



**Asia-Pacific  
Economic Cooperation**

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## **Role of Services in Global Value Chain**

Submitted by: Mandiri Institute



**Symposium on Services Trade  
Singapore  
30 May – 1 June 2018**

# **Role of Services in Global Value Chain**

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**APEC Symposium in Services Trade**  
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# Outline

**01** Services Sector in Global Value Chain

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**02** Indonesia's participation in Global Value Chain

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**03** Impacts of services in Global Value Chain

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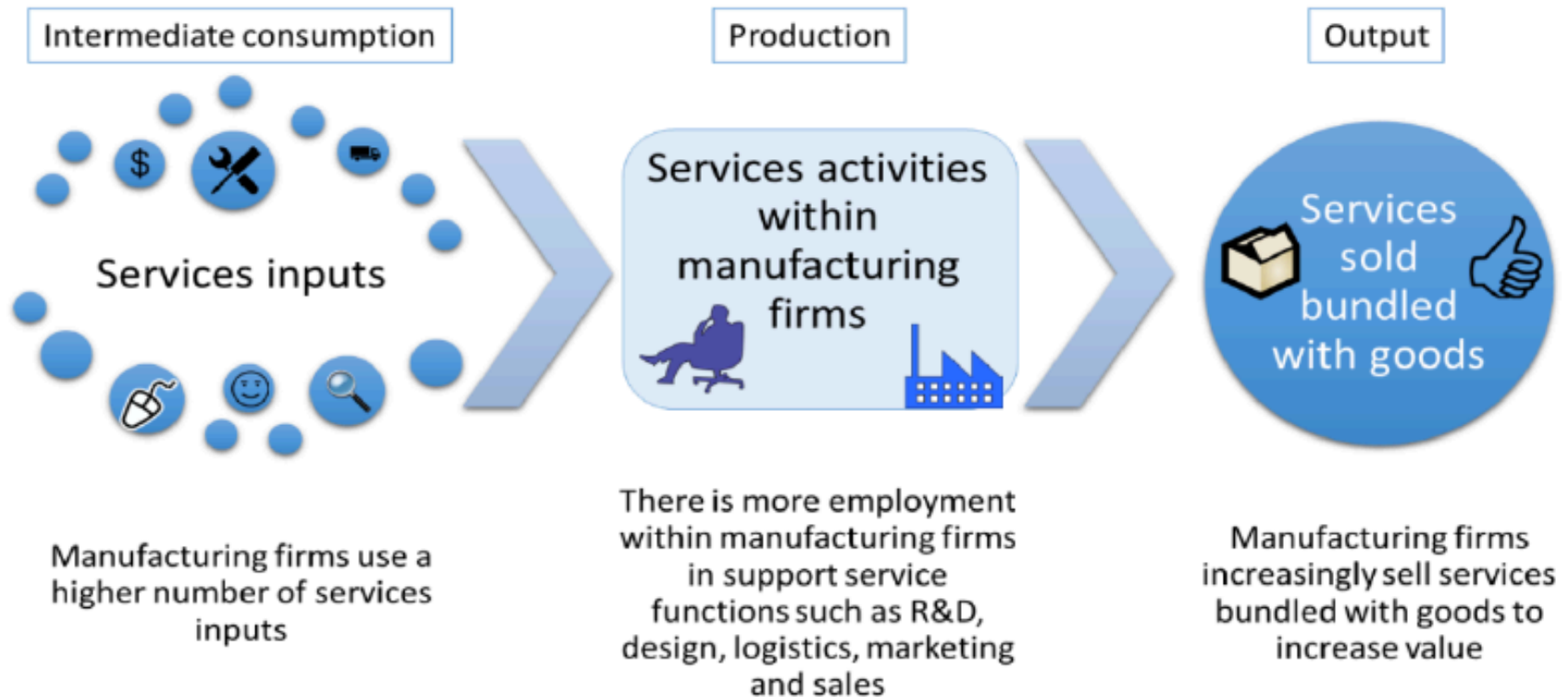
**04** Conclusion

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# 01 | Services Sector in Global Value Chain

# Servicification of Manufacturing

## Using services in the manufacturing process



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## Role of Services in GVC

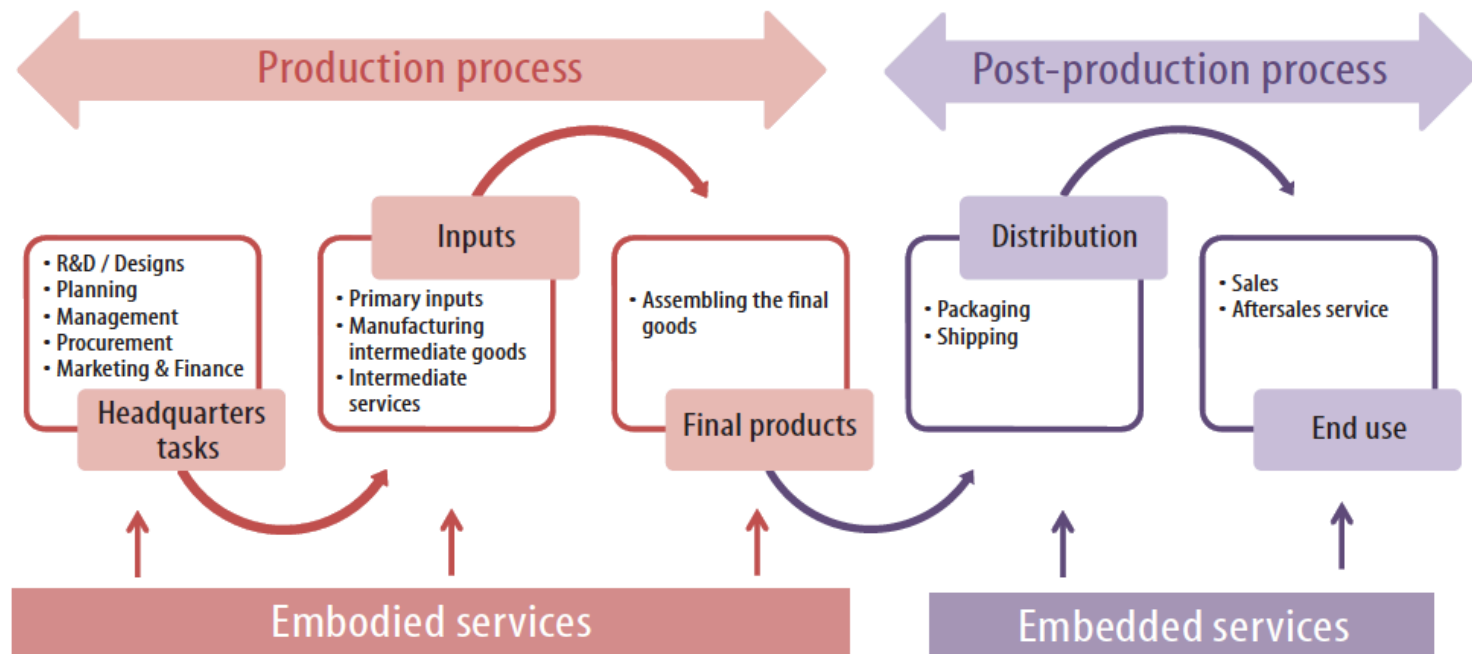
**Enablers**

**Embedded services** inputs adding value during the postproduction process

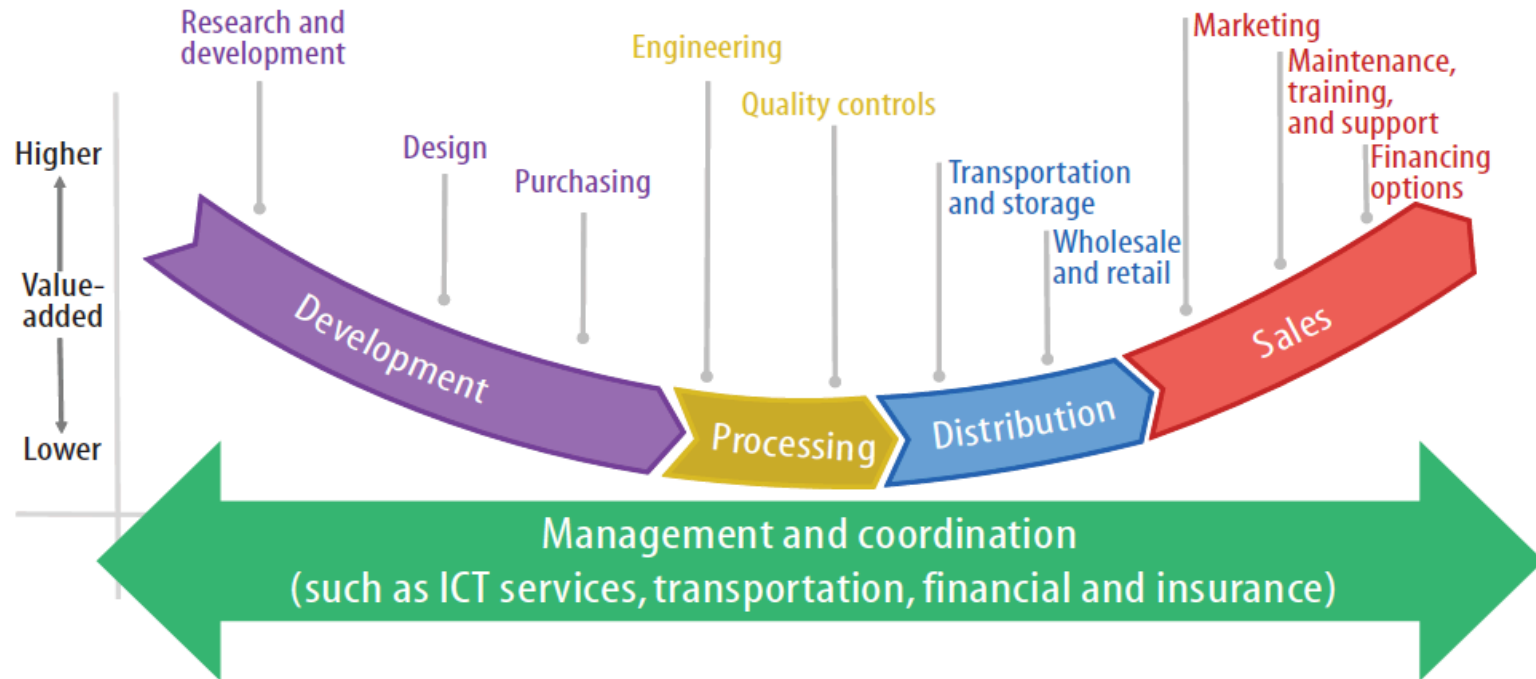
**Tasks**

**Embodied services:** inputs adding value during the production of other goods and services

# Role of Services in Manufacture



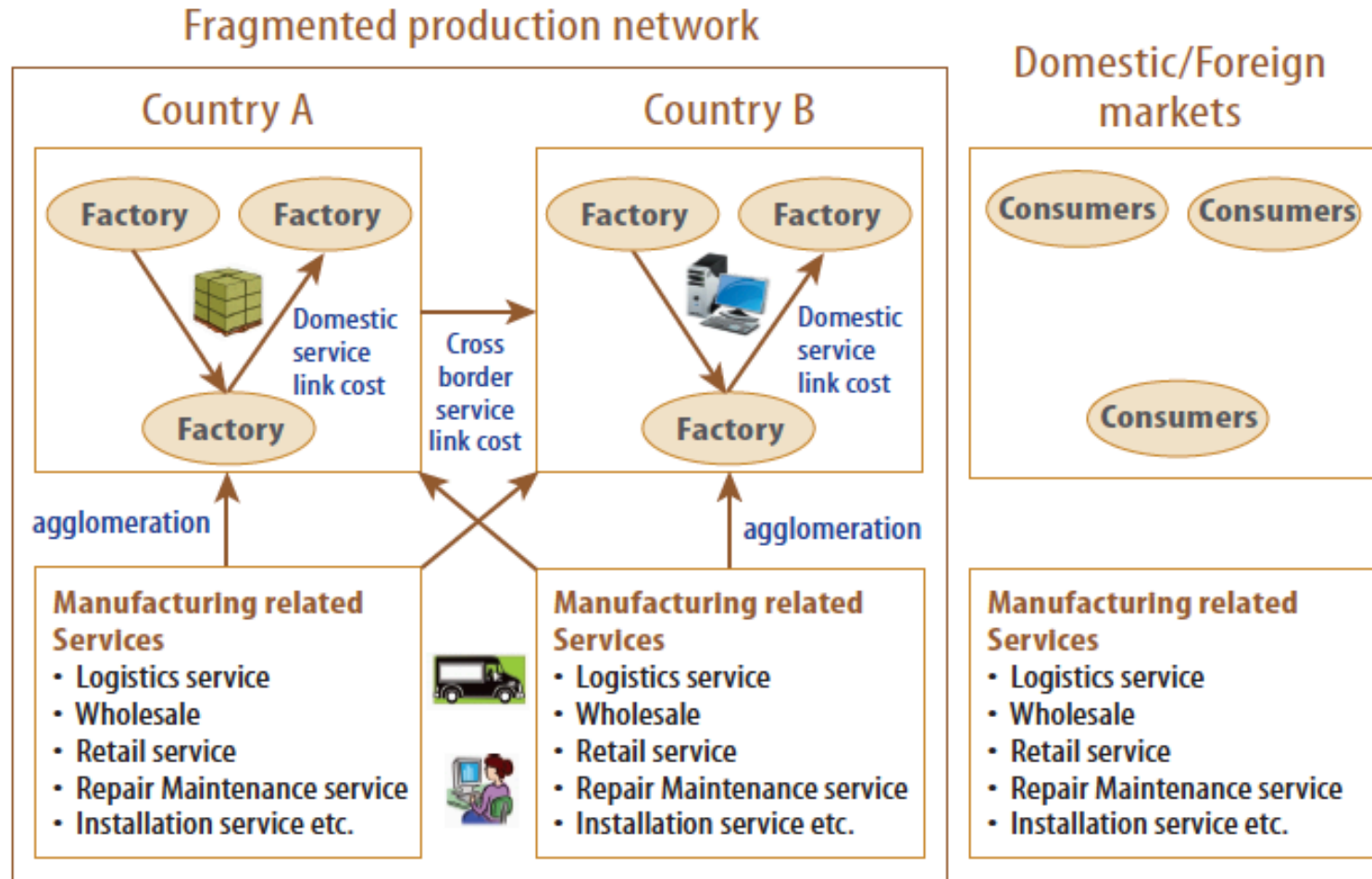
# Service inputs in the value addition process



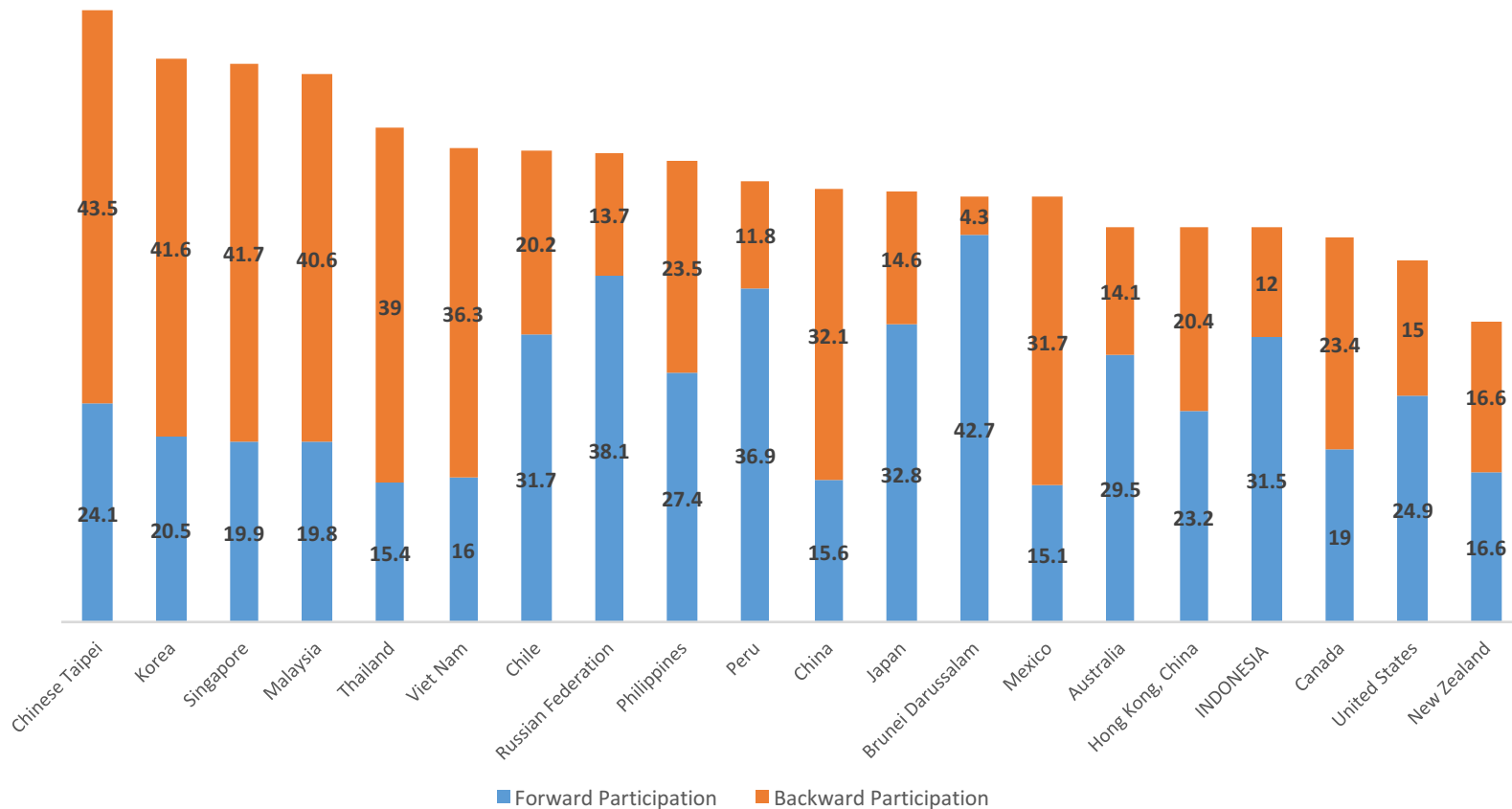
Source: ESCAP adaptation from the Conference Board of Canada, 2015.



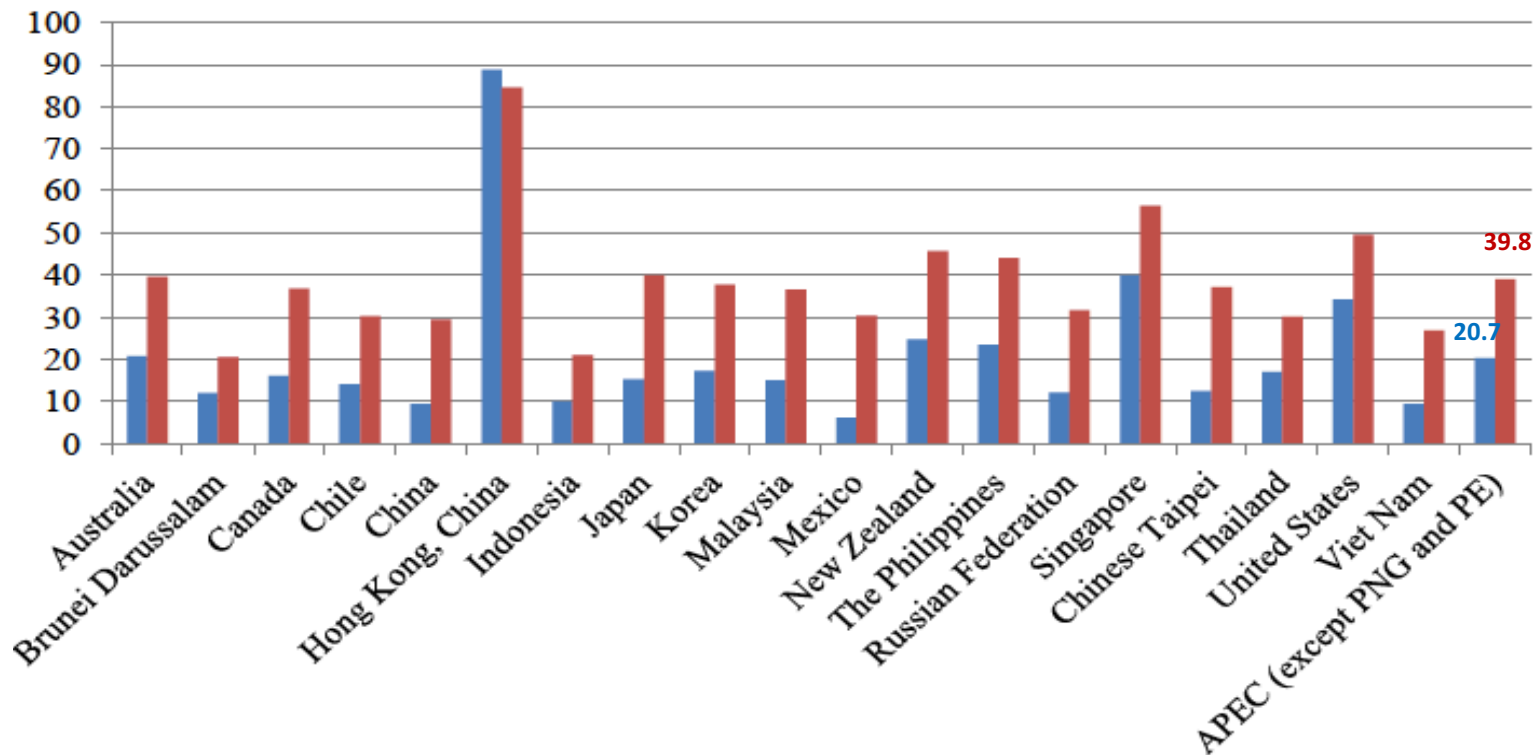
# Manufacturing-related services in GVC



# GVC Participation Index, 2011



# Shares of services in exports, 2009 (%)



Note:

**Services Industries in Gross Exports** include exports from Wholesale and retail trade; Hotels and restaurants; Transport and storage, post and telecommunication; Financial intermediation; Business services; and Other services.

**Services Value Added Embodied in Gross Exports** include Direct domestic service industry value added content of gross exports; Indirect domestic services content of gross exports (originating from domestic intermediates); Re-imported domestic services value added content of gross exports; and Foreign services value added content of gross exports.

# 02

## Indonesia's participation in Global Value Chain

# Indonesia: GVC Participation Index

	Indonesia	Developing economies	Developed economies
Total GVC participation	43.5	48.6	48
Forward participation	31.5	23.1	24.2
Backward participation	12.0	23.5	23.8

## Forward GVC participation, 2011

Top exporting industries to GVCs

1. Mining	49.5
2. Wholesale and retail trade	12.7
3. Agriculture	5.4

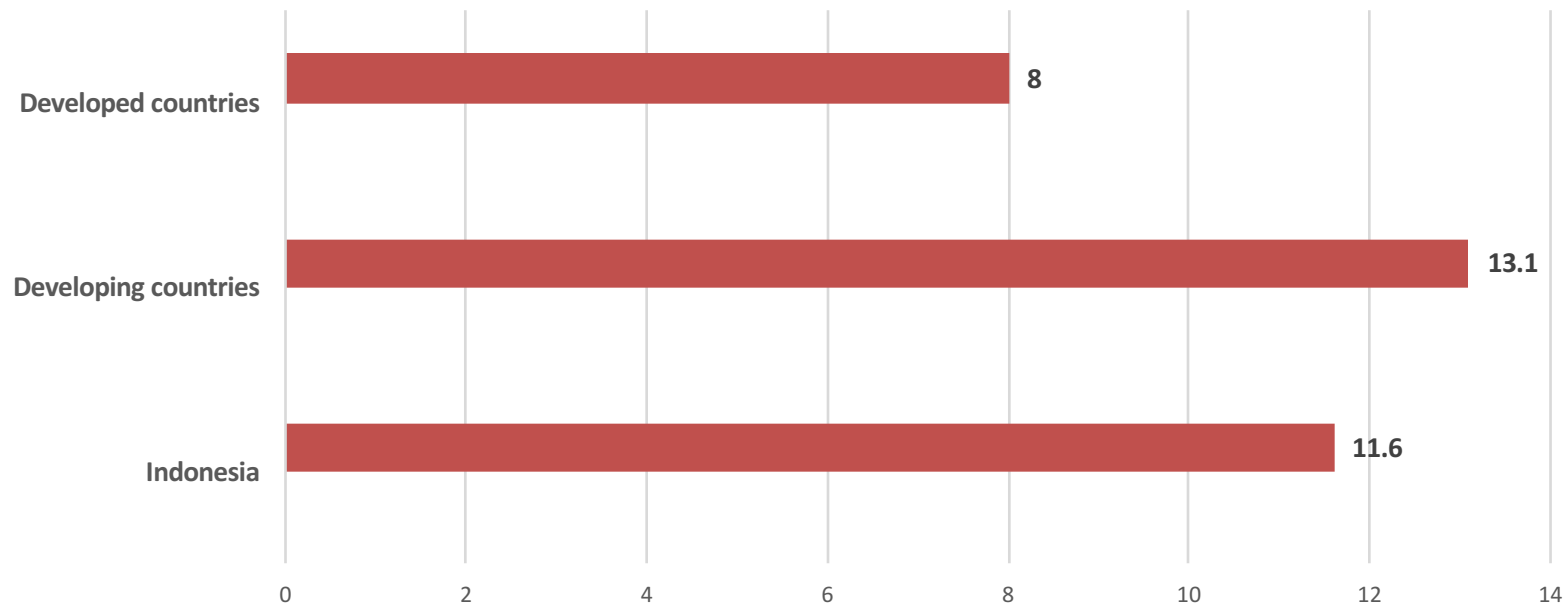
## Backward GVC participation, 2011

Top exporting industries to GVCs

1. Mining	11.4
2. Basic metals	10.6
3. Chemical products	8.6

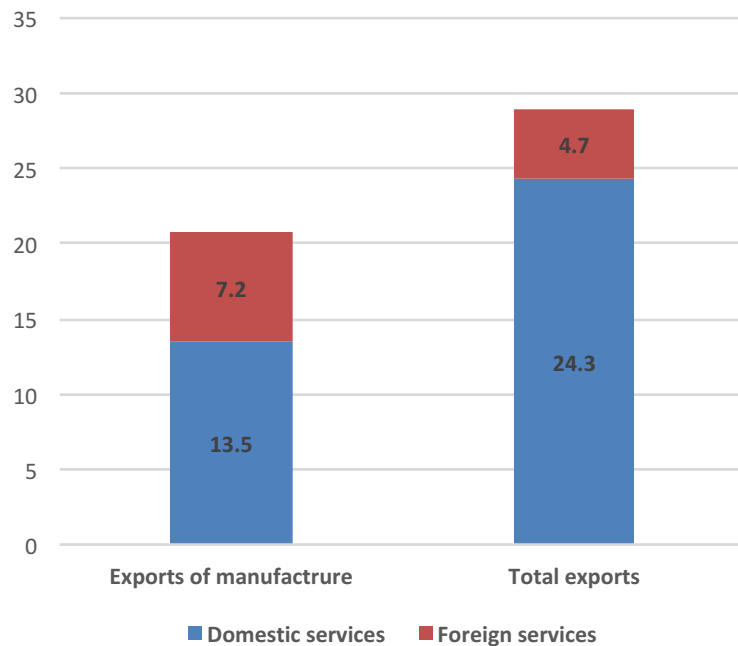
# Evolution of GVC participation, 1995 – 2011

(annual % change)

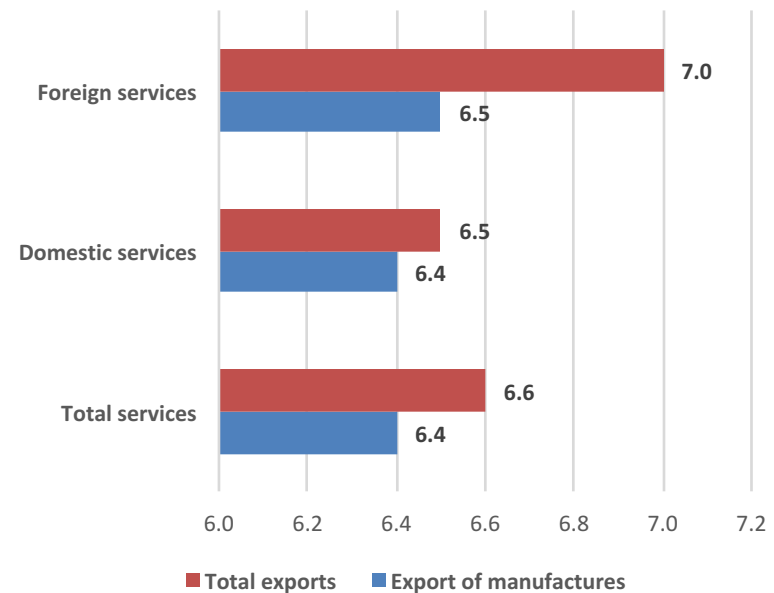


# The services VA content of exports by origin, 2011

Service VA content of exports by origin, 2011



Evolution of services VA content of exports, 1995 - 2011, annual percentage change



# Service VA contribution to exports

## Services VA contribution to exports of manufactures

Top services industries contributing to exports of manufactures, 2011

1. Wholesale and retail	9.1		
2. Transport and storage	2.7		
3. Financial intermediaries	2.4		

## Services VA contribution to total exports

Top services industries contributing to total exports, 2011

1. Wholesale and retail	14.5		
2. Transport and storage	3.4		
3. Financial intermediaries	2.2		

## Trade in merchandise and commercial service intermediaries

(Billion \$, and annual % change)

	2014	Share in total	1995 - 2014	2005 - 2015
Merchandise exports in intermediaries	83.4	66.1	7.7	8.2
Merchandise imports in intermediaries	94.3	70.0	6.8	14.2
Intermediate commercial service exports	7.2	31.3		6.6



# 03 | Impacts of services in Global Value Chain

# Impacts on productivity

- Greater openness and improved regulations leading to dramatic growth in domestic and foreign direct investment
- Firms have access to a better, newer, more reliable and more diverse business services
- This access enhances firms' ability
  - to invest in new business opportunities and better production technology
  - to exploit economies of scale by concentrating firm location
  - to effectively manage inventories; and
  - to coordinate decisions with suppliers and consumers
- Some empirical studies:
  - Arnold and others, 2016: India competitive reforms in banking, transportation, insurance and telecommunication boosted the productivity of both foreign and domestic owned firms
  - Hoekman and Mattoo, 2008: low cost, high quality produces services can promote productivity and economic growth
  - Arnold, Javorcik and Mattoo, 2011: positive impacts of productivity of domestic firms in downstream manufacturing as a result of services sector reforms leading to greater FDI in Czech Republic

# Impacts on comparative advantages

- Since large parts of good trades includes trade in services, the development of domestic services sector and access to imported inputs can improve comparative advantages on manufacture trade
- Both good and services sector compete for resources. Therefore increase in services sector can be at the expense of manufacture sector
- Some empirical studies:
  - Liu and others, 2017: calculate new Revealed Comparative Advantage (RCA) using domestic value added in gross export.
  - Domestic services has mixed effect on the RCA of manufacture export:
    - Low embodied services: services development reduces RCA
    - High embodied services: services development increase RCA
  - For countries with less develop services sector, manufacture export benefit more from access to foreign services inputs
  - Ju and Wei, 2010: lower services trade barriers can help developing countries bypass inefficient domestic services provision and promote their manufacture export through inter sectoral linkages

# 04 | Conclusion

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## Conclusion

- Service trade increased substantially in recent years and parts of it because of servicification: using services in manufacturing process through three types of activities:
  - Embedded services
  - Embodied services
  - Services sold bundled with goods
- Value added of services in manufacturing process is different in each stage: Smiley graph
- Indonesia's participation in GVC is relatively low compared to other APEC economies. Forward participation is higher than backward participation especially from mining sector
- Domestic services sector dominates Indonesia export because of limited access to foreign services
- Services sector impacts GVC through productivity and comparative advantages of manufacture export



**THANK YOU**