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ポストコロナの世界と工業化の将来—「UNIDO工業 開発報告書 (IDR) 2022」をふまえて

第9回「これからの途上国の産業開発を考える」勉強会

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2022年3月25日



Introduction

- UNIDO
- Research and Industrial Policy Advice Division
- Industrial Development Report



The Industrial Development Report 2022



The Industrial Development Report 2022

Five questions guide the narrative of the report:

1. Why industrialization is important in a crisis like COVID-19?
2. Who were the most affected by the crisis?
3. Why did some countries do better?
4. What can we expect for the future?
5. How can we build a better future?





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Why industrialization is important in a crisis like COVID-19?

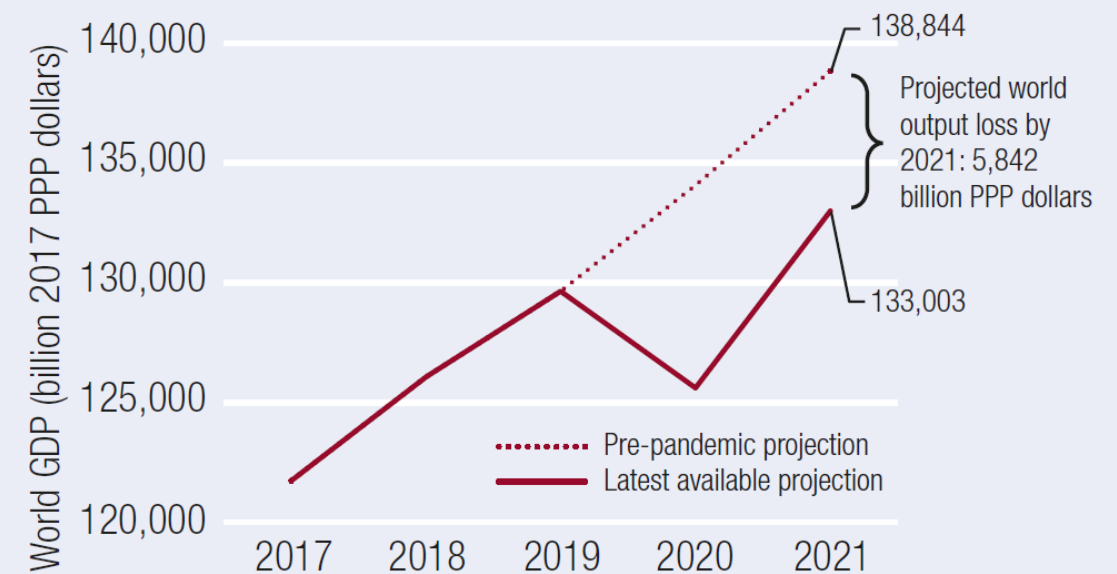


The COVID-19 crisis had profound socio-economic impacts at the global level...

- During 2020 world **GDP fell by 3.3%**, the deepest global recession in 70 years.
- The sudden stop in economic activity had a direct impact on employment, with **255 million jobs lost** only in 2020
- More dramatically: **97 million more people** are estimated to live in poverty due to the pandemic
- Latest IMF estimates indicate that world **GDP is still 4.2% below** the level projected for 2021

Figure 1

Estimate of world output loss due to COVID-19 by 2021

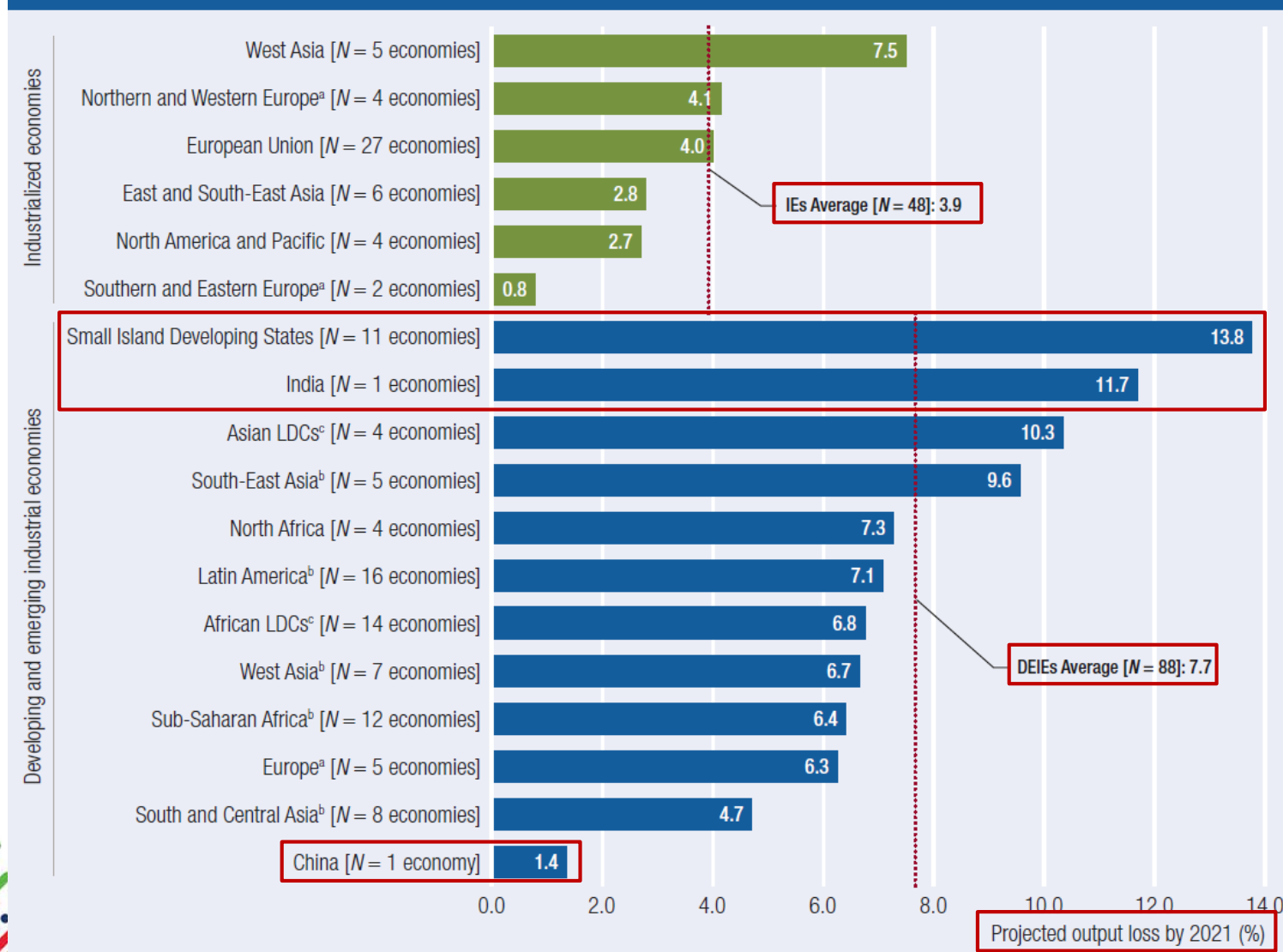


... but not all regions were affected equally

- The projected impact on economic activity—proxied by the output loss by 2021—is **highly heterogeneous** across economy groups
- On average: Developing and Emerging Industrial Economies (DEIEs) were **more impacted** than Industrialized Economies (IEs)
- Within DEIEs: **the most impacted** are Small Islands Development States (SIDS) and India; the **less impacted** are South & Central Asia (exc. India) and China.

Figure 2

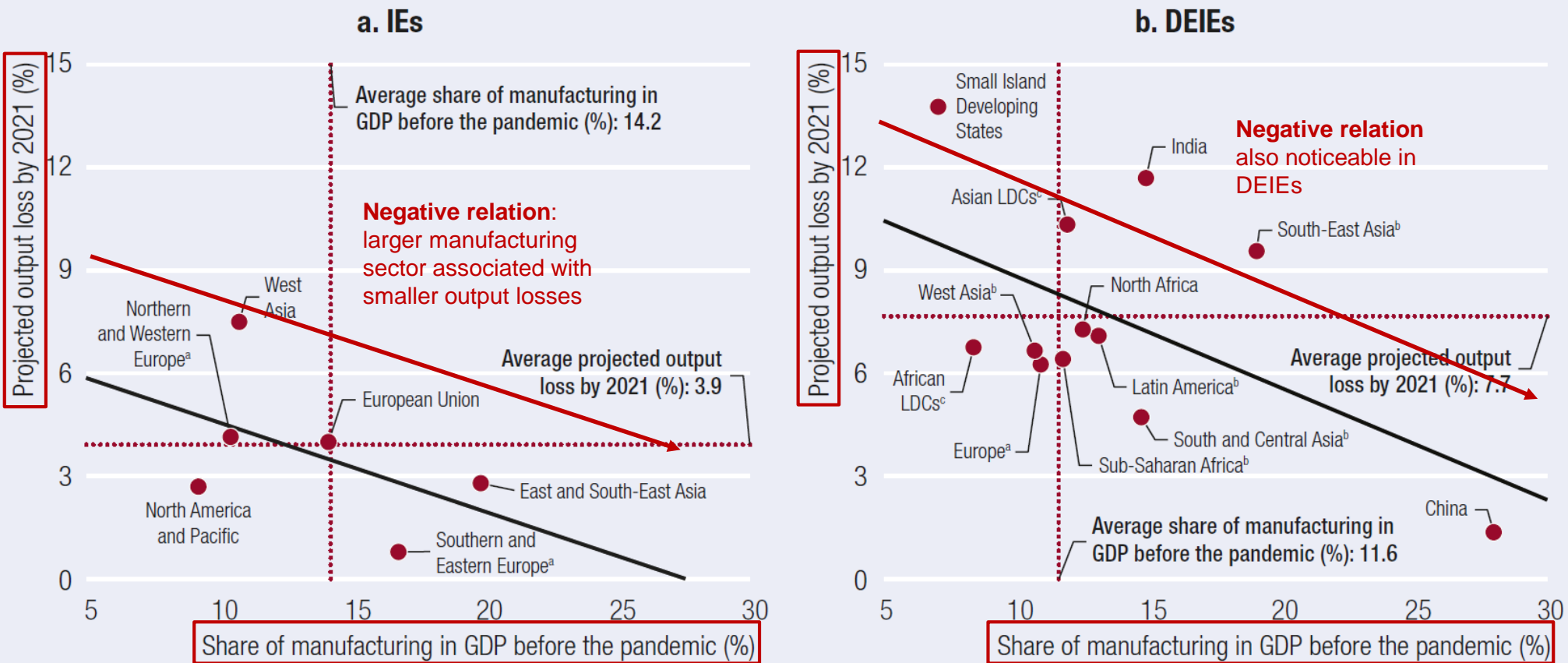
Estimated output losses due to COVID-19 by 2021, across economy groups



Countries with stronger industrial sectors did better

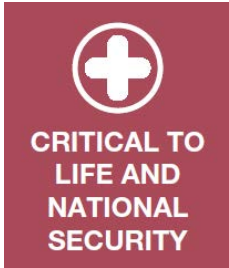
Figure 3

Impact of COVID-19 on economic activity by 2021 and relative size of the manufacturing sector before the pandemic, across economy groups



Why? Because manufacturing support key dimensions of resilience

“the ability of a system exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner” (UNDRR 2020)



- Manufacturing provides goods that are critical for the **sustenance of life**
- Manufacturing provides inputs to critical **national infrastructure**



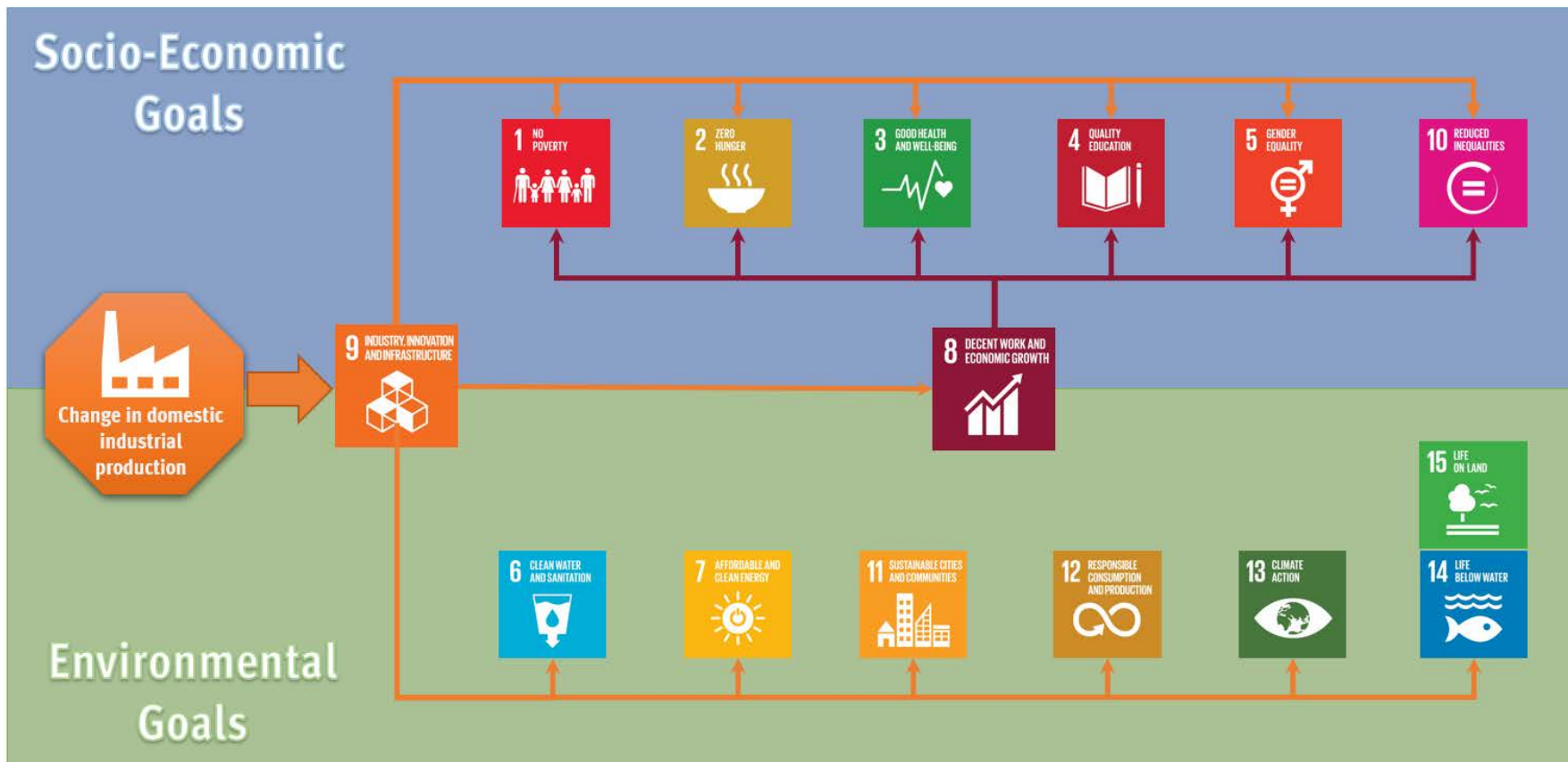
- Manufacturing provides strategically important products and assets in **combatting** certain types of emergencies
- A shortage of **COVID-19-critical items** hindered countries’ ability to respond to the crisis



- Historically, manufacturing has been the **engine of growth** because of its contribution to productivity, trade, jobs and innovation.
- Manufacturing industries have offered **pockets of resilience** supporting recovery from COVID-19



Manufacturing is also key driver of sustainable development



- Industrial production drives **SDG9** and through that channel affects all the other SDGs, directly but also indirectly through economic growth
- The pandemic impacts on the industrial sector also have implications for the achievement of **broad-based sustainable development**



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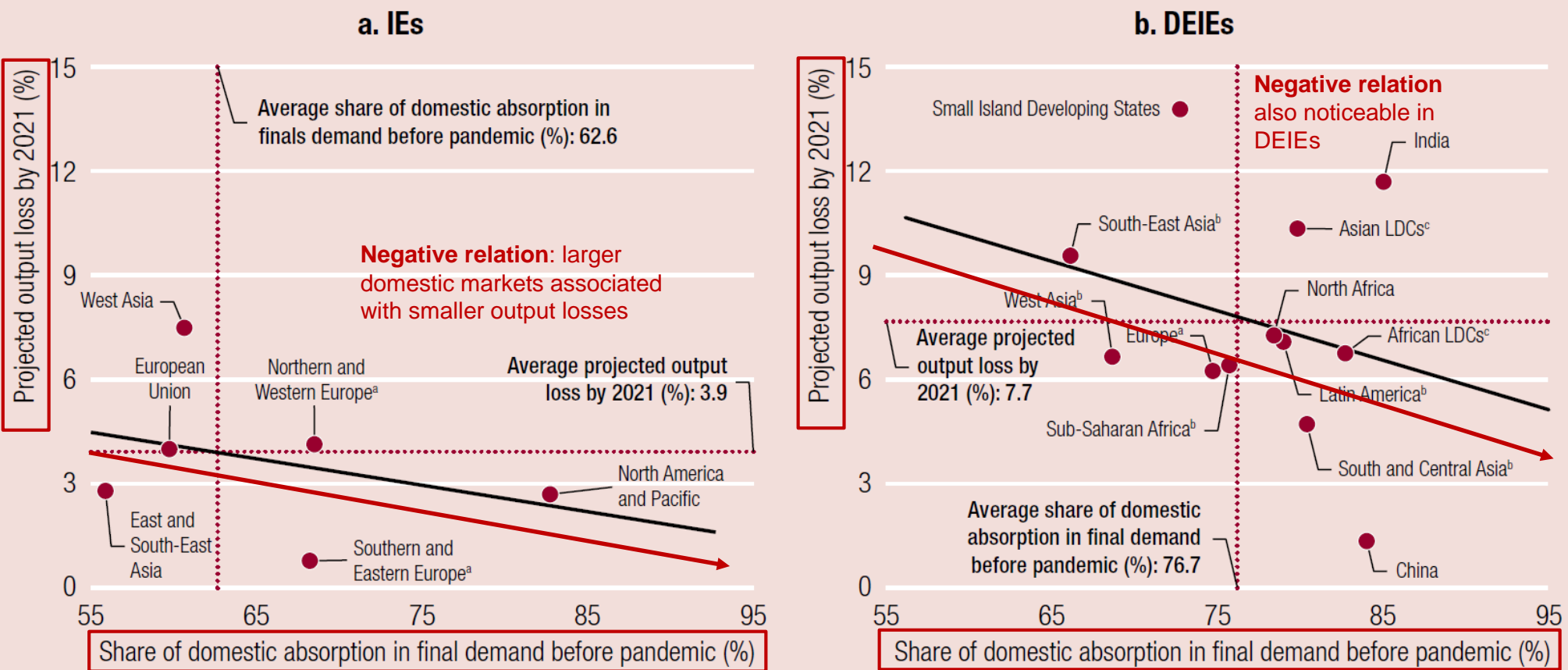
Who were the most affected by the crisis?



Countries with larger domestic markets did better

Figure 1.21

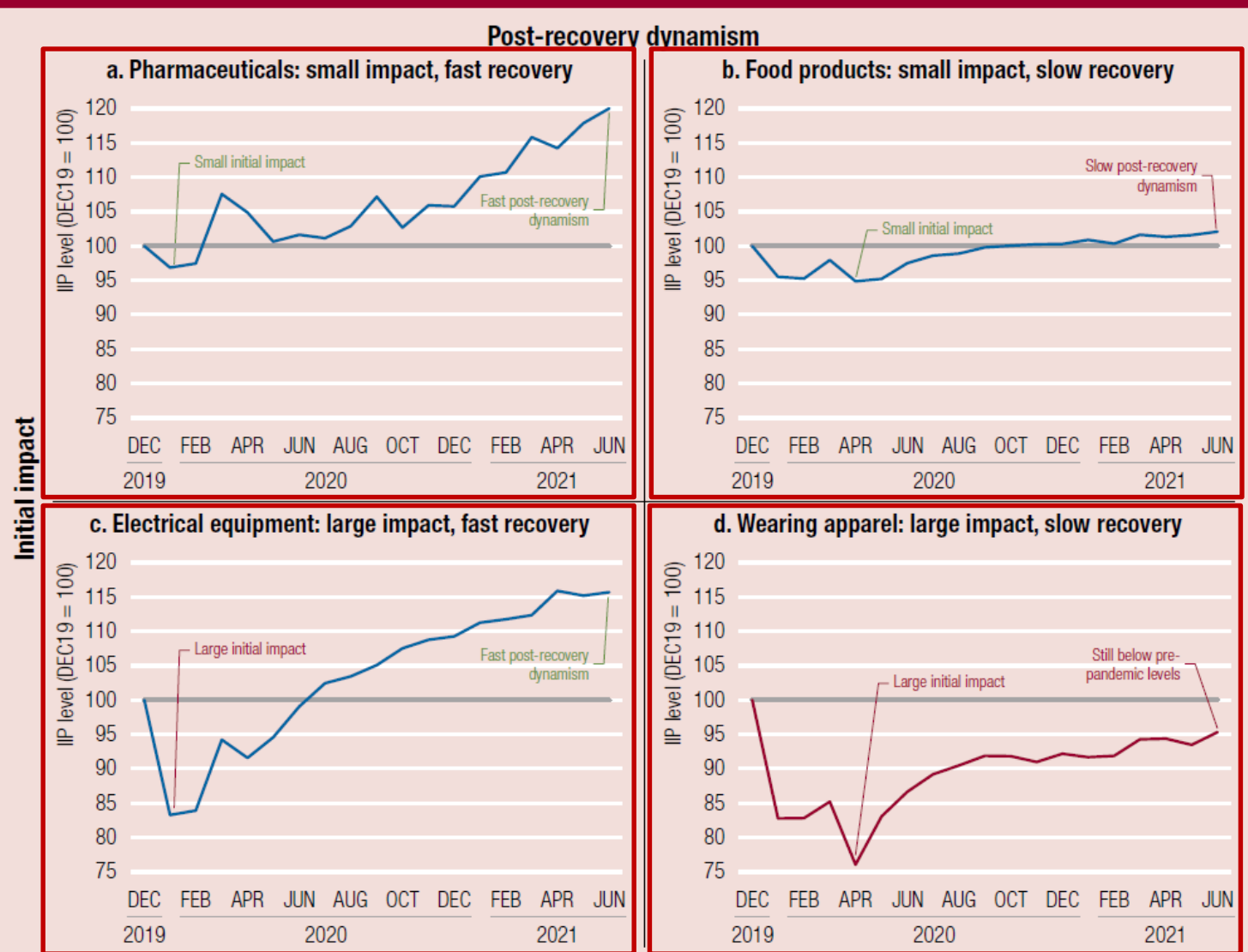
Impact of COVID-19 on economic activity by 2021 and relative size of domestic demand, across economy groups



Industry dynamics during the COVID-19 pandemic

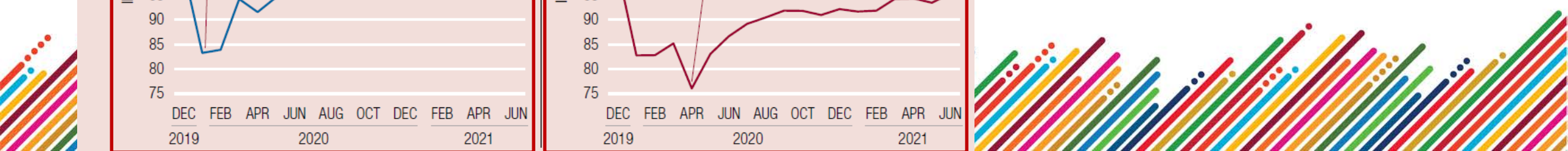
Figure 1.18

Evolution of monthly index of world industrial production for selected industries: Differences in initial impact and post-recovery dynamism, December 2019–June 2021



IDR22 identifies four types of industrial dynamics based on the evolution of industries' world IIP during the crisis:

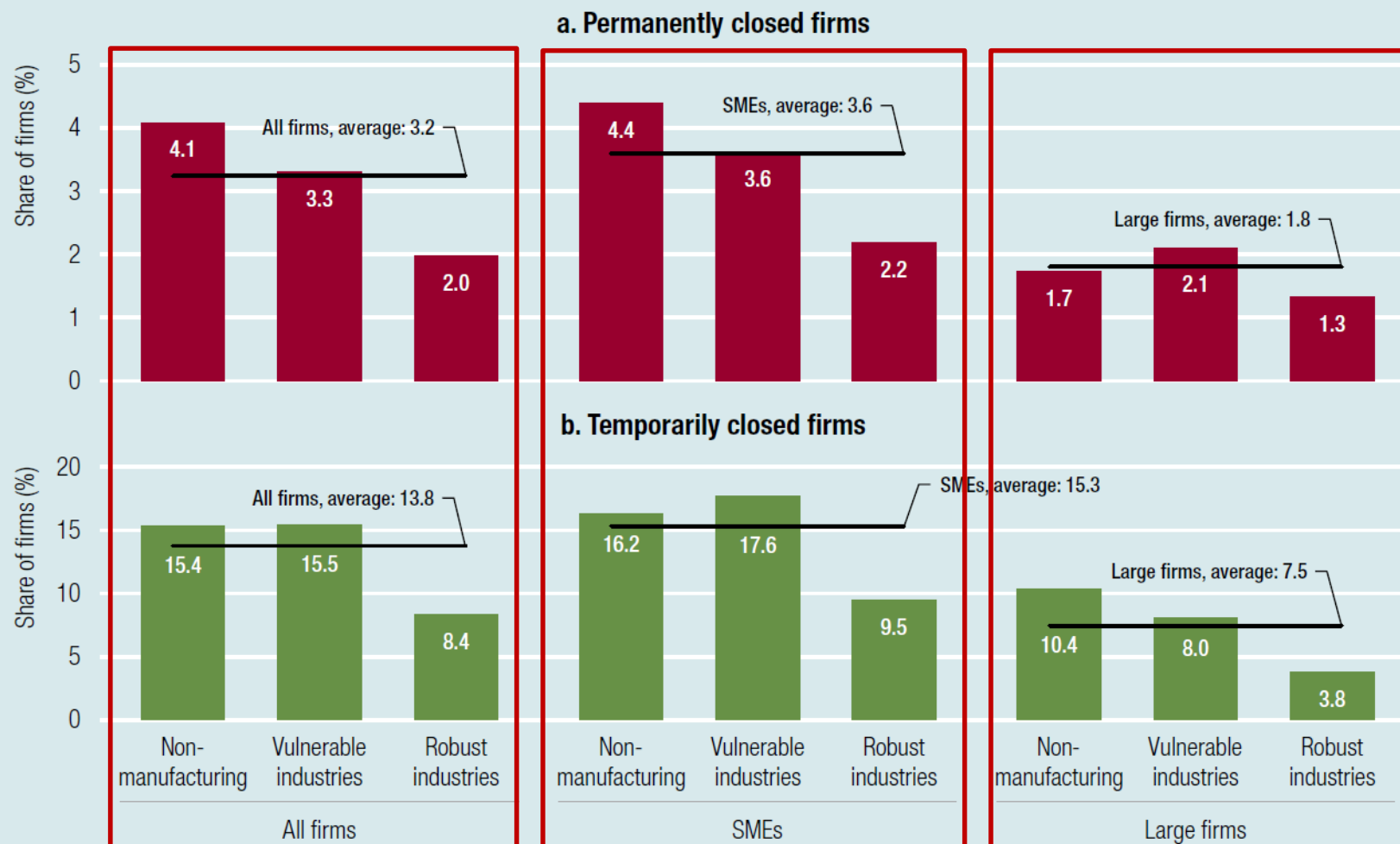
- a. *Small initial impact and fast recovery (case of pharma)*
 - b. *Small initial impact and slow recovery (case of food)*
 - c. *Large initial impact but fast recovery (case of electronics)*
 - d. *Large initial impact and slow recovery (case of apparel)*
- Robust industries** (groups a and b)
- Vulnerable industries** (groups c and d)



SMEs outside manufacturing and in vulnerable industries suffered the most

Figure 2.2

Firm closures: Share of businesses temporarily and permanently closed by firm category, 2020



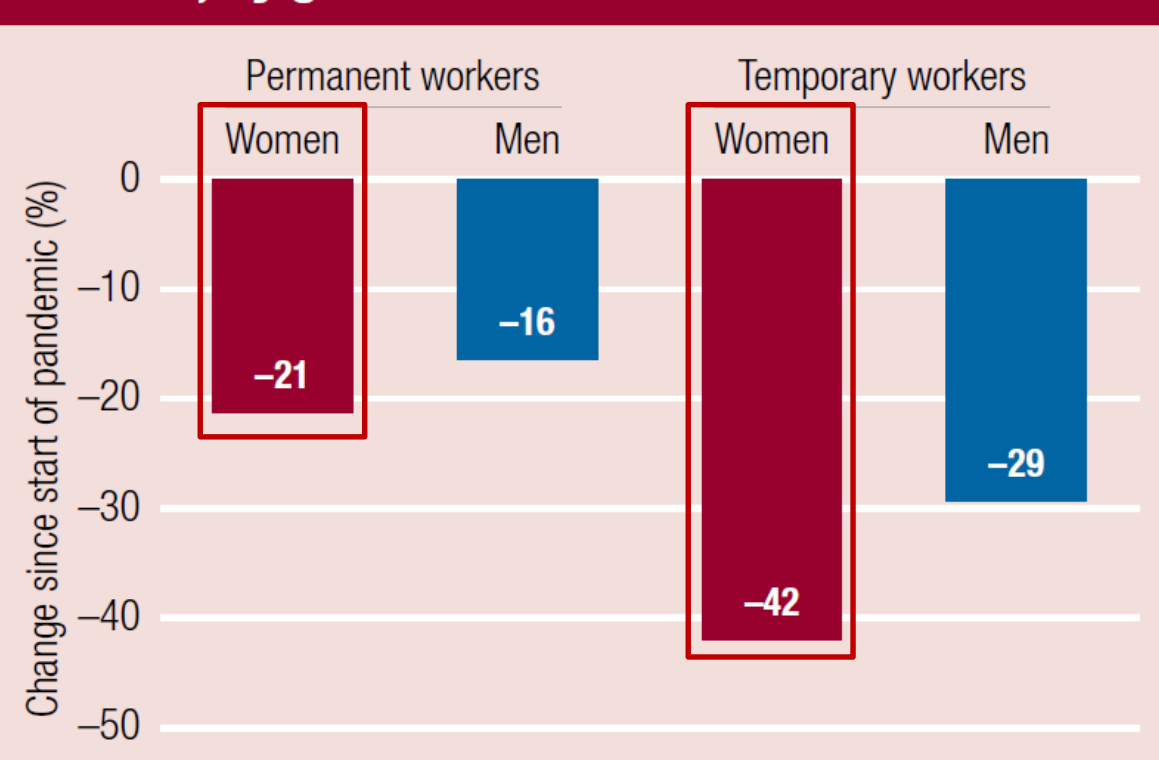
- Data collected in 4,000 firm in 26 DEIEs in Africa, Asia and LAC
- In general, firms outside manufacturing and in vulnerable industries were more likely to closed.
- This is particularly noticeable in the case of SMEs
- Large firms suffered relatively less

Women workers were more impacted than men

- Data collected in 4,000 firm in 26 DEIEs in Africa, Asia and LAC
- The share of laid-off workers since the start of the pandemic is higher among women than men
- Temporary workers were more affected than permanent ones. Within them, women show the largest declines

Figure 1.16

Drop in employment: Temporary and permanent workers, by gender



Within the industrial sector, the impacts were also highly heterogeneous across countries, industries, firms and workers

	Less impacted (resilient)	More impacted (vulnerable)
Countries	<ul style="list-style-type: none"> • Countries with strong manufacturing sectors and strong industrial capabilities • Countries with large domestic markets 	<ul style="list-style-type: none"> • Countries more reliant on service sectors • Countries more reliant on foreign markets • Countries with weak industrial capabilities
Industries	<ul style="list-style-type: none"> • Health-related industries • Information technology-related industries • Industries producing essential goods (i.e., food, paper) 	<ul style="list-style-type: none"> • Labour-intensive industries, producing non-essential goods
Firms	<ul style="list-style-type: none"> • Large firms • Digitally advanced firms • Firms with high production capabilities 	<ul style="list-style-type: none"> • Small and Medium Enterprises and informal firms • Digitally backward firms • Firms integrated into global value chains (GVCs) • Firms with low production capabilities
Workers	<ul style="list-style-type: none"> • Male, formal workers 	<ul style="list-style-type: none"> • Female workers • Youth workers • Temporary and informal workers



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Why did some countries do better?

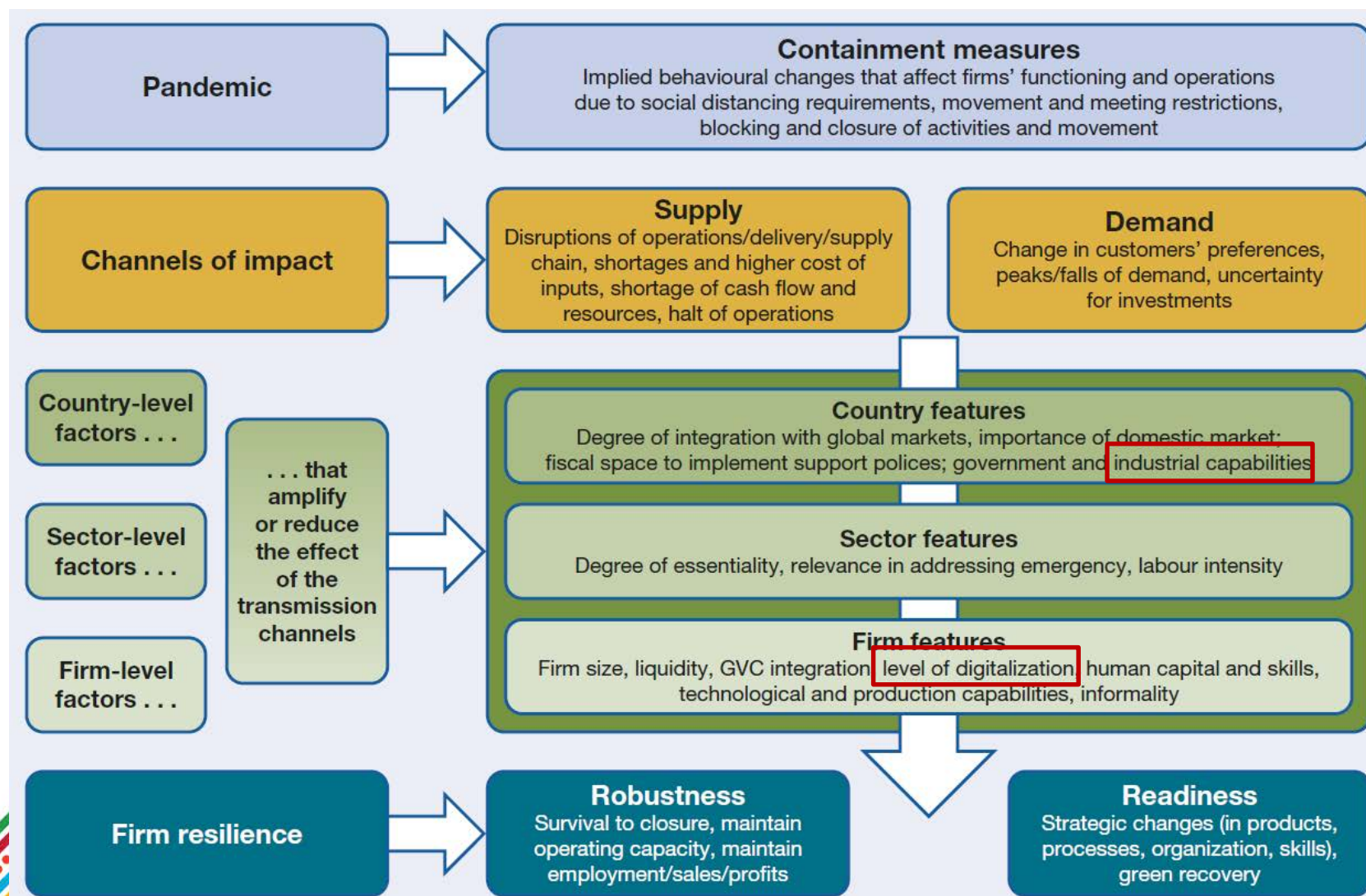


IDR2022 explores different factors that amplified or reduced the crisis impact

From the many factors examined, two stand out:

- The level of **industrial capabilities** of countries; and
- The level of **digitalization** of manufacturing firms

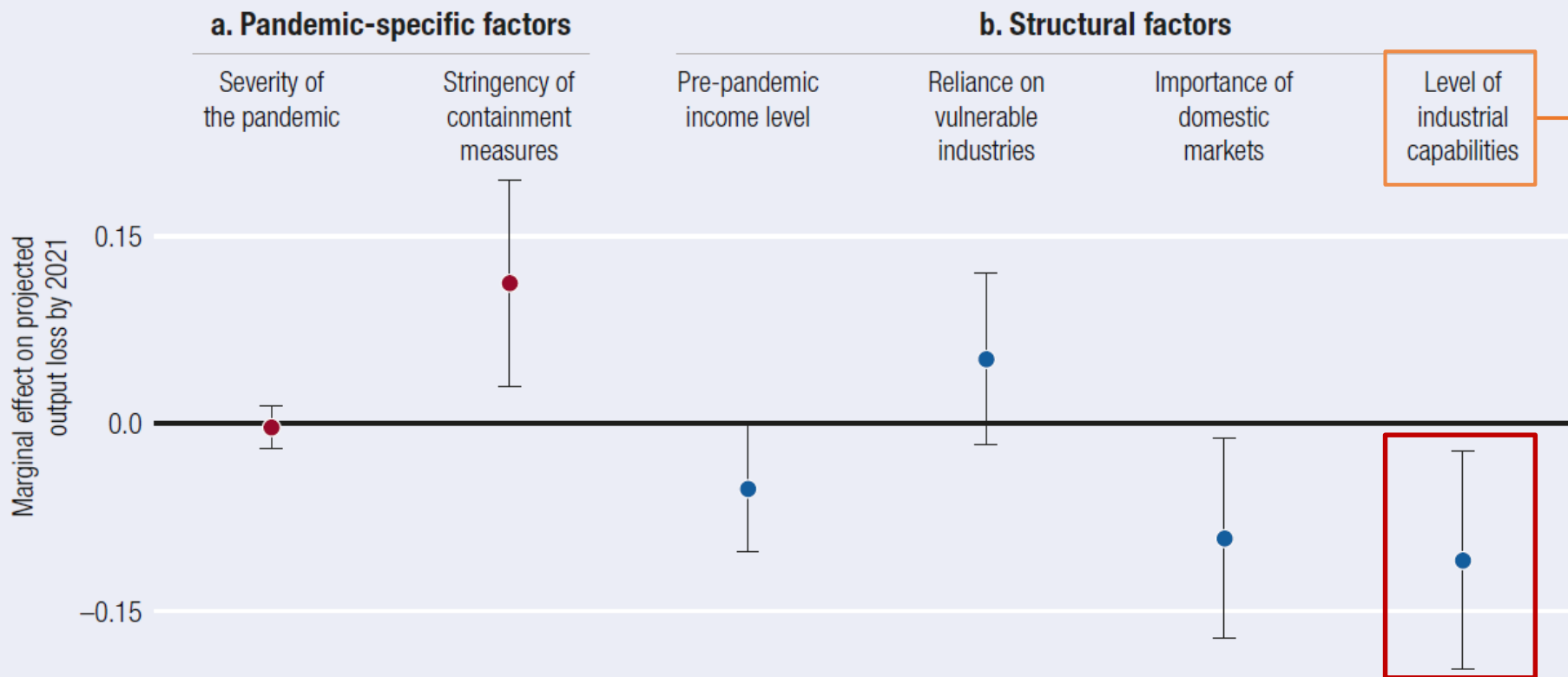
IDR shows that both elements have been key in driving resilience during the pandemic



Countries with stronger industrial capabilities were more resilient to the economic impact

Figure 12

Determinants of COVID-19 impact on economic activity by 2021: The role of industrial capabilities

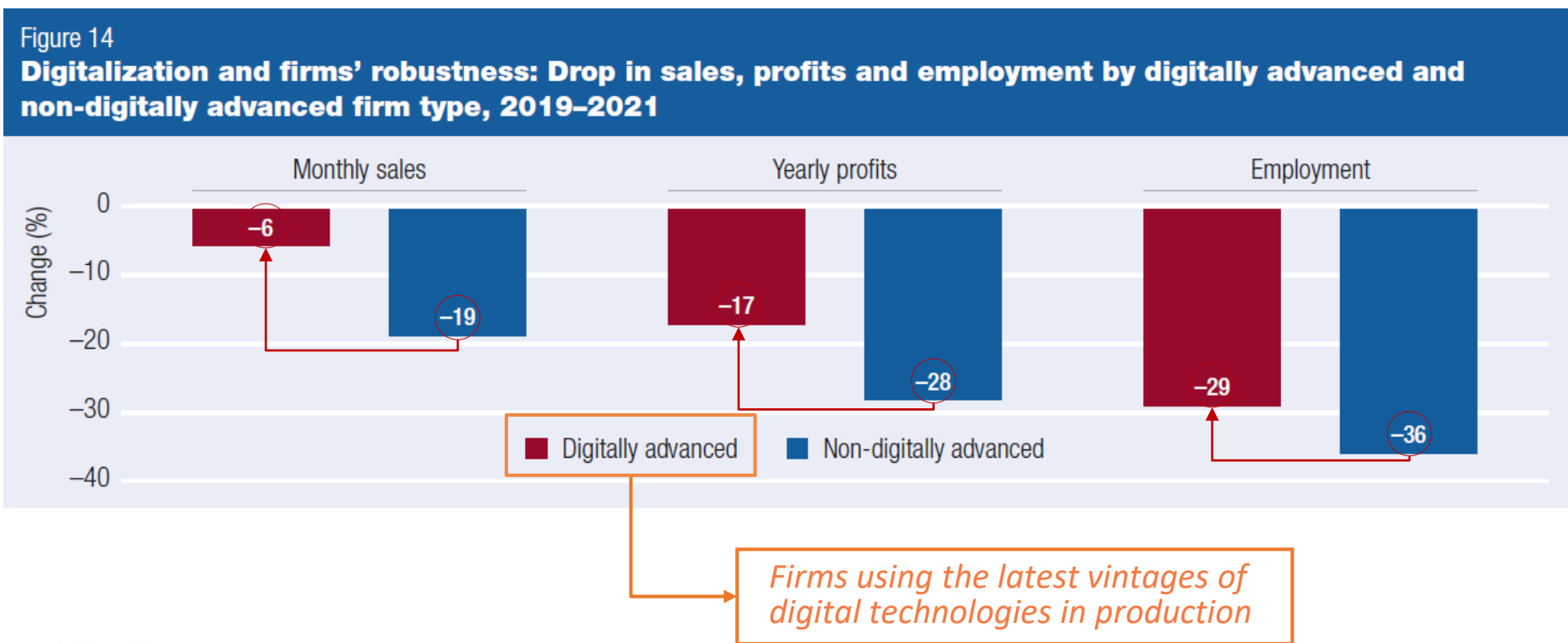


Proxied by UNIDO's Competitiveness Industrial Performance (CIP) index

- Sample of 140 countries
- Factors below the zero are associated with lower impact
- The level of countries **industrial capabilities** are the **most important factor** softening the impact of the crisis



Digitally advanced manufacturing firms were more resilient than the rest during the COVID-19 pandemic

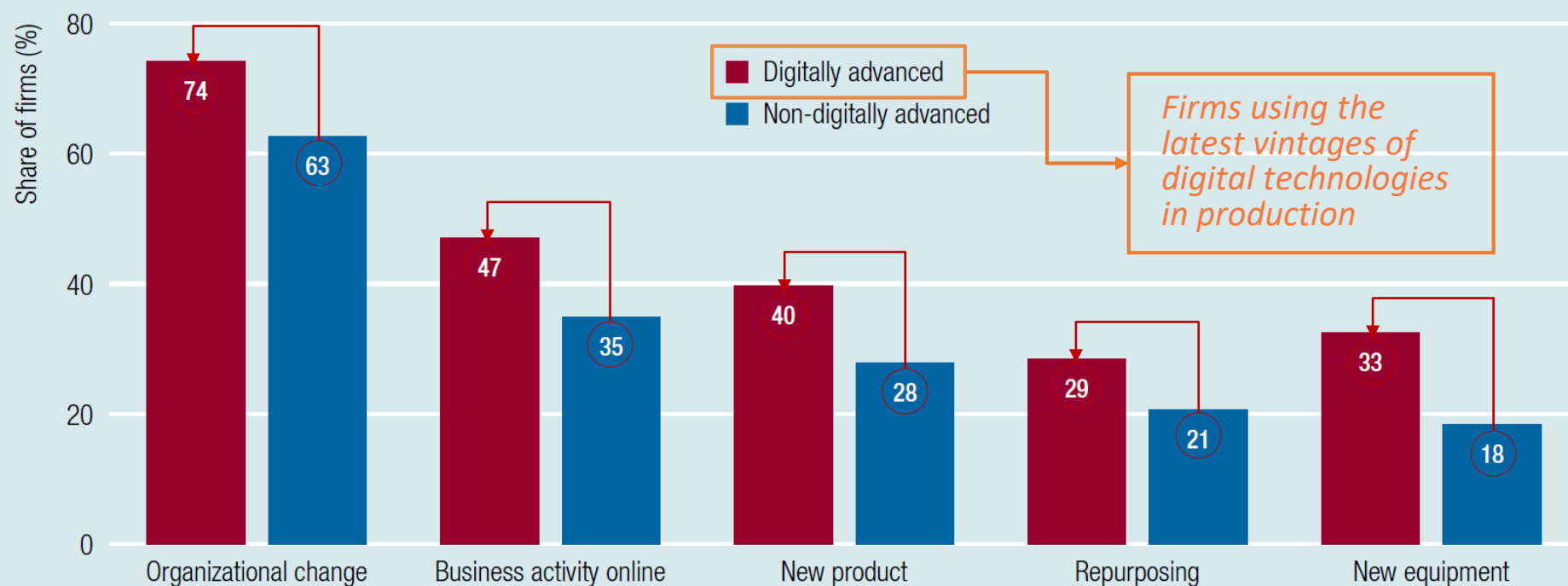


- 4,000 firms in 26 DEIEs in Africa, Asia and Latin America
- In all three dimensions of impact examined, **digitally advanced firms suffered lower impacts** than the rest

Digitally advanced manufacturing firms were more prone to introduce transformational changes in response to the COVID-19 pandemic

Figure 2.12

Digitalization and firms' readiness: Percent of firms that experienced a transformational change by digitally advanced and non-digitally advanced firm type, 2020–2021

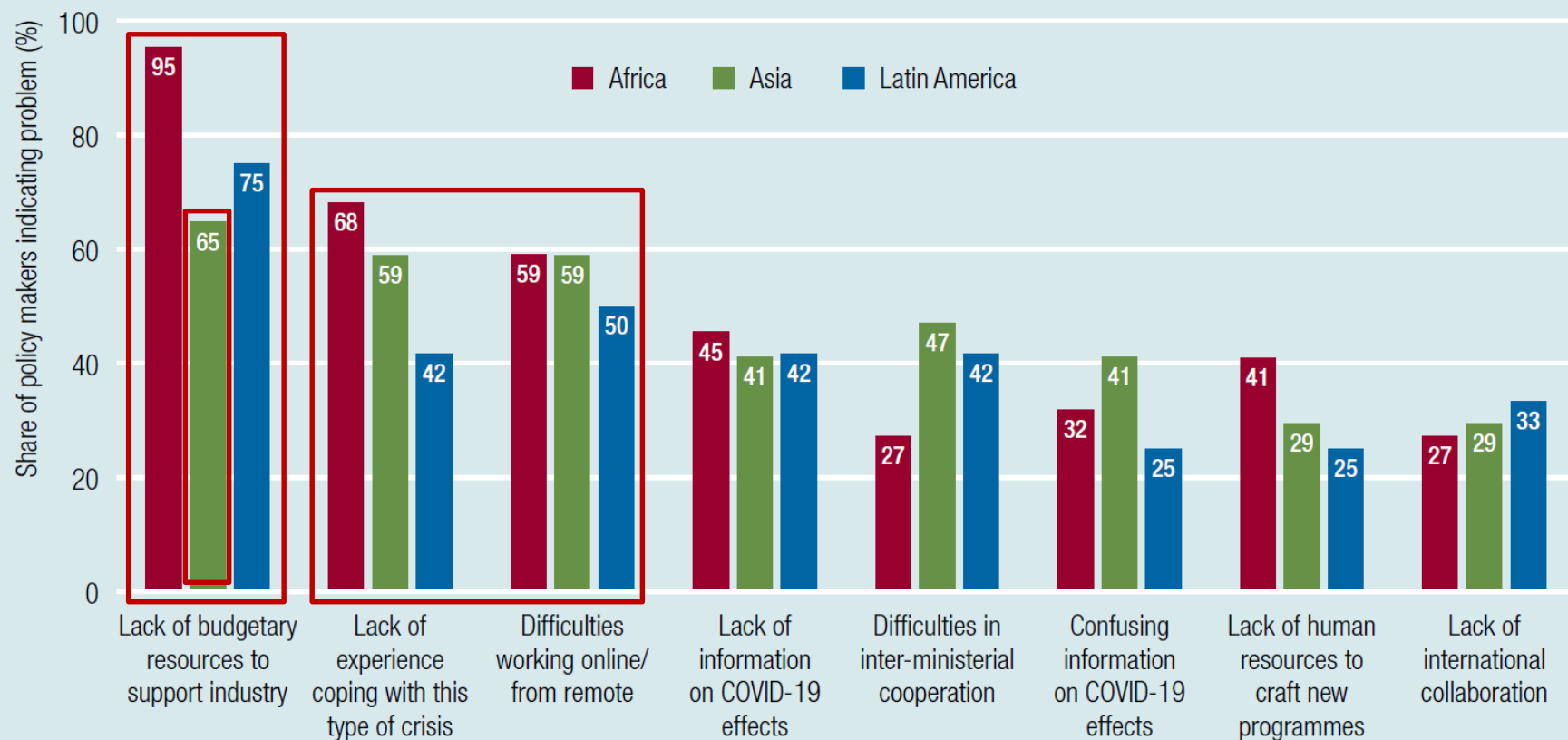


- 4,000 firms in 26 DEIEs in Africa, Asia and Latin America
- In all five changes explored, the share of **digitally advanced firms introducing changes** is larger than the share of the rest

Supporting polices played a key role in buffering impacts—but implementation also faced difficulties

Figure 2.15

Most important problems faced by policymakers in selected DEIEs, by region, 2020–2021



- Data collected by UNIDO in 44 developing economies in Africa, Asia and Latin America
- Main problem was lack of budgetary resources across the three regions
- But this problem tended to be less severe in Asia
- Other recurrent problems included the novelty of the situation and difficulties working online



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What can we expect for the future?



The long-term impact of COVID-19 depends on its interplay with on-going megatrends likely to shape the future of industrialization

IDR 2022 identifies three important trends:

- **Digitalisation and automation of industrial production**, as technological innovation in these fields, affects essentially all spheres of business development and deeply changes the competitive advantages of firms and nations;
- **Global economic power shifts**, especially the emergence of Asia as a dominant hub of the world industrial production, and China's structural transformation towards a knowledge-driven high-income economy, as these developments imply a major restructuring of trade flows and global value chains;
- **The greening of industrial production**, as the need to reduce environmental footprints, and particularly to decarbonise economies, calls for radically different business models and systemic transformations with far-reaching effects on the positioning of DEIEs in the world economy.



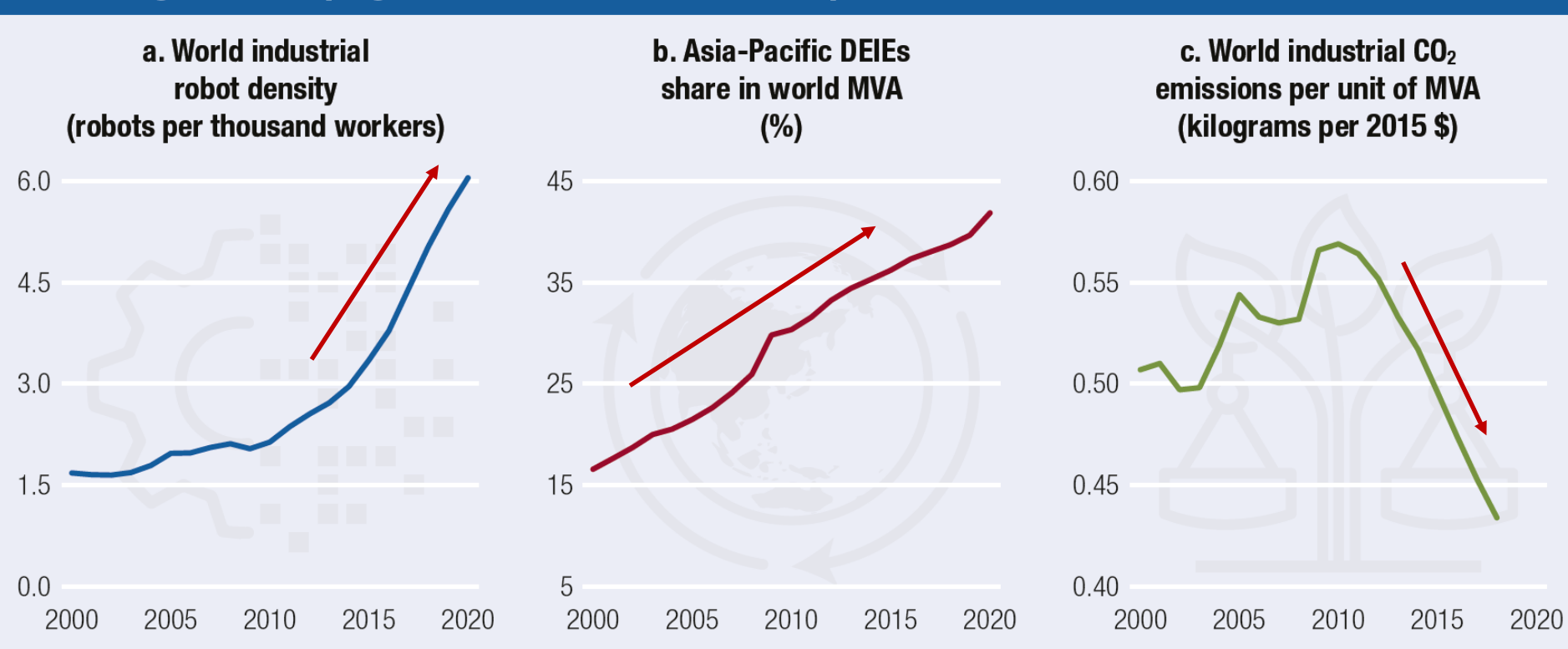
These trends were operating already 10-20 years before COVID-19

Three global indicators illustrate these trends:

- Robot density **triplicated** in the last 10 years;
- Asia-Pacific DEIEs gained **30 pp** in world manufacturing value added (MVA)
- Emissions per MVA **dropped 15 pp** in the last 10 years

Figure 18

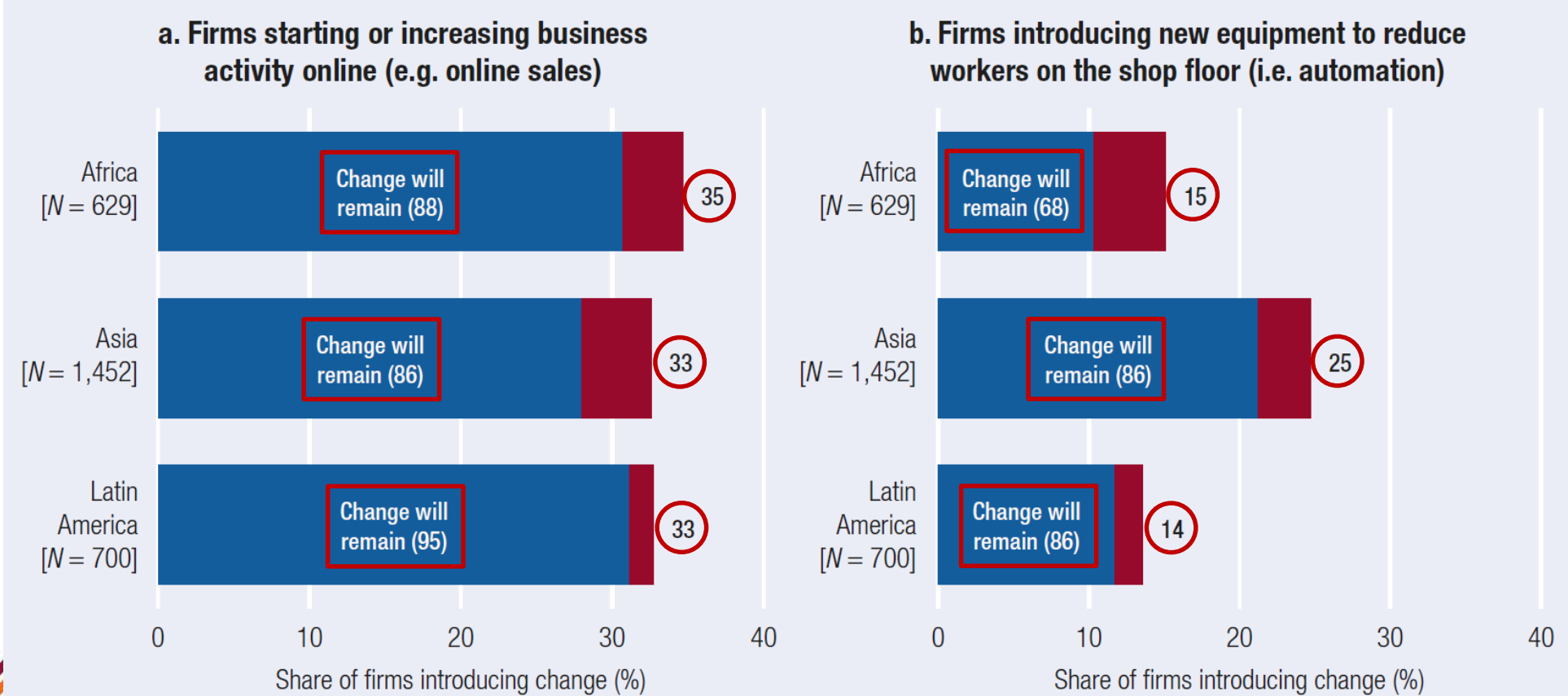
Three megatrend shaping the future of industrial development



COVID-19 seems to have accelerated the trend towards digitalization

Figure 19

Digitalization among manufacturing firms due to the pandemic in selected DEIEs, by region, 2021



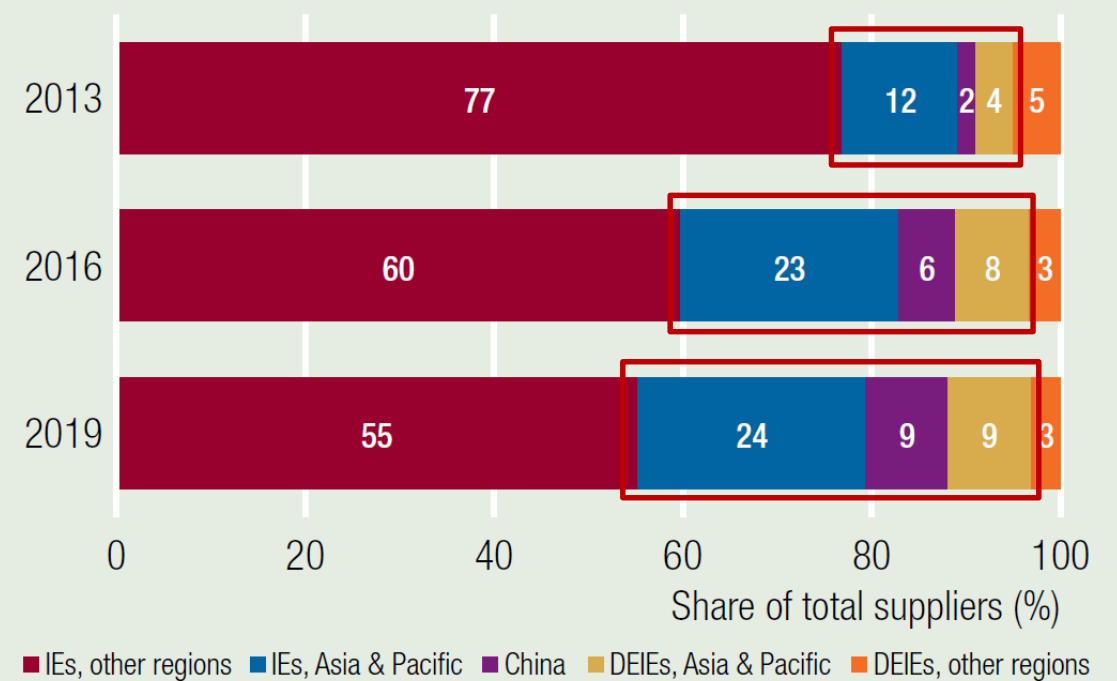
- UNIDO survey on 4,000 firms around the world
- A large number of firms started activity online or automation due to COVID-19
- In most cases, the change came to stay (68-95%)

A shift of global suppliers towards Asia

- Data from FactSet on the suppliers for the largest 750 world manufacturing public companies
- The share of suppliers from Asia steadily growing in the last years: from 18% in 2013 to 42% in 2019. An increase of 24 percentage points
- This increase is equally distributed between Asian IEs (12 points) and Asian DEIEs (also 12 points)

Figure 3.6

Share of suppliers for all G750 manufacturing companies, by region of origin, 2013–2019

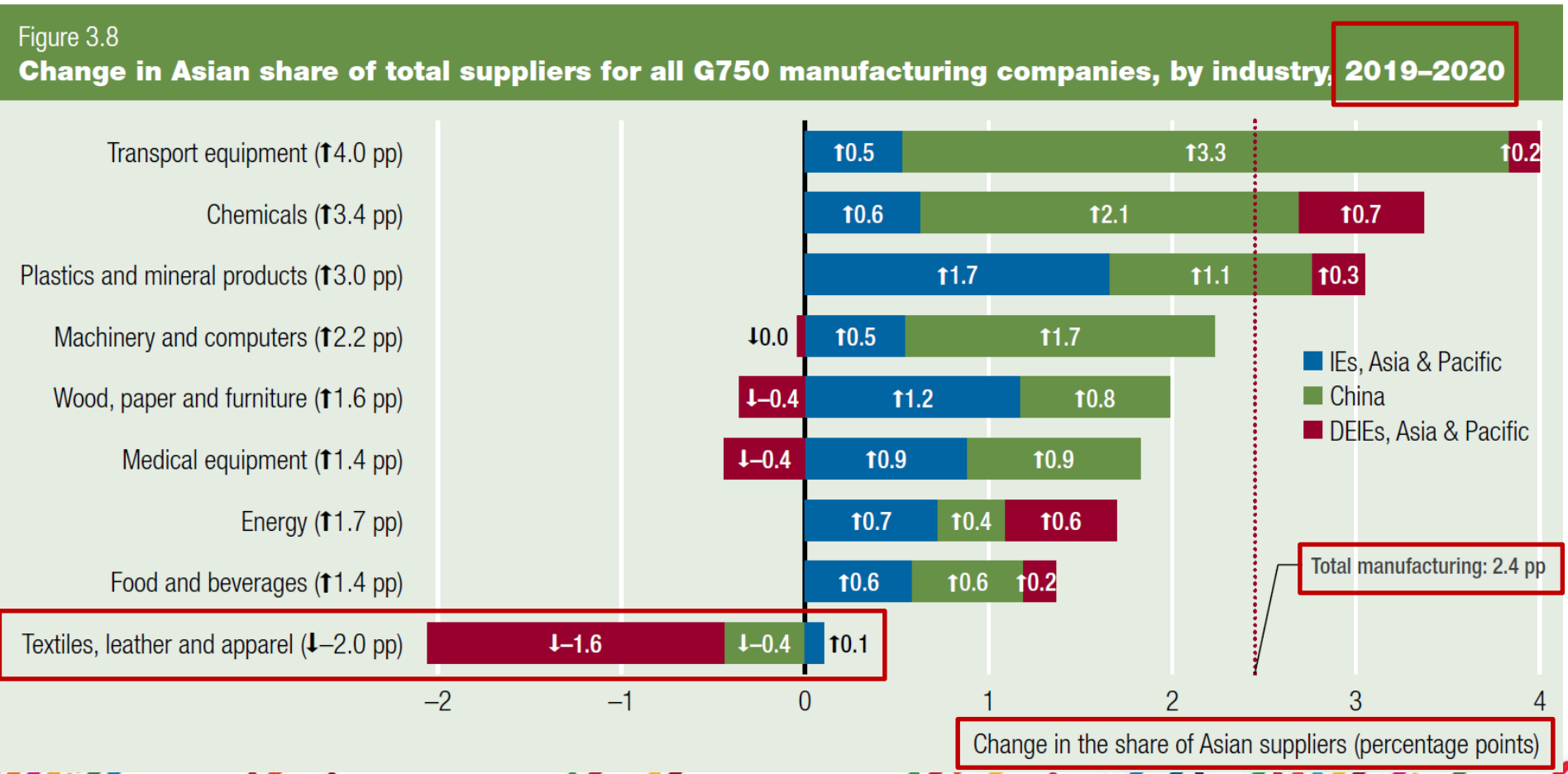


Shift towards Asian suppliers visible across all manufacturing GVCs



- FactSet data on G750 public companies
- The increase in Asian suppliers is visible across all industries
- But the shift has been particularly intense in four industries

The pandemic seems to have accelerated this trend, in all industries but textiles and apparel

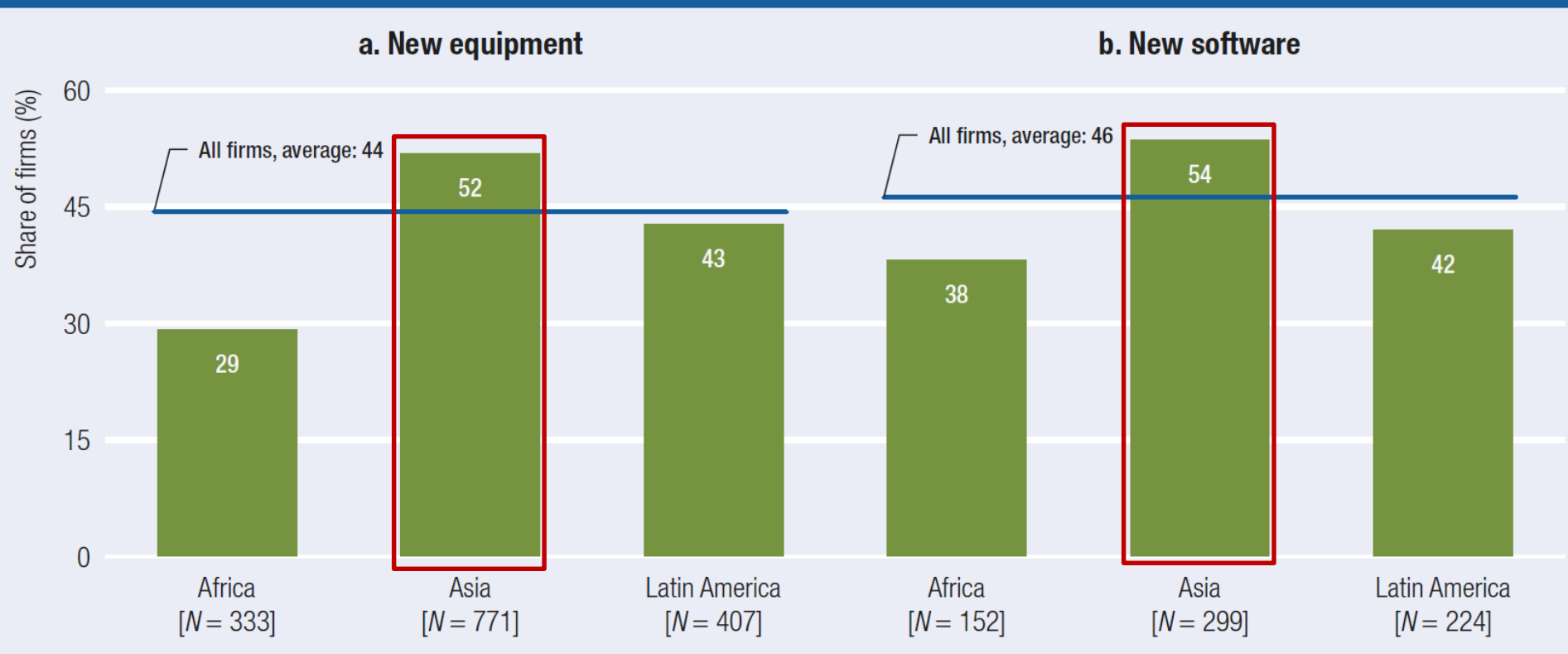


- FactSet data on G750 public companies
- Between 2019 and 2020 Asian suppliers participation increased by 2.4 pp
- This is visible across all industries but textiles & apparel

COVID-19 might have also accelerated shifts in global production towards Asia

Figure 21

Manufacturing firms expecting to increase post-pandemic investments in selected DEIEs, by region, 2021



- UNIDO survey on 4,000 firms around the world
- Expected investment decisions
- Firms in Asia are more likely to increase investments post-pandemic
- These differences will affect the speed of recovery

There are some signs that COVID-19 might also trigger new green practices

- UNIDO survey on 4,000 firms around the world
- Most firms surveyed (from 78 to 83 percent) expect that the pandemic will trigger to a great or moderate extent the adoption of new environmentally-friendly practices.
- This is quite consistent across regions

Figure 22

Adoption of environmentally friendly practices due to COVID-19 in selected DEIEs, by region, 2021





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How can we build a better future?



Efforts should be coordinated at the local and global levels to achieve a recovery that enables a safer development path

Aligning industrial policies with the building back better narrative means putting them to work for the achievement of the SDGs, taking into account the megatrends which are likely to shape the future of industrialization and the tangible risk of global disasters like the COVID-19 pandemic.

These policies should promote a recovery that is:

- **Green;**
- **Inclusive;** and
- **Resilient**

And can only be achieved with the support of the international community



Industrial policies to promote a green, inclusive and resilient recovery

Green industrial policy should simultaneously target demand and supply:

- **Consumers:** *shift consumer behaviour through demand-side instruments*
- **Firms:** *provide incentives to improve firms' resource and energy efficiency and promote green innovation*

Inclusive industrial policy should support the actors which have been more vulnerable during the pandemic:

- **SMEs:** *Facilitate the uptake of new technologies (especially ADPTs) and promote market diversification*
- **Female, youth and informal workers:** *Enhance safety net provision and support employability*

Industrial policy should also strengthen the resilience of countries against future risks:

- **Prevention:** *build awareness and foster knowledge creation and exchange about new and existing risks*
- **Preparedness:** *support firm's integration of industry vulnerability data, monitoring and evaluation mechanisms*



Building back better: SDG-friendly industrial policies post-pandemic

Box 4.1

Recommendations for SDG-oriented industrial policy approaches post-pandemic

- Distinguish between short-term and long-term effects of a disaster. Emergency interventions should accompany other solutions that address more structural challenges and that contribute to enhancing industry's resilience against future disasters.
- Include multistakeholder approaches to policymaking, with greater levels of dialogue and cooperation from all parties. Private sector involvement in short-term recovery, and in fostering long-term industrial development and resilience, should be part of any recovery and long-term development strategy.
- Address the risks and opportunities opened by megatrends expected to shape industrialization in the future.
- Target systemic, structural change by enhancing local manufacturing capacities and other industrial commons, including research and development (R&D), manufacturing infrastructure and expertise.
- Contribute to strengthened multilateralism and international coordination around industrial policy issues, resilience and global disaster risk management.

Source: UNIDO elaboration.



How can we build a better future?

A call for action to the international community to support an Inclusive, Sustainable and Resilient Industrial Recovery



Priorities for the Short Term

Address vaccine rollout and access, ensuring global protection against COVID-19

- Accelerate production and deployment of COVID-19 vaccines, especially to developing countries.
- Eliminate export restrictions on ingredients essential to COVID-19 vaccines and medicines.
- Expand technology transfer commitments to increase the global manufacturing capacity of vaccines and treatments.



Goals for the Medium to Long Term

Coordinate global efforts to address future development challenges and ensure that the world builds back better through inclusive and sustainable means

Expand the policy space

- Promote recapitalization of development banks
- Facilitate developing countries' efforts to expand fiscal space needed for recovery packages

Strengthen gov. capabilities

- Assist governments in design of SDG-oriented industrial strategies
- Support revitalization of synergistic partnerships with the private sector
- Support sustained, long-term investments in public institutions

Tackle digital divides

- Support establishment of an international programme that creates and shares knowledge of advanced digital production technologies
- Scale investment and strengthen domestic capacities in digital infrastructure, education, skills and R&D

Foster a green transition

- Scale investments in industrial decarbonization, energy switching and circular economy principles
- Facilitate global access to green technologies
- Foster partnerships created to fight COVID-19

Promote local industrial resilience

- Foster opportunities for local production capabilities in health-related strategic goods and devices
- Integrate crisis resilience, risk management and socio-economic goals into industrial policy practices



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Thanks for your attention

The report is now available at:

www.unido.org/idr2022

