



Creating a Region? The Evolution of Free Trade Agreement Networks in East Asia

Seungjoo Lee
Chung-Ang University

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The East Asia Institute
909 Sampoong B/D, 310-68 Euljiro 4-ga
Jung-gu, Seoul 100-786
Republic of Korea
Tel 82 2 2277 1683
Fax 82 2 2277 1684



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East Asia has long been characterized as under-institutionalized, despite the rapid growth of economic interdependence such as the increase in intra-regional trade and the expansion of production networks. However, East Asian countries have made a drastic move toward free trade agreements (FTAs) in the new millennium. This shift toward FTAs sparked scholarly attention on the changing nature of East Asian regionalism as it was seen as an attempt to transform their deepened economic integration into more institutionalized arrangements.¹ What is the driving force behind these new dynamics? It is believed that East Asian countries embarked on FTA initiatives in reacting to changes in external political and economic factors such as the end of the Cold War, the Asian financial crisis, and the rising Sino-Japanese rivalry. The push for FTAs in East Asia is also part of the global proliferation of bilateral FTAs in the aftermath of the problems experienced in concluding the Doha Development Round (DDR) of the World Trade Organization (WTO). In particular, the Asian financial crisis was a key catalyst in igniting East Asian countries' rush to FTAs. Frustrated with the inability of existing regional institutions such as ASEAN and APEC to deal with that crisis, nations in East Asia felt it necessary to pursue an alternative way of institutionalizing the region, paving the way for the formation of FTA networks there.

However, an overemphasis on external factors fails to shed light on why East Asia chose markedly different responses in dealing with the external changes and shocks, depending on the country. Furthermore, much analysis of East Asian FTAs is generally underspecified, because it often lumps together individual countries' FTA policies, the structure of FTA networks, and network strategies. This underspecified analysis of East Asian FTAs makes it more difficult to explain the way in which FTA networks are structured as well as the way they have evolved.²



With these analytical lacunae in mind, I explore the evolution of the FTA network in East Asia by drawing on network analysis. Specifically, I examine the following issues. First, despite extensive research on individual countries' FTA strategies, we still understand neither the FTA network structure nor each country's position within the FTA network. In order to remedy this analytical failing, I employ network analysis to grasp the nature of the FTA network in East Asia, the evolutionary nature of the network, and changes in individual countries' positions within the network. Second, I ask how and why East Asian countries have pursued divergent FTA policies and network strategies. In a sense, East Asian countries are competing with each other in networking the region. FTAs may be an expedient way of creating networks in the region. I explore East Asian countries' FTA network strategy in terms of partner selection and sequence.

I first discuss various features of the FTA network in East Asia by examining the current status of FTAs in which East Asian countries are involved. Next I provide a brief overview of the existing literature that has examined the potential causal factors leading to East Asian countries' FTA network strategies. After that I employ network analysis to examine the main features of the East Asian FTA network in greater detail. In particular, by using key concepts of network analysis to focus on changes in the network's structure, I explore the way in which this FTA network has evolved. Finally, I examine the theoretical and practical implications arising from the main findings of this discussion.

A Snapshot of FTAs in East Asia

East Asian FTAs have four primary features. First, these FTA networks have grown dense and complex as East Asian countries have actively undertaken FTA negotiations in the first decade of the new millennium. As of January 2010, East Asian nations were involved in a total of 79 deals. Out of 79, 33 FTAs are currently in effect and 5 FTAs are signed. With this backdrop, FTA networks are emerging in East Asia, giving rise to a classic hub-and-spoke structure.³ Bigger countries in East Asia have emerged as key hubs of the networks, while smaller countries have become spokes. For example, the five largest economies in East Asia have extensively engaged in multiple FTA deals over the last decade. Singapore, which is most enthusiastic about FTAs in East Asia, has concluded 12 FTAs, of which 10 are in effect and 2 are signed. In addition, 5 more are under negotiation and 2 have been proposed.



Second, another unusual characteristic of East Asian FTA networks is that each of the Northeast Asian countries, Korea, China, and Japan, concluded ASEAN+1 FTAs without concluding a single FTA among themselves. In February 2003, China signed an FTA framework agreement with the 10 ASEAN countries, pledging free trade by 2010. Alarmed by China's surprise move, Japan signed the Comprehensive Economic Partnership Agreement (CEPA) with ASEAN in October 2003. Stimulated by the Sino-Japanese rivalry in Southeast Asia, South Korea jumped ahead of Japan and signed an FTA of its own with ASEAN in May 2006. ASEAN plays a pivotal role linking Southeast Asian countries to the region's bigger economies. Moreover, ASEAN has been active in setting up FTAs with advanced or big economies outside the region such as India, Australia, and New Zealand. As a consequence, ASEAN is emerging as a hub of FTA networks in East Asia, connecting countries there to other regions.

Third, in terms of the geographical orientation, East Asian countries tend to pursue trans- or cross-regional FTAs as they have actively pursued FTAs with extra-regional partners. In contrast to their counterparts in Europe and North America, East Asian countries have displayed a cross-regional orientation in the early stage of their FTAs.⁴ This feature is particularly visible in the FTAs of major economies. Japan, South Korea, and Singapore have been active in pursuing trans-regional FTAs with distant economies, both small and large. South Korea concluded FTAs with Chile, EFTA, the United States, India, and the European Union. Korea has also concluded FTAs with small economies, even though their economic effects will remain insignificant, if not negligible.⁵ China has actively negotiated with Nigeria, Pakistan, Australia, the states of the Gulf Cooperation Council (GCC), Peru, Iceland, Norway, and Costa Rica. Japan also signed FTAs with Mexico and Chile and is currently negotiating with India, Australia, and Switzerland.

Singapore has been the most aggressive in concluding trans-regional FTAs, both bilaterally and minilaterally. Among the 14 bilateral FTAs it has concluded so far, 9 are with countries outside the region. Starting with its first FTA with New Zealand in 2000, Singapore completed FTA negotiations with Chile (2002), the United States (2003), Australia (2003), Jordan (2004), India (2005), Panama (2006), and Peru (2008). A strong cross-regional character is also found in FTAs under negotiation as well as in proposed FTAs. East Asian countries' heightened interest in cross-regionalism reflects their trade dependence on the rest of the world and their political interest in ameliorating domestic opposition to comprehensive trade liberalization.

Finally, East Asian countries focus heavily on the negotiation of bilateral FTAs rather than on minilateral or plurilateral FTAs, while East Asian countries continue to discuss the benefits of minilateral arrangements.⁶ Plurilateral FTAs, which involve more countries,



inevitably take a longer period of time and more resources in the negotiation process. As latecomers to FTAs, bilateral FTAs are an expedient way for East Asian countries to catch up with other countries. In addition, East Asian countries prefer bilateral FTAs in which they have greater room for maneuvering.

Why FTAs in East Asia? Existing Explanations

Existing studies have attempted to explain why and how East Asian countries are creating FTA networks both with and outside of regional partners. First, interested in efficiency gains from a division of labor from increasing trade, economic explanations see liberalization through the WTO as more preferable and bilateral agreements as second-best solutions. Nonetheless, these explanations assume that greater gains are expected from bilateral FTAs with larger trading partners than with smaller ones, because these agreements provide companies with the ability not only to exploit larger economies of scale, but also to reduce the information and organizational costs associated with individually negotiating agreements with large numbers of countries.

Second, political economy explanations address an analytical pitfall left by purely economic explanations that are not readily applicable to East Asia. Undoubtedly, FTAs can produce overall welfare gains by promoting trade, investment, and technology transfer. Yet the economic studies disregard the political costs of FTAs. Globally competitive and export-oriented industries should have policy preferences different from those of domestic-oriented import competing industries.⁷ And FTA strategy will reflect the political competition between the two opposing groups.⁸

Third, a more statist approach can shed light on national trade policymaking.⁹ It is often claimed that the negotiation of bilateral FTAs will help to facilitate the streamlining, upgrading, and restructuring of states' economies. In this vein, countries enter FTAs to lock in domestic reforms so that they can use FTAs for domestic political leverage to pry open protectionist sectors. This tied-hands strategy, geared toward domestic opposing groups, is expected to neutralize resistance by traditionally protected sectors.¹⁰

Fourth, diplomatic and security motivations influence the nature of FTAs.¹¹ A growing number of scholars examine the way in which government policymakers take diplomatic and security considerations into account in negotiating FTAs.¹² The U.S. government has been explicit in closely linking foreign economic and security policy, which has



utilized FTAs as a reward for allies. This tendency is seen in the cases of the U.S.-Israel FTA and the U.S.-Jordan FTA. The “securitization” of U.S. FTA policy has further accelerated in the post-9/11 era.¹³

Both China and Japan have also used FTAs as an instrument to achieve foreign and security policy goals. China concluded the China-ASEAN FTA primarily for diplomatic reasons to deepen diplomatic and political ties as well as to secure deep integration in the long run, even though the current economic structures of China and ASEAN are competitive rather than complementary. Concerned about China’s rising influence in the region, Japan’s FTAs are not purely driven by economic factors but reflect its desire to rejuvenate its presence in the region.¹⁴

Finally, in the face of mounting pressure from bigger partners, smaller countries are forced to concede more in FTA negotiations. The U.S. FTAs with Australia, South Korea, and Singapore as well as Japan’s FTA with ASEAN countries are manifestations of this situation. If this is the case, why do smaller countries enter into FTA negotiations with bigger countries in which they are expected to give up more? The fear of exclusion forces the smaller countries to engage themselves in FTA negotiations even if they prefer the *status quo*.¹⁵ According to this logic, the smaller countries are likely to embark on FTAs in order not to be excluded rather than to create their own FTA networks.

Some implications about FTA network strategies can be drawn from the conventional explanations, although they may be contradictory with each other. First, in terms of FTA partner selection, because they are mainly concerned with the expected gains at the aggregate level, economic studies suggest that East Asian countries seek FTA negotiations with bigger trade partners or with as many countries as possible to maximize economic gains from trade and investment ahead of their rivals, while not dismissing the political necessity for strategic choice of FTA partners.¹⁶ In the case of South Korea, numerous studies, drawing on computable general equilibrium (CGE) models, have consistently shown that the Korea-U.S. (KORUS) FTA will generate greater gains than the Korea-Japan FTA. The KORUS FTA is estimated to increase Korea’s GDP by 0.69–1.73 percent,¹⁷ while the Korea-Japan FTA will boost Korea’s GDP by 0.22–1.05 percent.¹⁸ In this regard, an FTA with the United States is more desirable than an FTA with Japan. However, these explanations fall short of explaining why Korea has not embarked on negotiations for an FTA with China, which would be expected to generate greater gains than the KORUS FTA.

By contrast, the natural trading bloc thesis that derives the formation of preferential trading agreement from such factors as geographic distance proposes alternative FTA network strategies. In this view, neighboring countries are more likely to enter into FTAs, because these agreements can effectively reduce the costs related to geographic distance



and to maximize the benefits from economic size.¹⁹ If this is the case, then a natural FTA bloc among neighboring countries is likely to be formed. The countries in this FTA bloc will be able to expand trade by reducing transaction costs as well as by implementing policy coordination with relative ease.²⁰

From this perspective, East Asian countries are expected to form natural trading blocs with neighboring countries to maximize welfare gains, but to place low priority on the formation of unnatural trade blocs with distant or small economies. In addition, FTAs among Northeast Asian countries are more likely than FTAs between Northeast and Southeast Asian countries. However, the track record of East Asian countries' FTAs reveals the geographic model's limited explanatory utility. It is unable to explain why Northeast Asian countries—South Korea, Japan, and China—have not formed a trading bloc among themselves, even though they would most likely be better off if they removed existing trade and investment barriers by establishing a set of trilateral FTAs.²¹

The political economy explanation also offers diametrically opposing views. While the explanations focusing on the role of interest groups argue that the governments under cross-cutting political pressure are likely to prefer FTA partners that can alleviate the negative effects of trade liberalization, a more statist view suggests that countries engage in FTAs with advanced countries in order to maximize not just immediate benefits from tariff liberalization but also the potential benefits of FTAs such as increases in productivity through efficient reallocation of resources.

Finally, the realist view emphasizing the security externalities of FTAs argues that countries are likely to conclude FTAs to reward military allies and strengthen security relations. In this view, countries are more likely to form FTA networks with allies rather than selecting FTA partners purely on the basis of economic benefits.

Beyond the State-Centric Approach: Incorporating a Network Perspective

Conventional wisdom explains some crucial features of East Asian countries' FTAs, such as economic and political determinants of FTA policy, and helps us understand the way in which FTAs have proliferated in East Asia, as FTAs in one country have had a “domino effect” on the development of FTAs in other countries in the region.²² Existing explanations that are essentially based on materialistic perspective, however, do not enable us to properly grasp the way in which FTA networks are structured and have evolved in East



Asia. A crucial difference between material and social power lies in the fact that a certain country's material power is inherently determined by the relative size of its material capability, whereas its social power is created by its ties with other countries through mechanisms such as FTAs. A country's position and power can be derived from its ties to other countries. Like material power, network power that is derived from social ties among countries creates inequality. In the case of FTA networks, countries with more connections may enjoy significant advantages over others. Simply put, the more a country is connected to other countries through FTAs, the more social power it possesses.

I employ network analysis to capture the primary nature, the structure, and the dynamic evolution of FTA networks in East Asia. FTA networks are formed in two tiers in East Asia: (1) FTA networks formed among 13 East Asian countries; and (2) FTA networks created between East Asian countries and their FTA partners. I examine the FTA networks formed among 27 nations including non-East Asian countries that have engaged in FTA pacts with East Asian countries. Given that East Asian countries are also actively involved in FTAs with countries outside the region, the examination of 27 East Asian and non-East Asian countries allows us to effectively capture the genuine structure of FTA networks in East Asia. The period covered in this study is from 2001 to 2010. Until 1992, the AFTA was the only FTA that had existed in East Asia. No FTA was concluded by any East Asian countries until Singapore signed an FTA with New Zealand in November 2000. Therefore, I examine the way in which their FTA networks have evolved in the first decade of the 2000s.²³

There are various ways to measure network relationships among countries. One way to measure ties between states is to count the number of common FTAs that the two states share.²⁴ I measure the direct FTA ties between two states instead of the number of common FTAs. Since we are interested in analyzing the way in which the FTA network structure has evolved, it is reasonable to measure direct ties rather than indirect ties. In this case, the maximum strength of the tie is equal to the total number of FTAs involving East Asian countries in a given year. And the strength of ties can be defined as the number of FTAs that both states belong to in a given year out of the total number of FTAs that exist in a given year. By examining the patterns of ties within the entire networks, one can figure out relative positions in the networks that the two states occupy. I then utilize two key measures of network properties— degree centrality and betweenness centrality —to explain the FTA network structure and individual countries' position within the network.



Network Dimension 1: Degree Centrality

Overview of East Asian FTA Networks

Although some East Asian countries embarked on FTA initiatives from the beginning of the new millennium, no East Asian country had concluded an FTA as of 2001. The only exception was the ASEAN Free Trade Area (AFTA), which was created by ASEAN countries in 1992. The AFTA started with six countries because ASEAN had six members in 1992, namely, Brunei, Indonesia, Malaysia, the Philippines, Singapore, and Thailand. Latecomers to ASEAN joined AFTA in 1995 (Vietnam), 1997 (Laos, Myanmar), and 1999 (Cambodia), respectively. AFTA is now composed of ten ASEAN member countries. Therefore, until 2001, ASEAN countries were connected with each other, while other East Asian countries such as China, Japan, and South Korea were isolated from the networks. And the only non-East Asian country linked to East Asia was New Zealand, as it signed an FTA with Singapore in 2000.

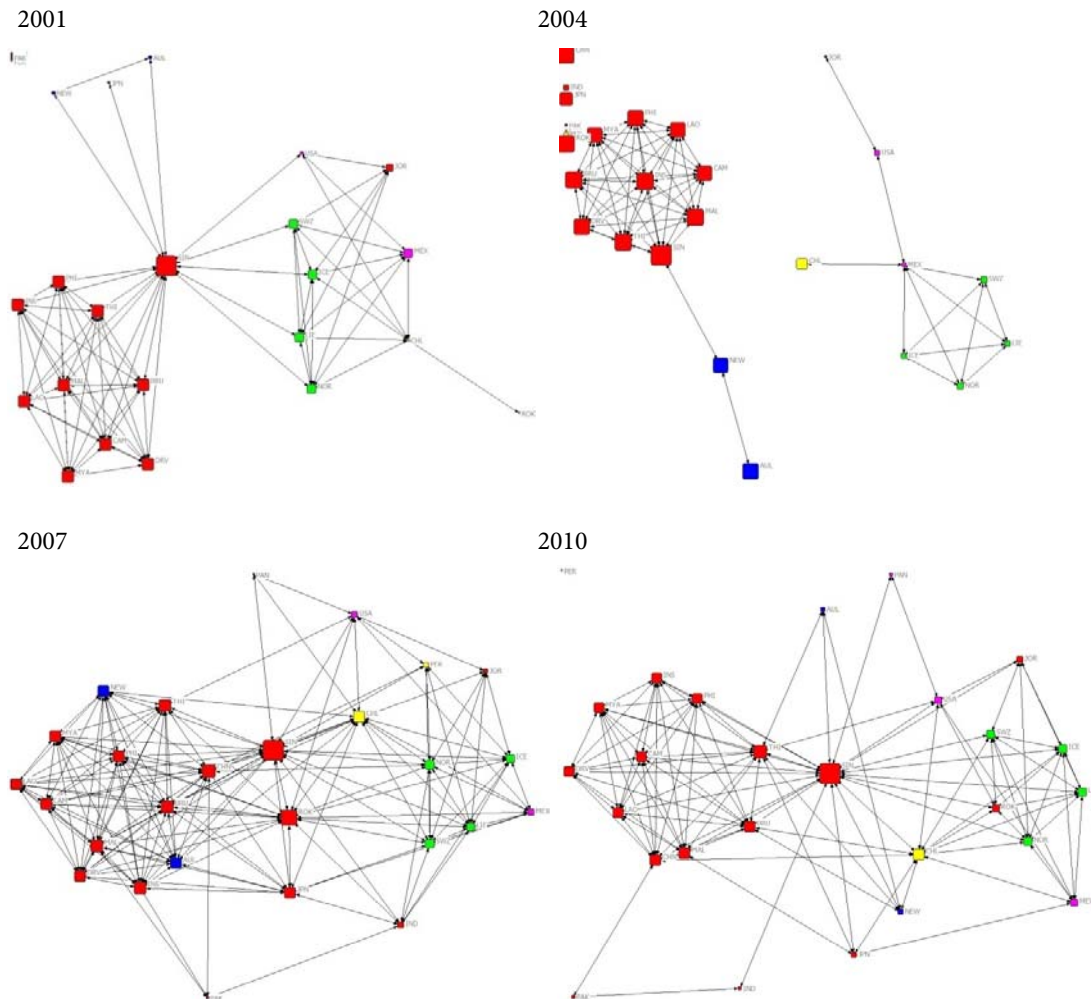
Since 2001, the structure of FTA networks in East Asia has gradually changed (see Figure 1). The FTA network in East Asia transformed from a star configuration with one central node into a more dispersed configuration with several nodes. However, the structural transformation of the FTA network has not been a gradual process at all. Rather, the network's hierarchical nature strengthened in fits and starts until 2006, after which it became relatively stabilized.

By 2004, with the conclusion of Singapore-EFTA (2002), Iceland, Norway, Sweden, and Liechtenstein entered the East Asian FTA networks. In addition, the United States and Australia were also incorporated into East Asian FTA networks as they struck FTA deals with Singapore. By contrast, major countries in East Asia did not entirely enter the regional FTA networks. China was entirely ruled out. Japan and South Korea showed different patterns of networking. While Japan was isolated in the networks with just one FTA completed with Singapore, Korea was linked only with a non-regional country, Chile. In this process of FTA networking, Singapore emerged as a FTA hub country that was most connected with other East Asian as well as with non-East Asian countries.

The FTA networks continued to evolve in 2007. The foremost change was found in the fact that the network structure grew more dense and complex, as shown in Figure 1. These structural changes notwithstanding, Singapore was still positioned as a hub within the complex networks as it successfully established new linkages with both regional and extra-regional countries such as South Korea, India, Australia, Panama, Chile, and Jordan.



Figure 1 The Evolution of FTA Networks in East Asia, 2001–2010 (Degree)



Another notable change is that China finally began to engage in FTAs with ASEAN countries as well as with non-East Asian countries such as Chile and Pakistan. Japan also attempted to get out of isolation to create its own FTA networks by completing FTA deals with several ASEAN countries (Singapore, Thailand, Malaysia) and Mexico. The Japanese network approach closely reflects its economic interests, because Japan has established and operated production networks in these countries.

Moreover, despite its position as a non-regional country, Chile rose to become a second-tier node in East Asian FTA networks. As it established connections with a variety of countries, including Singapore, Brunei, China, South Korea, the United States, Mexico, EFTA members, and New Zealand, Chile was well positioned to link East Asian and non-



East Asian countries. By contrast, late-developing ASEAN member countries became spokes within the network as they were unable to attract other countries on their own. They could be linked primarily through framework of ASEAN.

The FTA network structure began to decentralize in 2010. Whereas Singapore maintained its hub status in 2010, a few countries emerged as second- and third-tier nodes. In particular, South Korea rose to a second-tier node with its increased linkage with ASEAN countries, Chile, EFTA countries, the United States, and India. China, Japan, and Chile became third-tier nodes. These changes indicate that as major countries in East Asia have actively pursued FTAs, the FTA network structure has substantially transformed into a decentralized one.

Network Centralization

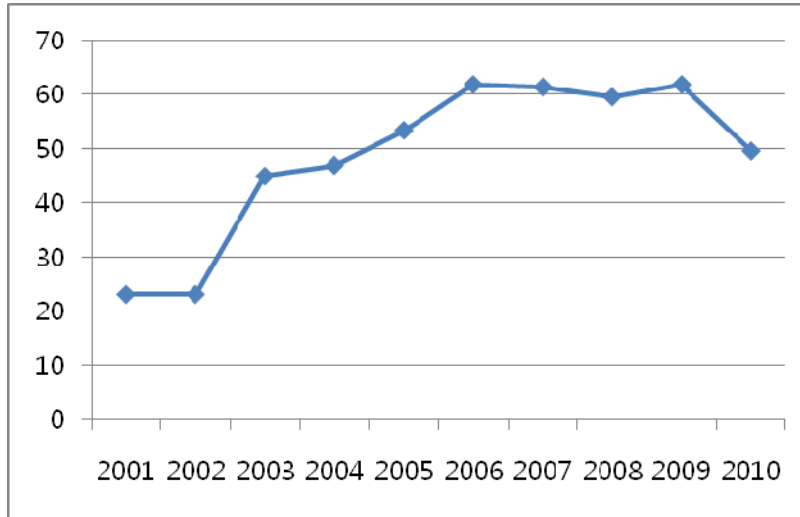
Network centralization is defined as the difference between the number of links for each node divided by maximum possible sum of differences. In a centralized network, many links are dispersed around one or a few nodes. Each node has a relatively equal number of links in a decentralized network. And there is little variation between nodes in terms of the number of links in the decentralized network.

The network structure has substantially changed in the first decade of the new millennium (see Figure 2). Although FTA networks have become widespread and dense in East Asia, the network structure did not become more centralized until 2006. In terms of degree of centralization, network centralization has steadily increased from 23.1 percent in 2001 to 53.4 percent in 2005 and 61.8 percent in 2009. These percentages indicate that the structure of FTA networks has become centralized because a few countries have a disproportionately large number of FTAs. A few key countries in East Asia emerged as hubs in the FTA networks, while the majority of countries became spokes in the networks. In terms of network structure, the hub-and-spoke system has been created within the East Asian FTA network. The network centralization has begun to decline, dropping to 49.5 percent in 2010, signifying that the FTA network has become decentralized as many countries have simultaneously jumped on the FTA bandwagon.

The majority of studies drawing on network analysis imply that as more states join more FTAs, the network structure will become decentralized and social ties among countries will be distributed increasingly equally over the long term (Hafner-Burton and Montgomery 2005; Kim and Shin 2002). By contrast, structural inequality has been on the rise in East Asian FTA networks. It may have to do with the fact that the FTA net-



work in East Asia is still in the formative stage. The decline of network centralization to **Figure 2 Changes in Network Centralization, 2001–2010 (Degree)**



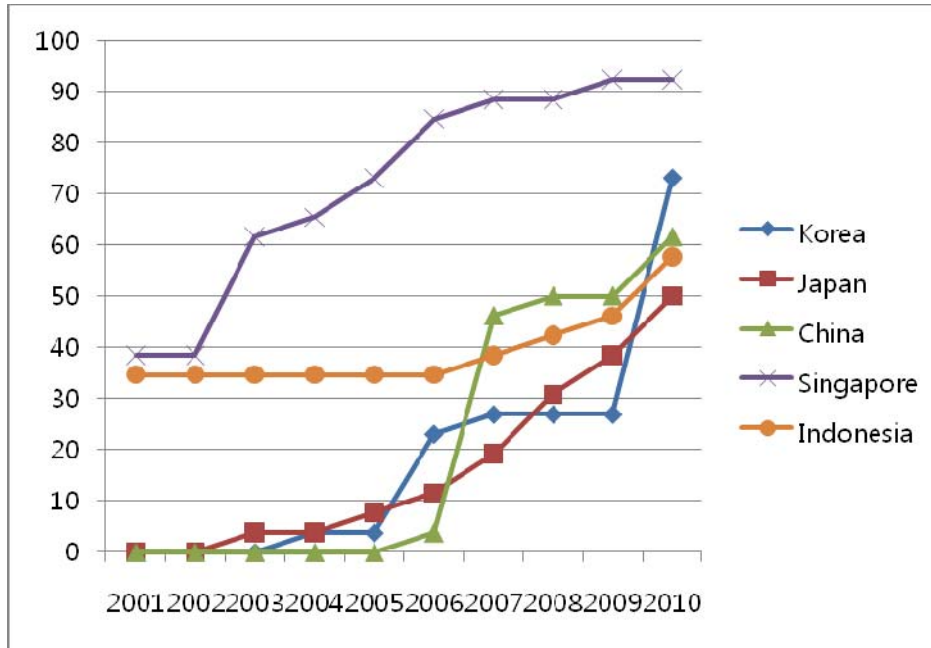
49.5 percent in 2010 suggests that the network structure may become still more decentralized, as more East Asian countries conclude more FTAs in the future. Given that East Asian countries have multiple FTAs under negotiation, inequality in social ties among East Asian countries may decrease. To test this possibility, I added the 22 FTAs currently under negotiation to the cases we are considering to examine how they would change the network structure in East Asia. The network centralization changed slightly, to 49.8, indicating that the decentralized nature of the FTA network has not fundamentally changed from 2009.

Actor Centrality

The number of countries taking part in at least one FTA has rapidly increased over time. In 2001, 7 countries, including South Korea, China, and Japan, had concluded a single FTA. The number decreased to 5 in 2004 and 1 in 2007. In 2010, all East Asian countries succeeded in joining the FTA network if they had not already done so. An increasing number of countries are gaining social capital, measured by degree, in the East Asian network of FTAs, as they belong to multiple agreements and share ties with many other states.



Figure 3 Changes in Actor Centrality, 2001–2010 (Degree)



In terms of degree of centralization, reflecting close linkages among ASEAN countries, in 2001, Singapore and other ASEAN member countries such as Thailand recorded high scores of normalized degrees of centralization, 38.5 and 34.6, respectively. However, differences in relative degrees of FTAs between the top few countries such as Singapore and underdeveloped countries such as Laos and Cambodia rapidly increased until 2009. Other major East Asian countries, such as China, Japan, and South Korea, scored 0 in actor centrality, implying that did not enter FTA networks until 2001.

Since then, there have been notable changes in actor centralization (see Figure 3). Singapore's actor centrality has steadily increased to 65.4 in 2004, 88.5 in 2007, and 92.3 in 2010. These percentages suggest that in 2010, Singapore is connected to 92.3 percent of the countries within the FTA networks. In terms of degree of centralization, Singapore has succeeded in positioning itself as a hub in the FTA networks.

South Korea's centrality has substantially increased from 0 in 2001 to 3.85 in 2004, 26.9 in 2007, and 73.1 in 2010. With this remarkable increase, South Korea rose to the second-tier node in East Asian FTA networks in 2010. The actor centrality of China, which did not sign a single FTA until 2005, was dramatically boosted to 46.2 in 2007 and 61.5 in 2010.



By contrast, Japan's linkage with the FTA networks has been less phenomenal as its degree centrality gradually changed from 0 in 2001, 3.8 in 2004, 19.2 in 2007, and 50 in 2010. Japan's actor centrality is lower than that of Indonesia (57.7 in 2010) and Thailand (57.7 in 2010). It is also noteworthy that the status of less developed countries in East Asia has been demonstrated in the low scores of Cambodia (50.5) and Laos (50.0). Incapable of attracting other countries into their own FTA network, these countries have only been able to conclude FTAs within the framework of ASEAN.

Network Dimension 2: Betweenness Centrality

Overview of East Asian FTA Networks

Betweenness is another indicator measuring the connectivity of a node's neighbors. A betweenness centrality measures the extent to which a node lies between other nodes in the network. For example, in FTA networks, betweenness centrality measures the number of countries that a country connects indirectly through their direct FTA links. In this measure, nodes that bridge clusters receive a higher value. <Figure 4> shows the process in which East Asian FTA networks have evolved in terms of betweenness.

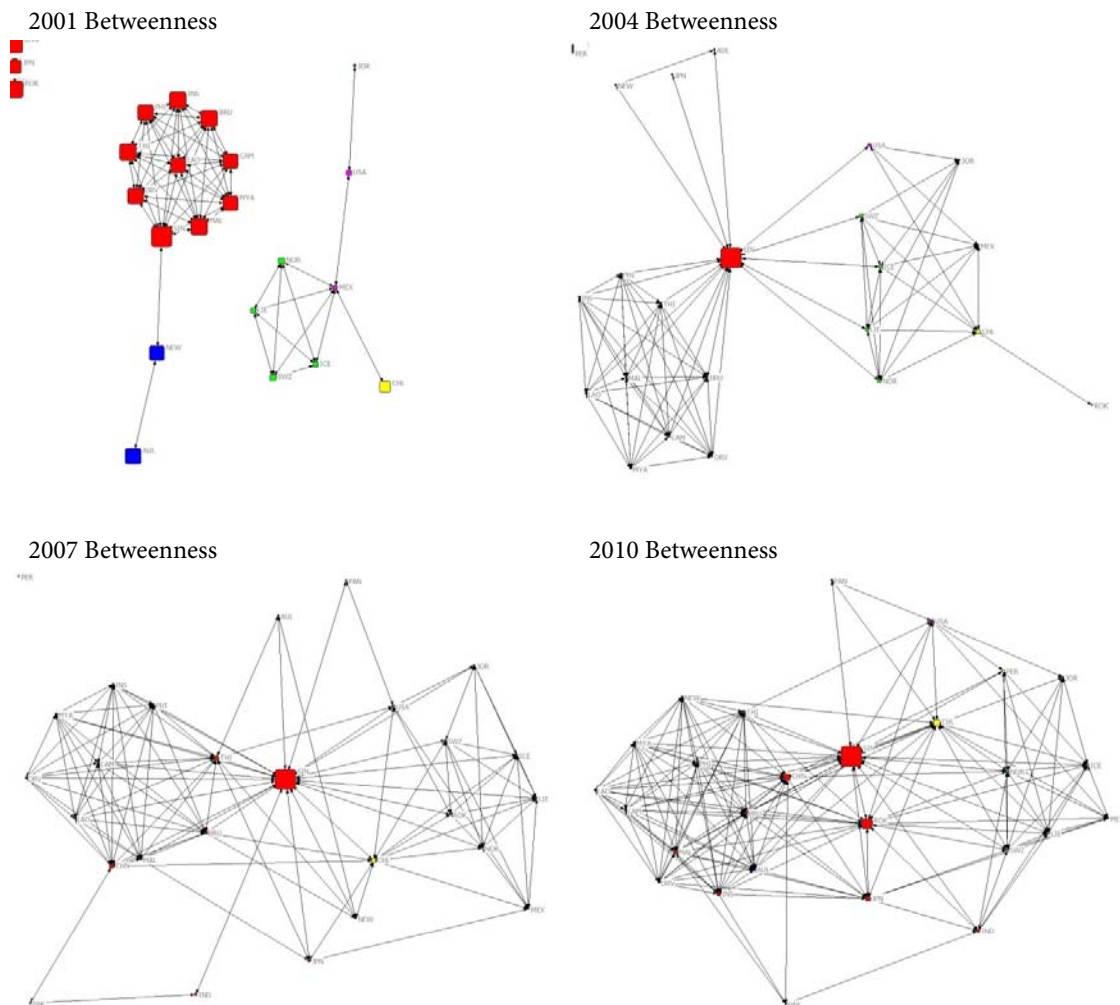
In 2001, the FTA networks that had not yet fully developed were quite decentralized, as each cluster of nodes was not connected into a unified network. No country in these networks was able to serve as a broker indirectly linking other countries. However, by 2004, the network structure had profoundly changed so that all nodes in the FTA networks were linked either directly or indirectly. Singapore emerged as a broker indirectly linking countries inside and outside East Asia. For example, ASEAN countries and Japan could be connected to EFTA countries, Australia, New Zealand, and the United States through Singapore.

By 2007, East Asian FTA networks had become highly centralized. While Singapore was still positioned as a broker in the networks, no country was able to emerge as a second-tier node, which is in stark contrast to FTA network structure measured by degree centralization. Although East Asian countries attempted to conclude many FTAs, the majority of countries in the network were not connected through broker countries, signifying that the FTA networks were not effectively structured.



By 2010, the East Asian FTA networks have grown further and become dense and complex. Because most East Asian countries have completed multiple FTA deals, their direct linkages have strengthened. Singapore's position as a broker has solidified, not just because it has concluded more FTAs but because it is in a position to link indirectly more countries both in and outside East Asia. Second, South Korea has emerged as a second-tier node. Through Korea's FTA networks, ASEAN countries are indirectly connected to EFTA countries, the United States, Mexico, and Chile. Third, China and Chile became third-tier nodes. Chile serves as a broker indirectly linking EFTA members, the United States, Australia, New Zealand, Panama, and Jordan to ASEAN+3 countries. By contrast, Japan has been less successful in playing a brokerage role in East Asian FTA networks.

Figure 4 The Evolution of FTA Networks in East Asia, 2001-2010 (Betweenness)

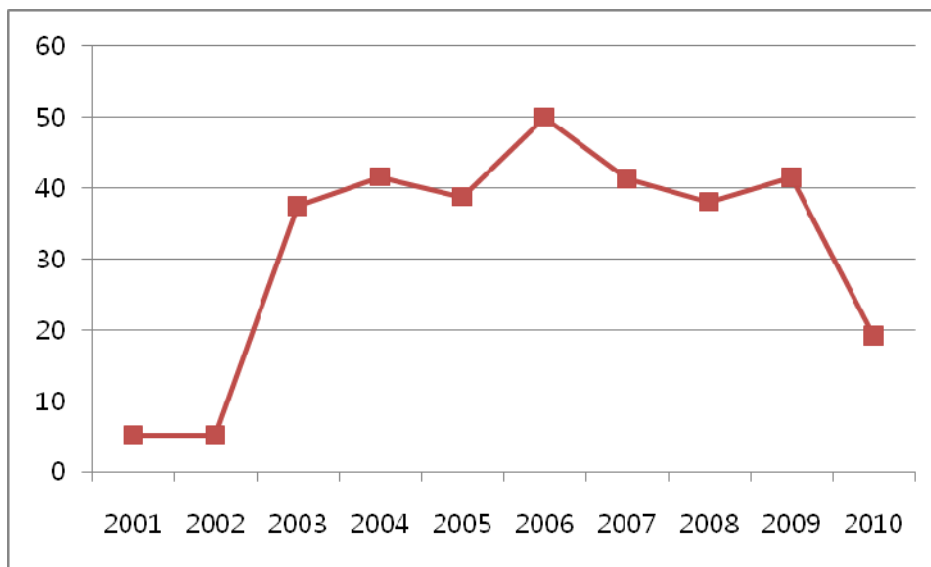




Network Centralization

Changes in network centralization measured by betweenness are slightly different than the changing patterns of degree centralization (see Figure 5). From 2001 to 2004, betweenness centralization rose abruptly from 5.18 to 41.5, implying that the network structure had become much more centralized. In the period of 2005 to 2009, the centralized structure was well maintained, before the network centralization index slid sharply to 19.2 in 2010. This change signifies that the FTA networks have become decentralized, as more countries became better positioned to connect other countries indirectly.

Figure 5 Changes in Network Centralization (Betweenness)



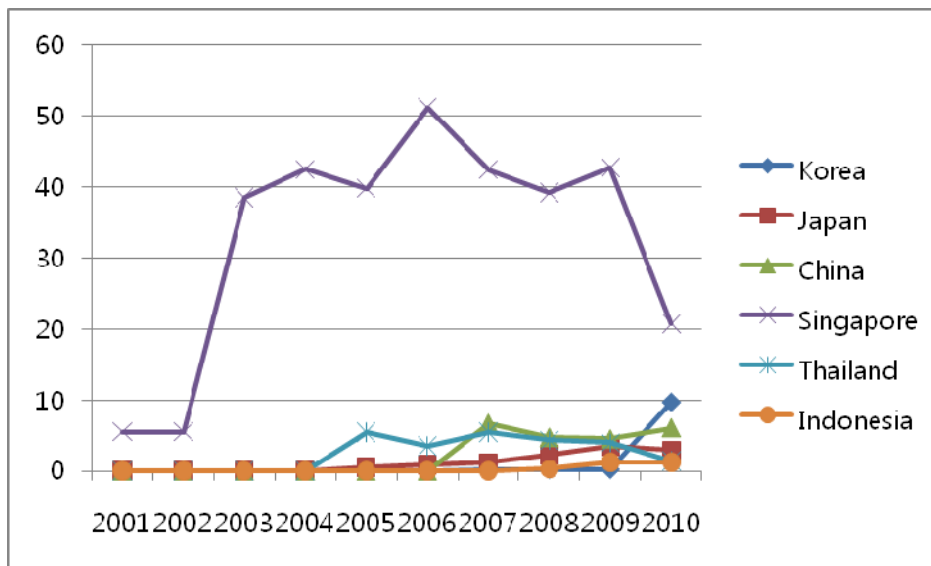
Actor Centrality (Betweenness)

In 2001, although Singapore was the only country that was able to serve as a broker, its score in terms of individual-country betweenness centrality was a mere 5.54, suggesting



that it could indirectly link only 5.54 percent of the countries in the FTA networks. However, Singapore's unique position as a sole broker in the FTA networks gradually solidified with its actor centrality increasing considerably to 42.5 (2007) and 42.7 (2009). In 2007, whereas Singapore still maintained its broker status with its actor centrality of 42.7, China and Thailand began to function as brokers within the networks from 2007 on. The two countries' score reached 6.7 and 5.4, respectively. More profound changes occurred in 2010, when Singapore's actor centrality substantially dropped to 20.7, and South Korea and China, with actor centrality of 9.7 and 6.1, respectively, emerged as second-tier nodes in the regional FTA networks.

Figure 6 Changes in Actor Centrality, 2001-2010 (Betweenness)



FTA Networking Strategy in Different Styles

While East Asian countries embarked on FTAs almost simultaneously, they have used profoundly different FTA strategies. First, major countries in East Asia show a great deal of divergence in terms of the number of partners they have. Japan, a latecomer to FTAs, has quickly caught up with other countries by completing 10 FTAs with 9 countries and an agreement with ASEAN, and is currently negotiating agreements with Australia, India,



and Korea.²⁵ China, the archrival of Japan, has been involved in a total of 18 FTAs, of which 6 are currently in effect. Starting with FTAs with neighboring countries (ASEAN) and its special administrative regions such as Hong Kong and Macau, China has concluded FTAs with Chile and Pakistan, Singapore, and New Zealand. South Korea, aspiring to emerge as a hub country in the region, has concluded or is negotiating 13 FTA deals thus far. Singapore has even more aggressively pursued FTAs by concluding them with the large economies, such as the United States, China, India, Japan, and South Korea.

Second, East Asian countries have demonstrated different styles of networking in terms of the sequence of FTAs. The prime examples are the Chinese and Japanese approaches to the agreements with ASEAN countries. China started FTA negotiations with individual ASEAN countries such as Thailand (2005) and Singapore (2008) only after it concluded an FTA with ASEAN as a whole in 2002. By contrast, Japan initially preferred FTAs with individual ASEAN countries. From 2002 to 2007, Japan concluded FTAs with 6 individual countries in ASEAN before it finally signed an FTA with ASEAN in 2008. With the exception of an FTA with Singapore in 2005, South Korea largely took a Chinese approach to Southeast Asian countries by signing an FTA with ASEAN in 2006.

Third, East Asian countries have adopted substantially different strategies in networking with transregional partners.²⁶ Korea was keen to start with a country that was small and in a different hemisphere, while Japan first sought to negotiate with Singapore and then move on to a large country, Mexico. For Japan, the Japan-Mexico FTA was an attempt to alleviate the negative impacts of NAFTA and the EU-Mexico FTA on its competitive advantage in the U.S. market.²⁷ Rather than taking such a detour, South Korea and Singapore were more aggressive in concluding FTAs with a large country, the United States, even though the KORUS has yet to be ratified.

Fourth, East Asian countries have also shown distinctive features in designing FTAs.²⁸ In terms of the scope of FTAs, Singapore pursues comprehensive FTAs that include various sectors, such as telecommunications services, financial services, and entertainment sectors. Singapore's FTAs also typically include provisions regarding intellectual property and labor and environmental standards that go beyond WTO agreements. By contrast, China's primary motivation for FTAs is to ensure market access for goods and then facilitate its outward investment in East Asia, as demonstrated in its approach to an FTA with ASEAN. China is currently negotiating an investment agreement with ASEAN after it concluded separate FTAs on goods and services.²⁹ China prefers narrow and simple FTAs in terms of scope and coverage, reflecting the fact that Chinese regulatory frameworks about intellectual property rights, financial services, and investment measures are still underdeveloped. China usually restricts trade liberalization primarily to trade in goods by



excluding or delaying liberalization in services. Another feature is that it tends to include provisions related to economic cooperation when it forms FTAs with other developing countries.³⁰

While the scope and coverage of Japanese and South Korean FTAs are in the middle of U.S. and Chinese FTAs, there are still significant differences between the two countries. In terms of trade liberalization, Japan seeks asymmetric agreements by making fewer concessions vis-à-vis its FTA partners. Japan's tariff elimination ratio ranges from 87 percent (Japan-Mexico FTA) to 94 percent (Japan-Malaysia FTA), while the ratio for its counterparts usually hovers around 97 to 100 percent.³¹ Japan has a clear preference for enhancing economic partnership going beyond trade liberalization to incorporate provisions about intellectual property rights, financial services, and investment.

Compared with Japan, South Korea takes a more progressive approach in terms of trade liberalization, while it places less emphasis on economic cooperation. South Korea is one of the few major economies that have entered into an FTA with the United States, which will inevitably create a massive scale of economic restructuring. In this agreement, South Korea agreed to eliminate 99.7 percent of existing tariffs.³² South Korea's aggressive approach to FTAs is expected to boost the ratio of South Korea's trade covered by FTAs to about 66 percent, if South Korea concludes the FTAs currently under negotiation.

Conclusions and Implications

FTAs have proliferated since 2000 to replace the multilateral trading agreements that had underpinned the postwar international economic structure. Out of 219 free trade agreements reported to the WTO, the majority have been completed in the first decade of the new millennium.³³ Joining this worldwide trend belatedly, East Asian countries have devised their own FTA strategies that in turn have led to the creation of FTA networks in East Asia. Various existing studies have examined the mushrooming of FTAs in East Asia, primarily from individual countries' strategic point of view. However, systematic analyses of the creation and evolution of FTA networks are rare. Drawing on key concepts from network analysis, I have explored not just individual East Asian countries' FTA strategies, but also the formation of FTA networks.

We have seen how two particular measures of FTA networks (degree of centralization and degree of betweenness) have varied since 2000 in East Asia. Both measures have



shown similar patterns of changes, in which structural inequality has sharply risen from 2001 to 2006, stabilized after that, and begun to decline from 2010. The analyses of actor centrality show that while Singapore has continued to maintain the hub status in the network, major powers have rapidly closed the gap with Singapore, emerging as second-tier nodes. By contrast, late developing countries such as Cambodia and Laos have been marginalized from network formation, failing to close the gap with the highly networked countries.

Several implications arise from these findings. First, it has been widely believed that the East Asian way of networking has been primarily driven by economic factors such as trade, foreign direct investment (FDI), and production sharing. Many analysts have argued that the widespread presence of an intra-regional trade network spearheaded by production networks did not require East Asian countries to formalize networks through intergovernmental collaboration (Katzenstein 1997). However, the rapid growth of FTA networks in East Asia shows that deepened economic integration still requires harmonization of government policies related to trade and FDI and ultimately results in the creation of intergovernmental collaboration. Middle-power countries such as Malaysia and Thailand, which emerged as regional production hubs for the auto and electronics industries, have been active in forging FTA networks with Japan and China. FTA networks, if properly designed, are likely to serve as an institutional framework for effectively managing economic interdependence propelled by production networks.

Second, the dramatic increase in FTAs in East Asia ultimately led to the growth of dense and complex FTA networks. Observing the emergence of networking in the global political economy, many analysts have engaged in intense debate regarding whether various kinds of networks primarily facilitated by economic interdependence aggravate or nullify structural inequality in international policy economy. Kim and Shin (2002) contend that the structure of international trade networks has steadily become equalized so that all countries in the global trade network have benefited. Rebutting this argument, Matthew Mahutga (2006) argues that the hierarchical nature of the global political economy has been maintained throughout the postwar period. In this view, the rise of interlocking economic relationships has benefited a few exceptional countries to exacerbate structural inequality within the international trade network. In their recent research on the evolution of the global PTA network, Hafner-Burton and Montgomery (2009) suggest a more nuanced analysis. While the global PTA network has become denser and more equalized, not all countries have benefited from these structural changes. An increase in PTA network ties is primarily made by middle-ranking countries. And these countries



have been the main beneficiaries of networking, exacerbating the structural position of the least developing countries.

A close look at the structure of FTA networks in East Asia seems to support Hafner-Burton and Montgomery's argument. Until 2009, although the FTA networks have become dense in East Asia, not all countries are incorporated into the networks. As a consequence, the FTA network structure had become more hierarchical and centralized, with a few countries having a disproportionately large number of FTAs. Singapore as a middle-ranking country in East Asia has successfully emerged as a hub that links not just regional countries but also regional and nonregional countries. By contrast, China and Japan have begun to rise to second-tier nodes within the FTA networks. Thus far, social power and material capabilities are very differently distributed in East Asia, suggesting that the FTA network is not a mere reflection of material power.

Third, many network analyses suggest that small countries may be able to make up for structural disparities in economic relationships by increasing social power in their network of FTAs. Furthermore, small states may take advantage of FTAs as a vehicle of power. However, in East Asia, late developing countries such as Cambodia, Laos, Vietnam, the Philippines, and Indonesia are inherently incapable of creating FTA networks on their own. Lacking resources, bargaining leverage, and institutional capacity, they have failed to actively engage in FTA negotiations. Instead, they had to rely on ASEAN to attract other countries as FTA partners. It is uncertain whether these countries can successfully pool scarce capacity and resources to overcome their individual weaknesses.

Fourth, the uneven nature of FTA networks has ultimately led to the emergence of a hub-and-spoke system in East Asia.³⁴ Although this system may entail some costs in managing and harmonizing different standards of trade regulation such as rules of origins, in terms of net economic effects, the FTA hub country is likely to enjoy additional economic benefits created from both trade creation and trade diversion effects. However, it remains to be seen whether the hub country is able to materialize other benefits going beyond economic gains, such as an increase in social power. ■

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Endnotes

¹ Pempel (2006).

² I use preferential and free trade agreements (PTAs and FTAs) interchangeably.

³ Hufbauer and Schott (2009).

⁴ Katada and Solís (2007).

⁵ Koo (2005, 144).

⁶ According to Kawai and Wignaraja, bilateral FTAs account for 74 percent of the concluded FTAs in Asia. Kawai and Wignaraja (2009).

⁷ A key debate in this literature revolves around whether sector-specific or factor-based organizations wield more political influence on FTA policymaking. For a discussion of factor *versus* sectoral explanations, see Rogowski (1987), Brawley (1997), and Hiscox (2001).

⁸ Frieden (1991).

⁹ Krasner (1978).

¹⁰ Ravenhill (2005).

¹¹ In addition, a government may seek raw materials through FTAs, as China appears to be doing with its PTAs. See Ravenhill (2008) on motivations for PTAs in the Western Pacific. Ravenhill considers the opportunity to introduce new issues into PTAs (WTO plus) as a possible economic motivation.



¹² Feinberg (2003); Ravenhill (2008).

¹³ Higgott (2004).

¹⁴ Capling (2008).

¹⁵ Gruber (2000).

¹⁶ Cheong (2005); Nam et al. (2004); Urata (2002).

¹⁷ Choi and Schott (2001); Cheong and Wang (1999).

¹⁸ Cheong (2001).

¹⁹ Frankel (1997); Krugman (1991); Bhagwati and Panagariya (1996).

²⁰ Mansfield and Milner (1999).

²¹ Sohn and Yoon (2001).

²² See Baldwin (1993) on domino effect.

²³ I exclude PTAs based on GATT enabling clauses, because they are not designed to realize free trade as specified by GATT's Article XXIV.

²⁴ Emile Hafner-Burton and Alexander H. Montgomery use this measure to explore the evolution of the global PTA network. Hafner-Burton and Montgomery (2009).

²⁵ Urata (2002).

²⁶ Lee (2007).

²⁷ Solís (2005).

²⁸ Ravenhill (2008).



²⁹ Kawai and Wignaraja (2009).

³⁰ Dent (2007).

³¹ Japan's tariff elimination ratio is 99.9 percent in the Japan-Brunei FTA.

³² Chae (2007).

³³ WTO homepage.

³⁴ Kawai and Wignaraja (2009) point out that several economic factors such as economic size, per capita income, levels of protection, economic geography, and the production network strategies of multinational corporations affect the emergence of the FTA hub-and-spoke system in East Asia.

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Author's Biography

Seungjoo Lee
Chung-Ang University

Seungjoo Lee is an associate professor of political science at Chung-Ang University (Seoul, Korea). Professor Lee received his Ph.D. in political science from the University of California at Berkeley, specializing in international and East Asian political economy. Professor Lee has previously taught at the National University of Singapore and Yonsei University. Professor Lee has also been a visiting research scholar at the Institute of Social Science at the University of Tokyo and worked with the Berkeley APEC Study Center (BASC) as a postdoctoral fellow. Professor Lee is the co-editor of *Northeast Asia: Ripe for Integration?* (2008) and *Trade Policy in the Asia-Pacific: The Role of Ideas, Interests, and Domestic Institutions* (forthcoming). His recent publications appeared in various journals such as *Comparative Political Studies*, *The Pacific Review*, *Asian Survey*, and *Korean Political Science Review*. His current research investigates the changing nature of East Asian regionalism, the evolution of global FTA networks, and the transformation of the East Asian countries' developmental strategies in the age of globalization.



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