



ASIAN DEVELOPMENT
OUTLOOK 2014
UPDATE

ASIA IN GLOBAL VALUE CHAINS

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ASIAN DEVELOPMENT BANK



ADB

Today's presentation

1. Asia's rise in GVCs
2. Benefits and risks associated with GVC participation
3. Overcoming limited access to GVCs

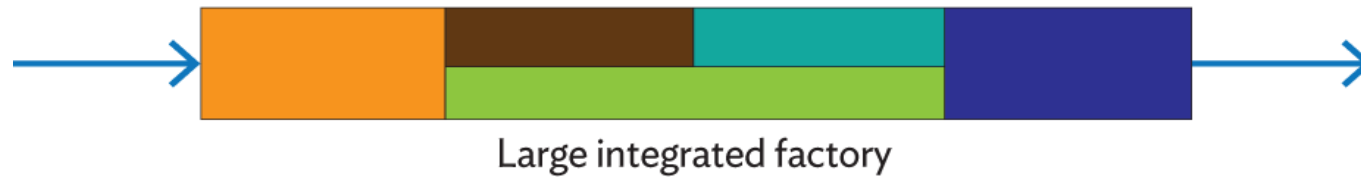


1. Asia's rise in GVCs

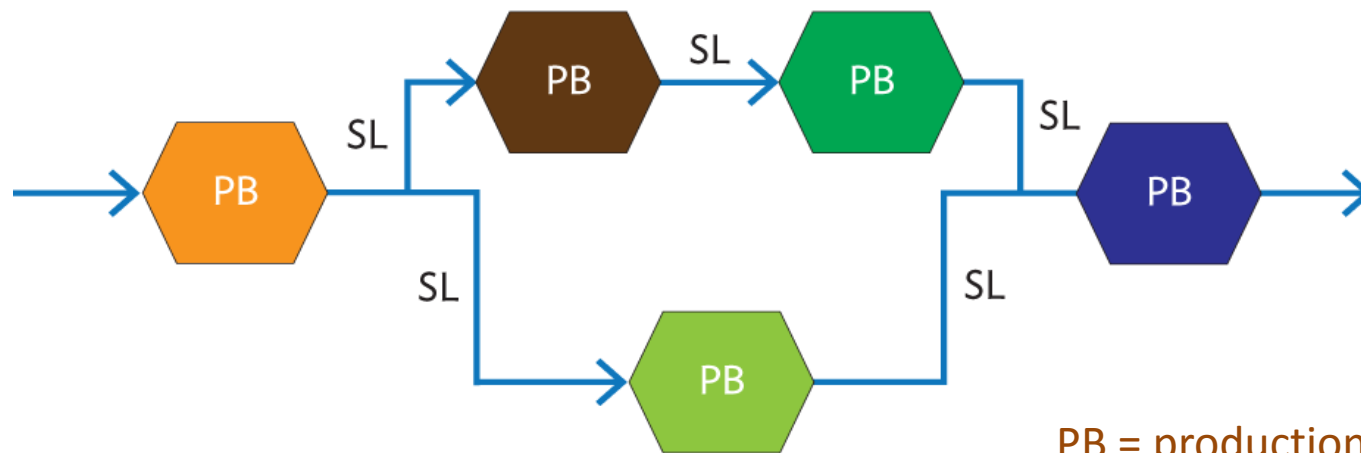


Falling trade costs and the ICT revolution spurred cross-border production networks...

Before fragmentation



After fragmentation

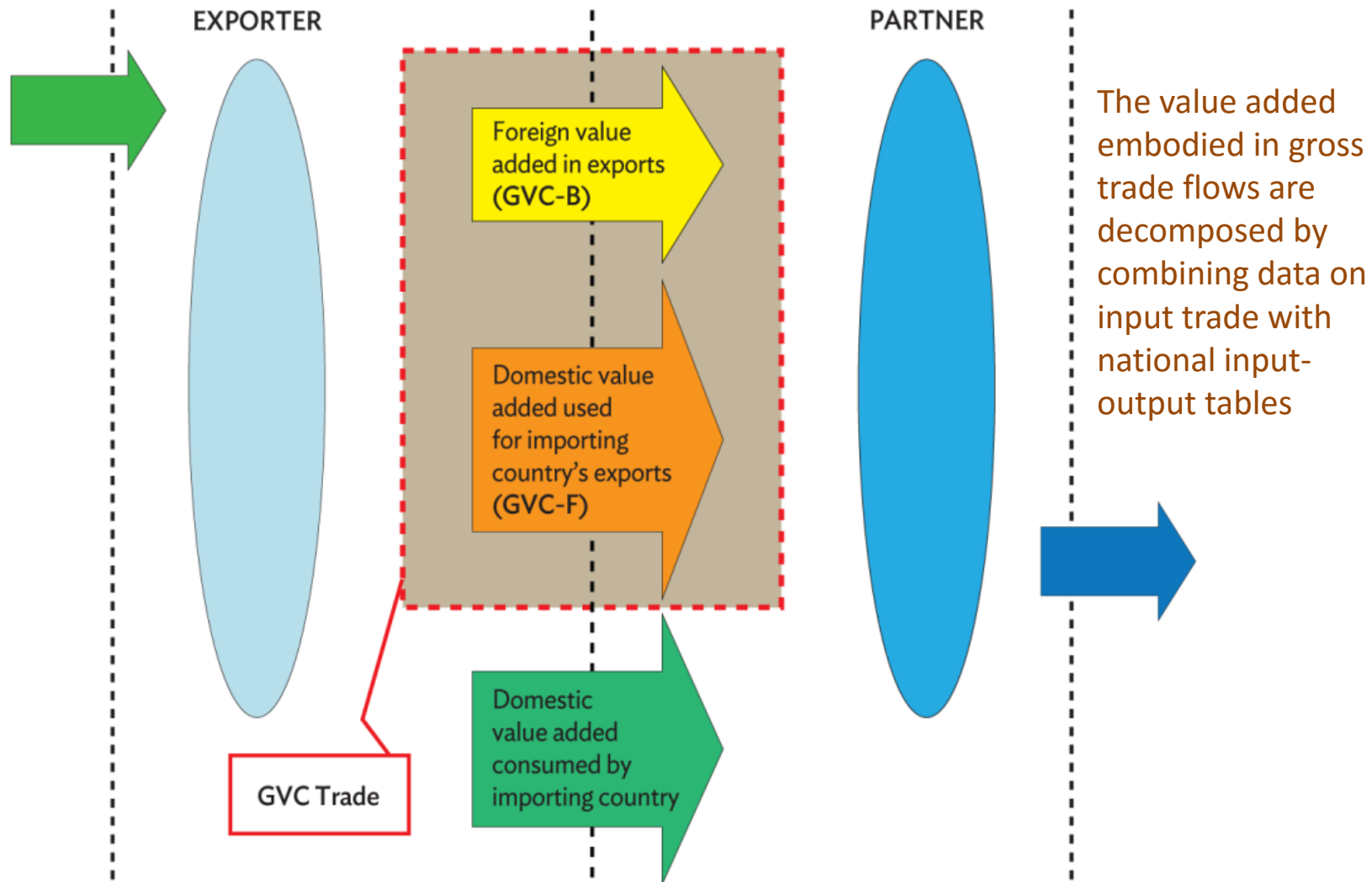


PB = production block
SL = service link

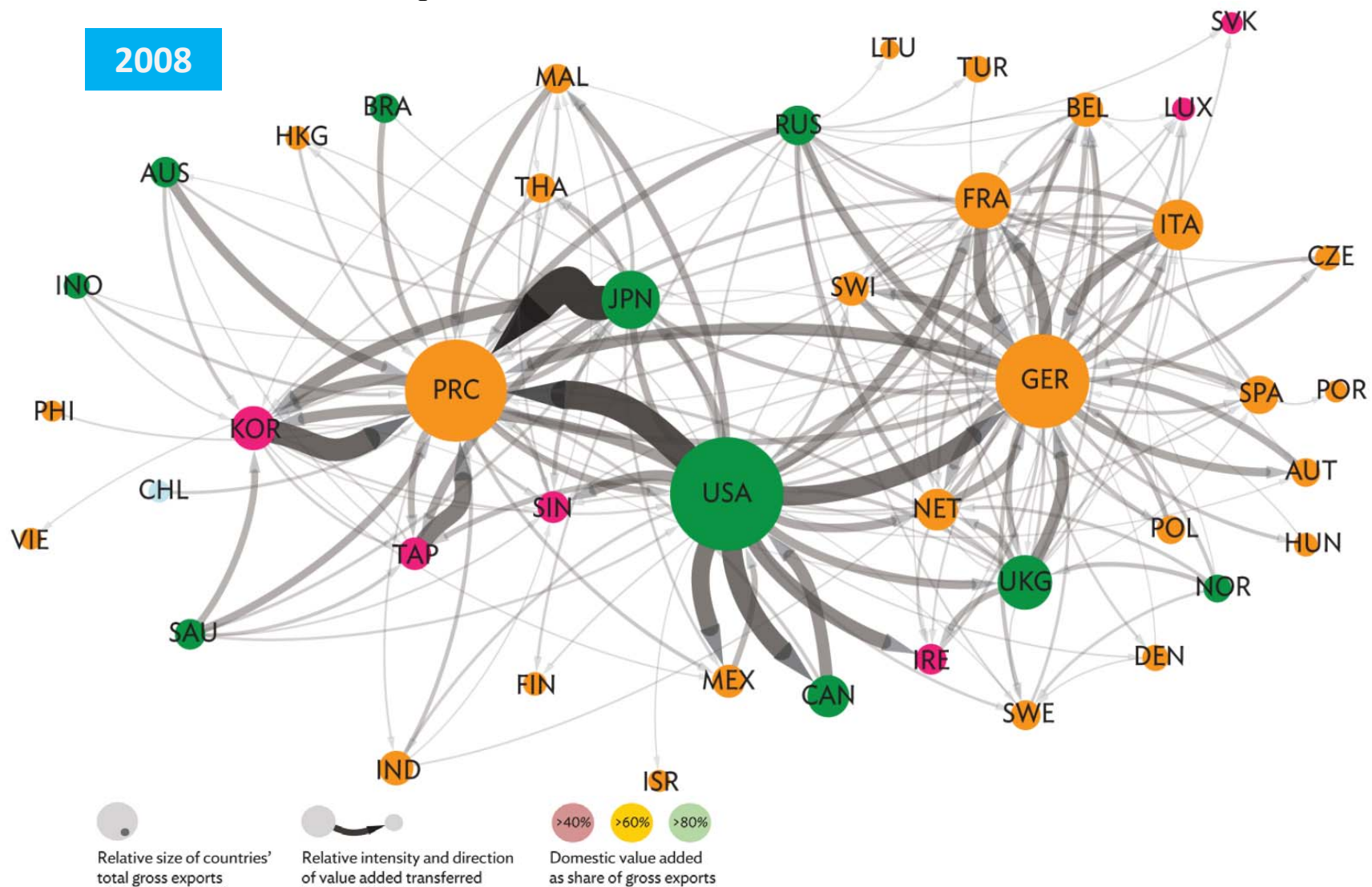
Source: Kimura and Obashi 2011.



...and “trade in value added”

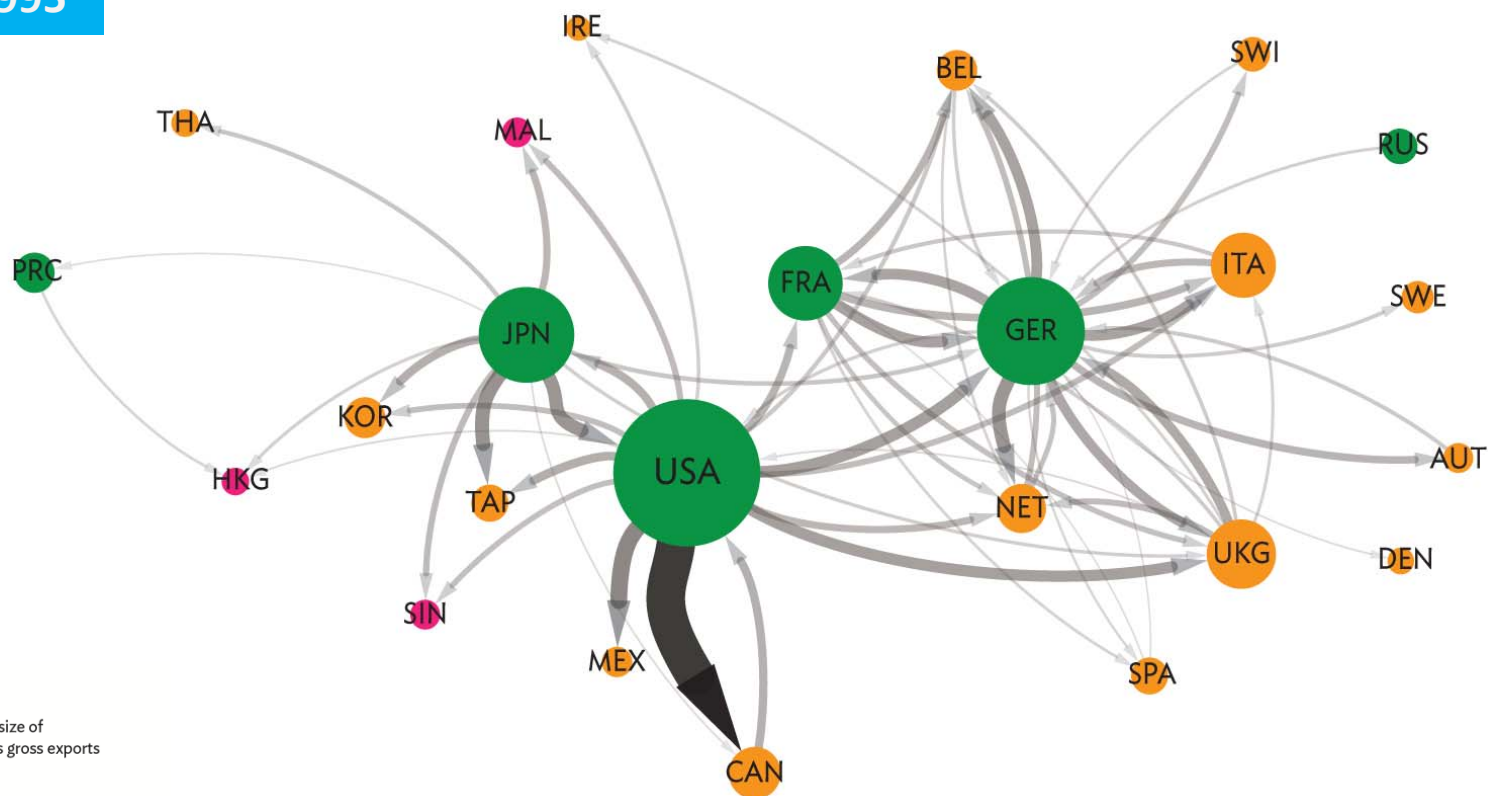


Global production networks in 2008



GVC evolution from 1995...

1995



Relative size of countries gross exports

Relative intensity of value added and direction of transfer

Domestic value added as a share of gross exports

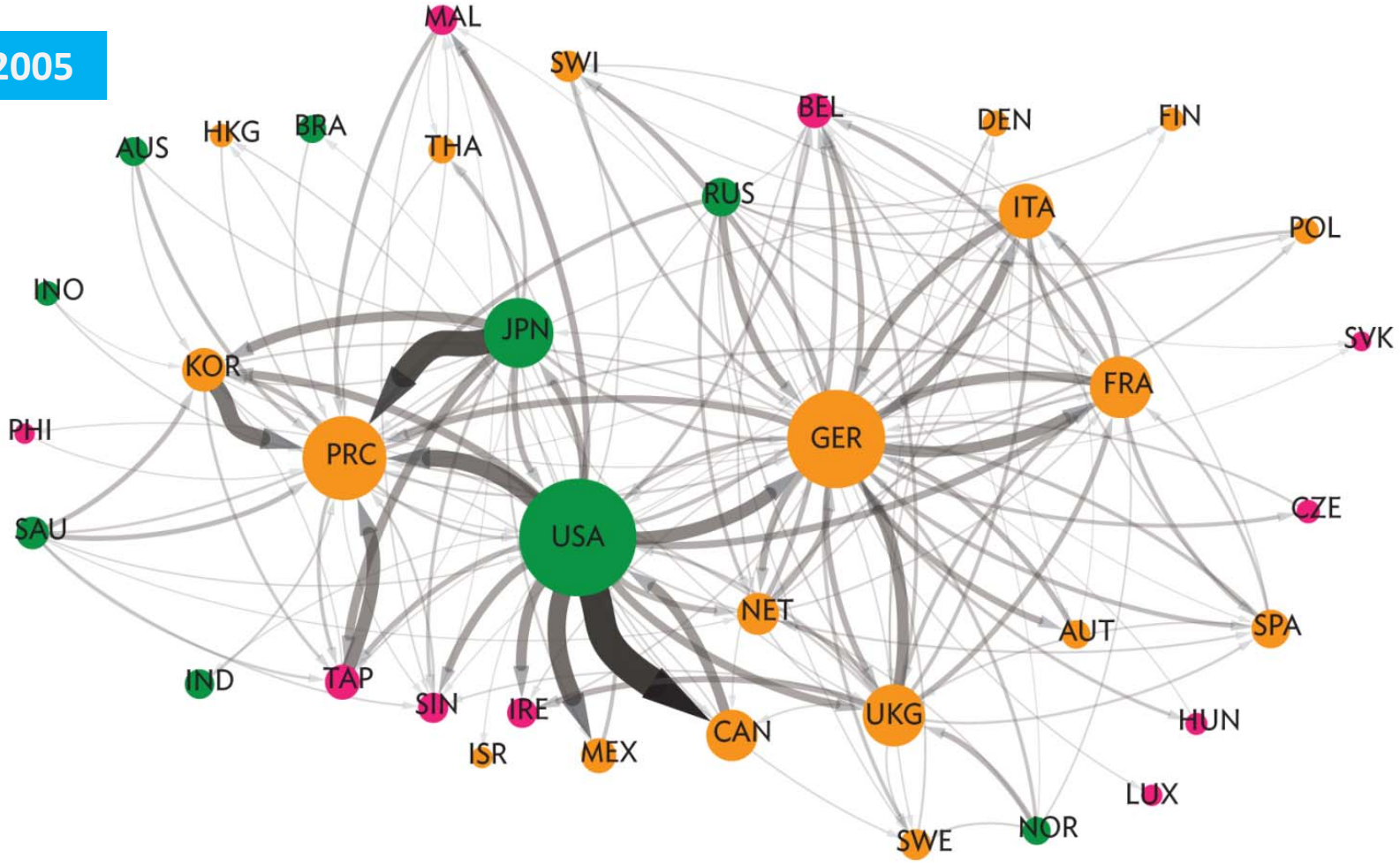
- >40%
- >60%
- >80%

Figures show the value added domestically in countries' gross exports, based on the OECD-WTO TiVA database (accessed 15 September 2013). Only the top 5% of bilateral trade flow connections are shown. A force-directed algorithm is applied to lay out the data as network maps. The size of the nodes indicates relative magnitude of countries' gross exports. The width of the arrows indicates the intensity of value-added transfers. **Green** nodes denote countries with the highest share of value added domestically, at least 80%. **Orange** nodes denote 60%–80% of value added domestically, and **pink** nodes 40%–60%.

ARG = Argentina, AUS = Australia, AUT = Austria, BRA = Brazil, BEL = Belgium, CAN = Canada, CHL = Chile, CZE = Czech Republic, DEN = Denmark, FIN = Finland, FRA = France, GER = Germany, GRC = Greece, HKG = Hong Kong, China, HUN = Hungary, IND = India, INO = Indonesia, IRE = Ireland, ISR = Israel, ITA = Italy, JPN = Japan, KOR = Republic of Korea, LTU = Lithuania, LUX = Luxembourg, MAL = Malaysia, MEX = Mexico, NET = Netherlands, NOR = Norway, OECD-WTO TiVA = trade in value added indicator of the Organisation for Economic Co-operation and Development and the World Trade Organization, PHI = Philippines, POL = Poland, POR = Portugal, PRC = People's Republic of China, RUS = Russian Federation, SAU = Saudi Arabia, SIN = Singapore, SPA = Spain, SWE = Sweden, SWI = Switzerland, SVK = Slovakia, TAP = Taipei, China, THA = Thailand, TUR = Turkey, UKG = United Kingdom, USA = United States of America, VIE = Viet Nam.

to 2005...

2005



Relative size of countries' total gross exports

Relative intensity and direction of value added transferred

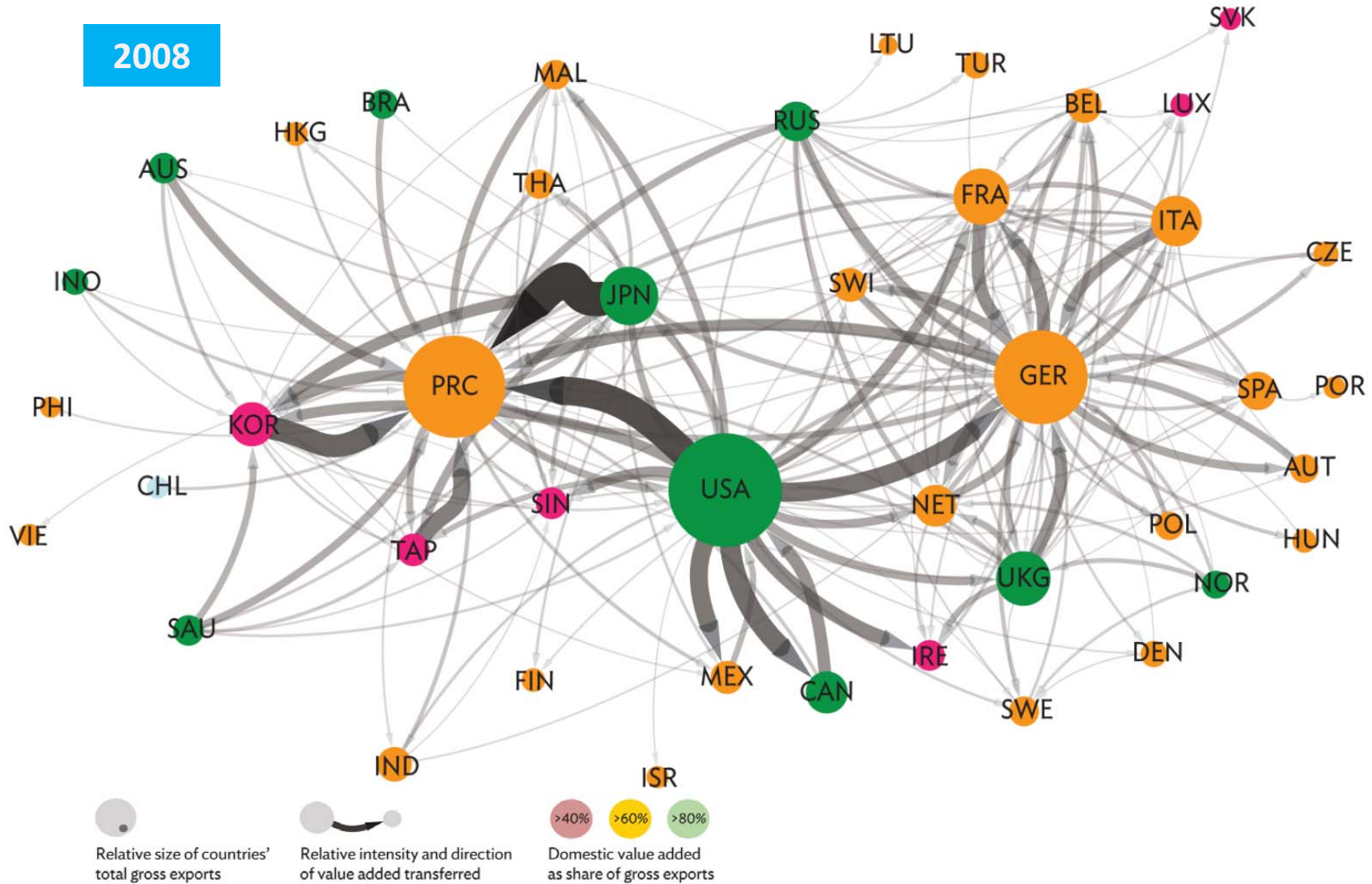
>40% >60% >80%

Domestic value added as share of gross exports

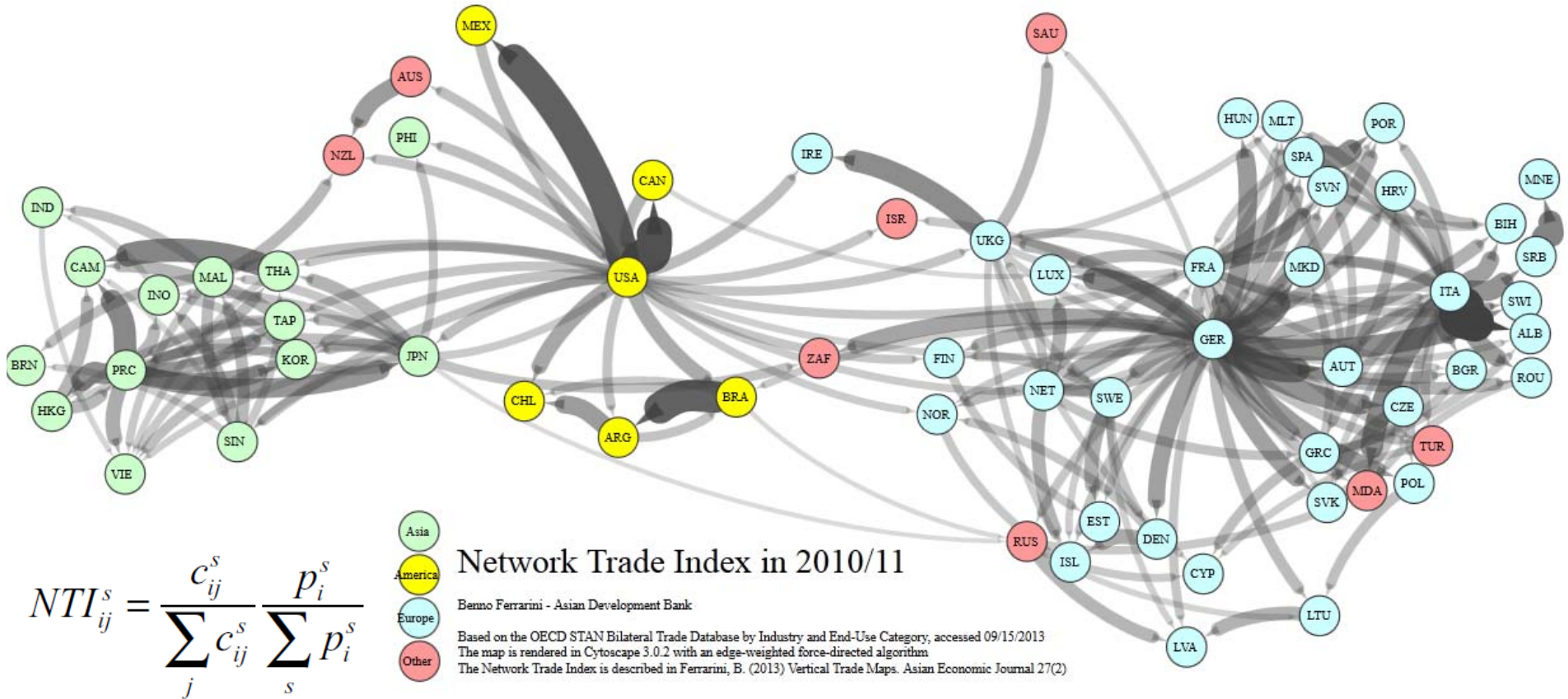


to 2008

2008



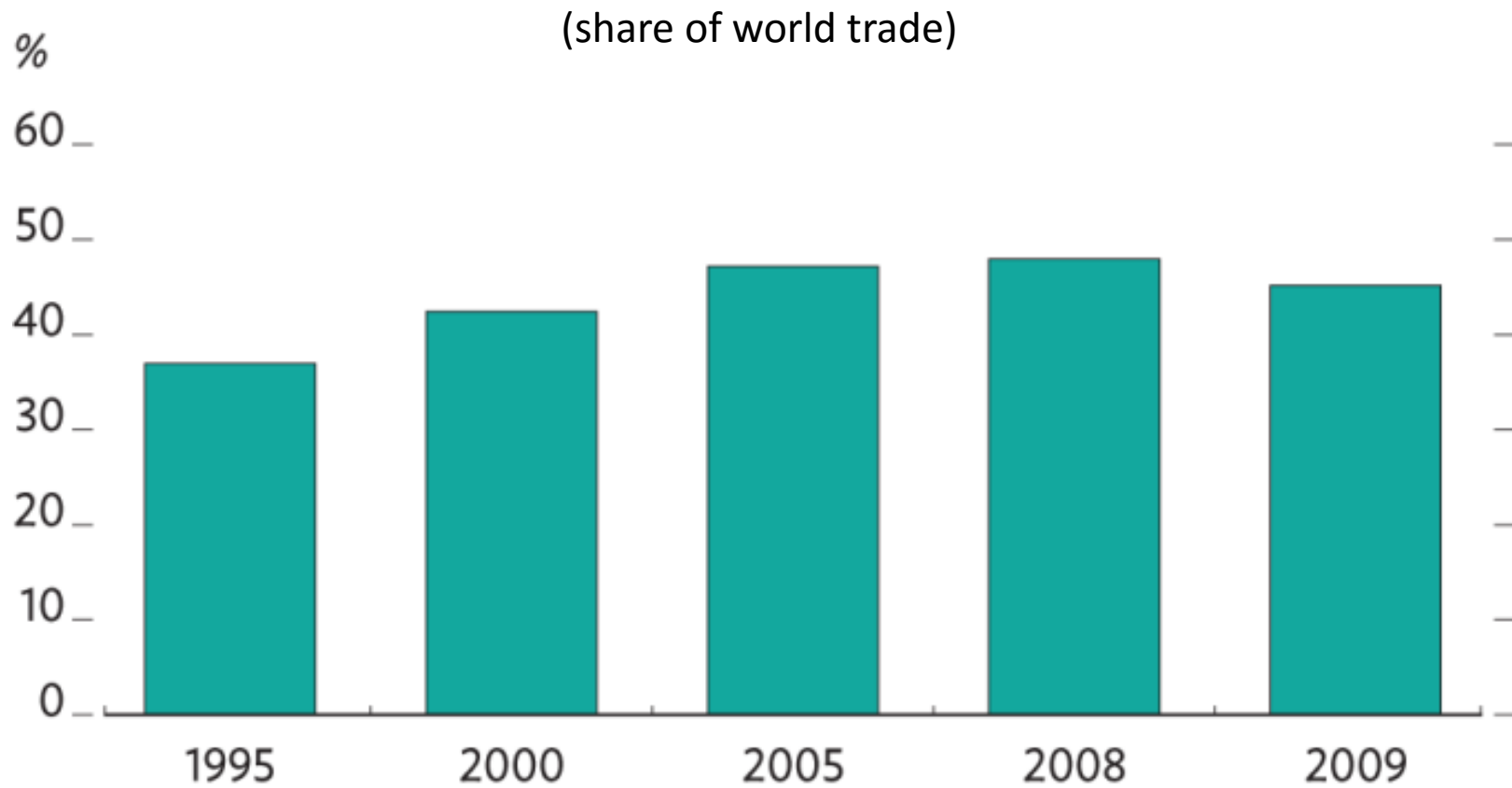
Vertical Trade in 2010/11



$$NTI_{ij}^s = \frac{c_{ij}^s}{\sum_j c_{ij}^s} \frac{p_i^s}{\sum_s p_i^s}$$



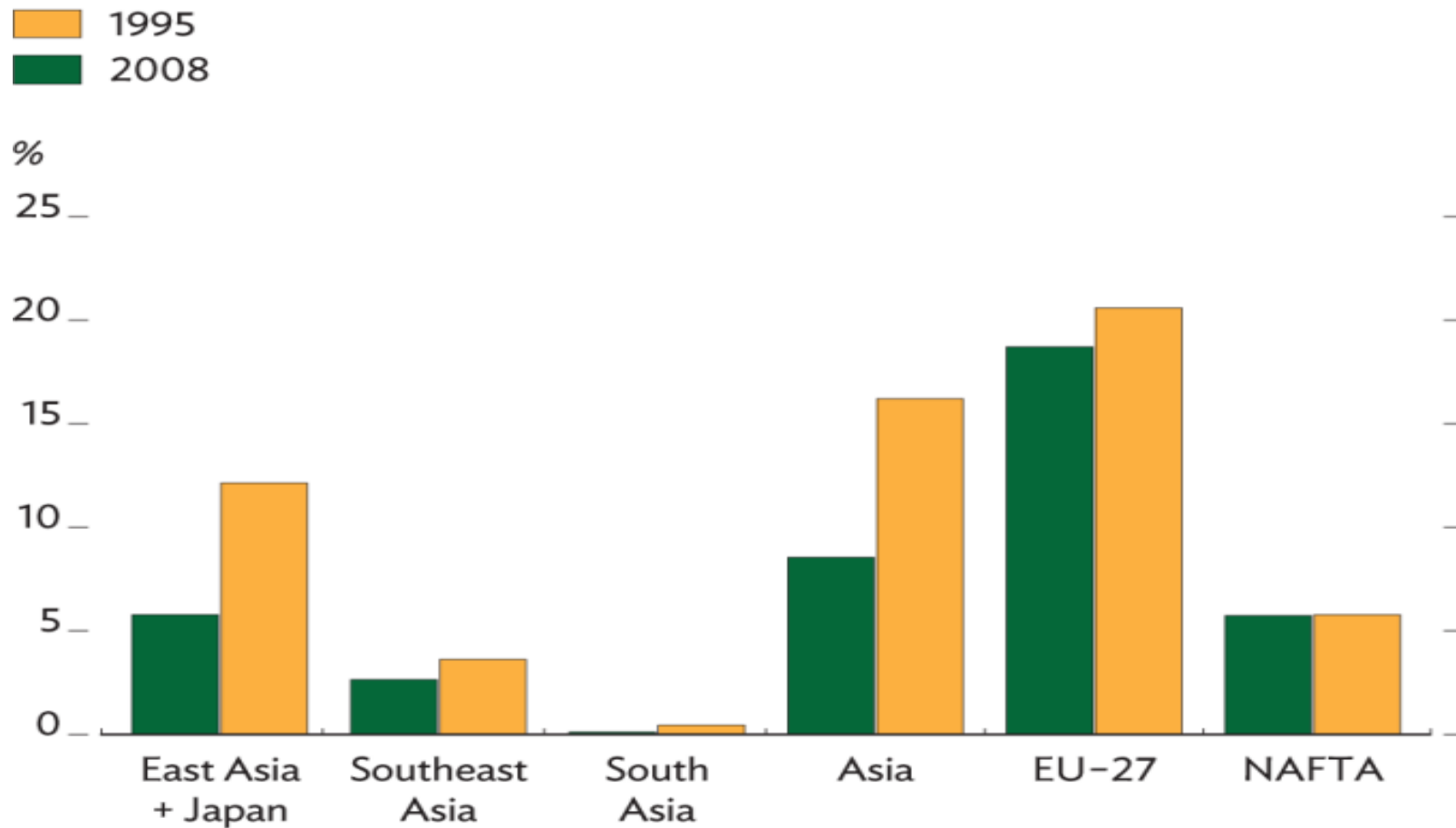
In sum, GVC trade expanded rapidly in the past 2-3 decades...



Note: Forward and backward linkages



and East and Southeast Asia emerged as a world manufacturing hub



2. Benefits and risks associated with GVC participation



GVC production has boosted the economies of those involved...

Relation between GVC trade growth versus income, employment, and output growth, 1995-2009

Dependent variable	Real GDP per capita growth		Industry-level employment growth		Industry level output growth	
	(1)	(2)	(3)	(4)	(5)	(6)
GVC trade (growth)	0.12*** (0.037)		0.10*** (0.016)		0.19*** (0.042)	
GVC-B trade (growth)		0.03 (0.029)		0.08*** (0.016)		0.13*** (0.035)
GVC-F trade (growth)		0.09** (0.039)		0.03** (0.015)		0.10*** (0.030)
R²	0.65	0.66	0.41	0.41	0.65	0.65
Number of observations	221	221	1,236	1,232	1,248	1,244

* = significant at 10%, ** = significant at 5%, *** = significant at 1%, () = standard error, GDP = gross domestic product, GVC = global value chain; GVC trade comprises two parts: GVC-B trade = foreign value added used in domestic exports and GVC-F trade = domestic value added used in destination country exports; R²=coefficient of determination.

Notes: ADB estimates using the data from the trade in value added indicator of the Organisation for Economic Co-operation and Development and the World Trade Organization, and employment data from the World Input-Output Database. The dependent variable is annualized growth between periods (1995, 2000, 2005, 2008, and 2009). All estimates include year and country fixed effects, while the industry-level employment and output growth estimates also include industry fixed effects.



GVC contagion risk is real but limited

- Shocks to a GVC partner need not become an economy-wide shock at home, as flexible labor and capital markets can contain the effects
- Shocks can become opportunities for nimble GVC members

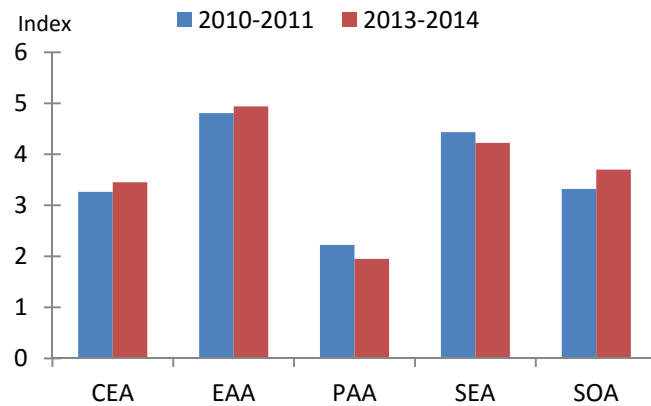


3. Overcoming limited access to GVCs

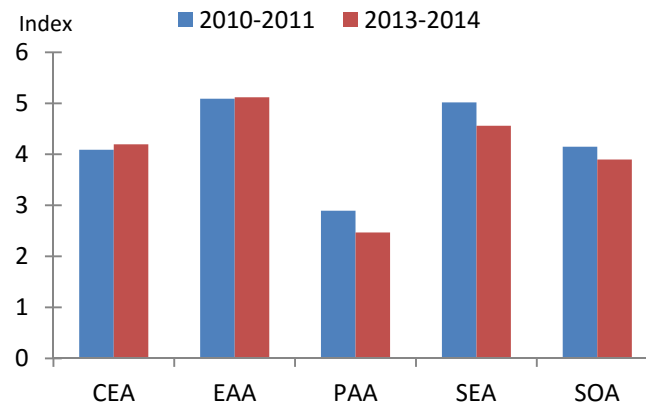


Few countries in Central, South Asia or Pacific have found their GVC niche, due to:

Quality of roads

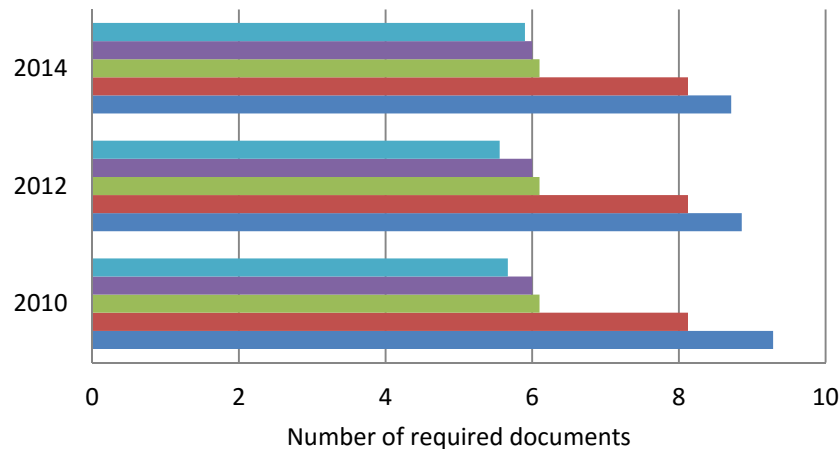


Quality of air transport infrastructure

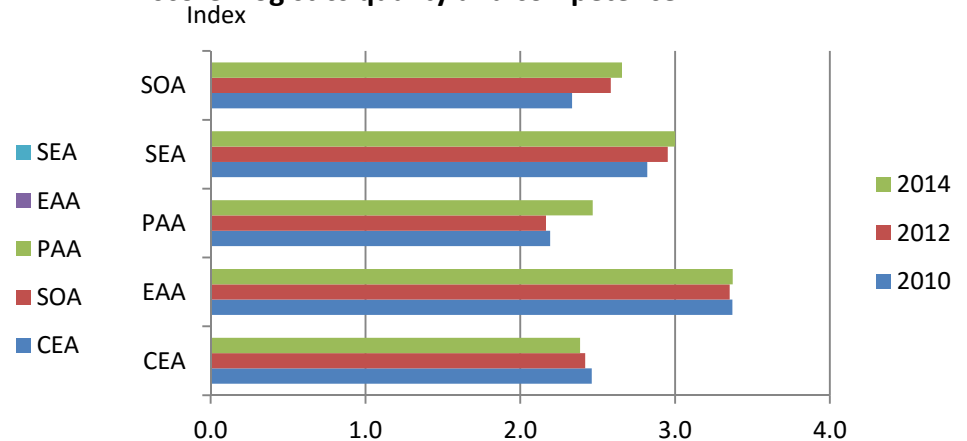


CEA=Central Asia
EAA=East Asia
PAA=The Pacific
SEA=Southeast Asia
SOA=South Asia

Number of required documents to export, 2014



LPI score: Logistics quality and competence



Asia is well positioned to deepen, broaden, and upgrade its role in global production networks

Falling trade costs allowed cross-border production to emerge, but more can be done:

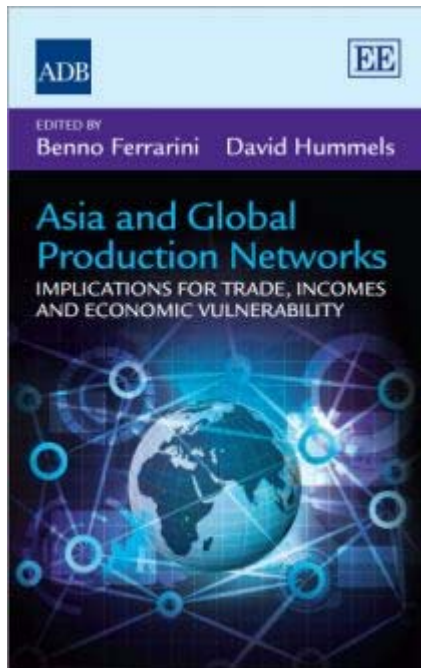
- Low, predictable tariffs are necessary to connect to GVCs
- Lower transport costs may reduce trade costs even more than tariff reductions
- Process and product standards must not become barriers to trade
- Small and medium enterprises (SMEs) need special attention to join to global networks



Thank you for your attention

The report and ADB/EE book are free for download:

<http://www.adb.org/publications/asia-and-global-production-networks-implications-trade-incomes-and-economic-vulnerability>



<http://www.adb.org/publications/asian-development-outlook-2014-update-asia-global-value-chains>

