

Regionalization in Search of Regionalism:
Production Networks and Deep Integration Commitments in Asia's FTAs

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Prepared for presentation at the annual meeting of the International Political Economy Society,
25-26 October 2013, Claremont Graduate School.

Abstract

Asia is a latecomer to the free trade agreements (FTA) scene. While regionalism was on the rise and FTAs proliferated in the 1990s, Asia was an anomaly that experienced increasing trade flows but little progress in forming international institutions such as trade agreements to govern them. Until recently, Asia's regionalization has relied heavily on the private sector to drive and to manage economic integration. This pattern has changed dramatically in recent years, especially in the region's FTA landscape. Increasingly, governments have taken the lead in governing economic exchange across borders. Why has Asia become such an active region in the formation of regional trade agreements, and why, in particular, have governments become more actively involved in forming international institutions? This study offers an explanation that highlights the institutional demands of production networks in determining governments' willingness to enter into FTAs that are designed to attain harmonization and greater compatibility in domestic trade-related regulations. An empirical analysis of FTAs signed by Asian countries finds support for the effect of production network trade on the overall depth of integration and on investment commitments. The results indicate that FTA commitments are shaped by trade along the international supply and by the domestic politics of agreement partners.

Regionalization in Search of Regionalism:

Production Networks and Deep Integration Commitments in Asia's FTAs¹

Asia is a latecomer to the FTA scene. While regionalism was on the rise and FTAs proliferated in the 1990s, Asia was an anomalous region that experienced increasing trade flows but little progress in forming international institutions such as trade agreements to govern them (Mansfield and Milner 1999). Indeed, an established body of literature led by Amitav Acharya (2001) supports the "ASEAN Way," which captures the tendency of Asian countries to eschew formal institutions and binding legal commitments. This phenomenon is supported by the characteristics of Asia's regionalization, which has relied heavily on the private sector to drive and to manage economic integration. Societal organizations, especially business organizations such as the Pacific Economic Cooperation Council (PECC) and the Pacific Basin Economic Council (PBEC), as well as the extensive and powerful network formed by the Chinese Diaspora, have been instrumental in producing a 'market-oriented, decentralized Asia-Pacific' (Funabashi 1995).

This pattern of private-sector led regionalization has changed dramatically in recent years, especially in the region's FTA landscape. Increasingly, governments have taken the lead in governing economic exchange across borders, by enthusiastically embracing the global trend in regional trade agreements that commit states to legal obligation in the liberalization and management of trade relations. Asia is now one of the most active sites of FTA projects (Crawford and Fiorentino 2004; Fiorentino, Verdeja, and Toqueboeuf 2006), and the region has continued to consolidate the drive toward greater regionalism. As Figure 1 shows, according to the most recent report from the Asian

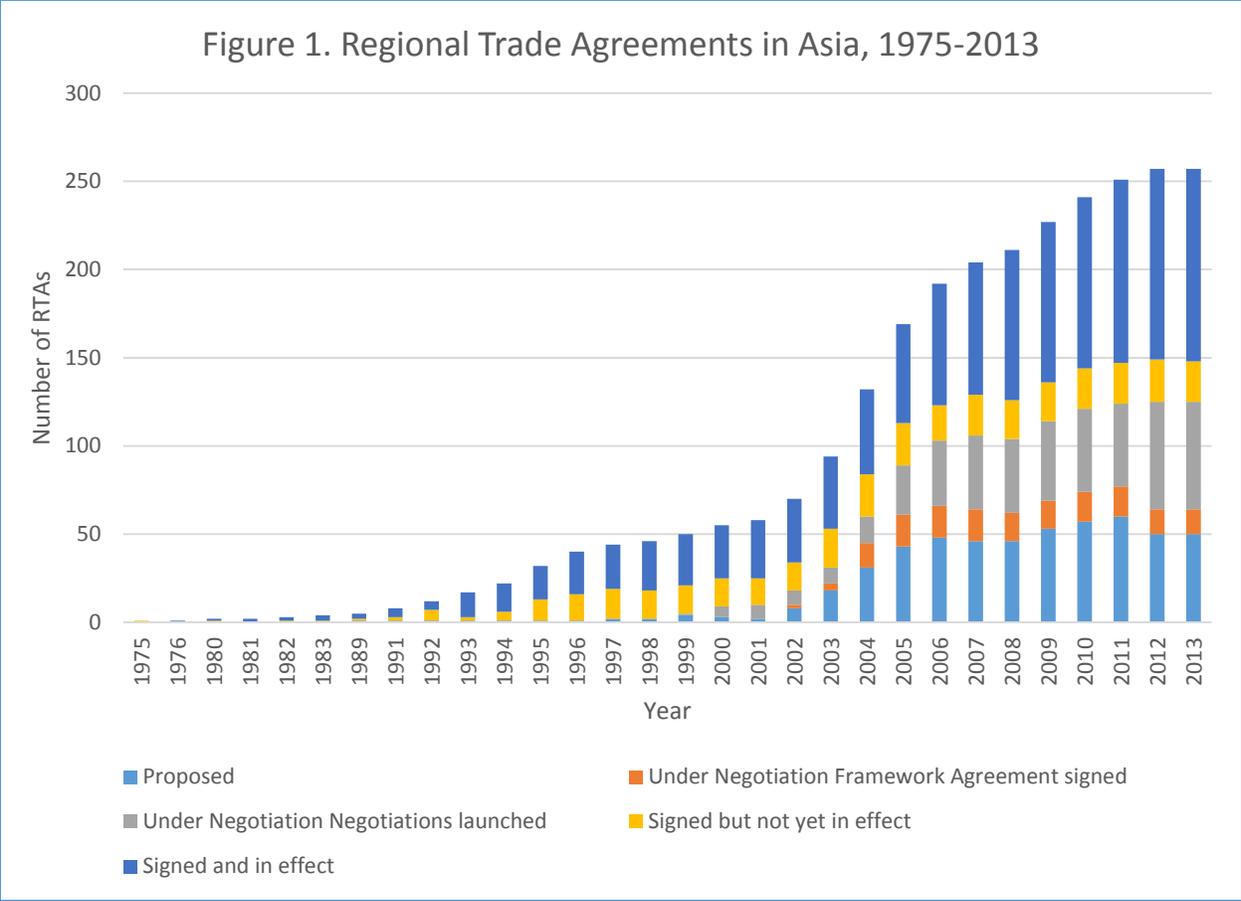
¹ The author is grateful to Li Xiang, Hanson Mah, and Terence Tan for excellent and timely research assistance.

Regional Integration Center (ARIC) of the Asian Development Bank (ADB), 109 agreements are in effect, with another 23 awaiting ratification, and about as many have been proposed or currently under negotiation.² Even Mongolia, long the outlier in FTA participation as the only WTO member with no trade agreements, has joined the FTA bandwagon, as it is currently negotiating accession to the Asia-Pacific Trade Agreement (APTA) and a FTA with Japan (UNESCAP 2013).³

Why has Asia become such an active region in the formation of regional trade agreements, and why, in particular, have governments become more actively involved in forming international institutions? Given the dearth of institutional history of the region, it is surprising that countries in the region have participated at all in forming international institutions, much less formed them with speed and strong commitments. The explosion of FTAs involving Asian countries may simply be a regional reaction to the global trend, in which trade agreements have proliferated, especially and increasingly as the Doha Round negotiations have not yielded a successful multilateral trade round. Yet this explanation does not account for the wide variability in the quality of Asia FTAs, which range from the very brief India-Bhutan FTA to the extensive Korea-US FTA, a highly legalized and complex agreement that covers the gamut of trade and trade-related liberalization commitments. Alternatively, the FTA project may reflect the consolidation of regionalism that began in the aftermath of the Asian Financial Crisis. However, this explanation does not account for the fact that the ASEAN countries began negotiations on the creation of the ASEAN Free Trade Area in 1992, well before the outbreak of the financial crisis. As Ravenhill (2008) notes, the link between the crisis and the subsequent FTA wave may be little more than a coincidence.

² <http://aric.adb.org/fta>.

³ http://www.unescap.org/tid/aptiad/agg_db.aspx.



Source: Asia Regional Integration Center (ARIC), Asian Development Bank (ADB). As of January 2013.

This study offers an explanation that highlights the institutional demands of production networks and the role of multinational firms as political actors in their host countries in determining governments' willingness to enter into FTAs, both with regional and extra-regional partners. In particular, the increasing prevalence and economic importance of production networks in Asia have driven governments to make deep integration commitments in their FTAs, in which states commit to harmonization and greater compatibility in domestic trade-related regulations that are relevant to the operations of multinational firms. In doing so, this study examines the extent to which regionalization--the increasing flows of trade and investment, has contributed to the momentum of regionalism through

FTAs, in which states seek active cooperation and coordination in trade-related economic policy (Mansfield and Milner 1999, 591; Fishlow and Haggard 1992).

This paper considers three main features in Asian regionalism through FTAs. First, the analysis identifies the institutional complexity encoded FTAs, as seen through commitments regarding the depth of integration. Second, the analysis examines the extent to which the deep integration commitments are shaped by participation in production networks, as measured by trade in parts and components, and by FDI inflows. Finally, this study takes a closer look at commitments made in the protection and liberalization of investment in FTA commitments. Investment and trade are integrally related in the operation of production networks, whether in Asia or beyond, and the analysis highlights the extent to which production network trade and investment affect states' commitments in regulating investments.

Production Networks and Asia's Economic Integration

Production networks have been a key driver of Asia's economic integration, linking firms that are dispersed across different countries, in which each firm contributes to a different stage of the manufacturing process depending on the relative cost advantage of their location. Production networks also reflect the internationalization of the supply chain, which first began among developed nations, in what Richard Baldwin has called the "second unbundling" (Baldwin 2011,3). US-Canada or French-German trade in autos and auto parts in the 1970s are early examples of this phenomenon. However, the big push in the second bundling occurred between developed and developing countries, pushed by systemic advancements in international communications and technology (ICT) and huge wage discrepancies (Feenstra 1998; Ando and Kimura 2005). This "new" trade that promoted the internationalization of the supply chain involved production unbundling known as outward processing trade, or vertical specialization trade (Manger 2009, Hummels, Ishii and Yi 2001), in which intermediate

inputs are imported and used in goods that are subsequently exported. By some estimates, this vertical specialization trade was more important for Europe and North America until the 1980s, after which North-South vertical specialization trade boomed and especially in Asia, which has earned the label “Factory Asia” to denote the extensive production unbundling that has occurred in the region (Ando and Kimura 2005, Athukorala 2005).

Multinational firms with production networks in Asia include the likes of Proctor & Gamble and General Electric, as well as Toyota and the local agribusiness giant Wilmar. Within the ASEAN countries, for example, Proctor & Gamble, whose presence dates back to 1935 when it opened its first affiliate in the Philippines, has manufacturing operations dispersed across Indonesia, Malaysia, Singapore, Thailand, and Vietnam as well as in the Philippines that cover the full spectrum of its value chain. Toyota, whose first investments took place in the 1960s in Southeast Asia, now carries out production in automobile parts and components in Malaysia, Indonesia, Thailand, the Philippines, and Vietnam, with service operations based in Singapore. ASEAN, in particular, has been an important player in the international supply chain, and 10 of the world largest automakers have production facilities across several member countries (ASEAN 2013). The textiles and garments industry also figures prominently in ASEAN’s participation in the international supply chain and in local production networks, with companies such as Nike, Adidas, H&M, Target, and Marks and Spencer employing contract manufacturers from Cambodia, Indonesia, and Vietnam as well as operating production facilities. Vietnam, in particular, is a major source for brands such as Gap, Columbia, LL Bean, and Walmart (ASEAN 2013).

Production networks form a “trade, investment, and services” nexus (Baldwin 2011). They involve trade intermediate goods, the production of which is driven by investment and supported by

services that ease communications and operations of firms that are geographically separated. They also demand strong commitments in behind-the-border trade rules. The success of production networks relies not only on low tariffs but also on the infrastructure, institutional apparatus, and regulations that facilitate cross-border production. Offshoring by international firms that geographically split up input suppliers and final goods producers are strongly affected by domestic regulations that drive up (or down) the cost of doing business. Local rules matter. This is where FTAs can and do play an important role, especially in delivering commitments on domestic trade-related rules that lower the cost of doing business for international firms. As such, where trade in intermediate goods is prevalent, trade agreements need to extend beyond traditional market access conditions such as tariffs to cover the conditions of competition that exist in member countries.

Deep Integration FTAs

This study investigates how participation in production network trade has shaped deep integration commitments in Asia's FTAs. Deep integration, consistent with the institutional demands of production networks, refers to a process of economic integration that erodes differences in national economic policies and regulations and renders them more compatible for economic exchange. The concept of deep integration is widely associated with Robert Z. Lawrence (1995), who defined it essentially as 'behind the border' integration in a study that examined the tensions between regional trade agreements and national autonomy. It is also synonymous with 'positive integration,' which is associated with the liberalization approach of the WTO era. Positive integration involves the active establishment of domestic rules and regulations that render a country's trade regime more consistent with its obligations under the 'single-undertaking' that is the WTO. Positive integration, or deep integration, can also be contrasted with the 'negative integration' or 'shallow integration' approach of the GATT era, in which member states had the option to enroll in GATT agreements in à la carte fashion

and whose commitments extended only to the agreement *not* to raise ‘barriers at the border’ such as to raise tariffs above the bound level, to impose quantitative restrictions, or to implement indirect taxes to protect domestic industries and discriminate against foreign firms.

Deep integration in FTAs has the objective of enhancing and strengthening the contestability of markets for foreign firms through provisions that reach deep into the domestic rules and regulations of partner economies. Provisions geared toward deep integration among signatories of FTAs have three main functions: i) protection of foreign firms and their interests; ii) liberalization of ‘beyond-the-border’ barriers to trade, i.e., trade-related laws and regulations that go beyond traditional border barriers such as tariffs and quotas; and iii) harmonization of domestic trade rules and policies designed to enhance the efficiency of international production. Deep integration is the hallmark of the modern FTA, which began to flourish in the 1990s in tandem with the increasing complexity of the international supply chain. Prominent FTAs in this family include NAFTA, the EU’s RTAs, and, more recently, Japan’s push for economic partnership agreements (EPAs) that seek to incorporate an extensive array of issue areas as well as the US-led Trans-Pacific Partnership (TPP) agreement currently under negotiation. Deep integration FTAs are the institutional choice not only for countries of the developed North or between North and South countries, but also many South-South partnerships. The customs union represents the highest level of deep integration, in which member countries not only remove trade barriers but also enact a common external tariff (CET) and also pool their economic sovereignty in economic policy. In this connection, the most advanced deep integration arrangement currently in existence in the world is the European Union, with its Single Market, the free flow of the factors of production, and institutional convergence of domestic policies.

In terms of provisions in FTAs, deep integration commitments promote harmonization or at least mutual recognition of trade rules (Birdsall and Lawrence 1999), an idea which can be traced back as far as Tinbergen's (1954) work on economic integration. Deep integration provisions are wide in scope (Koremenos, Lipson, and Snidal 2001), covering an extensive range of issues that are mostly trade-related but, in some cases, fall outside the governance purview of existing WTO agreements. These issues include but are not limited to services, product and production standards, government procurement, investment, competition policy, labor and environmental policies, as well as the protection of intellectual property rights. Commitments in these regulatory areas are accompanied by low tariff levels, as harmonization of domestic trade-related rules becomes a feasible enterprise once barriers the border have been cleared. In the case of ASEAN for example, the move toward the ASEAN Free Trade Area has been accompanied by the reduction of internal tariffs to zero for 98.6% of 98,176 tariff lines (ASEAN 2013).

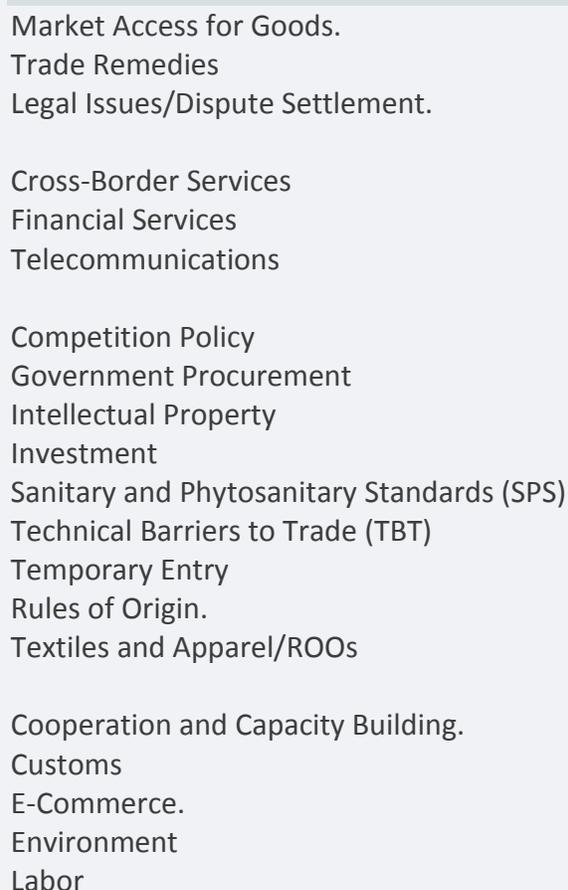
The Trans-Pacific Partnership Agreement: A Deep Integration FTA for the 21st Century

As of this writing, one of the most important deep integration FTA projects for Asia is the Trans-Pacific Partnership (TPP) agreement, currently under negotiation and involving eleven countries including the United States. The TPP is the cornerstone of the Obama's administration's economic policy in Asia and the economic arm of the "Asian Pivot." As an institutional form, the TPP is a 21st century deep integration agreement that features 'regulatory coherence' as a key objective.⁴ It is also featured as a 'fully regional agreement' designed to 'facilitate the development of production and supply chains'

⁴ The current members of the agreement are Australia, Brunei Darussalam, Canada, Chile, Malaysia, Mexico, New Zealand, Peru, Singapore, the United States and Vietnam. Most recently, the United States proposed the entry of Japan in the TPP negotiations. <http://www.ustr.gov>.

among member countries.⁵ The TPP is advanced as a high-standard agreement among 'like-minded' countries that covers core areas of deep integration, such as investment, services, competition, labor and environment, as well as the traditional areas of market access in goods and trade remedies. Most relevant to this discussion of deep integration is that one important goal of the agreement is to make the regulatory systems of the members more compatible so that firms may operate more seamlessly and efficiently across the eleven (and twelve including Japan) partner economies.

Figure 1. The Trans-Pacific Partnership (TPP) Agreement: Areas of Negotiation



- Market Access for Goods.
- Trade Remedies
- Legal Issues/Dispute Settlement.

- Cross-Border Services
- Financial Services
- Telecommunications

- Competition Policy
- Government Procurement
- Intellectual Property
- Investment
- Sanitary and Phytosanitary Standards (SPS)
- Technical Barriers to Trade (TBT)
- Temporary Entry
- Rules of Origin.
- Textiles and Apparel/ROOs

- Cooperation and Capacity Building.
- Customs
- E-Commerce.
- Environment
- Labor

Free Trade Agreements in Asia across Space and Time

Existing FTAs in Asia vary widely in their deep integration commitments. Utilizing information on FTA provisions gathered by the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), Figure 2 (at back of this paper) shows the level of deep integration in FTAs signed by countries in region, including both agreements with other Asian countries as well as those outside the

⁵ <http://www.ustr.gov/about-us/press-office/fact-sheets/2011/november/outlines-trans-pacific-partnership-agreement>

region. The figure illustrates depth of integration commitments across agreements signed by countries of Northeast Asia, Southeast Asia, South Asia, and the Pacific island countries including Australia, New Zealand, and Papua Guinea. Deep integration commitments cover a comprehensive set of provisions, including market access for goods, investment, services, trade facilitation, rules of origin, and an 'others' category that includes issue areas such as competition, intellectual property rights, labor and environmental standards, government procurements, dispute settlement, and technical cooperation. Each agreement was given a depth of integration 'score' that is essentially a count of all explicit provisions under items of each category included in the FTA. The UNESCAP categorization covers 58 items across the six categories. A detailed list of the provisions included for the depth of integration score are listed in the Appendix.

Utilizing the UNESCAP categorization provides a cursory but illustrative view of the level of depth in FTAs in Asia. In terms of the agreements themselves, the 10 agreements with the highest depth of integration scores are all FTAs and Economic Integration Agreements (EIAs) that cover both goods and services. They are also recent agreements, as all of them were signed after 2000, and have been notified to the WTO under GATT Article XXIV and GATS Article V. The 10 agreements with the lowest scores, in contrast, have not been notified to the WTO, with the exception of Japan-Peru FTA (GATT Article XXIV and GATS Article V), the Turkey-Korea FTA (GATT Article XXIV), and the Lao PDR-Thailand PTA were notified under the Enabling Clause. Even among the next five FTAs with low depth of integration scores, the agreements were either not WTO-notified or were notified under the Enabling Clause.⁶

⁶ They are the Asia Pacific Trade Agreement (signed 1975, Enabling Clause), Group of 8 PTA (2006, not notified to the WTO), India-Sri Lanka FTA (1998, Enabling Clause), Pakistan-Iran FTA (2004, not notified to the WTO), and the India-Bhutan FTA (2006, Enabling Clause).

Figure 3 shows average depth of integration scores per country, averaged across all agreements it has signed. Australia, Japan, and Singapore, on the average, are signatories of FTAs with high depth of integration scores. Just below this tier are many of the ASEAN countries. Taiwan, Bangladesh, and Papua New Guinea have the lowest depth of integration scores. Across time, as shown in Figure the long-term pattern in depth of integration in FTAs is a positive one, as agreements appear generally to be increasing in their strength and quality. However, this pattern is consistent and varies widely in the short term.

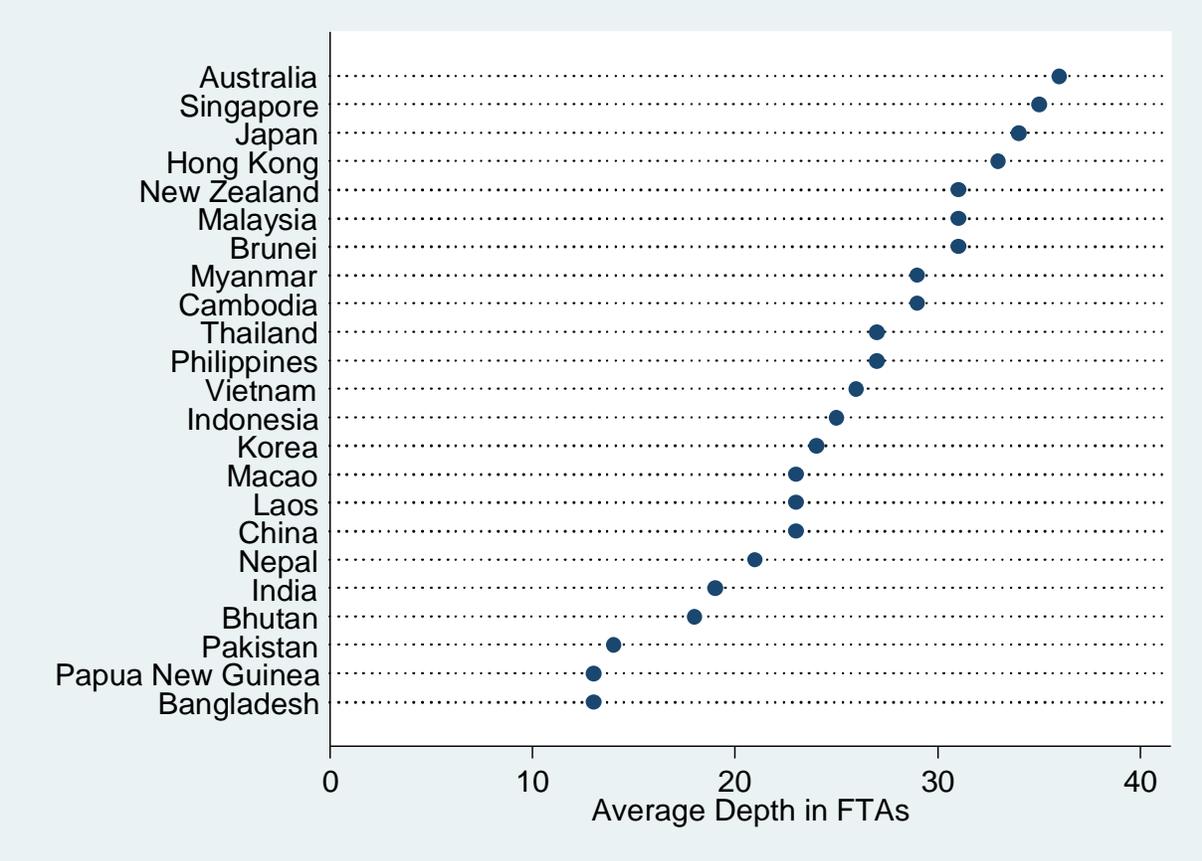


Figure 3. Depth of Integration Scores by Country

Scores are consistently on the rise during the years 2000-2010, when the region was most active in forming FTAs, but that trend appears to be on the decline. The most recent agreements feature lower depth of integration scores. This suggests that high-standard agreements are mostly attributable to the

Characteristics of signatories rather than a systemic evolution of agreement templates over time. Moreover, countries that tend to sign FTAs with higher depth of integration scores also improve upon their templates. This may be driven by the US and its generations of FTA templates, including the model of the US-Singapore FTA that was followed by the Korea-US FTA and, most recently, the TPP as its most developed 'next-generation' FTA.

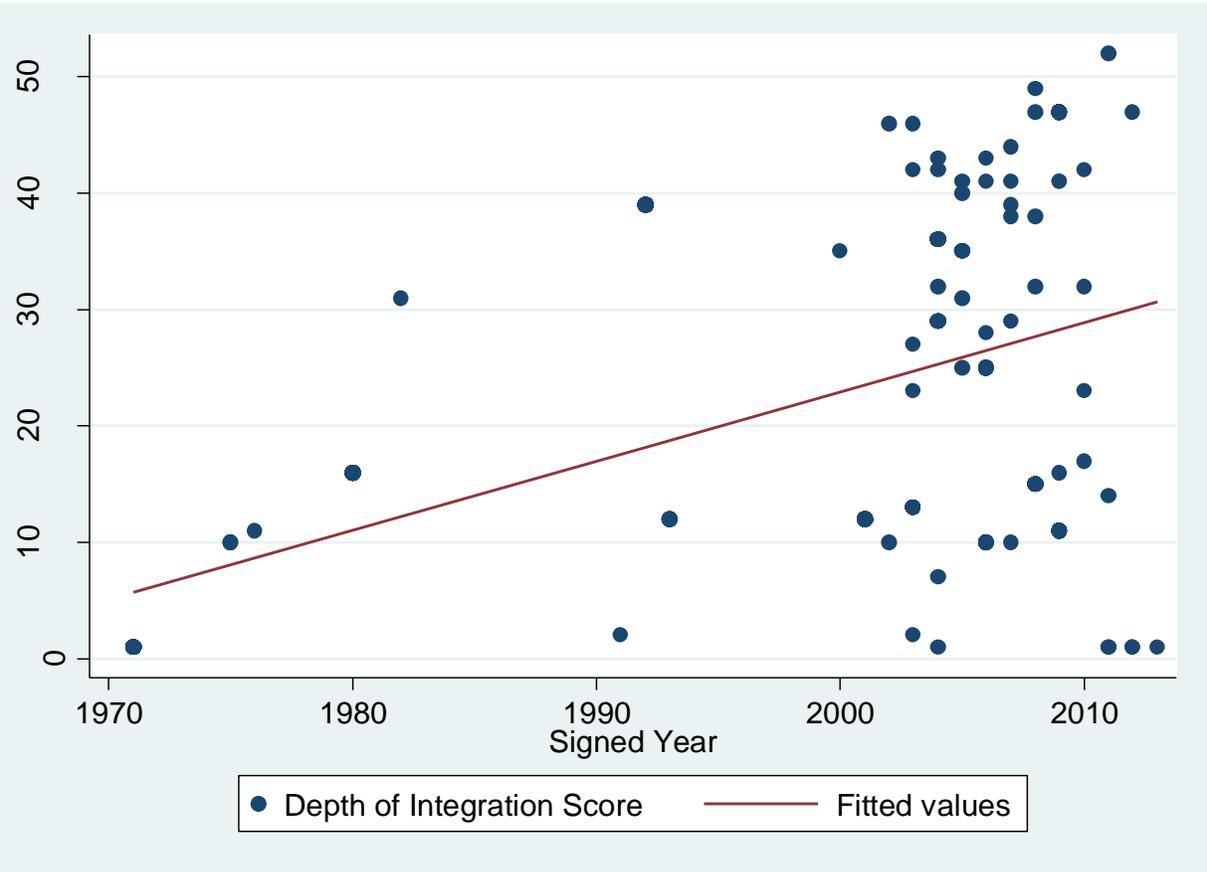


Figure 4. Depth of Integration in FTAs over Time: 1971-2013

Production Networks and Depth of Integration in FTAs

The next part of the analysis examines the role of production networks in Asia in determining the depth of integration in the region's FTAs. The unit of analysis is the FTA-dyad, in which each member

of the agreement is paired with all other members. The dependent variable is the depth of integration score for a given FTA, which ranges between 0 and 49, though the score may be as high as 58 if provisions were present in all categories covered by UNESCAP. The independent variable of interest is production network trade, measured in terms of the annual dollar value of bilateral trade in parts and components between the FTA-dyad members, weighted by their respective GDPs. Trade in parts and components refer specifically to goods that are ‘parts and accessories of capital goods (except transport equipment)’ (code 42*) and ‘parts and accessories of transport equipment (code 53*) under the UN Registry of Broad Economic Categories (BEC).⁷ Data were obtained from the UN Comtrade Database. It is perhaps the most commonly used measure for capturing global production sharing (Ng and Yeats 1999; Hoekman and Kostecky 2009), due to data availability, though other studies have sought to expand the range of intermediate goods covered under this label (Athukorala 2010) or have proposed measures such as trade in value-added (Elms and Low 2013). This study employs trade in these categories of intermediate goods for reasons of data availability, but also to capture the importance of the industries (such as auto parts manufacturing) that are especially important in the production networks of the region. These data were weighted by the GDP of each country in the dyad and then averaged across the dyad, to reflect the importance of production network trade to the domestic economy in both countries. This dyadic average was then averaged once again across time for the ten-year period preceding the signing of the FTA utilizing the years for which data were available.

The analysis controls for several factors that may affect both production network trade and the depth of integration. Perhaps the most important of the controls is foreign direct investment (FDI), which has been the engine of production networks, enabling multinational firms to establish and to operate manufacturing sites. FDI is measured in terms of average annual inflows as a proportion of GDP

⁷ <http://unstats.un.org/unsd/trade/bk/Knowledgebase/Intermediate-Goods-in-Trade-Statistics>.

across the pair of countries. The analysis also controls for trade openness and economic growth, both averaged across the dyad. In addition, the analysis controls for economic asymmetry, indicated by the ratio of the larger to smaller GDP per capita of the two countries to capture the disparity in economic size and development. This measure is constructed along the lines of the capability ratio (Singer, Bremer, and Stuckey 1972) to indicate disparities in power based on material capabilities. The economic data were obtained from the World Development Indicators (2013). The control variables also include two key political variables that reflect the domestic politics of trade, namely regime type and veto players (Mansfield and Milner 2012, Mansfield, Milner, and Pevehouse 2007). Regime type is operationalized as the average Polity score for the two dyad members, and veto players as the dyadic average of the *Political Constraint* index provided in Henisz (2000).⁸ As was the case for the independent variable of interest—trade in parts and components—values of all control variables were averaged across the FTA-dyad members and then averaged again across the ten-period period before the FTA was signed for those years where data were available.

Table 1 thus presents the results of a cross-sectional analysis of FTA dyads. The ten-year pre-FTA period was adopted to minimize the loss of observations due to missing data. Moreover, it also allows the analysis to take into account the lengthy pre-FTA period of initial investment by multinational firms, during which time production networks have been established and operating in the Asian region. In addition, the time frame also incorporates the duration of the proposal and more lengthy negotiation stage of the FTA, which is often even preceded by the negotiation and signing of a framework agreement.

⁸The Polity data were obtained from <http://www.systemicpeace.org/polity/polity4.htm>, and the Political Constraint Index from <http://www-management.wharton.upenn.edu/henisz/>

The results of the analysis show that trade in parts and components between countries the dyad has a positive effect on the depth of integration in their FTA commitments, increasing the depth of integration score by approximately 1.4 points per unit increase. Trade openness also has a strong positive effect on the strength of FTA commitments. FDI inflows into each country appear to depress such commitments, though this result is not statistically strong. This effect is estimated using national-level FDI inflows rather than dyadic FDI flows, however, and thus may not adequately capture the importance of FDI moving across countries. Nor does the model control for FDI stocks, which would indicate the level of existing economic interests of foreign firms that may drive the FTA process. General trade openness, however appears to have a small but positive impact on FTA commitments, associated with an increase in the depth of integration commitments by one-tenth of a point. Economic growth does not seem to have an effect on the strength of FTA commitments.

The disparity in development measured in terms of the ratio of per capita incomes suggests this may also be an effective proxy for disparity in economic power. The result shows that the greater the developmental disparity, the higher the depth of integration score in an FTA, suggesting that the more developed country is the driver for strong commitments. Among the political variables, higher levels of democracy common to both countries in the dyad is associated with higher-quality FTAs, though this result is not statistically strong. However, dyads in which countries are constrained by numerous veto players are likely not to opt for FTAs with strong deep integration commitments.

A Case Study in Deep Integration Commitments: Investment Provisions

As a refinement to the above analysis that examines the whole agreement, this part of the study provides a closer look at the investment provisions in FTAs. Commitments in investment comprise one

of the two pillars of a free trade agreement, especially as they concern the establishment of production networks. For Asian countries, in particular, attracting investment has been one of the major motivations behind government decisions to sign onto a free trade agreement. In the case of the ASEAN Free Trade Area (AFTA) Agreement, for example, officials have been explicit about the need to attract investment to the region and to prevent the diversion of FDI, as a key argument for the AFTA project. Already in the early 1990s and well before the Asian Financial Crisis, FDI was on the decline (Nesadurai 2003, 82-87). AFTA negotiators, in their consultations with experts during the drafting the agreement, took into account the general conclusion of numerous studies that the major impact of trade agreement projects such as NAFTA and the European Single Market would be further decline in FDI flows to the

Table 1. Production Network Trade and FTA Commitments

	<i>Depth of Integration</i>	<i>Investment Commitments</i>
<i>Trade in Parts and Components</i>	1.439 (0.279)**	0.398 (0.133)**
<i>FDI Inflows</i>	-0.880 (0.375)*	0.115 (0.186)
<i>Trade Openness</i>	0.107 (0.022)**	0.011 (0.014)
<i>Economic Asymmetry</i>	2.524 (1.026)*	1.020 (0.528)
<i>Economic Growth</i>	0.749 (0.485)	-0.108 (0.233)
<i>Democracy</i>	0.537 (0.337)	0.364 (0.172)*
<i>Veto Players</i>	-23.560 (9.770)*	-4.888 (5.005)
Constant	22.513 (5.053)**	6.843 (2.798)*
R-squared	0.31	0.15
N	208	191

* p<0.10, ** p<0.05. OLS with robust standard errors

region. The need to address this FDI “crisis” and to prevent further diversion of FDI, especially to China, spurred the cooperation that produced AFTA in 1992 (Khong and Nesadurai 2007, 51).

This analysis on investment provisions relies on a detailed coding of investment provisions in FTAs, which captures the dimensions of protection and liberalization (Kotschwar 2009) that are explicitly stated as agreement provisions. The coding of investment provisions covers 33 components across 10 broad categories:

- 1) Sectoral coverage to include portfolio investment as well as FDI;
- 2) Investor-state dispute settlement;
- 3) Positive or negative-list bindings in MFN and national treatment;
- 4) Scope of MFN and NT as they concern the stages of investment: establishment, acquisition, post-establishment and (re)sale;
- 5) Investment protection, covering ‘fair and equitable treatment,’ repatriation of profits, and expropriation
- 6) Restrictions on transfers and payments
- 7) Performance requirements
- 8) Restrictions on senior management and board of directors, in terms of membership and temporary entry provisions
- 9) Denial of benefits for third-party investors
- 10) General transparency provisions regarding the publication of laws and regulations and the availability of a national inquiry point.

These categories encompass provisions emphasized in both Kotschwar (2009) and Miroudot (2011), in which the latter focus on the FTA-formation strategies of developing countries. They comprise

a comprehensive set of provisions on investment that are found in FTAs in general. The analysis relies on an additive index that was constructed by summing up the level of protection and/or liberalization that is captured by each category.

The empirical analysis is similar to that carried out for the depth of integration scores covering the entire agreement. The dependent variable is now defined as the index for investment commitments, and the major independent variable of interest remains the same: trade in parts and components as a percentage of GDP, averaged across the two countries in the dyad. The additional independent variable of interest in this particular analysis is FDI, again measured in terms of annual FDI inflows as a percentage of FDI. As the outcome of interest is the set of investment commitments, the impact of FDI is expected to be positive. The analysis employs the same control variables as for the analysis of depth of integration: trade openness, economic asymmetry, economic growth, regime type, and veto players. Also as above, all independent variables are averaged across the 10-year period preceding the signing of the FTA. The results of the analysis are presented in Table 2.

Production network trade, that is, trade in parts and components, is associated with stronger commitments in the protection and liberalization of investment in a trade agreement. This effect is not as strong as for the comprehensive depth of integration score; nevertheless, this results suggest that production networks have a specific impact on investment commitments, and by extension, that domestic rules governing investment activity by foreign economic actors figure significantly in the operations of regional production networks. FDI inflows, general trade openness, and economic growth however, have weak effects on investment commitments and appear generally not to be associated with them. More democratic dyads are associated with stronger investment commitments; however, political constraints exert only a weak effect.

Conclusion

This paper has focused on the role of production networks in shaping commitments in Asia's FTAs. As the region continues its push toward greater regional integration, FTAs have emerged as an important institutional mechanism for managing trade relations. Deep integration commitments in FTAs are an integral part of protection, liberalization, and harmonization of domestic trade-related regulations that are intended to facilitate the establishment and especially operation of production networks by multinational firms.

The analysis in this paper investigated the effect of trade in parts and components, as a proxy for production network trade, on a comprehensive index of deep integration that considers all aspects of a trade agreement. The results of the analysis show that production network trade has a positive impact on deep integration commitments, thus contributing to the signing of high-quality agreements that address issue areas such as government procurement, services, and intellectual property rights on which the current multilateral trade regime has provided only weak coverage. Production network trade also has a positive impact on investment commitments in FTAs, which this paper has further examined as a case study. The analysis also controlled for a host of economic and political variables, including trade openness, economic asymmetry, growth, democracy and the political constraints posed by veto players.

Future research on this project would benefit from greater clarity in the causal direction of effects, and examining both the impact of production network trade on FTA commitments and, conversely, whether these commitments lead to trade gains and the development of domestic trade-related institutions. Especially relevant for future study would be to investigate in greater depth and

detail the role of investments in deep integration FTAs. Investments are a key driver in the formation of production networks, and it would be expected to have a significant role in FTA commitments in this area. While this paper employed a basic measure of annual FDI inflows as a percentage of GDP, the effect of FDI may be observed more strongly where there is already a large existing of investments and thus specific assets that spur lobbying for deep integration commitments by multinational firms. As to FDI inflows, they may rather be consequences of deep integration FTAs rather than causes, as the credible commitment provided the agreement may strongly encourage FDI flows in subsequent years. Last but not least, the role of multinational firms as political actors in their host countries also calls for closer investigation. As actors that drive investment and stand to gain much from deep integration processes, how they function as an interest group in the political competition over trade policy would provide important insights into the political economy of international supply chains more broadly.

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Table 2. Depth of Integration Scores for Asian FTAs

FTA	Year of Signature	Scope	WTO Notification	Depth of Integration Score
Korea-Peru FTA&EIA	2011	Bilateral	GATT Art XXIV, GATS Art V	49
Australia-Chile FTA&EIA	2008	Bilateral	GATT Art XXIV, GATS Art V	47
AANZFTA	2009	Country - Bloc	GATT Art XXIV, GATS Art V	45
Malaysia-Australia FTA	2012	Bilateral	GATT Art XXIV, GATS Art V	45
US-Singapore FTA&EIA	2003	Bilateral	GATT Art XXIV, GATS Art V	44
Japan-Singapore FTA&EIA	2002	Bilateral	GATT Art XXIV, GATS Art V	44
Peru-Singapore FTA&EIA	2008	Bilateral	GATT Art XXIV, GATS Art V	44
Japan-Switzerland FTA&EIA	2009	Bilateral	GATT Art XXIV, GATS Art V	44
Korea-Chile FTA&EIA	2003	Bilateral	GATT Art XXIV, GATS Art V	43
Japan-Thailand FTA&EIA	2007	Bilateral	GATT Art XXIV, GATS Art V	41
Australia-US FTA&EIA	2004	Bilateral	GATT Art XXIV, GATS Art V	41
India-Singapore FTA&EIA	2005	Bilateral	GATT Art XXIV, GATS Art V	41
Australia-Thailand FTA&EIA	2004	Bilateral	GATT Art XXIV, GATS Art V	40
India-Malaysia FTA&EIA	2011	Bilateral	Enabling clause, GATS Art V	40
Japan-Philippines FTA&EIA	2006	Bilateral	GATT Art XXIV, GATS Art V	40
Japan-Mexico FTA&EIA	2004	Bilateral	GATT Art XXIV, GATS Art V	40
Singapore-Australia FTA&EIA	2003	Bilateral	GATT Art XXIV, GATS Art V	40
Korea-Singapore FTA&EIA	2005	Bilateral	GATT Art XXIV, GATS Art V	39
Panama-Singapore FTA&EIA	2006	Bilateral	GATT Art XXIV, GATS Art V	39
China-Peru FTA&EIA	2009	Bilateral	GATT Art XXIV, GATS Art V	39
Japan-Indonesia EPA	2007	Bilateral	GATT Art XXIV, GATS Art V	39
Singapore-Costa Rica FTA&EIA	2010	Bilateral	early announcement	39
Japan-Malaysia FTA&EIA	2005	Bilateral	GATT Art XXIV, GATS Art V	38
EFTA-Korea FTA&EIA	2005	Country - Bloc	GATT Art XXIV, GATS Art V	37
ASEAN FTA	1992	Regional	Enabling Clause	37
EFTA- Hong Kong, China	2011	Country - Bloc	GATT Art XXIV, GATS Art V	37
New Zealand-Malaysia FTA&EIA	2009	Bilateral	GATT Art XXIV, GATS Art V	37
New Zealand-China FTA&EIA	2008	Bilateral	GATT Art XXIV, GATS Art V	36
Japan-Brunei Darussalam FTA&EIA	2007	Bilateral	GATT Art XXIV, GATS Art V	36
Japan-Chile FTA&EIA	2007	Bilateral	GATT Art XXIV, GATS Art V	35
Korea-India FTA&EIA	2009	Bilateral	GATT Art XXIV, GATS Art V	35
ACFTA FTA&EIA	2004	Country - Bloc	Enabling clause, GATS Art V	34
EFTA-Singapore FTA&EIA	2002	Country - Bloc	GATT Art XXIV, GATS Art V	34
New Zealand-Singapore FTA&EIA	2000	Bilateral	GATT Art XXIV, GATS Art V	34
Trans-Pacific SEPA	2005	Cross-Continental Plurilateral	GATT Art XXIV, GATS Art V	32
Singapore-Jordan FTA&EIA	2004	Bilateral	GATT Art XXIV, GATS Art V	31

New Zealand-Hong Kong, China FTA&EIA	2010	Bilateral	GATT Art XXIV, GATS Art V	30
New Zealand-Thailand FTA&EIA	2005	Bilateral	GATT Art XXIV, GATS Art V	30
ANZCERTA FTA&EIA	1982	Bilateral	GATT Art XXIV	30
Japan-Viet Nam FTA&EIA	2008	Bilateral	GATT Art XXIV, GATS Art V	29
China-Pakistan FTA&EIA	2006	Bilateral	GATT Art XXIV	27
Malaysia-Pakistan FTA&EIA	2007	Bilateral	Enabling clause, GATS Art V	27
South Asian FTA	2004	Regional	Enabling Clause	27
China-Hong Kong CEPA	2003	Bilateral	GATT Art XXIV, GATS Art V	26
China-Singapore FTA&EIA	2008	Bilateral	GATT Art XXIV, GATS Art V	25
AKFTA	2006	Country - Bloc	GATT Art XXIV	22
China-Macao CEPA	2003	Bilateral	GATT Art XXIV, GATS Art V	22
China-Chile FTA&EIA	2005	Bilateral	GATT Art XXIV	22
KORUS (Korea-US)	2007	Bilateral	GATT Art XXIV, GATS Art V	21
Gulf Cooperation Council-Singapore FTA	2008	Country - Bloc	No Notification	20
Costa Rica-China FTA&EIA	2010	Bilateral	GATT Art XXIV, GATS Art V	18
US-Lao PDR PTA	2003	Bilateral	No Notification	16
Malaysia-Chile FTA	2010	Bilateral	GATT Art XXIV	16
EU-Papua New Guinea-Fiji IEPA	2009	Country - Bloc	GATT Art XXIV	15
South Pacific Regional Trade and Economic Cooperation Agreement	1980	Regional	Enabling Clause	15
AJCEPA	2008	Country - Bloc	GATT Art XXIV	14
Turkey-Mauritius FTA	2011	Bilateral	GATT Art XXIV	13
India-Nepal Treaty of Trade	2009	Bilateral	Enabling Clause	12
ECOTA	2003	Regional	No Notification	12
Japan-India FTA&EIA	2011	Bilateral	GATT Art XXIV, GATS Art V	12
Chile-India PTA	2006	Bilateral	Enabling Clause	12
Melanesian Spearhead Group PTA	1993	Regional	Enabling Clause	11
Pacific Island Countries FTA	2001	Regional	Enabling Clause	11
India-MERCOSUR PTA	2004	Country – Bloc	Enabling Clause	11
PATCRA	1976	Bilateral	GATT Art XXIV	10
ASEAN-India FTA	2009	Country – Bloc	Enabling Clause	10
Pakistan-Sri Lanka FTA	2002	Bilateral	Enabling Clause	9
Pakistan-Mauritius PTA	2007	Bilateral	No Notification	9
India-Afghanistan PTA	2003	Bilateral	Enabling Clause	9
EU-Korea FTA&EIA	2010	Country – Bloc	GATT Art XXIV, GATS Art V	9
Asia-Pacific Trade Agreement	1975	Regional	Enabling Clause	9
Group of 8 PTA	2006	Cross-Continental Plurilateral	No Notification	9
India-Sri Lanka FTA	1998	Bilateral	Enabling Clause	8

Pakistan-Iran PTA	2004	Bilateral	No Notification	6
India-Bhutan FTA	2006	Bilateral	Enabling Clause	6
China-Thailand FTA	2003	Bilateral	No Notification	1
Lao PDR-Thailand PTA	1991	Bilateral	Enabling Clause	1
Viet Nam-Chile FTA	2011	Bilateral	No Notification	0
Korea-Colombia FTA	2012	Bilateral	No Notification	0
Japan-Peru FTA	2011	Bilateral	GATT Art XXIV, GATS Art V	0
Turkey-Korea FTA	2012	Bilateral	GATT Art XXIV	0
Indonesia-Pakistan FTA	2012	Bilateral	No Notification	0
China-Iceland FTA	2013	Bilateral	No Notification	0
Sri Lanka-Iran PTA	2004	Bilateral	No Notification	0

Appendix 1. FTA Provisions, UNESCAP Categories

Goods	Tariffs (Goods)	
	Rules of Origin (Goods)	
	Contingencies Anti-Dumping (Goods)	
	Contingencies Countervailing Duties (Goods)	
	Contingencies Safeguards (Goods)	
	Standards (Goods)	
Services	Liberalization Approach (Services)	
	Cross - Border Supply (Mode1) (Services)	
	Consumption Abroad (Mode2) (Services)	
	Commercial Presence (Mode3) (Services)	
	Presence of Natural Persons (Mode4) (Services)	
	(Specific Chapters)	Financial Services (Services)
	(Specific Chapters)	Telecommunications (Services)
	(Specific Chapters)	Movement of Natural Persons (Services)
	(Specific Chapters)	Professional Services (Services)
	(Specific Chapters)	Other (Services)
	Most Favoured Nation (Services)	
	National Treatment (Services)	
	Market Access (Services)	
	Domestic Regulation (Services)	
Subsidies Covered by Services Disciplines (Services)		
Denial of Benefits for Commercial Presence (Services)		
Investment	Scheduling Approach (Investment)	
	Definition of Investment (Investment)	
	Most Favoured Nation (Investment)	
	Economic integration exception to MFN (Investment)	
	National Treatment (Investment)	
	NT provision applies to entry and establishment rights (Investment)	
	Fair and Equitable Treatment (Investment)	
	Clarifying text on FET (Investment)	
	Expropriation (Investment)	
	Clarifying text (Investment)	
	Board of Directors and executive personnel (Investment)	
	Investor - State arbitration (Investment)	
	Denial of Benefits (Investment)	
Trade Facilitation	Customs procedures (Trade Facilitation)	
	Customs valuation (Trade Facilitation)	
	Trade regulations publication and administration (Trade Facilitation)	
	Use of ICT (Trade Facilitation)	
	Mobility of business people (Trade Facilitation)	
	Freedom of transit (Trade Facilitation)	
	Transport and logistics (Trade Facilitation)	

	Trade finance (Trade Facilitation)
Other Areas	Government Procurement (Other Areas)
	Investment (Other Areas)
	Competition Policy (Other Areas)
	Intellectual Property (Other Areas)
	Dispute Settlement (Other Areas)
	Labour Mobility (Other Areas)
	Labour and Environmental Standards (Other Areas)
	Technical cooperation (Other Areas)
	Institutional mechanism (Other Areas)
Rules of Origin	Cumulation (Rules of Origin)
	Specific Process (Rules of Origin)
	Heading Change (Rules of Origin)
	De Minimis (Rules of Origin)
	Minimum Content (Rules of Origin)
	Drawback (Rules of Origin)

Appendix 2. Classification of Investment Provisions in FTAs

- 1) Sectoral Coverage
 - a) Definition: is investment defined as FDI or does it also include portfolio investment?
 - b) Is there a separate Investment Chapter?
 - c) Are investment provisions found in the Services Chapter as mode 3 (commercial presence)?
 - d) Endeavours without specified scope: Is there a general commitment to cooperation/liberalization/promotion of investment (often in the preamble to the agreement) but without specific commitments such as *b* or *c* above?
- 2) Does the FTA provide for Investor-State Dispute Settlement?
- 3) MFN and National Treatment
 - a) Positive-list bindings: FTA investment provisions list sectors to be liberalized; all others remain “unbound” (not subject to commitments)
 - b) Negative-list bindings: FTA investment provisions stipulate MFN and national treatment as general principles applicable across the board, but with exemptions for those sectors that are to remain closed.
- 4) Scope of MFN and National Treatment: phases of investment covered by MFN and national treatment.
 - a) “Establishment”
 - b) “Acquisition”
 - c) “Post-establishment”
 - d) “(Re)sale” [of investment]”
- 5) Investment Protection: the terms should appear in the provisions.
 - a) “fair and equitable treatment”
 - b) Free transfer of funds
 - c) Expropriation and compensation: expropriation on a nondiscriminatory basis and with adequate compensation
- 6) Transfers and Payments
 - a) Does FTA place restrictions on transfer of funds in the event of balance-of-payments difficulties?
 - b) Does RTA place restrictions on transfer of funds in other prescribed circumstances?
- 7) Performance Requirements: i) obligations to export a particular percentage of goods and services; ii) to use a particular level or percentage of local content; iii) to give preference to local goods or services; iv) to observe trade and foreign exchange balancing requirements; v) to transfer technology; or vi) to act as the exclusive supplier of goods and services
 - a) Prohibition of local content, trade, or other specified requirements?
 - b) Prohibition of local content or trade requirements only? Prohibits any of i) – iv) only from above list; allows v) and vi) and other specified requirements

- c) Provisions more limited than TRIMs (performance requirements not banned/prohibited)? No provisions on local content?
- 8) Senior Management/Board of Directors: Restrictions regarding the nationality of managers and members of the board; hiring of top managerial personnel regardless of nationality; stipulating nationality of majority of board of directors
- a) Provisions allowing for temporary entry of key personnel? (may be in another part of FTA)
 - b) Cannot restrict either senior management/board of directors based on nationality?
 - c) Can partially restrict board of directors?
 - d) Can partially restrict management or both?
- 9) Denial of Benefits: Description: concerns rights of third-party (non-FTA partner country) investors. Issue is whether they enjoy the same rights as investors of a party to the FTA when they have a substantial presence in one member and invest in the other party's territory through this presence. Implies *de facto* transfer of investment rules to non-party actors.
- a) (Denial of benefits) Only to persons with no substantial business operations in other party?
 - b) (Denial of benefits/) Tougher treatment for specific reasons?
 - Examples: denial of benefits in the absence of diplomatic relations between denying party and non-party or adoption/maintenance of measures with that non-party that prohibits transactions with the enterprise
 - c) (Denial of benefits/) Tougher treatment for all reasons?
- 10) Transparency (in any part of the agreement): GATS obligation to publish all relevant laws and to set up inquiry points that companies/governments can use to obtain information about regulations in the sector. Prior comment: parties notify each other with regard to any proposed or actual matter than might be adopted that might affect other party
- a) 'Prior comment'?
 - b) Publish (as in GATS)?
 - c) National inquiry point (as in GATS)? (may also be 'contact point')