

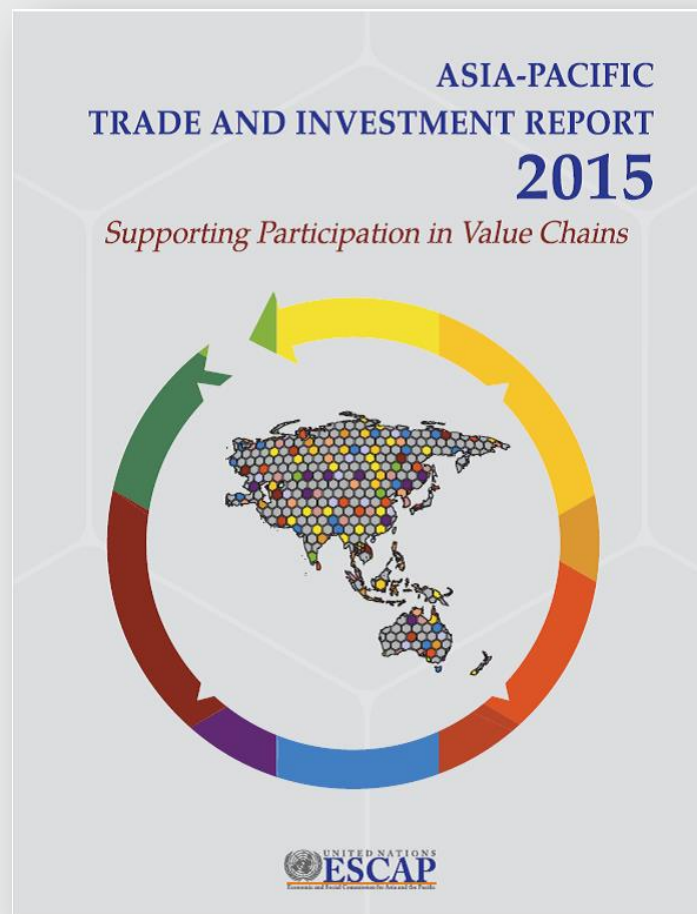


ADB-ESCAP JOINT WORKSHOP

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Asia-Pacific Trade and Investment Report 2015: *Supporting Participation in Value Chains*

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Agenda

- ▶ Participation of Asia-Pacific region in the Global Value Chains
- ▶ The roles of policies in strengthening regional participation in GVCs
- ▶ Priorities at different development levels



Rising of global trade in intermediates

“About 60% of global trade, which today amounts to more than \$20 trillion, consists of trade in *intermediate goods and services* that are incorporated at various stages in the production process of goods and services for final consumption” (UNCTAD, 2013, p. 122)

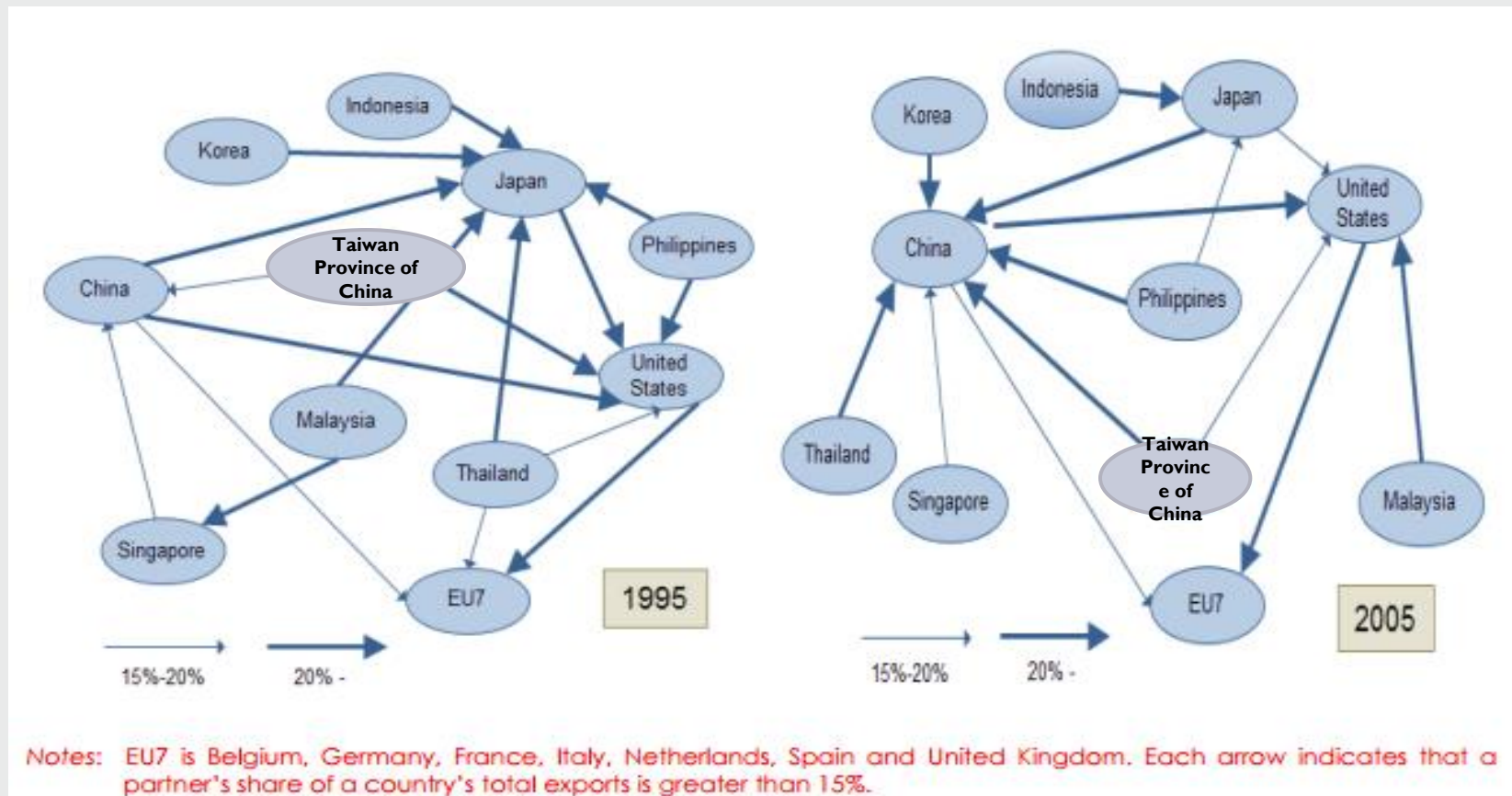
✓ More than **half** of world **manufactured imports** are intermediate goods

✓ More than **70%** of world **services imports** are intermediate services





Changing of regional trade architecture



Source: Yamano, Meng, Fukasaku (2011)



Measurements of GVC participation

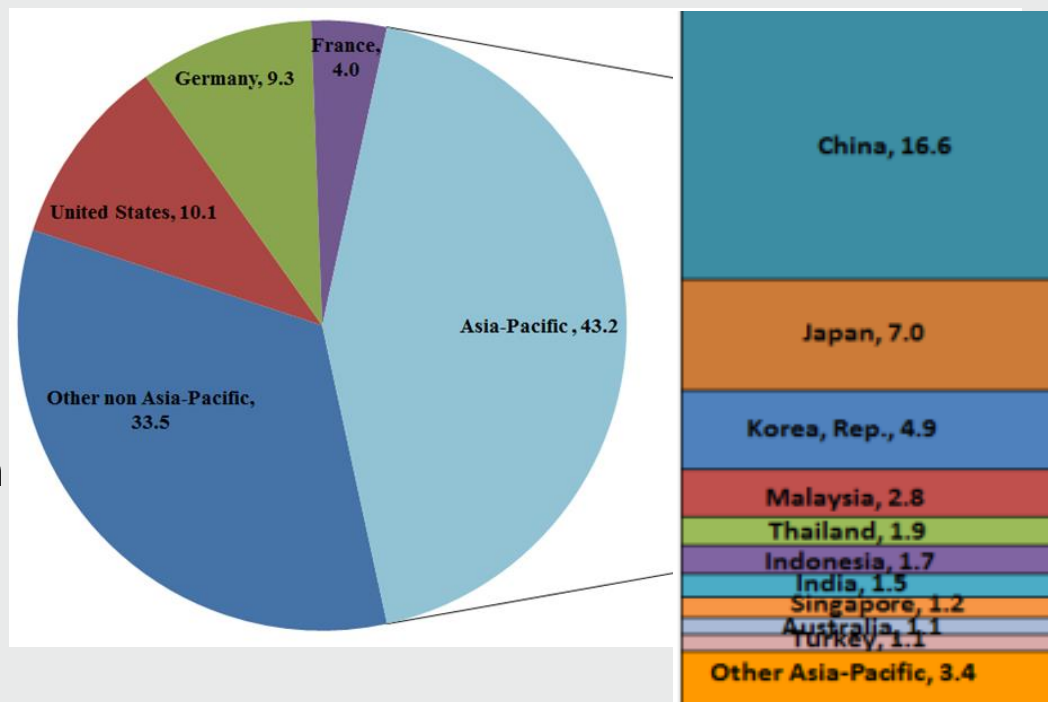
- ▶ We are based on a conservative approach, which is the statistics on trade in intermediates, we take one step further.
 - ▶ Using Sturgeon and Memodevic (2010)'s classification of 'customized' final and intermediate manufacturing products in combination with the United Nations' Broad Economic Categories (BEC)'s classification of products by 'their uses'.
- ▶ **GVC-related exports** of 'final' and 'intermediate' goods from Asia-Pacific economies from 1995 to 2013 in 5 sectors.
 - ▶ Apparel and footwear
 - ▶ Automotive
 - ▶ Electronics
 - ▶ Processed Agriculture
 - ▶ Primary agriculture



Asia-Pacific region in the Global Value Chains

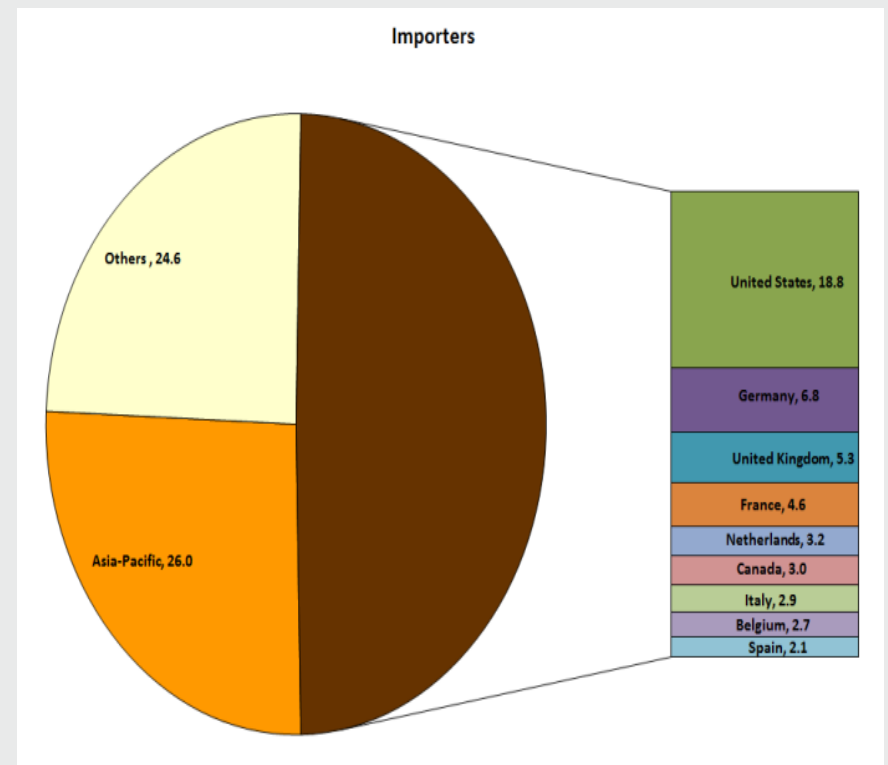
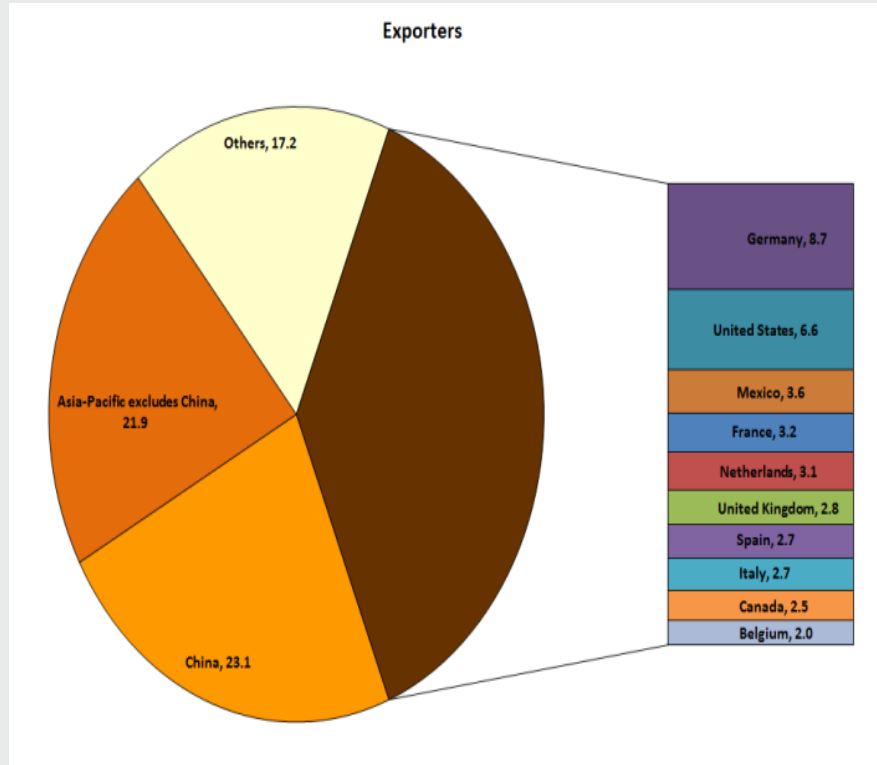
- ▶ GVCs dominate policy discussions, but we lack a common yardstick for measurement.
- ▶ The region plays a major role on the supply side of GVCs: 43% of global intermediates exports and 39 % for imports.
- ▶ 90% of the GVC participation by the region is concentrated in only 10 countries. Low-income economies are largely bypassed.

Shares in global exports of GVC-intermediate products (2013)





- ▶ The region's role on the final demand side of GVCs, although rising, is still limited—reflected by a large gap final export and import shares of final products (45% vs 26%).



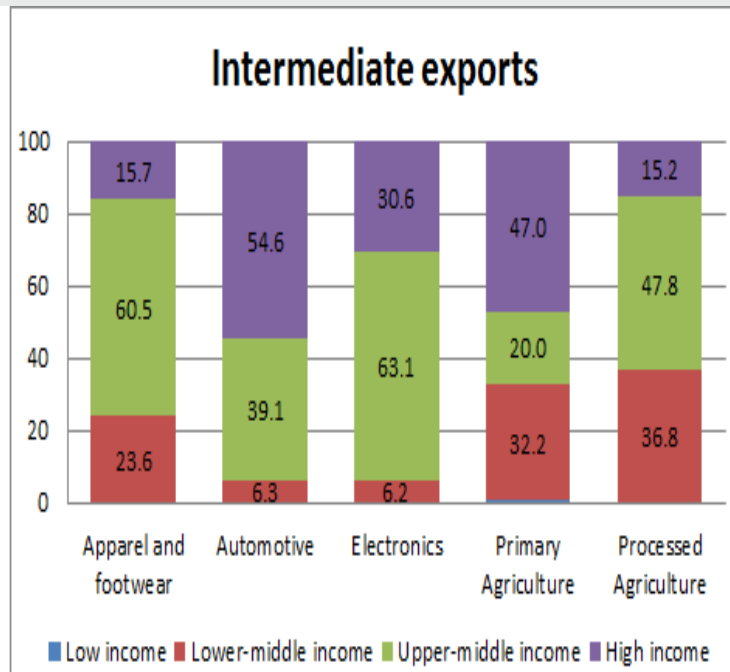
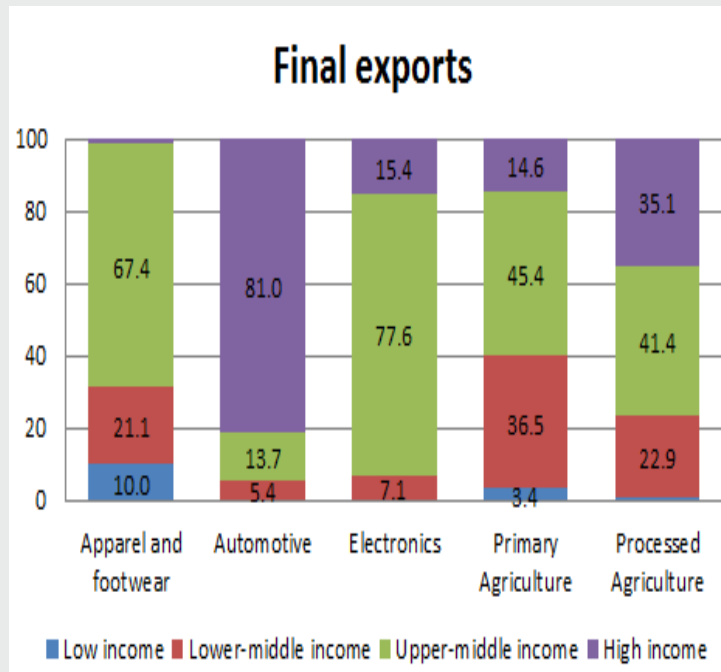
Source: ESCAP calculations based on data from United Nations Comtrade database



Asia-Pacific economies

Does a country development level matter for its participation in GVCs?

- ▶ The low-income countries are largely bypassed by GVCs.

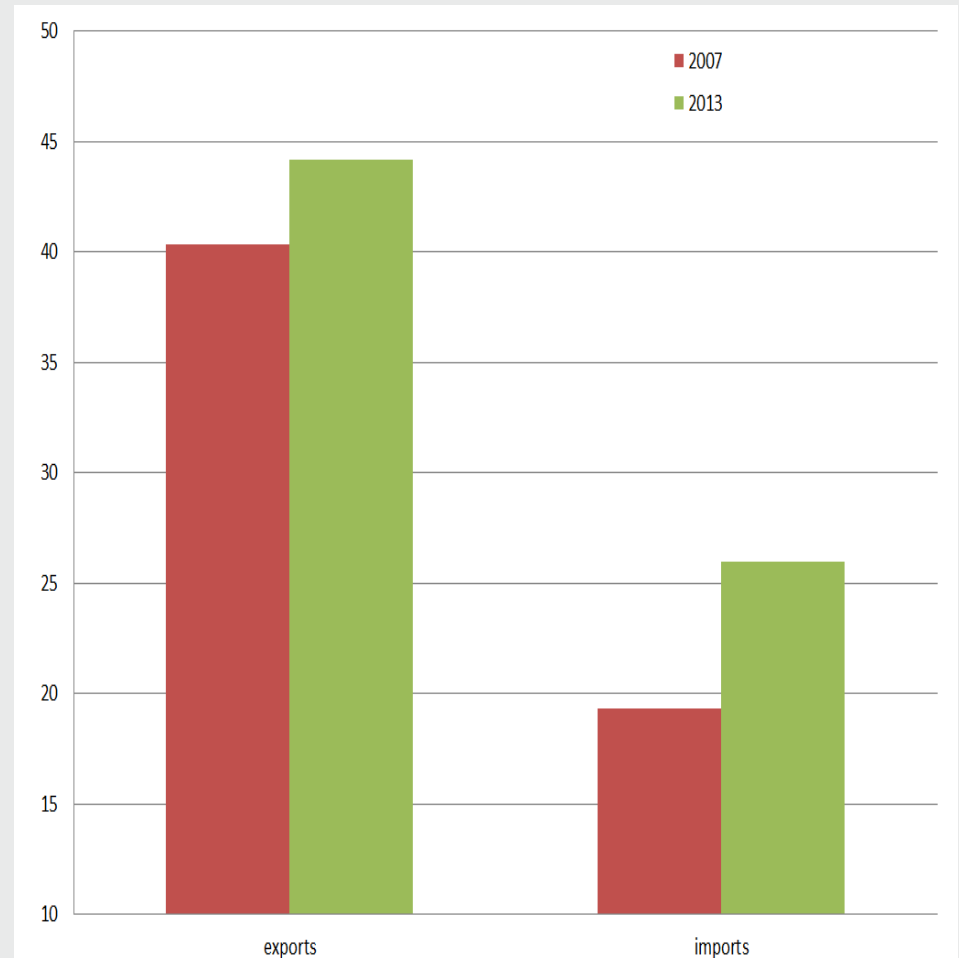




Asia-Pacific economies

How did the recent global economic crisis affect GVCs?

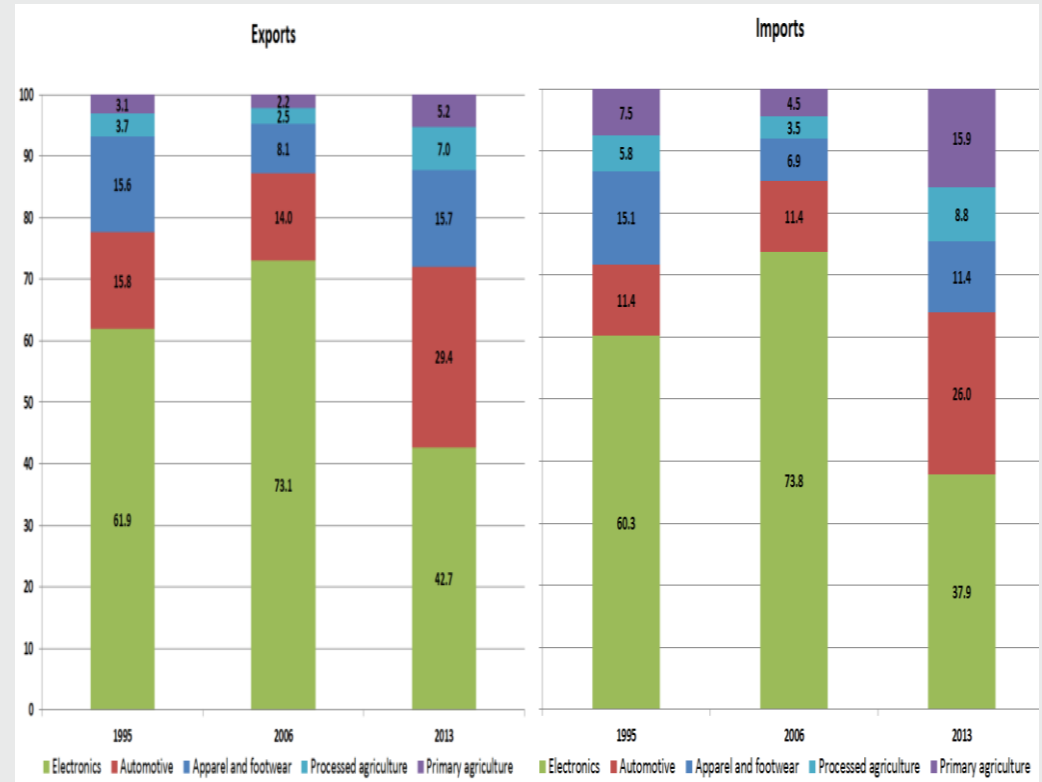
- Core of demand for final goods has started to shift towards Asia and the Pacific
- Accelerated global demand shift from the United States and the European Union towards developing economies





A significant drop in the demand for electronics since the start of the economic crisis

- ▶ Automotive intermediates have been less affected than electronics
- ▶ The share of intermediate electronics in the region's total intermediate trade dropped from about 73% in 2006 to 40% in 2013





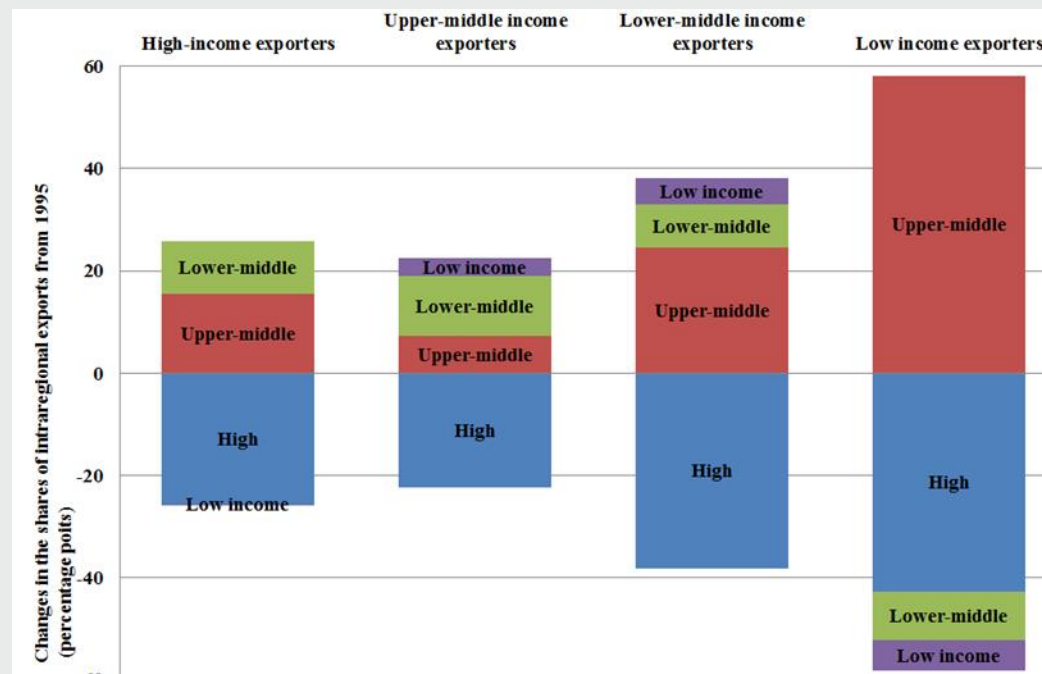
- ▶ More than 65% of the GVC intermediate imports by Asia-Pacific economies are sourced within the region.
- ▶ The destination of intraregional intermediate exports by all income groups has been shifting from high-income destinations toward the middle income ones.
- ▶ South-South trade in the regional value chains rose between 22 to 43 percentage points during the period 1995 to 2013 depending on income levels.

Asia-Pacific economies:

How is intraregional trade affected by GVCs?

GVCs enhance intraregional South-South trade

Shifting of intraregional intermediate exports





Factors for competitiveness in GVCs

➤ **Natural factors**

- Country's geographic location
- Endowment of natural resources
- Size of the economy

➤ **Other factors might be changed by the right policy mix.**

- Infrastructure,
- Skills of workforce,
- Trade and investment barriers
- Border procedures
- Macroeconomic stability, access to finance, and the overall ease of doing business.
- Technology absorptive capacity
- etc.



Motivation

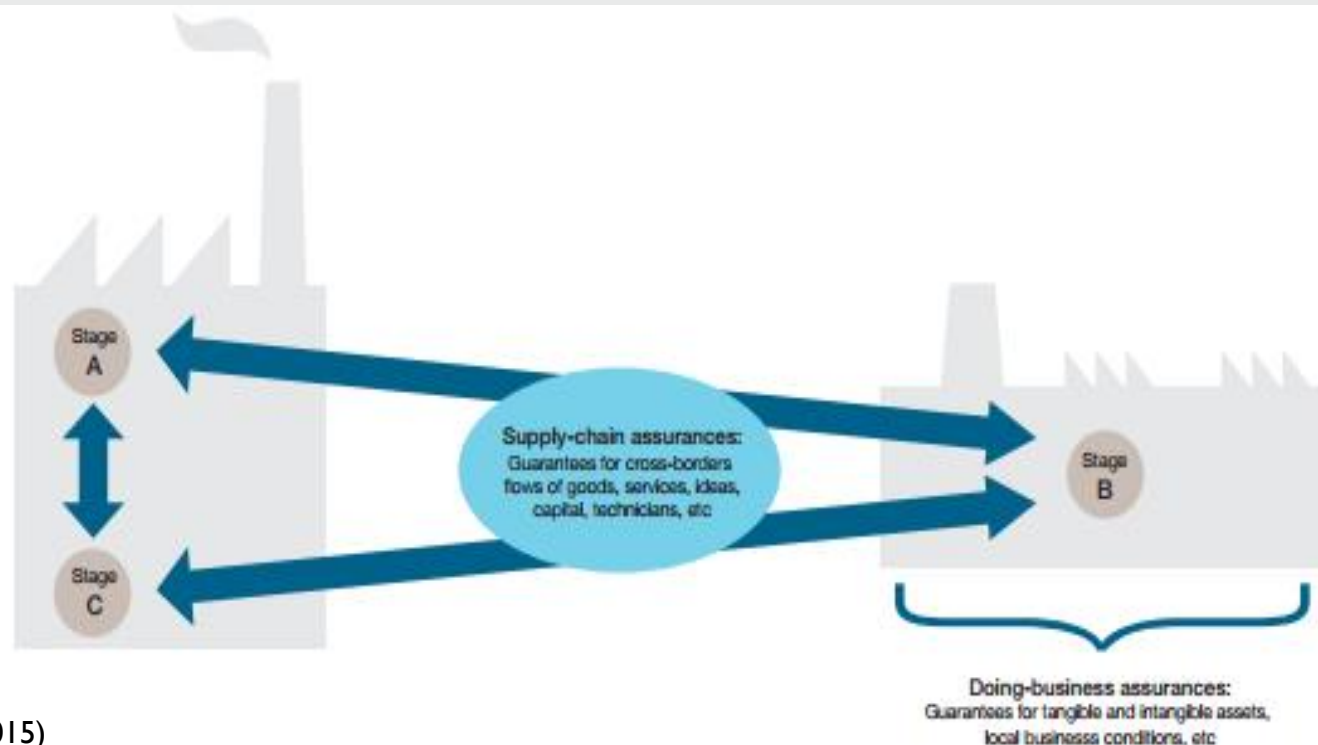
Developing countries are not equally able to tap these new opportunities arising from GVCs. Especially, low income countries including LDCs are often lagging behind.

A combination of natural and “man-made” factors determine the opportunity of a country to engage in GVC activities. The “man-made” factors are where policies could play a role in enabling the GVC engagement of a country.

How policies could play a role to enhance participation of Asia-Pacific economies, taking into account the diversity of economies in the region?



The roles of government



Source: WEF (2015)

Providing supply-chain assurances: Removing barriers to cross-border movement of goods, capital, people, etc.

Providing doing-business assurances: Removing threats to foreigners' property rights, local business conditions, etc.

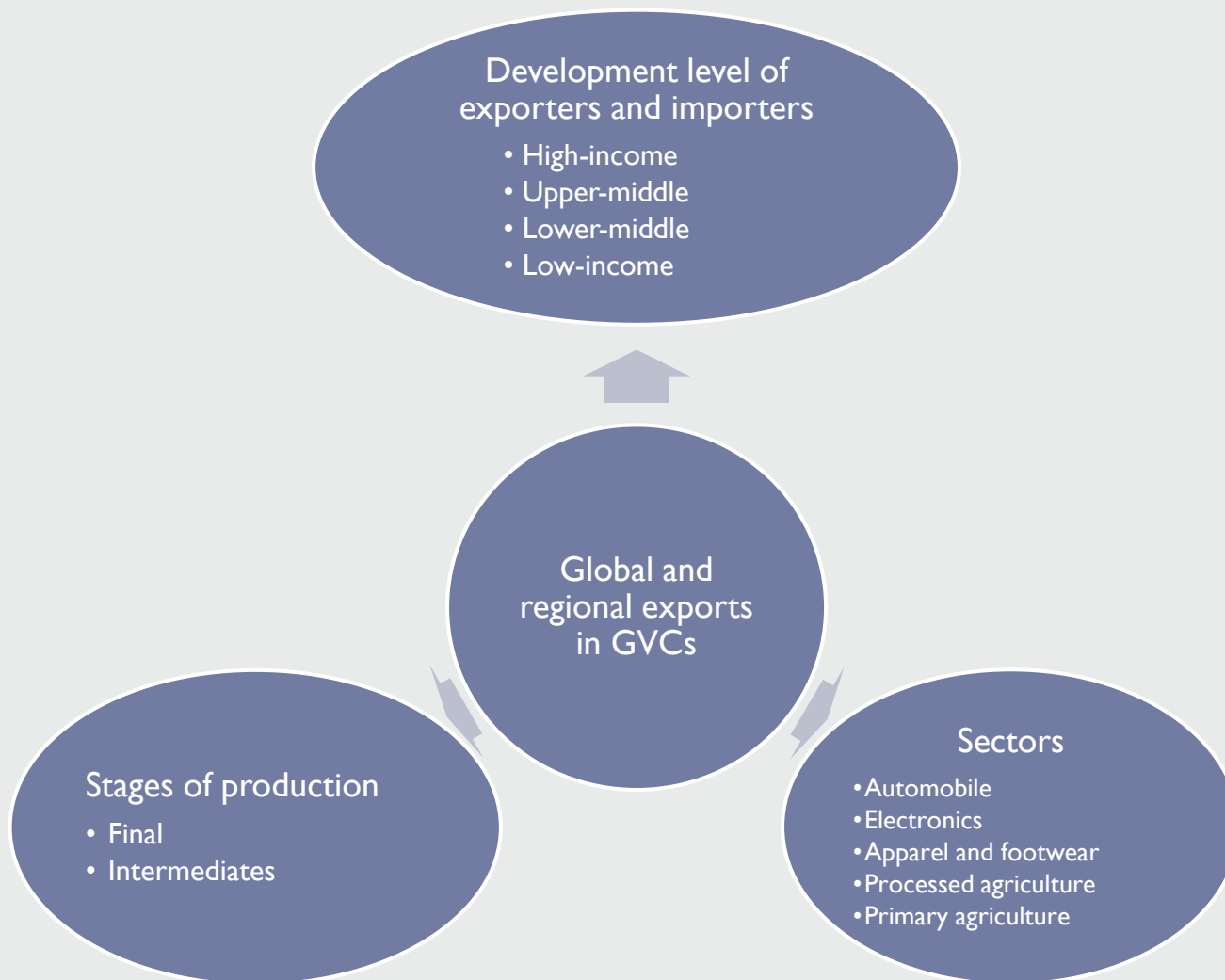


Focus

- ▶ **Policy-related conditions:**
 - ▶ Trade-policy conditions
 - ▶ Tariffs and non-tariff measures
 - ▶ RTA
 - ▶ Environments for doing business
 - ▶ Soft-infrastructure (ICT) for connectivity
 - ▶ Hard-infrastructure (port and shipping) for connectivity
 - ▶ Business facilitation



Empirical Scope





Experimental Framework:

The augmented gravity model of bilateral exports

Policies:

- ▶ trade-policy measures
- ▶ trade facilitation and behind-the-border obstacles to trade and FDI

Two parts:

- ▶ gravity model with only trade-policy variables

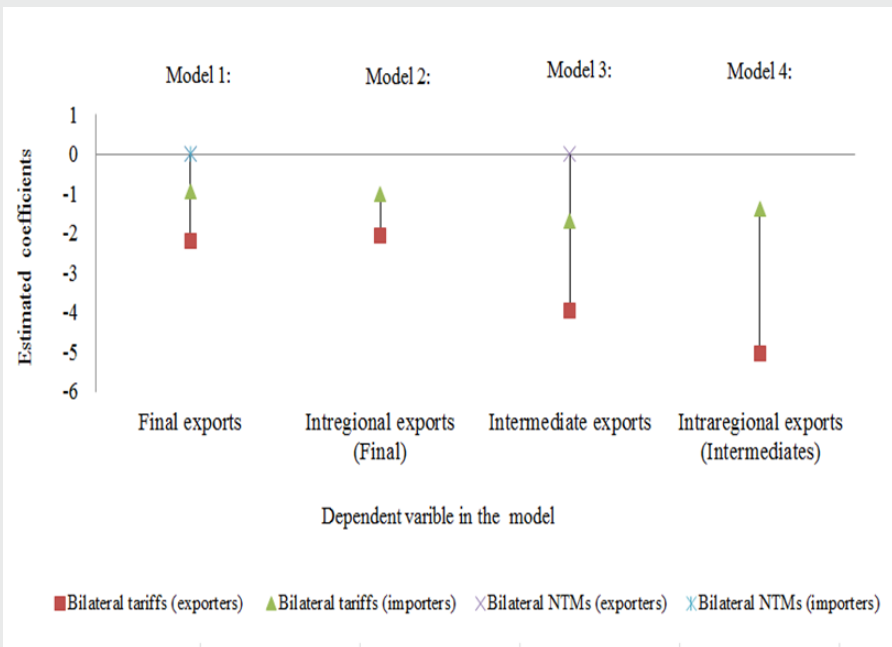
$$X_{ijkt}^l = \beta_0 + \beta_1 mass_{ijt} + \beta_2 T_{ijkt}^l + \beta_3 T_{jikt}^l + \beta_4 RTA_{ijt} + \beta_5 G_{ij} + \delta_{it} + \delta_{jt} + \delta_{kt} + \varepsilon_{ijkt}^l$$

- ▶ gravity model with trade facilitation and behind-the-border factors

$$X_{ijkt}^l = \beta_0 + \beta_1 mass_{ijt} + \beta_2 T_{ijkt}^l + \beta_3 T_{jikt}^l + \beta_4 RTA_{ijt} + \beta_5 G_{ij} + \beta_6 F_{it} + \beta_7 F_{jt} + \delta_i + \delta_j + \delta_k + \varepsilon_{ijkt}^l$$



Empirical evidence : A comprehensive trade liberalization



Source: ESCAP Estimations

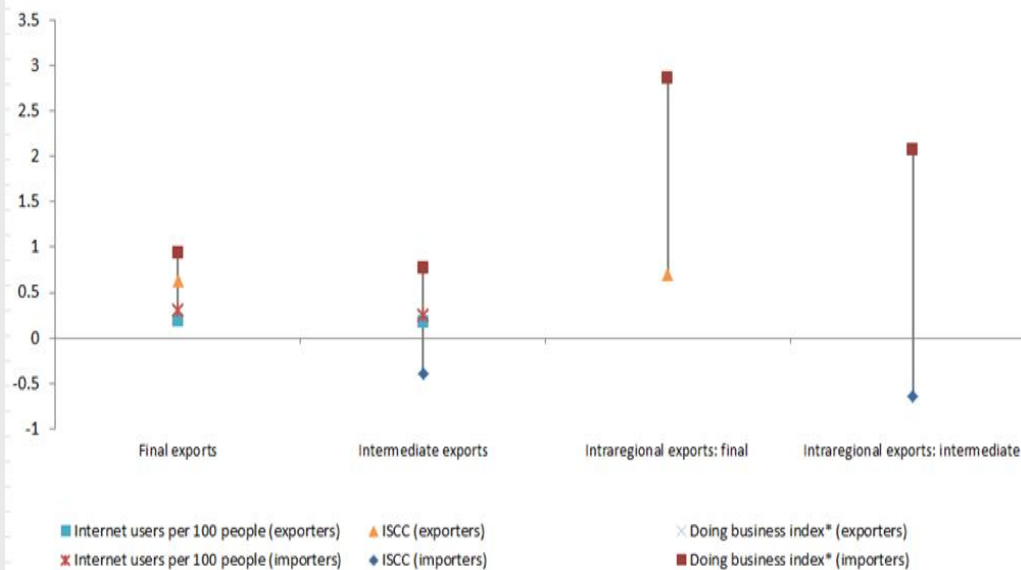
Note: Estimated coefficients that are statistically significant at 1% to 5% level are illustrated in the figure

- ▶ Import barriers of a country could impede its capacity to export through GVCs.
- ▶ Trade liberalization for the development of GVCs implies more than just tariff elimination
- ▶ Liberalization of trade in services and investment could help facilitate participation in GVCs



Evidence: Trade facilitation and behind-the-border conditions

Estimated coefficients of trade-facilitation infrastructure



- ▶ ICT is important for expanding production and trade networks from the regional to the global level.
- ▶ Asia-Pacific exporters might lose their competitive edge in the GVC-related exports if they could not match their import partner in improving logistics and custom procedures.
- ▶ Exports in GVCs are highly sensitive to rules and obstacles of doing business in importing countries.

Source: ESCAP Estimations

Note: Estimated coefficients that are statistically significant at less than or equal to 5% level are illustrated in the figure.



Empirical evidence: The role of RTAs

Table 7.2 Estimated RTA coefficients from the gravity models by group of exports and importers

Exports by types of products and income level at destinations

	Final		Intermediate		Final (intraregional)		Intermediate (intraregional)	
	High	Non-high	High	Non-high	High	Non-high	High	Non-high
Asia-Pacific exporters								
Low-income ^a	1.732		1.531				1.586	
Lower-middle income ^b		1.908	0.515		0.790	1.798	1.482	1.396
Upper-middle income ^c	0.735		0.386		0.663			0.806
High-income ^d		1.062		1.266		0.722		1.211
All Asia-Pacific ^e	0.739		0.789		0.586		0.731	

Note: Each column of the table presents estimated RTA coefficients obtained from specific gravity models of GVC-related exports. The models are controlled for conditions related to trade protections, trade facilitation, and fixed effects of countries and years. Only the RTA coefficients with statistical significance at 1% to 5 % level are presented in the table.

- ▶ RTAs seems to be helping expansion of exports related to GVCs.
- ▶ It may reflect that GVC-related exports appear to increase after a formal trade agreement is signed.
- ▶ It could also mean that GVC-related exports appear to be destined more to countries with which those economies have a trade agreement compared to other countries with which they do not, given that they are similar in other characteristics.



Policy priorities for low-income countries

- Infrastructure investment to improve connectivity is the key to enter into GVCs.

Table 7.3 Estimated coefficients of policy variables from the gravity models of GVC-related exports by low-income Asia-Pacific exporter ^a

Exports by types of products and income level at destinations

Policy variables	Final		Intermediate		Final (intraregional)		Intermediate (intraregional)	
	High	Non-high	High	Non-high	High	Non-high	High	Non-high
Tariffs (exporters)	x							
Tariffs (importers)	-3.46		-2.262		-2.117		-1.999	-3.475
RTA	1.732		1.531		1.586		1.732	
Internet users (exporters)	0.274	x					0.274	
ISCC (exporters)	2.675	9.422				x	2.675	x
Doing business (exporters)	x					3.035		
Internet (importers)			1.211					
ISCC (importers)								
Doing business (importers)								

Note: The table presents estimated coefficients shown in tables 3 and 4 of annex D. Only the policy coefficients that are statistical significant at 1% to 5 % level are presented in the table. Denoted by “x” is the coefficients with unexpected results. The models are controlled for conditions at the border and behind-the-border that might affected GVC-related export capacity. Fixed effects are also controlled at country, year, and sector level. The NTM coefficient cannot be estimated due to the NTM data are missing for most of low-income countries.



Policy priorities for lower-middle income countries

- Domestic reforms of trade and investment policy, and especially in trade facilitation area are critical for these countries to become a major player in GVCs.

Policy variables	Exports by types of products and income level at destinations							
	Final		Intermediate		Final (intra regional)		Intermediate (intra regional)	
	High	Non-high	High	Non-high	High	Non-high	High	Non-high
Tariffs (exporters)	x							
Tariffs (importers)	-1.413	-1.805		-3.357	-1.369	-3.658		-5.255
RTA		1.908	0.515	1.482	0.79	1.798		1.396
NTMs (exporters)	-0.009	-0.016	-0.005	-0.009		-0.021		-0.021
NTMs (importers)	-0.002							
Internet users (exporters)					x			
ISCC (exporters)	1.171	1.224				1.616		
Doing business (exporters)						x	x	
Internet (importers)	0.355					-0.37		
ISCC (importers)			-0.738		-1.288			
Doing business (importers)		1.663	1.416		9.06			

Note: The table presents the estimated coefficients shown in tables B.5 and B.6 of annex 7B. Only the policy coefficients that are statistically significant at the 1% to 5 % level are presented in the table. The coefficients with unexpected results are denoted by “x”. The models are controlled for conditions at the border and behind-the-border that may affect GVC-related export capacity. Fixed effects are also controlled at the country, year and sector levels.



Policy priorities for upper-middle income countries

- ▶ The upper-middle income economies need a unique set of policies to support their GVC participation.
- ▶ Investing in technologies and enhancing market integration to facilitate upgrading process within a value chain.

Table 7.5 Estimated coefficients of policy variables from the gravity models of GVC-related exports by upper-middle income Asia-Pacific exporter

Exports by types of products and income level at destinations

Policy variables	Final		Intermediate		Final (intraregional)		Intermediate (intraregional)	
	High	Non-high	High	Non-high	High	Non-high	High	Non-high
Tariffs (exporters)		x	-1.358		x	x		
Tariffs (importers)		-2.728	-2.509	-3.913	x	-3.82		-7.328
RTA	0.735		0.386		0.663			0.806
NTM measures (exporters)		x	x	-0.005			x	
NTM measures (importers)	-0.003		-0.004					
Internet users (exporters)	0.236	x	0.291	0.699	0.517			
ISCC (exporters)						x	1.045	
Doing business (exporters)	x	x			x	x		
Internet (importers)		0.187						
ISCC (importers)					-1.363		-1.223	
Doing business (importers)					5.217			

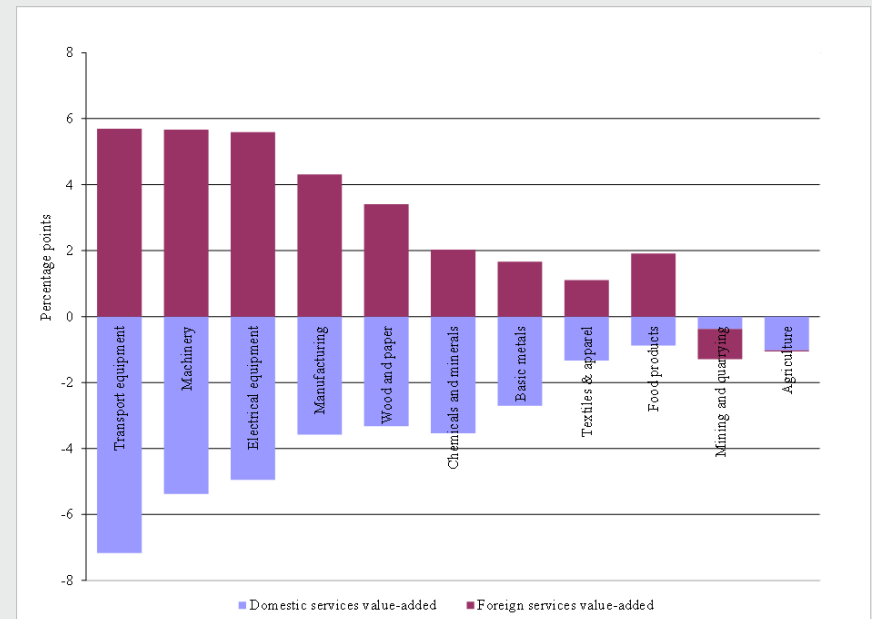
Note: The table presents estimated coefficients shown in tables 7 and 8 of annex D. Only the policy coefficients that are statistical significant at 1% to 5 % level are presented in the table. Denoted by “x” is the coefficients with unexpected results. The models are controlled for conditions at the border and behind-the-border that might affected GVC-related export capacity. Fixed effects are also controlled at country, year, and sector level.



Availability of services inputs crucial for GVCs

- ▶ Services create a significant value (30%) in the process of manufacturing, distribution and marketing of goods in GVCs.
- ▶ Exports of high-tech industrial sectors participating in global value chains, especially transport equipment, tend to have higher services content than other sectors (37%).
- ▶ Share of imported services in industrial exports increased from 7.6% in 1995 to 11.1% in 2009. Particularly rapid increase for business services.

Changes in the shares of services value-added in gross industrial exports by Asia-Pacific economies, 1995-2009

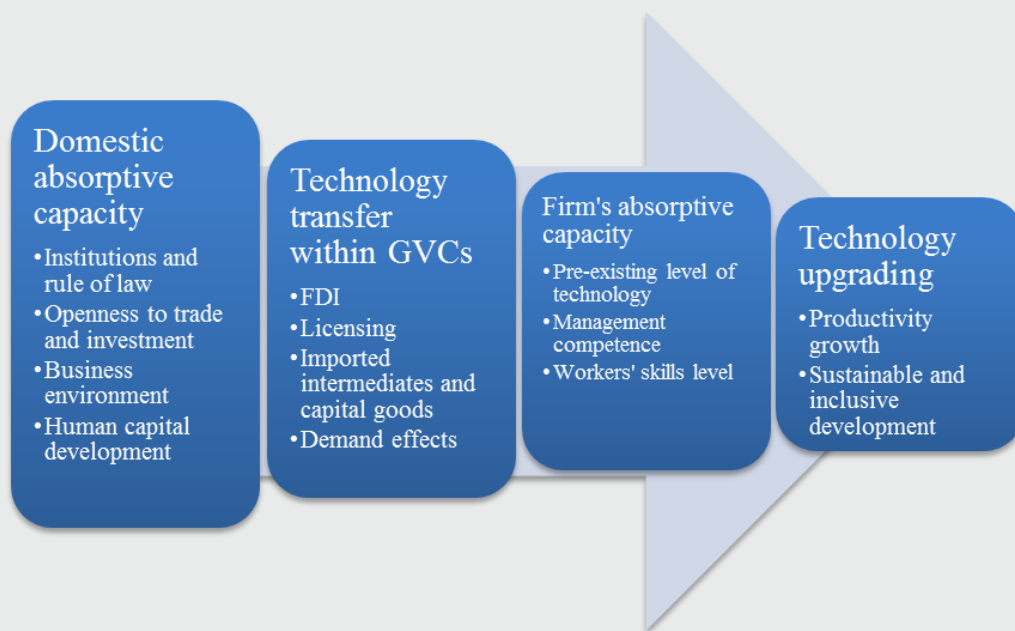




GVCs can support technology transfer and innovation

- ▶ GVC participation can have wider productivity spillovers
- ▶ Tech transfer important part of upgrading to higher value added
- ▶ FDI can drive tech transfer and upgrading: foreign-owned firms are, on average, 82% more productive
- ▶ Firms that license foreign technology are, on average, 48% more productive
- ▶ Key is openness to imports also important avenue for accessing technology, capital and knowledge as well as intermediates.

From technology diffusion to national upgrading – the role of absorptive capacity





Policy environment critical to support GVCs

Policy priorities critical differ by stages of GVC participation

Securing entry to GVCs

- Hard Infrastructure: connectivity , energy and logistics
- Domestic regulatory reforms
- Trade and investment liberalization and trade facilitation
- Skill upgrading from agriculture skills to manufacturing skills

Expanding participation in GVCs

- Competitive environment and strong domestic services
- Preferential trade agreements to support regional integration
- Soft infrastructure: open financial services backed by strong regulation, education and training to increase absorptive capacity of firms and workers, ICT development

Upgrading within GVCs and creating new GVCs

- Building innovative, human and firm capital
- Governance and intellectual property protection
- Harmonization of rules and standards with international norms
- Openness to FDI and imported technology