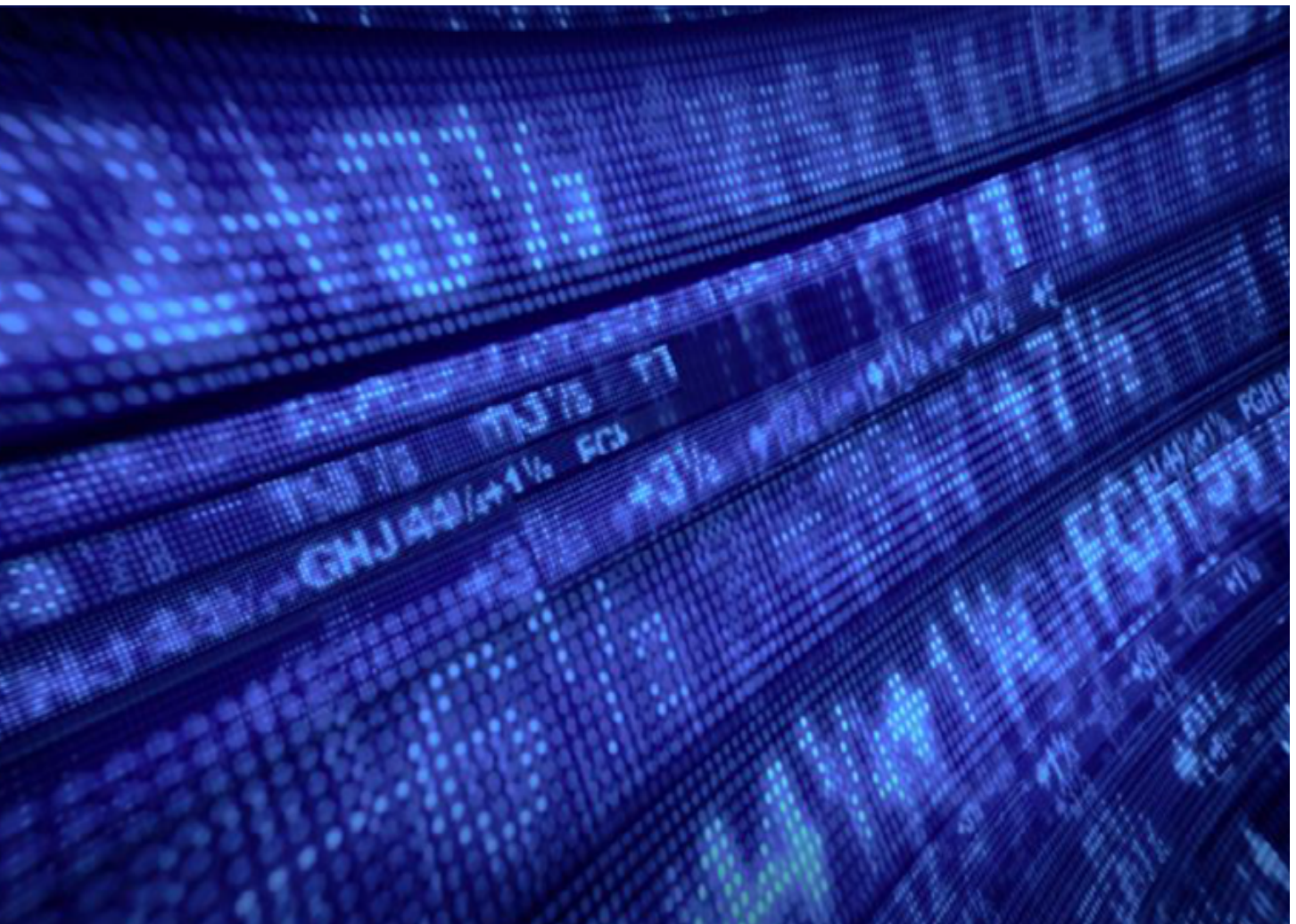




UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

World Manufacturing Production

Statistics for Quarter I, 2018



Report on world manufacturing production

This report presents the observed growth rates and growth estimates of world manufacturing production for the first quarter of 2018. The figures are based on the index numbers of industrial production (IIP) collected by UNIDO Statistics from national data sources.

IIP measures the growth of the volume of industrial production in real terms, free from price fluctuations. Users are advised to take note that while annual industrial growth rates generally refer to changes in manufacturing value added (MVA), i.e. output net of intermediate consumption, the quarterly indices reflect the growth of gross output. Given the temporal nature of estimates, output growth provides the best approximation of value added growth, assuming that the input-output relationship is relatively stable during the observation period.

UNIDO has been publishing quarterly reports on world manufacturing since 2011. The data compilation and presentation methods are regularly updated. Earlier reports included index figures for some countries which were not seasonally adjusted or for which no information

on seasonal adjustments was available. Growth figures have been published based on seasonally adjusted index numbers since 2013. Since 2017, seasonal adjustments are made using the TRAMO/SEATS method¹ in the JDemetra+ software. The purpose of seasonal adjustments is to filter out any fluctuations or calendar effects within time series shifts.

In 2013, UNIDO Statistics introduced new country groups, with economic territories being classified based on their stage of industrialization. This grouping is implemented in all of UNIDO's statistical publications. The grouping is particularly useful for presenting aggregated growth estimates by country group at different levels of industrialization. In the aftermath of the economic crisis, the pattern of growth, particularly in industrialized and developing countries, differed considerably. A comparative picture of growth trends in different parts of the world has been provided to users. The full list of economies used in the country groups is available in the International Yearbook of Industrial Statistics².

¹TRAMO stands for Time series Regression with ARIMA noise, Missing values and Outliers, and SEATS for Signal Extraction in ARIMA Time Series. ARIMA is the abbreviation of Autoregressive Integrated Moving Average, a widely applied statistical method for time series analyses.

²<https://www.unido.org/resources/publications/flagship-publications/international-yearbook-industrial-statistics>

The present report implements Revision 4 of the International Standard for Industrial Classification of All Economic Activities (ISIC Rev 4)³ in the quarterly data. For countries that publish monthly/quarterly index numbers based on ISIC Rev 4, national data are used in their original form. For countries that still produce index numbers based on ISIC Rev 3, growth figures are estimated at the 2-digit level of Rev 4 using correspondence tables. In both cases, data on index numbers are derived from national statistical sources. In case of missing data, UNIDO conducts imputations or projections, where appropriate. These estimates are generally replaced as soon as the officially reported values become available in national statistical publications.

Growth rates are calculated from the national index numbers that are aggregated to

the given country group or world region using weights based on the country's contribution to world manufacturing value added in 2010. The country groups are based on economic territories rather than political boundaries. This report presents the growth figures for country groups by stage of industrial development and by geographic region.

Users can find further information on the methodology of index numbers, estimation procedure or compilation of the country groups' indices in a methodological document⁴ which is available on the statistical pages of UNIDO's website, together with the actual indices published in UNIDO's Quarterly IIP database, available at UNIDO's Statistics Data Portal⁵.

This report presents estimates for the first quarter of 2018 as well as revised estimates for the fourth quarter of 2017.

³http://unstats.un.org/unsd/publication/seriesM/seriesm_4rev4e.pdf

⁴http://www.unido.org/fileadmin/user_media/Publications/Research_and_statistics/Branch_publications/Research_and_Policy/Files/Reports/World_Manufacturing_Production_Reports/Methodology_of_the_Quarterly_Report.pdf

⁵<http://stat.unido.org/>

World manufacturing growth in quarter I 2018

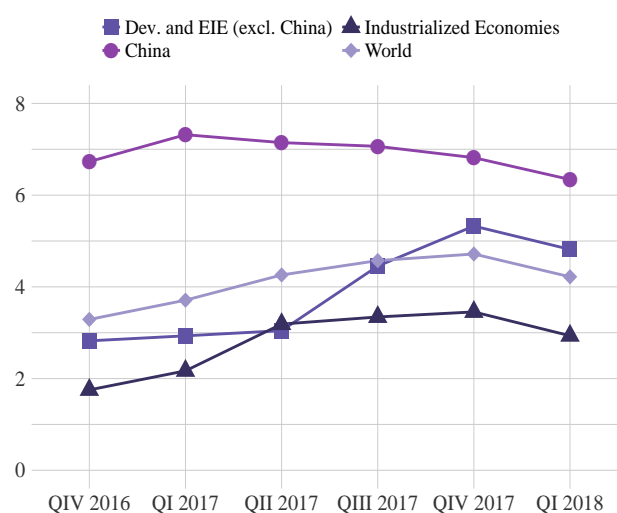
Following the improved growth rate of global manufacturing in 2017 both in industrialized as well as in developing and emerging industrial economies, the year 2018 set off with major downturn risks caused by a new wave of protectionism. This development has not yet had an impact on the dynamics of manufacturing growth. New tariffs and economic sanctions announced by the United States as well as uncertainties related to Brexit are considered impending threats of another slowdown of global industrial growth. The improved growth conditions in industrialized economies in 2016-2017 continue to have a positive impact on global manufacturing. As a result, world manufacturing output maintained an impressive growth rate of 4.2 per cent in the first quarter of 2018.

Industrialized economies, accounting for more than half of world industrial output, played a major role in this development. New fiscal stimuli — above all, in the United States, but in Germany as well — are expected to further boost short-term growth. This and other factors according to the OECD will continue to drive and strengthen world manufacturing output.⁶ As already mentioned above, increased

trade tensions may, however, have detrimental effects on production growth and jobs.

Data for the first quarter of 2018 generally indicate that year-over-year manufacturing growth has only decreased marginally (Figure 1). Data for China is to the extent possible presented separately from the country groups due to the size of the country's economy.

Figure 1: Growth of world manufacturing output in % compared to the same quarter of the previous year



⁶OECD: Interim Economic Outlook (March 2018), <http://www.oecd.org/eco/outlook/economic-outlook/>

Industrialized economies continued to maintain the higher growth rates attained at the end of 2017. In the first quarter of 2018, this country group's manufacturing output rose by 2.9 per cent compared to the same period in 2017. This growth was attributable to the dynamic recovery of Europe's manufacturing sector, which increased by 4.1 per cent in the first quarter of 2018. At the same time, North America's manufacturing output rose by 2.6 per cent. The growth rate of East Asia's industrialized economies remained below 2.0 per cent due to the poor performance of the Republic of Korea, where manufacturing output dropped by 3.1 per cent in the first quarter of 2018.

China, the world's largest manufacturer, maintained a robust year-over-year growth rate of about 6.3 per cent despite the import restrictions announced by the United States against Chinese products.

The manufacturing output of developing and emerging industrial economies (excluding China) registered the most dynamic growth rate in recent quarters and achieved an overall

growth rate of 4.8 per cent compared to the same quarter of 2017.

Developing economies in Asia and Pacific recorded a high growth rate of 5.5 per cent in the first quarter of 2018, supported in particular by India with an impressive growth rate of 7.0 per cent. An even higher increase of 7.7 per cent was observed in the group of developing economies in the Eastern Europe region.

Latin America continued its recovery and expanded its manufacturing output by 2.7 per cent compared to the first quarter of 2017. The year-over-year growth rate of Brazil's economy of 4.4 per cent has had a considerable impact on Latin America's strong performance.

Growth estimates based on limited data also showed a positive growth rate of nearly 2 per cent for Africa's manufacturing output.

In short, manufacturing production expanded across all industrialized and developing regions in the first quarter of 2018 compared to the same period of the previous year, which confirms manufacturing's sustained recovery at the global level.

Findings by country group

Industrialized economies

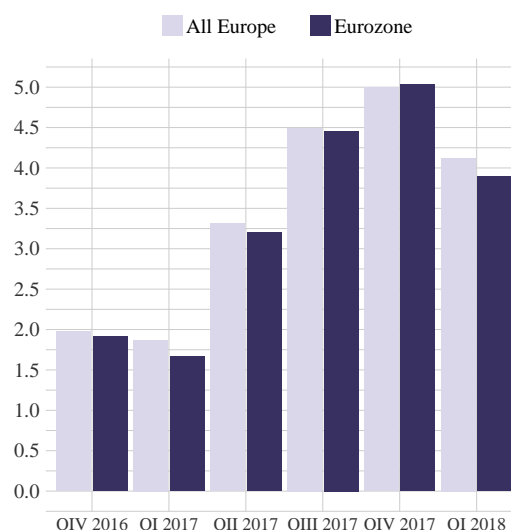
All industrialized regions, namely East Asia, Europe and North America, recorded positive growth rates and the overall upward trend in industrialized economies continued in the first quarter of 2018.

After the strong growth at the end of 2017, reaching 5.0 per cent in the fourth quarter, some moderation in Europe's pace of growth was observed (4.1 per cent in the first quarter of 2018) compared to the same period of the previous year. The rate of growth in the eurozone countries fell more noticeably to slightly under 4.0 per cent. Overall, however, economic growth is expected to remain solid and broad-based according to the European Central Bank, implying a strengthening of business investments building on very favourable financing conditions, rising corporate profitability and robust demand.⁷

A closer look at the leading eurozone economies reveals that year-over-year manufacturing output increased by 4.6 per cent in Italy, 4.2 per cent in Germany and 3.0 per cent in Spain. French manufacturing output, however, experienced its worst quarterly drop since 2012 (-1.8 per cent compared to the fourth quarter of 2017), but was able to maintain a positive

growth rate of 2.0 per cent compared to the first quarter of the previous year. With the exception of Malta, the manufacturing production of other eurozone economies continued to witness positive growth figures. Remarkable growth was achieved by Slovenia (9.3 per cent), Lithuania (7.0 per cent) and Austria (6.4 per cent). A fairly robust growth rate was furthermore observed in Estonia and Luxembourg (5.8 per cent each), the Netherlands (4.9 per cent) and Finland (4.1 per cent).

Figure 2: Growth rates of manufacturing output in Europe, in % compared to the same period of the previous year



⁷ECB Economic Bulletin, Issue 1 / 2018, <https://www.ecb.europa.eu/pub/economic-bulletin/html/eb201801.en.html>

Beyond the eurozone, the United Kingdom and Denmark, in particular, experienced a rather moderate year-over-year growth rate (2.6 and 2.0 per cent, respectively), while Sweden (+7.0 per cent) and Czechia (+6.2 per cent) successfully extended their periods of high growth already witnessed over the last quarters.

Among non-EU economies, Belarus, which in accordance with UNIDO criteria has recently been added to the group of industrialized economies, showed strong growth in the first quarter of 2018 (9.9 per cent). This high growth rate was driven by the production of machinery and equipment, petroleum refineries and the manufacturing of transport vehicles and equipment.

The growth rate of the Russian Federation turned positive again, with an estimated 0.8 per cent rise of manufacturing output. The country's performance, however, lagged far behind that of other industrialized countries.

North America's overall manufacturing production grew by 2.6 per cent compared to the same period of the previous year, with an increase in output of 2.5 per cent in the United States and even 3.8 per cent in Canada. It remains to be seen whether the tax reforms in the

United States and the expected stimulus for investment will result in further growth, as an increase in the reshoring of manufacturing activities is very likely. However, protectionist policies threaten to disrupt an otherwise promising economic outlook.

Japan's manufacturing output rose by 2.6 per cent, the seventh straight quarter of year-over-year growth of manufacturing production. Industrial momentum remains strong in the world's third-largest manufacturer. The country's manufacturing output was boosted by the rapid growth of machinery and equipment.

By contrast, the manufacturing output of the Republic of Korea dropped by 3.1 per cent due to the weak performance of motor vehicles and machinery, which also had significant ripple effects in various materials and components industries. It is the second consecutive quarter of negative economic growth of more than 1.0 per cent.

Among other East Asian economies, Singapore and Malaysia showed a strong performance with a growth rate of 9.8 per cent and 5.2 per cent, respectively.

Developing and emerging industrial economies

Earlier quarterly reports included China in the group of emerging industrial economies. However, due to the size and new characteristics of the economy, China is presented separately from the other country groups. Moreover, China is rapidly transforming into an industrialized economy owing to the country's extended high growth period.

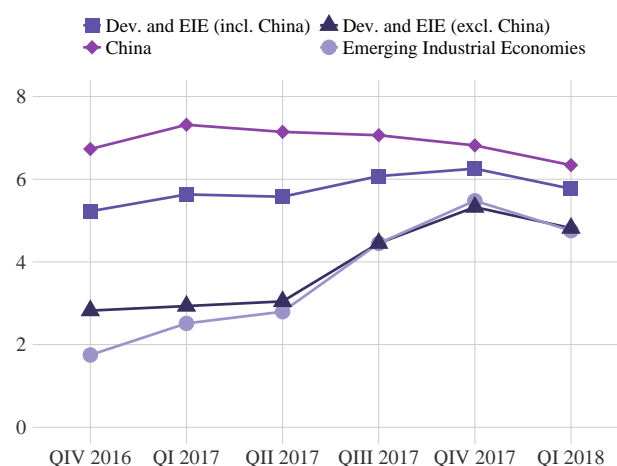
China

China's manufacturing output rose by 6.3 per cent in the first quarter of 2018. The country's growth was slightly lower than in the previous quarter, when it reached 6.8 per cent. The strongest growth performance was observed in computer electronics (12.1 per cent). The production of motor vehicles and pharmaceuticals increased by about 10.0 per cent each. The combined growth of medium-high- and high-technology-industries was estimated at 9.0 per cent, indicating a significant shift of Chinese manufacturing from low- to high-tech-sectors.

Developing and emerging industrial economies (excl. China)

Manufacturing output in China and in developing and emerging industrial economies (excluding China) remained strong overall, but there is clear evidence that the latter group comprising emerging industrial economies has been more dynamic since the third quarter of 2017 (Figure 3).

Figure 3: Growth of manufacturing output of developing economies in % compared to the same quarter of the previous year



The growth performance of the Asia and Pacific region, in particular, increased by 5.5 per cent compared to the same period of the previous year. As regards another large Asian economy, India's manufacturing output grew by 7.0 per cent, leading to the expectation that India is on a sustained recovery path. Compared to the same quarter of the previous year, manufacturing output in Mongolia rose by 11.9 per cent and by 5.5 per cent in both Indonesia and Viet Nam. The manufacturing of electronics, computers and optical products as well as steel production strongly contributed to the growth observed in Viet Nam.

Latin America prolonged the phase of expanding the region's manufacturing output with a year-over-year growth rate of 2.7 per cent. Not only the rise in Brazil's manufacturing output by 4.4 per cent indicates continued recovery from

the downturn in 2016. Argentina, Chile and Uruguay's manufacturing sectors grew around 3.0 per cent, while Mexico was slightly less dynamic with a growth rate of 1.3 per cent compared to the first quarter of 2017. The discussions surrounding the re-negotiation of the North American Free Trade Agreement might trigger uncertainty in Mexico, in particular, considering its close trade links with the U.S. economy, which is one of the main importers of Mexican manufactured products.

Growth estimates based on limited data for African countries generally indicated a moderate rise in manufacturing output. Manufacturing production in Egypt rose by 1.1 per cent, by 2.0 per cent in Nigeria, 1.5 per cent in South Africa and 2.8 per cent in Tunisia. Côte d'Ivoire reported a 9.6 per cent growth rate in manufacturing output. This was primarily attributable

to a strong development of the agro-industrial sector, including the manufacturing of food and beverages.

Among the developing and emerging industrial economies of Europe, Turkey registered an impressive growth figure of 9.9 per cent compared to the first quarter of 2017. Experts mainly attribute this growth to the inflow of foreign short-term investments as well as government policies, including the rise in bank lending, tax cuts and other incentives. Higher growth rates were also observed in other countries of the region. Cyprus's manufacturing output rose by 10.1 per cent, that of the Republic of Moldova by 9.1 per cent and Romania's by 7.6 per cent. Albania, FYR Macedonia, Latvia, Poland and Serbia attained growth rates of more than 5.0 per cent.

Findings by industry group

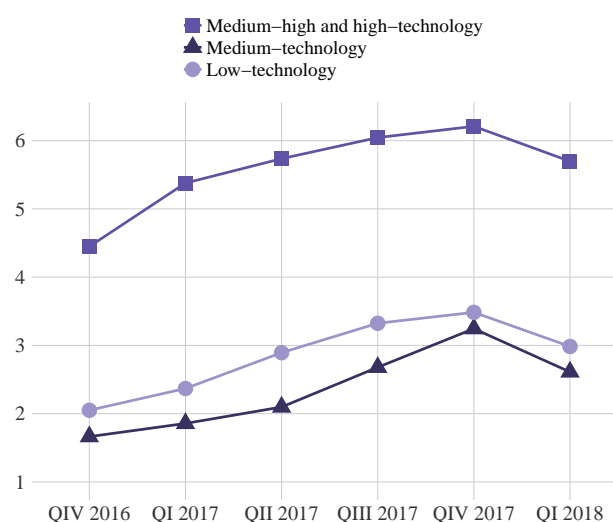
Industries grouped according to technological intensity have seen fairly similar growth patterns in recent periods. Growth in manufacturing output has decelerated in all industry groups since the beginning of 2018, with differences in the level of growth. While the growth rate of medium-high- and high-technology manufacturing industries at the global level was above 5.0 per cent, medium- and low-technology industries consistently performed lower. Despite some remarkable developments, the data underscores that investment in high-technology industries is a key component in the generation of innovation, leading to significant economic growth.

Overall, medium-high- and high-technology manufacturing industries reached a year-over-year growth rate of 5.7 per cent in the first quarter of 2018. This was largely driven by strong growth of about 9.0 per cent in China. India and Brazil's contributions are noteworthy as well, with a growth rate of 10.8 per cent and 8.1 per cent, respectively.

Europe and Japan reported again more than solid rates, reaching 5.3 respectively 5.1 per cent. North America could not quite keep the pace with a year-over-year growth of 3.4 per cent. As potential tariffs were also pronounced for high tech products, it will of course be interesting to observe the respective development in

the forthcoming quarters.

Figure 4: Growth of manufacturing industries by technological intensity, in % compared to the same quarter of the previous year



A decomposition of medium high- and high-technology industries reveals that the global production of machinery and equipment witnessed the highest growth rate at 7.9 per cent, followed by computers, electronics and optical products, which maintained a consistent year-over-year growth rate of over 7.2 per cent since the first quarter of 2017. The production of basic pharmaceutical products ranked third, achieving a growth rate of 7.1 per cent compared to the same quarter of the previous year.

The global production of basic metals increased by 3.6 per cent, followed by rubber and

plastic products at 2.3 per cent and non-metallic mineral products at 1.8 per cent.

Food products rose by 4.8 per cent, making an essential contribution to global food supply. With a population growth of 1.2 per cent, an increased rate of growth in food products implies an improvement in per capita food consumption worldwide. Among other consumer goods, wearing apparel rose by 3.0 per cent and leather products by 3.7 per cent. Consumer goods generally increased at a much higher pace in devel-

oping and emerging industrial economies than in industrialized economies.

Figure 5 illustrates the growth rates for various industries in detail. While most of the growth rates are positive, wearing apparel has declined in industrialized countries whereas coke and refined petroleum products decreased in developing countries (excluding China). Additional data on growth rates in the first quarter of 2018 are available in the Statistical Tables.

Figure 5: Estimated growth rates by industry in % compared to previous year Quarter I, 2018

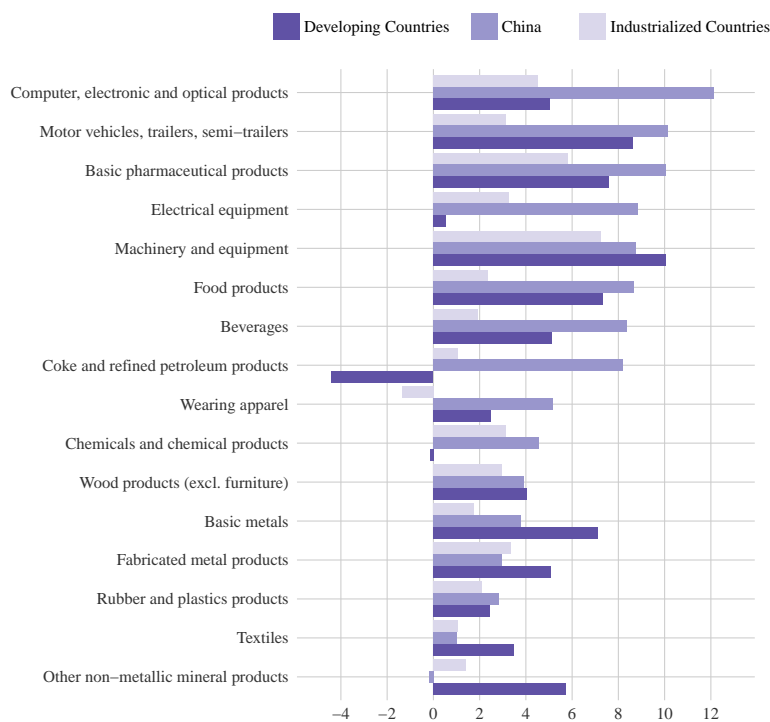


Table 1

Estimated growth rates of world manufacturing output

In % compared to the previous quarter and same period of the previous year

Quarter I, 2018

	Share in world MVA (2010)	Compared to previous quarter	Compared to same period of the previous year
World	100.0	0.6	4.2
Industrialized Economies	63.2	0.2	2.9
North America	20.0	0.9	2.6
Europe	23.5	0.1	4.1
East Asia	16.4	-0.8	1.8
China	19.2	1.5	6.3
Dev. and EIE excl. China (by development group)	17.6	0.7	4.8
Emerging Industrial Economies	15.9	0.5	4.8
Other Developing Economies	1.5	1.6	3.5
Dev. and EIE excl. China (by region)	17.6	0.7	4.8
Africa	1.3	-0.5	1.9
Asia & Pacific	7.3	1.2	5.5
Latin America	6.2	0.4	2.7
Others	2.7	0.5	7.7

Source: UNIDO Statistics

Note: Not all subgroups are presented; seasonally adjusted data

Table 2

Estimated growth rates of output by manufacturing industry

In % compared to the same period of the previous year

Quarter I, 2018

	Developing and Emerging Industrial Economies excl. China	China	Industrialized Economies	World
Food products	7.3	8.7	2.4	4.8
Beverages	5.1	8.4	1.9	4.3
Tobacco products	-0.6	3.8	-7.6	-0.1
Textiles	3.5	1.0	1.1	1.5
Wearing apparel	2.5	5.2	-1.4	3.0
Leather and related products	4.8	4.2	1.6	3.7
Wood products (excl. furniture)	4.0	3.9	2.9	3.3
Paper products	0.8	1.8	0.2	0.7
Printing	3.9	6.9	-0.7	1.0
Coke and refined petroleum products	-4.4	8.2	1.0	1.1
Chemicals and chemical products	-0.2	4.6	3.1	3.1
Basic pharmaceutical products	7.6	10.0	5.8	7.1
Rubber and plastics products	2.4	2.8	2.1	2.3
Other non-metallic mineral products	5.7	-0.2	1.4	1.8
Basic metals	7.1	3.8	1.7	3.6
Fabricated metal products	5.1	2.9	3.4	3.5
Computer, electronic and optical products	5.1	12.1	4.5	7.3
Electrical equipment	0.5	8.9	3.3	4.8
Machinery and equipment	10.1	8.7	7.2	7.9
Motor vehicles, trailers, semi-trailers	8.6	10.1	3.1	5.5
Other transport equipment	9.2	4.6	-0.5	1.3
Furniture	5.4	5.6	-0.4	1.7
Other manufacturing	-2.6	7.9	-0.5	0.9
Total Manufacturing	4.8	6.3	2.9	4.2

Source: UNIDO Statistics

Note: Seasonally adjusted data

Table 3

Estimated growth rates of output by manufacturing industry

In % compared to the previous quarter

Quarter I, 2018

	Developing and Emerging Industrial Economies excl. China	China	Industrialized Economies	World
Food products	1.1	2.8	0.6	1.1
Beverages	1.0	2.1	0.0	0.8
Tobacco products	0.4	1.8	-0.6	0.9
Textiles	0.7	-0.2	0.0	0.1
Wearing apparel	0.2	1.6	0.0	0.8
Leather and related products	0.6	1.4	-1.9	0.4
Wood products (excl. furniture)	0.8	1.1	0.2	0.5
Paper products	-0.5	0.9	-0.5	-0.1
Printing	1.5	1.4	0.2	0.6
Coke and refined petroleum products	-2.7	2.2	-0.6	-0.5
Chemicals and chemical products	-0.3	1.6	-0.7	0.1
Basic pharmaceutical products	1.4	1.3	2.7	2.1
Rubber and plastics products	-0.3	-0.1	-0.2	-0.2
Other non-metallic mineral products	1.0	-0.4	-0.6	-0.2
Basic metals	0.6	1.9	0.0	1.0
Fabricated metal products	-0.1	0.6	0.1	0.2
Computer, electronic and optical products	-0.5	3.1	0.8	1.6
Electrical equipment	0.7	1.6	-0.5	0.4
Machinery and equipment	2.8	2.1	0.1	0.9
Motor vehicles, trailers, semi-trailers	1.3	1.9	0.3	0.8
Other transport equipment	2.2	0.5	-0.8	-0.2
Furniture	0.7	0.9	-0.4	0.1
Other manufacturing	-2.2	1.6	-1.1	-0.7
Total Manufacturing	0.7	1.5	0.2	0.6

Source: UNIDO Statistics

Note: Seasonally adjusted data

Table 4

Estimated growth rates of world manufacturing output

In % compared to the previous quarter and same period of the previous year

Quarter IV, 2017 (revised)

	Share in world MVA (2010)	Compared to previous quarter	Compared to same period of the previous year
World	100.0	1.3	4.7
Industrialized Economies	63.2	1.1	3.5
North America	20.0	1.3	2.3
Europe	23.5	1.4	5.0
East Asia	16.4	0.9	3.2
China	19.2	1.5	6.8
Dev. and EIE excl. China (by development group)	17.6	1.5	5.3
Emerging Industrial Economies	15.9	1.6	5.5
Other Developing Economies	1.5	1.0	2.3
Dev. and EIE excl. China (by region)	17.6	1.5	5.3
Africa	1.3	1.3	2.3
Asia & Pacific	7.3	1.7	5.2
Latin America	6.2	0.7	3.2
Others	2.7	2.6	10.3

Source: UNIDO Statistics

Note: Not all subgroups are presented; seasonally adjusted data

Table 5

Estimated growth rates of output by manufacturing industry

In % compared to the same period of the previous year

Quarter IV, 2017 (revised)

	Developing and Emerging Industrial Economies excl. China	China	Industrialized Economies	World
Food products	6.8	7.5	3.2	4.9
Beverages	3.3	8.4	2.3	4.0
Tobacco products	-2.0	4.1	-7.5	-0.3
Textiles	3.6	3.1	1.3	2.8
Wearing apparel	2.5	5.7	-1.9	3.2
Leather and related products	5.1	4.0	3.9	4.2
Wood products (excl. furniture)	3.4	4.8	4.1	4.2
Paper products	2.2	1.6	0.8	1.2
Printing	1.3	8.4	-1.4	0.3
Coke and refined petroleum products	-1.8	6.5	1.9	1.9
Chemicals and chemical products	-0.4	3.9	4.3	3.5
Basic pharmaceutical products	11.8	13.0	1.9	6.1
Rubber and plastics products	4.0	5.5	3.3	3.9
Other non-metallic mineral products	5.3	1.6	3.1	3.0
Basic metals	8.7	2.0	2.0	3.1
Fabricated metal products	6.5	5.1	4.3	4.8
Computer, electronic and optical products	8.0	13.5	4.9	8.1
Electrical equipment	-0.7	10.6	4.6	5.9
Machinery and equipment	8.3	10.2	9.3	9.4
Motor vehicles, trailers, semi-trailers	9.6	9.7	2.7	5.2
Other transport equipment	8.8	6.3	0.5	2.3
Furniture	5.8	8.8	0.0	2.6
Other manufacturing	-0.3	8.8	0.4	2.0
Total Manufacturing	5.3	6.8	3.5	4.7

Source: UNIDO Statistics

Note: Seasonally adjusted data