



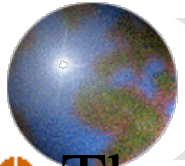
*Trade and Investment for Tomorrow:
Promoting Asia-Pacific Regional Integration*

*ARTNeT RESEARCH WORKSHOP
10-12 December 2013
Macao, China*



Evolution of Machinery Production Networks in East Asia: Linkage of North America and Europe

Mitsuyo Ando
(Keio University, Japan)



1. Introduction

✚ The 2nd unbundling or int'l division of labor at prod. processes/tasks (Baldwin, 2011)

✚ Geo. distance and the quality of logistics links

- Global value chains, value added trade
 - Right timing of procurement, subtle coordination among PBs, other SL costs, with tight information and ICT connectivity and reliable logistics connectivity

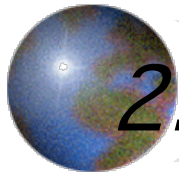
✚ 3 centers of machinery prod. networks: E. Asia, North America, and WE-CEE

- Change in the extent and depth of prod. networks within E. Asia parti. after the GFC

✚ Expanding connectivity of production bet. E.Asia and North America / Europe

- The increasing dominance of E. Asia for their production
 - Advanced industrial agglomeration on the developing

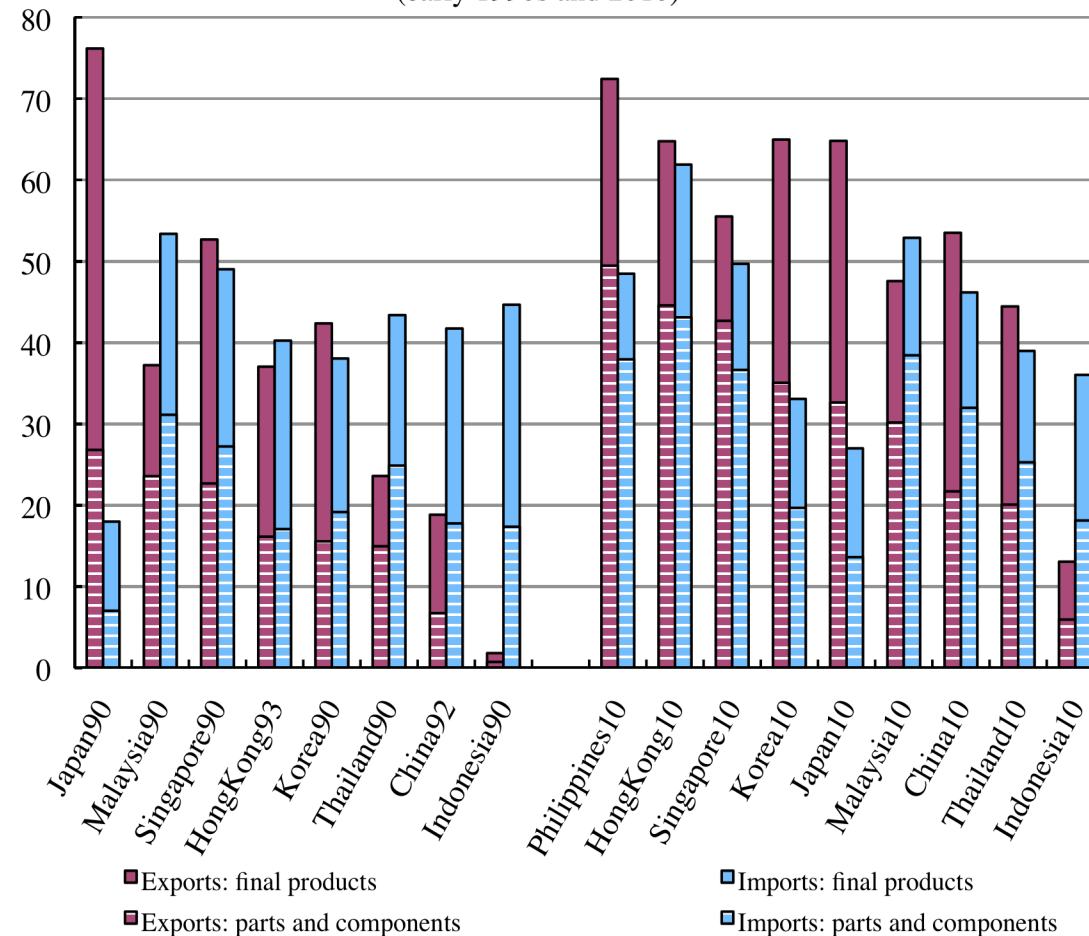
Dec 11 2013 countries' side with short-distance arm's length transactions



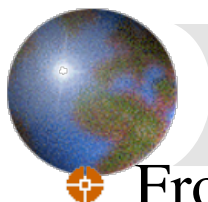
2. *Prod. networks in E. Asia: trade value*

- ✚ Significance of machinery trade with active back-and-forth transactions of P&C

Figure 1: Machinery trade in East Asia: shares in total exports/imports
(early 1990s and 2010)



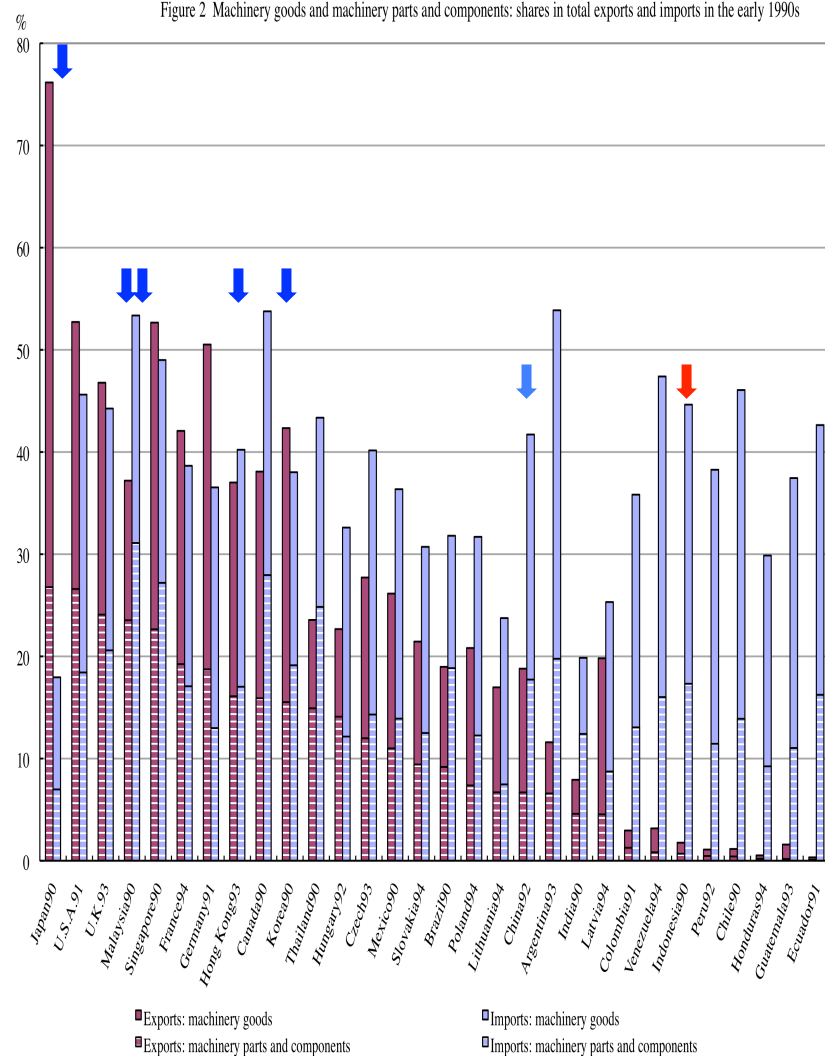
Data: Ando (2006) and Ando and Kimura (2013).



From right to left (early 1990s, 1995, 2010)

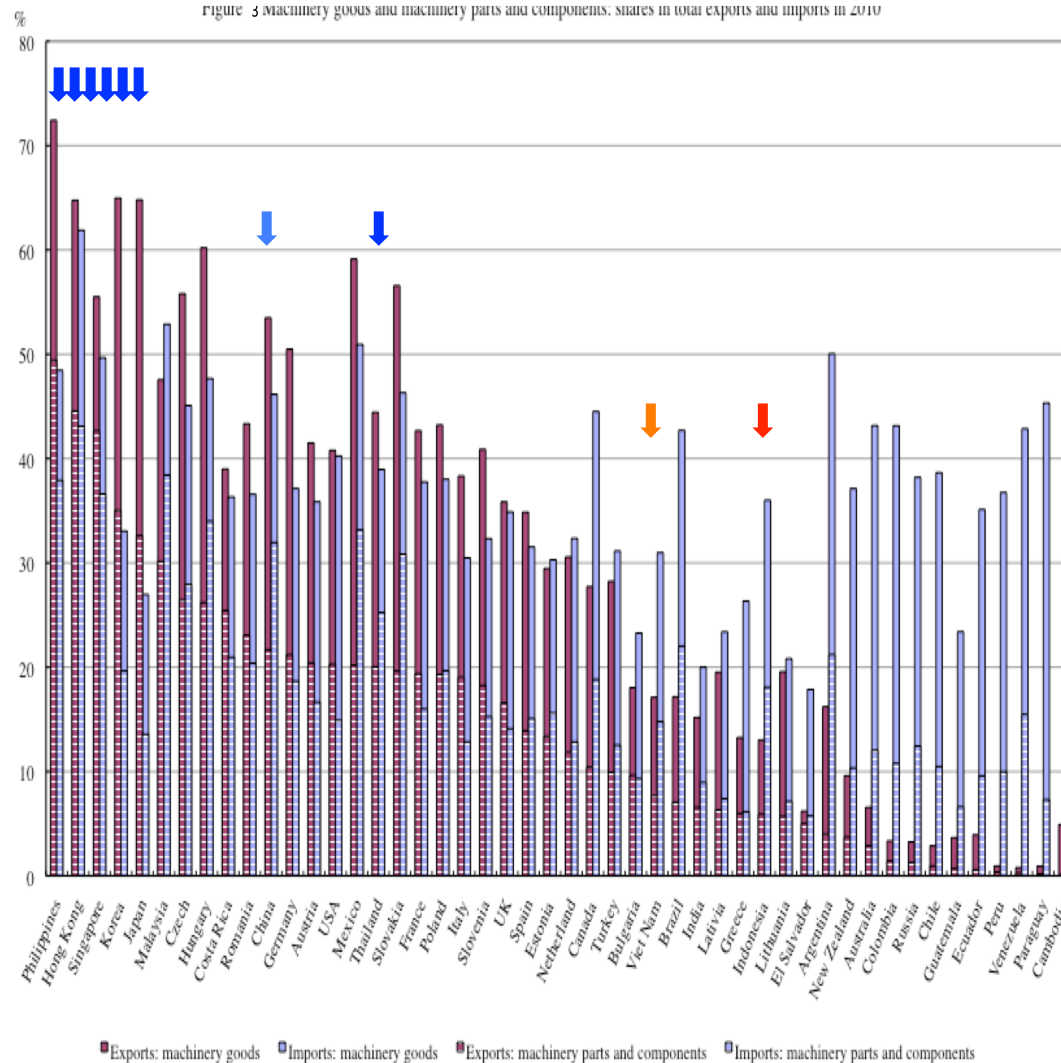
Different timing (PHL, SIG, MAL, KOR, THA, HKG; CHN; IND; VNM)

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).



Almost no decline at the annual level after GFC: resiliency

Increasing importance as the market for final products

Table 2: Intra-regional trade of East Asia 9: value and share

Destination/origin	Exports					Imports				
	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011

(b) Machinery parts and components
Value (nominal): 2007=1

World	1.00	1.06	0.94	1.19	1.31	1.00	1.05	0.91	1.19	1.27
EastAsia15	1.00	1.04	0.95	1.19	1.30	1.00	1.04	0.90	1.22	1.28

Share: World=100

World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
EastAsia15	63.9	62.4	65.1	64.0	63.5	69.9	69.3	69.3	71.3	70.7
China	20.9	20.9	23.6	22.0	22.8	14.2	15.1	15.3	15.1	15.7
CLMV	0.7	0.9	1.1	1.1	1.3	0.3	0.4	0.4	0.5	0.6
ASEAN4	10.5	10.3	9.7	9.8	9.3	12.5	11.7	11.1	11.9	11.2
ASEAN5	11.1	11.1	10.6	10.8	10.5	12.8	12.1	11.5	12.4	11.8
ASEAN10	15.7	15.1	14.8	15.0	14.1	17.2	16.7	16.4	17.1	16.4
NIEs4	26.2	24.7	25.6	26.3	25.2	28.2	27.0	27.9	28.7	28.2
Japan	5.7	5.6	5.1	4.8	4.8	14.7	15.1	14.6	15.1	15.0

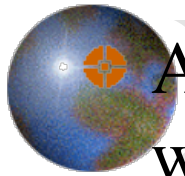
(c) Machinery final products
Value (nominal): 2007=1

World	1.00	1.11	0.91	1.16	1.29	1.00	1.11	0.99	1.28	1.54
EastAsia15	1.00	1.12	0.99	1.32	1.52	1.00	1.12	0.97	1.29	1.51

Share: World=100

World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
EastAsia15	30.4	30.6	33.3	34.7	35.8	58.7	59.0	57.2	59.0	57.8
China	6.2	6.2	6.6	7.4	7.5	23.4	23.1	24.5	25.3	25.5
CLMV	0.9	1.1	1.3	1.3	1.5	0.3	1.3	0.5	0.5	0.7
ASEAN4	4.6	5.0	5.1	5.5	5.7	9.9	10.2	9.9	10.0	9.1
ASEAN5	5.2	5.8	6.1	6.4	6.7	10.2	10.6	10.4	10.5	9.7
ASEAN10	8.4	9.1	9.9	9.6	10.2	13.3	14.5	13.8	13.2	12.6
NIEs4	14.6	14.3	15.6	15.8	16.2	11.4	10.7	10.4	10.0	10.6
Japan	4.2	4.1	4.7	4.7	4.8	13.6	13.7	11.8	13.2	12.0

Data: Ando (2013).



A possible change in the composition of trading P&C within the region: CN, CLMV (mainly VN)

Table 2: Intra-regional trade of East Asia 9: value and share

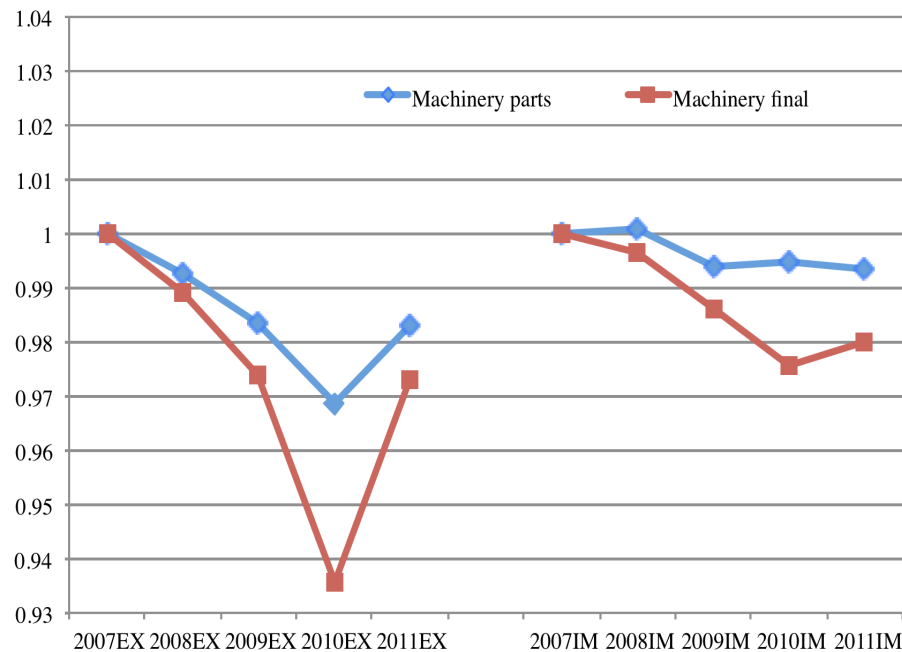
Destination/origin	Exports					Imports				
	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
(b) Machinery parts and components										
Value (nominal): 2007=1										
World	1.00	1.06	0.94	1.19	1.31	1.00	1.05	0.91	1.19	1.27
EastAsia15	1.00	1.04	0.95	1.19	1.30	1.00	1.04	0.90	1.22	1.28
Share: World=100										
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
EastAsia15	63.9	62.4	65.1	64.0	63.5	69.9	69.3	69.3	71.3	70.7
China	20.9	20.9	23.6	22.0	22.8	14.2	15.1	15.3	15.1	15.7
CLMV	0.7	0.9	1.1	1.1	1.3	0.3	0.4	0.4	0.5	0.6
ASEAN4	10.5	10.3	9.7	9.8	9.3	12.5	11.7	11.1	11.9	11.2
ASEAN5	11.1	11.1	10.6	10.8	10.5	12.8	12.1	11.5	12.4	11.8
ASEAN10	15.7	15.1	14.8	15.0	14.1	17.2	16.7	16.4	17.1	16.4
NIEs4	26.2	24.7	25.6	26.3	25.2	28.2	27.0	27.9	28.7	28.2
Japan	5.7	5.6	5.1	4.8	4.8	14.7	15.1	14.6	15.1	15.0
(c) Machinery final products										
Value (nominal): 2007=1										
World	1.00	1.11	0.91	1.16	1.29	1.00	1.11	0.99	1.28	1.54
EastAsia15	1.00	1.12	0.99	1.32	1.52	1.00	1.12	0.97	1.29	1.51
Share: World=100										
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
EastAsia15	30.4	30.6	33.3	34.7	35.8	58.7	59.0	57.2	59.0	57.8
China	6.2	6.2	6.6	7.4	7.5	23.4	23.1	24.5	25.3	25.5
CLMV	0.9	1.1	1.3	1.3	1.5	0.3	1.3	0.5	0.5	0.7
ASEAN4	4.6	5.0	5.1	5.5	5.7	9.9	10.2	9.9	10.0	9.1
ASEAN5	5.2	5.8	6.1	6.4	6.7	10.2	10.6	10.4	10.5	9.7
ASEAN10	8.4	9.1	9.9	9.6	10.2	13.3	14.5	13.8	13.2	12.6
NIEs4	14.6	14.3	15.6	15.8	16.2	11.4	10.7	10.4	10.0	10.6
Japan	4.2	4.1	4.7	4.7	4.8	13.6	13.7	11.8	13.2	12.0

Data: Ando (2013).

2. Prod. networks in E. Asia: extensive margins

✚ # of products exported to the world ↓ , but # of exported product-country pairs within the region ↑
 => New trade relationships within the region!

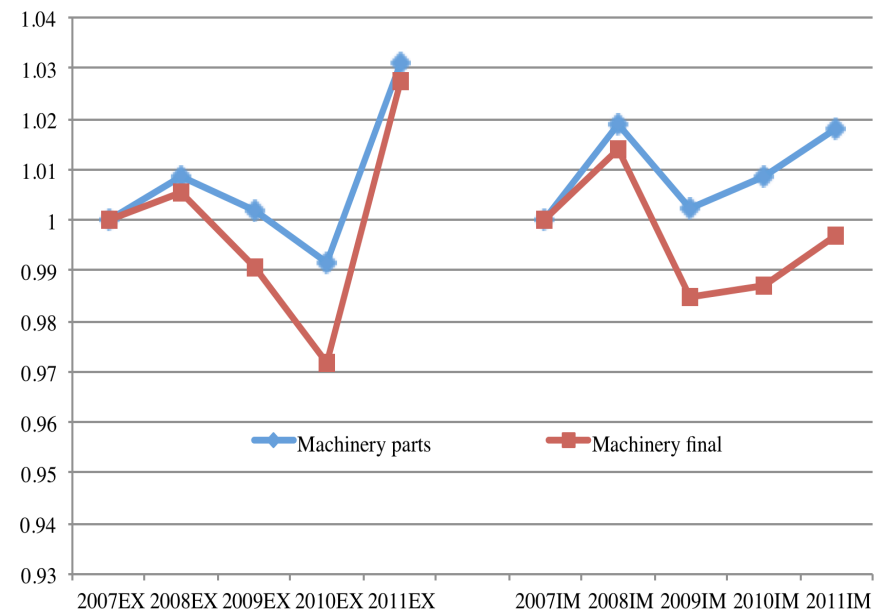
Figure 4: The number of products traded with the world for East Asia 9 (2007=1)



Data: Ando (2013).

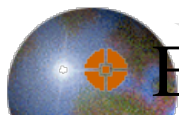
Note: the number of products traded with the world is at HS 6 digit level, regardless of partner countries.

Figure 5: The number of exported/imported product-country pairs for intra-regional trade: East Asian 9 (2007=1)



Data: Ando (2013).

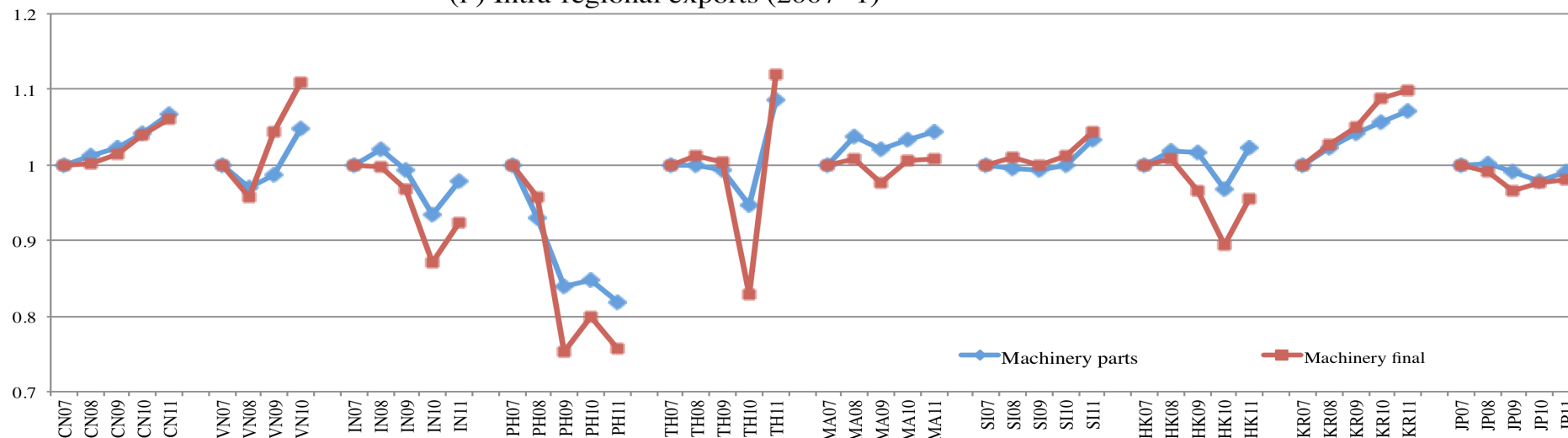
Note: intra-regional trading partners are East Asia 15.



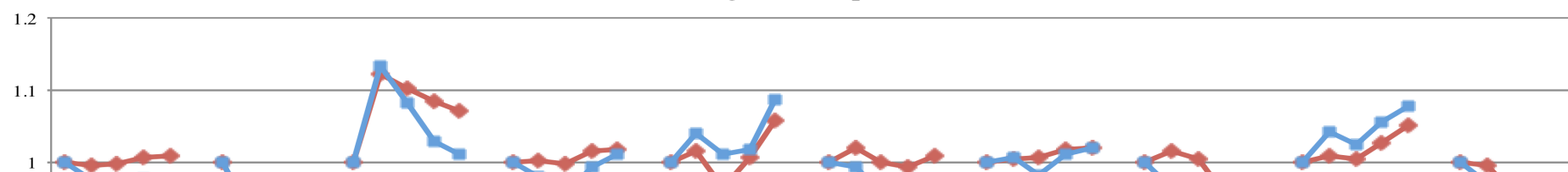
E.g. CN ↑, KR ↑ ↑, VN ↑ ↓, PH ↓

Figure 6: The number of product-country pairs for intra-regional machinery trade

(i) Intra-regional exports (2007=1)



(ii) Intra-regional imports (2007=1)



预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_5890

