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**Working Paper**

## Cross-Regional Comparison of Trade Integration: The Case of Services

ADB Working Paper Series on Regional Economic Integration, No. 108

**Provided in Cooperation with:**

Asian Development Bank (ADB), Manila

*Suggested Citation:* Hamanaka, Shintaro (2013) : Cross-Regional Comparison of Trade Integration: The Case of Services, ADB Working Paper Series on Regional Economic Integration, No. 108, Asian Development Bank (ADB), Manila, <https://hdl.handle.net/11540/2326>

This Version is available at:

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## ADB Working Paper Series on Regional Economic Integration



### Cross-Regional Comparison of Trade Integration: The Case of Services

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Shintaro Hamanaka  
No. 108 | March 2013





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No. 108 | March 2013

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## **Abstract**

In this paper, we will examine the level of services trade integration in Asia in comparison with Europe and North America. The main empirical findings of this paper are that (i) the regional bias of services trade in Asia is as high or higher than in Europe and North America; (ii) in Asia, the regional bias of services trade is higher than that of goods trade, which is in sharp contrast to Europe and North America, where the regional bias of goods trade is higher than that of services trade; and (iii) while Asia's regional bias of goods trade shows a declining trend, that of services trade remains high, although in the future its decline is expected. Asia's relatively high-level of regional bias of services trade can be explained by the following factors: (i) a relatively high prevalence of a shared language (Chinese), which is essential to services trade, but not to goods trade; and (ii) the archipelagic nature of the region, which inhibits goods trade more than services trade. In contrast, for example, major European countries share land borders with their neighbors and they speak different languages. In order to deepen Asia's services trade integration, two policies are necessary. First, effective regional services agreements are critical to enhancing the level of integration. Second, policies to increase the trade of crisis-resilient services, such as professional services and insurance, as opposed to crisis-vulnerable services, such as transport and travel, are necessary.

*Keywords:* Services trade, regional integration, trade integration, determinants of trade, regional bias, regional trade agreement (RTA)

*JEL Classification:* F15

## 1. Introduction

Studies on services trade are very limited in number, compared with the literature on goods trade. This is especially true for services trade in Asia. While there is some interesting analysis on how dynamic the development of trade in services is in Asia (UNESCAP 2011, pp. 19–32), most research is not substantial, partly because available data are very limited. Most services literature focuses on Organisation for Economic Co-operation and Development (OECD) countries where relatively complete services datasets are available. However, it is important to include services in our trade picture of Asia, wherein the status of services trade may be very different from goods trade.

Such a lack of research on services trade is especially prominent with regard to regional trade integration. While there are many papers and books that discuss trade integration in Asia, almost all of them focus exclusively on goods trade. There are a few studies that mention services trade integration (ADB 2010),<sup>1</sup> but so far no substantial analysis of the trade in services in Asia has been conducted. This makes for a very limited understanding of Asia's services trade integration.

This paper is an attempt to make a contribution to the discussion of trade integration in Asia by conducting some analysis on services trade integration in comparison with Europe and North America. The study will answer basic questions on services trade integration in Asia. Does Asia's services trade have a positive regional bias? Is the regional bias of services trade in Asia increasing or decreasing? Is the regional bias of services trade in Asia greater or less than that of goods trade? Is the regional bias of services trade in Asia greater or less than that in Europe and North America? Rather than developing our own model to examine the explanatory power of the determinants of services trade in comparison to goods trade, our study will determine the status of services trade integration in Asia and explain the difference in degree of trade integration between goods and services using the findings of existing studies. We believe such an exercise is necessary to close our knowledge gap on services trade integration.

In this paper, we mainly examine services trade integration among four Asian economies that publish services country-level data—Hong Kong, China; Japan; the Republic of Korea; and Singapore, which will be referred to collectively as “Asia 4.” Given the increasing significance of the People's Republic of China (PRC) in the field of services trade, it will also be included in the analysis using mirror statistics (trade partners' statistics of services trade with PRC). With the inclusion of PRC, the group will be referred to as “Asia 5.” In the case of Europe, we limit our analysis to services trade of France, Germany, Italy, the Netherlands, Spain, and the United Kingdom (UK), because these six countries dominate services trade in Europe and publish relatively comprehensive sets of services trade statistics. In the case of North America, we cover three members of North America Free Trade Area (NAFTA), namely Canada, Mexico, and the United States (US).

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<sup>1</sup> ADB (2010) argues that regional integration in services trade is insignificant compared with goods trade, though its empirical analysis on the former is still preliminary.



The structure of this paper is as follows. The next section briefly explains the indicators that measure the level of regional trade integration, particularly the regional bias of trade. Section 3 reviews the literature on the determinants of services trade in comparison with goods trade and then identifies the uniqueness of the services trade in terms of the determinant factors. Based on the relative impact of each determinant factor on services and goods trade, Section 4 includes hypothetical conjectures on the regional services trade bias relative to goods in three regions: Asia, Europe, and North America. Section 5 examines the availability of services trade data, with emphasis on Asian countries. Section 6 examines the actual level of intraregional services trade integration in Asia at the sector level and overall. Section 7 examines if the hypothetical conjecture in Section 4 is consistent with the empirical findings, and attempts to explain any differences with the presence of regional trade agreements (RTAs). Section 8 summarizes the findings of this research.

## 2. Regional Bias of Trade

There are mainly two kinds of indices to assess the actual level of trade interdependence within a region: (i) intraregional trade share and (ii) intraregional trade intensity. The formulae are given below.

$$\text{Intraregional Trade Share} = T_{ii} / T_i \quad (1)$$

$$\text{Intraregional Trade Intensity} = (T_{ii} / T_i) / (T_i / T_w) \quad (2)$$

Where:

$T_{ii}$   $\equiv$  exports of region  $i$  to region  $i$  plus imports of region  $i$  from region  $i$

$T_i$   $\equiv$  total exports of region  $i$  to the world plus total imports of region  $i$  from the world

$T_w$   $\equiv$  total world exports plus imports

Intraregional trade share measures the share of regional members' trade within the region to their collective/total trade with all countries in the world. This is a widely used and easy to calculate index that provides a snapshot of trade interdependence in a particular region. However, in certain cases, this indicator becomes inappropriate for cross-regional comparisons. First, the share can rise when more countries are included in the group even if, actually, there is no regional bias in trade among members. Second, the share can increase when a large trading nation is included in the group even if, actually, there is no regional bias in trade (Plummer, Cheong, and Hamanaka 2010).

A better indicator for comparing regional bias across regions is the intraregional trade intensity index because it accounts for the weight of the region (total trade of member countries) in the world trade. For instance, if a region's share of world trade is 10% and its intraregional trade share is 10%, the resulting intensity of 1.0 indicates that the region's trade does not have a regional bias because the likelihood of trading outside or inside the region is the same -- 10%. If a region's share in world trade is 10% while the intraregional trade share is 20% (5%), the resulting intensity of 2.0 (0.5) implies that the

region's trade has a strong positive (negative) bias because the latter is twice as much (half as much) as the former. Thus, if this intensity indicator is more than 1.0, then the region's trade has a positive regional bias toward itself; if the indicator is less than 1.0, then the region's trade has a negative regional bias toward itself (and a positive regional bias toward outsiders).<sup>2</sup> It is intuitively understood easily if we start our discussion from the intensity index. If there is no/positive/negative regional bias, with (intensity of is 1.0/2.0/0.5), the region's share in the region's total trade (intraregional share) is the same as/double of/half of the region's share in the world's total trade.

### 3. Review on Determinants of Trade: Goods and Services Compared

The gravity model used in analyzing services trade is more or less similar to the gravity models used in studying goods trade. Two types of independent variables are included in gravity models in explaining bilateral goods and services trade: (i) relational factors and (ii) country-specific factors. A relational factor is a feature regarding the relation between the two countries. Each pair of countries has specific relational features. These include common language (whether two countries speak the same language or not), shared border (whether two countries share a land border or not), membership in an RTA (whether two countries belong to the same RTA or not), and distance (whether two countries are near to each other or not). In the gravity model, a dummy variable is used for each of the relational factor, except for distance, where data on specific values are available. A country-specific factor is a factor specific to a certain country that affects its trade with all other countries. These include gross domestic product (GDP), per capita GDP, population, landlocked status, labor market and wages, contract enforcement, technology, and economic freedom. In the gravity model, available data are used for these country-specific factors, except for landlocked status, where a dummy variable is used.

Relational factors, mainly, explain regional bias. On the other hand, country-specific factors of a particular country affect its trade with both regional and non-regional countries in the same manner. For example, the large GDP of the PRC affects not only the PRC's trade with Asian countries, but also its trade with non-Asian countries in the same direction. Thus, country-specific factors, such as GDP, are insufficient in explaining the regional bias of trade.

While there is a large number of literature that assesses the impact of various factors on bilateral trade in either goods or services, there are only a limited number of studies that attempt to directly examine the difference between goods and services in terms of the size of each explanatory variable's trade impact. Among these studies, there is no common method to compare the significance of each variable in goods and services trade. Kimura and Lee (2004) estimate standard gravity equations separately for

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<sup>2</sup> It must be noted though that the indicator only takes into consideration internal bias and not external bias. The regional trade introversion index is the most suitable index to measure trade interdependence that considers both intraregional and extraregional trade bias. For details on these indicators, see Plummer, Cheong, and Hamanaka (2010).

aggregate bilateral trade in services and goods to emphasize the difference between the two. Lejour and de Paiva Verheijden (2004) also examine the determinants of goods and services separately and compare the difference at the aggregate level, although this study mainly analyzes only intra-European Union (EU) trade.<sup>3</sup> Head et al. (2009) examine the explanatory power of distance and a common language on goods and services separately, although this study focuses on other commercial services (OCS).<sup>4</sup> Lennon (2009) conducts regressions on trade in goods and OCS together, and identifies the explanatory variables that affect services trade more than goods trade. Not surprisingly, while the methodology employed in each study differs, there is some agreement with regard to the explanatory power of each relational factor, although there are inconsistencies among the main findings of the four papers as well.

The explanatory power of relational variables in the four studies is summarized in Table 1. It seems that two factors (borders and language) have clear differences in terms of their explanatory power on goods and services trade, while the other two factors (distance and RTA) have ambiguous differences. There seems to be a consensus that the common language factor affects services trade much more than goods trade. If two countries share the same language, the likelihood of deepening services trade rather than goods trade increases. This is understandable because language is crucial in the supply of services. Likewise, there seems to be a consensus that a common border affects goods trade more than services trade. If two countries share a land border, this has a larger positive impact on goods rather than on services trade between the two bordering countries. This is also understandable because several types of goods can be easily delivered via land transportation, especially in the absence of air or sea transportation, if two countries share a land border. In contrast, the explanatory power of common RTA membership is ambiguous in terms of the comparison between goods and services trade. (We will revisit the significance of the RTA factor in Section 7.) The explanatory power of distance is also ambiguous in terms of the comparison between goods and services trade. While Kimura and Lee (2006) consider that distance is more critical for services trade than goods trade,<sup>5</sup> several studies find that distance is not a critical unfavorable factor for services, unlike for goods (Lennon 2009; Lejour and de Paiva Verheijden 2004). Thus, the impact of distance on services trade remains an open question in the academic debate.<sup>6</sup>

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<sup>3</sup> Lejour and de Paiva Verheijden (2004) analyze trade between Canada and European countries, and find that the determinants are statistically insignificant. They conclude that the respective impacts of a common border and language on goods and services trade are incomparable.

<sup>4</sup> OCS covers services other than government services, travel, and transport.

<sup>5</sup> Park (2002) also finds that distance has a statistically significant negative impact in all services sectors examined. Note that this paper does not compare goods trade and services trade; rather it focuses on the latter.

<sup>6</sup> In the case of goods, distance usually has a strong negative impact on trade value because distance is a proxy for transport costs. The greater the distance between the two countries, the larger the transport costs, hence the smaller the value of trade. In the case of services, although distance seems to have a statistically significant negative impact on services trade, how distance interacts with the value of services trade remains unclear. One possibility is that distance is a proxy for an information network in the case of services, unlike in goods where distance is a proxy for transport costs. Kandilov and Grennes (2012) find that the distance factor is negligible in explaining services trade after controlling for information barriers. Another possibility is that some sectors of services trade, such as transport services, correlate with goods trade and since goods trade is affected by distance, those services sectors is also affected by distance.

**Table 1: Comparison of Determinants of Goods and Services Trade**

	Distance	Common Border	Common Language	RTA
Kimura and Lee (2006)	(Slightly) larger negative impact on services	Much larger positive impact on goods	Much larger positive impact on services	No significant difference
Lejour and de Paiva Verheijden (2004)	Slightly larger negative impact on goods	Much larger positive impact on goods	Slightly larger positive impact on services	NA
Head et al. (2009)	Larger negative impact on services	NA	Larger positive impact on services	NA
Lennon (2009)	(Much) larger negative impact on goods	Much larger positive impact on goods	Much larger positive impact on services	Much larger positive impact on services

NA = Not Available, RTA = Regional Trade Agreement.

Notes:

1. Head et al. (2009) find that common language has a larger impact on services trade when a standard gravity model is used, but also find that such impact is statistically insignificant if a fixed-effect estimation is used. Therefore, comparison between goods and services is difficult.

2. Kimura and Lee (2006) find that the impact of common border and language on services is statistically insignificant if import data are used. Therefore, comparison between goods and services is difficult.

Source: Author's compilation.

#### 4. Predicting the Regional Bias of Services Trade in Three Regions

In this section, we will make some conjectures on the level of regional services trade bias relative to regional goods trade bias in three regions: Asia, Europe, and North America. In Section 7, these conjectures will be compared against the actual status of regional services and goods trade integration, which will be analyzed in Section 6. We will make hypothetical conjectures based on the factors with unambiguous explanatory power: common borders and common language. As we saw in Section 3, the factor of common border has a larger impact on goods than services, while the factor of common language has a larger impact on services than goods.

We will not consider the distance factor because the relative impact of distance on goods and services trade is ambiguous. In addition, because all regional groupings are a group of countries geographically proximate with each other, this factor does not explain variations across regions. For example, if the distance factor has a larger negative impact on goods (services), this would have a larger positive impact on goods' (services') regional bias in any region. We will not consider RTAs primarily because its relative impact on services and goods trade is also ambiguous. However, we will return to the RTA issue in Section 7.

In order to make such conjectures, we first assess the status of common borders and language in each region. The level of shared borders and languages are assessed in terms of the share of bilateral pairs that satisfy the condition. For example, in the case of North America, there are three bilateral pairs (US–Canada, US–Mexico, and Canada–Mexico), among which two pairs satisfy the land border condition (US–Canada and US–Mexico). Based on this status of the factor, shared border and its relative impact on goods and services, we can expect that a common border would generate a larger regional bias in goods than in services, in the case of North America. Note, however, that the status – high or low in the assessment is not a judgment in absolute terms; it simply assesses the frequency of shared border or common language for purposes of comparison with other regions. Table 2 summarizes the hypothetical conjectures.

**Table 2: Summary of Hypothetical Conjectures**

		<b>Common Border</b> (larger impact on goods)	<b>Common Language</b> (larger impact on services)	<b>Hypothetical Conjecture</b>
Asia 5	Status Relative impact	Low (1/10) Lower regional bias in goods.	High (3/10) Higher regional bias in services	NA Much higher regional bias in services
Asia 4	Status Relative impact	Very low (0/6) Much lower regional bias in goods	Medium (1/6) No significant difference	NA Much higher regional bias in services
Europe	Status Relative impact	High (4/15) Higher regional bias in goods	Very low (0/15) Much lower regional bias in services	NA Much higher regional bias in goods
North America	Status Relative impact	Very high (2/3) Much higher regional bias in goods	High (1/3) Higher regional bias in services	NA Higher regional bias in goods

NA = Not Applicable.

Note: Numbers in the parentheses reflect the frequency of common border(s) or common language(s) in regional groupings. Example, in North America, 2/3 means that there are 2 shared borders out of 3 bilateral pairs.

Source: Author's compilation.

Considering Asia 5, the shared land borders factor seems to lead to a lower regional bias of goods trade than services trade. As aforementioned, while shared border(s) between trade partners is important for services trade, it affects goods trade in a more substantial manner. Given that most economies of Asia 5 do not share a border, with the exception of the PRC and Hong Kong, China, this should have a larger negative impact on the regional bias of goods trade, rather than services trade.

The common language factor seems to contribute to a higher level of regional bias in services rather than goods trade, in the case of Asia 5. Many studies have found that language is more critical to trade in services than goods. The level of shared language among Asia 5 economies is relatively high because the primary language of three of the Asia 5 countries (the PRC; Hong Kong, China; and Singapore) is Chinese. This is

reflected in the frequency of the factor, common language – 3/10, which means three out of the 10 pairs satisfying the condition of a common language (See Table 2). Given that the level of shared language among Asia 5 is high, this factor should have a larger positive impact on the regional bias of services trade than goods trade.

The difference between the regional bias of services and goods trade (the former being higher than the latter) of Asia 4 is expected to be similar to Asia 5. Just like the case of Asia 5, the regional bias in services is expected to be higher than goods for Asia 4. The impact of the common border factor on regional bias is even more favorable to services trade in the case of Asia 4 than Asia 5. Since no countries in the Asia 4 group share a land border with each other, the common border factor has a negative and significant impact on the groups' regional bias in goods trade (while the negative impact on services trade is limited). In contrast, the impact of the common language factor on regional bias seems to be more unfavorable to services trade in the case of Asia 4 than Asia 5. This is because fewer countries share a common language among Asia 4 than Asia 5. Thus, the impact of the two factors somewhat cancels each other out.

In the case of North America, a significantly high level of shared borders (two out of three country pairs have a shared land border) contributes to a significantly higher regional bias in intraregional goods rather than services trade, but the high prevalence of the common language factor (one country pair out of three share the English language) is more favorable to services than goods trade. While the two effects cancel each other out to a degree, the effects of a shared border factor seem to surpass those of a common language factor. In the case of Europe, both the high level of common borders and the low level of shared languages contribute to a higher regional bias of goods trade than services trade.

In summary, the higher regional bias of services trade than goods trade in Asia can be attributed to two factors that have unambiguous differences in terms of their explanatory power (a common border and a common language) and are more favorable to services trade. The fact that Asian countries do not share land borders contributes to a lower regional bias in goods trade than in services. The common language factor contributes to a higher regional bias in services trade than goods trade because many Asian countries share a common language. In contrast, it is expected that regional bias in goods is higher than services in Europe and North America, mainly because the level of shared languages is low, which has a negative impact on services rather than goods (Europe), or the frequency of shared borders is high, which has a larger positive impact on goods rather than services (North America).

## **5. Services Trade Data Availability**

Services trade has four modes of supply. Mode 1 comprises cross-border transactions. In this case, both services suppliers and consumers remain in their own respective country as services move across the border, using various means such as the telephone and internet. Mode 2 is consumption abroad. Consumers move across the border to consume services, such as hotel services, in a foreign country. Mode 3 is trade through

a commercial presence; in this case, corporate services suppliers, such as foreign banks, move across the border and supply services in foreign markets. Mode 4 is the movement of natural persons in which individual services suppliers, such as engineers, move across the border to supply services.

This paper mainly deals only with services supplied through Modes 1 and 2. This inevitable limitation is due to the fact that, first, consistent country-level data is available only in the cases of Modes 1 and 2. That is, balance of payment (BOP) statistics mainly include cross-border services transactions (Mode 1) and travel services (Mode 2).<sup>7</sup> Second, because goods trade data, whether BOP or customs data, are based on cross-border transactions, limiting the research focus mainly to cross-border services transactions is necessary to make the analysis between goods and services consistent.<sup>8</sup> In addition, recent studies show that various modes are complementary, rather than substitutes. This implies that status of Mode 1 and 2 and other modes are not very different, albeit not identical.

Extended Balance of Payment Statistics (EBOPS) are compiled by OECD countries and some other highly developed economies. EBOPS includes country- and sector-level services trade transactions, in addition to the total amounts. EBOPS covers 11 sectors: (i) transportation; (ii) travel; (iii) communications services; (iv) construction services; (v) insurance services; (vi) financial services, (vii) computer and information services; (viii) royalties and license fees; (ix) other business services; (x) personal, cultural, and recreational services; and (xi) government services. As aforementioned, the travel sector transactions fall under Mode 2, while the other 10 sectors are mainly transacted under Mode 1. It is important to note that many countries' EBOPS do not have a complete set of sector-level figures.

In Asia, only four economies release country-level services trade data based on EBOPS: Hong Kong, China; Japan; the Republic of Korea; and Singapore. Several countries in Asia are included as partner countries (destination or origin country), such as Brunei Darussalam; the PRC; Hong Kong, China; India; Malaysia; the Philippines; Taipei, China; Thailand; and Viet Nam. Thus, for example, the PRC's services imports from Japan are not reported, but Japan's services exports to the PRC can be captured by Japanese-side statistics. As aforementioned, we will analyze two groups of Asian countries in this study. Asia 4 (Hong Kong, China; Japan; the Republic of Korea; and Singapore) is the group of Asian countries that have comprehensive services data based on EBOPS. Asia 5 includes these four countries and the PRC, using mirror data for the latter. Given the significance of the PRC in services trade, the examination of Asia 5 is important.

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<sup>7</sup> BOP mainly covers Modes 1 and 2. However, Modes 3 and 4 transactions are also included in BOP to a degree because services are usually transacted under a combination of multiple modes of supply. For transportation, communication, insurance, finance and royalties and license fees, services are predominantly delivered by Mode 1. Travel is services consumption by travelers, and therefore falls under Mode 2. Computer and information, other business services and personal, cultural, and recreational services are delivered through Modes 1 and 4. In the case of construction, Modes 3 and 4 may be involved. For details, see Maurer et al. (2008).

<sup>8</sup> Theoretically speaking, to limit the analytical focus on cross-border trade, travel must be dropped in the comparison between goods trade and services trade.

However, since the PRC data are mirror data<sup>9</sup> and the high level of regional bias of Asia 5 would be primarily due to the high trade intensity between the PRC and Hong Kong, China, we also analyze Asia 4, separately.

In the case of North America, Mexico does seem to have comprehensive services trade data in the form of reported data available through the UN Services Trade Statistics Database. Thus, we will use the mirror data for Mexico. In the case of the six major European countries analyzed in this study (France, Germany, Italy, the Netherlands, Spain, and the UK) there are comprehensive data only after 2002.<sup>10</sup>

The reliability of country- and sector-level services trade is a bottleneck to research of trade economists and policymakers. Since 2002, the sum of all countries' services exports (credit) is larger than that of imports (debit). In 2010, the discrepancy was US\$140.8 billion.<sup>11</sup> However, if we go to the sector level, the discrepancy becomes much larger. In 2010, the sum of all countries' transportation exports was smaller than imports by US\$180.7 billion, while the sum of all countries' other services exports was larger than imports by US\$317.8 billion (IMF 2011).<sup>12</sup> Moreover, the discrepancy between import and export services statistics at the bilateral level is significantly large. These observations imply that both direction misclassification and commodity misclassification are persistent in services trade statistics.

## 6. Actual Regional Bias of Services Trade in Asia

### 6.1 Regional Trade Bias in Services

Asia's intraregional trade share in services is lower than that in goods (Table 3). This tendency is particularly evident in the case of Asia 5. In the past decade, the intraregional trade share of goods (around 0.35) has been much higher than that of services (0.25). This is mainly because the PRC is already a hub of goods trade in Asia, but not yet a hub for services. In fact, if we look at the intraregional trade share of Asia 4, which does not include the PRC, the difference between goods and services is marginal. In the case of Europe, the intraregional trade shares in goods and services are almost the same. However, in the case of North America, the intraregional trade share is much higher in the case of services than goods, which implies that the US is a global services trader and a regional goods trader.

<sup>9</sup> If one more mirror country such as the PRC is included in addition to India, the regional bias cannot be computed because neither India nor the PRC reports bilateral services trade between the two countries.

<sup>10</sup> Several European countries did not report country-level data prior to 2001.

<sup>11</sup> The sum of all countries services exports is US\$3,765.7 billion; services imports total US\$3,624.8 billion.

<sup>12</sup> For further discussion on the discrepancy between services import and export data, see WTO 2010, p. 30. Also, see Wang (2012) for the discrepancy assessment of import and export services data at the sector level.



**Table 3: Intra-regional Trade Share**

		2000	2001	2002	2003	2004	2005	2006	2007	2008
Asia 5	Goods	0.33	0.34	0.35	0.36	0.36	0.36	0.35	0.34	0.33
	Services	0.25	0.26	0.27	0.27	0.27	0.28	0.27	0.26	0.25
Asia 4	Goods	0.16	0.15	0.15	0.16	0.16	0.15	0.15	0.14	0.14
	Services	0.14	0.15	0.15	0.14	0.15	0.15	0.15	0.15	0.14
Europe 6	Goods	0.41	0.41	0.41	0.42	0.41	0.39	0.38	0.39	0.37
	Services	NA	NA	0.38	0.38	0.37	0.37	0.36	0.36	0.34
North America 3	Goods	0.46	0.46	0.46	0.45	0.44	0.43	0.42	0.41	0.40
	Services	0.24	0.24	0.24	0.25	0.23	0.24	0.23	0.22	0.21

NA = Not Available.

Sources: UN Commodity Trade Statistics Database (goods) and UN Service Trade Statistics Database (services).

In general, services trade in Asia has a positive regional bias (Table 4). The intra-regional intensity of the Asia 5 group ranged between 1.6 and 2.0 over the past decade. This means that the shares of services trade as a part of total trade in these economies are 1.6 to 2.0 times higher than their respective shares of world services trade. While regional trade bias in goods was higher than that in services in the early 2000s, the regional bias in services surpassed goods' regional bias after 2003, despite the fact that the intra-regional trade share of goods (around 0.35) is much higher than of services (0.25) throughout the period.

**Table 4: Regional Bias of Trade**

		2000	2001	2002	2003	2004	2005	2006	2007	2008
Asia 5	Goods	1.74	1.86	1.89	1.87	1.82	1.76	1.72	1.67	1.59
	Services	1.67	1.77	1.88	1.94	1.90	1.93	1.82	1.77	1.68
Asia 4	Goods	1.07	1.10	1.12	1.16	1.18	1.13	1.13	1.14	1.11
	Services	1.12	1.22	1.26	1.29	1.30	1.37	1.36	1.36	1.31
Europe 6	Goods	1.50	1.44	1.45	1.44	1.45	1.46	1.44	1.45	1.46
	Services	NA	NA	1.27	1.21	1.21	1.22	1.23	1.23	1.23
North America 3	Goods	1.98	2.04	2.12	2.28	2.35	2.31	2.34	2.42	2.50
	Services	1.13	1.18	1.26	1.39	1.38	1.41	1.37	1.41	1.41

NA = Not Available.

Sources: UN Commodity Trade Statistics Database (goods) and UN Service Trade Statistics Database (services).

However, the high level of intensity among Asia 5 may be mainly because the trade intensity between the PRC and Hong Kong, China is extremely high. Thus, it is important to check the regional bias of regional groups that do not include both the PRC and Hong Kong, China. Intra-regional trade in services of Asian 4 also has a regional bias, which is around 1.3 in terms of the trade intensity index. The level of regional bias of services trade within the group of Asia 4 is also larger than that of goods trade. While the group's regional bias is very small in the case of goods trade, its regional bias in services trade

reached as high as 1.4 in some years. Comparing intraregional goods and services trade, the difference in terms of regional bias for this group is very significant.

Thus, it can be said that Asian countries trade services with each other intensively, while their weight in the global services trade has not been significant. It is wrong to argue that intraregional services trade in Asia is insignificant just because the intraregional services trade share is low. In absolute terms, it is true that Asian countries trade heavily with non-Asians, but they also relatively trade a great deal within the region.

The intensity of services and goods trade differs among regional groups that do and do not include the PRC. While the services trade intensity of groups including the PRC started to decline only after the mid-2000s, the trend in goods trade intensity started to decline in the early 2000s. The difference can be explained by, first, the PRC's trade (in both services and goods) has become less regionally biased. Second, the weight of the PRC's trade in Asia is larger in goods than services; thus, the PRC's declining trend in regional bias has a larger impact in the case of goods.

Considering the level of regional services trade bias in regions other than Asia in comparison with goods trade, it is observed that, first, the regional bias of Asia (Asia 5) is much higher than in either North America or Europe in terms of absolute levels in the case of services. Second, in both North America and Europe, intraregional intensity of services trade is much lower than that of goods trade; the difference between goods and services is especially significant in the case of North America. Intraregional goods trade share of North America is high, as we already saw; compared with goods, North America's regional bias in services is very small. Among the three regions (Asia, North America, and Europe), Asia is the only region where regional bias of services trade is higher than that of goods trade.

## 6.2 Regional Trade Bias in Services at the Sector Level

While the analysis of regional bias of total services trade gives us a broad idea of the status of the cohesion of services trade in Asia, sector-level analysis is useful. The nature of services trade is heterogeneous across sectors in terms of determinant factors (Walsh 2006). Thus, it is reasonable to consider that regional bias of services trade significantly varies across sectors.

Table 5 illustrates the regional bias of two services sectors in Asia and Europe with available services trade data.<sup>13</sup> In the case of Asia 5, only the transport and insurance sectors have a complete dataset for the computation of regional bias. A group of four European countries—France, Germany, Italy, and the Netherlands—as opposed to the group of six European countries discussed earlier, has a complete dataset on for insurance and transport sectors.<sup>14</sup> It can be observed that regional bias of services trade

<sup>13</sup> Among North American countries with large amounts of trade in services, only the US publishes relatively complete country- and sector-level services trade data. Thus, regional bias in North America cannot be computed at the sector level.

<sup>14</sup> For Europe, some bilateral data before 2000 in the case of transport and before 2003 in the case of insurance are missing.

in a certain region varies from sector to sector. Furthermore, a sector that has a high level of regional bias in one region will not necessarily have a high level of regional bias in another region. In the case of Asia, the regional bias of transport services is high, while that of insurance services is very low. In the case of Europe, however, the regional bias of insurance is as high as 2.0, while that of transport services is very low.

**Table 5: Regional Bias of Services Trade by Sector**

		2000	2001	2002	2003	2004	2005	2006	2007	2008
Asia 5	Transport	1.30	1.38	1.49	2.07	1.46	1.61	1.55	1.53	1.51
	Insurance	1.12	1.16	1.63	2.05	1.16	1.05	0.76	0.90	0.98
Europe 4	Transport	NA	1.15	1.14	1.60	1.01	0.94	0.93	0.96	0.97
	Insurance	NA	NA	NA	NA	1.87	1.71	2.59	1.78	1.86

NA = Not available.

Source: UN Service Trade Statistics Database.

From a policy perspective, the distinction of sectors is important because the vulnerability of each services sector during economic crises is very different. Brochert and Matoo (2009) find that goods trade collapsed in 2009,<sup>15</sup> while the decline in services trade was limited.<sup>16</sup> It is believed that trade in transport, travel, and financial services fluctuate similar to trade in goods, which is relatively cyclical and is highly reactive to economic booms and recessions. In contrast, other private services—especially insurance, communications, and professional services—maintain their levels even during economic crises.<sup>17</sup> Therefore, European countries conduct relatively vast crisis-resilient services trade (e.g., insurance) within the region, while Asian countries conduct relatively vast crisis-vulnerable services trade (e.g., transport) within the region.

## 7. Further Discussions on the Determinants of Services Trade: The Impact of RTAs

Overall, the conjecture in Section 4 is consistent with the empirical findings in the previous section. In Asia, regional bias in services is higher than that in goods. In Europe and North America, regional bias in goods is higher than that in services. The only one minor difference between the hypothetical conjecture and empirical facts is that in Asia, regional bias in services is slightly higher than that in goods, unlike the prediction that

<sup>15</sup> In 2009, goods trade declined between 10% and 30%, while the decline in services trade was limited to between 5% and 20%.

<sup>16</sup> It is widely known that the elasticity of goods trade to GDP is nearly 2.0–3.0 and it exhibits a highly cyclical nature (Engel and Wang 2011). Thus, the real puzzle is not a question of why services trade is not that cyclical, but why goods trade is so cyclical.

<sup>17</sup> Brochert and Matoo (2009) assert that there are two reasons why some services trade is less cyclical than goods. First, the demand of certain types of services is less cyclical than that of goods. Some services such as bookkeeping are necessities, irrespective of the economic situation. Second, services trade and production is less dependent on external finance than goods trade and production. Thus, in an economic crisis when financial flows stagnate, goods trade shrinks, while services trade is sustained.

the former would be much higher than the latter. Likewise, while we expected a much higher regional bias in goods than services in Europe, the actual situation is that Europe's regional bias in services is only slightly higher than that in goods. Such a difference between conjecture and actual situation seems to be related to the explanatory power of RTAs.

As we discussed in Section 3, the explanatory power of common RTA membership is ambiguous in terms of the comparison between goods and services trade, but this is partly because most studies compare the impact of a goods agreement on goods trade and that of a goods agreement on services trade, not the impact of a services agreement on services trade. However, recent studies find that a goods agreement has a small positive impact on services trade, while a services agreement has a larger positive impact on services trade (Park and Park 2011).<sup>18</sup> Thus, RTAs seem to have a larger impact on services than goods if they include a substantial services component (or chapter).

The RTA factor seems to explain why Asia's regional bias in services is only slightly higher than that in goods, unlike the conjecture that predicts the former would be much higher than the latter. Services RTAs are not prevalent in Asia. While both Europe and North America have a region-wide services agreement, among Asia 5, only four out of 10 pairs have services agreements; among Asia 4, only three out of six pairs have such agreements. The number of services agreements is lower than for goods agreements. It should be noted that the RTA between the Republic of Korea and the PRC is not counted as it covers only goods and not services.<sup>19</sup>

Supposing that RTAs covering services have larger impacts on services than goods, we can argue that the poor status of services agreement networks in Asia would have a negative impact on the regional bias in services relative to goods. Among the three regions under discussion, only in Asia is the status of services RTAs poor, thereby creating an unfavorable condition for regional bias in services relative to goods. If there were effective services agreement networks in Asia, regional bias in services would have been much higher than that in goods as predicted. Likewise, the fact that Europe has a comprehensive region-wide services agreement explains why regional bias in services in goods is higher than that in goods only to a degree, despite the fact that two other factors, border and language, are significantly favorable (unfavorable) to goods trade (services trade).

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<sup>18</sup> Grunfeld and Moxnes (2003) argue that FTA membership does not have an impact on services trade unlike goods trade. However, this study assesses the impact of goods agreement, not services agreement, on services trade.

<sup>19</sup> Both the PRC and the Republic of Korea are members of the Asia–Pacific Trade Agreement (APTA), which covers only goods.

**Table 6: Impact of RTAs on Regional Bias in Goods and Services**

		<b>Services RTAs</b> (Larger impact on services)
Asia 5	Status Relative impact	Relatively low (4/10) Lower regional bias in services
Asia 4	Status Relative impact	Relatively low (3/6) Lower regional bias in services
Europe	Status Relative impact	Relatively high (15/15) Higher regional bias in services
North America	Status Relative impact	Relatively high (3/3) Higher regional bias in services

Note: Numbers in the parentheses reflect the frequency of RTA membership in regional groupings. Example, in Asia 4, 3/6 means that there are 3 shared borders out of 6 bilateral pairs.

Source: Author's compilation.

## 8. Summary and Policy Implications

The main empirical findings of the paper are that (i) the regional bias of services trade in Asia is as high as or higher than in Europe and North America; (ii) the regional bias of services trade is higher than that of goods trade in Asia, which is in sharp contrast to Europe and North America where regional bias of goods trade is higher than that of services trade; and (iii) while Asia's regional bias in goods trade has shown a declining trend, the regional bias of services trade remains at a high level, although its future decline is expected.

Asia's relatively high-level of regional bias in services trade can be explained by the following two factors: (i) a relatively high-level of a shared language (Chinese), which is essential to services trade, but less to goods trade; and (ii) the archipelagic nature of the geography of the region, which is a critical unfavorable condition for goods trade, but not for services trade.

In order to further integrate Asia's services trade, two policies are necessary. First, effective regional services agreements are critical to increasing intraregional services trade among Asian countries. Second, institute policies that increase the trade of "crisis-resilient services" such as professional services as oppose to "crisis-vulnerable services" such as transport and travel is necessary. For instance, Europe has a high level of regional bias in insurance, which is a crisis-resilient service, but a low level of regional bias in transport, which is a crisis-vulnerable service. This situation is reversed in the case of Asia.

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### **Database**

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UN Service Trade Statistics. <http://unstats.un.org/unsd/servicetrade/default.aspx>

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## **Cross-Regional Comparison of Trade Integration**

### The Case of Services

This paper examines the level of services trade integration in Asia compared with Europe and North America. The regional bias of Asia's services trade (relative to goods) is prominent for two main reasons: (i) a relatively high prevalence of a shared language (Chinese), which is essential to services trade; and (ii) the archipelagic nature of the region, which inhibits goods trade more than services trade.

### **About the Asian Development Bank**

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to two-thirds of the world's poor: 1.7 billion people who live on less than \$2 a day, with 828 million struggling on less than \$1.25 a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.