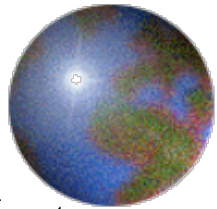




Technical Workshop on Value Chain Development for Deeper Integration of FEALAC: Asian perspective

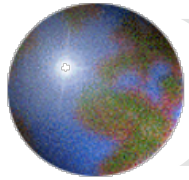
10-11 July 2019, ESCAP UNCC, Bangkok, Thailand



International Production/Distribution Networks in East Asia and FTAs

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1. Introduction

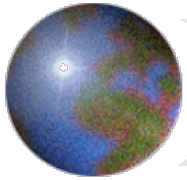
✚ Emergence of int'l production/distribution networks

▣ Int'l division of labor and int'l trade since 1980s

- Separation of production and consumption across borders at the industry level (1st unbundling) => international division of labor at the production process/task level (2nd unbundling)
- From raw materials/final products to parts and components (P&C)

▣ Influence policy implications

- Development strategies, economic integration, avoidance/delay of de-industrialization, robustness of prod. networks etc
- Logics, which are relevant for the 1st unbundling, cannot necessarily be applied anymore (Baldwin, 2016)
 - May not realize the purpose or may bring even the opposite results



Fragmentation theory (Jones and Kierzkowski (1990))

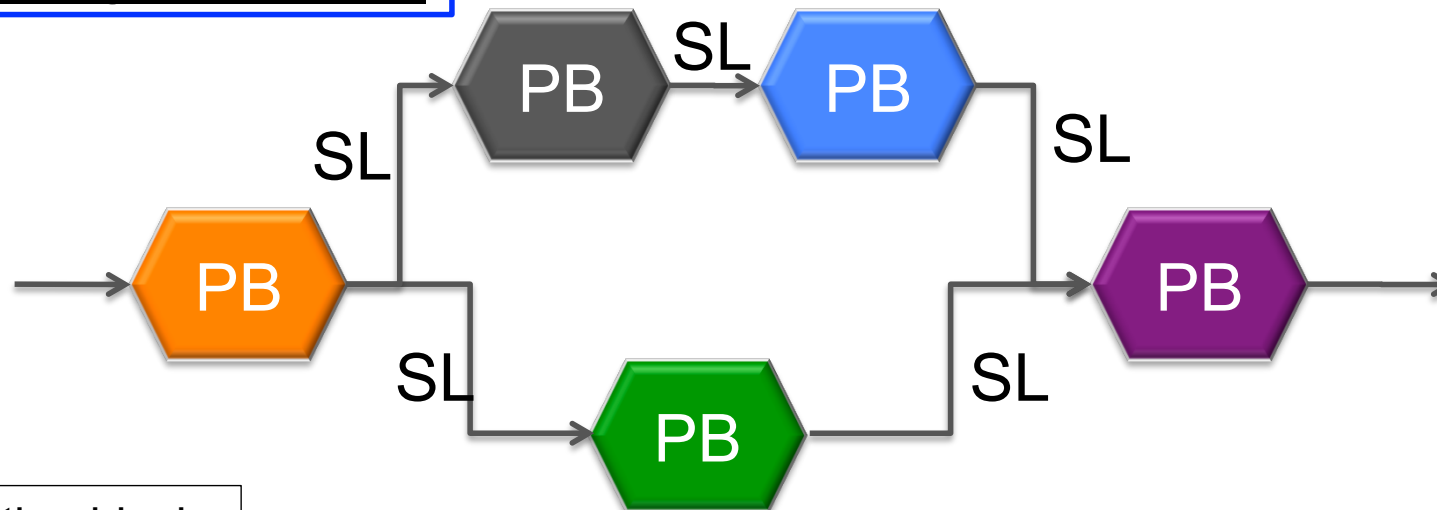
- Key is reduction of production costs at each PB and lowering SL cost

Before fragmentation



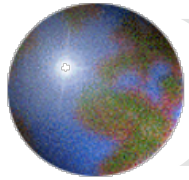
Large integrated factory

After fragmentation



PB: Production block
SL: Service link

Example of SL: transport costs, communication costs, coordination costs, tariffs



1. Introduction (conti.)

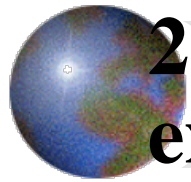
Outline

1. Introduction

2. Development of prod. networks within a region: extent and depth

3. Development of inter-regional production link (link between prod. networks in E.Asia and prod. networks in other regions)

4. FTAs for further activation



2. Development of prod. networks within a region: extent and depth

✚ Development of prod. networks

- ✚ One of the major players: machinery sectors
 - A large number of parts and components (P&C)
- ✚ E.Asia: mainly EX of final products by Japan in 1970s; from one-way trade/trade of final products to back-and-forth transactions of P&C in 1980s-1990s
 - Vertical back-and-forth transactions became active more rapidly
- ✚ High EX P&C ratio: mostly developed countries in the initial 1990s, but currently many E.Asian countries
 - Participation by developing countries in other regions: some in Central and Eastern Europe (CEE), Mexico, Costa Rica

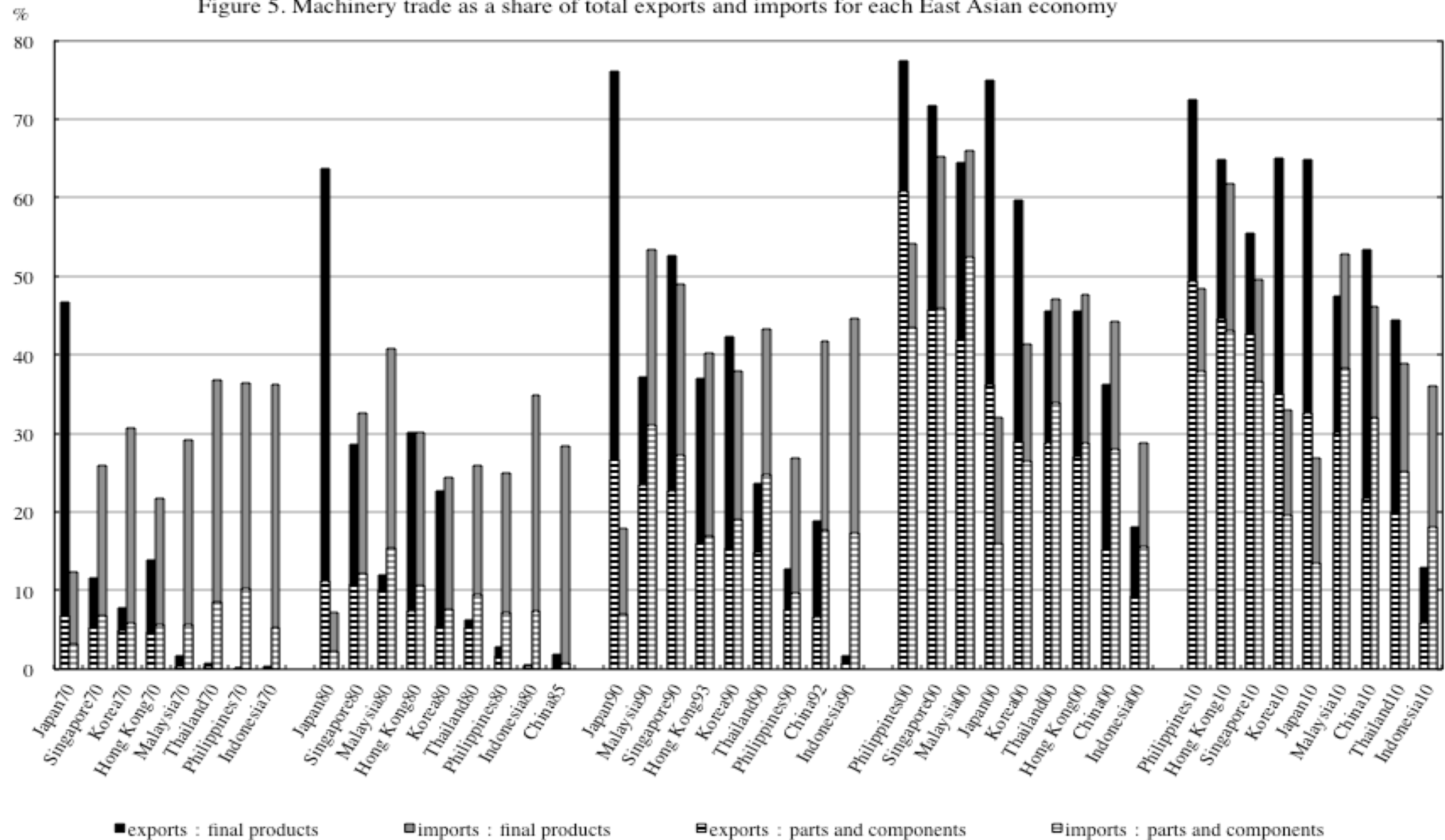
✚ Restructuring and expansion of prod. networks in E.Asia

- ✚ Restructuring among countries already involved the networks
- ✚ Rapidly involving CLMV (particularly Vietnam)
- ✚ Importance of E.Asia as both production/consumption sites



Development of back-and-forth transactions in E.Asia

Figure 5. Machinery trade as a share of total exports and imports for each East Asian economy



Data source: Kimura and Ando (2016).

Note: data for 1970 and 1980 are based on the SITC classification and data for 1990 and 2010 are based on the HS classification (data for 1990 of the Philippines is of the SITC).

Data for China for 1980 is from 1985, and data for China and Hong Kong for 1990 are from 1992 and 1993, respectively.

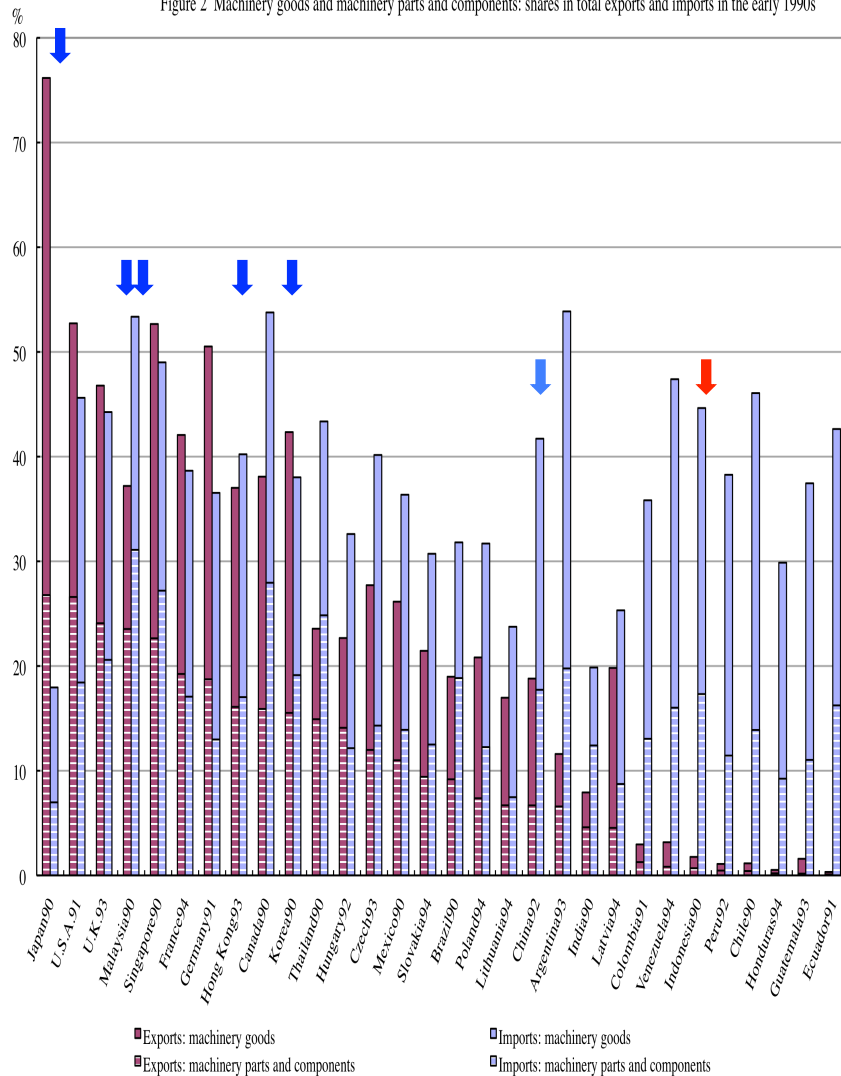


E.Asian countries

From right to left (with relatively high EX P&C ratios)

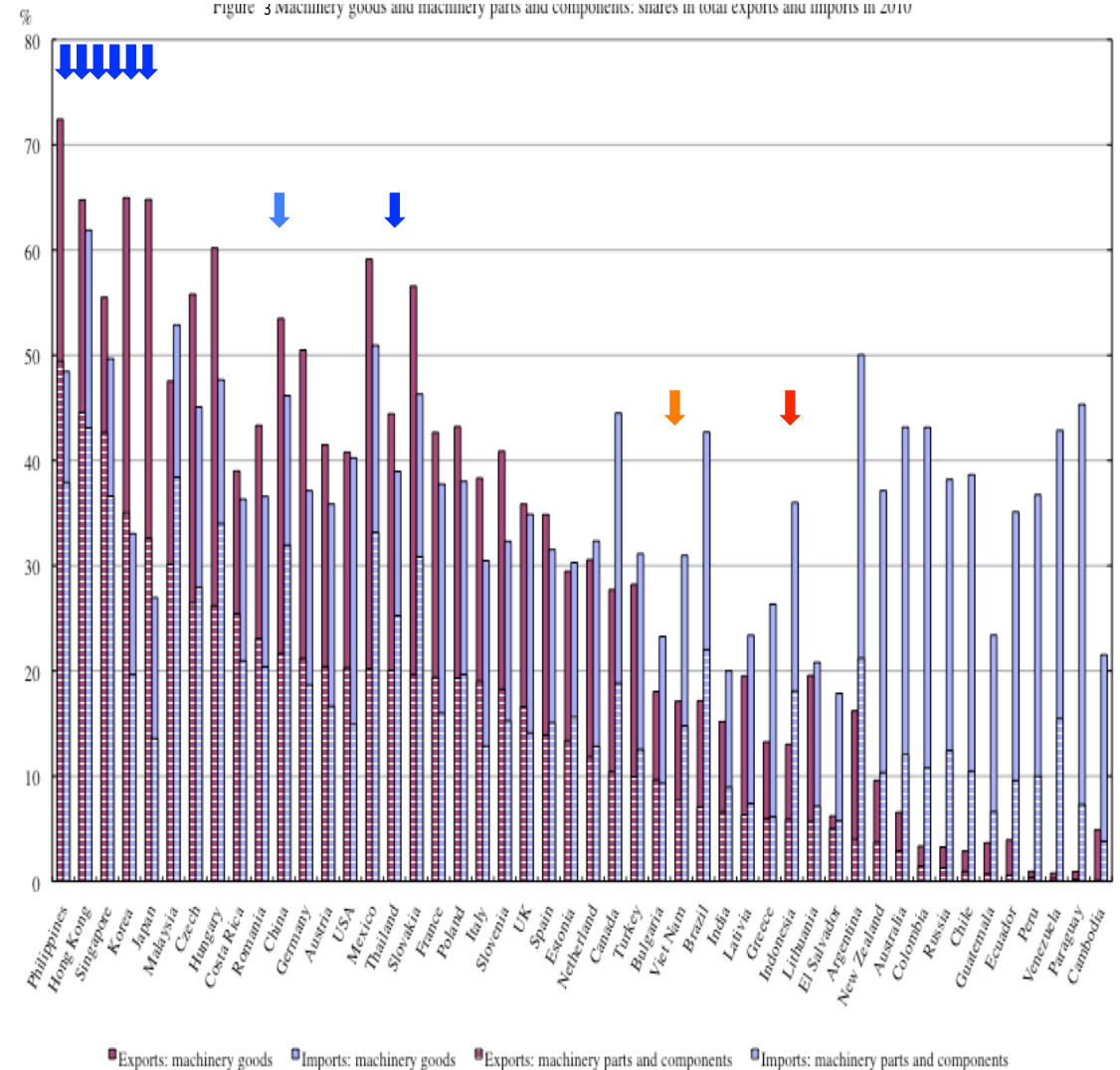
High P&C ratios for both EX and IM (back-and-forth transactions, export-oriented operations)

Figure 2 Machinery goods and machinery parts and components: shares in total exports and imports in the early 1990s

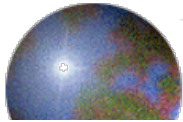


Data: Ando (2006).

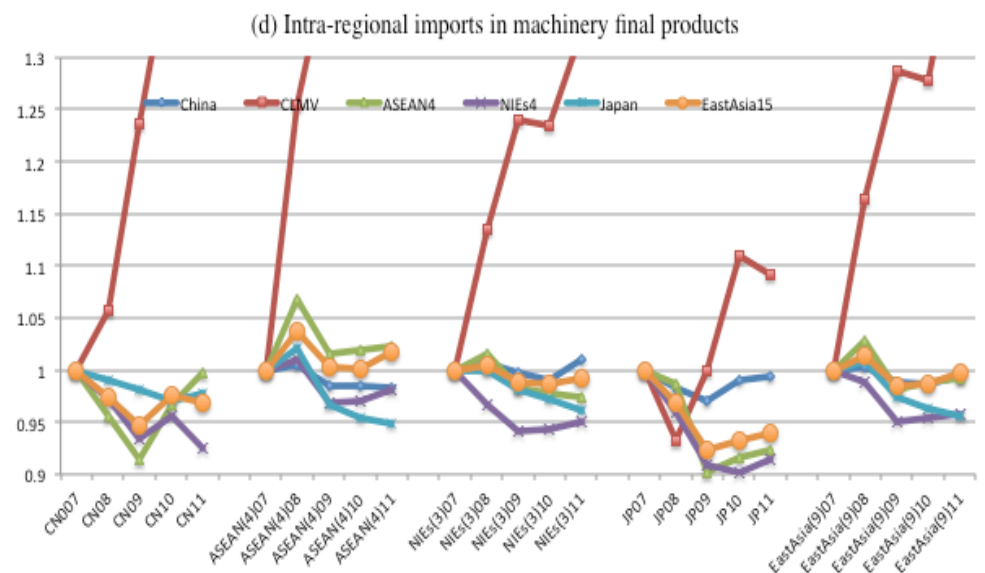
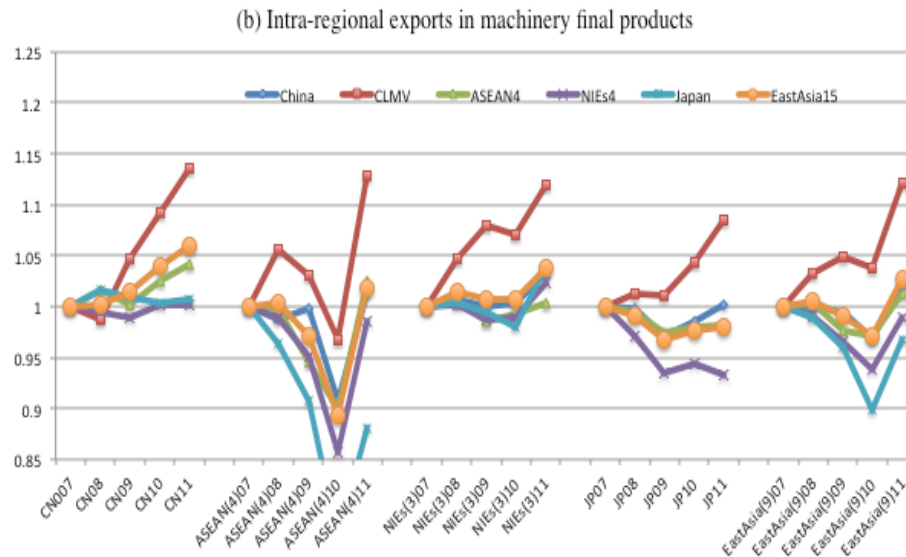
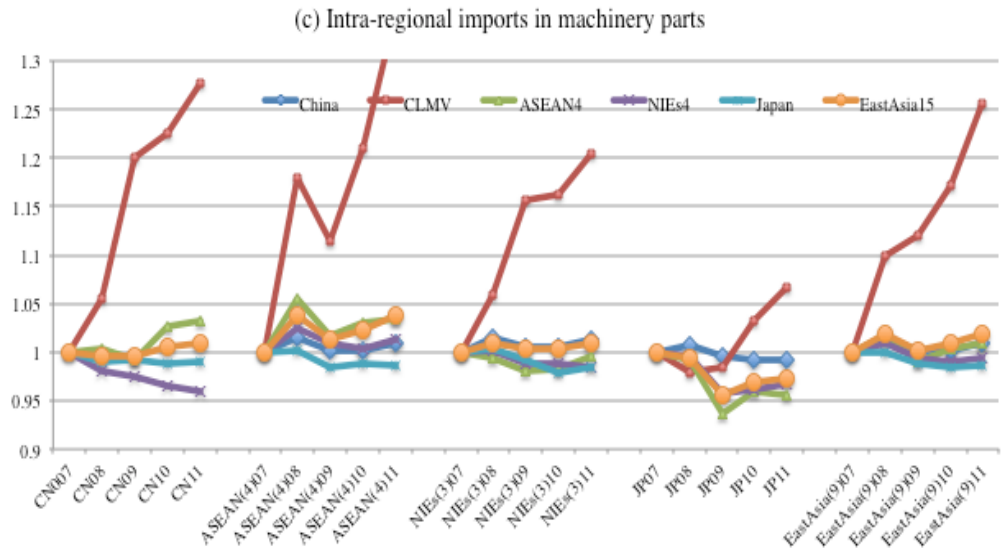
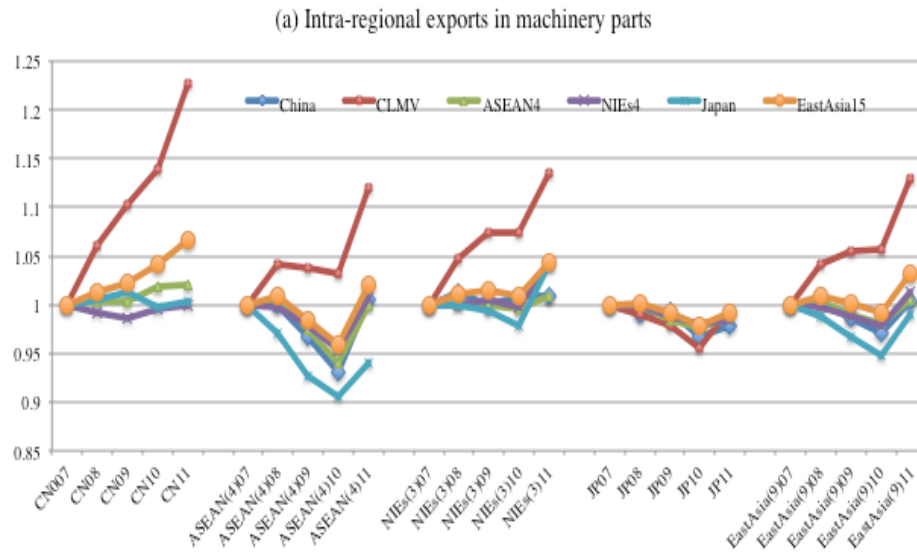
Figure 3 Machinery goods and machinery parts and components: shares in total exports and imports in 2010



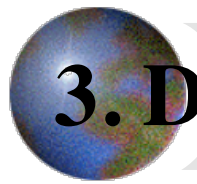
Data: Ando and Kimura (2013).



Participation of CLMV, mainly Vietnam, into prod. networks



Source: Ando (2013). The number of exported/imported product-economy pairs by destinations/origins (2007=1)



3. Development of inter-regional production link

- ✚ P&C trade in general: regional, not global
 - ✚ Timing of procurement, coordination among production blocks, service link cost, connectivity of ICT and logistics, etc

Strengthened prod. link with N.America/Europe

- ✚ Mexico's mach. IM from E. Asia ↑ : from 10% in 1991 to 60% in 2011 for electric P&C (Ando&Kimura, 2014)
 - ✚ Nominal IM values : 130 times
 - ✚ FDI in E.Asia by US firms, FDI in Mexico by Asian (mainly Japanese/Korean) firms, NAFTA, PROSEC etc
 - ✚ E.Asia's share in US total IM: keeping around 50%
 - ✚ **Mexico: a role of bridge to strengthen the production link between US and E.Asia, with creating new transactions**
 - Not only expanding intensive margin but also extensive margin

3. Development of inter-regional production link (conti.)

- CEE's mach. IM from E.Asia ↑ : from 10% in 1995 to 45% in 2010 for electric P&C (Ando&Kimura, 2013)
 - Nominal IM values: 57 times for P&C, 21 times for final
 - E.Asia's share for Poland's IM: 60%
 - FDI in E.Asia by EU firms, FDI in CEE by Asian (mainly Japanese/Korean) firms, expansion of EU, etc
 - CEE: a role of bridge to strengthen the production link between WE and E.Asia, with creating new transactions

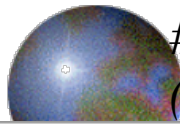
⇒ Prod. networks in E.Asia are important suppliers for prod. networks in N. America/Europe, while two regions remain to be important consumption sites for prod. networks in E.Asia

⇒ Many more countries are involved even beyond the region, and thus changes in trade policies in some countries may significantly influence other countries as well

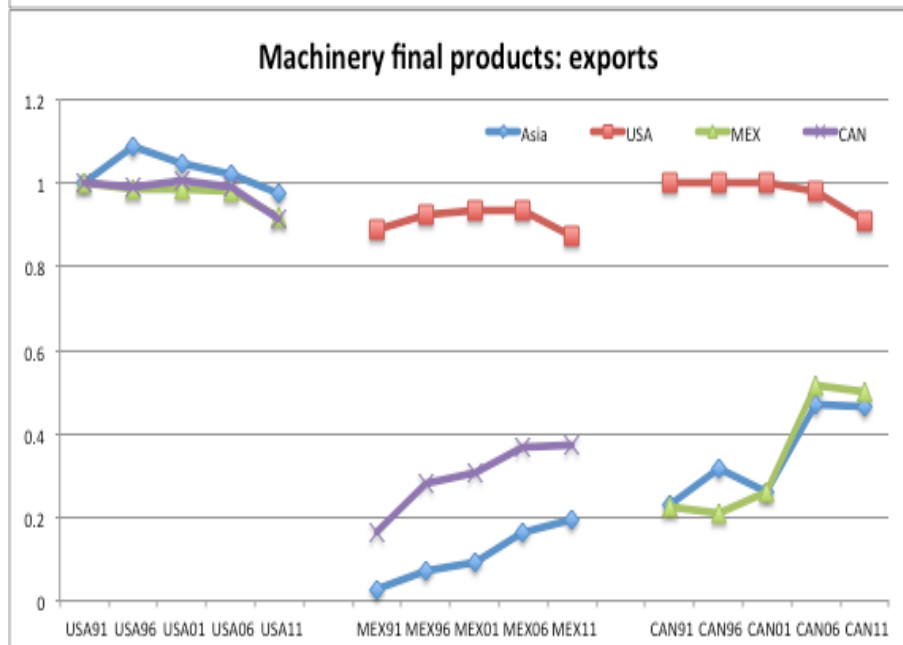
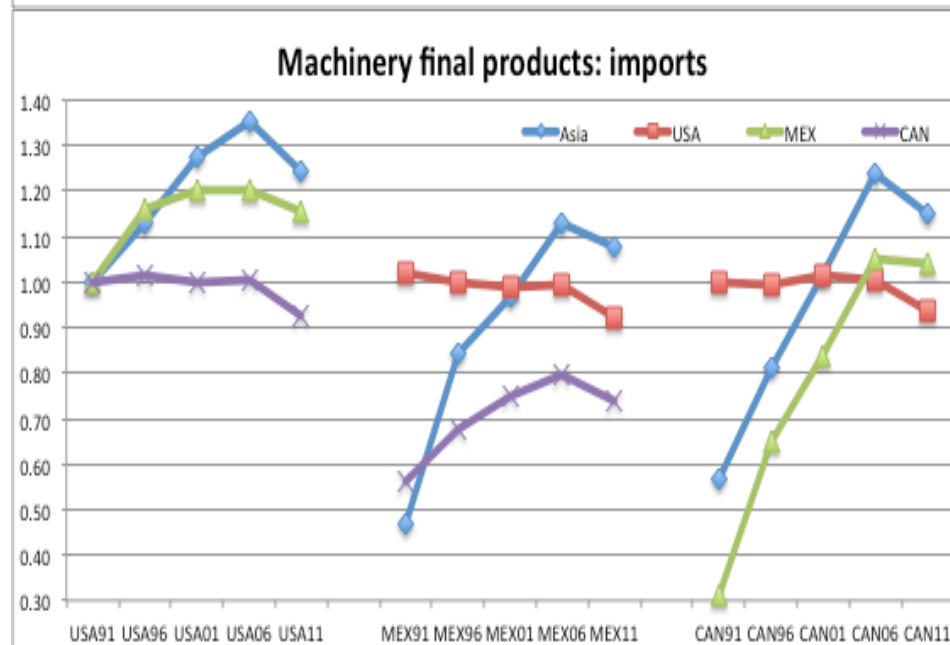
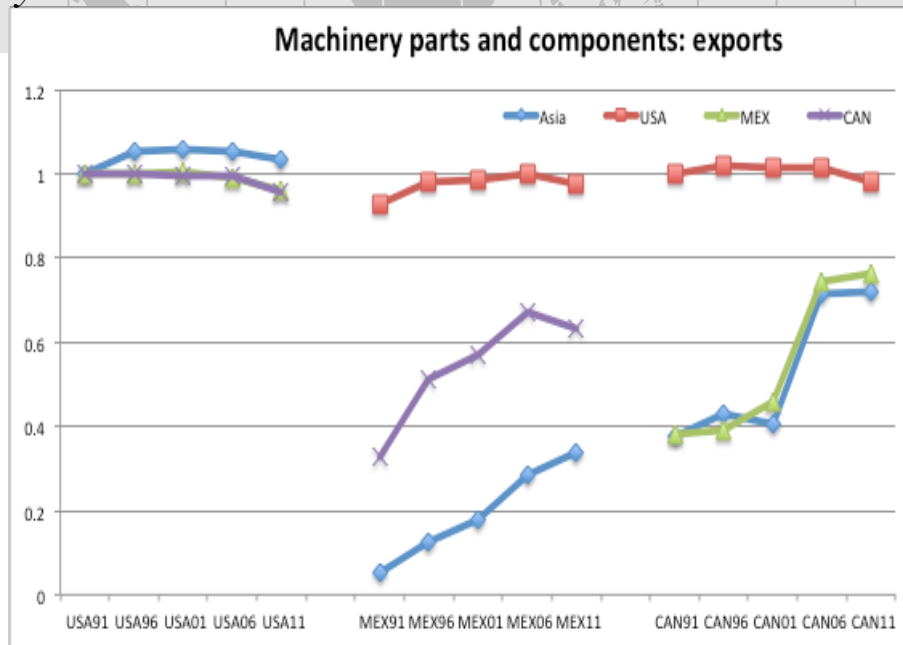
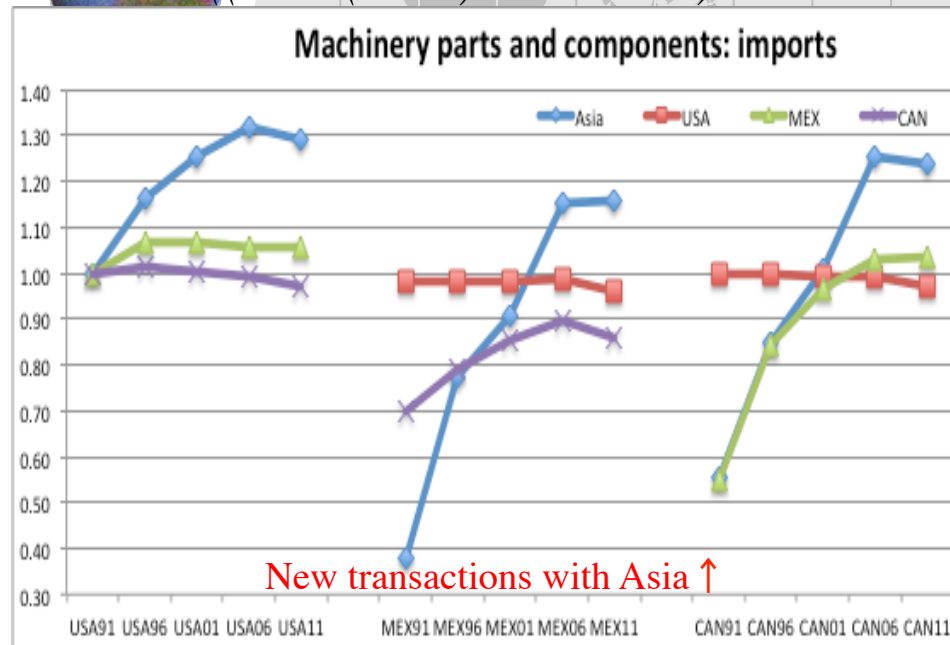
Importance of East Asia for machinery imports by North America

		Year	Origin	US		Origin	Mexico		Origin	Canada			
				Total	Parts		Final	Total		Parts	Final		Total
(b)Electric machinery													
Value (1991=1)	2011	World	4.5	3.3	5.8	World	19.5	29.8	10.7	World	3.3	2.4	5.0
	2011	E. Asia	4.3	3.1	5.3	E. Asia	72.5	179.7	28.5	E. Asia	6.4	6.3	6.4
	2011	Mexico	6.6	4.2	10.2	USA	9.6	13.7	6.2	USA	1.8	1.5	2.4
	2011	Canada	1.7	1.1	3.4	Canada	11.2	11.8	10.4	Mexico	19.6	9.9	36.1
Share in total (%)	1991	E. Asia	60.7	52.4	70.1	E. Asia	15.0	9.5	19.8	E. Asia	20.5	11.2	35.7
	1991	Mexico	13.2	14.9	11.4	USA	55.4	55.3	55.5	USA	59.3	64.5	50.8
	1991	Canada	8.0	11.7	3.9	Canada	1.7	2.0	1.4	Mexico	2.5	2.6	2.5
	2011	E. Asia	57.7	49.5	63.0	E. Asia	55.9	57.1	53.0	E. Asia	39.0	30.2	46.0
	2011	Mexico	19.5	18.8	19.9	USA	27.4	25.4	32.3	USA	31.8	41.8	24.0
	2011	Canada	2.9	3.9	2.3	Canada	1.0	0.8	1.4	Mexico	14.9	10.8	18.0
(c) Transport equipment													
Value (1991=1)	2011	World	2.8	3.3	2.6	World	16.5	29.5	9.5	World	2.8	2.3	3.1
	2011	E. Asia	2.1	3.4	1.7	E. Asia	65.5	145.5	35.2	E. Asia	2.3	4.2	1.8
	2011	Mexico	10.8	9.8	11.3	USA	14.3	26.6	7.2	USA	2.5	1.9	3.0
	2011	Canada	2.0	1.7	2.0	Canada	42.6	62.5	31.9	Mexico	6.4	4.0	8.1
Share in total (%)	1991	E. Asia	39.8	34.2	41.6	E. Asia	4.8	3.8	5.4	E. Asia	15.1	7.1	20.6
	1991	Mexico	5.2	7.5	4.5	USA	65.3	68.2	63.7	USA	71.7	82.3	64.4
	1991	Canada	34.3	31.4	35.2	Canada	2.2	2.2	2.2	Mexico	4.1	4.2	4.0
	2011	E. Asia	29.7	35.2	27.6	E. Asia	19.2	18.7	20.1	E. Asia	12.4	13.3	12.0
	2011	Mexico	20.3	22.3	19.5	USA	56.5	61.6	48.0	USA	65.1	69.2	63.1
	2011	Canada	24.2	16.6	27.3	Canada	5.7	4.6	7.4	Mexico	9.5	7.4	10.5

Source: Ando and Kimura (2014).



of product-country pairs for each N. American country from 1991 to 2011
((USA (CAN) in 1991=1): all machinery sectors





Importance of East Asia for machinery imports by CEE

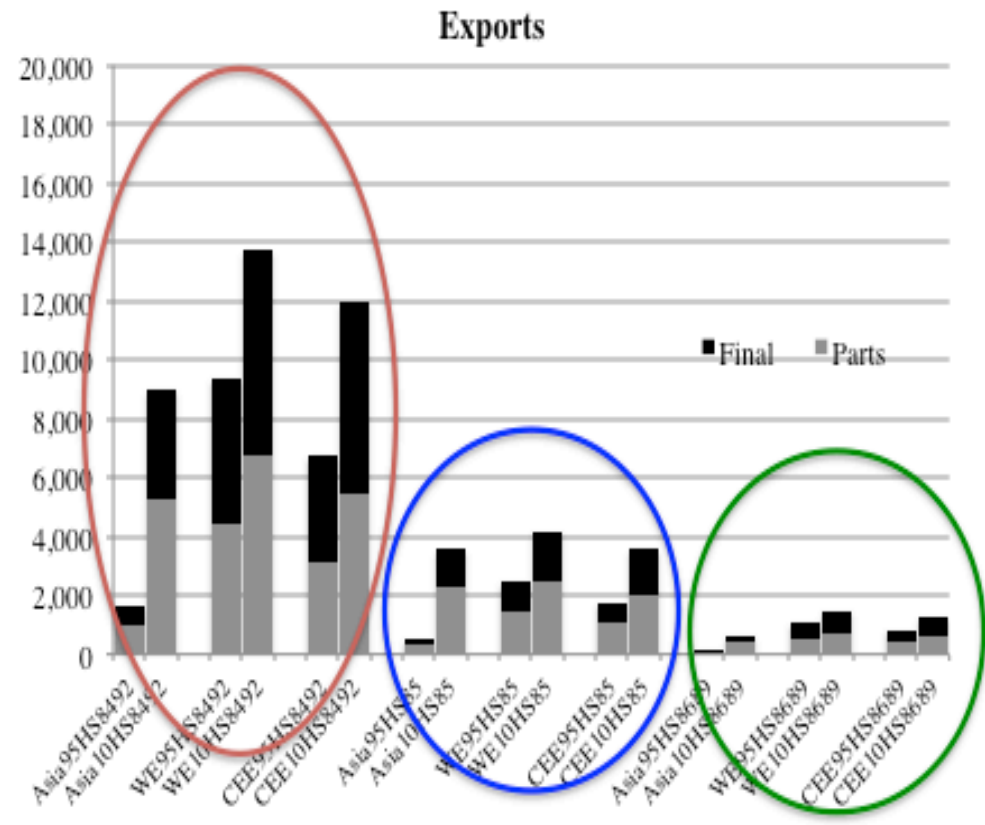
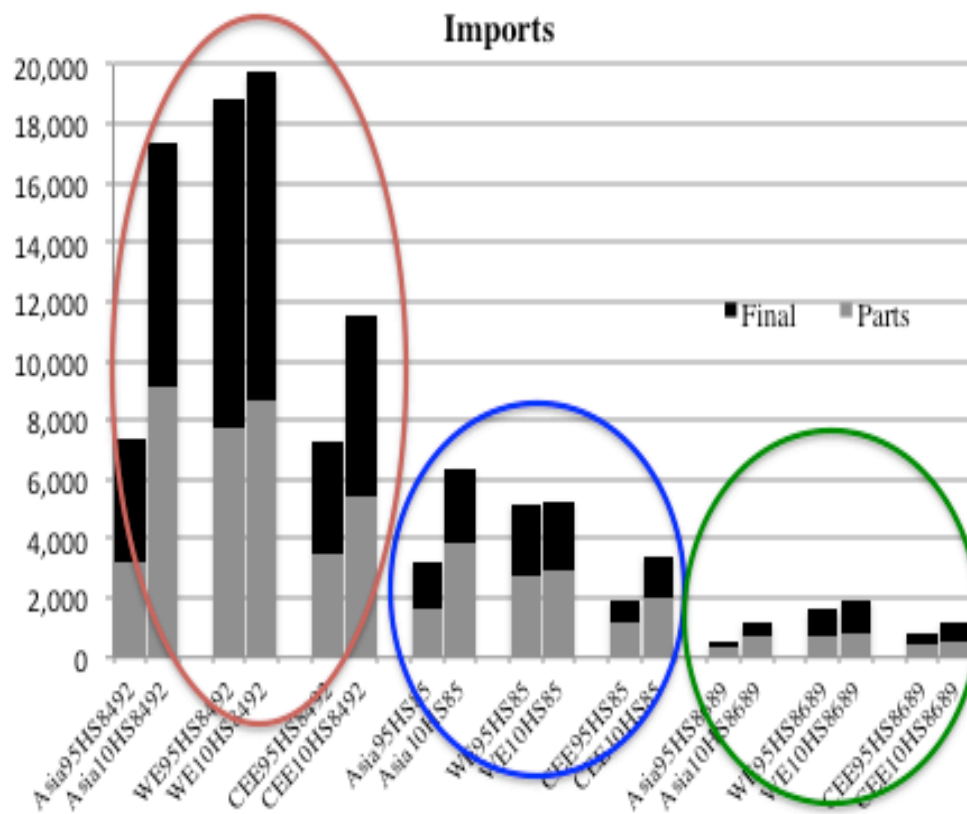
		Origin	CEE5			Czech	Hungary	Poland	Romania	Slovakia
			Total	Parts	Final					
Parts										
(b)Electric machinery										
Value (1995=1)	2010 World	11.3	12.1	9.8	8.4	16.9	9.6	12.9	24.6	
	2010 E.Asia	38.8	56.9	21.3	50.8	112.6	54.4	7.5	210.6	
	2010 W.Europe	5.4	5.9	4.2	3.6	8.0	4.1	11.9	13.4	
	2010 CEE	24.5	18.5	36.1	12.2	47.9	35.1	100.3	6.6	
Share in total (%)	1995 E.Asia	12.6	9.5	18.1	6.7	6.9	11.2	25.3	5.2	
	1995 W.Europe	55.8	61.4	45.6	70.9	66.1	52.5	51.9	44.1	
	1995 CEE	5.3	5.4	5.1	5.7	2.0	1.7	2.7	30.8	
	2010 E.Asia	43.2	44.9	39.5	40.8	45.8	63.4	14.7	44.1	
	2010 W.Europe	26.8	29.9	19.8	30.4	31.4	22.6	47.9	24.1	
	2010 CEE	11.5	8.3	18.7	8.3	5.6	6.1	21.0	8.3	
(c) Transport equipment										
Value (1995=1)	2010 World	8.4	12.2	6.4	11.2	13.8	7.3	26.6	35.3	
	2010 E.Asia	7.6	45.3	3.4	57.6	9.0	33.2	25.0	508.4	
	2010 W.Europe	7.7	12.4	5.2	11.4	14.2	7.7	25.7	57.1	
	2010 CEE	10.0	10.0	9.9	6.7	28.9	6.3	62.1	13.3	
Share in total (%)	1995 E.Asia	10.0	3.0	13.7	2.2	9.0	2.2	4.3	1.3	
	1995 W.Europe	57.5	59.4	56.5	59.6	67.8	62.0	59.6	30.5	
	1995 CEE	11.1	18.5	7.3	27.2	7.2	10.6	6.8	56.0	
	2010 E.Asia	9.0	11.0	7.1	11.2	5.8	9.9	4.0	18.1	
	2010 W.Europe	52.8	60.4	45.5	60.6	69.6	65.7	57.7	49.3	
	2010 CEE	13.1	15.2	11.1	16.4	15.0	9.2	15.8	21.0	

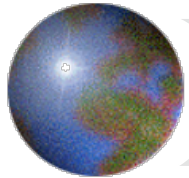
Source: Ando and Kimura (2013).



A greater variety of product-country pairs of mach. IM from WE and E.Asia, with more restricted # of EX => Use of imported key P&C and final to produce exports to more restricted destinations

✿ Rapid growth in # for E.Asia => growth in value by an increase in both intensive and extensive margins, parti. in electric machinery





4. FTAs for further activation

📍 FTAs are one of the tools for further activation

📍 Beyond simple tariff removal is expected

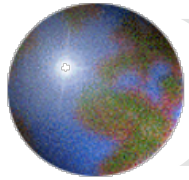
- Deeper integration including liberalization in services trade and investment and trade and investment facilitation and construction of int'l rules such as IPRs, competition, and standards

📍 Tariff reduction under FTAs: ROO must be satisfied

📍 The restrictiveness of ROO (CTC/VA rules etc)

📍 Ando and Urata (2018) analyze the impacts of restrictiveness of ROO in Japan's FTAs on the FTA utilization for imports

- They emphasize that it is crucial to construct user-friendly ROO or to provide services to promote FTA utilization



4. FTAs for further activation (conti.)

❖ Their major results

- Restrictive ROOs lower the FTA utilization rate, while larger preferential margins (gap between preferential and MFN tariffs) raise it
 - The effects of ROOs differ by type of ROO
 - Negative effects: “change-in-tariff classification (CTC) and value-added (VA) rules”, which require satisfying both CTC and VA rules, >> the simple “CTC rule” or the selective “CTC or VA rule”
 - Negative effects: $CTC \& VA > CTC/VA$ (i.e., CC, CH, and CS)
 - Negative effects: among CTC rules, “change-in-chapter (CC) rule” >> “change-in-heading (CH) rule”
 - MFN tariffs (control): negative, NTMs: negative for NTM-E (licensing, quota, and other quantitative restrictions)
- => traditional trade measures tend to lower the FTA utilization rate