Comments on East Asian Trade Integration

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I. Main Findings of Yamashita's Paper

I-1. Extent and involvement of trade in value added (TiVA)

- An expansion in production networks in East Asian has reached the saturation point. The China factor has somewhat gradually changed its facet moving away from trade-oriented growth into the more maturing economy driven by services and consumption. The dependency of ASEAN to East Asian has grown in more recent years.

- In East Asia, the proportion of backward and forward participation as the rate to gross exports is roughly the same. In ASEAN, the proportion of backward participation outweighs that of forward participation in gross exports

- There is heterogeneity in difference of GVC participation in a cross-country comparison.

- Japan has perhaps become more accepting foreign value-added in its gross exports by possibly replacing the domestically produced parts and components. However, it does not mean that there has been a direct substitution between domestic and foreign value-added.

I-1. Extent and involvement of trade in value added (TiVA)

- The largest involvement of GVC participation in East Asia is the electrical and electronic equipment. While the expansion of production networks does not limit itself to regional, East Asia has a strong base of regional value chains (RVCs). ASEAN economies are naturally more involved with forward GVC involvement outside the regions.

- As compared to East Asia, ASEAN countries tend to have a larger share of value-added created within the region. For example, in 2010, 23 percent of value added for ASEAN's backward participation was created within the ASEAN region as compared to 10 percent for East Asia. This naturally means the lower share of foreign value-added created outside ASEAN. This intraregional concentration of foreign value-added creation is perhaps driven by the active role of major MNEs operating within ASEAN.

- Their rise in GVCs is partly explained by the migration of manufacturing in textile and clothing from China since China has started to climb up the technological ladder in the export bundle away from the labour-intensive industries to more capital-intensive industries. The dissimilarity in the pattern of GVC and RVC seems to mirror the different industry development patterns.

I-2. Use of free trade agreements (FTAs)

- FTAs are not the right policy instruments to promote growth and spread of production networks in the region.

- First, FTAs may not have any actual impacts on trade in parts and components, since these types of products are usually duty free owing to the 'tariff escalation' structure, which makes MFN tariff rates almost negligible or significantly lower for parts and components.

- Second, trade flows in final assembled goods consisting of a larger number of imported parts and components may not be facilitated well due to the presence of complex rules of origins in the existing overlapping FTAs

- The related administrative costs for satisfying ROOs easily outweigh the preferential tax reductions (1) the conventional value-added content criterion may not be binding constraints since those value-added are extremely low in parts and components, and (2) change in the tariff classification criterion may disqualify many parts and components both inside and outside the region since they virtually belong the same HS 6-digiti code.

- FTAs should be designed in the manner consistent with the multilateral MFN-basis, rather than the exclusive regional member countries only.

I-3. Effects of non-tariff measures (NTMs)

- The increased presence of NTMs may partly explain the limited role of FTAs on the progress of GVCs

- To understand the role of NTMs on trade related to GVCs in East Asia, we undertake the empirical analysis in this part using the gravity model of bilateral trade flows.

- To measure the extent of NTMs, we use a simply dummy variable specifying the value of one if NTMs is recorded at HS 6-digit under HS 1-digit heading, otherwise zero.

- According to the estimation results, the NTM encourages exports of foods while the effects of NTM were estimated to discourage domestic value-added exports in Electronics and Transport Equipment.

- In addition, NTMs in electronics and transport industry turn out to impose the additional trade resistance costs by inflicting the costs of imports to East Asian economies.

II. Questions and Comments

II-1. New flying geese model?

- Production fragmentation has risen in the Asian region most dramatically. The Asian share in world value added in exports and imports increased substantially between 1995 and 2015. The American as well as the European shares in world value added in exports have decreased steadily but their shares in world value added in imports still remain high during the same period.

Regional Shares in World Value Added in Exports and Imports (%)

Regional shares in world value added in imports

Regional shares in world value added in exports
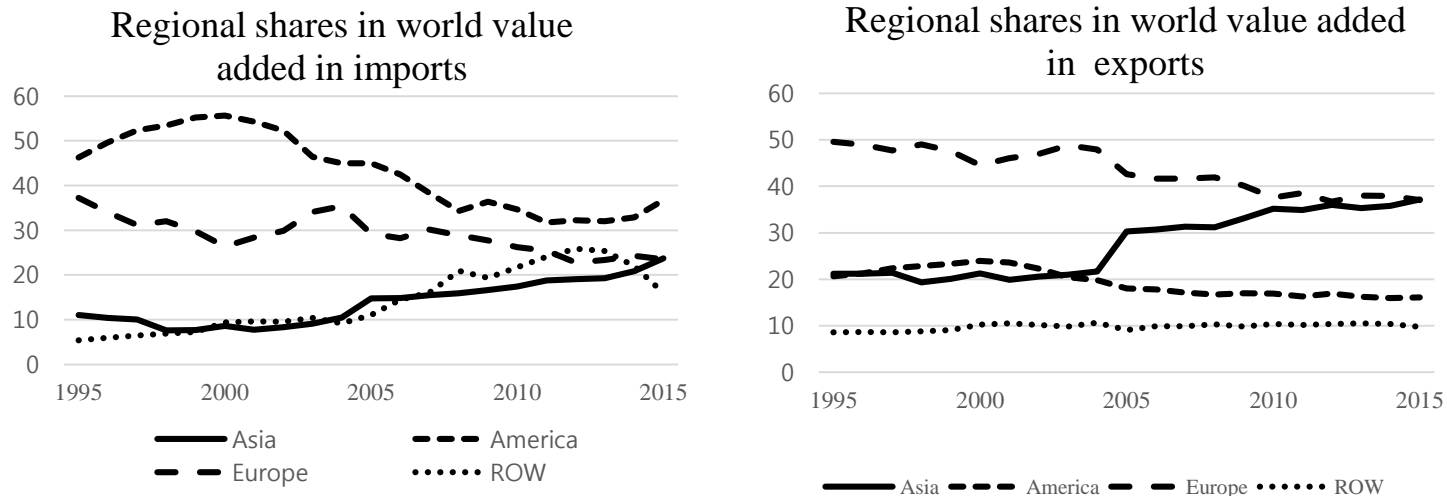
Source: Choi, Nakgyoon (2019), "Deeper Regional Integration and Global Value Chains," Working Paper, Korea Institute for International Economic Policy, forthcoming.

II-1. New flying geese model?

- As Dr. Yamashita pointed out, there has been no direct substitution between domestic and foreign value-added in Japan.

- According to Ando and Kimura (2007, 2012b), Japanese manufacturing firms that increase the number of their affiliates in East Asia enlarge domestic employment and operations relative to other Japanese manufacturing firms, no matter whether in normal periods or during a crisis.

- Ando and Kimura (2007, 2012b): Increase rate of domestic employment Japanese manufacturing firms during 2002-2006 and 2007-2009: Expansion in East Asia (12.5% and 2.8%) vs. No entry in East Asia (5.2% and -0.5%)

- Companies in search of low labor costs may seek to invest in other low-cost countries. Japan, like the first goose in a V-shaped formation, leads other Asian economies toward industrialization, passing older technologies down to followers as it moves into newer ones (OECD, 2017).
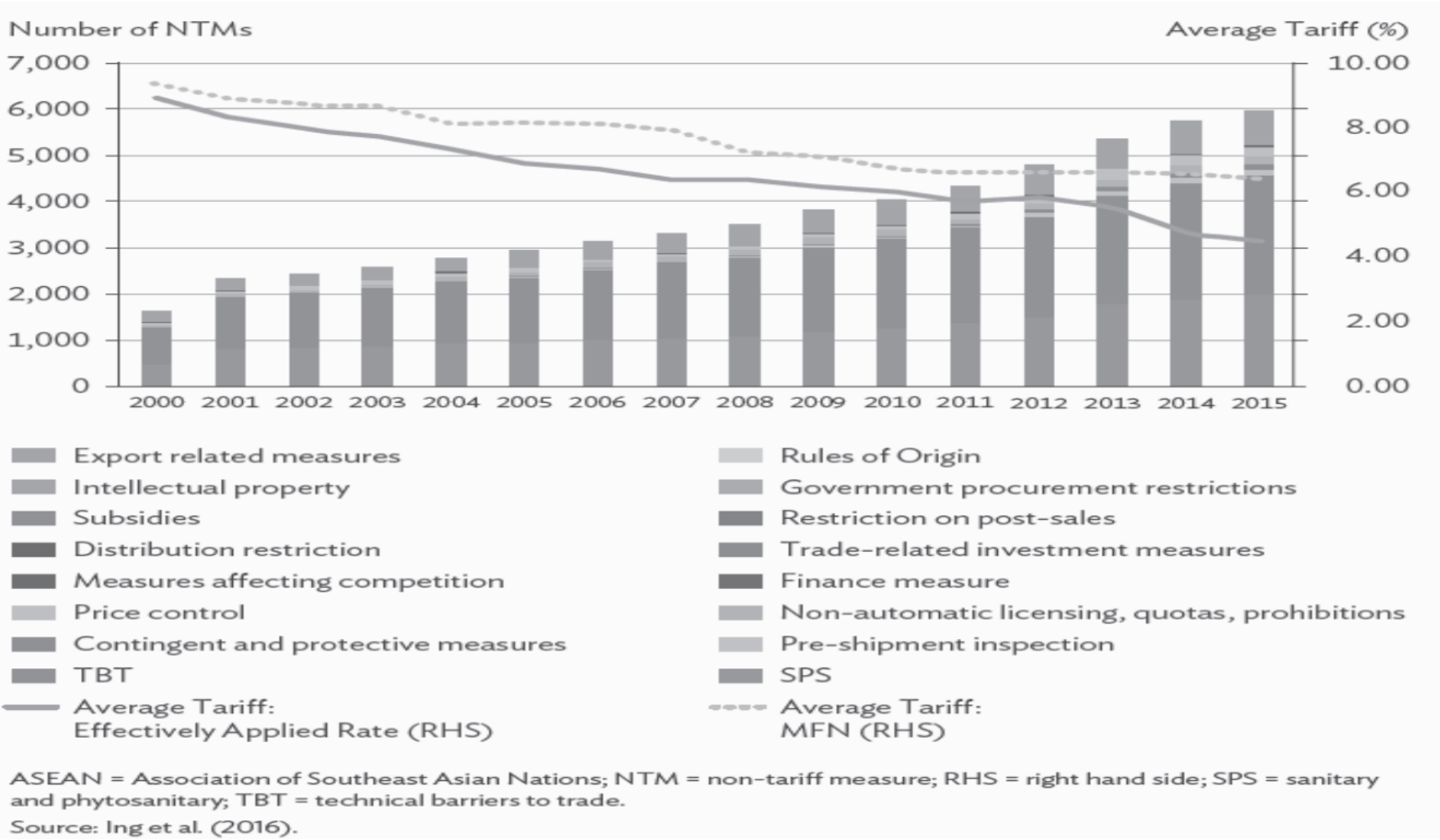
II-2. Positive Relationship between RTA and GVC

- Dr. Yamashita pointed out that the net effects of FTAs on trade in GVC are complicated by a couple of reasons.

- But, the recent trade agreements can possibly serve as stepping stones for multilateral agreements in that they are not only complementary to the multilateral rule-making in such areas as ROO, SPS and standards but they are also consistent with the GATT Article XXIV. For example, the CPTPP introduced the cumulative rules of origin, thereby upgrading the Asia-Pacific area into a more coordinated form of production network.

- Furthermore, recent trade agreements have deepened regional integration by improving trade rules already covered by the WTO agreements and by including new rules which are not addressed in the WTO agreements.

- Fore example, Boffa et al. (2019), Laget et al. (2018), Ruta (2017), Bickwit et al. (2017), Rubínová (2017), Orefice and Rocha (2014), Antras and Staiger (2011) emphasized the importance of deep regional integration for global value chains. They revealed positive relationship between deep regional trade agreements and global value chains.

II-3. Dealing with NTM Data

- Dr. Yamashita collapsed HS6 digit NTMs data to the broad 34 industry categories. To measure the extent of NTMs, he uses a dummy variable specifying the value of one if NTMs is recorded at HS6-digit under HS1-digit heading, otherwise zero. Each of 34 industries in Yamashita's database has more than 150 HS6-digit products because HS2012 has 5205 HS6-digit products. But, it does not capture the heterogeneous industry characteristics.

- My suggestion is to create NTM measures in the following two ways.

- First, The first way is to use MAST classification developed by UNCTAD which has led a conceptual effort to classify all NTMs according to a clear and exhaustive nomenclature, the Multi-Agency Support Team (MAST), which was adopted in 2012. And we can create NTM measures corresponding to each of 16 NTM classifications.

- Second, we can use the principal component analysis, which converts a set of possibly correlated variables into one of linearly uncorrelated ones. Doing so reduces the dimension of the variables by decomposing the eigenvalue.

NTM Proliferation in ASEAN

ASEAN = Association of Southeast Asian Nations; NTM = non-tariff measure; RHS = right hand side; SPS = sanitary and phytosanitary; TBT = technical barriers to trade.
Source: Ing et al. (2016).

II-4. Technical Issues related to estimation

A. There seems to be a problem of endogeneity bias in the following estimating equation on NTB. Such endogeneitymay lead to a downward bias on the estimated impact of NTBs on imports. Instrumental variables are needed to address this issue.

cf. Trefler (1993), Lee and Swagel (1997), Kee et al. (2009)

$$\ln M_{ijt}^{k} = \alpha + \beta_1 NTM_{it}^{k} + \beta_2 \ln D_{ij} + G_{ijt}\beta_3 + \varepsilon_{ijt}^{k}$$

B. Multilateral resistance needs to be included in the estimation equation in order to deal with the relative trade costs from rest of the world and the bilateral trade costs in estimating a gravity equation.

cf. Baier and Bergstrand (2009) and Baier et al. (2014)

$$M_{dist\_kl} = \frac{1}{2N}\left(\sum_{i \neq l}^{N} dist_{ki} + \sum_{i \neq k}^{N} dist_{li}\right),$$

$$M_{contig\_kl} = \frac{1}{2N}\left(\sum_{i \neq l}^{N} contig_{ki} + \sum_{i \neq k}^{N} contig_{li}\right)$$

where N represents the number of countries.

III. Policy Implications

III-1. Deeper Regional Integration

- Recent trade agreements have deepened regional integration by improving trade rules already covered by the WTO agreements and by including new rules which are not addressed in the WTO agreements.

- The recent trade agreements could possibly serve as stepping stones for multilateral agreements in that they are complementary to the traditional rule-making.

- In addition, many countries have negotiated FTAs to attain deep regional integration by going beyond the traditional trade negotiation issues.

- Specifically, mega FTAs such as the USMCA, CPTPP, EU-Japan FTA, and RCEP are expected to consolidate global value chains which have risen as new platforms for national development strategies.

- Furthermore, the US-EU FTA and US-Japan FTA, if finalized sometime in the future, will strengthen their pivotal roles as the regional hubs in production networks.

III-1. Deeper Regional Integration

- Horn et al. (2010) divided 52 provisions in 279 PTAs notified at the WTO into the two groups of WTO-plus (WTO+) and WTO-extra (WTO-X). The first group represents the 14 provisions which were discussed by the current mandate of the WTO and were upgraded by the PTA partners beyond their multilateral commitments. On the other hand, the second group represents the 38 provisions which were included in the PTA agreements outside the WTO commitments.

<Comparison of Depth of RTAs by Region>
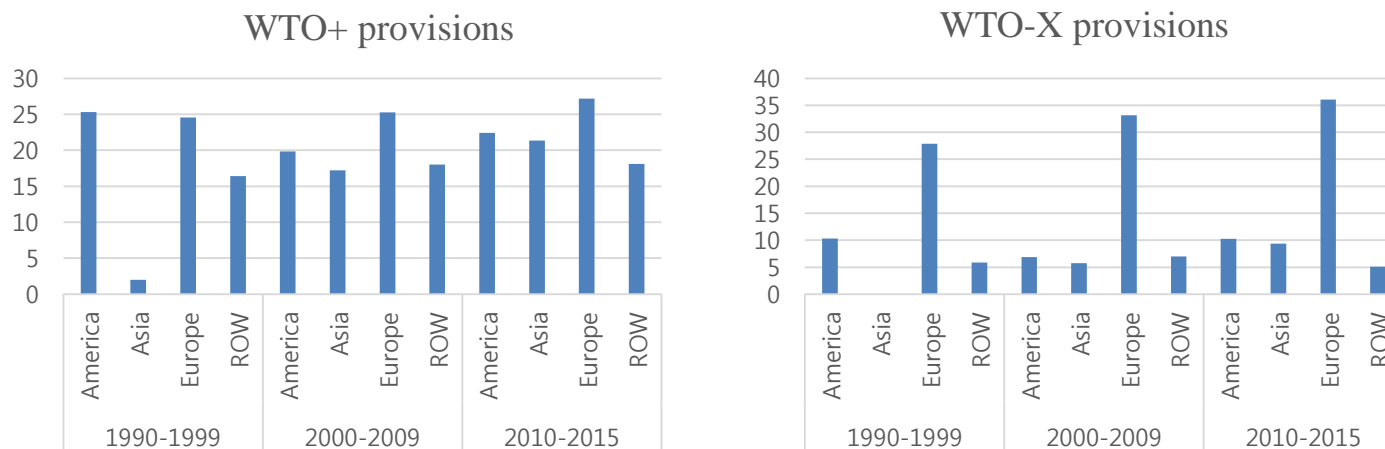
Source: Author's calculation, using the World Bank Database.
Note: Numbers in the table denote the average number of legally enforceable provisions per PTA during the corresponding period

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III-2. Stability and resiliency of production networks

- As Dr. Yamashita pointed out, a country no longer needs to specialise in the production of an entire product, being able instead to focus on some specific and narrow segments where it has a comparative cost advantage.

- But problem is that global value chains may work as a shock transmission channel.

- When a negative shock affects part of the production networks, it will necessarily influence the whole system. Transactions in the Asian production networks need to be more stable and resilient against shocks than other types of transaction (Kimura, 2013). For many enterprises and industries, ensuring resilient and reliable supply chain connectivity is critical to the flow for goods and services and hence trade (Goh, 2013).

- Example: the East Japanese earthquake and the massive flooding in Thailand

III-3. NTM Transparency and NTM Streamlining

- Dr. Yamashita observed the negative impacts of NTMs in the backward GVC participation in the electronics and transport equipment industries. His findings also suggest that removal of NTMs can further enhance GVC trade flows for East Asian economies

- According to Ing and Cadot (2016), ATIGA(ASEAN Trade in Goods Agreement)'s ROO have substantial trade-inhibiting effects, with recent research putting their ad-valorem equivalent (AVE) at about 3.40%. This means that ROO inhibit ASEAN's trade by an amount roughly equivalent to one quarter of its MFN tariffs.

- Therefore, it would be desirable to review the 'noodle bowl' of ROO and formulate recommendations for its streamlining and to create an institutional mechanism to foster NTM transparency through continuous NTM data collection and dissemination (Ing, 2017).

Thank you !