

# **Are Regional Trade Agreements in Asia Stumbling or Building Blocks?**

## **Some Implications for the Mekong Countries**

Patrizia Tumbarello<sup>1</sup>  
(IMF—Asia and Pacific Department)

### **I. INTRODUCTION**

1. Preferential trade agreements are proliferating around the world, including in Asia and the Pacific region.<sup>2</sup> At least 26 such agreements involving Asian economies have entered into force in the past five years, and currently about 40 additional ones are under negotiation (Table 1). Unlike other regions, most regional preferential agreements in Asia followed, rather than preceded, trade reforms on a most-favored nation (MFN) basis.<sup>3</sup> Regional trade integration is only one of the multiple facets of enhanced cooperation initiatives in the region that have come about since the Asian crisis.

2. The upsurge in Regional Trade Agreements (RTAs) around the globe reflects both economic and non-economic motivations. RTAs can be a cornerstone of larger economic and political efforts to increase regional cooperation beyond the multilateral agenda. They can also stimulate inward foreign direct investment (Kimura and Ando, 2005) and growth through technological transfers. Their proliferation can also be motivated by a growing sense that regional agreements elsewhere put the left-out countries at a disadvantage (Baldwin, 1993); and sometimes there may also be a perception that WTO accession is time-consuming. However, it is important to recognize that, as a discriminatory measure, RTAs can also be harmful, both to member countries and excluded countries, especially when they are pursued not as a complement, but as a substitute for multilateral liberalization. In such circumstances, increased protection of vested interests can turn the agreements into closed blocs, discouraging multilateralism, and distorting the pattern of international trade.

3. Consequently it is useful to ask whether the recent proliferation of preferential agreements in Asia is a healthy development, or runs the risk of turning into an unmanageable “noodle bowl” of regionalism in the future. The goal of this paper is to shed some light on this question, and the main messages are as follows:

---

<sup>1</sup> Paper prepared for the seminar “Accelerating Development in the Mekong Region—the Role of Economic Integration”, Siem Reap, Cambodia, June 26–27, 2006. The views expressed in this paper are those of the author and should not be attributed to the International Monetary Fund, its Executive Board, or its Management.

<sup>2</sup> As of January 2005, the WTO had been notified of 312 regional trade agreements: of these, 170 were currently in force. Another 65 were estimated to be operational but the WTO had not yet been notified (Crawford and Fiorentino, 2005).

<sup>3</sup> See Feridhanusetyawan (2005) for a comprehensive analysis of the Asia and Pacific preferential trade agreements.

- Membership in the Asian RTAs considered in this study does not, to date, seem to have generally occurred at the expense of trade with nonmembers, as most Asian countries' integration with the global economy preceded regional integration.
- The above result appears more the effect of Asian countries' strong inclination to pursue non-discriminatory liberalization, than the result of regionalism itself. In fact, while members of Asian RTAs seem to have recorded more trade with the rest of the world than other countries with similar characteristics in other regions, this effect was strongest for countries with the lowest MFN rates.
- Looking forward, a proliferation of RTAs, which is not accompanied by continuing unilateral and multilateral liberalization, could run the risk of leading to suboptimal trade patterns. To guard against this risk, the Mekong countries—which have relatively higher MFN rates compared to the rest of the region (Table 2)—would be well-advised to continue to pursue broad-based trade liberalization, not only at the regional level, but also vis-à-vis the rest of the world on an MFN basis.
- While it is beyond the scope of this paper to assess whether a pan-Asian free trade area would be preferable to several overlapping initiatives, a greater coherence among existing agreements, in terms of tariff preferences, rules of origin,<sup>4</sup> and phase-in modalities would facilitate implementation, reduce administrative costs, and help minimize possible distortions in trade patterns.

---

<sup>4</sup> Rules of origin are established in free trade agreements to ensure that only goods originating in participating countries enjoy preferences.

Table 1. Preferential Trade Agreements in the Asia and Pacific Region, June 2006 1/	
Regional Trade Agreements	Bilateral Trade Agreements
	Already in force:
AFTA (ASEAN Free Trade Area), 1992, 1993	Australia-New Zealand (CER, Closer Economic Relation, 1983, 1983)
ASEAN-China Free Trade Agreement, 2004, 2005	Australia-Singapore, 2003, 2003
Bangkok Agreement , 1975, 1976	Australia-Thailand, 2004, 2005
Pacific Island Countries Trade Agreement (PICTA), 2001, 2001	Australia-United States, 2004, 2005
SAARC Preferential Trade Agreement (SAPTA), 1993, 1995	China-Hong Kong SAR, 2003, 2004
South Asia Free Trade Agreement (SAFTA), 2002, 2006	China-Macao SAR, 2003, 2004
Trans-Pacific Strategic Economic Partnership Agreement (TPSEPA), 2005 2/	China-Pakistan, 2005, 2005
	China-Thailand, 2003, 2003
	India-Sri Lanka , 1998, 2001
	India-Thailand, 2003, 2004
	Japan-Mexico, 2004, 2005
	Japan-Singapore, 2002, 2002
	Korea-Chile, 2003, 2004
	Korea-Singapore, 2005, 2006
	Lao PDR-United States, 2003, 2005
	Lao PDR-Thailand, 1991, 2001
	New Zealand-Singapore, 2000, 2001
	New Zealand-Thailand, 2005, 2005
	Singapore-European Free Trade Association, 2002, 2003
	Singapore-Jordan, 2004, 2005
	Singapore-United States, 2003, 2004
	Sri Lanka- Pakistan, 2005, 2005
	Vietnam-United States, 2000, 2001

1/ The year in parenthesis refers respectively to the year of signing of the agreement and the year it became into force.  
2/ Not in force yet.

4. The remainder of the paper is structured as follows: Section II discusses some benefits and potential risk of regionalism. Section III briefly reviews RTAs in the Asia and Pacific region considered in this study. Section IV provides the results of the gravity model of trade used to assess how RTAs may have affected their members' trade patterns, and Section V concludes. The specification of the model is discussed in Annex I.

## II. BENEFITS AND POTENTIAL RISKS OF REGIONAL TRADE INTEGRATION INITIATIVE

5. Well-designed trade agreements can expand trade opportunities and benefit participants. RTAs can serve as a vehicle for dialogue and coordination on regional issues that are not part of the multilateral agenda.<sup>5</sup> They can also strengthen political ties between countries in the region.

6. However, as a discriminatory tool, RTAs can potentially be harmful. In principle, preferential trade agreements are economically inferior to nondiscriminatory trade liberalization on a MFN basis. Indeed, there is a risk that RTAs could, over time, turn into closed blocs. RTAs could divert resources away from multilateral trade liberalization, both in presence of limited administrative capacity, or because they are incorrectly perceived as a

<sup>5</sup> These might include regulatory harmonization, infrastructure development, and collaboration among members to facilitate trade and transport.

proxy for multilateral liberalization, and could thereby delay WTO negotiations and accession (Tumbarello, 2005). Political economy considerations also suggest that RTAs could create incentives for regional trade partners to lobby against any MFN-based reforms that would reduce the value of their tariff preferences, thus undermining prospects for future broader trade reforms (Krueger, 1995, and Krishna, 1998).

7. As second-best discriminatory policies, RTAs can give rise to welfare losses not only to third countries, but to the member countries themselves (Viner, 1950). RTAs may divert imports from nonmember sources whose production costs are lower to member suppliers, whose production costs may be higher. In such cases, the cost difference would be borne by the importing member (trade diversion effect). If, on the other hand, resources previously engaged in costly domestic production could be reallocated as a result of the RTA in the direction of countries' comparative advantage, economic welfare would increase (trade creation effect). The risk of net trade-diversion is more likely to be minimized (Krueger, 1995) if the rate of protection vis-à-vis nonmembers is low to start with, or if the RTA partners agree on a schedule of swift reductions in their MFN tariff over time, ideally to eventually match their preferential rates.

8. RTAs can also create a costly hub-and-spoke structure of trade. Such a structure can emerge when the largest RTA member or hub signs individual agreements with a wide range of peripheral countries or spokes, among which market access remains restricted. Such arrangements can marginalize the spokes, where market access conditions are usually less advantageous than in the hub, which enjoys improved access to all of the spokes. Such a scheme may generate lower gains among the spoke members, which will accrue mainly to the hub country (Wonnacott, 1996).

9. Other concerns associated with proliferation of RTAs arise from the so-called "noodle bowl effect," which refers to the potential problems arising from lack of coherence among different overlapping agreements. For example, some individual ASEAN members are negotiating bilateral agreements with non-ASEAN countries even if ASEAN itself negotiates with the same country. While the provisions of preferential agreements vary considerably, there has so far been little effort toward regulatory harmonization and consistency among them. As a result, restrictive and inconsistent rules of origin<sup>6</sup> across agreements can complicate outsourcing decisions by firms and add fragility to the trading system. Moreover, the outcome of a trade dispute between two members has the potential to spill over to other countries in the region and can create problems for other regional trade relations. In the absence of a regional dispute settlement mechanism, there is a potential risk

---

<sup>6</sup> The administrative costs associated with proving conformity to these rules may lead to low utilization of the preferential trade scheme. Moreover, rules of origin can lead to trade diversion if they oblige partners to buy higher-priced intermediate goods from a partner rather than on the lower-priced world markets.

of disruption in intra-regional trade.<sup>7</sup> Differences on rules of origin are an important cause of inconsistency among Asian RTAs. For example, New Zealand-Singapore and the ASEAN Free Trade Area (AFTA) use 40 percent value-added criteria, while ASEAN-India, Singapore-India, and Japan-Singapore include more complex provisions.

10. To minimize the risks that RTAs can entail, it is important that they be implemented within a well-designed comprehensive framework. Best practice in designing RTAs includes: low external barriers and a continued commitment to MFN liberalization; open access to membership; consistency among different agreements; comprehensive coverage of goods with few exclusion; symmetrical and simple rules of origin with transparent and consistent regulations; behind-the-borders reforms to promote synergies and strengthen the supply response; and the establishment of dispute settlement provisions, to resolve conflict in a timely fashion (ADB, 2006, p. 290). Satisfying these conditions becomes increasingly difficult if RTAs continue to proliferate, however.<sup>8</sup>

### **III. SELECTED REGIONAL AND BILATERAL TRADE ARRANGEMENTS IN THE ASIA AND PACIFIC REGION**

11. The empirical study undertaken in this paper focuses on assessing the implications of the following preferential trade agreements: The Association of Southeast Asian Nation (ASEAN), the Agreement on South Asian Association for Regional Cooperation (SAARC) Preferential Trading Arrangement (SAPTA), the Asia Pacific Economic Cooperation (APEC) Forum, and the Australia-New Zealand Closer Economic Relation (CER).

12. ASEAN was established in 1967 to accelerate economic growth and promote peace and stability in the region. In January 1992, the creation of the ASEAN Free Trade Area (AFTA) was announced. AFTA six original members include: Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore, and Thailand. Vietnam joined in 1995, Lao P.D.R. and Myanmar in 1997, and Cambodia in 1999. Its objective was to eliminate tariff and nontariff barriers among the Southeast Asian countries with a view to integrating the ASEAN economies into a regional market of more than 500 million people. AFTA has also a wide range of trade facilitation measures, including the ASEAN Agreements on Customs and Asian Customs Vision 2020, aimed at harmonizing and streamlining customs procedure among ASEAN members.

---

<sup>7</sup> See Baldwin (2006) on the fragility of East Asia regionalism caused by possible emerging tension among member countries.

<sup>8</sup> To assess whether it would be preferable to consolidate the Asian RTA into a single free trade area is beyond the scope of this paper. However, the need for greater coherence among regional schemes in Asia especially on rules of origin has been recently advocated (Mr. H. Kuroda, President Asian Development Bank, at the 39th Annual Meeting, Hyderabad, India, May 6, 2006).

13. The agreement on the Common Effective Preferential Tariff (CEPT) scheme for AFTA required that tariff rates levied on a wide range of products traded within the region be progressively reduced to no more than 5 percent by 2003 for the six original members. A somewhat longer adjustment period was allowed for the four newer members, with Vietnam committed to reduce its CEPT to no more than 5 percent by 2006, Lao P.D.R. and Myanmar by 2008, and Cambodia by 2010. All import duties are to be eliminated by 2010 for the

	MFN Rate, 1997	MFN Rate, 2005	CEPT Rate, 2005 <sup>1</sup>
Brunei Darussalam	3.1	4.8	1.3
Cambodia	<b>18.0</b>	<b>15.1</b>	<b>9.3</b>
Indonesia	13.0	9.8	2.0
Lao P.D.R.	<b>9.6</b> 1/	<b>10.9</b>	<b>4.4</b>
Malaysia	8.1	10.4	2.8
Myanmar	5.8	6.1	4.6
Philippines	13.4	7.2	2.3
Singapore	0.0	0.0	0.0
Thailand	17.0	11.7	2.5
Vietnam	<b>13.0</b>	<b>18.5</b>	<b>5.9</b>
<i>Memorandum items:</i>			
ASEAN	10.1	9.4	3.5
Mekong 3	13.5	14.8	6.5
ASEAN-6	9.1	7.3	1.8
World	15.3	11.4	...

Source: IMF Trade Policy Information Database (TPID) and ASEAN database.  
<sup>1</sup>Common Effective Preferential Tariff scheme under AFTA.  
Mekong 3 includes: Cambodia, Lao PDR, and Vietnam.

former six countries and by 2015 for the latter four. ASEAN members have also the option of excluding products from the CEPT in three cases: temporary exclusions, sensitive agricultural products, and general exceptions.

14. ASEAN members have made significant progress in lowering intra-regional tariffs through the CEPT scheme for AFTA (Table 2). However, the actual implementation of AFTA rates appears to have been limited so far. This could reflect, in large part, the perceived high costs of administrative compliance and documentation, together with a long list of sensitive products and exceptions that are not subject to the preferential rates, which may discourage broad-based use of AFTA preferences.

15. The South Asian Association for Regional Cooperation (SAARC) was established in 1985 and includes: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. In 1993, SAARC countries signed an agreement to gradually lower tariffs within the region and in 2002 they signed the South Asia Free Trade Agreement (SAFTA) which created a framework for the establishment of a free trade zone covering 1.4 billion people. This agreement went into force in January 2006.

16. The Asia Pacific Economic Cooperation (APEC) Forum is another regional initiative, which seeks to promote regional integration in tandem with continuing unilateral and multilateral liberalization. Since its inception, APEC has worked to reduce tariffs and other trade barriers across the Asia and Pacific region, and has been the cornerstone of a larger effort to deepen the policy dialogue and economic cooperation among countries in the region. The 1994 APEC Bogor Declaration was aimed at forming a free trade area in the region by 2010 for developed countries and by 2020 for developing countries. Rather than focusing on trade preferences, however, APEC trade liberalization is based on concerted unilateral liberalization in accordance with the MFN principle. The current APEC tariffs are, in fact, below the world average (Table 3) and declining.

Table 3. Simple Average MFN Tariffs 1/ (in percent)		
	1997	2005
APEC	10.1	8.3
ASEAN	10.1	9.4
CER	5.5	3.3
EAEC	10.9	8.4
EU-15	10.0	6.5
MERCOSUR	11.4	11.2
NAFTA	8.8	9.5
SAPTA	25.1	18.0
<i>Memorandum items:</i>		
ASEAN-6	9.1	7.3
World	15.3	11.4
Source: IMF Trade Policy Information Database (TPID).		
1/ Average among country members.		

17. The coverage of the Australia-New Zealand Closer Economic Relation (CER) is more comprehensive than AFTA, but its original focus was also on tariff reduction. Subsequently it has been revised several times to include services, trade facilitation, investment, and labor mobility.

#### IV. EMPIRICAL RESULTS

18. A gravity model of trade is a useful framework for the assessment of the impact of RTAs on the pattern of bilateral trade flows. The model is based on the idea that trade between two countries is analogous to the gravitational force exerted between two objects. Thus, trade is a function of the countries' mass (in this case, GDP and GDP per capita) and the distance between them. Theories of trade under perfect competition can be used to justify the gravity equation (Helpman and Krugman, 1985): a country is more likely to trade with economically larger countries that produce a greater variety of goods to offer, while GDP per capita also has a positive effect on trade, since as countries become more developed they tend to specialize more and, therefore, trade more. This framework, augmented by the use of dummy variables to capture countries' participation in RTAs, makes it possible to estimate trade diversion or trade creating effects that RTAs may produce. Further details about the empirical specifications are provided in Annex I.

19. The study considers the following preferential trade agreements with Asia: ASEAN, APEC, SAPTA, and the CER; and the following RTAs outside the region: the Eurasian Economic Community (EAEC), the European Union—comprising 15 members (EU-15); the Southern Common Market (Mercosur); and the North American Free Trade Agreement (NAFTA). Annex II spells out country membership of different groupings.

20. Two different sets of estimates were run. The first one uses a panel regression technique, which allows for year-specific effects covering the period 1984–2003 (Table 4).

The second one runs 8 separate annual regressions—one for each year—with annual data (Tables 5 and 6). The data set covers 182 countries for a total of 127,118 observations. Bilateral trade data are extracted from the UN COMTRADE database.

21. The empirical estimates show that all standard gravity variables—economic size, per capita income, and bilateral distance, common language, and common border—are statistically significant at the 99 percent confidence level and have the expected signs.

22. The results suggest that, during 1984–2003, membership in major RTAs in Asia (ASEAN, APEC, and SAPTA) does not generally appear to have led to trade diversion, although this is not so clear for the case of members belonging to different overlapping agreements.

23. More specifically:

- Members of ASEAN and SAPTA seem to have traded more than what the basic equation of the gravity model predicts—given their size, per capita income, geographic and linguistic characteristics—with both members and with nonmembers, suggesting that these RTAs are unlikely to have given rise to any trade diversion. This can be seen from the coefficients on the *RTAexp* and *RTAimp* dummies, which are both positive and statistically significant for all regional groups (Table 4, Regression 1).<sup>9</sup>
- This outward-looking pattern of trade integration is stronger for ASEAN-6 countries, compared to the entire ASEAN group, probably reflecting the fact that ASEAN-6 members have lower MFN tariffs and more liberal trade regimes than the rest of the ASEAN group. This result emerges consistently in both pooled (Table 4, Regression 2) and cross-section estimations (Tables 5 and 6), where the coefficients of ASEAN imp and ASEAN exp variables are lower than the corresponding coefficients of the ASEAN-6 group.
- ASEAN and SAPTA do not seem to have fostered trade flows among members to any significantly greater extent than trade with nonmembers. Given that the coefficients that express the amount of trade with all trading partners are higher than expected given the countries' economic characteristics, both ASEAN and SAPTA countries appear to have succeeded in achieving a high degree of international integration.
- When a dummy to capture the membership on APEC is introduced (Table 4, Regression 3), while both coefficients on the ASEAN export and ASEAN import

---

<sup>9</sup> In the extreme case of trade diversion the sum of the coefficient of *RTA1import* and *RTA1export* would be negative indicating that the RTA depresses country imports from the rest of the world more than it increases its exports to the rest of the world or vice versa, so that the net effect on trade flows between RTA members and the world is negative.



dummies continue to be significant and positive, their magnitude diminishes substantially. This result suggests that it may be difficult to disentangle the extent to which the high degree of intraregional trade is attributable to membership in either ASEAN or APEC, with seven of the ten ASEAN members also belonging to APEC.

- The trade agreement between the two CER countries (i.e., Australia and New Zealand) seems to have increased trade between them. This can be seen from the positive and significant coefficient of the CER 2 dummy, which captures the extent to which the trade between the two members is more extensive than their trade with the rest of the world (Table 4, Regressions 1 and 2).
- However, when a dummy for APEC is added to the model (Table 4, Regression 3), CER membership appears to have been associated with trade diversion. This can be seen from the negative coefficient of the CER import dummy.
- Membership in APEC was estimated to significantly expand trade between members as well as between members and the rest of the world. This is consistent with the expectation that APEC's open regionalism approach should have broadly based trade-creating effects.

24. The results of this study are in line with previous findings by Soloana and Winters (2001) and Clarete et al. (2002). However, for the case of ASEAN, they differ from previous results by Frankel and Wei (1997), which had found that membership in ASEAN was associated with a significant increase of intra-regional trade. A possible explanation for the difference is that the ASEAN definition of this study, as well as of Soloana and Winters and Clarete et. al., also includes ASEAN late-comers Cambodia, Lao P.D.R., Myanmar, and Vietnam. Because these latter countries still have MFN tariffs above those of other ASEAN countries, their inclusion in the model may have diluted the trade-creating effects of ASEAN membership.

Table 4. Pooled Estimations of the Gravity Model, 1984-2003

	Regression	Regression	Regression	Regression
	(1)	(2)	(3)	(4)
lnGDP i	0.8971 (0.000)***	0.896 (0.000)***	0.897 (0.000)***	0.886 (0.000)***
lnGDP j	1.028 (0.000)***	1.030 (0.000)***	1.028 (0.000)***	1.022 (0.000)***
lnGDP i percapita	0.109 (0.000)***	0.103 (0.000)***	0.108 (0.000)***	0.083 (0.000)***
lnGDP j percapita	0.148 (0.000)***	0.133 (0.000)***	0.148 (0.000)***	0.119 (0.000)***
ln distance	-1.311 (0.000)***	-1.306 (0.000)***	-1.310 (0.000)***	-1.387 (0.000)***
common border	0.583 (0.000)***	0.585 (0.000)***	0.583 (0.000)***	0.532 (0.000)***
common language	0.915 (0.000)***	0.893 (0.000)***	0.915 (0.000)***	0.877 (0.000)***
ASEAN imp	0.595 (0.000)***	...	0.413 (0.000)***	0.637 (0.000)***
ASEAN exp	1.118 (0.000)***	...	0.650 (0.000)***	1.163 (0.000)***
ASEAN 2	-0.533 (0.000)***	...	-0.501 (0.002)**	-0.547 0.186
CER imp	0.062 0.202	0.073 0.131	-0.225 (0.000)***	0.166 (0.000)***
CER exp	0.551 (0.000)***	0.564 (0.000)***	0.074 0.135	0.620 (0.000)***
CER 2	1.163 (0.036)**	1.199 (0.032)**	1.247 (0.024)**	1.154 (0.035)**
SAPTA imp	0.136 (0.003)**	0.12 (0.008)**	0.206 (0.000)***	0.141 (0.000)***
SAPTA exp	0.608 (0.000)***	0.561 (0.000)***	0.718 (0.000)***	0.646 (0.000)***
SAPTA 2	0.035 0.862	0.096 0.827	-0.145 0.471	0.022 0.913
ASEAN-6 imp	...	0.680 (0.000)***	...	...
ASEAN-6 exp	...	1.153 (0.000)***	...	...
ASEAN-6 2	...	-0.072 0.629	...	...
APEC imp	...	...	0.413 (0.000)***	...
APEC exp	...	...	0.650 (0.000)***	...
APEC 2	...	...	0.358 (0.000)***	...
EU-15 imp	...	...	...	0.417 (0.000)***
EU-15 exp	...	...	...	0.292 (0.000)***
EU-15 2	...	...	...	-1.028 (0.000)***
EAEC imp	...	...	...	-0.173 (0.000)***
EAEC exp	...	...	...	0.308 (0.000)***
EAEC 2	...	...	...	...
Mercosur imp	...	...	...	-0.392 (0.000)***
Mercosur exp	...	...	...	0.504 (0.000)***
Mercosur 2	...	...	...	0.941 (0.0013)**
NAFTA imp	...	...	...	0.227 (0.000)***
NAFTA exp	...	...	...	-0.303 (0.000)***
NAFTA 2	...	...	...	0.393 (0.05)*
Constant	12.788 (0.000)***	12.756 (0.000)***	13.455 (0.000)***	13.589 (0.000)***
Observations	127,118	127,118	127,118	127,118
Adj. R-squared	0.649	0.650	0.654	0.659

Source: Author's estimations.

P-values in parenthesis. \*, \*\* and \*\*\* denote significant at 10 percent, 5 percent, and 1 percent level.

Table 5. Cross Section Estimation of the Gravity Model

	1984	1987	1990	1993	1996	1999	2002	2003
ASEAN imp	0.258 (0.020)**	0.646 (0.000)***	0.940 (0.000)***	0.882 (0.000)***	0.555 (0.000)***	0.658 (0.000)***	0.407 (0.000)***	0.493 (0.000)***
ASEAN exp	0.583 (0.000)***	0.946 (0.000)***	0.896 (0.000)***	1.181 (0.000)***	1.160 (0.000)***	1.267 (0.000)***	1.200 (0.000)***	1.282 (0.000)***
ASEAN 2	0.657 0.164	0.444 0.310	-0.135 0.752	-0.438 0.285	-0.540 0.122	-0.928 (0.001)***	-0.811 (0.005)**	-0.966 (0.001)***
CER imp	-0.075 0.652	-0.158 0.315	0.314 (0.025)**	0.094 0.489	-0.022 0.864	0.172 0.179	-0.012 0.922	0.027 0.835
CER exp	0.433 (0.006)**	0.425 (0.004)**	-0.087 0.563	0.538 (0.000)***	0.614 (0.000)***	0.756 (0.000)***	0.757 (0.000)***	0.698 (0.000)***
CER 2	1.602 0.351	1.520 0.347	1.358 0.387	1.265 0.396	1.022 0.501	1.008 0.505	1.143 0.464	0.865 0.574
SAPTA imp	...	...	...	...	0.243 (0.009)***	0.038 0.677	-0.024 0.792	0.125 1.75
SAPTA exp	...	...	...	...	0.686 (0.000)***	0.465 (0.000)***	0.558 (0.000)***	0.662 (0.000)***
SAPTA 2	...	...	...	...	1.105 0.648	0.336 0.378	-0.075 0.852	-0.524 0.220
Observations	10,545	10,991	11,694	14,978	19,340	19,406	21,222	18,942
Adj. R-squared	0.552	0.609	0.642	0.666	0.668	0.674	0.665	0.679

Source: Author's estimations.

P-values in parenthesis. \*, \*\* and \*\*\* denote significant at 10 percent, 5 percent, and 1 percent level.

Table 6. Cross Section Estimation of the Gravity Model

	1984	1987	1990	1993	1996	1999	2002	2003
ASEAN-6 imp	0.258 (0.020)**	0.646 (0.000)***	0.940 (0.000)***	0.882 (0.000)***	0.611 (0.000)***	0.863 (0.000)***	0.493 (0.000)***	0.687 (0.000)***
ASEAN-6 exp	0.583 (0.000)***	0.95 (0.000)***	0.8961 (0.000)***	1.181 (0.000)***	1.092 (0.000)***	1.3894 (0.000)***	1.283 (0.000)***	1.472 (0.000)***
ASEAN-6 2	0.657 0.164	0.444 0.310	-0.135 0.752	-0.438 0.285	-0.330 0.409	-0.284 0.483	0.327 0.433	-0.185 0.654
CER imp	-0.075 0.652	-0.158 0.315	0.314 (0.025)**	0.094 0.489	-0.019 0.933	0.198 0.122	-0.003 0.979	0.053 0.686
CER exp	0.433 (0.006)***	0.425 (0.004)***	-0.087 0.563	0.538 (0.000)***	0.625 (0.000)***	0.782 (0.000)***	0.770 (0.000)***	0.736 (0.000)***
CER 2	1.602 (0.351)	1.520 0.347	1.358 0.387	1.265 0.396	1.077 0.483	1.032 0.495	1.183 0.209	0.893 0.562
SAPTA imp	...	...	...	...	0.227 (0.015)**	0.025 0.783	-0.031 0.727	0.116 0.208
SAPTA exp	...	...	...	...	0.608 (0.000)***	0.400 (0.000)***	0.504 (0.000)***	0.593 (0.000)***
SAPTA 2	...	...	...	...	0.207 0.589	0.346 0.365	-0.057 0.887	-0.520 0.223
Observations	10,545	10,991	11,694	14,978	19,340	19,406	21,222	18,942
Adj. R-squared	0.552	0.609	0.642	0.666	0.666	0.673	0.665	0.679

Source: Author's estimations.

P-values in parenthesis. \*, \*\* and \*\*\* denote significant at 10 percent, 5 percent, and 1 percent level.

25. One main reason that could explain why RTAs in Asia appear to have not led to date to trade diversion is the fact that regional trade integration in Asia followed a long period of unilateral liberalization during the 1980s and 1990s. Subsequently, regional integration efforts proceeded in parallel with multilateral liberalization. In fact, many Asian countries acceded to the WTO in the mid-1990s (Table 7), and lowered their MFN tariff rates substantially, thereby limiting the risk of possible trade diversion under subsequently agreed RTAs. Therefore variables that pick up changes in trade flows may be capturing the effects of unilateral and multilateral trade policies.

26. Another possible reason for the small estimated impact of ASEAN membership on intraregional trade could be the fact that only a limited amount of intra-ASEAN trade has been carried out so far under AFTA preferences, as reported recently by Baldwin (2006). AFTA's limited practical impact on trade flows to date is likely to be partly due to the high administrative costs associated with verifying that AFTA's rules of origin have been observed, which may often be perceived to be too large compared with the differential between the preferential CEPT rates and the corresponding MFN tariffs.

27. The results also suggest that the members of RTAs in Asia—especially ASEAN and APEC—showed a higher degree of openness vis-à-vis the rest of the world than other members of other RTAs outside the region (Table 4, Regression 4). Mercosur seems to have fostered intraregional trade, but also to have diverted imports from the world toward its member countries, while NAFTA countries are estimated to have traded on average 20 percent less with the rest of the world than one would expect based on the standard gravity model. The last result, which is in line with the findings of previous studies,<sup>10</sup> can be explained by the presence of significant complementarities in production among NAFTA countries, in contrast with the members of ASEAN and SAPTA, which have more similar comparative advantages.

Table 7. WTO Accession Status, June 2006	
	Current Status
Australia	Joined in 1995
Bangladesh	Joined in 1995
Bhutan	ongoing negotiations
Brunei Darussalam	Joined in 1995
Cambodia	Joined in 2004
China	Joined in 2001
India	Joined in 1995
Indonesia	Joined in 1995
Japan	Joined in 1995
Korea	Joined in 1995
Lao PDR	ongoing negotiations
Malaysia	Joined in 2001
Maldives	Joined in 1995
Myanmar	Joined in 1995
Nepal	Joined in 2004
New Zealand	Joined in 1995
Pakistan	Joined in 1995
Philippines	Joined in 1995
Singapore	Joined in 1995
Sri Lanka	Joined in 1995
Thailand	Joined in 1995
Vietnam	imminent accession

Source: WTO.

<sup>10</sup> Wei, S., and J. Frankel (1997).

## V. CONCLUSIONS

28. Regional Trade Agreements are a prominent part of the region's policy agenda and they can be an effective means to expand trade and increase cooperation in the region. However, their discriminatory nature also entails some risks, and could give rise to costly trade diversion. Going forward, to guard against these risks and ensure that trade remains a strong engine of growth, Asian countries should continue to complement regional integration with MFN-based trade liberalization.

29. As noted in a number of recent studies and reports, the negotiation and signing of multiple bilateral or regional trade arrangements could have serious adverse effects if regional integration ends up discouraging or retarding multilateral and unilateral liberalization.<sup>11</sup> The results of this study reinforce the need for ASEAN members with more restrictive trade regimes, in particular the Mekong countries, to continue decreasing their MFN tariffs along with their ongoing integration in the regional markets. In addition, care must be taken to ensure that these countries' limited administrative capacities are not overly taxed by the negotiation and implementation of new RTAs, so that they will remain in a position to pursue and achieve continuing multilateral liberalization, including in the context of WTO accession. In this connection, the sustained and diligent efforts of the Vietnam government toward early accession of Vietnam to the WTO are warranted and worthy of strong international support.

30. While continuing to enhance intra-Asian integration may be desirable, regional integration cannot be a substitute for multilateral and unilateral liberalization. In this light, the Mekong countries would be well-advised to continue to strengthen the outward-orientation of their policies vis-à-vis the rest of the world. Continuing unilateral and multilateral liberalization should serve to ensure that the region will reap the benefits from regional economic integration to the fullest extent possible without suffering from any significant trade diversion.

31. Countries should guard against participation in multiple memberships in bilateral and regional trade agreements, which could have mutually inconsistent rules of origin that can substantially complicate production and sourcing decision by firms. An Asian Free Trade Area could potentially avoid some of the risks associated with proliferating RTAs. However, whether it would make sense to consolidate Asian RTAs into a single free trade area is a more complicated issue that would require further research and analysis.

---

<sup>11</sup> Baldwin op.cit. and AsDB (2006).

## REFERENCES

- Asian Development Bank, 2006, Asian Development Outlook 2006.
- Baldwin, R., 1993, "A Domino Theory of Regionalism," CEPR Discussion Paper No. 857, Center for Economic Policy Research.
- Baldwin, R., 2006, "Managing the Noodle Bowl," CEPR Discussion Paper No. 5561, London.
- Brenton, P., 2003, "Rules of origin in Free Trade Agreements," Trade Note No. 4, The World Bank.
- Clarete, R., C. Edmonds, and J. Seddon Wallack, 2002, "Asian Regionalism and Its Effects on Trade in the 1980s and 1990s," Asian Development Bank, ERD Working Paper Series No. 30.
- Crawford, J., and R. Fiorentino, 2005, "The Changing Landscape of Regional Trade Agreements," Discussion Paper No. 8, The World Trade Organization, Geneva.
- Feridhanusetyawan, T., 2005, "Preferential Trade Agreements in the Asia-Pacific Region," IMF Working Paper 05/149 (Washington: International Monetary Fund).
- Helpman E., and P. Krugman, 1985, *Market Structure and Foreign Trade*, The MIT Press, Cambridge, Massachusetts.
- Kimura, F., and M. Ando, 2005, "The Economic Analysis of International Production/Distribution Networks in East Asia and Latin America," *Business and Politics*, Vol. 7, Issue 1.
- Krishna, P., 1998, "Regionalism and Multilateralism: A Political Economy Approach," *Quarterly Journal of Economics*, Vol. 113 (No. 1, February).
- Krueger, A., 1995, "Free Trade Agreements Versus Customs Unions," National Bureau of Economic Research, NBER Working Paper No. 5084, Cambridge, Massachusetts.
- Soloaga, I., and A. Winters, 2001, "Regionalism in the Nineties: What Effect on Trade," *North American Journal of Economics and Finance*, No. 12, pp. 1–29.
- Tumbarello, P., 2005, "Regional Integration and WTO Accession: Which is the Right Sequencing? An Application to the CIS," IMF Working Paper No. 05/94 (Washington: International Monetary Fund).

- Viner, J., 1950, *The Custom Union Issue*, Carnegie Endowment for International Peace, New York.
- Wei, S., and J. Frankel, 1997, "Open Versus Closed Regional Trade Blocs," in *Regionalism versus Multilateral Trade Arrangements*, ed. by T. Ito and A. Krueger, Chicago University Press.
- Wonnacott, P., 1996, "Beyond NAFTA—The Design of a Free Trade Agreement of the Americas," in *The Economics of Preferential Trade Agreements*, 79–107. College Park: University of Maryland, Center for International Economics; Washington DC: AEI Press.
- World Bank, 2005, *Global Economic Prospects 2005: Trade, Regionalism and Development*, Washington, D.C.

### THE MODEL

The following gravity equation was estimated in line with Soloaga and Winters (2001).

$$\begin{aligned} LnImports_{ij} = & \alpha + \beta_1 LnGDP_i + \beta_2 LnGDP_j + \beta_3 Ln \frac{GDP_i}{Pop_i} + \beta_4 Ln \frac{GDP_j}{Pop_j} + \beta_5 Ln[Dist_{ij}] + \beta_6 Ln[ADJ_{ij}] + \\ & \beta_7 Ln[Lang_{ij}] + \gamma_1 RTA2_{ij} + \gamma_2 RTAimp_{ij} + \gamma_3 RTAexp_{ij} + u_{ij} \end{aligned}$$

The gravity model regresses the imports of country  $i$  from country  $j$  (i.e., the dependent variable) on the economic size of the two countries, their level of development (proxied by their GDP per capita), the distance between the economic centers of the two countries, common border, common language, and by three dummy variables that represent membership in a regional agreement:  $RTA2$ , where the suffix 2 implies that both countries,  $i$  and  $j$ , are members of the same RTA,  $RTAimp$ , where the importer, country  $i$ , belongs to the RTA, whether the exporter  $j$  is a member of the RTA or not; and  $RTAexp$ , where the exporter—country—belongs to the tested RTA, whether the importer  $i$  is a member of the RTA or not.

$RTA2$ -dummy takes the value 1 if both country  $i$  and  $j$  are members of the RTA, and zero otherwise.  $RTAimp$ -dummy takes value 1 if the importing country  $i$  is a member of the RTA, while the exporting country  $j$  may or may not, and zero otherwise; and  $RTAexp$  takes value 1 when the exporting country  $j$  is a member of the RTA, while importing country may or may not be a member, and zero otherwise.

This specification aims to disentangle the effects of an RTA on bilateral trade flows between members and all their trading partners. In doing so, it provides an indication of whether an RTA is more likely to produce trade creation or trade diversion.

The coefficients of the RTA dummies ( $RTAimp$  and  $RTAexp$  and  $RTA2$ ) can be interpreted as follows:

- The coefficient  $\gamma_2$  represents how much more one RTA member imports from all its trading partners (both members and nonmembers) relative to what one would expect given their economic size, distance and other geographic and cultural characteristics. Analogous interpretation has the coefficient  $\gamma_3$  on the export side. Positive coefficients could be taken as an evidence of an open trade bloc. These coefficients can be interpreted as a measure of trade diversion, when the coefficients are negative.
- The coefficient  $\gamma_1$  represents the increase of intra-bloc trade over and above the effect of trade liberalization, which has been already captured by coefficients  $\gamma_2$  and  $\gamma_3$ .
- The sum of  $\gamma_1 + \gamma_2 + \gamma_3$  represents how much the trade flows between two countries is raised if they are both members of the RTA.



### **Country Membership**

The Asia Pacific Economic Cooperation (APEC): Australia, Brunei Darussalam, Canada, Chile, China, Hong Kong SAR, Indonesia, Japan, Korea, Malaysia, Mexico, New Zealand, Papua New Guinea, Peru, the Philippines, Russia, Singapore, Taiwan Province of China, Thailand, the United States, and Vietnam.

Agreement on South Asian Association for Regional Cooperation (SAARC) Preferential Trading Arrangement (SAPTA): Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka.

Association of Southeast Asian Nations (ASEAN): Brunei Darussalam, Cambodia, Indonesia, Lao P.D.R., Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

ASEAN-6: Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore, and Thailand.

Bangkok Agreement: Bangladesh, China, Lao PDR, and Sri Lanka

Closer Economic Relation (CER): Australia and New Zealand.

Eurasian Economic Community (EAEC): Belarus, Kazakhstan, the Kyrgyz Republic, the Russian Federation, and Tajikistan.

European Union comprising 15 members (EU-15): Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom.

North American Free Trade Agreement (NAFTA): Canada, Mexico, and the United States.

Southern Common Market (Mercosur): Argentina, Brazil, Paraguay, and Uruguay.

Trans-Pacific Strategic Economic Partnership (TPSEPA): Brunei Darussalam, Chile, New Zealand, and Singapore.

# **Are Regional Trade Agreements in Asia Stumbling or Building Blocks? Implications for the Mekong Countries**

Patrizia Tumbarello

International Monetary Fund

Siem Reap

June 26, 2006



The views expressed in this presentation are those of the author and should not be attributed to the International Monetary Fund, its Executive Board, or its Management.

# Outline



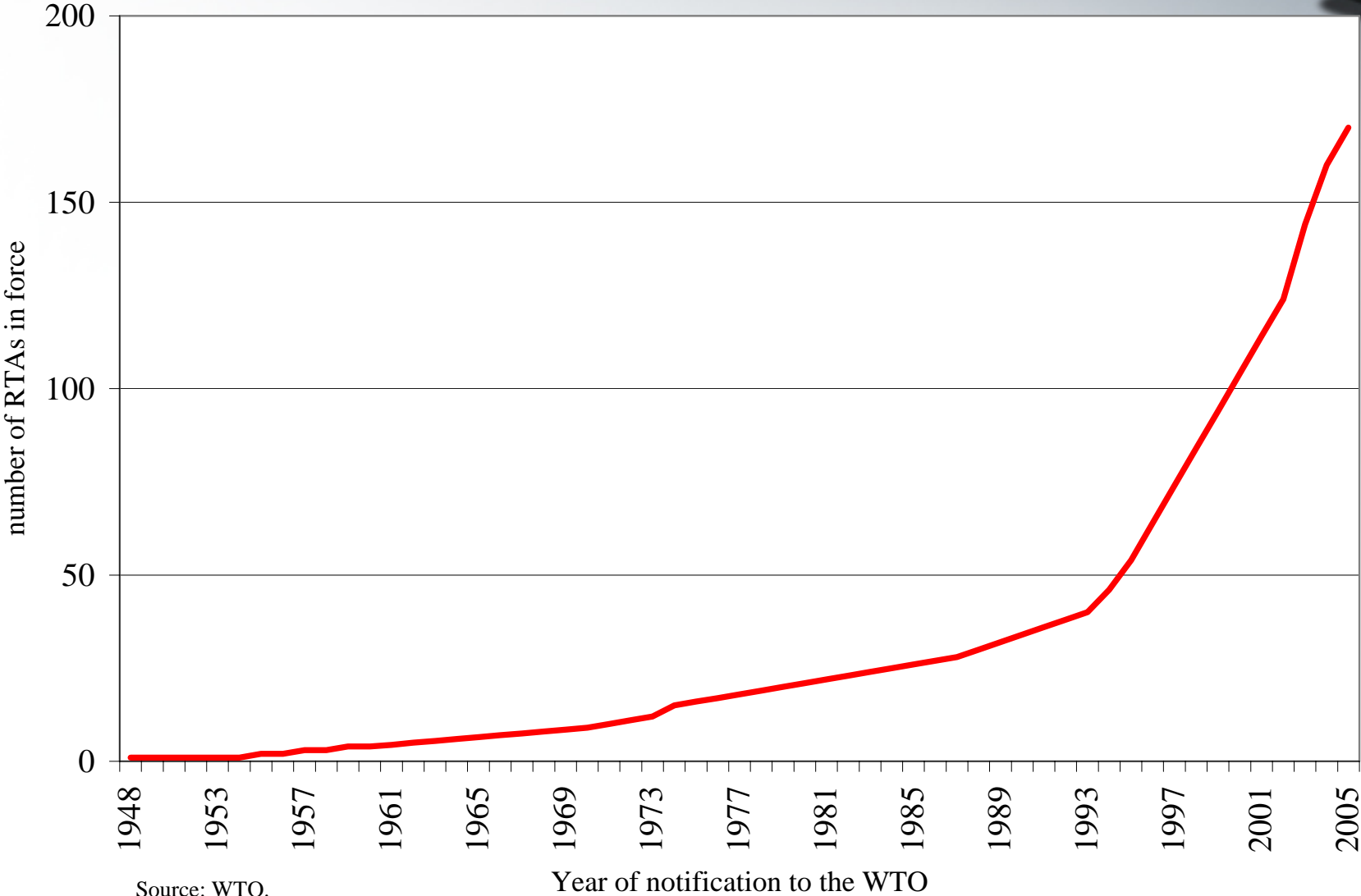
- Questions addressed in the paper
- Trends in Regional Trade Agreements (RTAs)
- Costs and Benefits of RTAs
- The Results of a Gravity Model of Trade
- Conclusions and Implications for the Mekong 3
- Issues for Discussion

# Is the Proliferation of RTAs in Asia a healthy development or does it carry downside risks?



- Do RTAs always promote faster growth in overall trade or could they discourage trade with nonmembers?
- Do they lead to trade creation or trade diversion?

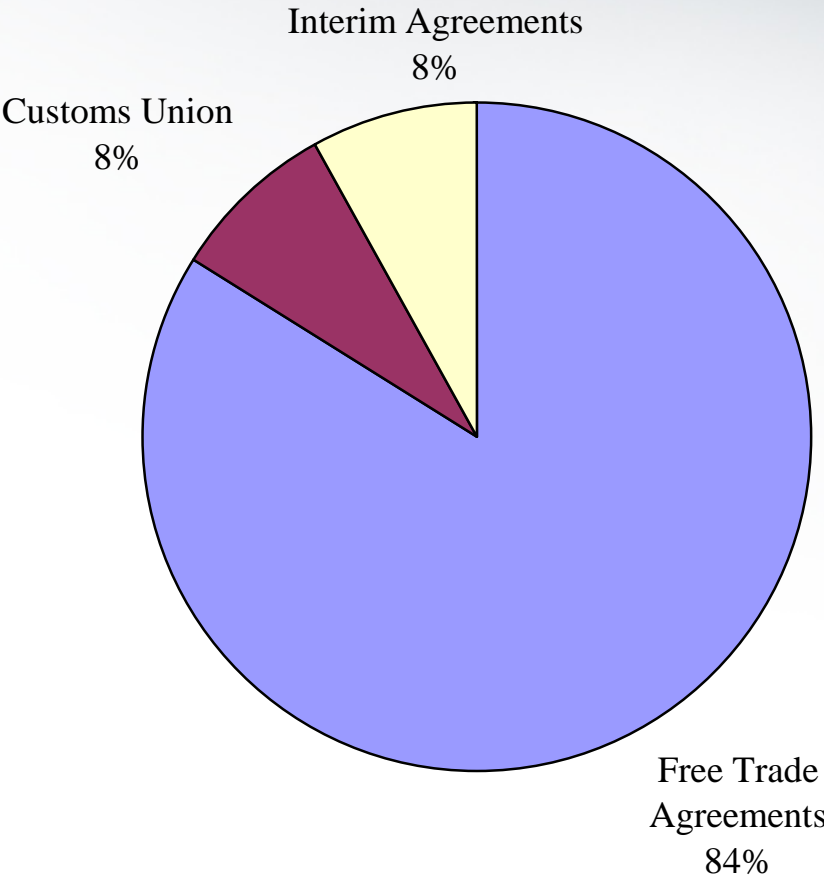
# RTAs are proliferating around the world.....



Source: WTO.



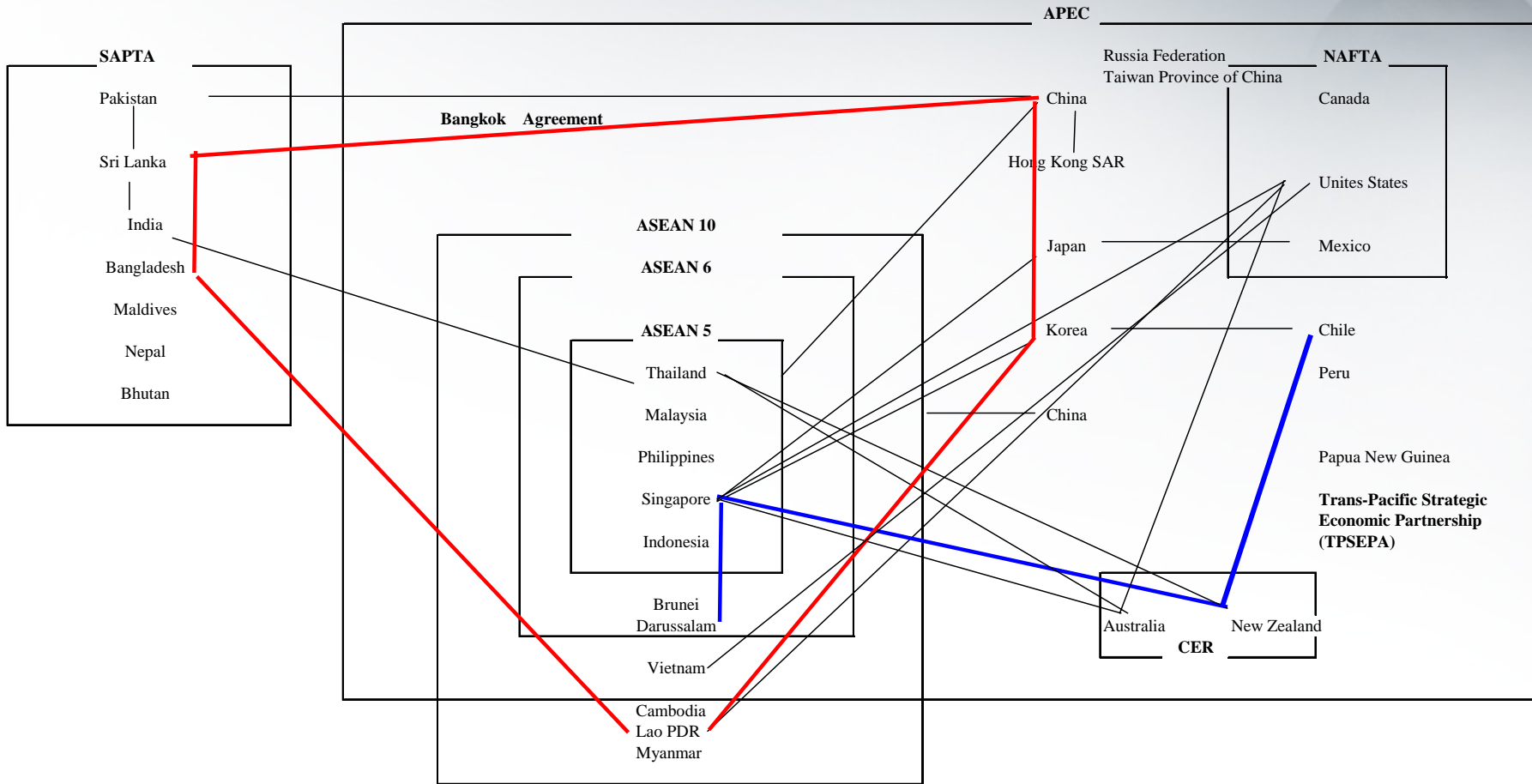
# RTAs around the World by Type



Source: WTO.



# RTAs in the Asia and Pacific Region



# Why are RTAs proliferating?

## Economic and non economic factors



- RTAs can expand trade opportunities
- RTAs can stimulate FDI (e.g., Kimura), technological spillover and activate regional production networks
- Regional cooperation can extend beyond the areas covered by the multilateral agenda
- RTAs can create a political momentum for reforms, thus enabling members to lock in important reforms (e.g., Bergsten)
- Domino effect: wish to avoid the costs of being left-out and fear of exclusion provide incentives to join (e.g., Baldwin)
- Desire to achieve strategic linkages in the region and strengthen regional security arrangements



# Possible Risks of RTAs as a Second-best Discriminatory Tool



- Welfare-reducing trade diversion (Viner)
- Hub-and-spoke structure: winners and losers within an RTA (Wonnacott)
- RTAs can be an obstacle (i.e., stumbling block) to MFN liberalization
  - Noodle bowl risk: web of different and/or inconsistent rules → administrative costs and uncertainty → fragility in the trading system
  - Diversion of negotiating capacity away from Multilateral negotiations
  - Weaken impetus of pro-trade lobbies (Krueger)

# Best practice in designing RTAs to minimize risks



- Continued commitment and implementation of Most-Favored-Nation (MFN) liberalization
- Comprehensive coverage with few exclusions
- Simple rules of origin and, for countries participating in multiple RTAs, avoidance of any inconsistency between the rules of origin of overlapping RTAs

# Trade diversion should be minimized...



Trade diversion is lower:

- The lower the external tariff with nonmember countries
- The larger the share of pre-existing trade among RTA partners (Krueger, 1995)

# Consistency with the WTO



- Departure from the WTO non-discrimination principle
- Article XXIV of the GATT and Article V of the GATS allow RTAs in goods and services if they:
  - do not lead to more restrictive trade barriers against nonmembers;
  - are fully implemented within a reasonable length of time;
  - eliminate barriers to *substantially all* RTA trade

# RTAs considered in this study



- ASEAN Free Trade Area (AFTA)
- APEC
- South Asia Preferential Trade Agreement (SAPTA)
- Closer Economic Relation (CER)

# Gravity model of trade



- Useful framework to assess the effects of RTAs on level and direction of trade
- Dependent variable: Imports of country  $i$  from country  $j$
- Explanatory variables: GDP, GDP per capita, distance, common language, common border, dummies that represent membership in an RTA
- Sample period: 1984-2003

## Results of the gravity model (1)



- Members of AFTA and SAPTA have traded more than what the basic equation of the gravity model predicts with both members and with nonmembers  
→AFTA and SAPTA are unlikely to have given rise to trade diversion
- This pattern of trade integration is stronger for ASEAN-6 countries (original signatories of AFTA) than for the later participants (Cambodia, Lao PDR, Myanmar, and Vietnam)

# ASEAN members: Most-Favored-Nation (MFN) and preferential tariffs



	MFN Rate, 1997	MFN Rate, 2005	CEPT Rate, 1/2005
Brunei Darussalam	3.1	4.8	1.3
Cambodia	<b>18.0</b>	<b>15.1</b>	<b>9.3</b>
Indonesia	13.0	9.8	2.0
Lao P.D.R.	<b>9.6</b>	<b>10.9</b>	<b>4.4</b>
Malaysia	8.1	10.4	2.8
Myanmar	5.8	6.1	4.6
Philippines	13.4	7.2	2.3
Singapore	0.0	0.0	0.0
Thailand	17.0	11.7	2.5
Vietnam	<b>13.0</b>	<b>18.5</b>	<b>5.9</b>
<i>Memorandum items:</i>			
ASEAN	10.1	9.4	3.5
Mekong 3	13.5	14.8	6.5
ASEAN-6	9.1	7.3	1.8
World	15.3	11.4	...

Source: IMF Trade Policy Information Database (TPID) and ASEAN database.

<sup>1</sup>Common Effective Preferential Tariff scheme under AFTA.



## Results of the gravity model (2)



- AFTA and SAPTA do not seem to have fostered trade flows among members to any significantly greater extent than trade with nonmembers
- With a second dummy introduced to capture any effects of participation in APEC, the magnitude of the coefficients on the AFTA export and AFTA import dummies diminishes→ it may be difficult to disentangle the extent to which the high degree of intraregional trade is attributable to membership in either AFTA or APEC

## Results of the gravity model (3)



- APEC members expanded trade both other APEC members as well as with nonmembers. This result attests to the effectiveness of APEC's open regionalism approach
- Australia and New Zealand (CER) seem to have increased trade between themselves. However, when an APEC effect is added, CER membership appears to have diverted trade away from nonmembers

## Results of the gravity model (4)



- AFTA and APEC showed a higher degree of openness vis-à-vis the rest of the world than other members of other RTAs outside the region

## **RTAs in Asia appear not to have led to trade diversion so far because:**



1. RTAs followed a long period of unilateral liberalization during the 1980s and 1990s
2. For most countries, RTAs proceeded in parallel with WTO accession
3. Intra-ASEAN trade under AFTA preferences has increased modestly and is still small



### WTO Accession Status, June 2006

Australia	Joined in 1995
Bangladesh	Joined in 1995
Bhutan	ongoing negotiations
Brunei Darussalam	Joined in 1995
Cambodia	Joined in 2004
China	Joined in 2001
India	Joined in 1995
Indonesia	Joined in 1995
Japan	Joined in 1995
Korea	Joined in 1995
Lao PDR	ongoing negotiations
Malaysia	Joined in 2001
Maldives	Joined in 1995
Myanmar	Joined in 1995
Nepal	Joined in 2004
New Zealand	Joined in 1995
Pakistan	Joined in 1995
Philippines	Joined in 1995
Singapore	Joined in 1995
Sri Lanka	Joined in 1995
Thailand	Joined in 1995
Vietnam	concluded bilateral negotiations

# Conclusions and Implications for the Mekong Countries



- Regional integration should be complemented by multilateral and unilateral liberalization in order to avoid in the future welfare-reducing trade diversion
- The Mekong 3 still have somewhat higher MFN rates compared to the rest of the region, and need to continue to pursue broad-based trade liberalization on an MFN basis
- Vietnam' efforts in joining the WTO in the near future are very well placed

# Toward a Pan-Asian Free Trade Area?



- Importance of a greater coherence among existing agreements, in terms of tariff preferences, rules of origin, and phase-in modalities to facilitate implementation, reduce administrative costs, and help minimize possible distortions in trade patterns
- Asian Free Trade Area could potentially avoid some of the risks associated with proliferating RTAs