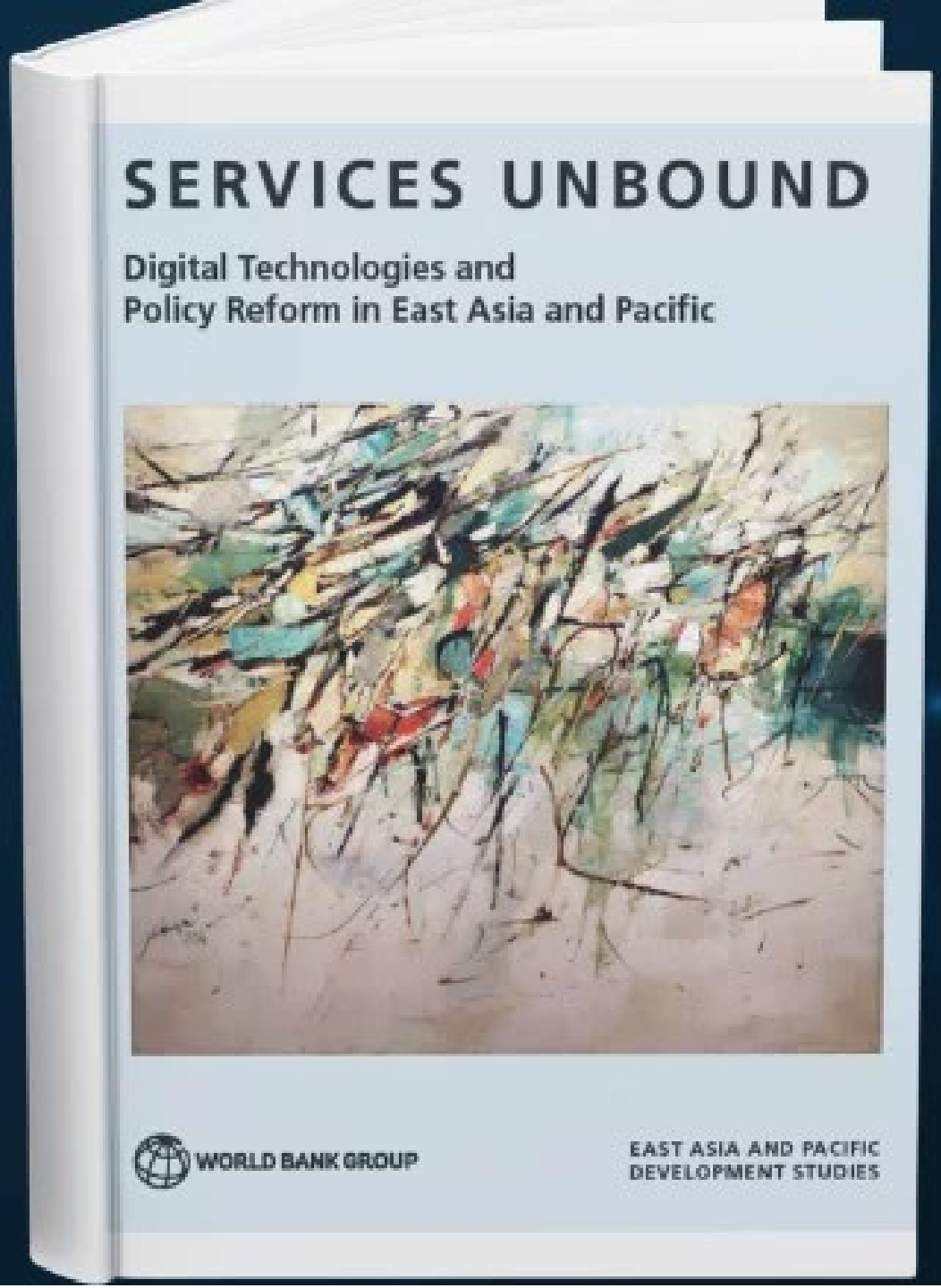


Services Unbound

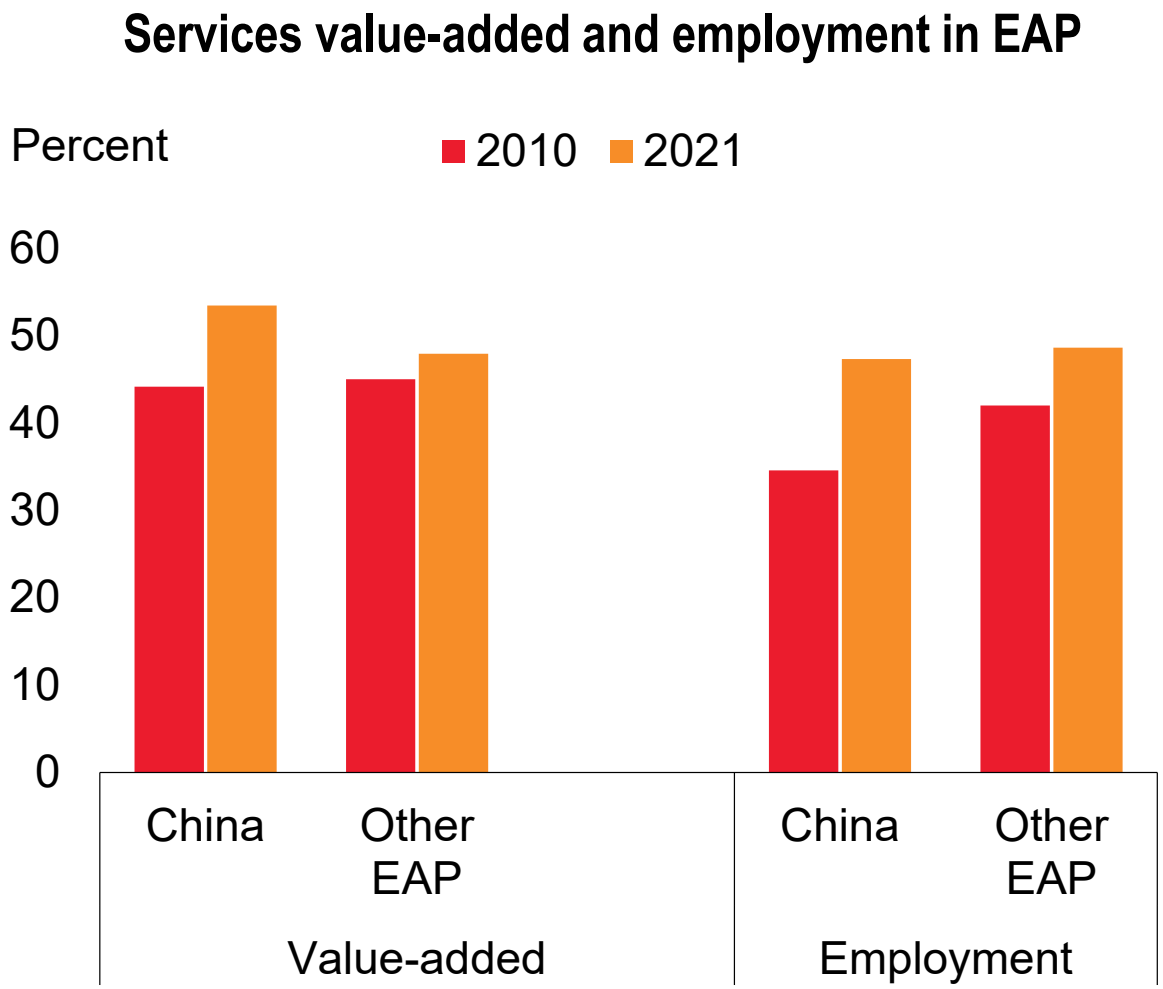
Digital Technologies and
Policy Reform in East Asia and Pacific

Introduction: Seven Facts about Services in the EAP

A Rainbow of Facts about Services in the EAP

1. The share of services in both value added and employment increased significantly in the last years
2. Services are now key contributors to aggregate productivity growth
3. Exports and FDI in services have grown faster than in manufacturing in the last decade
4. Expenditure on services increases with income levels (predicted future increase in demand)
5. Services are more skill-intensive than manufacturing
6. Services are less carbon-intensive than manufacturing (except transport)
7. Female employment ratio increases with development faster in services than in manufacturing

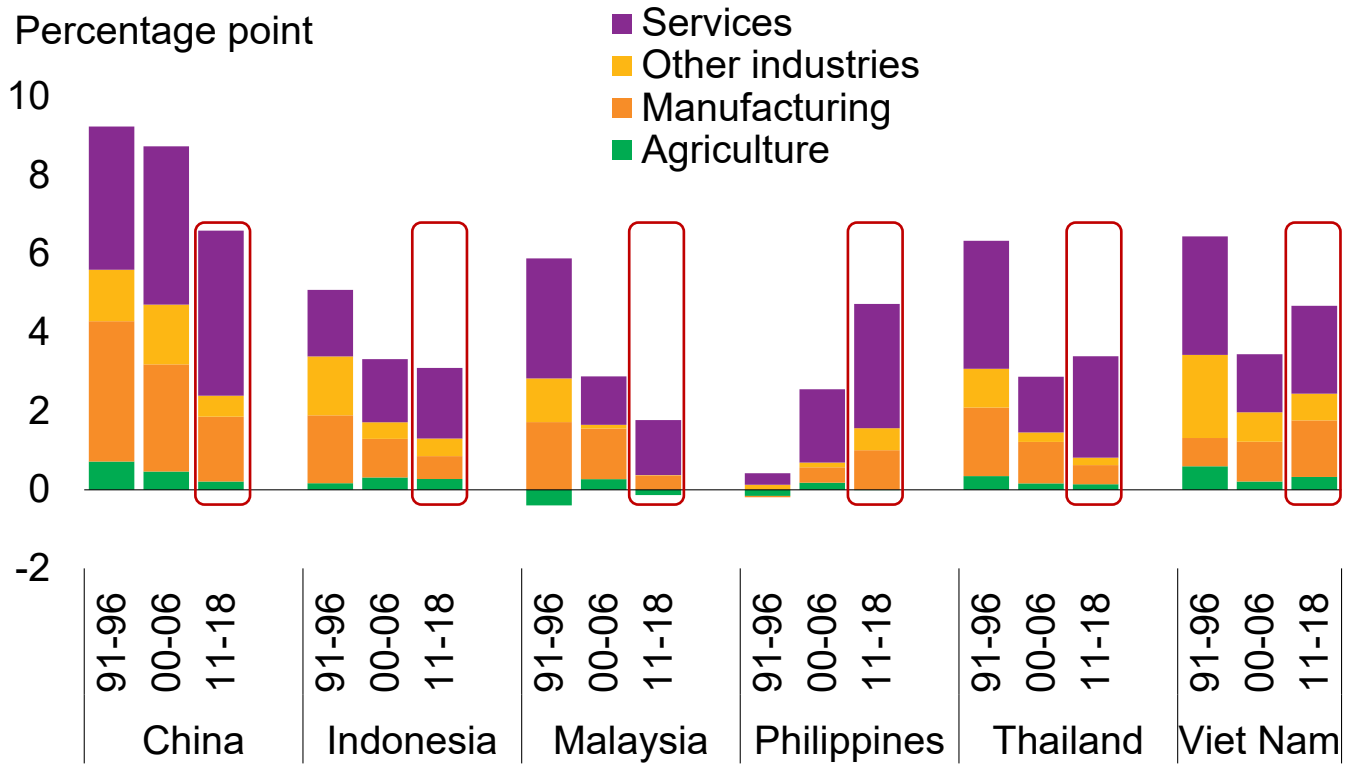
FACT 1: In recent years, the share of services in both value added and employment increased in the EAP countries



Source: WDI, ILOSTAT

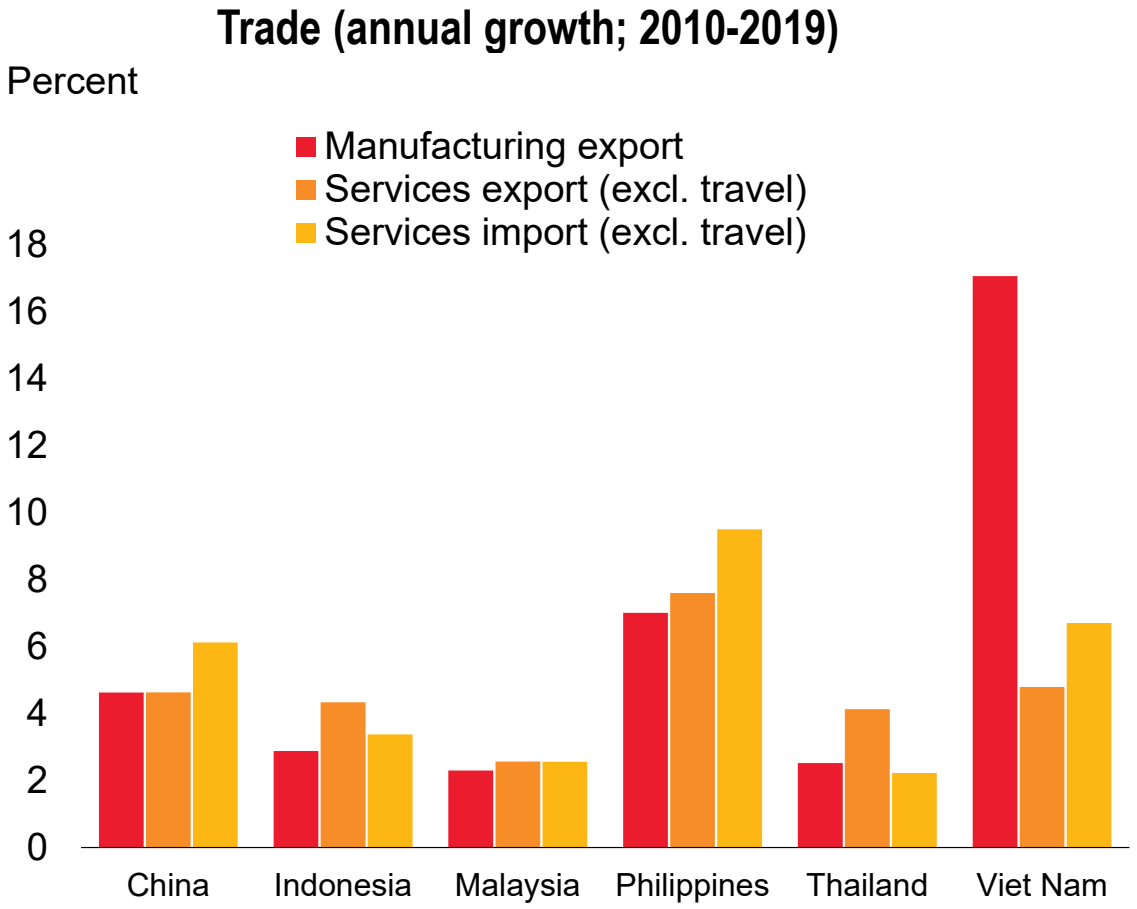
Fact 2: Services are key contributors to aggregate productivity growth

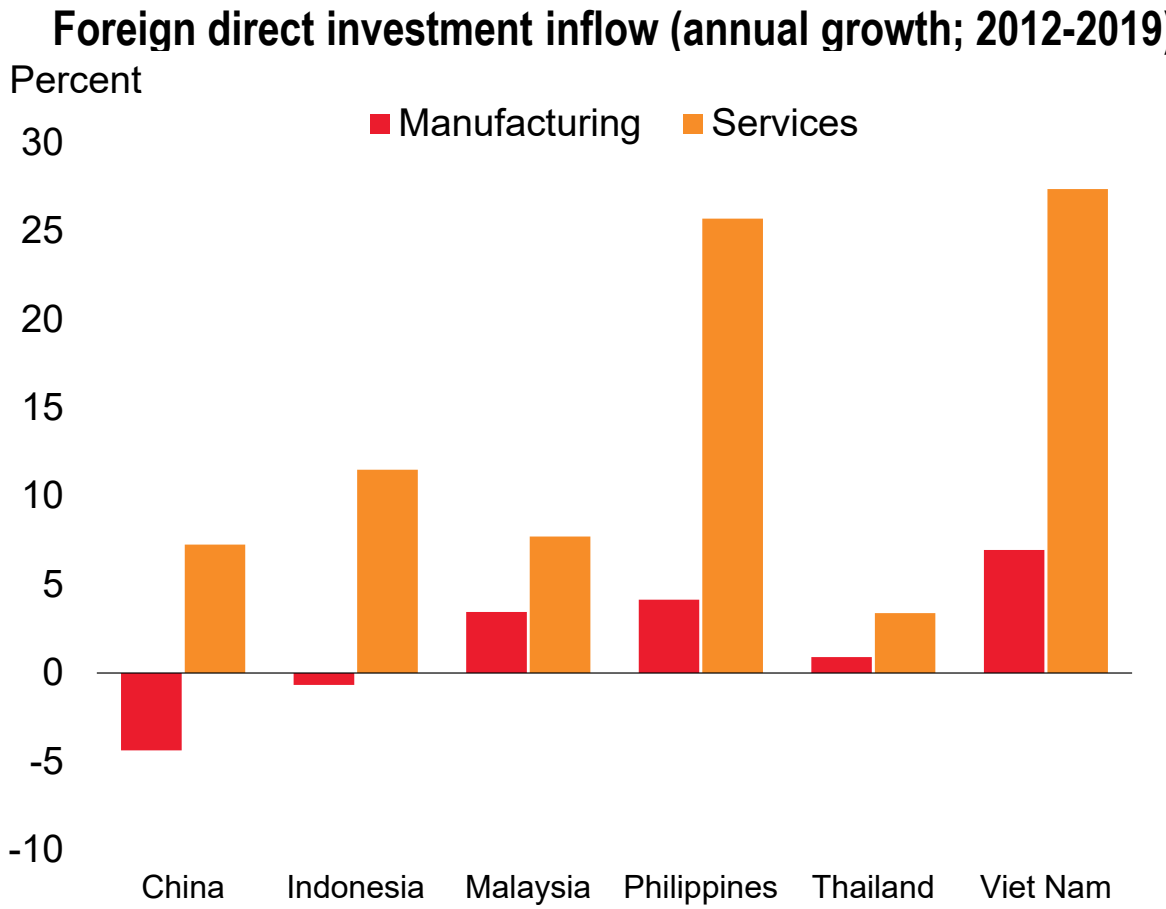
Contribution to growth in labor productivity (annualized)



Source: WDI

Fact 3: Both exports and FDI in services (even excluding tourism) have grown faster than in manufacturing in most EAP countries

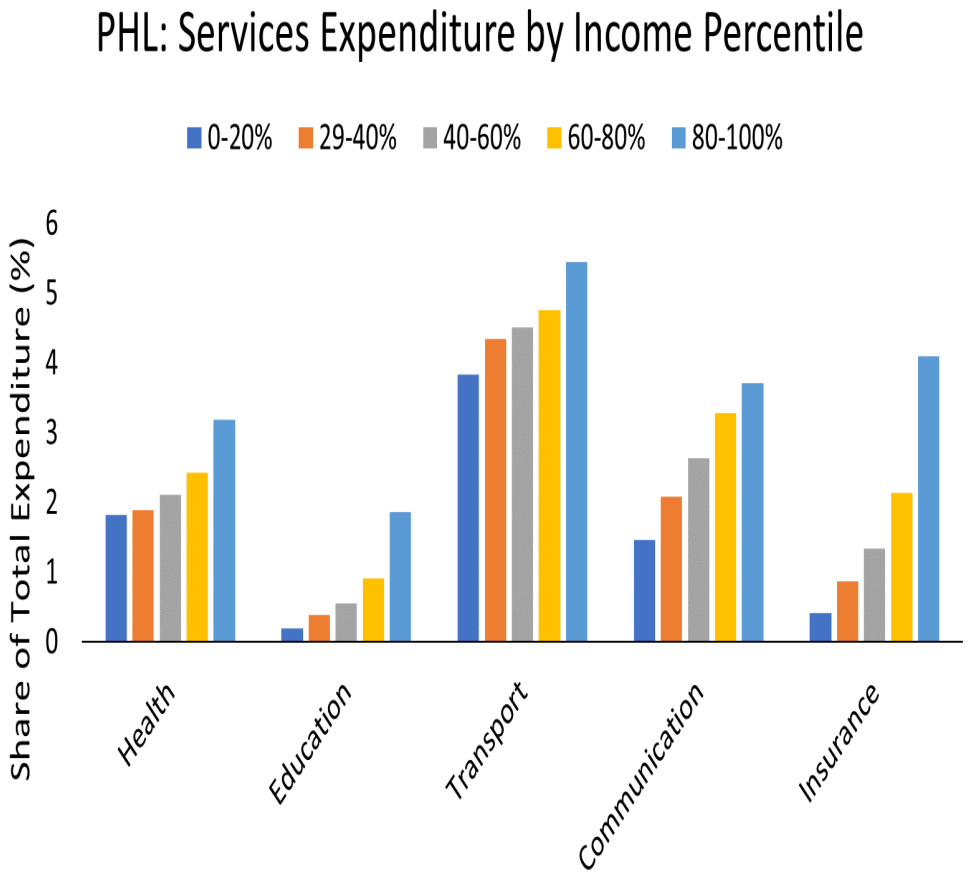


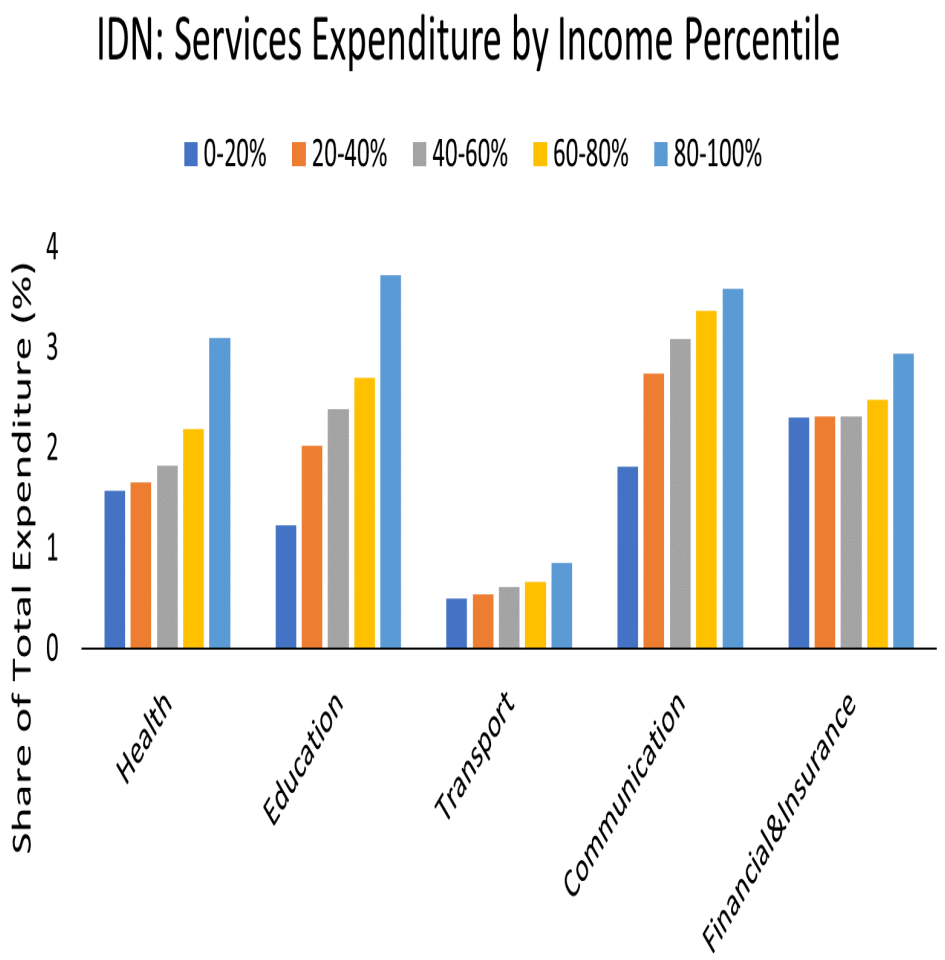


Source: Haver Analytics, World Development Indicators

Note: B. shows average annual growth of 3-year moving-average FDI values, during 2012-2019, except for Vietnam (2014-2019) and Indonesia and Philippines (2013-2019).

Fact 4: Expenditure on services increase with income levels

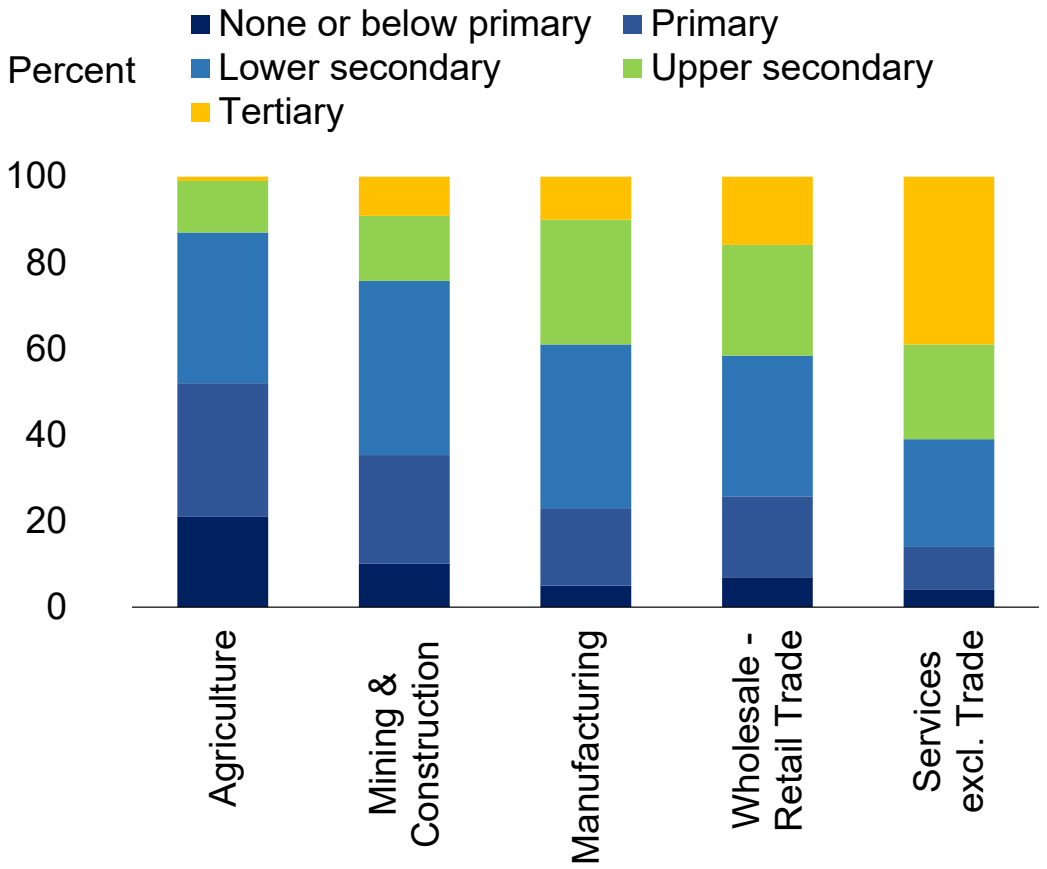




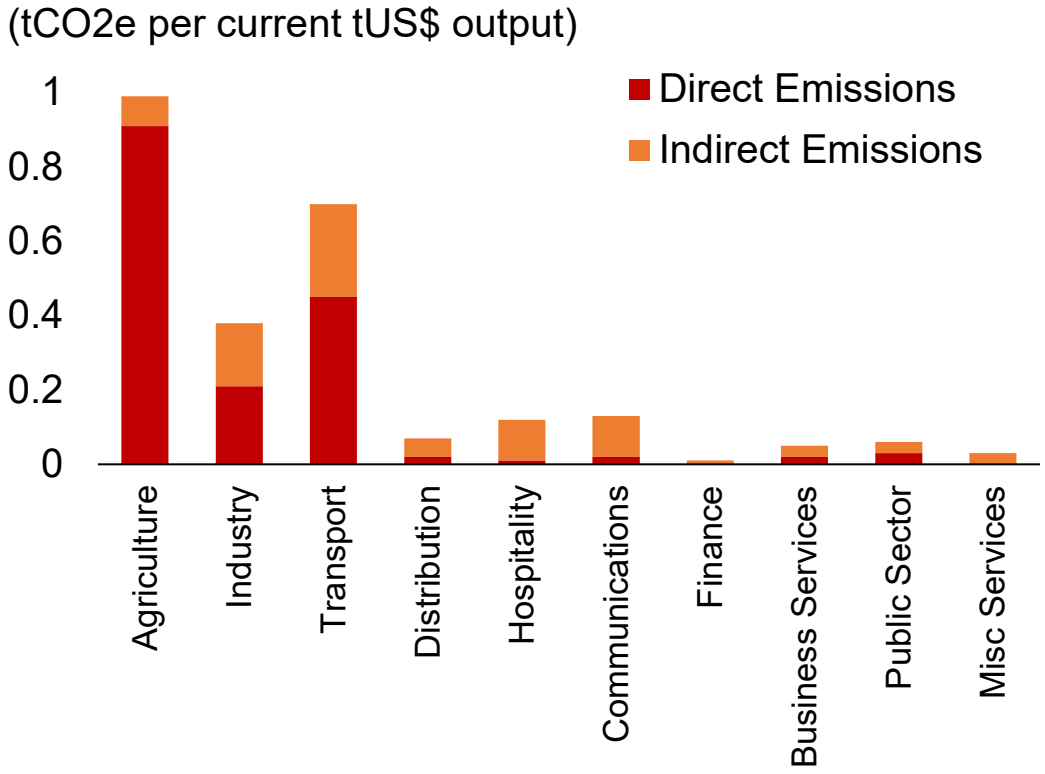
NoteThe Indonesian National Socioeconomic Survey (SUSENAS) and Family Income and Expenditure Survey (FIES) in P

Facts 5 and 6: Services are more skill-intensive and less carbon-intensive

Education levels by sector of employment, Vietnam

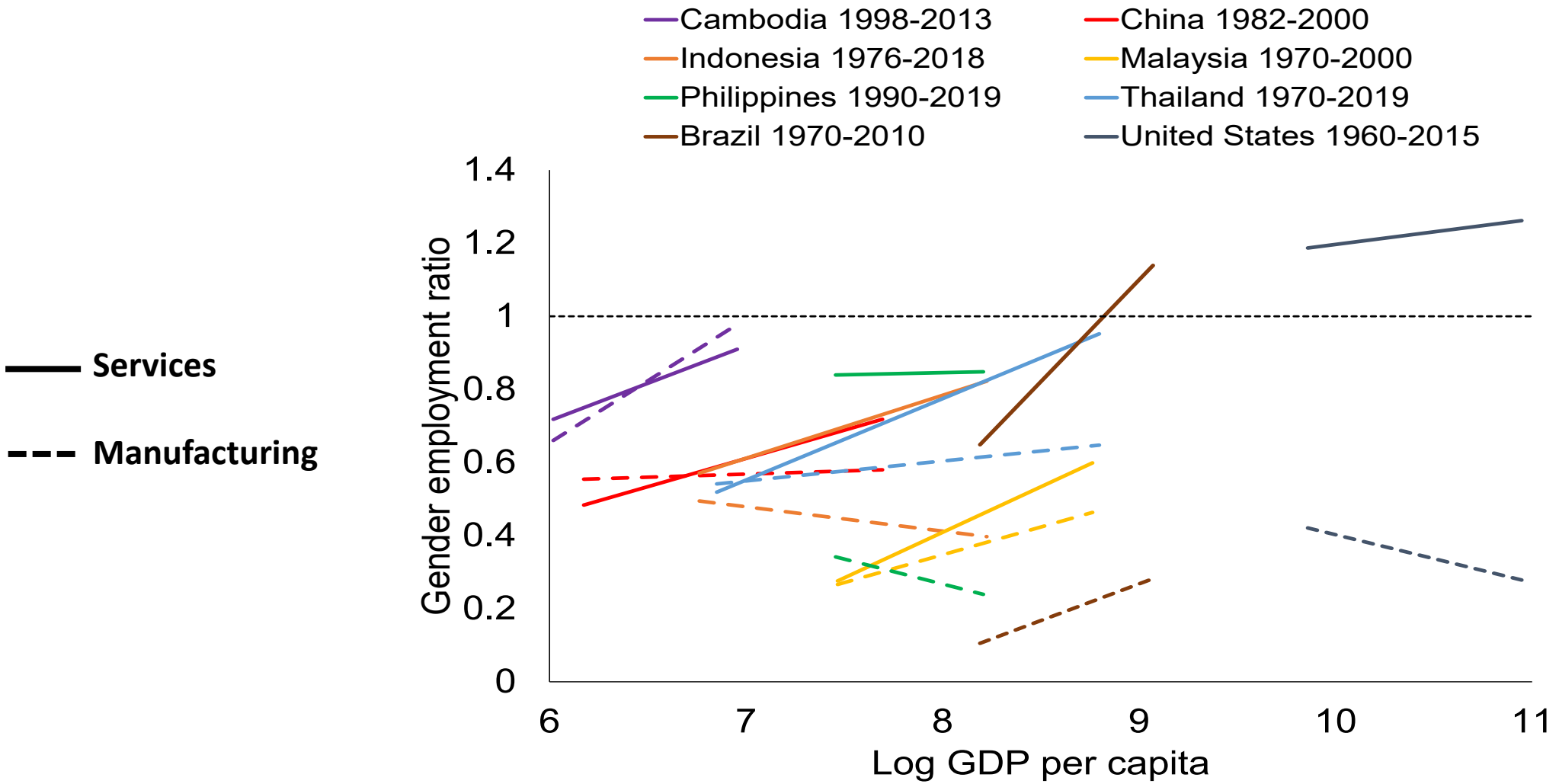


GHG emission intensity by sectors, China



Source: Vietnam Labor Force Survey 2021, EDGAR emissions data, GLORIA economic database.
Note: B. Emissions include CO2, CH4 and N2O.

Fact 7: Relative female employment increases with development faster in services than in manufacturing



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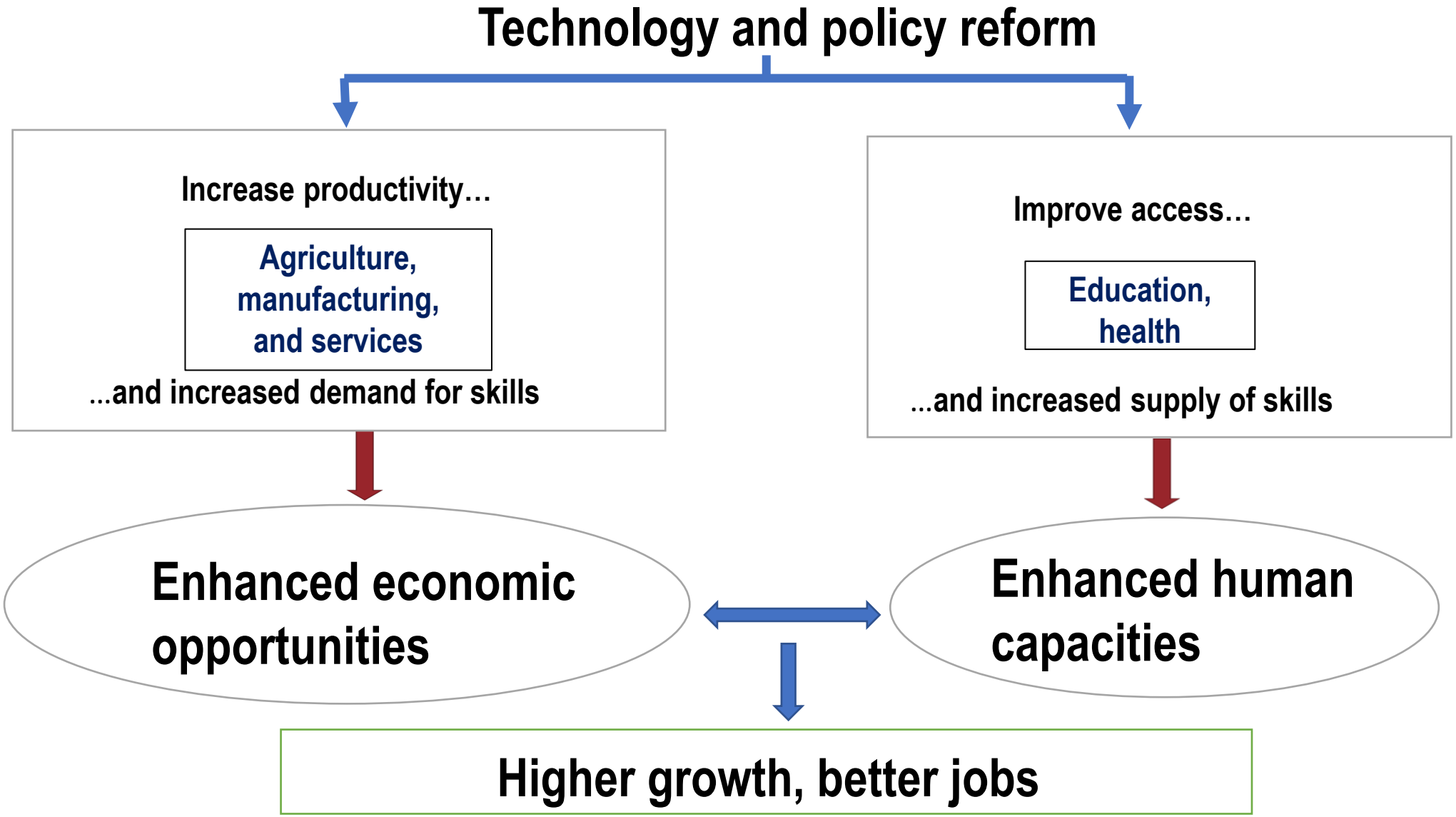
Source: analysis based on Chiplunkar and Kleineberg, 2023. For each country, the solid lines report the evolution by GDP per capita of the employment ratio of females to males in services. The dashed lines report the evolution of the same ratio in manufacturing.

An organizing framework



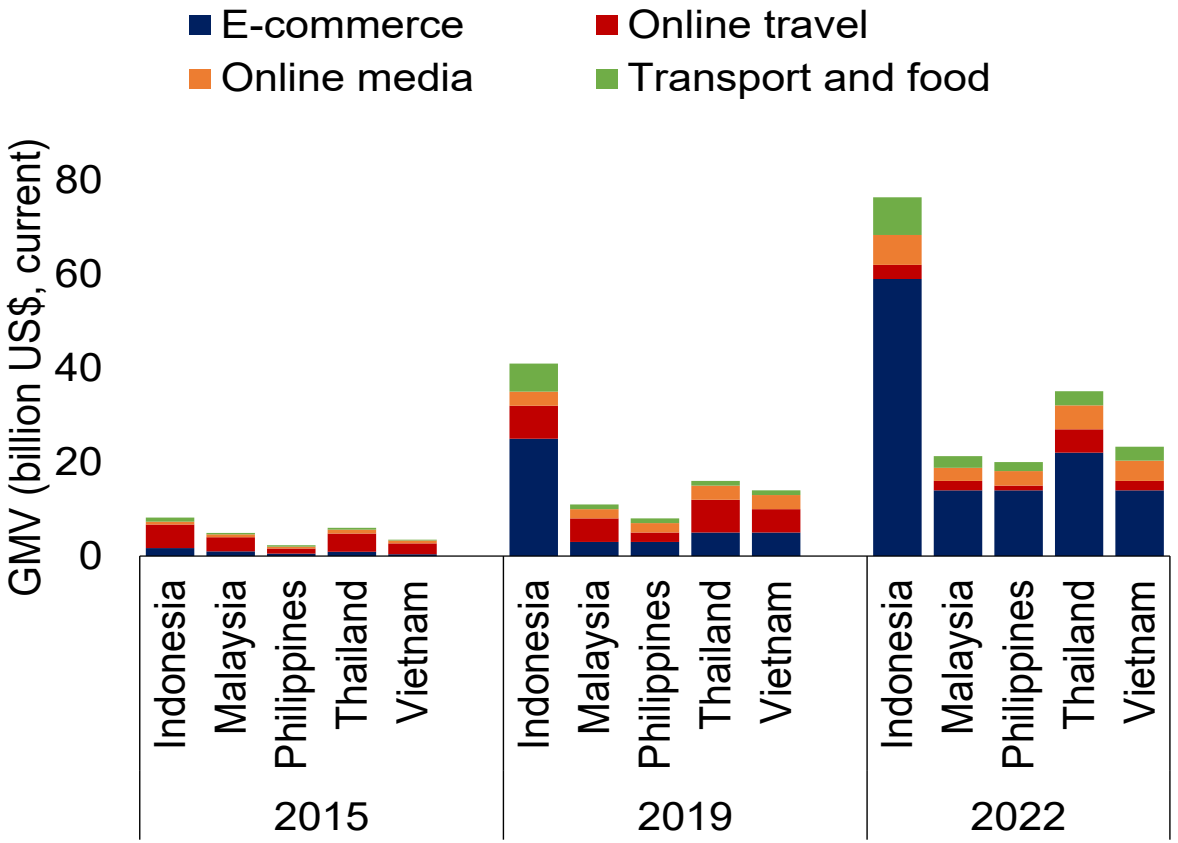
Outline

1. What is happening?
2. Why is it important?
3. What needs to be done?

What is happening?

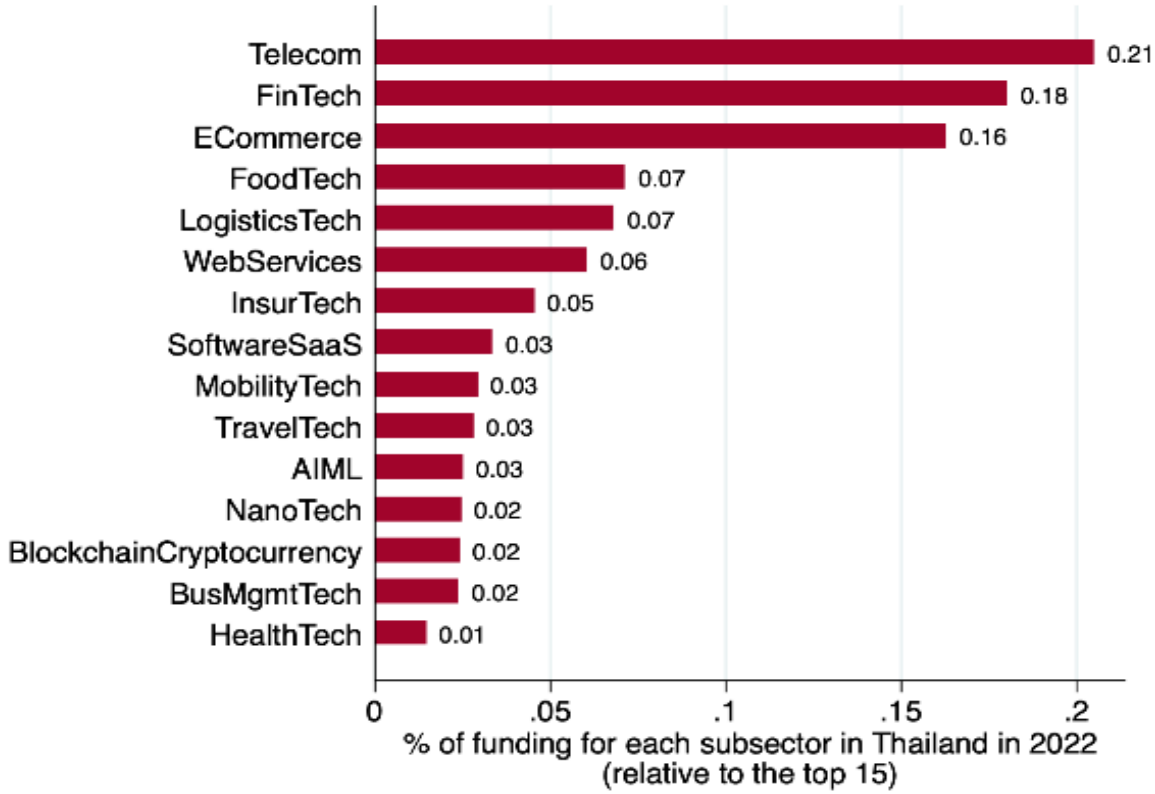
Digital economy is booming across the EAP region, close to 5-7% of GDP; Venture funds are flowing into a wide range of EAP services tech firms.

Gross Market Value of Digital Economy



Source:I Google-Temasek-Bain report on Digitalization in SEA 2016-2022. SEA: Indonesia, Malaysia, Philippines, Thailand, Singapore, Vietnam.

Share of venture funds by sector in Thailand : Evidence from a new database (DBD. 2022)



Source: FCI Global Digital Business Database

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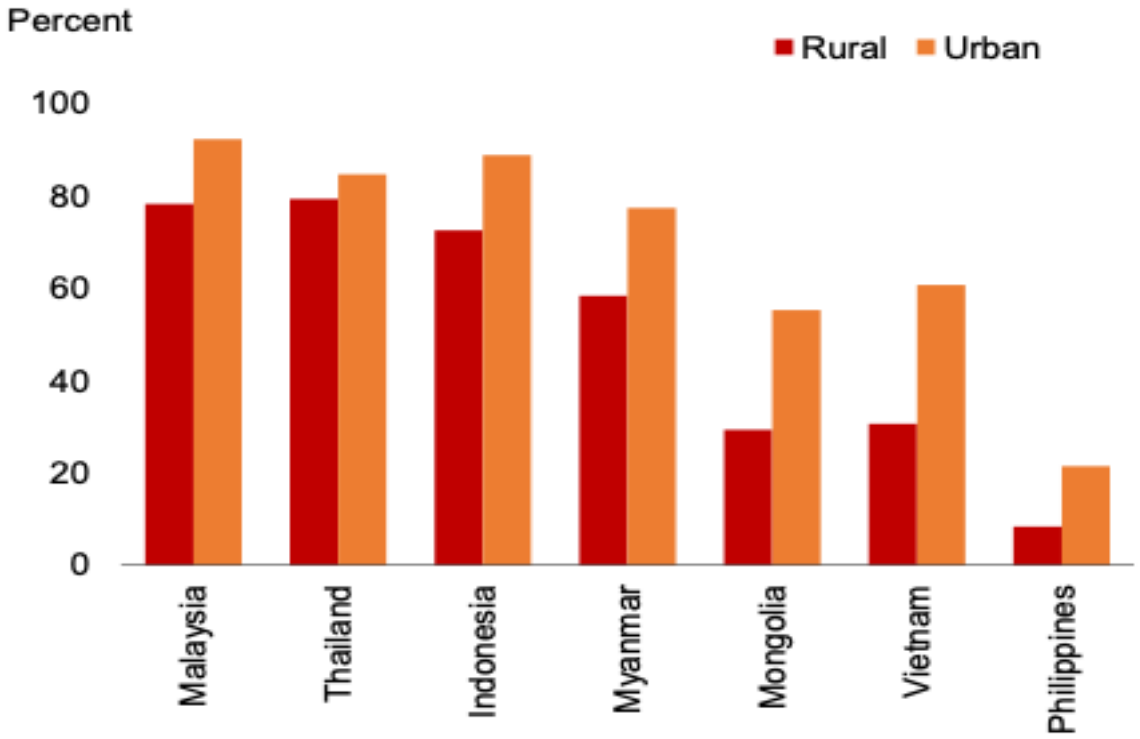
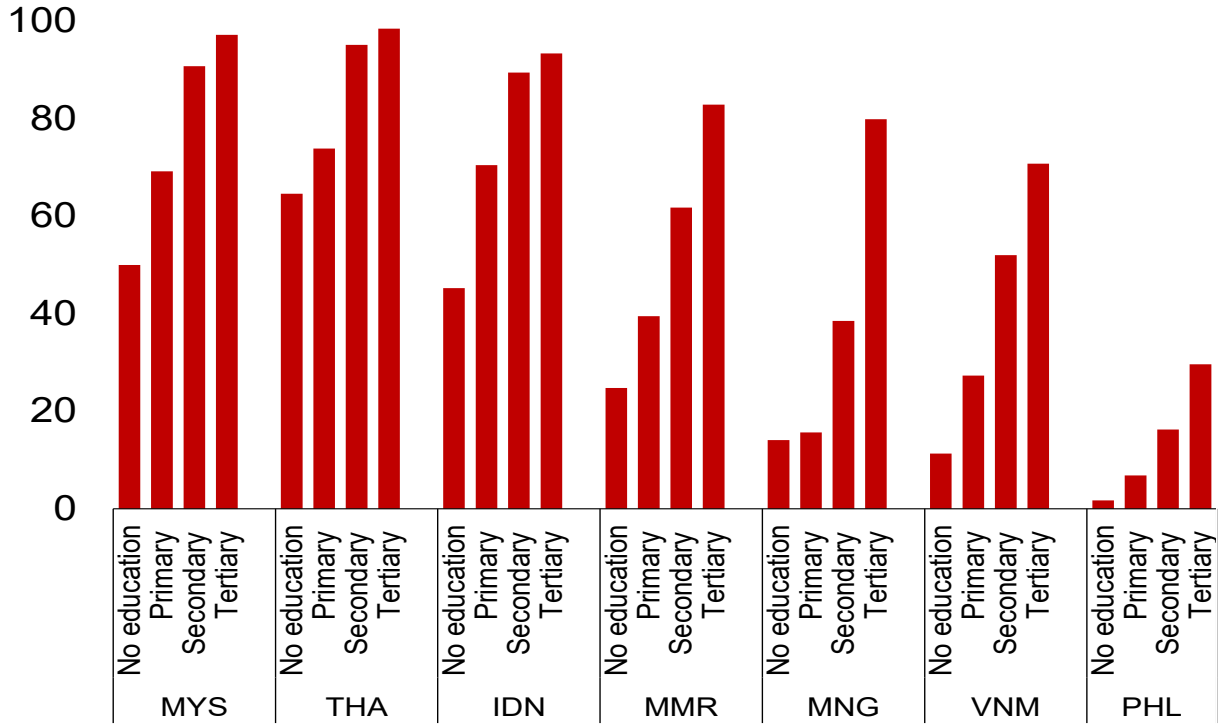
Access remains still very heterogeneous across geography, income, and education

Access to internet by urban/rural areas

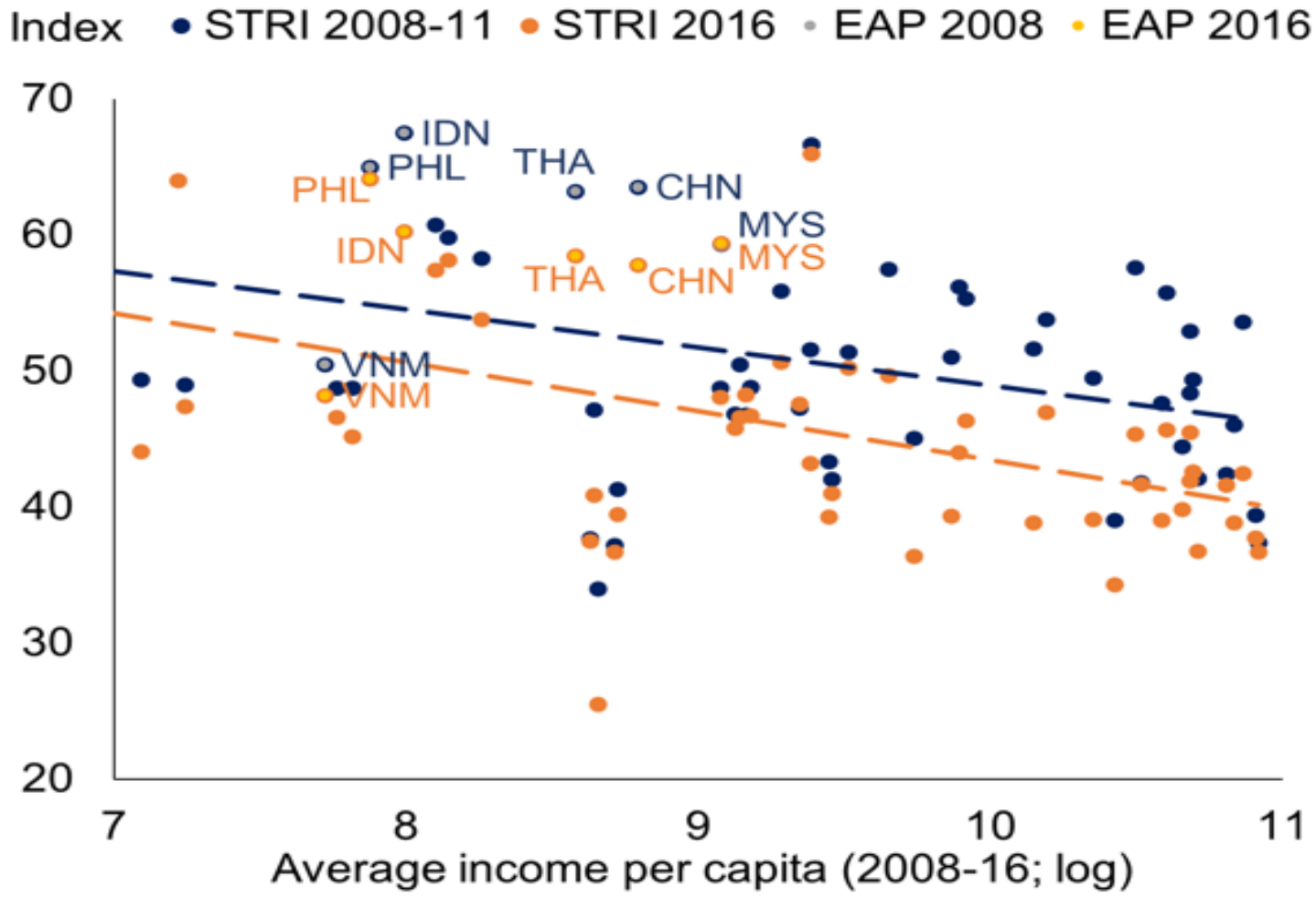


Access to internet by education quintiles



Source:World Bank East Asia and Pacific Team for Statistical Development using EAPPOV harmonized survey data from Indonesia SUSENAS 2022, Malaysia HIESBA 2019, Mongolia HSES 2018, Myanmar MLCS 2017, Philippines FIES 2021, Thailand SES 2021, and Vietnam VHLSS 2020.

Restrictions to Services Trade diminished in the post 2008- period

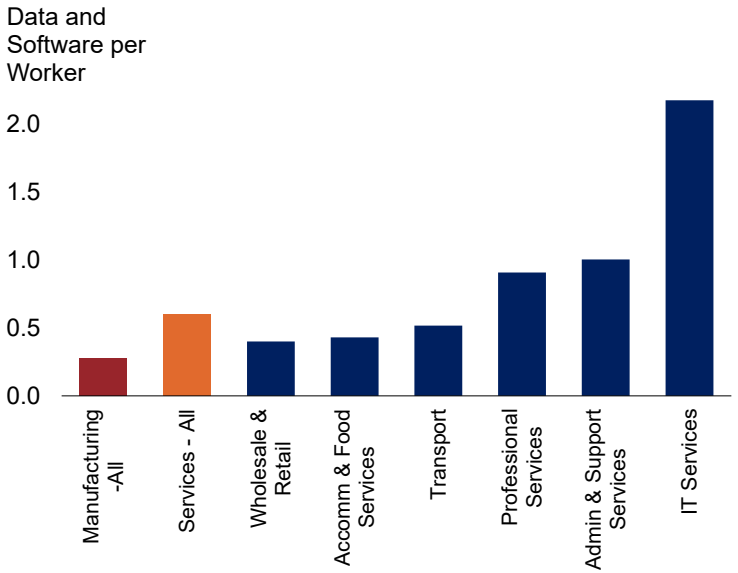


Source: WTO-WB STRI Database and WDI adapted from Borchert et al (2022b).

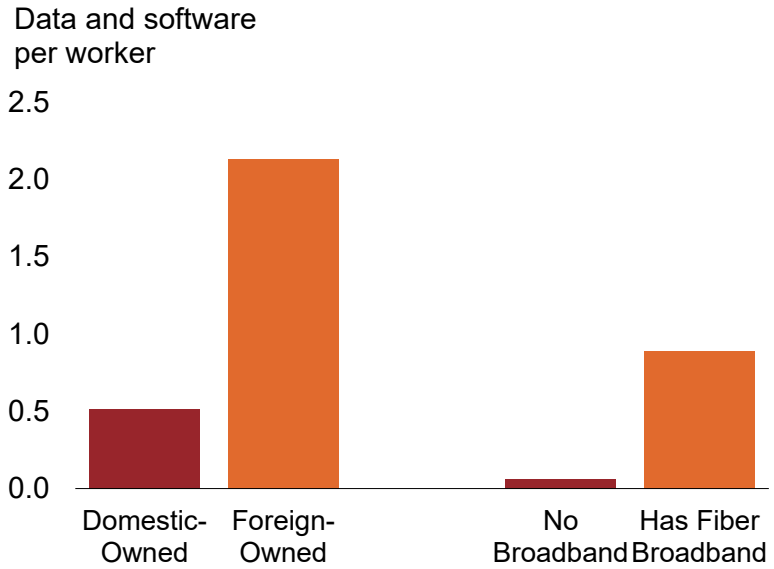
Why Do Digital Technologies and Policy Reform Matter?
1. Productivity

In the Philippines, the adoption of digital technologies boosted productivity of services firms

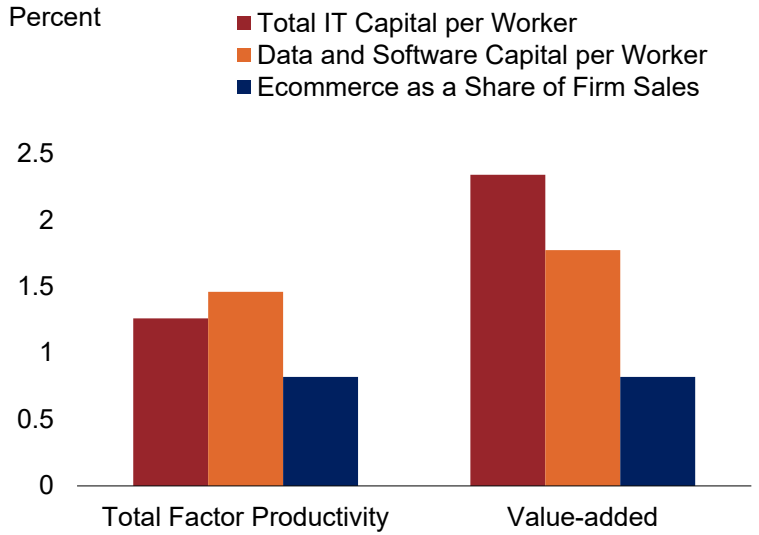
Services firms use more digital technologies…



…especially the foreign-owned and those with access to the broadband.



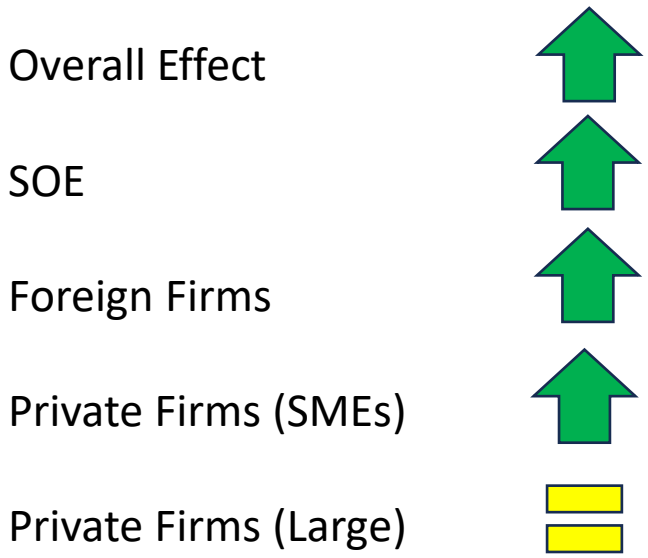
Use of digital technologies is associated with higher levels of productivity.



Source: Philippines Statistical Authority – ASPI, CPBI and SICT Databases and World Bank staff analysis.

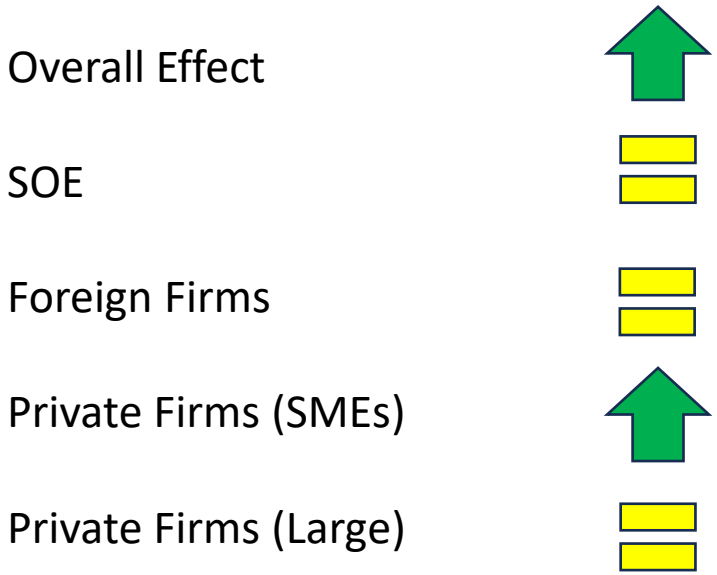
In Vietnam, removing barriers to entry and competition increased labor productivity of services firms, as well as manufacturing firms

Productivity effects of services liberalization on services firms (direct effect)



Average Productivity Effect: +2.9% yearly

Productivity effects of services liberalization on manufacturing firms (downstream effect)



Average Productivity Effect: +3.1% yearly

Source: World Bank staff estimation based on data from Vietnam enterprise surveys 2008 and 2016.

Story #1: Software exports from Viet Nam

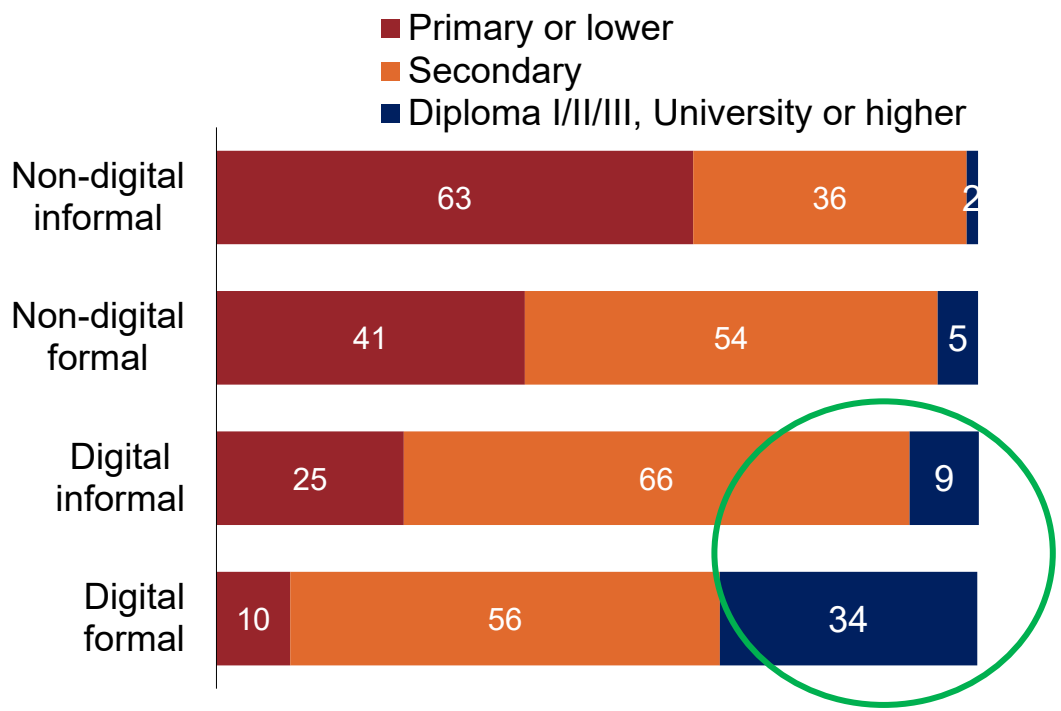
Can you give some specific examples of how you operate with the manufacturing customers?

"Many of our manufacturing clients need their processes migrated onto the latest systems and **now with the AI trend picking up steam, we are receiving requests to support manufacturing clients to implement their AI blueprints.** The most important value-add when it comes to serving manufacturing clients is industry knowledge, and **the ability to assemble large teams of high-quality engineers quickly.**"

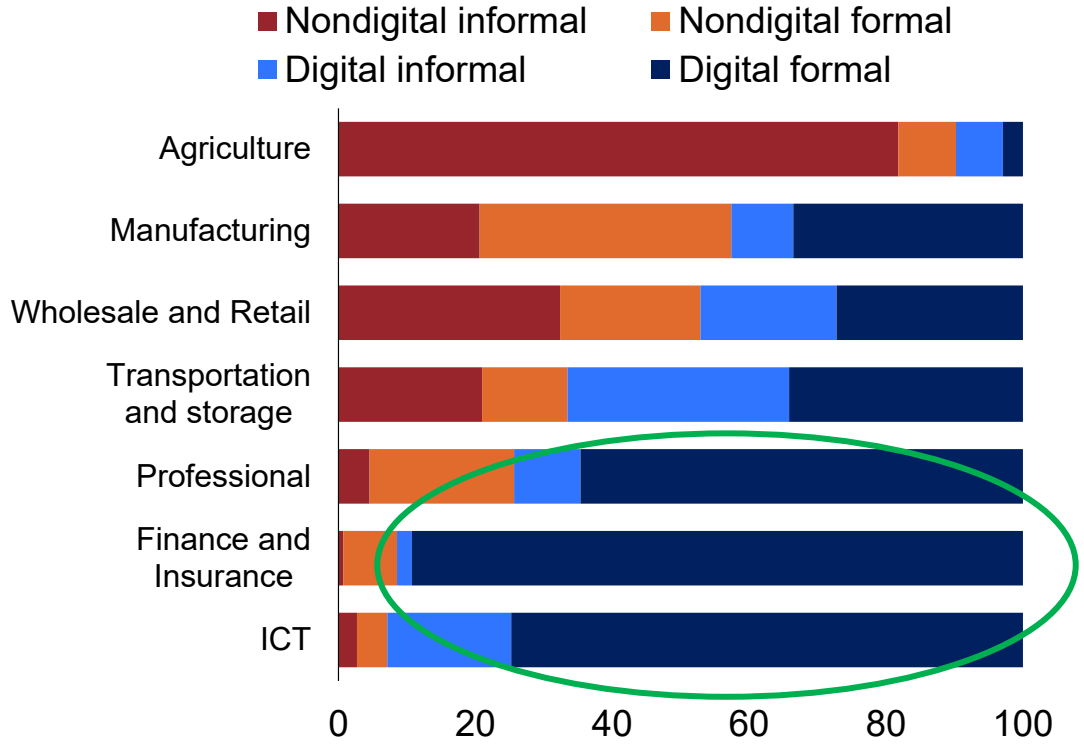
Why Do Digital Technologies and Policy Reform Matter?
2. Jobs and Skills

In Indonesia, digital jobs often require higher levels of education, and dominate the more technical service sectors

Share of educational levels, by employment type



Share of jobs involving digital technologies, by sector

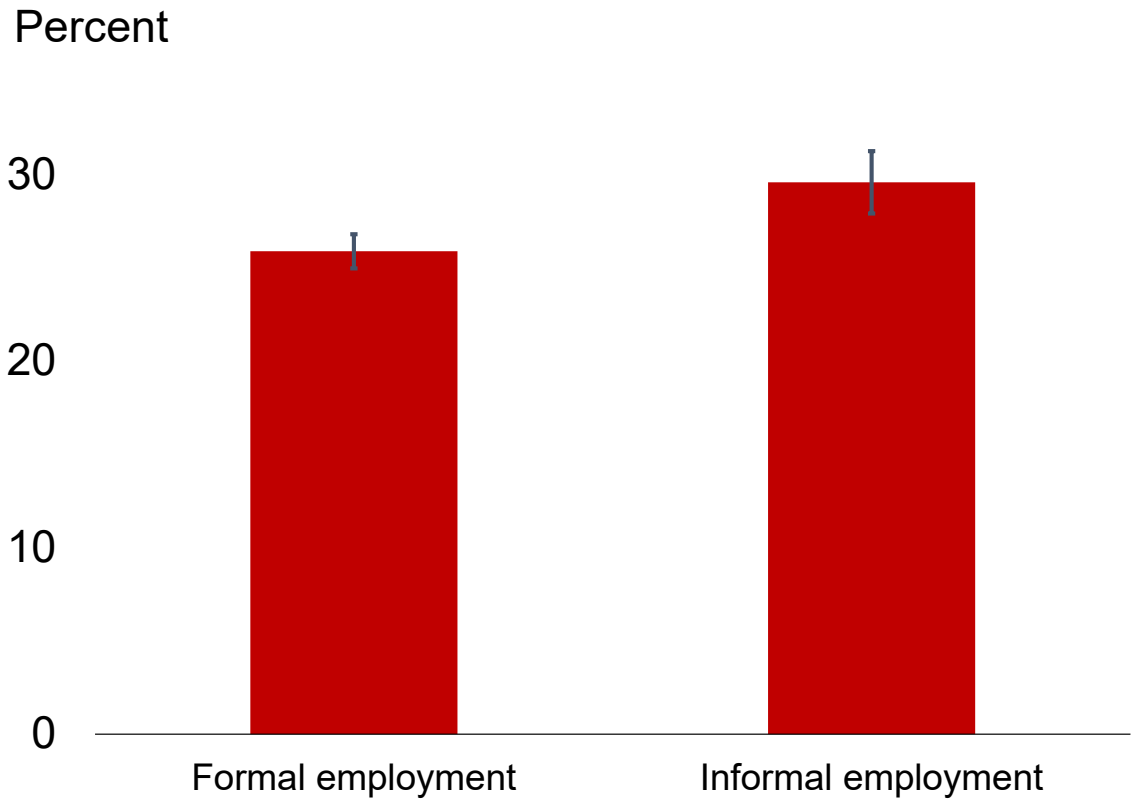


Source: Indonesia's LFS 2022

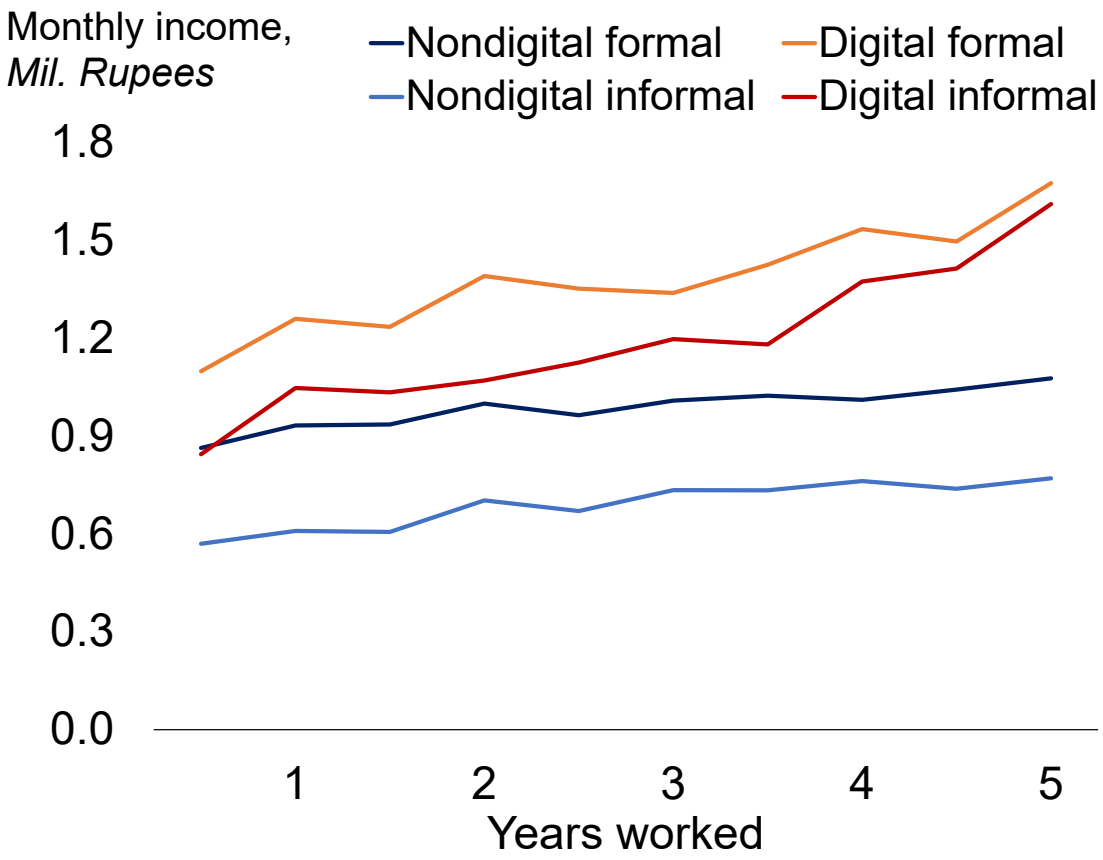
Note: Digital workers are defined as workers who use digital technologies and internet for work in primary job.

Digital jobs earn a wage premium which increases over time

Conditional wage premia of jobs involving digital technologies in formal and informal sectors



Average wages by job tenure



Source: Indonesia's LFS 2019

Note: Left panel shows conditional wage premia controlling for individual's age-group, gender, sector, location, education, and hours worked

Story #2: BPO Sector in the Philippines

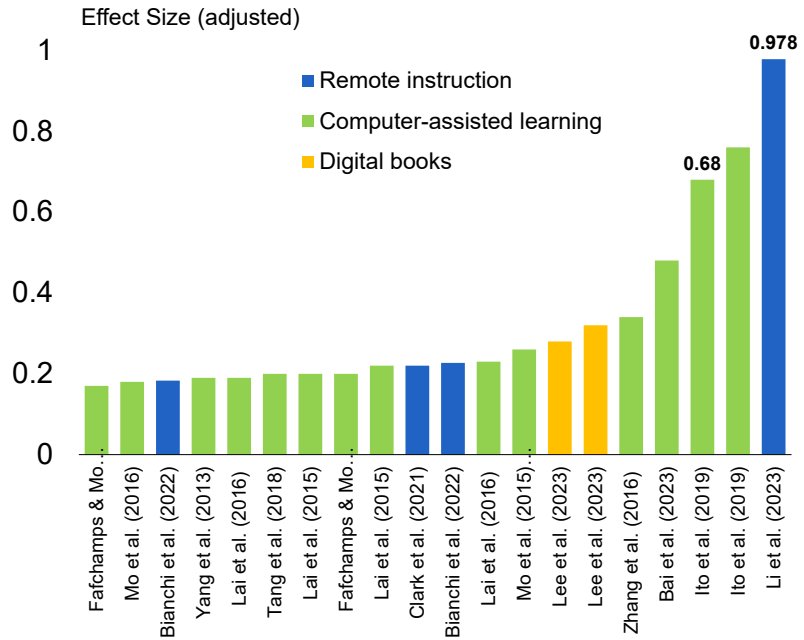
What types of skills do you look for when recruiting? How is this evolving with changes in technology?

" […] the pipeline for talent is narrow especially when it comes to soft skills. And as technology becomes more sophisticated, **critical thinking and creativity will matter even more in how we serve our clients.** If the Philippines aims to produce even stronger talent, education policies will need to emphasize **both math and the arts and not just at the basic level but all the way through college.**"

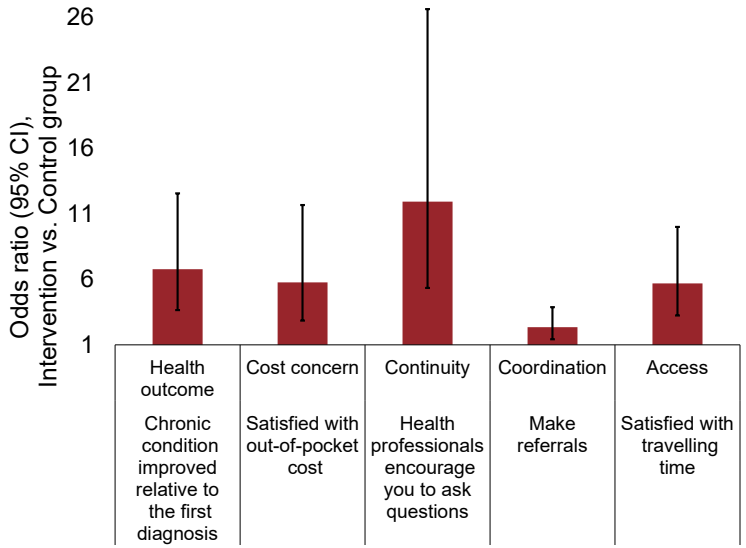
Why Do Digital Technologies and Policy Reform Matter?
3. Access

Digital technologies + reform help increase access and quality in education, health, and finance

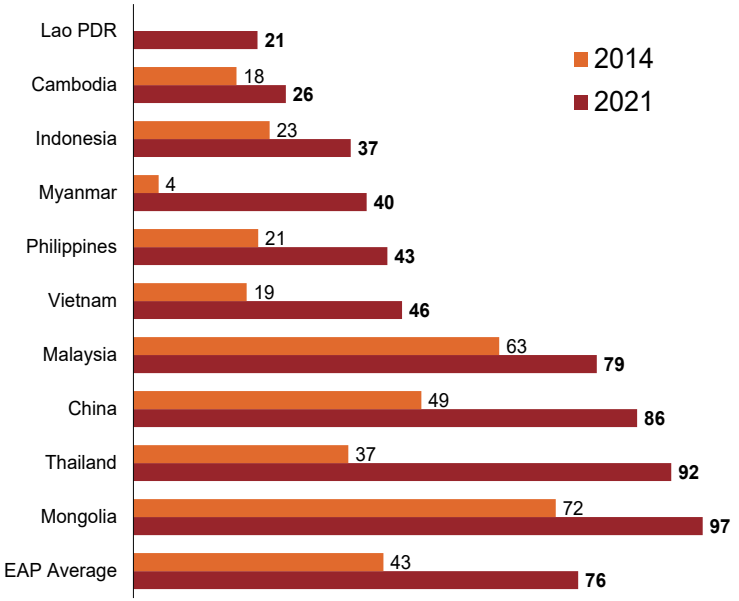
EdTech: Impact of EdTech programs on student learning (selected studies)



Healthcare: Impact of the integrated care delivery in Henan province, China



FinTech: EAP adults who made or received a digital payment (%)



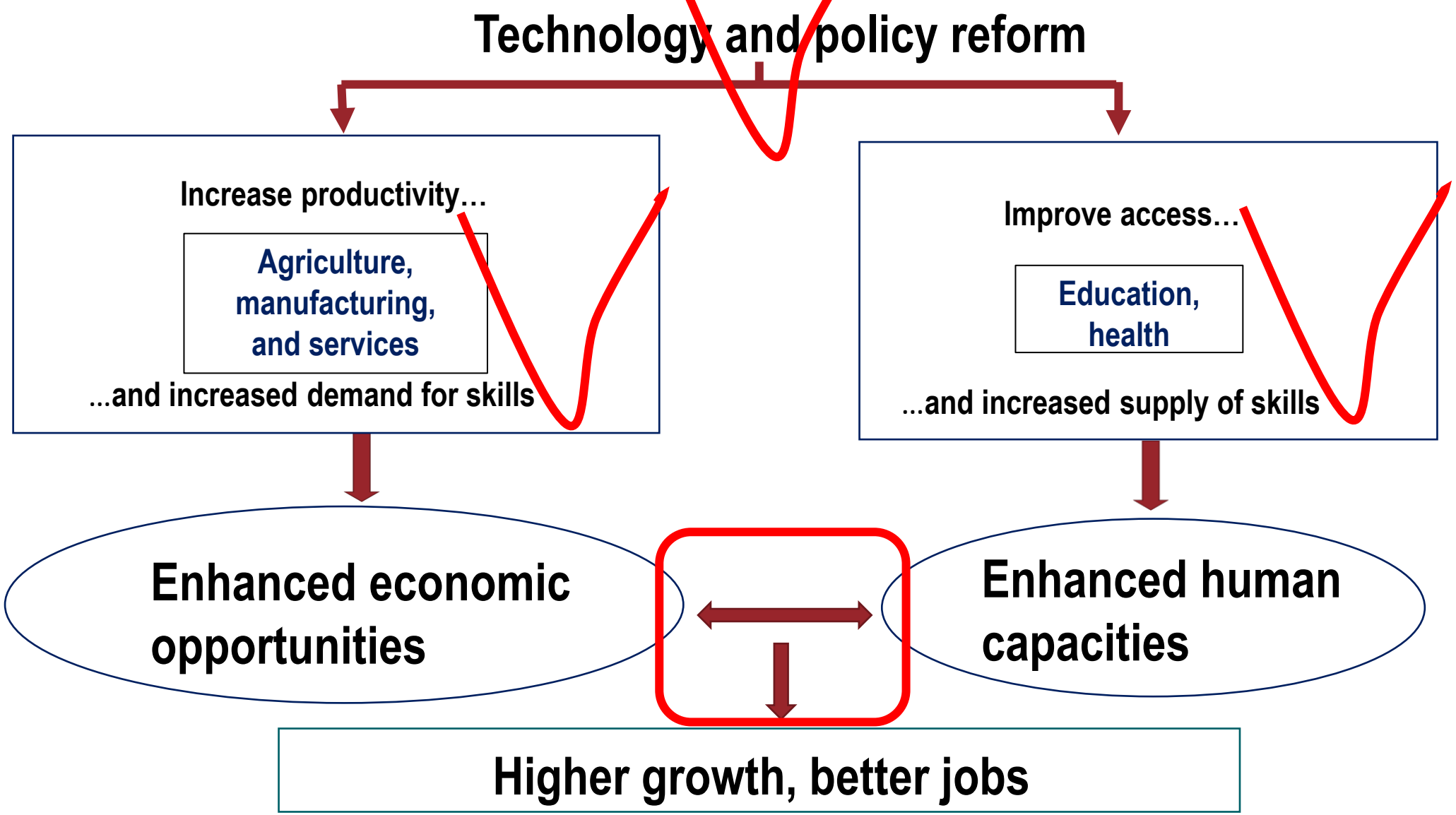
Source: Yarrow et al. (forthcoming), Shi et al. (2015), Findex (2022)

Story #3: Banking in Cambodia

What role has technology played in your operations in Cambodia?

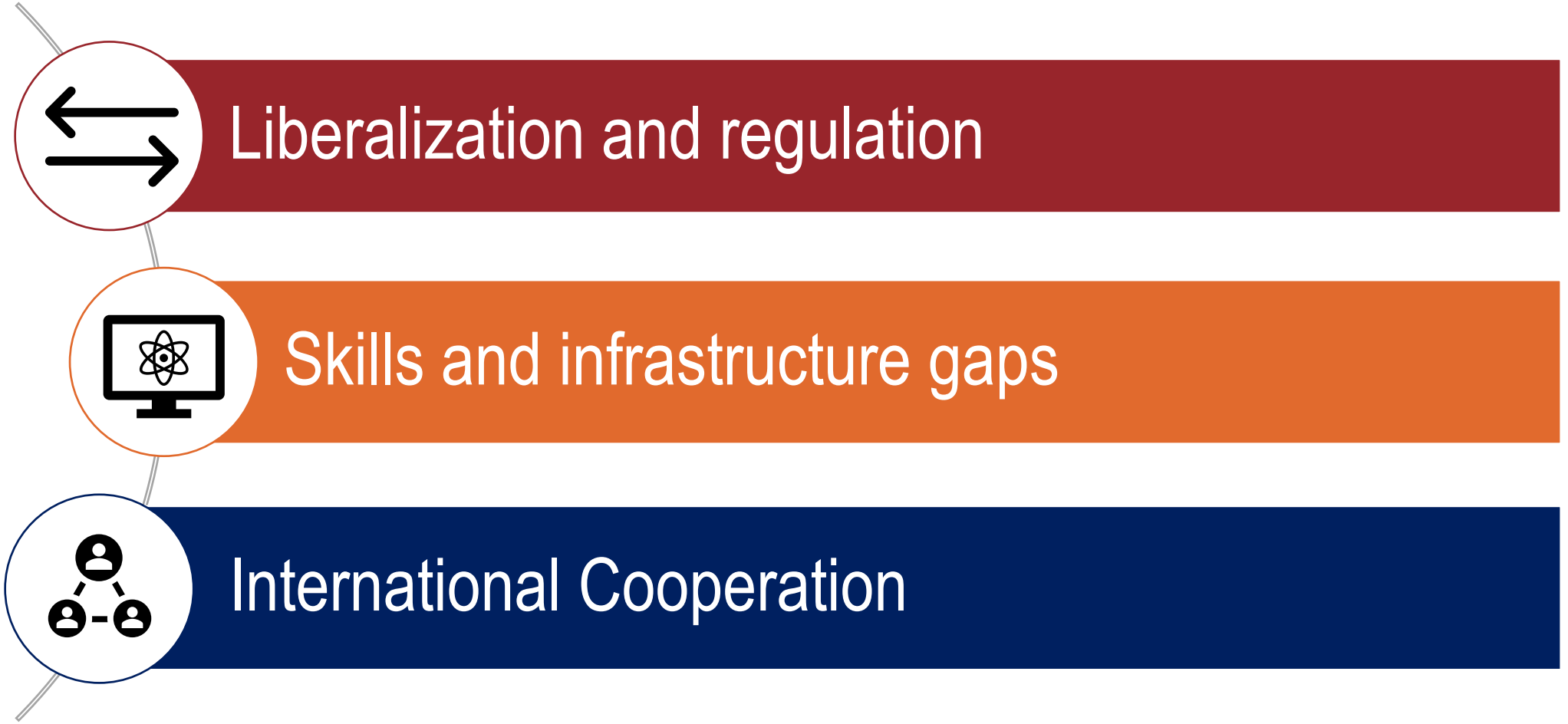
[…]**The low adoption of digital financial services was due to low levels of digital infrastructure and high costs of traditional digital finance products like debit cards and points of sales terminals. There was also a general lack of trust in the banking system that extended to digital finance products which were harder for people to understand.** Recognizing the gap, our internationally experienced management team developed a QR code-based payment in Cambodia. The technology was already popular in other Asian markets and Cambodia quickly embraced the innovation, partly because of its young and tech-savvy population. We also saw the level of digital transactions skyrocket during COVID, accelerating the shift that had already begun.

Recap…

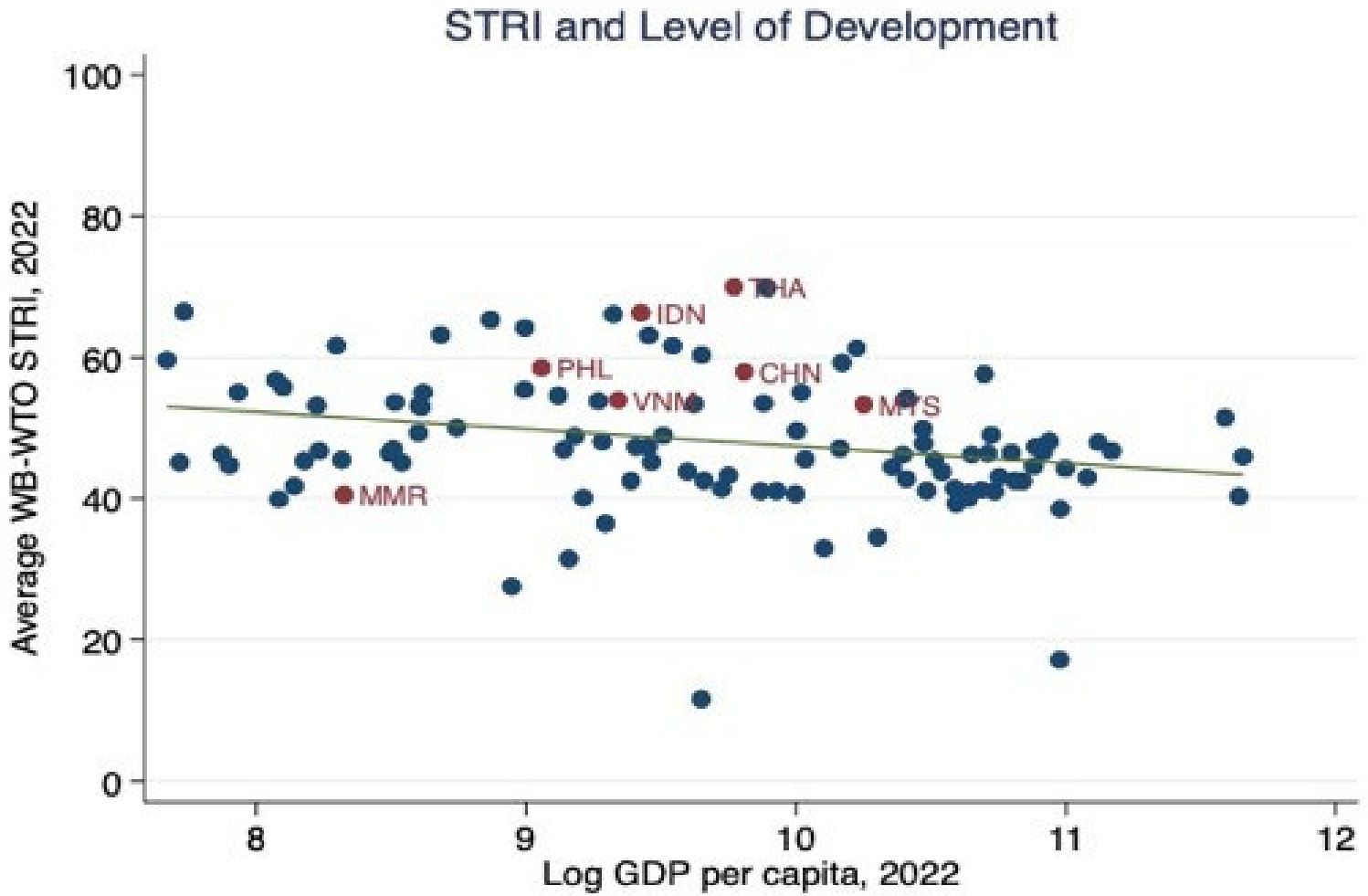

Technology and policy reform
Increase productivity…
Agriculture, manufacturing, and services
…and increased demand for skills
Improve access…
Education, health
…and increased supply of skills
Enhanced economic opportunities
Enhanced human capacities
Higher growth, better jobs

What needs to be done?

Reforms to harness opportunities

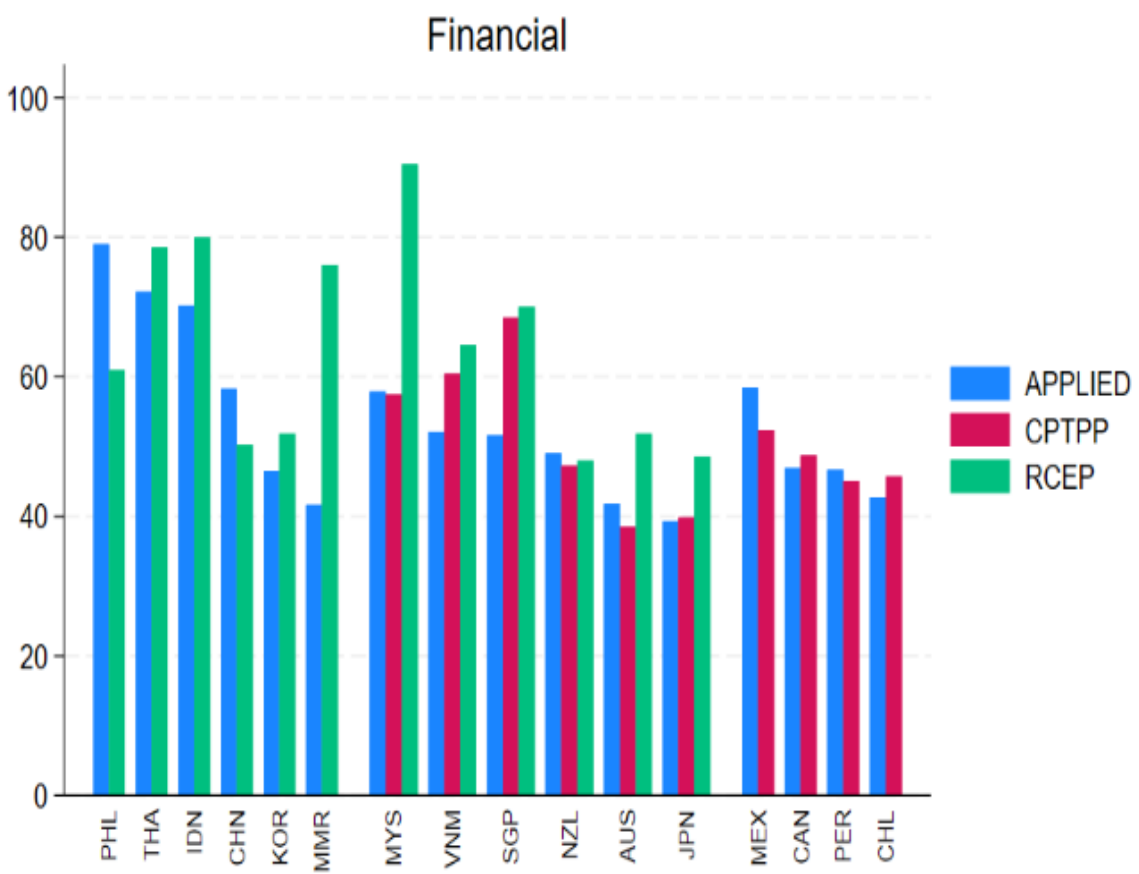


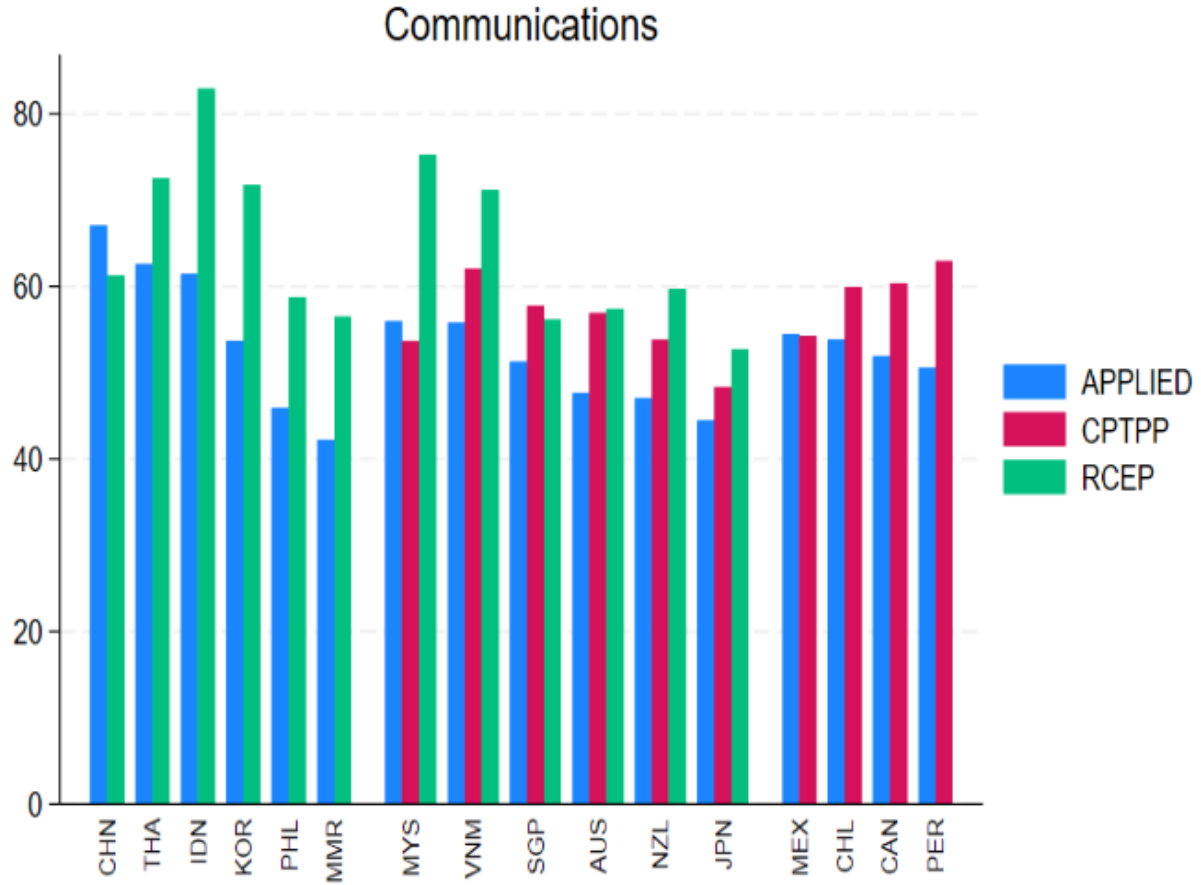
The unfinished business of services trade liberalization…



Source: WTO-WB STRI Database and WDI (2022)
Note: The average STRI is computed as a simple average of the indicators for the financial, communication and transport sectors.

…even considering initiatives like the RCEP and CPTPP





Source: WTO-WB STRI, 2022.

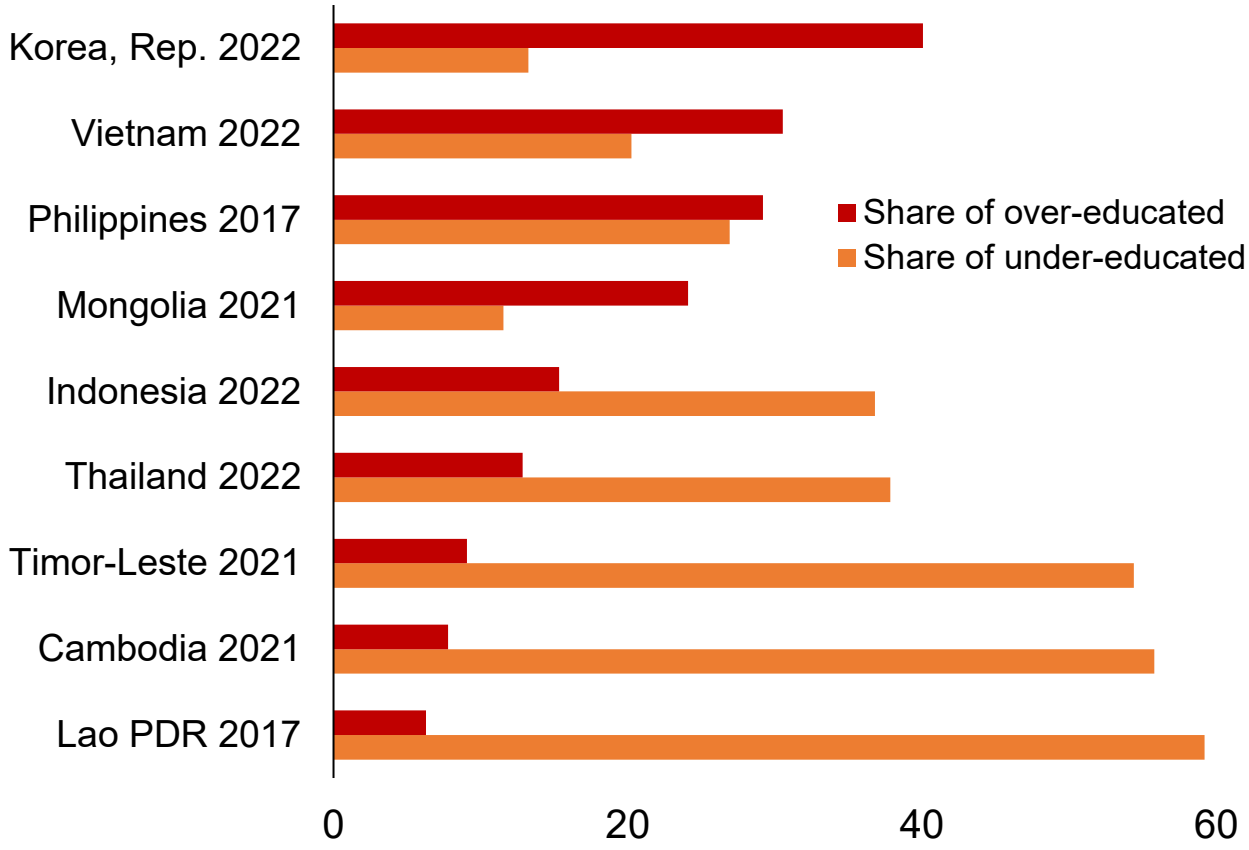
Story #3: Logistic in Indonesia

What is the current regulatory landscape and how has it impacted the logistics services sector in Indonesia?

"…**Despite these reforms, regulatory oversight of the logistics industry continues to be highly fragmented.** Freight forwarding services, maritime transport services, air transport services, rail transport services and freight transport are under the Ministry of Transport, while warehousing and storage are under the Ministry of Trade. Customs is under the Ministry of Finance, which is typical, and e-commerce logistics companies, courier and express logistics companies are under the Ministry of Information and Telecommunications".

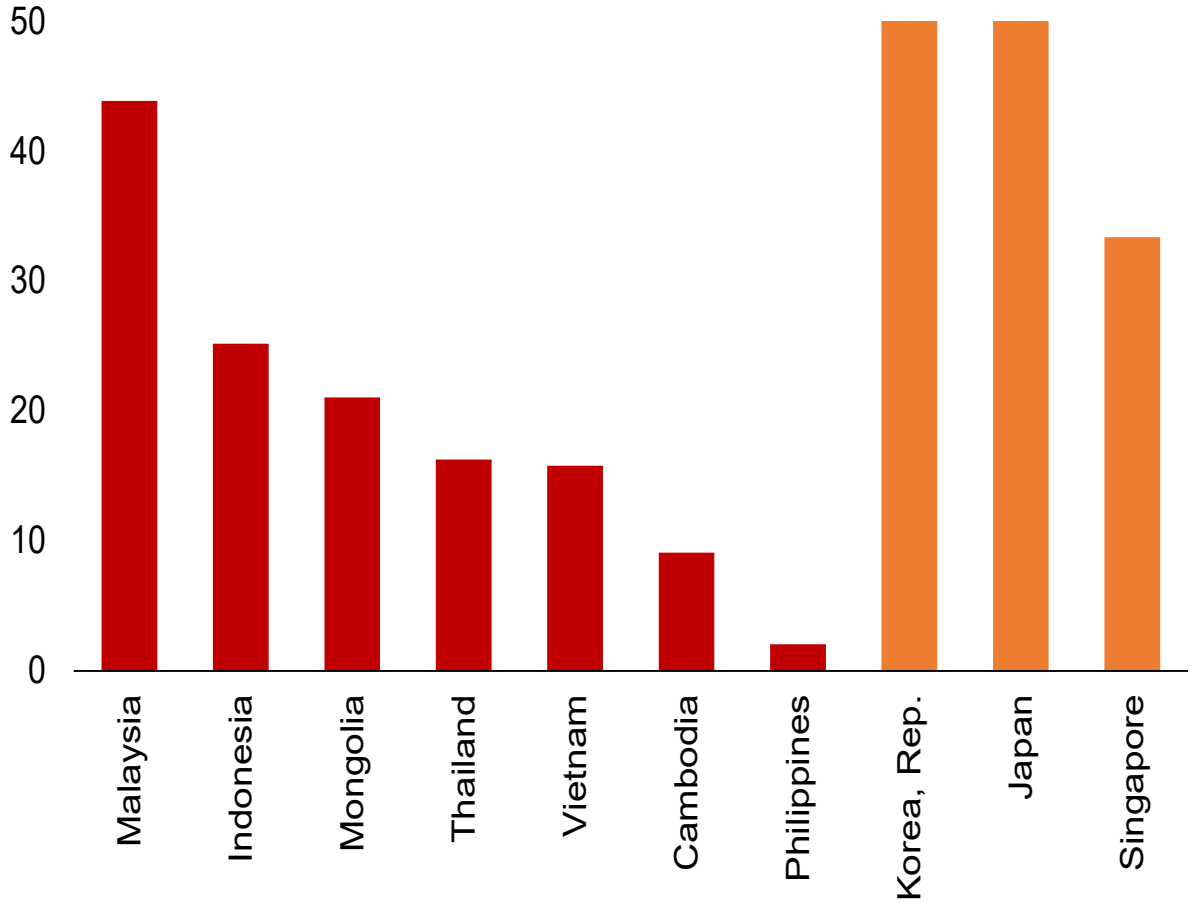
Several EAP countries are struggling to keep up with the demand for high-skilled employment
And digital skills are still lacking in many EAP countries

Firms are filling more positions with individuals who are underqualified for their job



Source: ILOSTAT (2022)

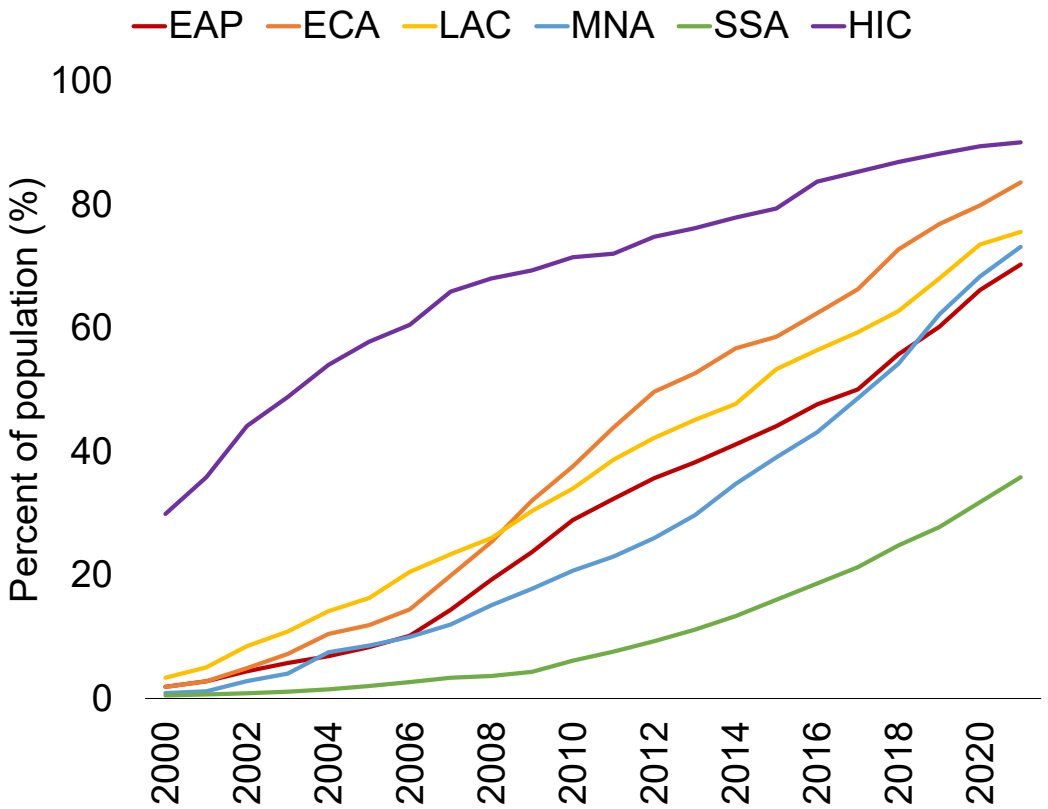
Digital skills: Using a spreadsheet (2021)



Source: ITU (2022)

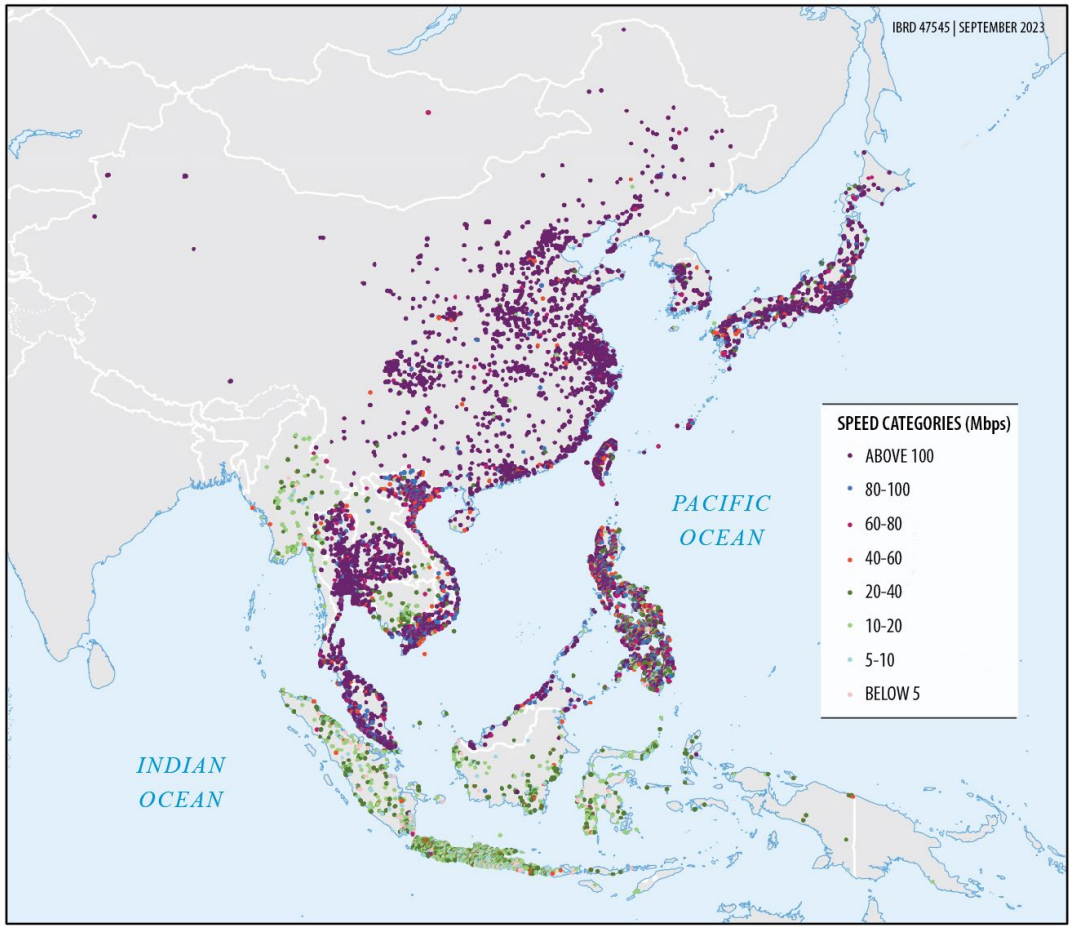
Closing the infrastructure gap: Internet access has improved but broadband access is limited and unequal

Individuals using the Internet (% of population)



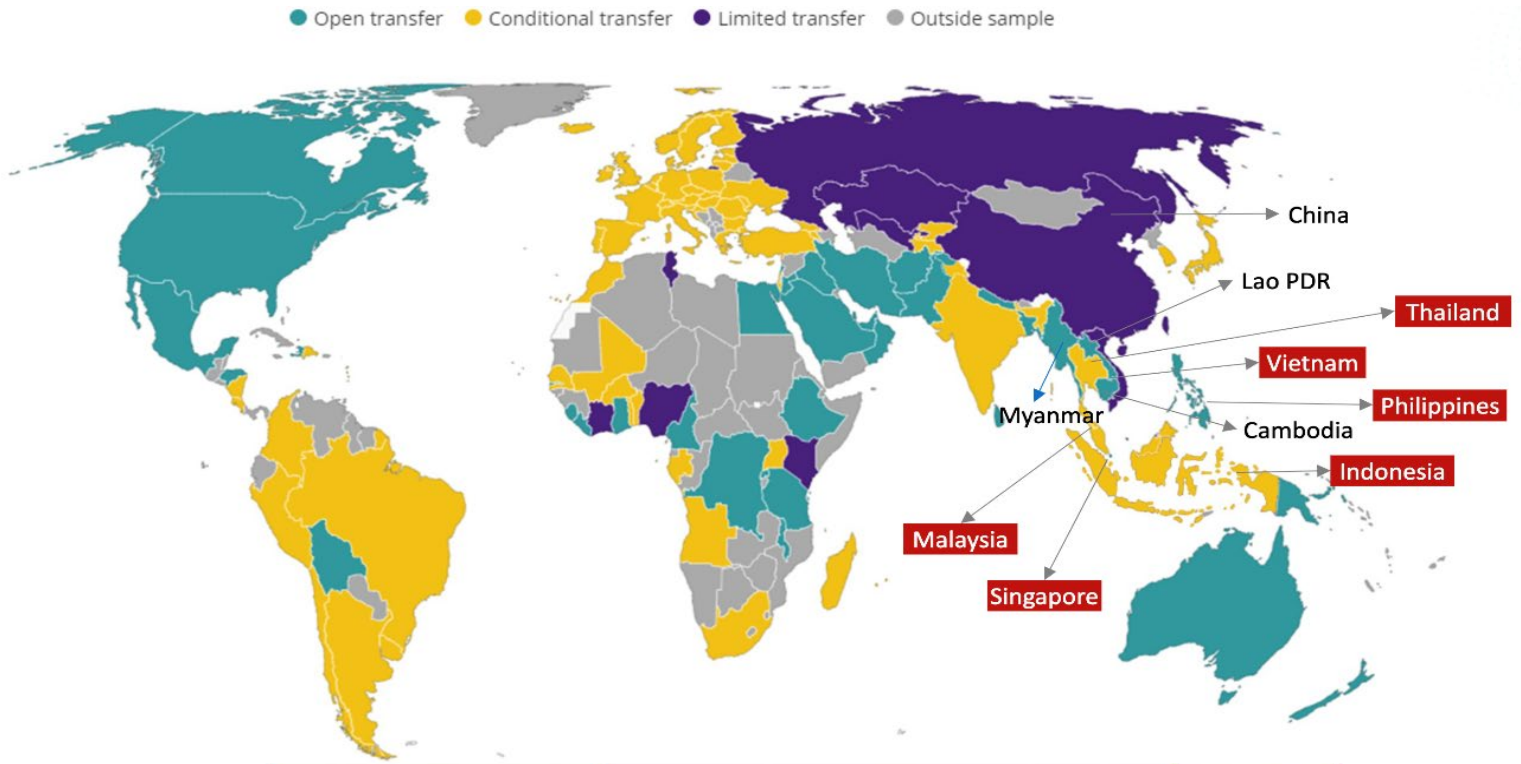
Source: ITU, World Data Lab, Ookla

Broadband Fixed Line Internet Speed (Q2-2023)



Cooperation in cross-border data flows: EAP countries take a heterogeneous regulatory approach to international data transfers

Regulatory Framework on International Data Flow

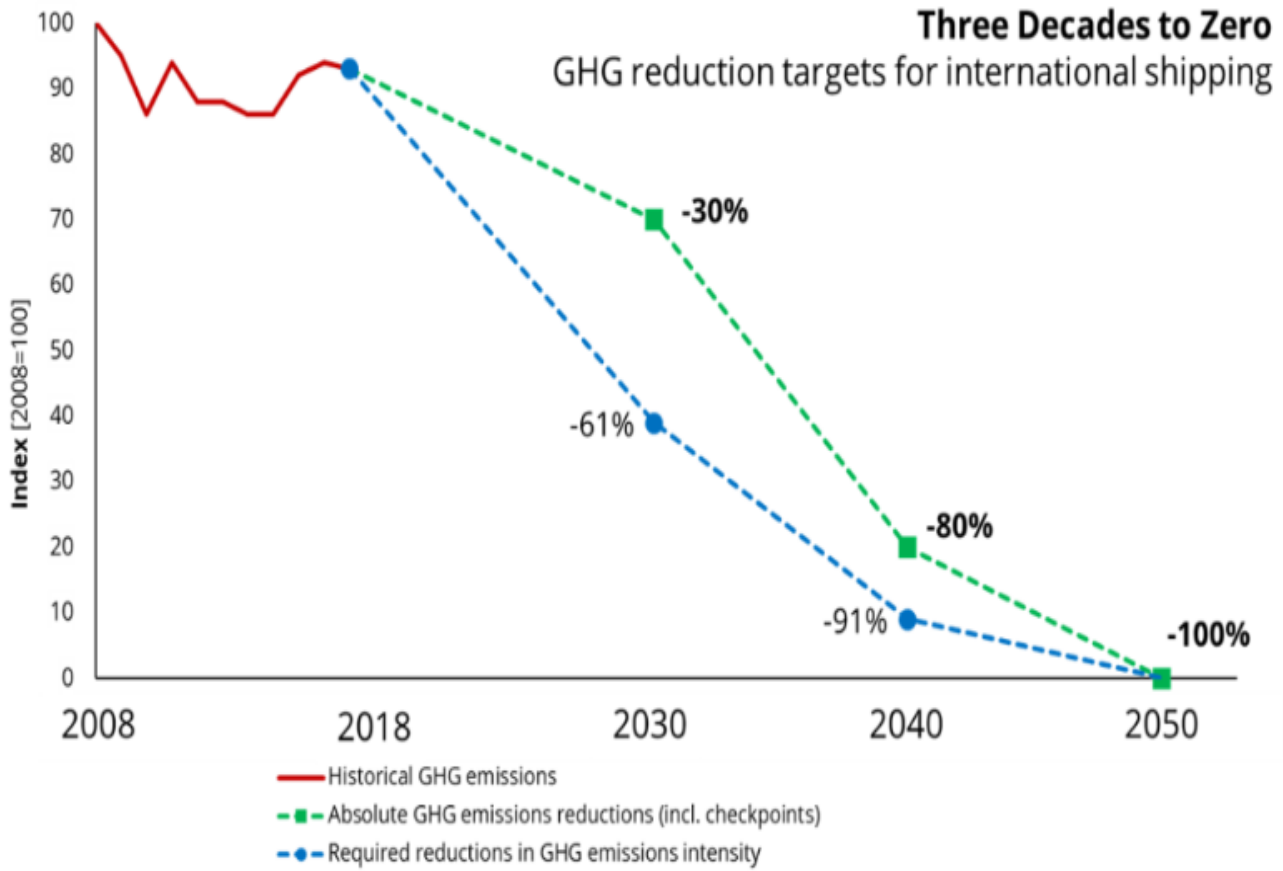


Open Transfers		Conditional Transfers			Limited Transfers
Philippines	Singapore	Indonesia	Malaysia	Thailand	Vietnam

Source: World Development Report 2021, updated for SEA-6 countries in June 2023.

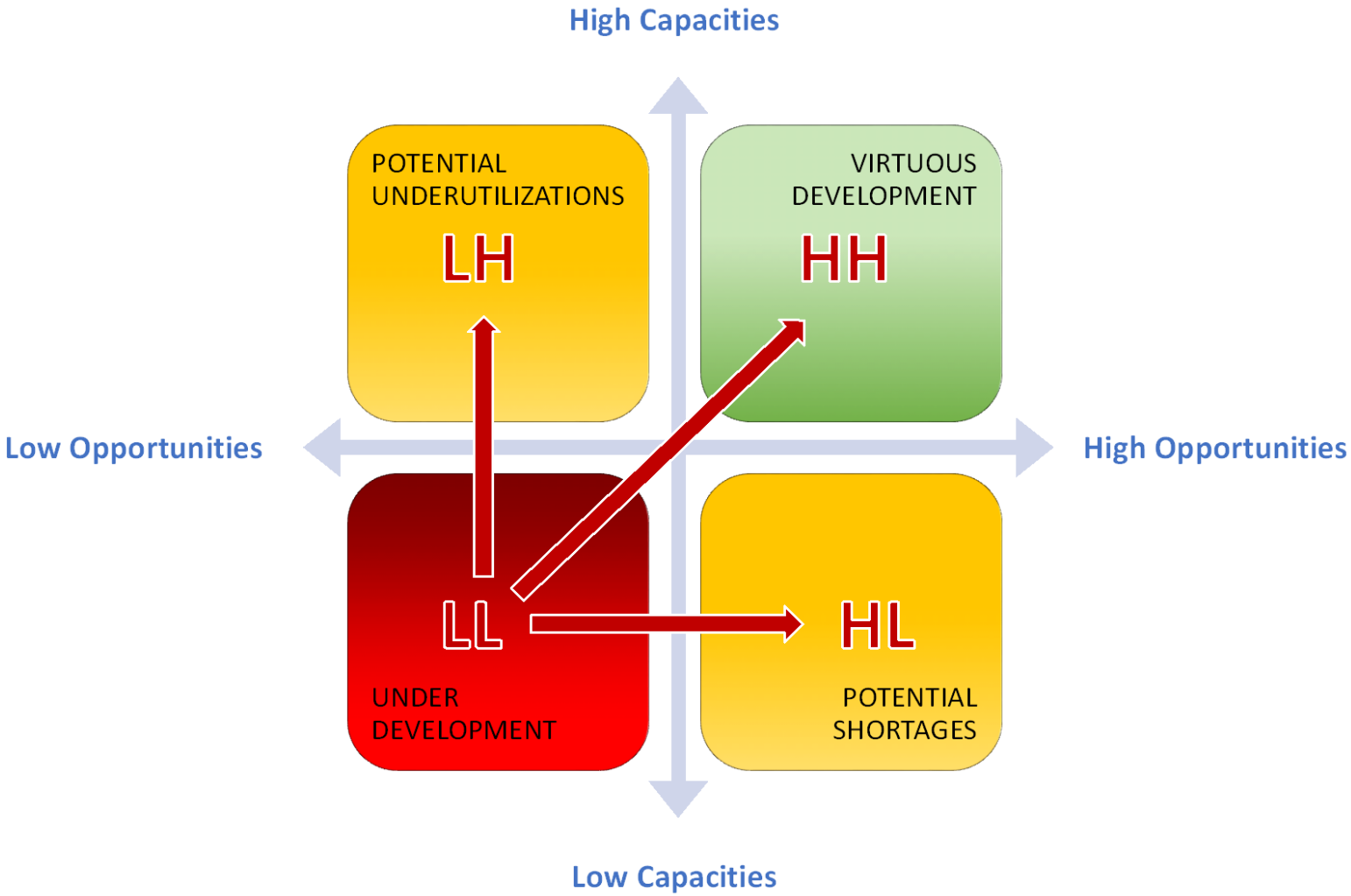
Cooperation: decarbonizing maritime transportation services

IOM commitment to GHG emissions reductions in international shipping from 2008-2050

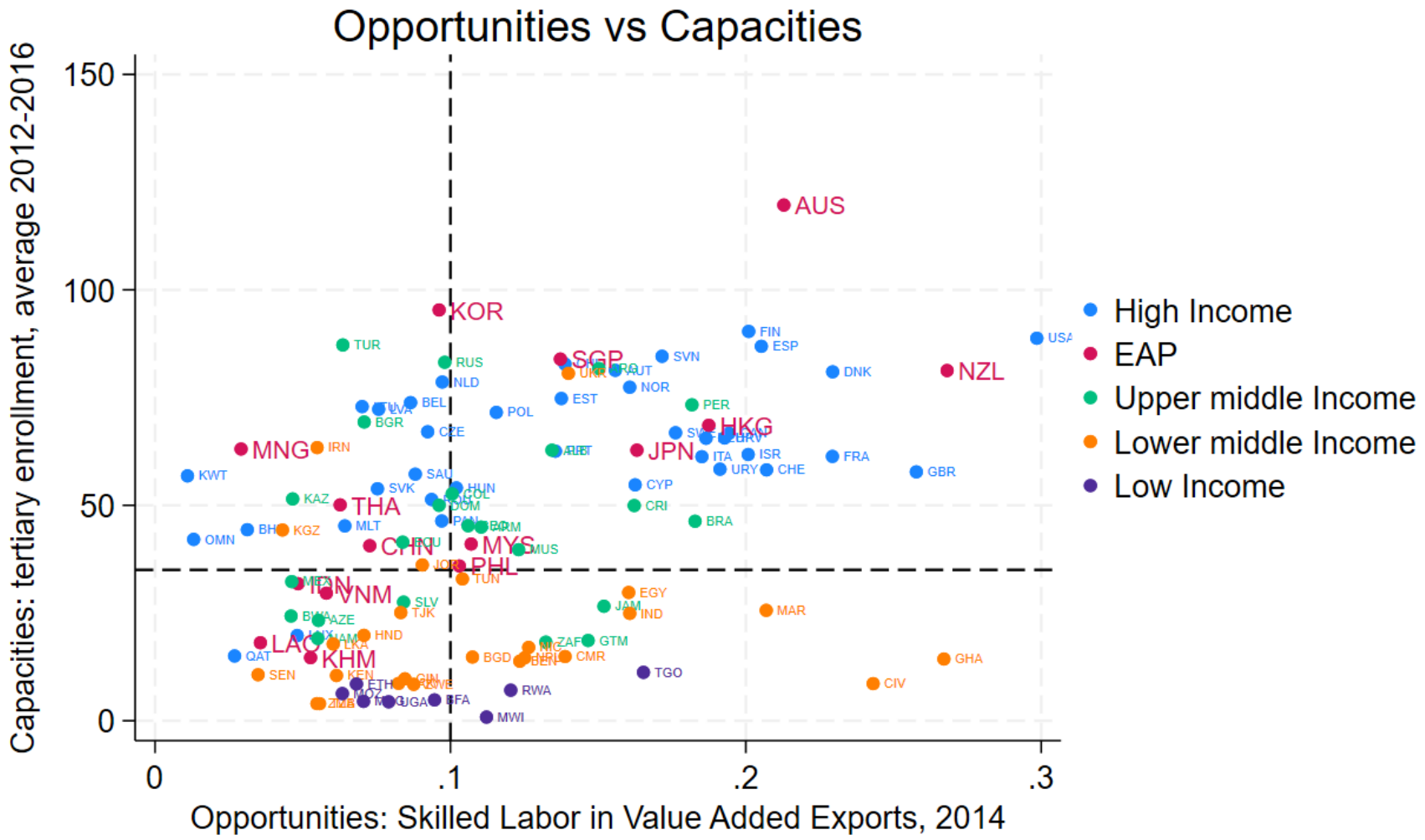


Source: Englert et al. 2023

Conclusion: policies to create a virtuous circle of Opportunities and Capacities



Conclusion: the Opportunities/Capacities space… what next for the EAP countries?



Thank You!

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