UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION
Progress by innovation

SUSTAINABLE DEVELOPMENT GOALS

International Yearbook of Industrial Statistics

Global Highlights 2023

Industrial sectors, which comprise mining, manufacturing and the utilities sectors, grew by 2.3 per cent in 2022 globally. Manufacturing accounted for most of this dynamism, with an increase of 3.2 per cent, while the combined mining and utilities sector contracted by 0.9 per cent. Industry is expected to decelerate in 2023 due to mounting headwinds from various sources. While manufacturing drives industrial growth at the global level, in low-income economies the largest contributor remains the mining and utilities sector.

In recent years, the world seems to be navigating a double decoupling in manufacturing, one positive and one negative. On the positive side, there is evidence of a decoupling between manufacturing activity and CO_2 emissions, with emissions remaining relatively flat while production keeps increasing. This trend is evident in most country groups, although the levels of emission intensity remain high in most cases. On the negative side, there is also a decoupling between manufacturing production and employment. Indeed, higher levels of global manufacturing output have not translated into more jobs. In particular, the employment of women in manufacturing has followed a downward trend, further accelerated due to the COVID-19 pandemic.

A clear global development observed over the last decades is the rebalancing of manufacturing from high-income economies towards middle-income economies, as well as from Northern America and Europe towards Asia and Oceania. The COVID-19 crisis further accelerated this macro-level trend.

Another worldwide megatrend is the expanding importance of higher technology industries in manufacturing. These industries recovered faster post-COVID-19 and have continued expanding dynamically, while growth in lower technology industries has stalled. This divergence could further increase inequalities within and between countries.

Excepting high-income industrial economies and Latin America and the Caribbean, all regions and country groups have achieved progress towards SDG 9 since 2015, although the rate of progress has generally been insufficient to reach the global Goal by 2030. This is a particular cause of concern in least developed countries (LDCs), where industrialization is one of the most promising development strategies.

This edition of the Yearbook included a thematic chapter on innovation statistics. Existing indicators suggest that the world's most innovative economies are concentrated in Europe, Eastern Asia and Northern America. However, further investment in data are needed to fully measure the incidence, drivers, obstacles and impacts of industrial innovation and provide crucial information for guiding policies in this area.

OVERVIEW

- MVA share in GDP: 16.8%
- MVA growth rate: 3.2%
- Manufacturing share in employment: 13.6%
- Manufacturing employment ♀: 40% ♂: 60%

MANUFACTURING INDUSTRIES

- Medium-high and high tech: 49%
- Other manufacturing: 51%

INDUSTRIAL PERFORMANCE

- Share of manufactures in exports: 76%
- SDG Industry Index:

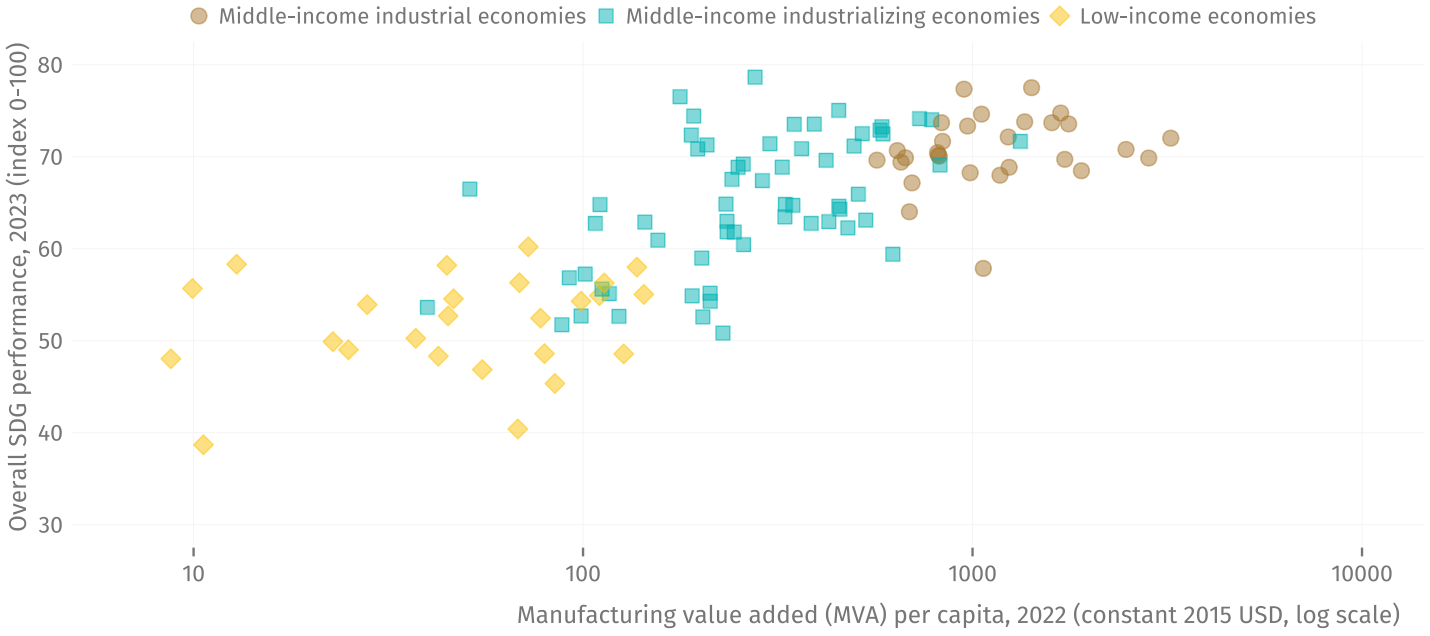

Figure 1 | There is a strong relationship between manufacturing and overall SDG progress
Source: [1; 2]
Note: Only low- and middle-income economies included.

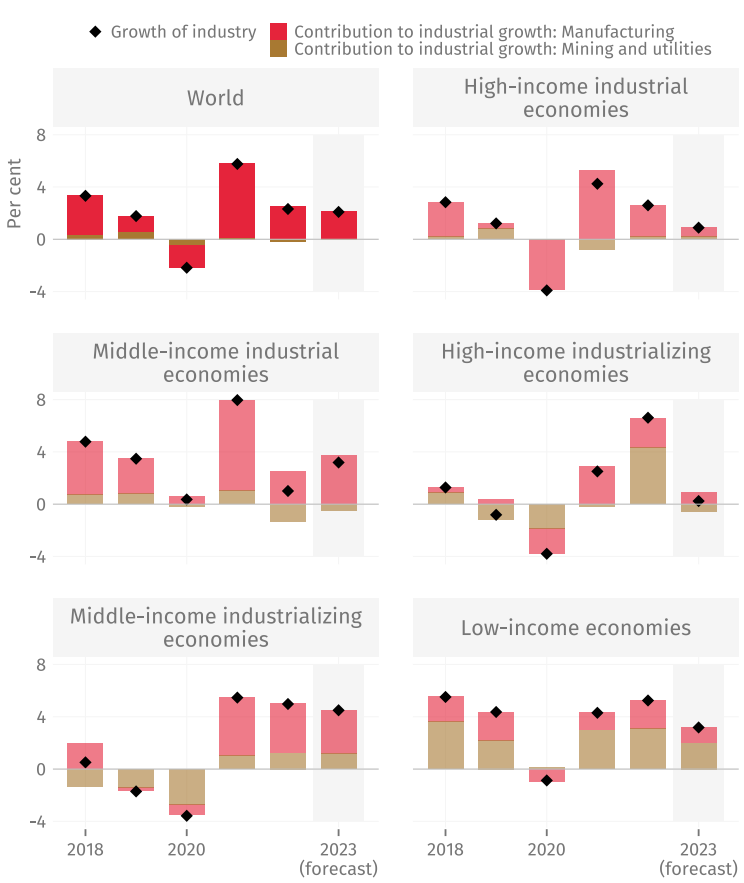

Figure 2 | While the manufacturing sector drives industrial growth at the global level, in low-income economies the largest contributor remains the mining and utilities sector
Source: [1]

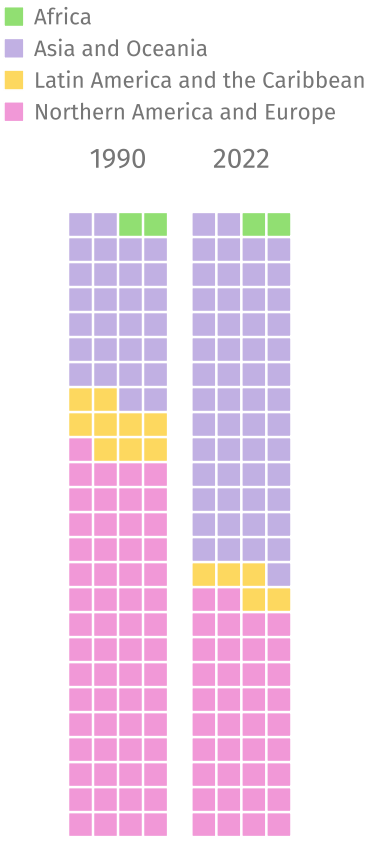

Figure 3 | One of the most significant megatrends in manufacturing is the shift of production from industrial economies in Europe and Northern America towards Asia *Source:* [1]
Note: One square represents 1 per cent of global MVA.

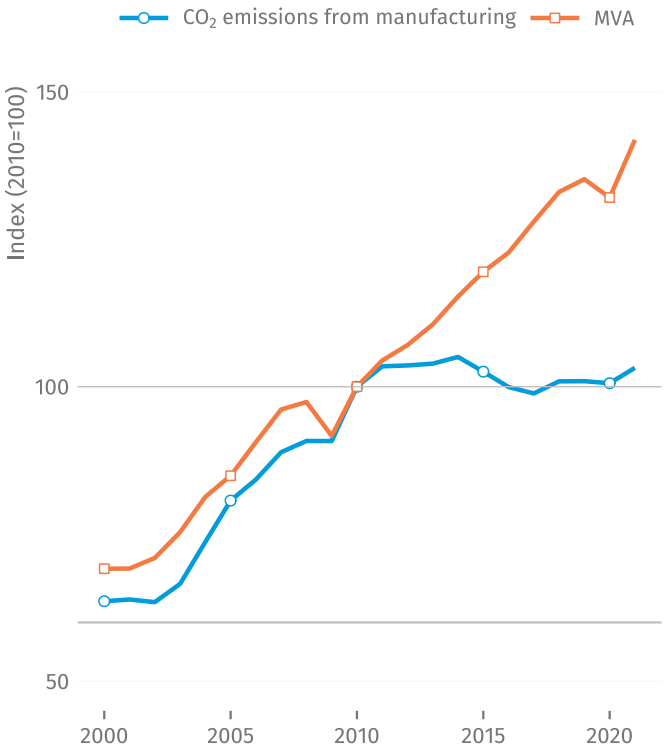

Figure 4 | Since 2010, there is evidence of decoupling between manufacturing activity and carbon dioxide (CO_2) emissions
Source: [1; 3]

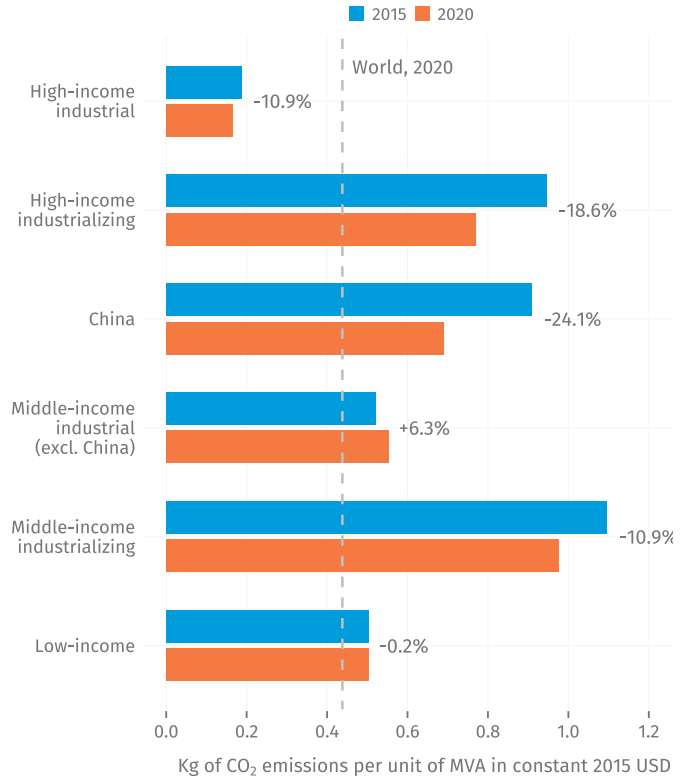

Figure 5 | The decoupling of CO_2 emissions is evident in most country groups, although the levels of emission intensity remain high in most cases
Source: [4]
Note: The numbers next to the bars indicate the change in the CO_2 emissions intensity of manufacturing between 2015 and 2020.

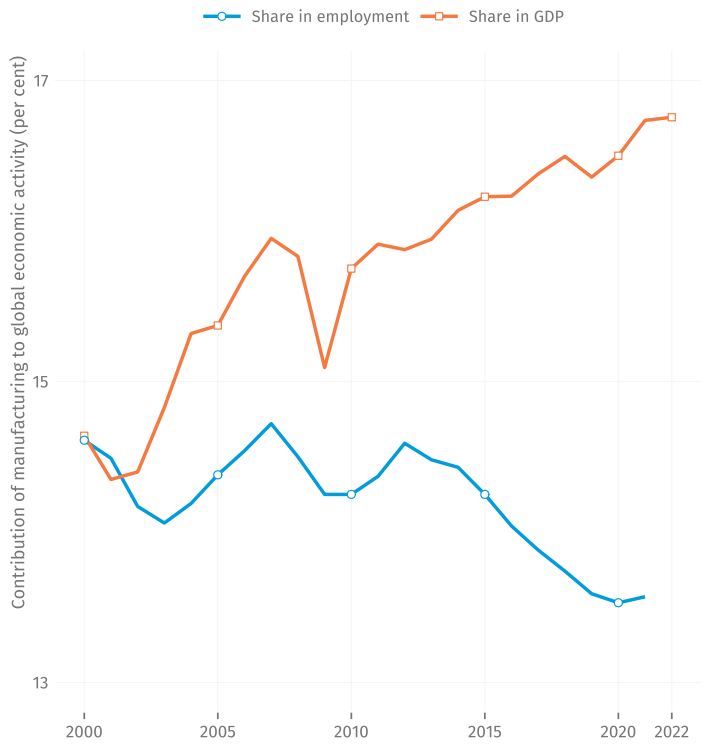

Figure 6 | There is also a decoupling between manufacturing production and employment, with higher levels of production not translating into more jobs
Source: [4]

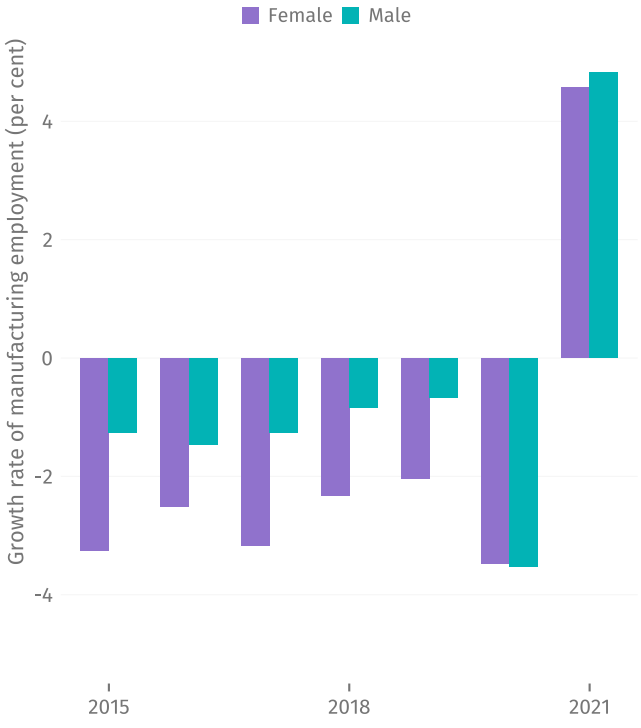

Figure 7 | The employment of women in manufacturing has generally followed a downward trend in recent years, further accentuated due to the COVID-19 pandemic
Source: [5]

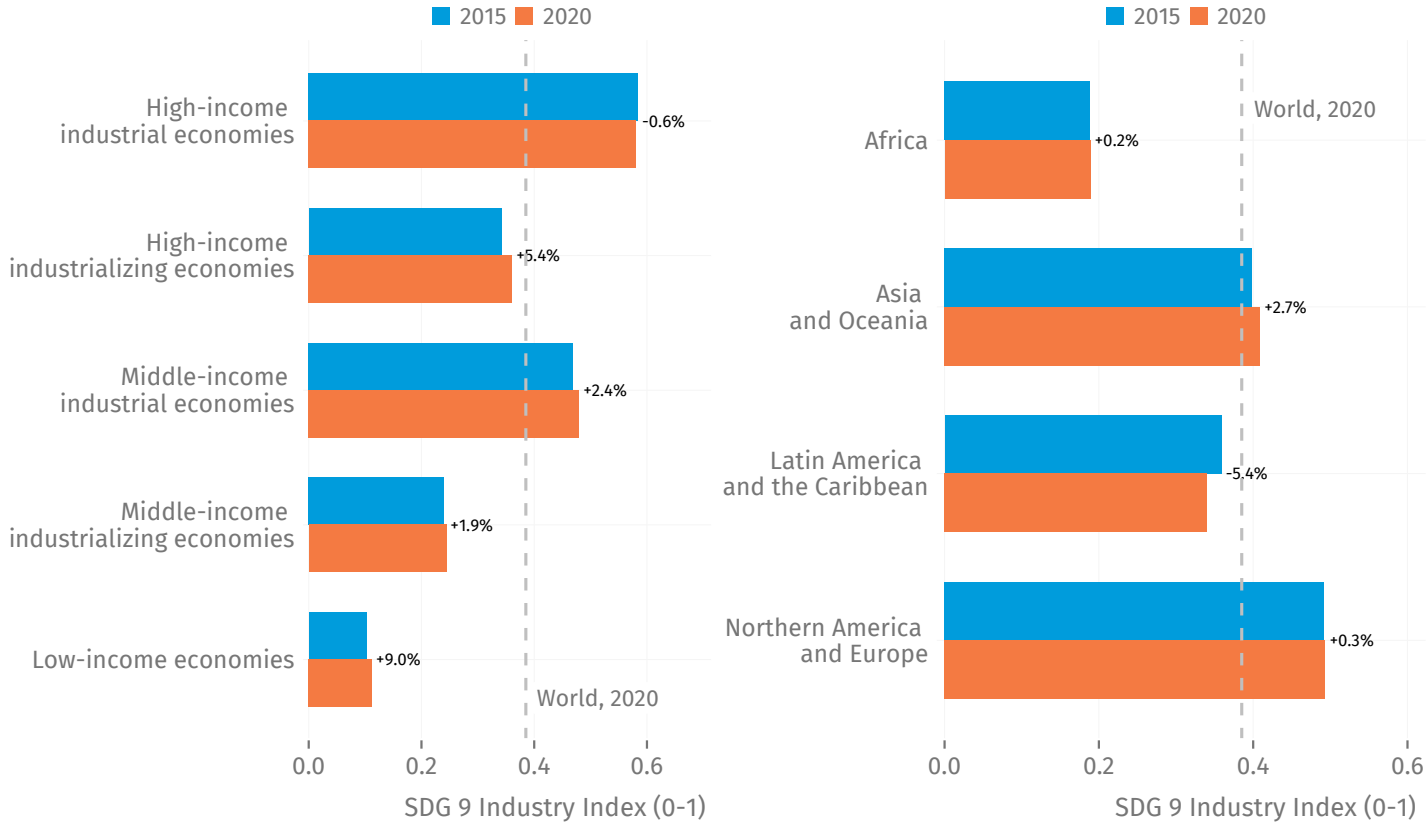

Figure 8 | Excepting high-income industrial economies and the region of Latin America and the Caribbean, all country groups and regions achieved progress towards SDG 9, although the rate of progress has generally been insufficient
Source: [4]
Note: Group aggregates are calculated as weighted averages of countries with available information, using population as weights.

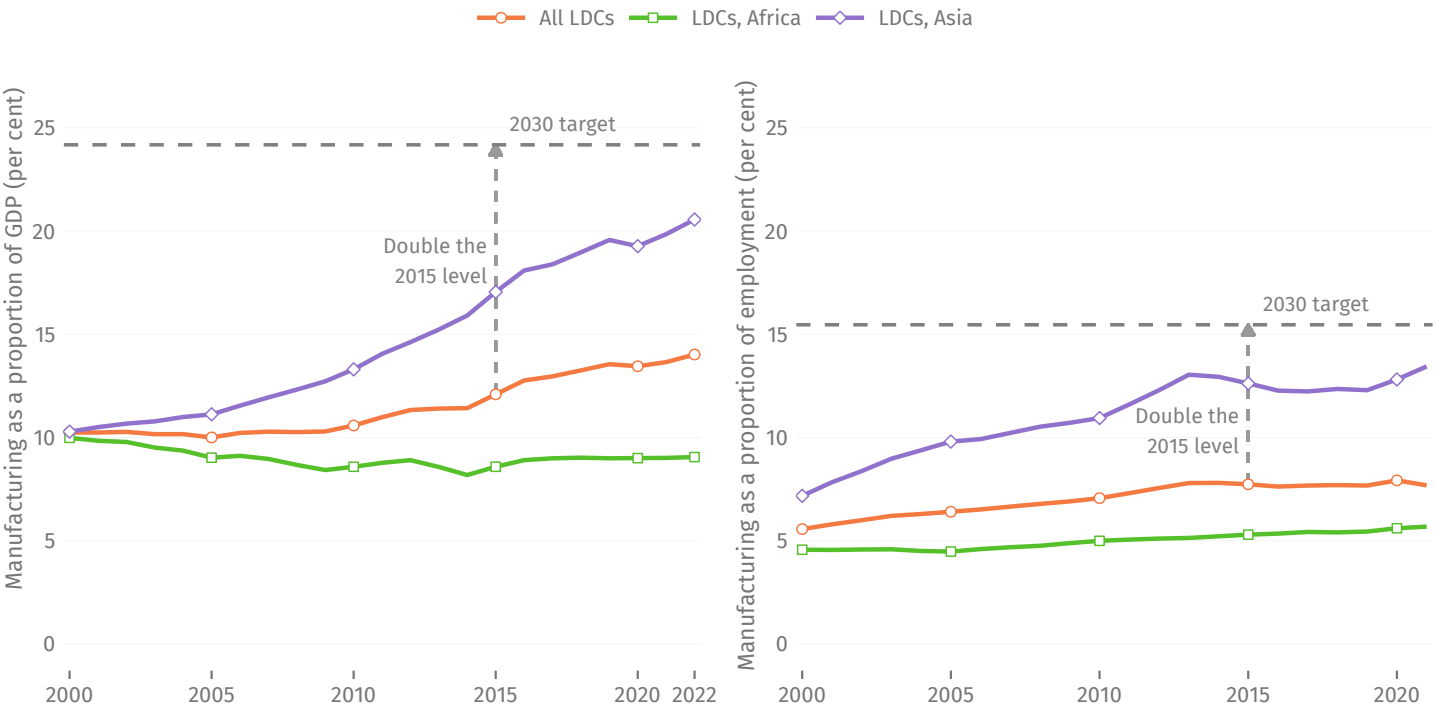

Figure 9 | Progress towards SDG 9 targets in least developed countries (LDCs) is stalling, although Asian LDCs have shown greater dynamism
Source: [4]
Note: The graphs correspond to SDG 9.2.1 (left) and SDG 9.2.2 (right).

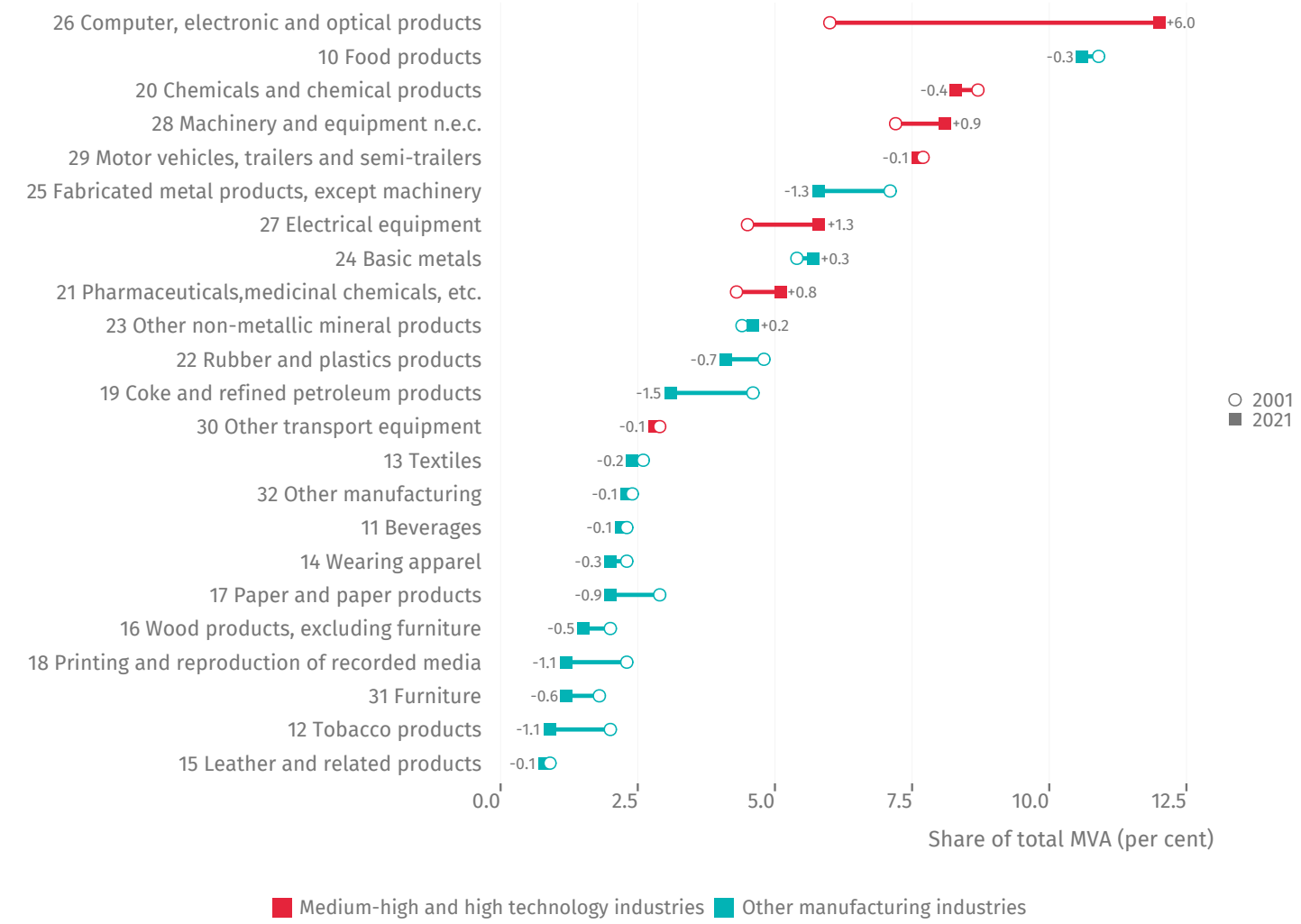

Figure 10 | Another global megatrend is the expanding importance of higher-technology industries in manufacturing
Source: [6]
Note: The numbers next to the bars indicate the change in the share of MVA between 2001 and 2021.

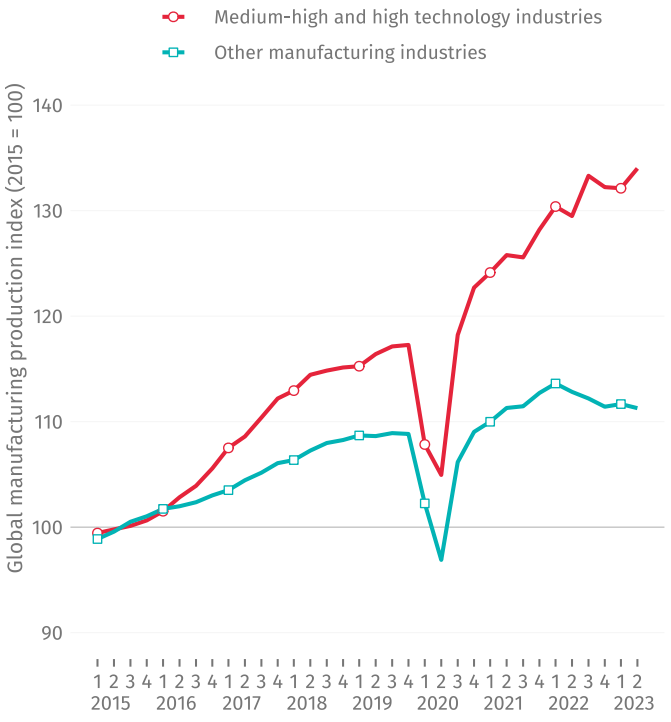

Figure 11 | Higher-technology industries recovered faster post-COVID-19 and have continued expanding, while growth in lower-technology industries has stalled
Source: [7]

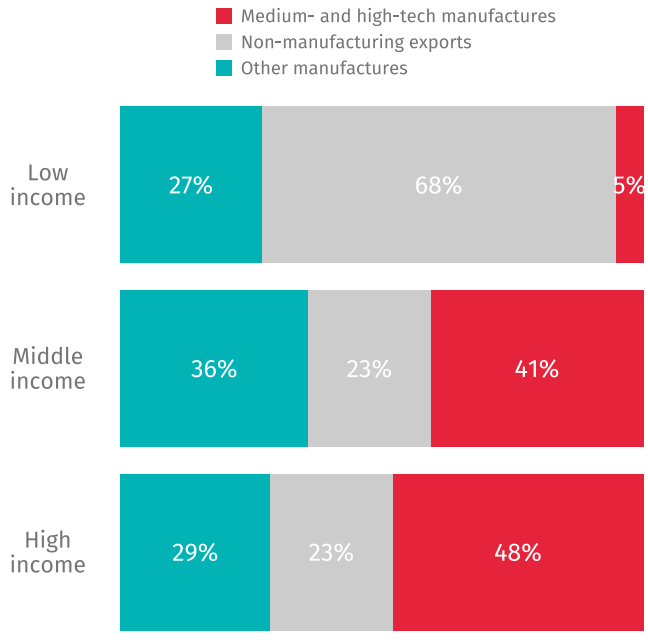

Figure 12 | The diverging performance between higher- and lower-technology industries could further increase inequality, as exports from low-income economies lack a specialization in high-tech industries
Source: [7]

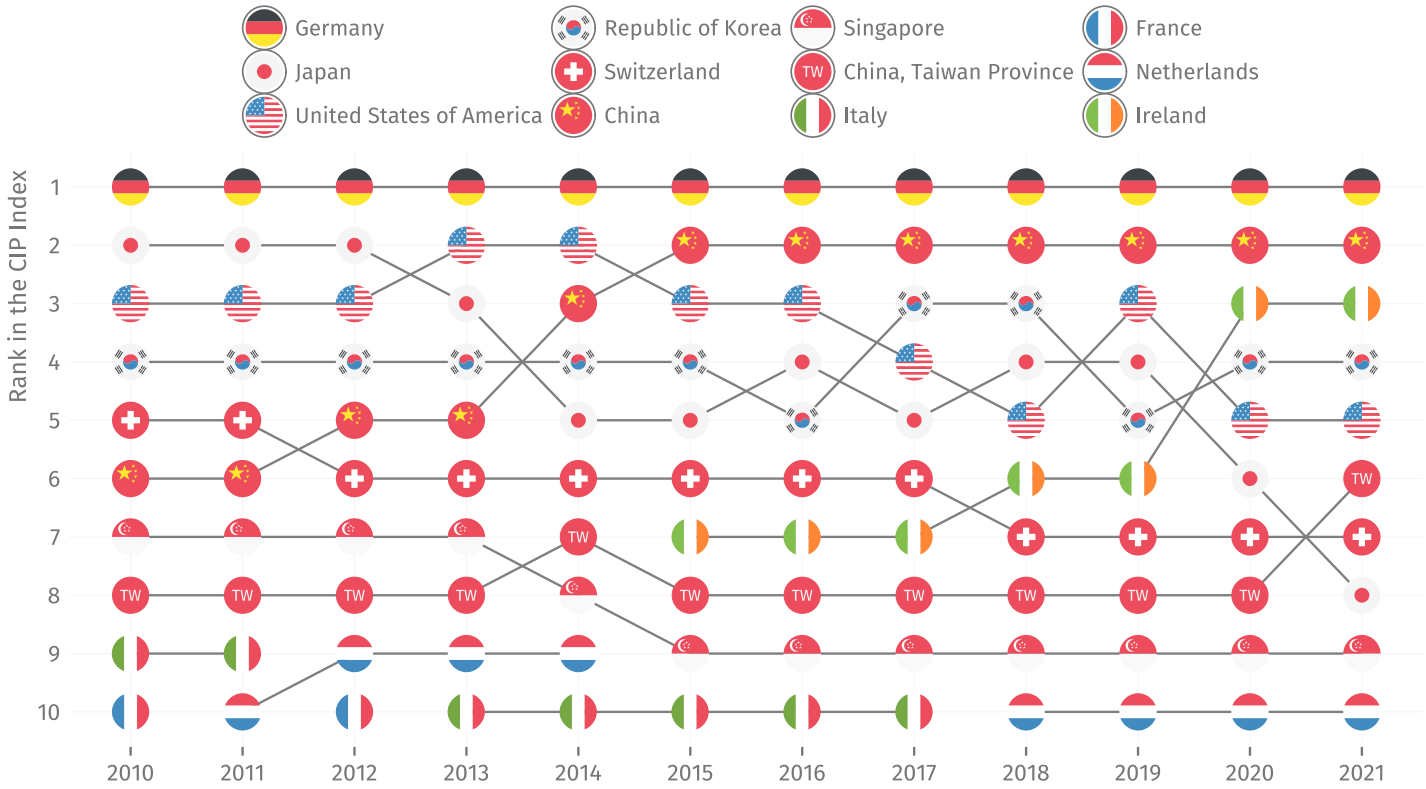

Figure 13 | Given their level of industrial development and their strong technological upgrading, high-income industrial economies and China are the world's most competitive manufacturers
Source: [8]

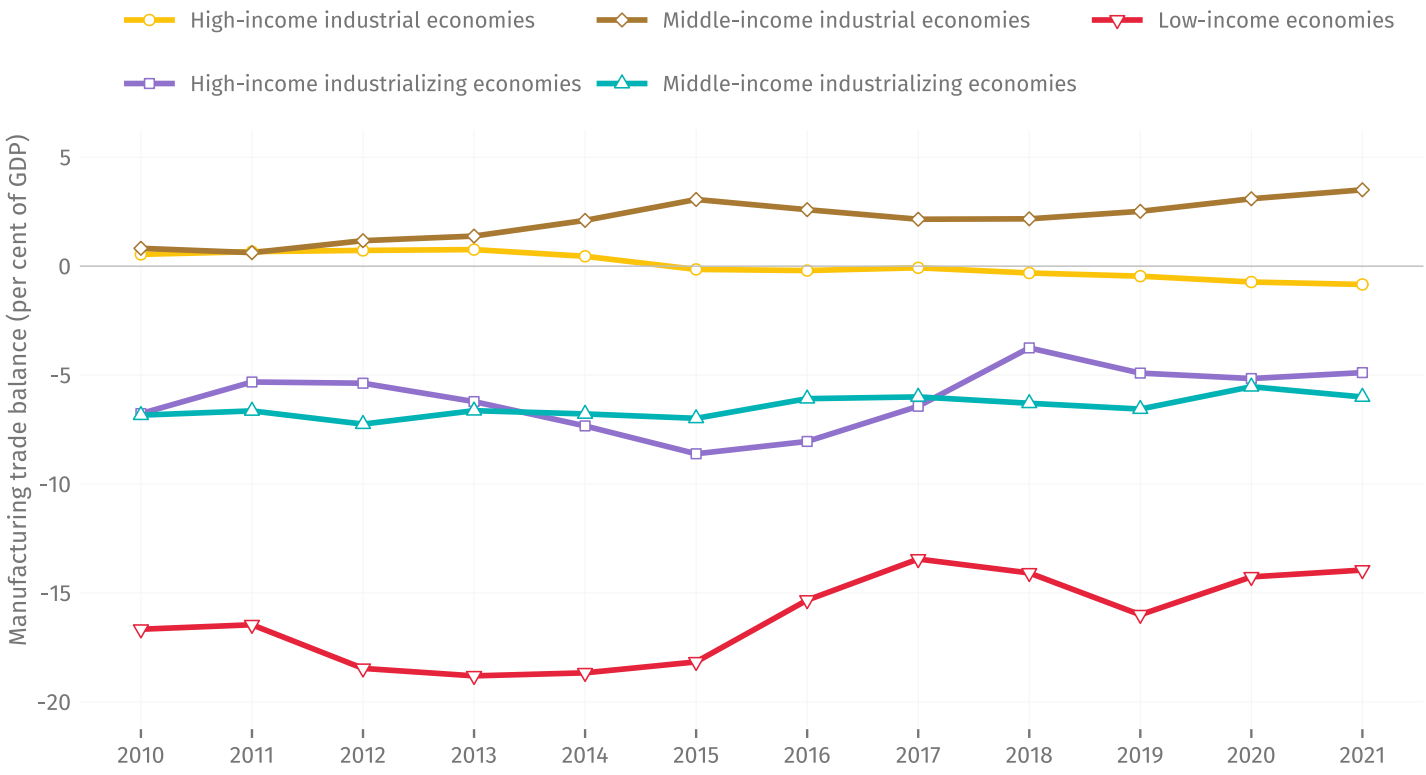

Figure 14 | This is also reflected in manufacturing trade balance, with industrializing economies showing the largest deficits in terms of GDP; especially worrying is the persistent deficit in low-income economies
Source: [1; 9]

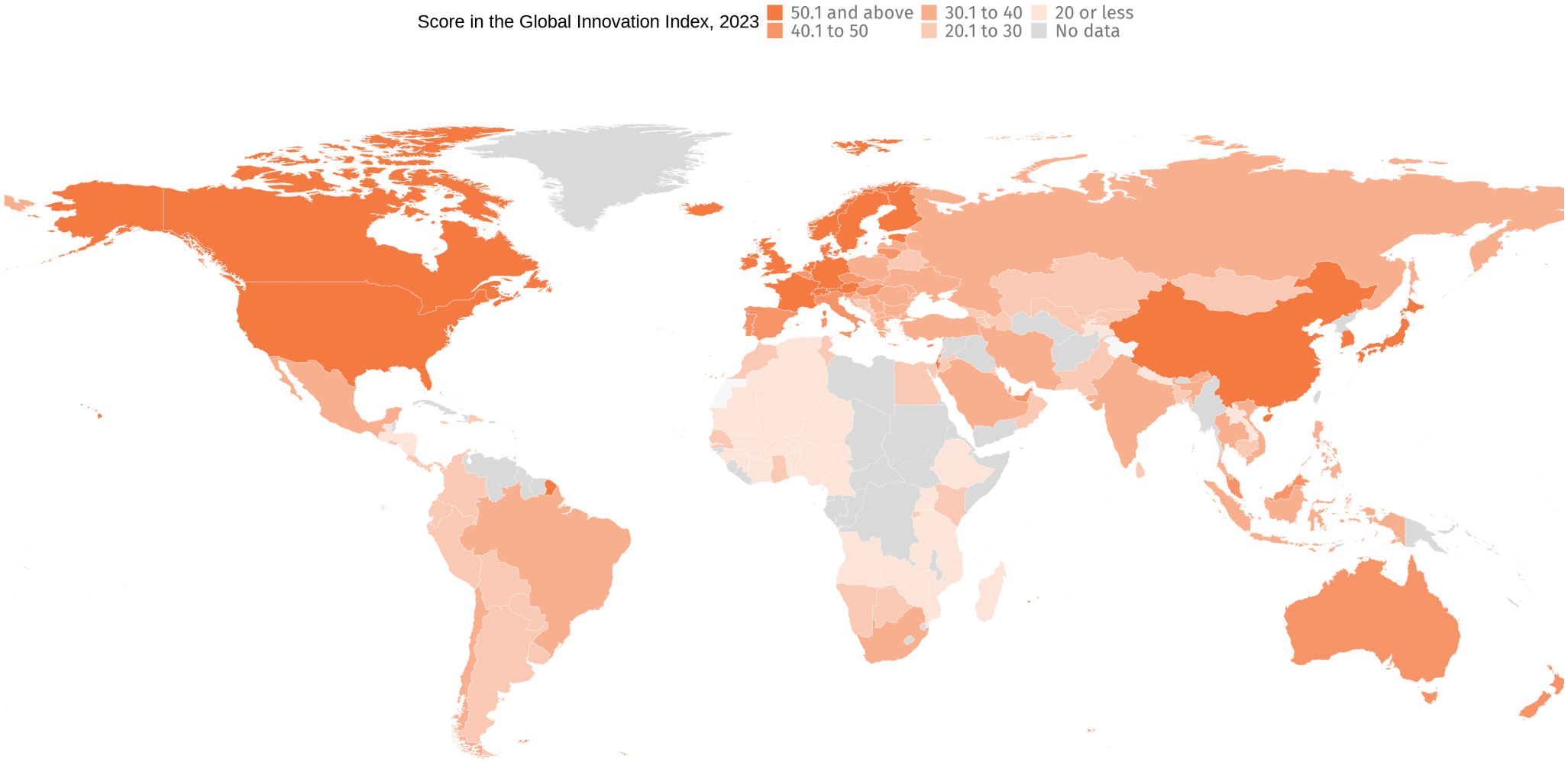

Figure 15 | The world's most innovative economies are concentrated in Europe, Eastern Asia and Northern America
Source: [10]

Table 1 | Industrial indicators by country/area group, latest available year

	MVA per capita 2022 (2015 US$)	MVA growth rate 2022 (%)	MVA share in GDP 2022 (%)	MHT share in MVA 2020 (%)	Industry value added share in GDP 2022 (%)	Manuf. share in exports 2022 (%)	MHT share in manuf. exports 2022 (%)	Manuf. trade balance 2021 (% GDP)	Manuf. share in employ-ment 2021 (%)	Manuf. CO_2 intensity 2020 (kg/US$)
Geographical regions										
World	1,879	3.2	16.8	45.1	21.4	76.5	59.2	-0.2	13.6	0.44
Africa	207	3.6	10.4	22.9	19.8	37.0	34.5	-9.8	7.4	0.49
Northern Africa	*383*	*4.4*	*10.7*	*25.1*	*23.4*	*45.4*	*43.1*	*-10.8*	*11.6*	*0.58*
Sub-Saharan Africa	*167*	*3.2*	*10.2*	*21.6*	*18.1*	*33.0*	*29.0*	*-9.3*	*6.7*	*0.44*
Asia and Oceania	1,733	3.4	22.4	45.0	27.9	81.6	59.5	3.6	15.4	0.60
Central Asia	*766*	*2.8*	*14.4*	*17.2*	*24.0*	*29.0*	*41.0*	*-12.5*	*10.8*	*0.68*
Eastern Asia	*3,741*	*2.4*	*26.4*	*47.1*	*30.2*	*94.3*	*67.8*	*6.1*	*18.6*	*0.55*
South-eastern Asia	*1,064*	*6.4*	*22.5*	*43.0*	*28.5*	*82.1*	*57.7*	*4.6*	*15.0*	*0.52*
Southern Asia	*345*	*7.5*	*15.8*	*37.7*	*20.8*	*83.0*	*29.3*	*-2.0*	*12.5*	*1.12*
Western Asia	*1,561*	*7.1*	*12.8*	*36.7*	*27.9*	*51.7*	*39.0*	*-3.4*	*11.7*	*0.79*
Oceania	*2,351*	*1.7*	*6.1*	*27.9*	*13.7*	*42.1*	*14.3*	*-3.0*	*6.7*	*0.38*
Northern America and Europe	5,087	2.9	13.0	47.7	16.3	75.8	59.9	-2.1	13.1	0.21
Europe	*4,213*	*3.9*	*14.7*	*49.5*	*18.4*	*78.1*	*59.6*	*1.1*	*14.8*	*0.23*
Northern America	*6,809*	*1.8*	*11.3*	*45.5*	*14.4*	*67.8*	*61.0*	*-5.1*	*9.8*	*0.18*
Latin America and the Caribbean	1,096	3.3	12.8	33.2	18.5	60.3	54.5	-5.4	12.0	0.32
Caribbean	*1,732*	*2.2*	*20.6*	*32.9*	*23.5*	*66.0*	*40.2*	*-7.4*	*8.1*	*0.38*
Central America	*1,422*	*4.1*	*16.5*	*41.4*	*22.5*	*77.8*	*72.9*	*-3.6*	*15.7*	*0.25*
South America	*899*	*3.0*	*10.4*	*27.9*	*16.4*	*44.3*	*26.4*	*-6.1*	*10.9*	*0.36*
Groups by income and stage of industrial development										
High income	6,073	3.1	14.0	50.9	17.9	76.7	62.6	-1.1	13.0	0.19
High-income industrial economies	*6,430*	*2.9*	*14.3*	*51.5*	*17.4*	*80.1*	*63.6*	*-0.8*	*13.4*	*0.17*
High-income industrializing economies	*2,785*	*6.0*	*9.7*	*38.8*	*25.3*	*58.6*	*55.6*	*-4.9*	*9.2*	*0.77*
Middle income	1,227	3.4	21.2	38.5	26.7	76.7	53.1	1.5	14.5	0.69
Middle-income industrial economies	*2,124*	*3.1*	*23.2*	*39.4*	*28.3*	*81.4*	*56.3*	*3.5*	*16.7*	*0.65*
Middle-income industrializing economies	*320*	*5.9*	*13.3*	*33.0*	*20.8*	*53.4*	*29.8*	*-6.0*	*11.2*	*0.98*
Low income	70	4.5	9.3	11.6	19.5	32.4	16.5	-13.9	6.1	0.38
Other groups										
Emerging industrial economies	1,502	3.6	25.7	40.6	30.2	90.9	55.4	5.2	15.4	0.72
Least developed countries (LDCs)	160	7.4	14.0	10.6	21.6	45.8	9.2	-11.6	7.7	0.28
Landlocked developing countries (LLDCs)	203	3.4	11.7	15.2	21.5	30.8	31.8	-15.2	6.5	0.62
Small island developing States (SIDS)	2,312	2.8	19.9	56.1	24.1	84.7	68.4	2.9	7.9	0.25

Source: [1; 4]

Note: Manufacturing value added per capita figures are in constant 2015 US dollars. Figures based on national accounts variables for 2023 are UNIDO estimates. CO_2 intensity is calculated as CO_2 emissions in kilograms per unit of manufacturing value added in constant 2015 US dollars. With the objective of maximizing data availability, the latest observed values for manufacturing share in employment are used to calculate the group aggregates.

Manuf. = manufacturing

References

[1] United Nations Industrial Development Organization (UNIDO). *National Accounts Database*. Available at https://stat.unido.org (accessed on Nov. 2023). Vienna, 2023 (cited on pages 2, 3, 6, 8).

[2] Sustainable Development Solutions Network. *Sustainable Development Report 2023: Implementing the SDG Stimulus*. Available at https://dashboards.sdgindex.org/ (accessed on Oct. 2023). Dublin, Ireland: Dublin University Press, 2023 (cited on page 2).

[3] International Energy Agency. *CO_2 Emissions from Fuel Combustion 2022*. Paris: International Energy Agency, 2023 (cited on page 3).

[4] United Nations Industrial Development Organization (UNIDO). *SDG 9 Database*. Available at https://stat.unido.org (accessed on Oct. 2023). Vienna, 2023 (cited on pages 3, 4, 8).

[5] International Labour Organization (ILO). *Employment by Sex and Age: ILO Modelled Estimates, Nov. 2022*. Available at https://www.ilo.org (accessed on Aug. 2023). 2022 (cited on page 3).

[6] United Nations Industrial Development Organization (UNIDO). *INDSTAT 2 2022, ISIC Revision 3*. Available at https://stat.unido.org (accessed on Nov. 2023). Vienna, 2022 (cited on page 5).

[7] United Nations Industrial Development Organization (UNIDO). *Quarterly IIP Database*. Available at https://stat.unido.org (accessed on Nov. 2023). Vienna, 2023 (cited on page 5).

[8] United Nations Industrial Development Organization (UNIDO). *CIP Competitive Industrial Performance Index Database*. Available at https://stat.unido.org (accessed on Oct. 2023). Vienna, 2022 (cited on page 6).

[9] United Nations Industrial Development Organization (UNIDO). *Manufacturing Trade Database*. Available at https://stat.unido.org (accessed on Nov. 2023). Vienna, 2023 (cited on page 6).

[10] World Intellectual Property Organization (WIPO). *Global Innovation Index 2023: Innovation in the Face of Uncertainty*. Available at https://www.wipo.int (accessed on Nov. 2023). Geneva: WIPO, 2023 (cited on page 7).

Vienna International Centre
Wagramerstr. 5, P.O. Box 300,
A-1400 Vienna, Austria
+43 1 26026-0
stat.unido.org
stat@unido.org

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

ISBN 978-92-13584-92-7