

Sauvé, Pierre; Shingal, Anirudh

## Working Paper

### Why do Countries enter into Preferential Agreements on Trade in Services? Assessing the Potential for Negotiated Regulatory Convergence in Asian Services Markets

ADB Working Paper Series on Regional Economic Integration, No. 129

#### Provided in Cooperation with:

Asian Development Bank (ADB), Manila

*Suggested Citation:* Sauvé, Pierre; Shingal, Anirudh (2014) : Why do Countries enter into Preferential Agreements on Trade in Services? Assessing the Potential for Negotiated Regulatory Convergence in Asian Services Markets, ADB Working Paper Series on Regional Economic Integration, No. 129, Asian Development Bank (ADB), Manila, <https://hdl.handle.net/11540/1972>

This Version is available at:

<https://hdl.handle.net/10419/109618>

#### Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

#### Terms of use:

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



<http://creativecommons.org/licenses/by/3.0/igo>

# WHY DO COUNTRIES ENTER INTO PREFERENTIAL AGREEMENTS ON TRADE IN SERVICES? ASSESSING THE POTENTIAL FOR NEGOTIATED REGULATORY CONVERGENCE IN ASIAN SERVICES MARKETS

*Pierre Sauvé and Anirudh Shingal*

**NO. 129**

.....  
April 2014

**ADB WORKING PAPER SERIES ON  
REGIONAL ECONOMIC INTEGRATION**



ADB Working Paper Series on Regional Economic Integration

## Why do Countries enter into Preferential Agreements on Trade in Services? Assessing the Potential for Negotiated Regulatory Convergence in Asian Services Markets

---

Pierre Sauvé\* and Anirudh Shingal\*\*  
No. 129 | April 2014

This paper is the outcome of a successful call for proposals by the Asian International Economists Network (AIEN) for their workshop entitled “Trade competitiveness in a world of rapid change: What challenges and opportunities for Asian economies” and hosted by the Asian Development Bank (ADB) in Manila on 22 March 2013. We would like to thank the conference participants, Martin Roy and an anonymous referee for their comments on an earlier draft of this paper.

\*Director of External Programs and Academic Partnerships, World Trade Institute, University of Bern, Switzerland. pierre.sauve@wti.org

\*\*Corresponding author and Senior Research Fellow, World Trade Institute, University of Bern, Switzerland. Address for correspondence: World Trade Institute, Hallerstrasse 6, CH - 3012, Bern. Tel: +41-31-6313270; Fax: +41-31-6313630. anirudh.shingal@wti.org

The ADB Working Paper Series on Regional Economic Integration focuses on topics relating to regional cooperation and integration in the areas of infrastructure and software, trade and investment, money and finance, and regional public goods. The Series is a quick-disseminating, informal publication that seeks to provide information, generate discussion, and elicit comments. Working papers published under this Series may subsequently be published elsewhere.

Disclaimer:

The views expressed in this paper are those of the authors and do not necessarily reflect the views and policies of the Asian Development Bank (ADB) or its Board of Governors or the governments they represent.

ADB does not guarantee the accuracy of the data included in this publication and accepts no responsibility for any consequence of their use.

By making any designation of or reference to a particular territory or geographic area, or by using the term “country” in this document, ADB does not intend to make any judgments as to the legal or other status of any territory or area.

Unless otherwise noted, “\$” refers to US dollars.

## Contents

Abstract	iv
1. Introduction	1
2. Review of the Related Literature	2
3. Regulation in Services Trade	3
4. Methodology	4
5. Explanatory variables	6
6. Data	6
7. Results	8
7.1 Secondary Results	11
8. Concluding Remarks	14
References	16
ADB Working Paper Series on Regional Economic Integration	21
Tables	
1. Comparison of STRI across Regions and Groups	4
2. Estimating the Likelihood of Negotiating a Services Agreement in Asia	10
3. Determinants of Regulatory Differences in Services within Asia	13
Annex Table	
Summary Statistics	20

## **Abstract**

More than half of the World Trade Organization (WTO)-notified services trade agreements (STAs) in effect since 2008 have involved at least one (South or Southeast) Asian trading partner. Drawing on Baier and Bergstrand's (2004) determinants of preferential trade agreements and using the World Bank's database on the restrictiveness of domestic services regimes (Borchert et.al. 2012), we examine the potential for negotiated regulatory convergence in Asian services markets. Our results suggest that countries within Asia that are more remote from the rest of the world and that have similar economic sizes, greater differences in relative factor endowments compared to the rest of the world, common legal origins, high levels of pre-existing trade, and restrictive services regulations are more likely candidates for regulatory convergence. Our empirical model successfully predicts 10 of the 14 STAs negotiated during 2008–12 and 88 of the 89 dyads within Asia that lack an STA.

*Keywords:* PTAs, services, regulation, regulatory convergence, Asia

*JEL Classification:* F10, F13, F15

## 1. Introduction

One of the striking features of trade diplomacy in recent years has been the seemingly unstoppable march of preferential trade liberalization and rule-making (Kawai and Wignajara 2010). Such a trend is now extending to services, most spectacularly of late in the Asia-Pacific region (Chanda 2011, PECC and ADBI 2011, Shepherd and Pasadilla 2012). Of the 80 preferential trade agreements (PTAs) in force prior to 2000, 70 (87.5%) featured provisions dealing exclusively with trade in goods. Since then, 98 of the 166 PTAs that have entered into force also include provisions on services trade. Meanwhile, more than half of the World Trade Organization (WTO)-notified services trade agreements (STAs) in effect since 2008 have involved at least one South or Southeast Asian trading partner. The above trends signal the heightened importance of services trade in general, the growing need among countries to place such trade on a firmer institutional and rule-making footing, and the attractiveness of doing so on an expedited basis via preferential negotiating platforms (Sauvé and Shingal 2011).

Unlike trade in goods, where the removal of border barriers retains significant negotiating traction, domestic regulation is the sole currency of negotiations in services trade (Mattoo and Sauvé 2010). The importance and potentially trade- and investment-inhibiting impact of domestic regulation on service sector performance has received significant attention in policy research circles (Kox and Nordas 2007 and 2009). However, less well understood and investigated has been the question of whether certain countries are more likely candidates for negotiated regulatory convergence from a services trade perspective? Simply put: are countries that display greater ex-ante regulatory convergence more likely candidates for deeper integration agreements in services markets? What is the role of geography in trade-facilitating regulatory convergence in services? And can the presence of significant developmental or institutional capacity gaps impede integration and convergence in services markets?

This paper seeks answers to the above questions in an Asian setting.<sup>1</sup> According to the WTO's Regional Trade Agreements Information System (RTA-IS), 72 PTAs entered into effect during 2008–12. A vast majority of these (70%) include provisions on both goods and services trade. Twenty-seven of the 50 STAs involve at least one Asian trading partner, and 11 of these have been entered into with another partner from Asia. Clearly then, Asian economies have been at the forefront of the burgeoning trend toward services preferentialism, offering a potentially fertile setting for exploring this paper's core research questions.

Regulatory heterogeneity has been shown to exert a significantly negative impact on bilateral services trade via Mode 3 (commercial presence) (Kox and Nordas 2009) and commercial presence is the most dominant mode of service delivery, accounting for 55%–60% of all services trade flows.<sup>2</sup> We would thus expect trading partners in a services accord to exhibit lower levels of regulatory heterogeneity compared to those not party to such an agreement.

---

<sup>1</sup> For the purpose of this paper, Asia comprises Bangladesh, Cambodia, the People's Republic of China, India, Indonesia, Japan, the Republic of Korea, Sri Lanka, Malaysia, Mongolia, Nepal, Pakistan, the Philippines, Thailand, and Viet Nam. These are the countries for which information on services regulation is available in the World Bank's Services Trade Restrictiveness Index (STRI) database (Borchert et.al. 2012).

<sup>2</sup> These are based on statistical estimates for 2005 provided by the WTO.



Interestingly, this is not found to be true for the Asian economies studied in this paper. The causal links actually run in the opposite direction.

Regulatory approximation or convergence thus appears as one of the main objectives of negotiated services agreements rather than its chief determinant: the greater the extent of regulatory heterogeneity between trading partners, the more likely are they to enter into a services agreement to promote trade- and investment-facilitating regulatory convergence. Significantly, this proposition is validated by the empirical analysis undertaken for our sample countries.

## 2. Review of the Related Literature

Services preferentialism has spawned three strands of literature to date. A first strand has investigated the trade effect of services accords on aggregate and disaggregated services trade flows, using advanced estimation techniques from the rapidly evolving gravity model empirical literature (Park 2002, François and Hoekman 2009, Grunfeld and Moxnes 2003, Kimura and Lee 2004, Lennon 2009, Marchetti 2009, Shingal 2013, van der Marel and Shepherd 2011, Walsh 2006).<sup>3</sup>

A second strand has explored the impact that differing levels of (and heterogeneity in) regulation exert on bilateral services trade flows (François et al. 2007, Fink 2009, Kox and Lejour 2006, Kox and Nordas 2007 and 2009, Schwellnus 2007, van der Marel and Shepherd 2011). A third strand has resorted to theoretical and empirical techniques to estimate barriers to trade in services and foreign direct investment (FDI), and/or provide estimates of services trade costs (François et al. 2007, Miroudot et al. 2010 and 2012, van der Marel 2011).

The literature has also evolved to explain services commitments in the GATS (Roy 2011), those made reciprocally (Marchetti et al., 2012) as well as GATS+ commitments in STAs (van der Marel and Miroudot 2012).

The two papers closest to ours are Baier and Bergstrand (2004), who were the first to examine the determinants of partners' propensities to negotiate PTAs, and Cole and Guillin (2012), who explored this issue for services accords. The latter paper, however, did not consider regulatory convergence as a determinant for entering into negotiations. Studying the role of regulatory convergence is thus the main contribution of this paper. This is done through recourse to a new World Bank dataset on measures of services (regulatory) restrictiveness (Borchert et al. 2012).<sup>4</sup>

Baier and Bergstrand (2004) found the potential welfare gains and likelihood of a PTA in goods trade between a pair of countries to be higher

---

<sup>3</sup> An elaboration of these techniques is beyond the scope of this paper but an excellent review is provided in Head and Mayer (2013).

<sup>4</sup> See the World Bank's STRI database at <http://iresearch.worldbank.org/servicetrade/home.htm>

- (i) the closer (in terms of distance) the two trading partners were;
- (ii) the more remote they were from the rest of the world (ROW);
- (iii) the larger and more similar they were economically, in real gross domestic product (GDP) terms, to enable exploitation of economies of scale in the presence of differentiated products;
- (iv) the greater the difference in factor endowments between the dyad emanating from Heckscher–Ohlin trade; and
- (v) the lesser the difference in factor endowment ratios of the member countries relative to those of the ROW, leading to less inter-industry trade diversion.

Baier and Bergstrand (2004) found these factors to have economically and statistically significant effects on the probability of negotiating a PTA covering trade in goods.

In comparison, Cole and Guillin (2012) examined a dyad’s propensity to negotiate a services agreement and in their baseline specification found statistically significant evidence only for the “natural trading partner hypothesis,” similarity in terms of economic size, and factor endowment differences—both those emanating from Heckscher–Ohlin trade and those leading to less inter-industry trade diversion.

### **3. Regulation in Services Trade**

Regulatory measures affect cross-border trade and investment in services by increasing both the fixed cost of entering a market and the variable cost of servicing that market. Where regulation is destination-specific, such costs can become sunk, which makes the decision to export similar to an investment decision, and involves a self-selection process studied in the “new new trade theory” literature (Melitz 2003; Helpman, Melitz, and Yeaple 2004; Bernard, Redding, and Scott 2007; Chaney 2008). Essentially, only firms with the highest productivity and/or lowest marginal costs tend to profitably overcome sunk market-entry costs, thereby self-selecting themselves into becoming exporters.

In the context of a services PTA, regulatory requirements assume significance for firms in both markets and the objective of the agreement is usually two-fold: (i) to bring down the level and incidence of restrictive regulation in both markets; and (ii) to promote convergence and approximation (including through mutual recognition), and ultimately (but less frequently) to harmonize regulatory practices between trading partners.

The measure of regulation in services markets used in this paper is the Services Trade Restrictiveness Index (STRI) recently released by the World Bank. Compiled from responses to questionnaires sent out by the World Bank to 79 developing countries on impediments to international integration, and from publicly available information for Organisation for Economic Co-operation and Development (OECD) countries, STRI is a quantitative index of restrictions on services trade encompassing 103 countries, 5 major service sectors, and 19 sub-sectors. The information is also available by modes of service delivery.

A comparison of STRI by regions and groups in Table 1 shows that the Middle East and North Africa (MENA) has the most restrictive services trade policies, followed by South Asia (SA), East Asia and the Pacific (EAP), and Sub-Saharan Africa (SSA), with the last also being the most heterogeneous cohort. As expected, OECD countries and Eastern Europe and Central Asia (ECA) not only report the lowest STRI values but also form the most homogeneous cohorts. Significantly, the Asian region is not only very restrictive but also highly heterogeneous in terms of services trade impediments, which again makes it a relevant case study for the purposes of this enquiry.

**Table 1: Comparison of STRI across Regions and Groups**

Region or Group	LAC	ECA	EAP	OECD	SSA	SA	MENA	World
Mean	21.6	18.8	39.1	19.1	32.0	43.9	45.2	28.3
Standard deviation	10.0	6.7	13.9	4.8	16.6	13.7	11.2	14.9

EAP = East Asia and the Pacific, ECA = Eastern Europe and Central Asia, LAC = Latin America and the Caribbean, MENA = Middle East and North Africa, OECD = Organisation for Economic Co-operation and Development, SA = South Asia, SSA = Sub-Saharan Africa.

Source: Authors' calculations based on World Bank STRI database.

A closer look at Table 1 provides an intuitive feel for the factors likely to make countries potential candidates for negotiated regulatory convergence. For instance, high levels of per capita income, economic development, and political stability all likely contribute to the observed homogeneity in STRI among OECD countries despite significant differences in language, culture, and distances within this cohort. In the case of ECA, on the other hand, there is greater homogeneity of language, culture, and distances, though more differences in terms of per capita income and economic development. This seems to suggest that a combination of these factors could determine which countries are potential candidates for negotiated regulatory convergence.

## 4. Methodology

In their seminal work exploring the determinants of partners' propensities to negotiate bilateral trade agreements, Baier and Bergstrand (2004) documented how distance, remoteness, economic country size, and factor endowments were the main economic determinants. Their analysis led to the following testable propositions:

A dyad's propensity to negotiate an agreement is directly proportional to

- (i) the proximity between them in terms of distance,
- (ii) remoteness from the ROW,
- (iii) the size and similarity of their economic markets,
- (iv) their relative factor endowment ratio, and
- (v) the inverse of the difference of their factor endowments from the ROW.

Baier and Bergstrand (2004) also consider other institutional and political economy determinants in their robustness checks. We use the same set of determinants in our empirical analysis and test the same propositions.

Our empirical framework draws on McFadden's (1975 and 1976) qualitative choice models, where utility is modeled as a latent, unobservable variable ( $y^*$ ) that can be explained by a vector of explanatory variables ( $x$ ).

Formally,  $y^* = \beta_0 + \beta x + e$ , where  $x$  is the vector of explanatory variables;  $\beta$  is a vector of parameters; and  $e$  is the error term, assumed to be independent of  $x$  and to have a standard normal distribution.

Since  $y^*$  cannot be observed, an indicator variable  $STA$  is used, which takes the value 1 (indicating  $y^* > 0$ ) if a trading dyad has a services agreement and 0 (indicating  $y^* \leq 0$ ) otherwise.

More formally,

$$STA = 1 \text{ if } y^* > 0 \text{ and } P(STA=1) = P(y^* > 0) = G(\alpha + \beta x) \quad (1)$$

where  $P$  is the response probability associated with a trading dyad signing a services accord;  $G(\cdot)$  is the standard normal cumulative distribution function that ensures that  $P(STA=1)$  lies between 0 and 1.

Empirically, given the dichotomy of the dependent variable, equation (1) leads itself to a probit estimation.<sup>5</sup>

The main objective of services PTAs is to increase bilateral trade in services. Regulatory convergence is one of the important channels through which services accords can expand services trade volumes. Thus, the determinants of a country's choice to negotiate a services accord are likely to be indistinguishable from those that inform whether certain countries are more likely candidates for such regulatory convergence.

Thus, in a secondary estimation, we regress regulatory heterogeneity between dyads on the same set of control variables to examine if the determinants of sample countries' propensities to negotiate a services accord are similar to those that determine if these countries are also potential candidates for regulatory convergence from a services trade perspective.

---

<sup>5</sup> While the statistical significance of the probit estimates can be determined, the non-linear nature of  $G(\cdot)$  implies that the coefficient estimates only reveal the signs of the partial effects of changes in  $x$  on the probability of signing an STA. Thus, the direction of the effect of variable  $x_k$  on  $E(y^*|x) = \alpha + \beta x$  is only qualitatively (not quantitatively) identical to the effect of  $x_k$  on  $E(STA|x) = G(\alpha + \beta x)$ , where  $E(\cdot)$  denotes the expectation of a variable. Our choice of the probit follows McFadden's (1975 and 1976) qualitative choice models and mirrors the methodology that Baier and Bergstrand (2004) follow with the 1,431 cross-sectional pairings in their own sample of 54 countries. Moreover, we also control for linear combinations of real GDP and factor endowment ratios on the RHS of equation (1). Since the latter are well-known proxies for per capita income (Egger and Larch 2008), we also control for levels of economic development, which further renders equation (1) fit for probit estimation.

$$\text{Formally, } \text{DREG}_{ij} = \alpha + \eta x + \varepsilon \quad (2)$$

where  $\text{DREG}_{ij}$  is the absolute value of the difference between the logs of STRI of both countries and  $\varepsilon$  is the error term.

## 5. Explanatory variables

Following Baier and Bergstrand (2004), for any dyad  $ij$ , the vector  $x$  includes two geographic variables:  $\text{Natural}_{ij}$ , which is the inverse of distance between  $i$  and  $j$ , and  $\text{Remote}_{ij}$ , which is the simple average of the mean distance between both countries and their partners.<sup>6</sup> Economic country sizes are represented by  $\text{SRGDP}_{ij}$ , which is the sum of the logs of real GDP of country  $i$  and  $j$ , and  $\text{DRGDP}_{ij}$ , which is the absolute value of the difference between the logs of real GDP of both countries.  $\text{DKL}_{ij}$  and  $\text{DROWKL}_{ij}$  determine the role of factor endowments in countries' propensities to negotiate agreements.  $\text{DKL}_{ij}$  is the absolute value of the difference between the logs of capital-labor ratios of country  $i$  and  $j$ . The variable  $\text{SQDKL}_{ij}$  is  $\text{DKL}_{ij}$  squared and is included to control for the likely quadratic relationship with the probability to negotiate a services agreement. To compare with ROW endowments,  $\text{DROWKL}_{ij}$  is included and calculated as the absolute value of the difference between the logs of capital-labor ratios of country  $i$  and  $j$  and those of the ROW.<sup>7</sup>

Institutional variables in  $x$  include common language, colonial antecedents, and legal origins. More importantly from the perspective of this paper, we also control for the level of services regulation in the dyad ( $\text{SREG}_{ij}$ , which is the sum of the logs of  $\text{STRI}_i$  and  $\text{STRI}_j$ ) and regulatory heterogeneity between partners by including the absolute value of the difference between the logs of STRI of both countries ( $\text{DREG}_{ij}$ ).

## 6. Data

Data on STAs are taken from the WTO's RTA-IS, where  $\text{STA} = 1$  for agreements notified under Article V of the General Agreement on Trade in Services (GATS) in 2008–12 and 0 otherwise. With the exception of the People's Republic of China (PRC), the STRI for all countries in our sample relates to 2008. Since regulatory convergence is an objective of services preferentialism, to minimize endogeneity in our estimation emanating from reverse causality

---

<sup>6</sup> Formally,  $\text{Remote}_{ij} = \frac{\log \frac{\sum_{k=1, k \neq j}^N d_{ik} / N + 1}{2} + \log \frac{\sum_{k=1, k \neq i}^N d_{jk} / N + 1}{2}}$  where  $d$  is the bilateral distance in

kilometers and  $d_{cont_{ij}}$  is equal to 1 if  $i$  and  $j$  are located on the same continent and 0 otherwise,

<sup>7</sup> Formally,  $\text{DROW}_{KL_{ij}} = \frac{1}{2} \left| \log \frac{\sum_{k=1, k \neq j}^N K_k}{\sum_{k=1, k \neq i}^N L_k} + \log \frac{K_i}{L_i} \right| \left| \log \frac{\sum_{k=1, k \neq i}^N K_k}{\sum_{k=1, k \neq j}^N L_k} + \log \frac{K_j}{L_j} \right|$

we only consider services accords that came into effect in 2008 or later.<sup>8</sup> The STRI for the PRC is for 2011. However, the PRC has only concluded one services accord to date (with Pakistan), which is unlikely to influence either its STRI considerably or this paper's overall results.

The Centre d'Etudes Prospectives et d'Informations Internationales (CEPII) gravity dataset (Head et al. 2010) provides geographic distances between capital cities that are used to compute  $Natural_{ij}$  and  $Remote_{ij}$ . Data on real GDP are taken from the Penn World Tables (PWT) and these are used to calculate  $SRGDP_{ij}$  and  $DRGDP_{ij}$ .

Factor endowment ratios are computed from estimated capital stock and the number of workers. We do this following Marchetti's methodology used in the Extended PWT and these ratios enable the calculation of  $DKL_{ij}$ ,  $SQDKL_{ij}$ , and  $DROWKL_{ij}$ .<sup>9</sup> Following Hulton and Wycoff (1981), the Perpetual Inventory Method, which is detailed in OECD (2009), is used to estimate the stock of capital.<sup>10</sup> The number of workers is calculated using the PWT.<sup>11</sup> The capital-labor ratio is thus the estimated capital stock divided by the number of workers.

The earliest STA involving at least one Asian partner (New Zealand–Singapore) entered into effect on 1 January 2001. Since trade agreements are typically phased in over multi-year transition periods and to control for potential endogeneity in our estimation, our data on the time-varying independent variables are for 1980. The choice of this early year is also likely to control for any domino effects that the earliest STAs may have exerted on the recent wave of services preferentialism involving Asian economies.

Data on common language and colonial antecedents are taken from the CEPII gravity dataset (Head et al. 2010), while those on legal origins are compiled using Shleifer (1999).<sup>12</sup> More importantly from the perspective of this paper, we also control for the level of services regulation in the dyad ( $SREG_{ij}$ , which is the sum of the logs of  $STRI_i$  and  $STRI_j$ ) and regulatory heterogeneity between partners by including the absolute value of the difference between the logs of STRI of both countries ( $DREG_{ij}$ ).

To test for the role of political stability in the choice of potential partners, we also proxied the extent of political homogeneity in the dyads by including the absolute value of the difference

<sup>8</sup> Only two services agreements were negotiated between Asian economies prior to 2008: Japan–Malaysia (2006) and Japan–Thailand (2007). Our sample size thus remains effectively the same even without these two agreements.

<sup>9</sup> <https://sites.google.com/a/newschool.edu/duncan-foley-homepage/home/EPWT>

<sup>10</sup> Formally,  $K^{stock}_t = \sum_i^T (1-d)^{T-i} I_{T-i} + I(1-d/2)$  and  $I_t = Pop_t RGDP^{pc}_t k_t^i$  where  $I_t$  corresponds to the real investment in year  $t$ , obtained from real investment share of GDP ( $k_t^i$ ), real GDP per capita in constant dollars (chain index) denoted by  $RGDP^{pc}_t$ , and population ( $Pop_t$ ) provided by the PWT. By assumption,  $i = 1, 2, 3, \dots, 14$ ; that is, the asset life is 14 years and the depreciation rate,  $d$ , is 7.5%.  $K^{stock}_t$  is the cumulated depreciated sum of past investments.

<sup>11</sup> Formally,  $N_t = \frac{Pop_t RGDP^{pc}_t}{RGDP^w_t}$  where  $N_t$  is the number of workers and  $RGDP^w_t$  is the real GDP per worker in constant dollars.

<sup>12</sup> [http://www.economics.harvard.edu/faculty/shleifer/files/qgov\\_web.xls](http://www.economics.harvard.edu/faculty/shleifer/files/qgov_web.xls)

between the logs of the State Fragility Index<sup>13</sup> (SFI), compiled by the Center for Systemic Peace, of both countries ( $DSFI_{ij}$ ) for 1995.<sup>14</sup> However, the inclusion of this variable created problems of multicollinearity and rendered the coefficients of all other variables statistically insignificant across estimations. In the absence of a strong theoretical justification for its inclusion we therefore decided to drop the variable.

In line with the endogenous protection literature (Trefler 1993), we also control for import penetration by using data on these countries' average bilateral trade. Since data on bilateral services trade were not available either for all countries in our sample or for the period before 1999, we used bilateral trade in goods data from UN Comtrade ( $TRADE_{ij}$ ). To the extent possible, we used averages over 1978–1980. However, in some cases, the earliest available years were 1984–86 (PRC), 1998–2000 (Mongolia and Viet Nam), and 2000–02 (Cambodia).

Finally, to control for the politics of preferentialism à la Grossman and Helpman (1995), we included the absolute value of the difference in the logarithms of a dyad's average global trade flows (DTRADE) as described above.

A priori, with the exception of  $DRGDP_{ij}$ ,  $DROWKL_{ij}$ ,  $TRADE_{ij}$ , and DTRADE, we expect the coefficients of all the other variables to be positive. Neighboring countries are more likely to sign a trade agreement, especially if both are remote from the ROW; this is likely to be true of services accords as well. Similar and larger economically-sized countries are also likely to gain more due to the exploitation of economies of scale and the presence of greater varieties flowing from deeper integration. The greater the difference in relative factor endowments between countries, and the larger the intercontinental trade costs, the greater trade creation is likely to be. On the other hand, the greater the difference in relative factor endowments between potential partners and the ROW, the more likely trade diversion becomes. Protection tends to be higher in sectors with greater import penetration. This means that more trade is likely to be associated with less inclination to negotiate a trade accord. Political pressure to prevent an agreement is reduced the more balanced potential trade is between partner countries (which would be reflected in smaller values of DTRADE). Finally, dyads with common institutions and homogeneity in regulation are more likely to enter into agreements, as are partners with high initial barriers to services trade. All data are summarized in Annex Table A1.

## 7. Results

The results from the probit estimation are reported in Table 2. The first three specifications control for economic, institutional, and political economy determinants separately; these are

<sup>13</sup> More information on the SFI is available at <http://www.systemicpeace.org/inscr/SFIv2011a.xls>. The index ranges from 0 (no fragility) to 25 (extreme fragility). According to the Center for Systemic Peace, “[a] country’s fragility is closely associated with its state capacity to manage conflict, make and implement public policy, and deliver essential services; and its systemic resilience in maintaining system coherence, cohesion, and quality of life; responding effectively to challenges and crises; and sustaining progressive development.”

<sup>14</sup> This is the earliest year for which the SFI has been formulated.

then introduced in combination in specifications IV–VI, with the final specification controlling for all determinants together.

The results reported in columns I–III suggest that economic determinants exert a greater influence than both institutional and political economy factors, though the model has the lowest explanatory power with only institutional determinants (pseudo-R-squared = 11%). Moreover, most of the variables within these three sets of determinants—with the exception of NAT (weakly), SRGDP, DROWKL, and TRADE—are individually statistically insignificant.

The negative coefficient of NAT (across specifications in general) suggests that distance seems to have a positive, counter-intuitive relationship with the propensity to negotiate services agreements in Asia. Alternatively, our findings offer no support to the natural trading partner hypothesis within Asia, at least with respect to services preferentialism. This finding is also consistent with the negative sign on the constant term across most specifications. That trading partners may be willing to negotiate services agreements despite the effect of distance becomes more readily understandable when one considers that almost a fourth of all services trade is delivered by Mode 1 (cross-border supply), where the effect of distance is far more benign, if not completely absent.

In the case of TRADE too, the positive sign of the coefficient is not as expected—the more traded goods sectors seem to be more likely to negotiate a services accord, a finding that contradicts the endogenous protection literature as well as the results found in Baier and Bergstrand (2004). On the other hand, the positive sign of this coefficient could also suggest greater goods trade leading to a successful erosion of vested protectionist interests in services leading in turn to juggernaut and domino forces, as described in Baldwin (2006), which may facilitate the conclusion of services accords. Moreover, the positive coefficient can also be explained by the rising salience of trade in intermediate products—both goods and services—made pervasive by the growth of regional value chains, especially in the context of East Asia and the Pacific.

The coefficients of SRGDP and DROWKL both have the expected signs and suggest that similarity in the economic size of partners and smaller differences in their factor endowment ratios compared to the ROW lead to a higher likelihood of negotiating a services accord.



**Table 2: Estimating the Likelihood of Negotiating a Services Agreement in Asia**

Probit estimation: Dependent variable STA

Variables	I	II	III	IV	V	VI	VII
REM (+)	2.45 (4.17)			8.59 (5.45)	-2.61 (4.89)		1.73 (7.41)
NAT (+)	-1.06# 0.56			-0.98 (0.62)	1.92* (0.78)		-1.83# (1.02)
SRGDP (+)	0.24* (0.1)			0.29* (0.12)	-0.23 (0.22)		-0.11 (0.32)
DRGDP (-)	-0.21 (0.18)			-0.3 (0.2)	0.09 (0.29)		0.24 (0.33)
DKL (+)	0.48 (0.58)			0.19 (0.63)	0.32 (0.7)		0.17 (0.76)
SQDKL (+)	0.03 (0.13)			0.2 (0.14)	0.1 (0.16)		0.04 (0.18)
DROWKL (-)	-1.22* (0.54)			-0.39 (0.63)	-1.06# (0.62)		-0.4 (0.78)
SREG (+)		-0.02 (0.38)		-0.94 (0.7)		-1.19* (0.6)	-1.05 (1.01)
DREG (+)		0.76 (0.5)		0.88 (0.73)		1.73* (0.77)	2.03# (1.1)
Com_lang (+)		0.19 (0.54)		0.11 (0.72)		-0.13 (0.67)	-0.19 (0.85)
Com_col (+)		4.72 (315.36)		6.23 (383.82)		6.34 (361.66)	4.73 (337.4)
Com_law (+)		-4.53 (315.36)		-4.49 (383.81)		-6.06 (361.66)	-3.89 (337.4)
Trade (-)			0.33*** (0.1)		0.54* (0.24)	0.42*** (0.11)	0.52 (0.33)
DTRADE (-)			-0.22 (0.17)		-0.70* (0.3)	-0.56* (0.27)	-0.96* (0.41)
Constant	-43.21 (39.38)		-6.41*** (1.73)	-95.4# (50.32)	10.8 (46.27)	0.23 (4.28)	-27.78 (69.32)
<b>N</b>	103	103	97	103	97	97	97
<b>df_m</b>	7	5	2	12	9	7	14
<b>Pseudo-r2</b>	0.37	0.11	0.27	0.46	0.52	0.48	0.61

Notes: Levels of significance at the 10%, 5%, 1%, and 0.1% levels are denoted by #, \*, \*\*, and \*\*\*, respectively. Standard errors reported in brackets. The signs against the variables denote the expected signs of the coefficients.

These results hold in specifications V and VI, though the explanatory power of the model is considerably improved when economic and political economy factors are combined. On the other hand, none of the coefficients, except that on SRGDP, is found to be individually statistically significant when economic and institutional determinants are used together in specification IV.

In specifications V and VI, the coefficients of DREG and DTRADE also have the expected signs and show statistical significance. SREG, on the other hand, seems to be inversely related to the propensity to negotiate a services accord. The latter finding runs contrary to expectations and would appear to suggest that Asian trading partners may be negotiating services agreements more for purposes of promoting regulatory convergence than to bring down levels of restrictive services regulation. However, such a finding could also emanate from the negative correlation between SREG and DREG in our sample (value of correlation coefficient 0.44), suggesting that dyads with more restrictive services regulation are also more homogeneous partners.

Finally, when all factors are controlled for in specification VII, only NAT (weakly), DREG (weakly), and DTRADE are statistically significant, but the latter specification exhibits the most robust explanatory power (pseudo R-squared = 61%). While TRADE loses its earlier statistical significance, the coefficient of DTRADE increases in absolute value. Significantly, the coefficient of DREG continues to report the expected sign and also becomes stronger in terms of effect, but weakens in terms of statistical significance.

A comparison of our model's predictions for STA when fully specified in column VII with the actual value of STA reveals that the propensity to negotiate (or not) an STA is correctly predicted for 95% of the 103 dyads in our sample.<sup>15</sup> Of the total, 14 dyads actually negotiated an STA and 10 of these were correctly predicted by our model. The remaining 89 dyads did not have a services accord and our model correctly predicted 88 (99%) of these.

We also found evidence of insufficient services preferentialism in our sample for the PRC–Japan ( $STA^{pred} = 0.92$ ) wherein our model suggested the existence of a services accord that does not exist at the moment. At the same time, the Republic of Korea seems to exhibit excessive services preferentialism in its agreements with members of the Association of Southeast Asian Nations (ASEAN): Cambodia ( $STA^{pred} = 0.32$ ), the Philippines ( $STA^{pred} = 0.45$ ), and Viet Nam ( $STA^{pred} = 0.38$ ). The same is true for the PRC–Pakistan ( $STA^{pred} = 0.02$ ). In all cases, both sets of trading partners have a services agreement, though our model suggests a very low probability for this.

## 7.1 Secondary Results

Table 3 reports the results from the ordinary least squares (OLS) estimation of the secondary specification. As before, columns I–III report the results from estimations that control for economic, institutional, and political economy determinants separately; columns IV–VII report results from estimations that include these variables in different combinations.

---

<sup>15</sup> To enable this comparison, we used the decision-rule from Baier and Bergstrand (2004). If  $STA^{pred} > 0.5$ , then we take this value to be 1. If  $STA^{pred} \leq 0$ , then we take this value to be 0.

At the outset, the explanatory power of the secondary estimation is low; even the fully-specified model in column VII has an adjusted R-squared of 31%. This said, a few of the explanatory variables report the expected signs of coefficients. Thus, dyads more remote from the ROW tend to be more homogeneous in services regulation—the coefficient of REM is negative and statistically significant across specifications. Commonality in institutions is likely to result in demand for (and greater supply of) regulatory convergence; yet, we see evidence of this only in the coefficient of common legal origins.

In the case of economic determinants, DRGDP, DROWKL, and SRGDP (in one specification) show statistical significance, with the coefficients of DRGDP (positive) and DROWKL (negative) showing the expected signs throughout the specifications.

The result of the sum of economic size of trading partners is harder to interpret as our data suggest a very low inverse relationship between market size and services regulation (correlation coefficient =  $-0.1$ ). The impact of combined market size on differences in regulation is thus uncertain and perhaps this is what is reflected in the near-zero coefficient of SRGDP across specifications in Table 3.

A more interesting result from the secondary estimation emanates from the coefficient of SREG, corroborating the negative partial correlation coefficient between the two variables. This suggests that a more regulated dyad is also more homogeneous in services regulation, and the result is found to be statistically significant across specifications.

Moreover, dyads in a services agreement seem more divergent in terms of services regulation. This is a somewhat curious result suggesting that the causality runs in reverse. Thus, the greater the extent of regulatory heterogeneity between trading partners, the more likely they are to enter into a services agreement to promote regulatory convergence. Of course, since the data on STRI pertain to 2008 and we only include services agreements negotiated in 2008–12 in our sample, our results are impervious to this reverse causality.

Finally, the coefficient of TRADE is negative as expected. Sectors characterized by greater trade intensity are also more likely to see a convergence in regulation facilitating such trade. This result too is statistically significant across specifications. Moreover, more balanced trade between partners is likely to be associated with similarities in the regulatory frameworks of trading partners. Thus, if DTRADE is low, DREG is also likely to be low. However, the sign on DTRADE fluctuates through specifications and also lacks statistical significance.

Table 3: Determinants of Regulatory Differences in Services within Asia

OLS estimation: Dependent variable DREG							
Variables	I	II	III	IV	V	VI	VII
REM (-)	-1.09# (0.55)			-1.38* (0.58)	-1.22* (0.55)		-1.39* (0.59)
NAT (-)	-0.08 (0.06)			0.01 (0.06)	-0.02 (0.07)		0.06 (0.07)
SRGDP (+/-)	-0.03# (0.01)			-0.02 (0.01)	-0.01 (0.02)		0.01 (0.02)
DRGDP (+)	0.07** (0.02)			0.05* (0.02)	0.09** (0.03)		0.06* (0.03)
DKL (+)	0.02 0.09			0.03 (0.08)	-0.02 (0.09)		-0.01 (0.09)
SQDKL (+)	0 (0.02)			-0.01 (0.02)	0.01 (0.02)		0 (0.02)
DROWKL (-)	-0.18*** (0.05)			-0.13* (0.05)	-0.16** (0.05)		-0.14** (0.05)
STA (-)		0.15 (0.09)	0.34** (0.1)	0.23* (0.1)	0.30** (0.1)	0.23* (0.1)	0.25* (0.1)
SDREG (-)		-0.29*** (0.06)		-0.16* (0.07)		-0.25*** (0.07)	-0.19* 0.07
Com_lang (-)		0.09 (0.11)		0.04 (0.11)		0.11 (0.11)	0 0.11
Com_col (-)		0.1 (0.12)		0.04 (0.12)		0.12 (0.12)	0.07 (0.12)
Com_law (-)		-0.13 (0.08)		-0.18* (0.09)		-0.14# (0.08)	-0.19* (0.09)
Trade (-)			-0.03** (0.01)		-0.03# (0.01)	-0.02* (0.01)	-0.03# (0.01)
DTRADE (+)			0.03 (0.02)		-0.03 (0.03)	0.01 (0.02)	-0.02 (0.03)
Constant	11.11* (5.06)	2.56*** (0.41)	0.83*** (0.17)	15.49** (5.33)	12.41* (5.08)	2.57*** (0.48)	15.19** (5.54)
<b>N</b>	103	103	97	103	97	97	97
<b>df_m</b>	7	5	3	12	10	7	14
<b>r2</b>	0.25	0.24	0.14	0.39	0.32	0.3	0.41
<b>r2-a</b>	0.2	0.23	0.11	0.31	0.24	0.24	0.31

Notes: Levels of significance at the 10%, 5%, 1%, and 0.1% levels are denoted by #, \*, \*\*, and \*\*\*, respectively. Standard errors reported in brackets. The signs against the variables denote the expected signs of the coefficients.

## 8. Concluding Remarks

This paper explored the question of whether certain countries within Asia are more likely candidates for negotiated regulatory convergence and harmonization in the context of services agreements. The two papers closest to the analysis on offer in this paper are Baier and Bergstrand (2004), who were the first to ask this question from the perspective of agreements focusing on goods trade, and Cole and Guillin (2012), who first explored the issue for services accords without, however, considering the influence of regulation in services trade.

While our results may be Asia-specific, the goodness-of-fit of our empirical model, demonstrated by the probabilities predicted successfully, is in line with the results found in Baier and Bergstrand (2004) and improve on those found in Cole and Guillin (2012).

Our results suggest that large Asian economies, in terms of real GDP, with fewer differences in relative factor endowments compared to the ROW, near balanced trade, and divergent regulatory frameworks are more likely to negotiate services agreements with each other. Contrary to expectations, we also found that more distant economies with lower levels of restrictive regulation in the dyad and higher levels of pre-existing trade are more likely candidates for services preferentialism in the region. India and Japan are a case in point.

Our results also suggest that Asian countries more remote from the ROW and with similar economic sizes, greater differences in relative factor endowments compared to the ROW, common legal origins, high levels of pre-existing trade, and restrictive services regulation are also more likely candidates for regulatory convergence. Indonesia and the Philippines would appear to meet such criteria.

Finally, our empirical results argue in favor of a future PRC–Japan services accord (abstracting from the various political considerations weighing on the bilateral relationship). They also suggest that the PRC–Pakistan services PTA and the services agreements that the Republic of Korea has entered into with Cambodia, the Philippines, and Viet Nam via the ASEAN–Republic of Korea accord are illustrative of “excessive” services preferentialism in the region.

A number of policy implications can be derived from the above results. For starters, far from inhibiting the quest for deeper market integration, ex ante divergences in regulatory regimes and enforcement capacities may well prove a significant spur to negotiated convergence, allowing parties to import best trade- and investment-facilitating standards from partners with greater overall regulatory efficiency. Where regulatory divergences are so marked as to inhibit market integration, the supply of adequate doses of variable geometry in meeting otherwise common policy objectives may represent a useful means to promote convergence. A case in point is ASEAN where, despite far-reaching income and development gaps within the regional grouping, significant regulatory convergence has been achieved through formulas that internalize the need for differentiated implementation modalities across members.<sup>16</sup>

<sup>16</sup> At year-end 2012, the per capita income level of Singapore, ASEAN’s wealthiest member, was 45.1 times higher in purchasing power parity (PPP) terms to that of Myanmar, the regional grouping’s poorest member, making ASEAN arguably the most heterogeneous regional grouping to have embarked (quite successfully to date) on the path of deep and sustained regulatory convergence and integration.

Moreover, the statistical insignificance of geographic proximity as a determining influence in the choice of STA partners within Asia must be understood in light of two key characteristics of services trade that allow remote partners to engage in deep forms of integration. First, the unfolding revolution in information and communications technologies increasingly favors the supply of ever-increasing doses of services delivered across borders in manners that are increasingly insensitive to considerations of time and space (and hence distance). Meanwhile, the continued predominance of services supplied through a commercial presence in the territory of the consumer, a dimension of services trade for which no equivalent exists in the goods trade, in effect reduces distance to zero and allows larger (and likely capital-exporting) countries to aspire to high degrees of market integration with smaller and/or distant partners. Efforts directed at the progressive dismantling of obstacles to trade and investment in services through Mode 1 (cross-border supply) and Mode 3 (commercial presence) may thus be important means of neutralizing the impact of distance on market integration in services.

## References

- S.L. Baier and J.H. Bergstrand. 2004. Economic Determinants of Free Trade Agreements. *Journal of International Economics*. 64 (1). pp. 29–63.
- R. Baldwin. 2006. Multilateralising Regionalism: Spaghetti Bowls as Building Blocs on the Path to Global Free Trade. *The World Economy*. 29 (11)
- A. Bernard, J. Jensen, S. Redding, and P. Schott. 2007. Firms in International Trade. *NBER Working Paper*. No. 13054. Cambridge, MA: NBER.
- I. Borchert, B. Gootiiz and A. Mattoo, A. (2012a). Guide to the services trade restrictions database. World Bank Policy Research Working Paper, (6108).
- R. Chanda. 2011. Mapping the Universe of Services Disciplines in Asian PTAs. *NCCR Working Paper*. No. 2011/34. Bern, Switzerland: World Trade Institute.
- T. Chaney. 2008. Distorted Gravity: The Intensive and Extensive Margins of International Trade. *American Economic Review*. 98 (4). pp. 1707–21.
- M.T. Cole and A. Guillin. 2012. The Determinants of Trade Agreements in Services vs. Goods. mimeo.
- P. Egger and M. Larch. 2008. Interdependent Preferential Trade Agreement Memberships: An Empirical Analysis. *Journal of International Economics*. No. 76. pp. 384–99.
- C. Fink. 2009. Has the EU Single Market Program Led to Deeper Integration of EU Services Market? *GEM Working Paper*. July. Paris, France: Group d'Économie Mondiale, Sciences Po.
- J. François and B. Hoekman. 2009. Services Trade and Policy. *Department of Economics Working Paper*. No. 2009-03. Linz, Austria: Johannes Kepler University.
- J. François, B. Hoekman, and J. Woerz. 2007. *Does Gravity Apply to Intangibles? Measuring Barriers to Trade in Services*. Paper presented at the CEPII–OECD Workshop on Recent Developments in International Trade in Services. Paris. November.
- G.M. Grossman and E. Helpman. 1995. The Politics of Free Trade Agreements. *American Economic Review*. 85 (4). pp. 667– 90.
- L.A. Grünfeld and A. Moxnes. 2003. The Intangible Globalization: Explaining the Patterns of International Trade in Services. *Discussion Paper No. 657*. Oslo: Norwegian Institute of International Affairs.
- K. Head and T. Mayer. 2013. Gravity Equations: Workhorse, Toolkit, and Cookbook. *CEPR Discussion Papers*. No. 9322. London, UK: CEPR.

- K. Head, T. Mayer, and J. Ries. 2010. The Erosion of Colonial Trade Linkages after Independence. *Journal of International Economics*. 81 (1). pp. 1–14.
- E. Helpman, M. Melitz, and S. Yeaple. 2004. Export versus FDI with Heterogeneous Firms. *American Economic Review*. 94 (1). pp. 300–16.
- A. Heston, R. Summers, and B. Aten. 2011. *Penn World Table Version 7.0*. Center for International Comparisons of Production, Income, and Prices at the University of Pennsylvania.
- C. Hulton and F. Wycoff. 1981. The Measurement of Economic Depreciation in C. Hulton (ed.) *Depreciation, Inflation, and the Taxation of Income from Capital*. Washington, DC: The Urban Institute.
- M. Kawai and G. Wignajara. 2010. Asian FTAs: Trends, Prospects, and Challenges. *ADB Economics Working Paper Series*. No. 226. Manila, Philippines: ADB.
- F. Kimura and H.H. Lee. 2004. The Gravity Equation in International Trade in Services. *Review of World Economics*. 142 (1). pp. 92–121.
- H. Kox and A. Lejour. 2006. The Effects of the Services Directive on Intra-EU Trade and FDI. *Revue Economique*. 57 (4). pp. 747–69.
- H. Kox and H. Nordås. 2007. Services Trade and Domestic Regulation. *OECD Trade Policy Working Paper*. No. 49. Paris, France: OECD.
- H. Kox and H. Nordås. 2009. Regulatory Harmonization and Trade in Services: Volumes and Choice of Mode. mimeo. Available at [www.eiit.org/WorkingPapers/Papers/Papers/TradePolicyMultilateral/FREITo40.pdf](http://www.eiit.org/WorkingPapers/Papers/Papers/TradePolicyMultilateral/FREITo40.pdf)
- R. La Porta, F. Lopez de Silanes, A. Shleifer, and R. Vishny. 1999. The Quality of Government. *Journal of Law, Economics, and Organization*.
- C. Lennon. 2009. Trade in Services and Trade in Goods: Differences and Complementarities. WIIW Working Papers. No. 53. Vienna, Austria: WIIW.
- J. Marchetti. 2009. *Do Economic Integration Agreements lead to Deeper Integration of Services Markets?* mimeo. Available [http://www.wto.org/english/res\\_e/reser\\_e/gtdw\\_e/wkshop09\\_e/marchetti\\_e.pdf](http://www.wto.org/english/res_e/reser_e/gtdw_e/wkshop09_e/marchetti_e.pdf)
- J. Marchetti, , Roy, M., and Zoratto, L. (2012). Is there reciprocity in preferential trade agreements on services? Technical report, Sta\_ Working Paper ERSD.
- A. Mattoo and P. Sauv . 2010. The Preferential Liberalization of Services Trade. NCCR Working Paper. No. 2010/13. May. Published as *Services* in J.-P. Chauffour and J.-C. Maur (eds.) *Preferential Trade Agreement Policies for Development: A Handbook*. Washington, DC: The World Bank. pp. 235–74.



- D. McFadden. 1975. The Revealed Preferences of a Government Bureaucracy: Theory. *Bell Journal of Economics*. 6 (2). pp. 401–16.
- D. McFadden. 1976. Quantal Choice Analysis: A Survey. *Annals of Economic and Social Measurement*. 5 (4). pp. 363–90.
- M.J. Melitz. 2003. The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity. *Econometrica*. 71 (6). pp. 1695–1725.
- S. Miroudot, J. Sauvage, and B. Shepherd. 2010. Measuring the Costs of International Trade in Services. GEM Working Paper. Paris, France: Groupe d'Économie Mondiale, Sciences-Po.
- Miroudot, S., J. Sauvage, and B. Shepherd. 2012. Trade Costs and Productivity in Services Sectors. *Economic Letters*. 114 (1). pp. 36–38.
- OECD. 2009. *Measuring Capital*. Paris, France: OECD.
- D. Park. 2002. How Far has Regional Integration Deepened? Evidence from Trade in Services. *KIEP Working Paper*. No. 02-17. Seoul, Republic of Korea: Korean Institute for International Economic Policy.
- PECC and ADBI. 2011. *Services Trade: Approaches for the 21st Century*. Singapore and Tokyo, Japan: Pacific Economic Cooperation Council and Asian Development Bank Institute.
- M. Roy (2011). Democracy and the political economy of multilateral commitments on trade in services. *Journal of World Trade*, 45 (6). pp.1157–1180.
- P. Sauvé and A. Shingal. 2011. Reflections on the Preferential Liberalization of Services Trade. *Journal of World Trade*. 45 (5). pp. 953–63.
- C. Schwellnus. 2007. The Effects of Domestic Regulation on Services Trade Revisited. CEPII Working Paper. No. 2007–08. Paris, France: CEPII Research Center.
- B. Shepherd and G. Pasadilla. 2012. Services as a New Engine of Growth for ASEAN, the People's Republic of China, and India. *ADB Working Paper Series*. No. 349. Tokyo, Japan: Asian Development Bank Institute.
- A. Shingal. 2014. How Much do Negotiated Agreements Matter for Services Trade? in P. Sauvé and A. Shingal (eds.) *The Preferential Liberalization of Trade in Services: Comparative Regionalism*. Edward Elgar Publishing Ltd. Forthcoming.
- D. Trefler. 1993. Trade Liberalization and the Theory of Endogenous Protection: An Econometric Study of US Import Policy. *Journal of Political Economy*. 101 (1). pp. 138–60.

- E. van der Marel. 2011. Determinants of Comparative Advantage in Services. *GEM Working Paper*. Paris, France: Groupe d'Économie Mondiale, Sciences-Po.
- E. van der Marel and B. Shepherd. 2011. Services Trade, Regulation, and Regional Integration: Evidence from Sectoral Data. *MPRA Paper*. No. 34343. Munich, Germany: MPRA.
- E. Van der Marel and Miroudot, S. (2012). The economics and political economy of going beyond the gates. London School of Economics, mimeo.
- K. Walsh. 2006. Trade in Services: Does Gravity Hold? A Gravity Model Approach to Estimating Barriers to Services Trade. *IIIS Discussion Paper*. No 183. Dublin, Ireland: Institute for International Integration Studies.
- World Bank. *Services Trade Restrictiveness Database*. Washington, DC: World Bank. Available at <http://iresearch.worldbank.org/servicetrade/>

## Annex

Table A1: Summary Statistics

Variables	Obs	Mean	Std. Dev.	Min	Max
<b>Geography</b>					
Distance (km)	103	3214.4	1433.5	536.0	6861.3
NAT	103	-8.0	0.5	-8.8	-6.3
REM	103	9.1	0.1	9.0	9.3
<b>Economic</b>					
rgdp p (USD bn)	103	177.0	427.0	3.7	2190.0
rgdp r (USD bn)	103	376.0	580.0	3.7	2190.0
SRGDP	103	50.0	2.4	44.1	55.7
DRGDP	103	2.2	1.5	0.0	6.4
l_p (mn)	103	29.1	63.4	0.6	504.0
k_p (USD bn)	103	414.0	1150.0	3.1	5950.0
l_r (mn)	103	110.0	167.0	0.6	504.0
k_r (USD bn)	103	901.0	1580.0	3.1	5950.0
kl_p (USD/worker)	103	14333.4	20330.4	939.7	105607.2
kl_r (USD/worker)	103	16016.4	27512.3	939.7	105607.2
kl_row (USD/worker)	103	23803.1	2303.0	20506.2	32659.0
DKL	103	1.6	1.1	0.0	4.7
SQDKL	103	3.8	4.6	0.0	22.3
DROWKL	103	1.5	0.7	0.0	3.1
<b>Institutional</b>					
stri_r	103	38.8	14.3	13.7	65.7
stri_p	103	38.5	12.7	13.7	65.7
DREG	103	0.5	0.4	0.0	1.6
SREG	103	7.2	0.3	5.8	8.2
Com_lang	103	0.1	0.6	0.0	1.0
Com_col	103	0.1	0.3	0.0	1.0
Com_law	103	0.3	0.5	0.0	1.0
STA	103	0.1	0.3	0.0	1.0
<b>Political economy</b>					
trade_r (USD bn)	103	17.3	28.8	0.1	110.0
Trade_p (USD bn)	103	10.3	20.9	0.1	110.0
TRADE	97	15.8	3.4	6.9	22.9
DTRADE	103	2.0	1.4	0.0	6.8

## **ADB Working Paper Series on Regional Economic Integration \***

1. “The ASEAN Economic Community and the European Experience” by Michael G. Plummer
2. “Economic Integration in East Asia: Trends, Prospects, and a Possible Roadmap” by Pradumna B. Rana
3. “Central Asia after Fifteen Years of Transition: Growth, Regional Cooperation, and Policy Choices” by Malcolm Dowling and Ganeshan Wignaraja
4. “Global Imbalances and the Asian Economies: Implications for Regional Cooperation” by Barry Eichengreen
5. “Toward Win-Win Regionalism in Asia: Issues and Challenges in Forming Efficient Trade Agreements” by Michael G. Plummer
6. “Liberalizing Cross-Border Capital Flows: How Effective Are Institutional Arrangements against Crisis in Southeast Asia” by Alfred Steinherr, Alessandro Cisotta, Erik Klär, and Kenan Šehović
7. “Managing the Noodle Bowl: The Fragility of East Asian Regionalism” by Richard E. Baldwin
8. “Measuring Regional Market Integration in Developing Asia: A Dynamic Factor Error Correction Model (DF-ECM) Approach” by Duo Qin, Marie Anne Cagas, Geoffrey Ducanes, Nedelyn Magtibay-Ramos, and Pilipinas F. Quising
9. “The Post-Crisis Sequencing of Economic Integration in Asia: Trade as a Complement to a Monetary Future” by Michael G. Plummer and Ganeshan Wignaraja
10. “Trade Intensity and Business Cycle Synchronization: The Case of East Asia” by Pradumna B. Rana
11. “Inequality and Growth Revisited” by Robert J. Barro
12. “Securitization in East Asia” by Paul Lejot, Douglas Arner, and Lotte Schou-Zibell
13. “Patterns and Determinants of Cross-border Financial Asset Holdings in East Asia” by Jong-Wha Lee
14. “Regionalism as an Engine of Multilateralism: A Case for a Single East Asian FTA” by Masahiro Kawai and Ganeshan Wignaraja

15. “The Impact of Capital Inflows on Emerging East Asian Economies: Is Too Much Money Chasing Too Little Good?” by Soyoung Kim and Doo Yong Yang
16. “Emerging East Asian Banking Systems Ten Years after the 1997/98 Crisis” by Charles Adams
17. “Real and Financial Integration in East Asia” by Soyoung Kim and Jong-Wha Lee
18. “Global Financial Turmoil: Impact and Challenges for Asia’s Financial Systems” by Jong-Wha Lee and Cyn-Young Park
19. “Cambodia’s Persistent Dollarization: Causes and Policy Options” by Jayant Menon
20. “Welfare Implications of International Financial Integration” by Jong-Wha Lee and Kwanho Shin
21. “Is the ASEAN-Korea Free Trade Area (AKFTA) an Optimal Free Trade Area?” by Donghyun Park, Innwon Park, and Gemma Esther B. Estrada
22. “India’s Bond Market—Developments and Challenges Ahead” by Stephen Wells and Lotte Schou- Zibell
23. “Commodity Prices and Monetary Policy in Emerging East Asia” by Hsiao Chink Tang
24. “Does Trade Integration Contribute to Peace?” by Jong-Wha Lee and Ju Hyun Pyun
25. “Aging in Asia: Trends, Impacts, and Responses” by Jayant Menon and Anna Melendez-Nakamura
26. “Re-considering Asian Financial Regionalism in the 1990s” by Shintaro Hamanaka
27. “Managing Success in Viet Nam: Macroeconomic Consequences of Large Capital Inflows with Limited Policy Tools” by Jayant Menon
28. “The Building Block versus Stumbling Block Debate of Regionalism: From the Perspective of Service Trade Liberalization in Asia” by Shintaro Hamanaka
29. “East Asian and European Economic Integration: A Comparative Analysis” by Giovanni Capannelli and Carlo Filippini
30. “Promoting Trade and Investment in India’s Northeastern Region” by M. Govinda Rao

31. “Emerging Asia: Decoupling or Recoupling” by Soyoung Kim, Jong-Wha Lee, and Cyn-Young Park
32. “India’s Role in South Asia Trade and Investment Integration” by Rajiv Kumar and Manjeeta Singh
33. “Developing Indicators for Regional Economic Integration and Cooperation” by Giovanni Capannelli, Jong-Wha Lee, and Peter Petri
34. “Beyond the Crisis: Financial Regulatory Reform in Emerging Asia” by Chee Sung Lee and Cyn-Young Park
35. “Regional Economic Impacts of Cross-Border Infrastructure: A General Equilibrium Application to Thailand and Lao People’s Democratic Republic” by Peter Warr, Jayant Menon, and Arief Anshory Yusuf
36. “Exchange Rate Regimes in the Asia-Pacific Region and the Global Financial Crisis” by Warwick J. McKibbin and Waranya Pim Chanthapun
37. “Roads for Asian Integration: Measuring ADB’s Contribution to the Asian Highway Network” by Srinivasa Madhur, Ganeshan Wignaraja, and Peter Darjes
38. “The Financial Crisis and Money Markets in Emerging Asia” by Robert Rigg and Lotte Schou-Zibell
39. “Complements or Substitutes? Preferential and Multilateral Trade Liberalization at the Sectoral Level” by Mitsuyo Ando, Antoni Esteveordal, and Christian Volpe Martincus
40. “Regulatory Reforms for Improving the Business Environment in Selected Asian Economies—How Monitoring and Comparative Benchmarking can Provide Incentive for Reform” by Lotte Schou-Zibell and Srinivasa Madhur
41. “Global Production Sharing, Trade Patterns, and Determinants of Trade Flows in East Asia” by Prema-chandra Athukorala and Jayant Menon
42. “Regionalism Cycle in Asia (-Pacific): A Game Theory Approach to the Rise and Fall of Asian Regional Institutions” by Shintaro Hamanaka
43. “A Macroprudential Framework for Monitoring and Examining Financial Soundness” by Lotte Schou-Zibell, Jose Ramon Albert, and Lei Lei Song
44. “A Macroprudential Framework for the Early Detection of Banking Problems in Emerging Economies” by Claudio Loser, Miguel Kiguel, and David Mermelstein
45. “The 2008 Financial Crisis and Potential Output in Asia: Impact and Policy Implications” by Cyn-Young Park, Ruperto Majuca, and Josef Yap

46. “Do Hub-and-Spoke Free Trade Agreements Increase Trade? A Panel Data Analysis” by Jung Hur, Joseph Alba, and Donghyun Park
47. “Does a Leapfrogging Growth Strategy Raise Growth Rate? Some International Evidence” by Zhi Wang, Shang-Jin Wei, and Anna Wong
48. “Crises in Asia: Recovery and Policy Responses” by Kiseok Hong and Hsiao Chink Tang
49. “A New Multi-Dimensional Framework for Analyzing Regional Integration: Regional Integration Evaluation (RIE) Methodology” by Donghyun Park and Mario Arturo Ruiz Estrada
50. “Regional Surveillance for East Asia: How Can It Be Designed to Complement Global Surveillance?” by Shinji Takagi
51. “Poverty Impacts of Government Expenditure from Natural Resource Revenues” by Peter Warr, Jayant Menon, and Arief Anshory Yusuf
52. “Methods for Ex Ante Economic Evaluation of Free Trade Agreements” by David Cheong
53. “The Role of Membership Rules in Regional Organizations” by Judith Kelley
54. “The Political Economy of Regional Cooperation in South Asia” by V.V. Desai
55. “Trade Facilitation Measures under Free Trade Agreements: Are They Discriminatory against Non-Members?” by Shintaro Hamanaka, Aiken Tafgar, and Dorothea Lazaro
56. “Production Networks and Trade Patterns in East Asia: Regionalization or Globalization?” by Prema-chandra Athukorala
57. “Global Financial Regulatory Reforms: Implications for Developing Asia” by Douglas W. Arner and Cyn-Young Park
58. “Asia’s Contribution to Global Rebalancing” by Charles Adams, Hoe Yun Jeong, and Cyn-Young Park
59. “Methods for Ex Post Economic Evaluation of Free Trade Agreements” by David Cheong
60. “Responding to the Global Financial and Economic Crisis: Meeting the Challenges in Asia” by Douglas W. Arner and Lotte Schou-Zibell
61. “Shaping New Regionalism in the Pacific Islands: Back to the Future?” by Satish Chand

62. “Organizing the Wider East Asia Region” by Christopher M. Dent
63. “Labour and Grassroots Civic Interests In Regional Institutions” by Helen E.S. Nesadurai
64. “Institutional Design of Regional Integration: Balancing Delegation and Representation” by Simon Hix
65. “Regional Judicial Institutions and Economic Cooperation: Lessons for Asia?” by Erik Voeten
66. “The Awakening Chinese Economy: Macro and Terms of Trade Impacts on 10 Major Asia-Pacific Countries” by Yin Hua Mai, Philip Adams, Peter Dixon, and Jayant Menon
67. “Institutional Parameters of a Region-Wide Economic Agreement in Asia: Examination of Trans-Pacific Partnership and ASEAN+ $\alpha$  Free Trade Agreement Approaches” by Shintaro Hamanaka
68. “Evolving Asian Power Balances and Alternate Conceptions for Building Regional Institutions” by Yong Wang
69. “ASEAN Economic Integration: Features, Fulfillments, Failures, and the Future” by Hal Hill and Jayant Menon
70. “Changing Impact of Fiscal Policy on Selected ASEAN Countries” by Hsiao Chink Tang, Philip Liu, and Eddie C. Cheung
71. “The Organizational Architecture of the Asia-Pacific: Insights from the New Institutionalism” by Stephan Haggard
72. “The Impact of Monetary Policy on Financial Markets in Small Open Economies: More or Less Effective During the Global Financial Crisis?” by Steven Pennings, Arief Ramayandi, and Hsiao Chink Tang
73. “What do Asian Countries Want the Seat at the High Table for? G20 as a New Global Economic Governance Forum and the Role of Asia” by Yoon Je Cho
74. “Asia’s Strategic Participation in the Group of 20 for Global Economic Governance Reform: From the Perspective of International Trade” by Taeho Bark and Moonsung Kang
75. “ASEAN’s Free Trade Agreements with the People’s Republic of China, Japan, and the Republic of Korea: A Qualitative and Quantitative Analysis” by Gemma Estrada, Donghyun Park, Innwon Park, and Soonchan Park



76. “ASEAN-5 Macroeconomic Forecasting Using a GVAR Model” by Fei Han and Thiam Hee Ng
77. “Early Warning Systems in the Republic of Korea: Experiences, Lessons, and Future Steps” by Hyungmin Jung and Hoe Yun Jeong
78. “Trade and Investment in the Greater Mekong Subregion: Remaining Challenges and the Unfinished Policy Agenda” by Jayant Menon and Anna Cassandra Melendez
79. “Financial Integration in Emerging Asia: Challenges and Prospects” by Cyn-Young Park and Jong-Wha Lee
80. “Sequencing Regionalism: Theory, European Practice, and Lessons for Asia” by Richard E. Baldwin
81. “Economic Crises and Institutions for Regional Economic Cooperation” by C. Randall Henning
82. “Asian Regional Institutions and the Possibilities for Socializing the Behavior of States” by Amitav Acharya
83. “The People’s Republic of China and India: Commercial Policies in the Giants” by Ganeshan Wignaraja
84. “What Drives Different Types of Capital Flows and Their Volatilities?” by Rogelio Mercado and Cyn-Young Park
85. “Institution Building for African Regionalism” by Gilbert M. Khadiagala
86. “Impediments to Growth of the Garment and Food Industries in Cambodia: Exploring Potential Benefits of the ASEAN-PRC FTA” by Vannarith Chheang and Shintaro Hamanaka
87. “The Role of the People’s Republic of China in International Fragmentation and Production Networks: An Empirical Investigation” by Hyun-Hoon Lee, Donghyun Park, and Jing Wang
88. “Utilizing the Multiple Mirror Technique to Assess the Quality of Cambodian Trade Statistics” by Shintaro Hamanaka
89. “Is Technical Assistance under Free Trade Agreements WTO-Plus?” A Review of Japan-ASEAN Economic Partnership Agreements” by Shintaro Hamanaka
90. “Intra-Asia Exchange Rate Volatility and Intra-Asia Trade: Evidence by Type of Goods” by Hsiao Chink Tang

91. “Is Trade in Asia Really Integrating?” by Shintaro Hamanaka
92. “The PRC’s Free Trade Agreements with ASEAN, Japan, and the Republic of Korea: A Comparative Analysis” by Gemma Estrada, Donghyun Park, Innwon Park, and Soonchan Park
93. “Assessing the Resilience of ASEAN Banking Systems: The Case of the Philippines” by Jose Ramon Albert and Thiam Hee Ng
94. “Strengthening the Financial System and Mobilizing Savings to Support More Balanced Growth in ASEAN+3” by A. Noy Siackhachanh
95. ”Measuring Commodity-Level Trade Costs in Asia: The Basis for Effective Trade Facilitation Policies in the Region” by Shintaro Hamanaka and Romana Domingo
96. “Why do Imports Fall More than Exports Especially During Crises? Evidence from Selected Asian Economies” by Hsiao Chink Tang
97. “Determinants of Local Currency Bonds and Foreign Holdings: Implications for Bond Market Development in the People’s Republic of China” by Kee-Hong Bae
98. “ASEAN–China Free Trade Area and the Competitiveness of Local Industries: A Case Study of Major Industries in the Lao People’s Democratic Republic” by Leebeer Leebouapao, Sthabandith Insisienmay, and Vanthana Nolintha
99. “The Impact of ACFTA on People’s Republic of China–ASEAN Trade: Estimates Based on an Extended Gravity Model for Component Trade” by Yu Sheng, Hsiao Chink Tang, and Xinpeng Xu
100. “Narrowing the Development Divide in ASEAN: The Role of Policy” by Jayant Menon
101. “Different Types of Firms, Products, and Directions of Trade: The Case of the People’s Republic of China” by Hyun-Hoon Lee, Donghyun Park, and Jing Wang
102. “Anatomy of South–South FTAs in Asia: Comparisons with Africa, Latin America, and the Pacific Islands” by Shintaro Hamanaka
103. “Japan’s Education Services Imports: Branch Campus or Subsidiary Campus?” by Shintaro Hamanaka
104. “A New Regime of SME Finance in Emerging Asia: Empowering Growth-Oriented SMEs to Build Resilient National Economies” by Shigehiro Shinozaki

105. “Critical Review of East Asia – South America Trade” by Shintaro Hamanaka and Aiken Tafgar
106. “The Threat of Financial Contagion to Emerging Asia’s Local Bond Markets: Spillovers from Global Crises” by Iwan J. Azis, Sabyasachi Mitra, Anthony Baluga, and Roselle Dime
107. “Hot Money Flows, Commodity Price Cycles, and Financial Repression in the US and the People’s Republic of China: The Consequences of Near Zero US Interest Rates” by Ronald McKinnon and Zhao Liu
108. “Cross-Regional Comparison of Trade Integration: The Case of Services” by Shintaro Hamanaka
109. “Preferential and Non-Preferential Approaches to Trade Liberalization in East Asia: What Differences Do Utilization Rates and Reciprocity Make?” by Jayant Menon
110. “Can Global Value Chains Effectively Serve Regional Economic Development in Asia?” by Hans-Peter Brunner
111. “Exporting and Innovation: Theory and Firm-Level Evidence from the People’s Republic of China” by Faqin Lin and Hsiao Chink Tang
112. “Supporting the Growth and Spread of International Production Networks in Asia: How Can Trade Policy Help?” by Jayant Menon
113. “On the Use of FTAs: A Review of Research Methodologies” by Shintaro Hamanaka
114. “The People’s Republic of China’s Financial Policy and Regional Cooperation in the Midst of Global Headwinds” by Iwan J. Azis
115. “The Role of International Trade in Employment Growth in Micro- and Small Enterprises: Evidence from Developing Asia” by Jens Krüger
116. “Impact of Euro Zone Financial Shocks on Southeast Asian Economies” by Jayant Menon and Thiam Hee Ng
117. “What is Economic Corridor Development and What Can It Achieve in Asia’s Subregions?” by Hans-Peter Brunner
118. “The Financial Role of East Asian Economies in Global Imbalances: An Econometric Assessment of Developments after the Global Financial Crisis” by Hyun-Hoon Lee and Donghyun Park

119. “Learning by Exporting: Evidence from India” by Apoorva Gupta, Ila Patnaik, and Ajay Shah
120. “FDI Technology Spillovers and Spatial Diffusion in the People’s Republic of China” by Mi Lin and Yum K. Kwan
121. “Capital Market Financing for SMEs: A Growing Need in Emerging Asia” by Shigehiro Shinozaki
122. “Terms of Trade, Foreign Direct Investment, and Development: A Case of Intra-Asian Kicking Away the Ladder?” by Konstantin M. Wacker, Philipp Grosskurth, and Tabea Lakemann
123. “Can Low Interest Rates be Harmful: An Assessment of the Bank Risk-Taking Channel in Asia” by Arief Ramayandi, Umang Rawat, and Hsiao Chink Tang
124. “Explaining Foreign Holdings of Asia’s Debt Securities” by Charles Yuji Horioka, Takaaki Nomoto, and Akiko Terada-Hagiwara
125. “South Caucasus–People’s Republic of China Bilateral Free Trade Agreements: Why It Matters” by Hasmik Hovhanesian and Heghine Manasyan”
126. “Enlargement of Economic Framework in Southeast Asia and Trade Flows in Lao PDR” by Sithanoxay Suvannaphakdy, Hsiao Chink Tang, and Alisa DiCaprio
127. “The End of Grand Expectations: Monetary and Financial Integration After the Crisis in Europe” by Heribert Dieter
128. “The Investment Version of the Asian Noodle Bowl: The Proliferation of International Investment Agreements (IIAs)” by Julien Chaisse and Shintaro Hamanaka

\*These papers can be downloaded from (ARIC) <http://aric.adb.org/archives.php?section=o&subsection=workingpapers> or (ADB) <http://www.adb.org/publications/series/regional-economic-integration-working-papers>











## **Why do Countries enter into Preferential Agreements on Trade in Services?**

Assessing the Potential for Negotiated Regulatory Convergence in Asian Services Markets

Given the surge of services preferentialism in Asia and the importance of domestic regulation for services trade, this paper examines the potential for negotiated regulatory convergence in Asian services markets. Our results suggest that Asian economies more remote from the rest of the world, with similar economic sizes, greater differences in relative factor endowments, common legal origins, high levels of pre-existing trade and restrictive services regimes are more likely candidates for negotiated regulatory convergence.

### **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 approximately two-thirds of the world's poor: 1.6 billion people who live on less than \$2 a day, with 733 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.



**ASIAN DEVELOPMENT BANK**

6 ADB Avenue, Mandaluyong City

1550 Metro Manila, Philippines

[www.adb.org](http://www.adb.org)

Publication Stock No. WPS146445

Printed in the Philippines