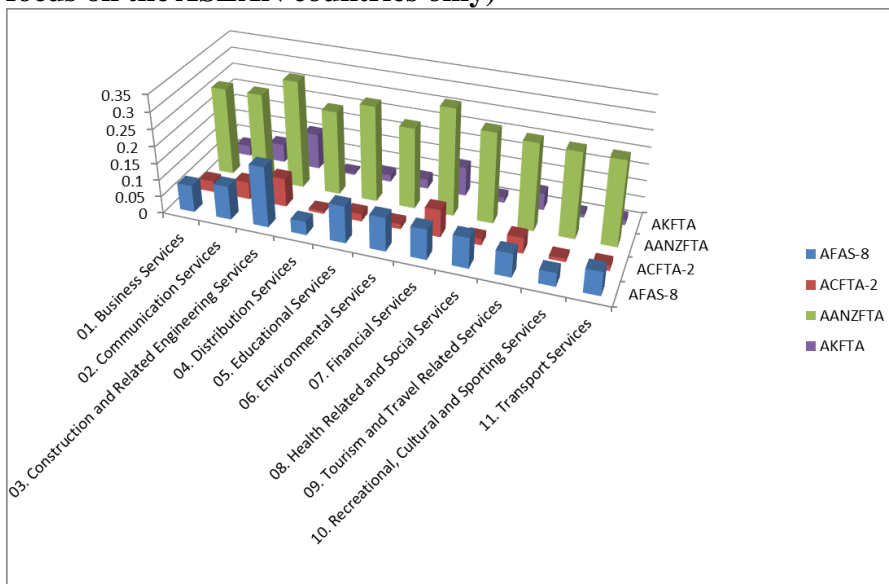
Table 12 lists a more detailed breakdown of sectors: “01.B. Computer and Related Services” under AFAS-8 has the highest N-commitment index value at 0.71 whereas “02.A. Postal Services” and “10.B. News Agency Services” both have low N-commitment values under all of the four FTAs.

**Figure 4. Comparison of N-commitment under the ASEAN+1 FTAs (by 11 sectors, focus on the ASEAN countries only)**



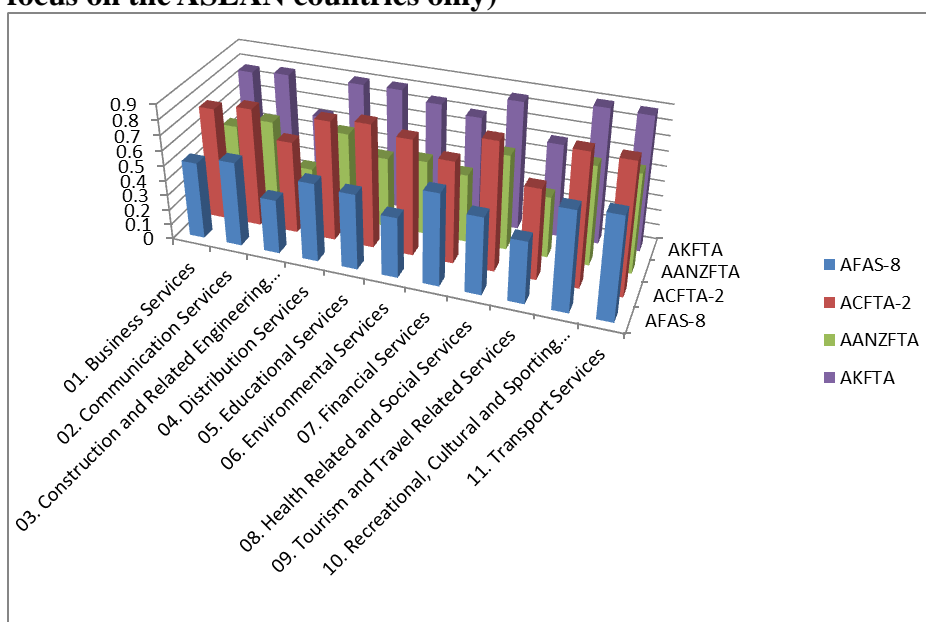
Source: Data from table 13.

**Figure 5. Comparison of L-commitment under the ASEAN+1 FTAs (by 11 sectors, focus on the ASEAN countries only)**



Source: Data from table 13.

**Figure 6. Comparison of U-commitment under the ASEAN+1 FTAs (by 11 sectors, focus on the ASEAN countries only)**



Source: Data from table 13.

Table 14 compares the four FTAs in terms of correlation coefficient while tables 15 to 18 show the Coverage Index by mode. As shown in table 14, AANZFTA (with only Modes 1 to 3 being considered) is rather closely correlated with both ACFTA-2 and AKFTA while AANZFTA (with Modes 1 to 4 being considered) is not as closely correlated due mainly to the fact that there is a separate chapter on the movement of natural persons under AANZFTA.

**Table 14. Correlation coefficient between all the pairs of the ASEAN+1 FTAs**

	AFAS-8	ACFTA-2	AANZFTA(1-4)	AANZFTA(1-3)	AKFTA
AFAS-8	-				
ACFTA-2	0.67	-			
AANZFTA(1-4)	0.31	0.43	-		
AANZFTA(1-3)	0.66	0.95	-	-	
AKFTA	0.73	0.98	0.45	0.97	-

Notes: AANZFTA (1-4) means that all the four modes have been considered in the calculation for this FTA; AANZFTA (1-3) means that only modes 1 to 3 have been considered; this is because AANZFTA is unique in that it has a separate chapter on mode 4, which might be a source of deflated correlation. The correlation coefficients involving AANZFTA (1-3) use data on modes 1 to 3 only (excluding data on mode 4).

Source: Calculated from the database constructed for this study (version updated on October 3, 2013).

Table 15 (the Coverage Index in Mode 1) reveals that in Mode 1, AFAS-8 has the highest N-commitment value of 0.48 while AFCTA-2 has the lowest N-commitment value of 0.16. Table 16 (the Coverage Index in Mode 2) reveals that AFAS-8 has the highest N-commitment value of 0.66 while ACFTA-2 has the lowest N-commitment value of 0.32. Table 17 (the Coverage Index in Mode 3) reveals that AFAS-8 has the highest N-commitment value of 0.39 (which is lower than the highest value under Mode 1 and Mode 2 while ACFTA and AKFTA both have the lowest N-commitment value of 0.24. Table 18 (the Coverage Index in Mode 4) shows that AFAS-8 has the highest (albeit by a small margin) N-commitment value of 0.04 while all the other three FTAs have the same N-commitment value of 0.03. As it stands, all of the FTAs exhibit the lowest commitment among the four modes, indicating that Mode 4 (movement of natural persons) remains the least open.

**Table 15. Coverage Indices of the ASEAN+1 FTAs in Mode 1**

Sector	AFAS-8			ACFTA-2			AANZFTA			AKFTA		
	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment
01. Business Services	0.59	0.01	0.40	0.23	0.01	0.76	0.31	0.01	0.68	0.27	0.02	0.72
02. Communication Services	0.46	0.04	0.50	0.28	0.05	0.67	0.35	0.04	0.61	0.37	0.05	0.58
03. Construction and Related Engineering Services	0.25	0.00	0.75	0.02	0.00	0.98	0.24	0.00	0.76	0.16	0.00	0.84
04. Distribution Services	0.56	0.00	0.44	0.14	0.00	0.86	0.16	0.00	0.84	0.19	0.00	0.81
05. Educational Services	0.54	0.00	0.46	0.10	0.00	0.90	0.24	0.00	0.76	0.19	0.00	0.81
06. Environmental Services	0.63	0.00	0.38	0.13	0.00	0.88	0.20	0.00	0.80	0.13	0.00	0.88
07. Financial Services	0.30	0.05	0.65	0.26	0.07	0.66	0.29	0.08	0.63	0.26	0.08	0.67
08. Health Related and Social Services	0.56	0.00	0.44	0.10	0.00	0.90	0.13	0.00	0.88	0.18	0.00	0.83
09. Tourism and Travel Related Services	0.71	0.00	0.29	0.31	0.00	0.69	0.39	0.00	0.61	0.36	0.00	0.64
10. Recreational, Cultural and Sporting Services	0.36	0.00	0.64	0.06	0.00	0.94	0.06	0.00	0.94	0.07	0.00	0.93
11. Transport Services	0.32	0.01	0.67	0.08	0.01	0.91	0.10	0.01	0.90	0.11	0.01	0.89
Average	0.48	0.01	0.51	0.16	0.01	0.83	0.22	0.01	0.76	0.21	0.01	0.78

Source: Calculated from the database constructed for this study (version updated on October 3, 2013).

**Table 16. Coverage Indices of the ASEAN+1 FTAs in Mode 2**

Sector	AFAS-8			ACFTA-2			AANZFTA			AKFTA		
	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment
01. Business Services	0.64	0.00	0.36	0.29	0.01	0.70	0.37	0.00	0.62	0.33	0.00	0.66
02. Communication Services	0.54	0.00	0.46	0.35	0.00	0.65	0.44	0.00	0.56	0.45	0.01	0.54
03. Construction and Related Engineering Services	1.00	0.00	0.00	0.46	0.00	0.54	0.80	0.00	0.20	0.80	0.00	0.20
04. Distribution Services	0.70	0.00	0.30	0.28	0.00	0.72	0.24	0.00	0.76	0.29	0.00	0.71
05. Educational Services	0.71	0.00	0.29	0.28	0.00	0.72	0.51	0.00	0.49	0.35	0.00	0.65
06. Environmental Services	0.80	0.00	0.20	0.35	0.00	0.65	0.43	0.00	0.58	0.35	0.00	0.65
07. Financial Services	0.52	0.04	0.44	0.51	0.04	0.45	0.54	0.04	0.42	0.47	0.05	0.48
08. Health Related and Social Services	0.69	0.00	0.31	0.15	0.00	0.85	0.18	0.00	0.83	0.23	0.00	0.78
09. Tourism and Travel Related Services	0.78	0.00	0.23	0.48	0.00	0.53	0.53	0.00	0.48	0.53	0.00	0.48
10. Recreational, Cultural and Sporting Services	0.52	0.00	0.48	0.18	0.00	0.82	0.16	0.00	0.84	0.16	0.00	0.84
11. Transport Services	0.41	0.00	0.59	0.17	0.00	0.83	0.18	0.00	0.82	0.19	0.00	0.81
Average	0.66	0.00	0.33	0.32	0.00	0.68	0.40	0.00	0.60	0.38	0.01	0.62

Source: Calculated from the database constructed for this study (version updated on October 3, 2013).

**Table 17. Coverage Indices of the ASEAN+1 FTAs in Mode 3**

Sector	AFAS-8			ACFTA-2			AANZFTA			AKFTA		
	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment
01. Business Services	0.38	0.18	0.45	0.25	0.06	0.69	0.26	0.09	0.64	0.25	0.07	0.68
02. Communication Services	0.30	0.19	0.51	0.21	0.14	0.65	0.28	0.16	0.55	0.28	0.18	0.55
03. Construction and Related Engineering Services	0.60	0.30	0.10	0.33	0.13	0.54	0.44	0.31	0.25	0.42	0.28	0.30
04. Distribution Services	0.47	0.14	0.39	0.28	0.00	0.72	0.24	0.00	0.76	0.28	0.01	0.71
05. Educational Services	0.30	0.27	0.43	0.19	0.04	0.77	0.23	0.14	0.63	0.14	0.07	0.79
06. Environmental Services	0.53	0.25	0.23	0.34	0.01	0.65	0.38	0.01	0.61	0.34	0.06	0.60
07. Financial Services	0.33	0.17	0.50	0.30	0.22	0.48	0.32	0.25	0.43	0.27	0.22	0.51
08. Health Related and Social Services	0.34	0.28	0.39	0.10	0.05	0.85	0.10	0.08	0.83	0.11	0.06	0.83
09. Tourism and Travel Related Services	0.49	0.20	0.31	0.36	0.10	0.54	0.35	0.11	0.54	0.33	0.14	0.54
10. Recreational, Cultural and Sporting Services	0.31	0.09	0.60	0.14	0.03	0.83	0.11	0.03	0.86	0.12	0.03	0.85
11. Transport Services	0.23	0.16	0.61	0.11	0.03	0.86	0.12	0.04	0.84	0.11	0.04	0.85
Average	0.39	0.20	0.41	0.24	0.07	0.69	0.26	0.11	0.63	0.24	0.11	0.65

Source: Calculated from the database constructed for this study (version updated on October 3, 2013).

**Table 18. Coverage Indices of the ASEAN+1 FTAs in Mode 4**

Sector	AFAS-8			ACFTA-2			AANZFTA			AKFTA		
	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment	N-commitment	L-commitment	U-commitment
01. Business Services	0.03	0.14	0.84	0.02	0.03	0.95	0.02	0.94	0.04	0.02	0.06	0.92
02. Communication Services	0.04	0.17	0.79	0.01	0.08	0.91	0.01	0.99	0.00	0.01	0.13	0.86
03. Construction and Related Engineering Services	0.03	0.40	0.57	0.03	0.11	0.86	0.03	0.97	0.00	0.03	0.15	0.82
04. Distribution Services	0.01	0.03	0.96	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.01	0.99
05. Educational Services	0.00	0.18	0.82	0.00	0.03	0.97	0.00	1.00	0.00	0.00	0.01	0.99
06. Environmental Services	0.05	0.15	0.80	0.05	0.05	0.90	0.05	0.95	0.00	0.05	0.05	0.90
07. Financial Services	0.05	0.09	0.86	0.06	0.07	0.88	0.06	0.94	0.00	0.01	0.07	0.91
08. Health Related and Social Services	0.00	0.09	0.91	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
09. Tourism and Travel Related Services	0.13	0.08	0.80	0.10	0.05	0.85	0.08	0.93	0.00	0.10	0.06	0.84
10. Recreational, Cultural and Sporting Services	0.02	0.07	0.91	0.01	0.01	0.98	0.01	0.99	0.00	0.01	0.01	0.98
11. Transport Services	0.05	0.11	0.84	0.03	0.03	0.94	0.03	0.97	0.00	0.06	0.03	0.91
Average	0.04	0.14	0.83	0.03	0.04	0.93	0.03	0.97	0.00	0.03	0.05	0.92

Source: Calculated from the database constructed for this study (version updated on October 3, 2013).



Tables 19 to 22 list correlation coefficients of the Coverage Index among the four FTAs by mode. As shown, AFAS-8 is somewhat distinct from the other three FTAs in all the modes. A special mention should be made of the fact that in Mode 4, AANZFTA is distinct from the other three FTAs (negative correlation coefficients are observed between AANZFTA and any one of the three other FTAs). This is due to the fact that AANZFTA alone has a separate chapter on the movement of natural persons.

**Table 19. Correlation Coefficient of the Coverage Indices among the ASEAN+1 FTAs (Mode 1, ASEAN countries only)**

ASEAN+1 FTA	AFAS-8	ACFTA-2	AANZFTA	AKFTA
AKFTA	-			
ACFTA-2	0.55	-		
AANZFTA	0.66	0.97	-	
AKFTA	0.62	0.98	0.98	-

*Source:* Calculated from the database constructed for this study.

**Table 20. Correlation Coefficient of the Coverage Indices among the ASEAN+1 FTAs (Mode 2, ASEAN countries only)**

ASEAN+1 FTA	AFAS-8	ACFTA-2	AANZFTA	AKFTA
AKFTA	-			
ACFTA-2	0.52	-		
AANZFTA	0.66	0.94	-	
AKFTA	0.63	0.96	0.97	-

*Source:* Calculated from the database constructed for this study.

**Table 21. Correlation Coefficient of the Coverage Indices among the ASEAN+1 FTAs (Mode 3, ASEAN countries only)**

ASEAN+1 FTA	AFAS-8	ACFTA-2	AANZFTA	AKFTA
AKFTA	-			
ACFTA-2	0.58	-		
AANZFTA	0.67	0.95	-	
AKFTA	0.63	0.97	0.97	-

*Source:* Calculated from the database constructed for this study.

**Table 22. Correlation Coefficient of the Coverage Indices among the ASEAN+1 FTAs (Mode 4, ASEAN countries only)**

ASEAN+1 FTA	AFAS-8	ACFTA-2	AANZFTA	AKFTA
AKFTA	-			
ACFTA-2	0.95	-		
AANZFTA	-0.35	-0.48	-	
AKFTA	0.96	0.99	-0.46	-

*Source:* Calculated from the database constructed for this study.

In order to have a rough estimate of how the GATS-based Commitment Index has been calculated, the nine ASEAN member countries with GATS commitment tables (i.e., Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Viet Nam) were incorporated. Table 23 shows the result of the calculations at the 11-sector level. As the average value of the Coverage Index for the N-commitment (0.03) indicates, the ASEAN member countries' commitment under the GATS is significantly lower than their commitments under any of the ASEAN+1 FTAs.

**Table 23. GATS-based Coverage Indices (excluding Laos)**

	N-commitment	L-commitment	U-commitment
01. Business Services	0.03	0.18	0.79
02. Communication Services	0.07	0.21	0.71
03. Construction and Related Engineering Services	0.05	0.22	0.73
04. Distribution Services	0.00	0.12	0.88
05. Educational Services	0.00	0.11	0.89
06. Environmental Services	0.01	0.20	0.78
07. Financial Services	0.11	0.24	0.65
08. Health Related and Social Services	0.01	0.06	0.93
09. Tourism and Travel Related Services	0.05	0.28	0.67
10. Recreational, Cultural and Sporting Services	0.01	0.07	0.92
11. Transport Services	0.01	0.08	0.90
Average	0.03	0.16	0.81

*Source:* Calculated from the database constructed for this study.

#### **4. Policy suggestions and conclusions**

This paper addresses the issue of converging the existing ASEAN+1 FTAs. The Coverage Index used in this paper shows to what extent the FTA members are committed to particular service sectors. Ideally, the index should converge at 1.0, and this is an important consideration since the RCEP should aim for the simplest structure of “N-commitments in all the service sectors by all the partner countries.”

This study has revealed that while AFAS-8 is rather distinct, the other three FTAs (i.e., ACFTA, AANZFTA, and AKFTA) are very similarly correlated (except for the fact that the Mode 4 commitment under AANZFTA is unique due to its separate chapter on the movement of natural persons). It has also been found that among the four ASEAN+1 FTAs studies, AFAS is the most deeply committed one. This is promising in the sense that ASEAN is at the center of the policy efforts toward streamlining the ASEAN+1 FTAs. In the services sector, there is no progress in WTO-mediated liberalization efforts (as reported by, for example, Gootiiz and Mattoo, 2009) as of this writing. Overall, therefore, uplifting of the coverage-widening efforts in each of the ASEAN+1 FTAs would be needed for the realization of the RCEP via convergence of these FTAs in the near future. More specifically, it is imperative to: (1) harmonize the N-based as well as L-based commitments among the ten ASEAN member countries under the current three ASEAN+1 FTAs (i.e., among ACFTA, AANZFTA, and AKFTA); (2) attempt to enhance the level of liberalization (an “ASEAN+1 template commitment on services,” so to speak); and (3) harmonize the N-based and L-based commitments between the “ASEAN+1 template commitment on services” and AFAS-8 in order to realize a first-version RCEP agreement on services. While the coverage index shows rather low levels of commitment by the member countries, a first-step and more tractable policy suggestion is to further prioritize the priority integration sectors (i.e., “01.B. Computer and Related Services,” “02.C. Telecommunication Services,” “04.B. Wholesale Trade Services,” “08.A. Hospital Services,” “09.B. Travel Agencies and Tour Operators services,” “09.C. Tourist Guides Services,” “11.A. Maritime Transport Services,” “11.B. Internal Waterways Transport,” “11.C. Air Transport Services,” “11.E. Rail Transport Services,” and “11.F. Road Transport Services”) for a seamless ASEAN Economic Community as well as for a well-connected RCEP.

## References

- Adlung, R. and M. Roy (2005), 'Turning Hills into Mountains? Current Commitments under the General Agreement on Trade in Services and Prospects for Change', *Journal of World Trade*, 39(6).
- Gootiiz, B. and A. Mattoo (2009), 'Services in Doha: What's on the Table?', *Policy Research Working Paper*, WPS4903. Washington, D.C.: World Bank. [http://www-wds.worldbank.org/external/default/main?pagePK=64193027&piPK=64187937&theSitePK=523679&menuPK=64187510&searchMenuPK=64187283&theSitePK=523679&entityID=000158349\\_20090416133806&searchMenuPK=64187283&theSitePK=523679](http://www-wds.worldbank.org/external/default/main?pagePK=64193027&piPK=64187937&theSitePK=523679&menuPK=64187510&searchMenuPK=64187283&theSitePK=523679&entityID=000158349_20090416133806&searchMenuPK=64187283&theSitePK=523679) (accessed October 2, 2014).
- Hoekman, B. (1995), 'Assessing the General Agreement on Trade in Services', *World Bank Discussion Paper*, No. 307, Washington, D.C.: World Bank.
- Ishido, H. (2011), 'Liberalization of Trade in Services under ASEAN+n: A Mapping Exercise', *ERIA Discussion Paper* 2011-02. [http://www.eria.org/publications/discussion\\_papers/liberalization-of-trade-in-services-under-aseann-a-mapping-exercise.html](http://www.eria.org/publications/discussion_papers/liberalization-of-trade-in-services-under-aseann-a-mapping-exercise.html) (accessed October 2, 2014).

## ERIA Discussion Paper Series

No.	Author(s)	Title	Year
2014-26	Hikari ISHIDO	Coverage of Trade in Services under ASEAN+1 FTAs	Dec 2014
2014-25	Junianto James LOSARI	Searching for an Ideal International Investment Protection Regime for ASEAN + Dialogue Partners (RCEP): Where Do We Begin?	Dec 2014
2014-24	Dayong ZHANG and David C. Broadstock	Impact of International Oil Price Shocks on Consumption Expenditures in ASEAN and East Asia	Nov 2014
2014-23	Dandan ZHANG, Xunpeng SHI, and Yu SHENG	Enhanced Measurement of Energy Market Integration in East Asia: An Application of Dynamic Principal Component Analysis	Nov 2014
2014-22	Yanrui WU	Deregulation, Competition, and Market Integration in China's Electricity Sector	Nov 2014
2014-21	Yanfei LI and Youngho CHANG	Infrastructure Investments for Power Trade and Transmission in ASEAN+2: Costs, Benefits, Long-Term Contracts, and Prioritised Development	Nov 2014
2014-20	Yu SHENG, Yanrui WU, Xunpeng SHI, Dandan ZHANG	Market Integration and Energy Trade Efficiency: An Application of Malmqvist Index to Analyse Multi-Product Trade	Nov 2014
2014-19	Andindya BHATTACHARYA and Tania BHATTACHARYA	ASEAN-India Gas Cooperation: Redefining India's "Look East" Policy with Myanmar	Nov 2014
2014-18	Olivier CADOT, Lili Yan ING	How Restrictive Are ASEAN's RoO?	Sep 2014
2014-17	Sadayuki TAKII	Import Penetration, Export Orientation, and Plant Size in Indonesian Manufacturing	July 2014
2014-16	Tomoko INUI, Keiko ITO, and Daisuke MIYAKAWA	Japanese Small and Medium-Sized Enterprises' Export Decisions: The Role of Overseas Market Information	July 2014
2014-15	Han PHOUMIN and	Trade-off Relationship between Energy	June

No.	Author(s)	Title	Year
	Fukunari KIMURA	Intensity-thus energy demand- and Income Level: Empirical Evidence and Policy Implications for ASEAN and East Asia Countries	2014
2014-14	Cassey LEE	The Exporting and Productivity Nexus: Does Firm Size Matter?	May 2014
2014-13	Yifan ZHANG	Productivity Evolution of Chinese large and Small Firms in the Era of Globalisation	May 2014
2014-12	Valéria SMEETS, Sharon TRAIBERMAN, Frederic WARZYNSKI	Offshoring and the Shortening of the Quality Ladder: Evidence from Danish Apparel	May 2014
2014-11	Inkyo CHEONG	Korea's Policy Package for Enhancing its FTA Utilization and Implications for Korea's Policy	May 2014
2014-10	Sothea OUM, Dionisius NARJOKO, and Charles HARVIE	Constraints, Determinants of SME Innovation, and the Role of Government Support	May 2014
2014-09	Christopher PARSONS and Pierre-Louis Vézina	Migrant Networks and Trade: The Vietnamese Boat People as a Natural Experiment	May 2014
2014-08	Kazunobu HAYAKAWA and Toshiyuki MATSUURA	Dynamic Two-way Relationship between Exporting and Importing: Evidence from Japan	May 2014
2014-07	DOAN Thi Thanh Ha and Kozo KIYOTA	Firm-level Evidence on Productivity Differentials and Turnover in Vietnamese Manufacturing	Apr 2014
2014-06	Larry QIU and Miaojie YU	Multiproduct Firms, Export Product Scope, and Trade Liberalization: The Role of Managerial Efficiency	Apr 2014
2014-05	Han PHOUMIN and Shigeru KIMURA	Analysis on Price Elasticity of Energy Demand in East Asia: Empirical Evidence and Policy Implications for ASEAN and East Asia	Apr 2014
2014-04	Youngho CHANG and Yanfei LI	Non-renewable Resources in Asian Economies: Perspectives of Availability, Applicability, Acceptability, and Affordability	Feb 2014
2014-03	Yasuyuki SAWADA and Fauziah ZEN	Disaster Management in ASEAN	Jan 2014

<b>No.</b>	<b>Author(s)</b>	<b>Title</b>	<b>Year</b>
2014-02	Cassey LEE	Competition Law Enforcement in Malaysia	Jan 2014
2014-01	Rizal SUKMA	ASEAN Beyond 2015: The Imperatives for Further Institutional Changes	Jan 2014
2013-38	Toshihiro OKUBO, Fukunari KIMURA, Nozomu TESHIMA	Asian Fragmentation in the Global Financial Crisis	Dec 2013
2013-37	Xunpeng SHI and Cecilya MALIK	Assessment of ASEAN Energy Cooperation within the ASEAN Economic Community	Dec 2013
2013-36	Tereso S. TULLAO, Jr. And Christopher James CABUAY	Education and Human Capital Development to Strengthen R&D Capacity in the ASEAN	Dec 2013
2013-35	Paul A. RASCHKY	Estimating the Effects of West Sumatra Public Asset Insurance Program on Short-Term Recovery after the September 2009 Earthquake	Dec 2013
2013-34	Nipon POAPONSAKORN and Pitsom MEETHOM	Impact of the 2011 Floods, and Food Management in Thailand	Nov 2013
2013-33	Mitsuyo ANDO	Development and Resructuring of Regional Production/Distribution Networks in East Asia	Nov 2013
2013-32	Mitsuyo ANDO and Fukunari KIMURA	Evolution of Machinery Production Networks: Linkage of North America with East Asia?	Nov 2013
2013-31	Mitsuyo ANDO and Fukunari KIMURA	What are the Opportunities and Challenges for ASEAN?	Nov 2013
2013-30	Simon PEETMAN	Standards Harmonisation in ASEAN: Progress, Challenges and Moving Beyond 2015	Nov 2013
2013-29	Jonathan KOH and Andrea Feldman MOWERMAN	Towards a Truly Seamless Single Windows and Trade Facilitation Regime in ASEAN Beyond 2015	Nov 2013
2013-28	Rajah RASIAH	Stimulating Innovation in ASEAN Institutional Support, R&D Activity and Intelletual Property Rights	Nov 2013
2013-27	Maria Monica WIHARDJA	Financial Integration Challenges in ASEAN beyond 2015	Nov 2013
2013-26	Tomohiro MACHIKITA and Yasushi UEKI	Who Disseminates Technology to Whom, How, and Why: Evidence from Buyer-Seller Business Networks	Nov 2013

No.	Author(s)	Title	Year
2013-25	Fukunari KIMURA	Reconstructing the Concept of “Single Market a Production Base” for ASEAN beyond 2015	Oct 2013
2013-24	Olivier CADOT Ernawati MUNADI Lili Yan ING	Streamlining NTMs in ASEAN: The Way Forward	Oct 2013
2013-23	Charles HARVIE, Dionisius NARJOKO, Sothea OUM	Small and Medium Enterprises’ Access to Finance: Evidence from Selected Asian Economies	Oct 2013
2013-22	Alan Khee-Jin TAN	Toward a Single Aviation Market in ASEAN: Regulatory Reform and Industry Challenges	Oct 2013
2013-21	Hisanobu SHISHIDO, Shintaro SUGIYAMA, Fauziah ZEN	Moving MPAC Forward: Strengthening Public-Private Partnership, Improving Project Portfolio and in Search of Practical Financing Schemes	Oct 2013
2013-20	Barry DESKER, Mely CABALLERO-ANTHONY, Paul TENG	Thought/Issues Paper on ASEAN Food Security: Towards a more Comprehensive Framework	Oct 2013
2013-19	Toshihiro KUDO, Satoru KUMAGAI, So UMEZAKI	Making Myanmar the Star Growth Performer in ASEAN in the Next Decade: A Proposal of Five Growth Strategies	Sep 2013
2013-18	Ruperto MAJUCA	Managing Economic Shocks and Macroeconomic Coordination in an Integrated Region: ASEAN Beyond 2015	Sep 2013
2013-17	Cassy LEE and Yoshifumi FUKUNAGA	Competition Policy Challenges of Single Market and Production Base	Sep 2013
2013-16	Simon TAY	Growing an ASEAN Voice? : A Common Platform in Global and Regional Governance	Sep 2013
2013-15	Danilo C. ISRAEL and Roehlano M. BRIONES	Impacts of Natural Disasters on Agriculture, Food Security, and Natural Resources and Environment in the Philippines	Aug 2013
2013-14	Allen Yu-Hung LAI and Seck L. TAN	Impact of Disasters and Disaster Risk Management in Singapore: A Case Study of Singapore’s Experience in Fighting the SARS Epidemic	Aug 2013



<b>No.</b>	<b>Author(s)</b>	<b>Title</b>	<b>Year</b>
2013-13	Brent LAYTON	Impact of Natural Disasters on Production Networks and Urbanization in New Zealand	Aug 2013
2013-12	Mitsuyo ANDO	Impact of Recent Crises and Disasters on Regional Production/Distribution Networks and Trade in Japan	Aug 2013
2013-11	Le Dang TRUNG	Economic and Welfare Impacts of Disasters in East Asia and Policy Responses: The Case of Vietnam	Aug 2013
2013-10	Sann VATHANA, Sothea OUM, Ponhrith KAN, Colas CHERVIER	Impact of Disasters and Role of Social Protection in Natural Disaster Risk Management in Cambodia	Aug 2013
2013-09	Sommarat CHANTARAT, Krirk PANNANGPETCH, Nattapong PUTTANAPONG, Preesan RAKWATIN, and Thanasin TANOMPONGPHANDH	Index-Based Risk Financing and Development of Natural Disaster Insurance Programs in Developing Asian Countries	Aug 2013
2013-08	Ikumo ISONO and Satoru KUMAGAI	Long-run Economic Impacts of Thai Flooding: Geographical Simulation Analysis	July 2013
2013-07	Yoshifumi FUKUNAGA and Hikaru ISHIDO	Assessing the Progress of Services Liberalization in the ASEAN-China Free Trade Area (ACFTA)	May 2013
2013-06	Ken ITAKURA, Yoshifumi FUKUNAGA, and Ikumo ISONO	A CGE Study of Economic Impact of Accession of Hong Kong to ASEAN-China Free Trade Agreement	May 2013
2013-05	Misa OKABE and Shujiro URATA	The Impact of AFTA on Intra-AFTA Trade	May 2013
2013-04	Kohei SHIINO	How Far Will Hong Kong's Accession to ACFTA will Impact on Trade in Goods?	May 2013
2013-03	Cassey LEE and Yoshifumi FUKUNAGA	ASEAN Regional Cooperation on Competition Policy	Apr 2013
2013-02	Yoshifumi FUKUNAGA and Ikumo ISONO	Taking ASEAN+1 FTAs towards the RCEP: A Mapping Study	Jan 2013
2013-01	Ken ITAKURA	Impact of Liberalization and Improved Connectivity and Facilitation in ASEAN for the ASEAN Economic Community	Jan 2013

<b>No.</b>	<b>Author(s)</b>	<b>Title</b>	<b>Year</b>
2012-17	Sun XUEGONG, Guo LIYAN, Zeng ZHENG	Market Entry Barriers for FDI and Private Investors: Lessons from China's Electricity Market	Aug 2012
2012-16	Yanrui WU	Electricity Market Integration: Global Trends and Implications for the EAS Region	Aug 2012
2012-15	Youngho CHANG, Yanfei LI	Power Generation and Cross-border Grid Planning for the Integrated ASEAN Electricity Market: A Dynamic Linear Programming Model	Aug 2012
2012-14	Yanrui WU, Xunpeng SHI	Economic Development, Energy Market Integration and Energy Demand: Implications for East Asia	Aug 2012
2012-13	Joshua AIZENMAN, Minsoo LEE, and Donghyun PARK	The Relationship between Structural Change and Inequality: A Conceptual Overview with Special Reference to Developing Asia	July 2012
2012-12	Hyun-Hoon LEE, Minsoo LEE, and Donghyun PARK	Growth Policy and Inequality in Developing Asia: Lessons from Korea	July 2012
2012-11	Cassey LEE	Knowledge Flows, Organization and Innovation: Firm-Level Evidence from Malaysia	June 2012
2012-10	Jacques MAIRESSE, Pierre MOHNEN, Yayun ZHAO, and Feng ZHEN	Globalization, Innovation and Productivity in Manufacturing Firms: A Study of Four Sectors of China	June 2012
2012-09	Ari KUNCORO	Globalization and Innovation in Indonesia: Evidence from Micro-Data on Medium and Large Manufacturing Establishments	June 2012
2012-08	Alfons PALANGKARAYA	The Link between Innovation and Export: Evidence from Australia's Small and Medium Enterprises	June 2012
2012-07	Chin Hee HAHN and Chang-Gyun PARK	Direction of Causality in Innovation-Exporting Linkage: Evidence on Korean Manufacturing	June 2012
2012-06	Keiko ITO	Source of Learning-by-Exporting Effects: Does Exporting Promote Innovation?	June 2012
2012-05	Rafaelita M. ALDABA	Trade Reforms, Competition, and Innovation in the Philippines	June 2012
2012-04	Toshiyuki MATSUURA and Kazunobu HAYAKAWA	The Role of Trade Costs in FDI Strategy of Heterogeneous Firms: Evidence from Japanese Firm-level Data	June 2012

No.	Author(s)	Title	Year
2012-03	Kazunobu HAYAKAWA, Fukunari KIMURA, and Hyun-Hoon LEE	How Does Country Risk Matter for Foreign Direct Investment?	Feb 2012
2012-02	Ikumo ISONO, Satoru KUMAGAI, Fukunari KIMURA	Agglomeration and Dispersion in China and ASEAN: A Geographical Simulation Analysis	Jan 2012
2012-01	Mitsuyo ANDO and Fukunari KIMURA	How Did the Japanese Exports Respond to Two Crises in the International Production Network?: The Global Financial Crisis and the East Japan Earthquake	Jan 2012
2011-10	Tomohiro MACHIKITA and Yasushi UEKI	Interactive Learning-driven Innovation in Upstream-Downstream Relations: Evidence from Mutual Exchanges of Engineers in Developing Economies	Dec 2011
2011-09	Joseph D. ALBA, Wai-Mun CHIA, and Donghyun PARK	Foreign Output Shocks and Monetary Policy Regimes in Small Open Economies: A DSGE Evaluation of East Asia	Dec 2011
2011-08	Tomohiro MACHIKITA and Yasushi UEKI	Impacts of Incoming Knowledge on Product Innovation: Econometric Case Studies of Technology Transfer of Auto-related Industries in Developing Economies	Nov 2011
2011-07	Yanrui WU	Gas Market Integration: Global Trends and Implications for the EAS Region	Nov 2011
2011-06	Philip Andrews-SPEED	Energy Market Integration in East Asia: A Regional Public Goods Approach	Nov 2011
2011-05	Yu SHENG, Xunpeng SHI	Energy Market Integration and Economic Convergence: Implications for East Asia	Oct 2011
2011-04	Sang-Hyop LEE, Andrew MASON, and Donghyun PARK	Why Does Population Aging Matter So Much for Asia? Population Aging, Economic Security and Economic Growth in Asia	Aug 2011
2011-03	Xunpeng SHI, Shinichi GOTO	Harmonizing Biodiesel Fuel Standards in East Asia: Current Status, Challenges and the Way Forward	May 2011
2011-02	Hikari ISHIDO	Liberalization of Trade in Services under ASEAN+n : A Mapping Exercise	May 2011
2011-01	Kuo-I CHANG, Kazunobu HAYAKAWA	Location Choice of Multinational Enterprises in China: Comparison between Japan and Taiwan	Mar 2011

<b>No.</b>	<b>Author(s)</b>	<b>Title</b>	<b>Year</b>
	Toshiyuki MATSUURA		
2010-11	Charles HARVIE, Dionisius NARJOKO, Sothea OUM	Firm Characteristic Determinants of SME Participation in Production Networks	Oct 2010
2010-10	Mitsuyo ANDO	Machinery Trade in East Asia, and the Global Financial Crisis	Oct 2010
2010-09	Fukunari KIMURA Ayako OBASHI	International Production Networks in Machinery Industries: Structure and Its Evolution	Sep 2010
2010-08	Tomohiro MACHIKITA, Shoichi MIYAHARA, Masatsugu TSUJI, and Yasushi UEKI	Detecting Effective Knowledge Sources in Product Innovation: Evidence from Local Firms and MNCs/JVs in Southeast Asia	Aug 2010
2010-07	Tomohiro MACHIKITA, Masatsugu TSUJI, and Yasushi UEKI	How ICTs Raise Manufacturing Performance: Firm-level Evidence in Southeast Asia	Aug 2010
2010-06	Xunpeng SHI	Carbon Footprint Labeling Activities in the East Asia Summit Region: Spillover Effects to Less Developed Countries	July 2010
2010-05	Kazunobu HAYAKAWA, Fukunari KIMURA, and Tomohiro MACHIKITA	Firm-level Analysis of Globalization: A Survey of the Eight Literatures	Mar 2010
2010-04	Tomohiro MACHIKITA and Yasushi UEKI	The Impacts of Face-to-face and Frequent Interactions on Innovation: Upstream-Downstream Relations	Feb 2010
2010-03	Tomohiro MACHIKITA and Yasushi UEKI	Innovation in Linked and Non-linked Firms: Effects of Variety of Linkages in East Asia	Feb 2010
2010-02	Tomohiro MACHIKITA and Yasushi UEKI	Search-theoretic Approach to Securing New Suppliers: Impacts of Geographic Proximity for Importer and Non-importer	Feb 2010
2010-01	Tomohiro MACHIKITA and Yasushi UEKI	Spatial Architecture of the Production Networks in Southeast Asia: Empirical Evidence from Firm-level Data	Feb 2010

<b>No.</b>	<b>Author(s)</b>	<b>Title</b>	<b>Year</b>
2009-23	Dionisius NARJOKO	Foreign Presence Spillovers and Firms' Export Response: Evidence from the Indonesian Manufacturing	Nov 2009
2009-22	Kazunobu HAYAKAWA, Daisuke HIRATSUKA, Kohei SHIINO, and Seiya SUKEGAWA	Who Uses Free Trade Agreements?	Nov 2009
2009-21	Ayako OBASHI	Resiliency of Production Networks in Asia: Evidence from the Asian Crisis	Oct 2009
2009-20	Mitsuyo ANDO and Fukunari KIMURA	Fragmentation in East Asia: Further Evidence	Oct 2009
2009-19	Xunpeng SHI	The Prospects for Coal: Global Experience and Implications for Energy Policy	Sept 2009
2009-18	Sothea OUM	Income Distribution and Poverty in a CGE Framework: A Proposed Methodology	Jun 2009
2009-17	Erlinda M. MEDALLA and Jenny BALBOA	ASEAN Rules of Origin: Lessons and Recommendations for the Best Practice	Jun 2009
2009-16	Masami ISHIDA	Special Economic Zones and Economic Corridors	Jun 2009
2009-15	Toshihiro KUDO	Border Area Development in the GMS: Turning the Periphery into the Center of Growth	May 2009
2009-14	Claire HOLLWEG and Marn-Heong WONG	Measuring Regulatory Restrictions in Logistics Services	Apr 2009
2009-13	Loreli C. De DIOS	Business View on Trade Facilitation	Apr 2009
2009-12	Patricia SOURDIN and Richard POMFRET	Monitoring Trade Costs in Southeast Asia	Apr 2009
2009-11	Philippa DEE and Huong DINH	Barriers to Trade in Health and Financial Services in ASEAN	Apr 2009
2009-10	Sayuri SHIRAI	The Impact of the US Subprime Mortgage Crisis on the World and East Asia: Through Analyses of Cross-border Capital Movements	Apr 2009
2009-09	Mitsuyo ANDO and Akie IRIYAMA	International Production Networks and Export/Import Responsiveness to Exchange Rates: The Case of Japanese Manufacturing Firms	Mar 2009

No.	Author(s)	Title	Year
2009-08	Archanun KOHPAIBOON	Vertical and Horizontal FDI Technology Spillovers: Evidence from Thai Manufacturing	Mar 2009
2009-07	Kazunobu HAYAKAWA, Fukunari KIMURA, and Toshiyuki MATSUURA	Gains from Fragmentation at the Firm Level: Evidence from Japanese Multinationals in East Asia	Mar 2009
2009-06	Dionisius A. NARJOKO	Plant Entry in a More Liberalised Industrialisation Process: An Experience of Indonesian Manufacturing during the 1990s	Mar 2009
2009-05	Kazunobu HAYAKAWA, Fukunari KIMURA, and Tomohiro MACHIKITA	Firm-level Analysis of Globalization: A Survey	Mar 2009
2009-04	Chin Hee HAHN and Chang-Gyun PARK	Learning-by-exporting in Korean Manufacturing: A Plant-level Analysis	Mar 2009
2009-03	Ayako OBASHI	Stability of Production Networks in East Asia: Duration and Survival of Trade	Mar 2009
2009-02	Fukunari KIMURA	The Spatial Structure of Production/Distribution Networks and Its Implication for Technology Transfers and Spillovers	Mar 2009
2009-01	Fukunari KIMURA and Ayako OBASHI	International Production Networks: Comparison between China and ASEAN	Jan 2009
2008-03	Kazunobu HAYAKAWA and Fukunari KIMURA	The Effect of Exchange Rate Volatility on International Trade in East Asia	Dec 2008
2008-02	Satoru KUMAGAI, Toshitaka GOKAN, Ikumo ISONO, and Souknilanh KEOLA	Predicting Long-Term Effects of Infrastructure Development Projects in Continental South East Asia: IDE Geographical Simulation Model	Dec 2008
2008-01	Kazunobu HAYAKAWA, Fukunari KIMURA, and Tomohiro MACHIKITA	Firm-level Analysis of Globalization: A Survey	Dec 2008