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Gross domestic product and agriculture value added 2012–2021

Global and regional trends

HIGHLIGHTS

- **The global gross domestic product (GDP) grew from USD 68.4 trillion* in 2012 to USD 86.0 trillion in 2021, at an average annual rate of 2.6 percent. The COVID-19 pandemic years of 2020 and 2021 deviated from this upward trend, as GDP fell by 3.2 percent in 2020 then soared by 6.0 percent in 2021.**
- **Investment in capital, measured by the share of the gross fixed capital formation (GFCF) in GDP, grew from 24.6 percent in 2012 to 25.9 percent in 2021.**
- **The global agriculture** value added increased steadily by 2.8 percent on annual average from USD 2.9 trillion in 2012 to USD 3.7 trillion in 2021.**
- **The agriculture value added seems to be hardly affected by the COVID-19 pandemic in 2020. The sector's contribution to global GDP fluctuated from 4.18 percent in 2012 to 4.31 percent in 2021.**

* All values are measured in 2015 constant USD.

** Agriculture includes agriculture, forestry and fishing (ISIC Rev. 4, A 01-03).

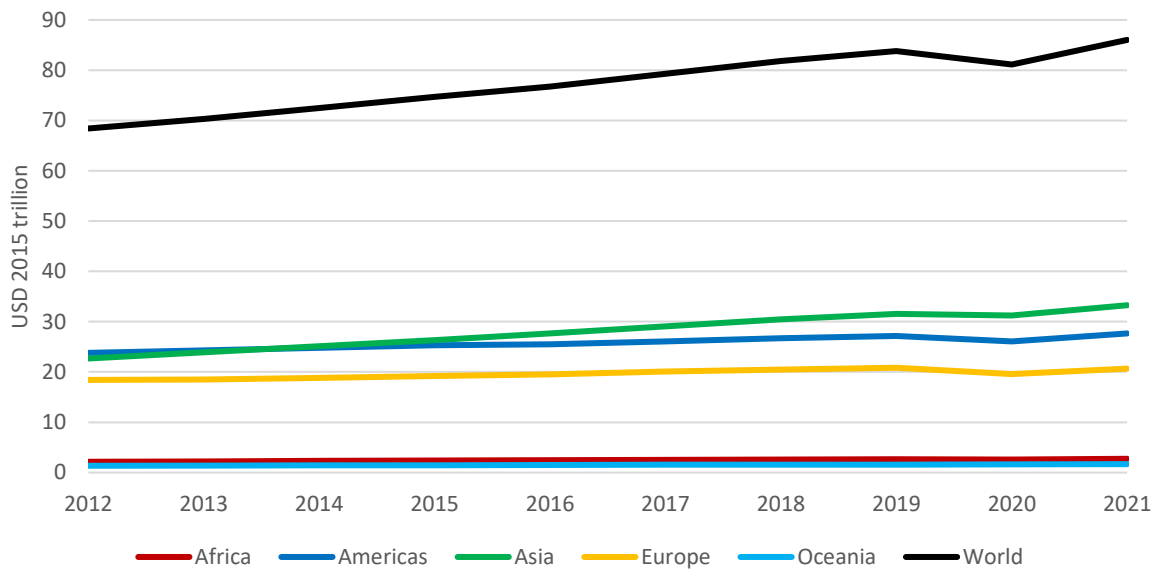
FAOSTAT MACRO-ECONOMIC INDICATORS

GLOBAL

Global GDP grew by 3.1 percent annually on average from USD 18.1 trillion in 1970 to USD 86.0 trillion in 2021. During the last decade, the average annual growth rate of global GDP decreased to 2.6 percent: due to the COVID-19 pandemic, GDP plummeted by 3.2 percent from USD 83.8 trillion in 2019 to USD 81.2 trillion in 2020. In 2021, as the global economy was recovering from the pandemic, it soared by 6.0 percent.

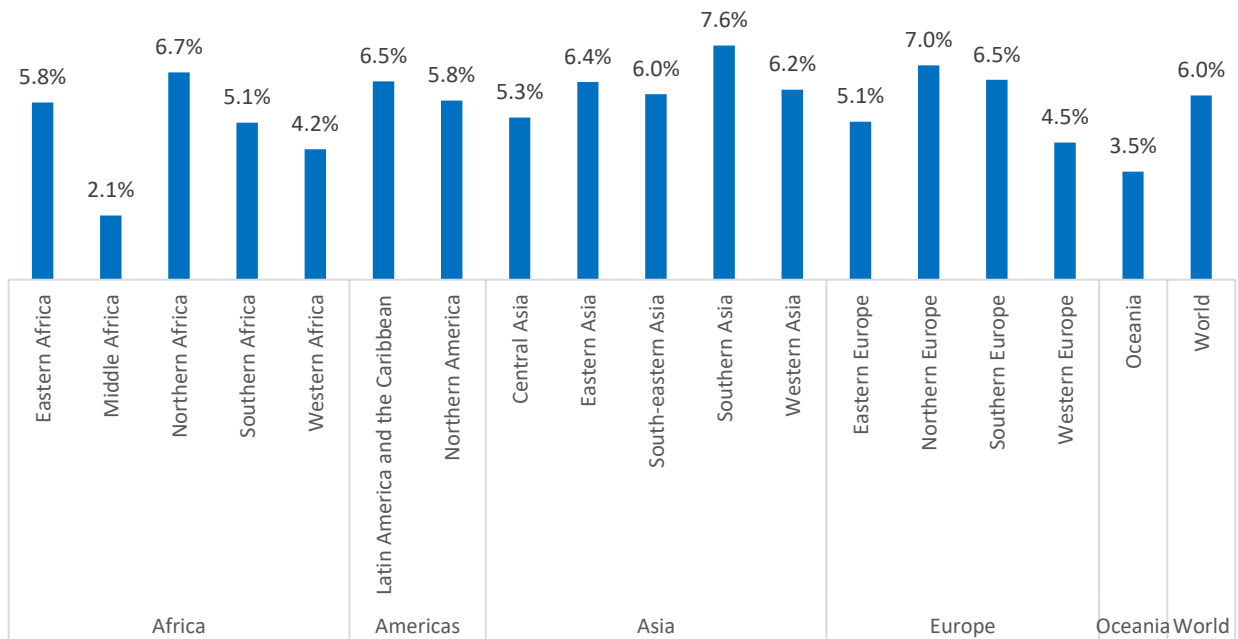
Europe's GDP growth rate of 1.2 percent on average between 2012 and 2021 was the smallest among all regions, and Europe's lowest since the 1970s: this significant decrease is mainly due to the 6.0 percent drop in 2020, from USD 20.8 trillion in 2019 to USD 19.6 trillion in 2020, led by Spain (-11.3 percent), the United Kingdom of Great Britain and Northern Ireland (-11.0 percent) and Italy (-9.0 percent). The GDP of Europe bounced back to USD 20.7 trillion in 2021, increasing by 5.6 percent. By contrast, Asia had the highest GDP growth rate among regions, of 4.4 percent on average between 2012 and 2021, showing the lowest drop in GDP (-1.1 percent) in 2020 and the largest rebound (6.5 percent) in 2021 led by Southern Asia (7.6 percent) and Eastern Asia (6.4 percent). While the average annual GDP growth rate of the Americas registered 1.8 percent between 2012 and 2021, the region's GDP fell by 3.8 percent in 2020 and bounced by 6.0 percent in 2021. Africa followed a similar pattern as the other regions with an average GDP growth rate of 3.1 percent. Oceania is the only region with a positive GDP growth rate in 2020 (1.7 percent from USD 1.59 trillion in 2019 to USD 1.62 trillion in 2020) followed by increases of 3.5 percent in 2021; its average annual GDP growth rate between 2012 and 2021 was 2.4 percent (Figures 1 and 2, Table 1).

Figure 1: Global and regional GDP



Source: FAO. 2023. FAOSTAT: Macro Indicators. In: FAO. Rome. Cited April 2023. <http://www.fao.org/faostat/en/#data/MK>

Figure 2: Regional growth rate of GDP in 2021



Source: FAO. 2023. FAOSTAT: Macro Indicators. In: FAO. Rome. Cited April 2023. <http://www.fao.org/faostat/en/#data/MK>

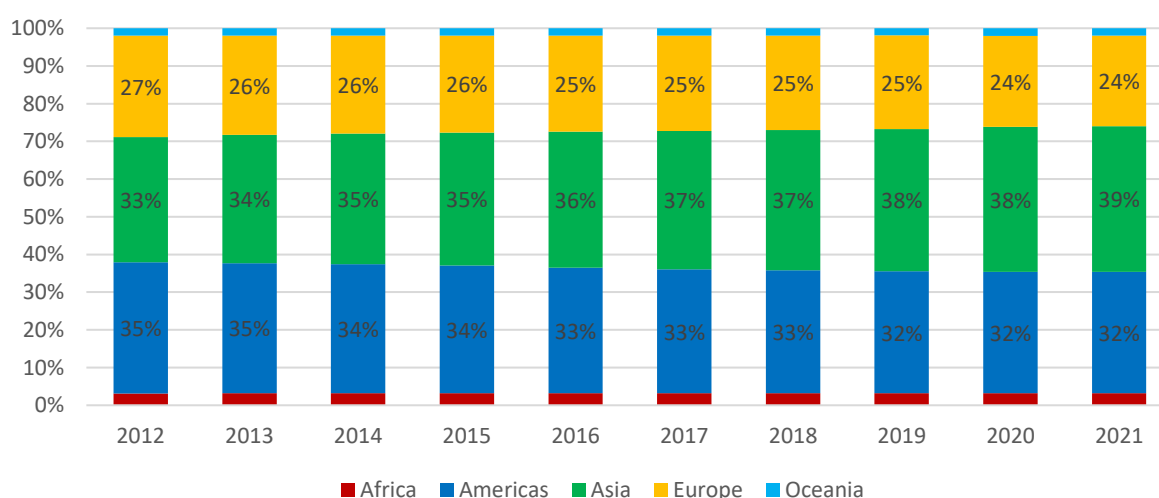
Table 1: Average annual growth rate of GDP (percent)

	1972–1981	1982–1991	1992–2001	2002–2011	2012–2021	1972–2021
Africa	3.8	2.3	2.8	5.2	3.1	3.4
Americas	3.6	2.7	3.4	2.2	1.8	2.7
Asia	4.9	5.2	4.2	5.8	4.4	4.9
Europe	3.1	2.4	1.9	1.6	1.2	2.0
Oceania	2.8	2.5	3.8	3.0	2.4	2.9
World	3.6	3.1	3.0	3.1	2.6	3.1

Source: FAO. 2023. FAOSTAT: Macro Indicators. In: FAO. Rome. Cited April 2023. <http://www.fao.org/faostat/en/#data/MK>

During the last decade, Asia’s contribution to global GDP increased from 33.2 percent in 2012 to 38.7 percent in 2021, with Eastern Asia (which includes China, Japan, and the Republic of Korea) accounting for 26.0 percent of global GDP in 2021. During the same period, Europe’s share in global GDP shrank from 26.9 percent to 24.0 percent, and the America’s share decreased from 34.8 percent to 32.2 percent. The contributions of Africa and Oceania to global GDP remained stable at around 3.2 percent and 2.0 percent respectively (Figure 3).

Figure 3: Regional contributions in global GDP



Source: FAO. 2023. FAOSTAT: Macro Indicators. In: FAO. Rome. Cited April 2023. <http://www.fao.org/faostat/en/#data/MK>

Global GDP per capita increased by 13.9 percent over the last decade, from USD 9 553 in 2012 to USD 10 877 in 2021. Asia experienced the highest increase (34.9 percent), followed by Europe (11.3 percent), the Americas (7.7 percent), Oceania (6.6 percent) and Africa (1.4 percent). All regions except Africa and Europe have recovered from the impact of the COVID-19 pandemic in 2021 and returned to their decadal trend (Table 2).

Table 2: Global and regional GDP per capita (USD)

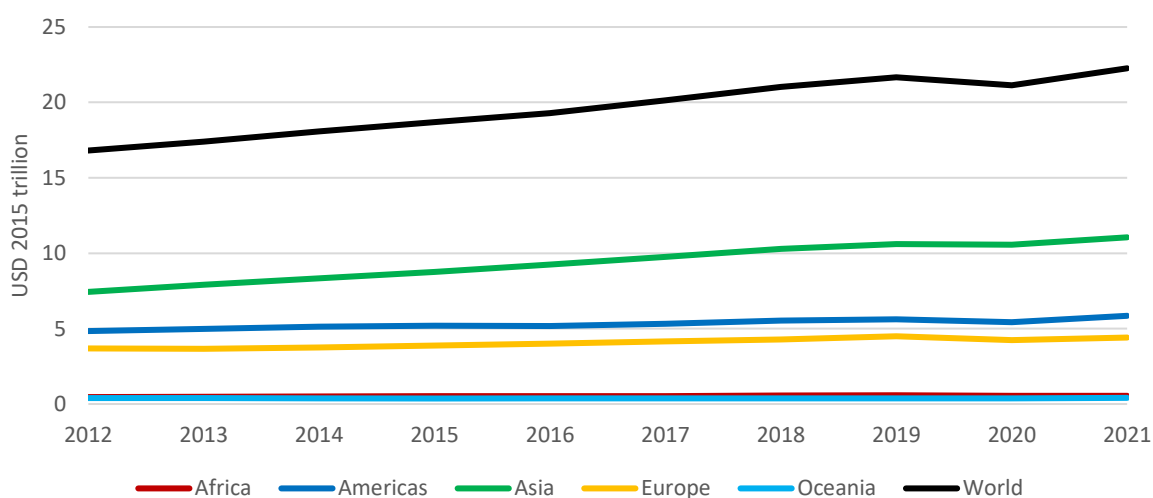
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Africa	1 937	1 962	1 990	2 004	1 986	2 001	2 014	2 012	1 912	1 964
Americas	24 916	25 177	25 441	25 707	25 721	26 001	26 403	26 644	25 453	26 824
Asia	5 253	5 476	5 687	5 909	6 145	6 394	6 633	6 822	6 697	7 087
Europe	24 934	25 011	25 418	25 861	26 299	26 953	27 484	27 940	26 251	27 749
Oceania	35 363	35 632	35 899	36 345	36 620	37 101	37 330	36 825	36 883	37 702
World	9 553	9 702	9 875	10 059	10 210	10 432	10 647	10 797	10 351	10 877

Source: FAO. 2023. FAOSTAT: Macro Indicators. In: FAO. Rome. Cited April 2023. <http://www.fao.org/faostat/en/#data/MK>

INVESTMENT DRIVES GDP GROWTH

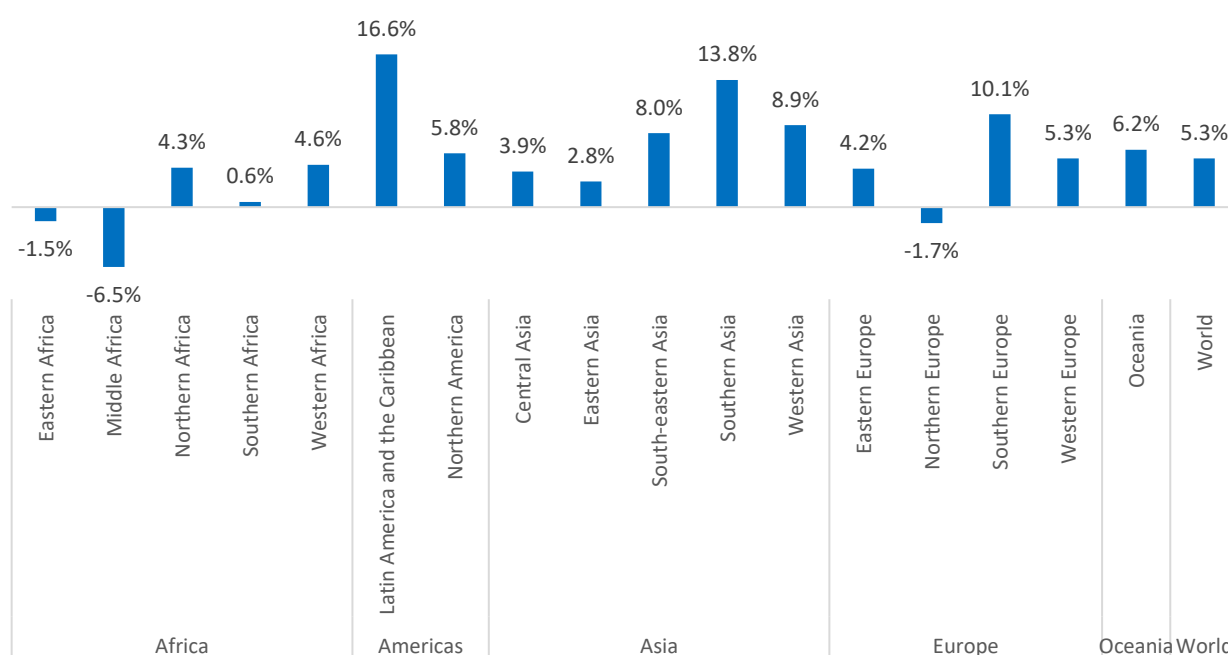
Investment in capital, measured by the gross fixed capital formation (GFCF), was a key driver of GDP growth globally. Over the last decade, GFCF went up by 24.6 percent, from USD 16.8 trillion in 2012 to USD 23.3 trillion in 2021. Because of the COVID-19 pandemic, the GFCF dropped by 2.4 percent, from USD 21.7 trillion in 2019 to USD 21.1 trillion in 2020 before bouncing back by 5.3 percent in 2021 (Figures 4 and 5). Latin America and the Caribbean, Southern Asia and Southern Europe contributed significantly to the growth of GFCF in 2021 by 16.6 percent, 13.8 percent, and 10.1 percent respectively.

Figure 4: Global and regional gross fixed capital formation



Source: FAO. 2023. FAOSTAT: Macro Indicators. In: FAO. Rome. Cited April 2023. <http://www.fao.org/faostat/en/#data/MK>

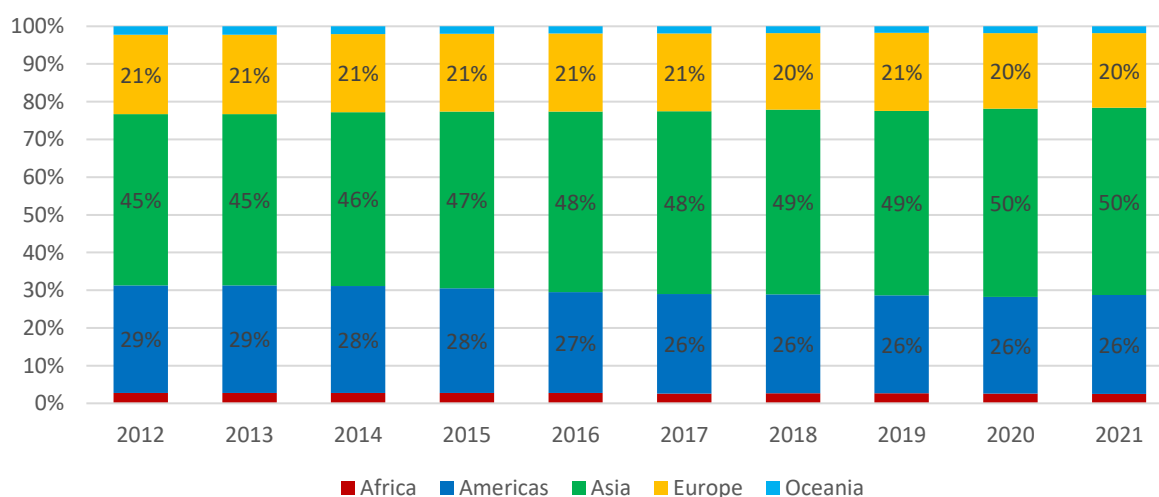
Figure 5: Regional growth rate of gross fixed capital formation in 2021



Source: FAO. 2023. FAOSTAT: Macro Indicators. In: FAO. Rome. Cited April 2023. <http://www.fao.org/faostat/en/#data/MK>

Over the last decade, Asia presented the highest increase in investment, 48.7 percent, from USD 7.4 trillion in 2012 to USD 11.4 trillion in 2021, thus increasing the region's share in global investment from 45.4 percent to 49.7 percent. The share of all the other regions in the world decreased during the same period (Figure 6).

Figure 6: Gross fixed capital formation by region



Source: FAO. 2023. FAOSTAT: Macro Indicators. In: FAO. Rome. Cited April 2023. <http://www.fao.org/faostat/en/#data/MK>

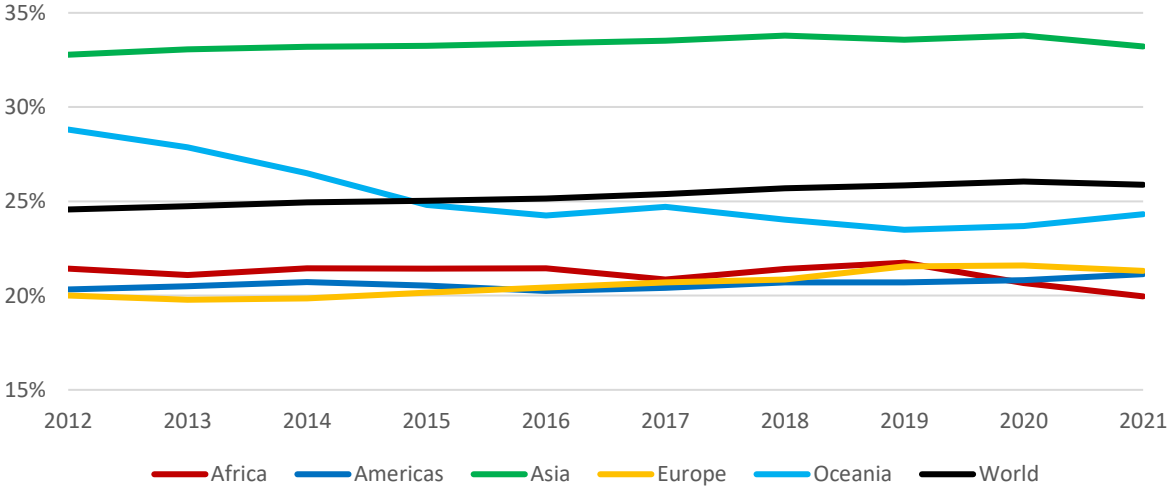
The investment ratio, defined as the gross fixed capital formation share of GDP, grew steadily during the last decade, from 24.6 percent in 2012 to 25.9 percent in 2021. The investment ratio on average between 2012 and 2021 was the lowest in Africa with 20.0 percent, followed by the Americas (21.1 percent), Europe (21.3 percent), and Oceania (24.3 percent), while Asia showed the highest investment ratio: 33.5 percent. Overall, Asia enjoyed the highest growth rate of 5.5 percent on average between 1970 and 2021 and Europe showed the lowest growth rate of 1.6 percent. Africa, Asia, and Oceania experienced a large decrease compared to the previous decade (Table 3 and Figure 7).

Table 3: Average annual growth rate of GFCF (percent)

	1972–1981	1982–1991	1992–2001	2002–2011	2012–2021	1972–2021
Africa	7.2	-3.3	2.8	6.2	2.5	3.1
Americas	4.3	1.9	5.3	1.9	2.6	3.2
Asia	5.4	6.0	3.6	7.6	4.7	5.5
Europe	1.6	2.3	0.9	1.5	1.8	1.6
Oceania	4.1	1.7	5.6	6.4	0.8	3.7
World	3.4	2.9	3.2	4.0	3.3	3.4

Source: FAO. 2023. FAOSTAT: Macro Indicators. In: FAO. Rome. Cited April 2023. <http://www.fao.org/faostat/en/#data/MK>

Figure 7: Investment ratio (GFCF share of GDP)



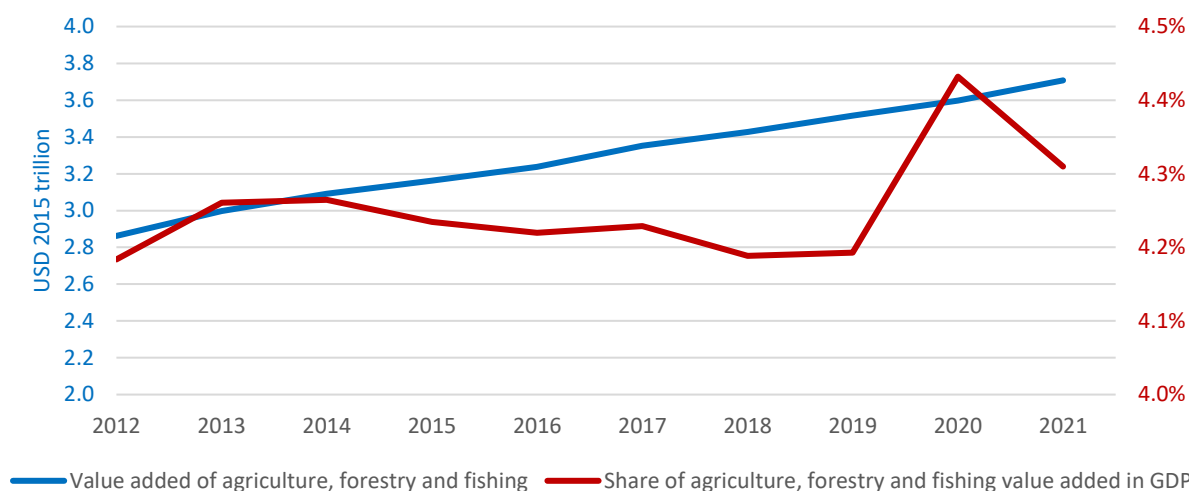
Source: FAO. 2023. FAOSTAT: Macro Indicators. In: FAO. Rome. Cited April 2023. <http://www.fao.org/faostat/en/#data/MK>

SHARE OF AGRICULTURE VALUE ADDED IN GDP

The global agriculture value added increased steadily by 2.8 percent each year on average, from USD 2.9 trillion in 2012 to USD 3.7 trillion in 2021; it kept increasing despite the COVID-19 pandemic in 2020. The fluctuations of the sector’s contribution to global GDP are largely dependent on the performance of non-agricultural activities, while agriculture was relatively more stable in most cases. The relative decline until 2019 was due to a faster growth of non-agricultural activities than the

agriculture sector, while the spike in 2020, due to the COVID-19 pandemic, occurred as the value added of the industry and services sector fell while that of agriculture kept increasing (Figure 8).

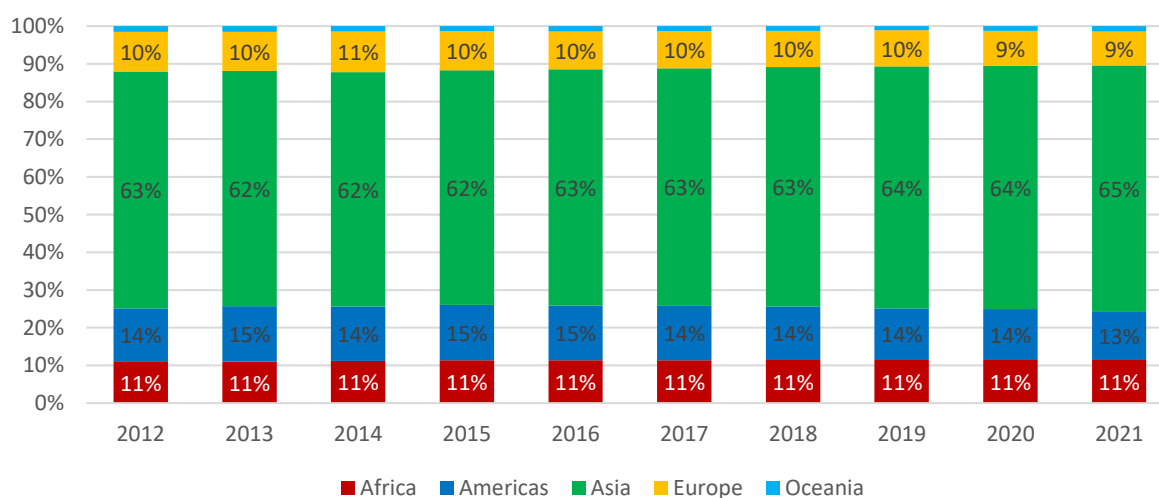
Figure 8: Global agriculture value added and share of GDP



Source: FAO. 2023. FAOSTAT: Macro Indicators. In: FAO. Rome. Cited April 2023. <http://www.fao.org/faostat/en/#data/MK>

During the last decade, Asia was the main contributor to the global value added of agriculture, largely as a consequence of its geographical size. It accounted for 62.8 percent of the global value added of agriculture in 2012 and 65.3 percent in 2021, driven by the contribution of Eastern Asia (35.0 percent in 2021) and Southern Asia (17.4 percent in 2021). In contrast, the share of Europe significantly declined from 10.5 percent in 2012 to 9.0 percent in 2021. Changes in the contributions of other regions during the same period were more limited: from 11.1 percent to 11.5 percent for Africa, from 14.0 percent to 12.8 percent for the Americas, and from 1.5 percent to 1.4 percent for Oceania (Figure 9).

Figure 9: Global agriculture value added by region



Source: FAO. 2023. FAOSTAT: Macro Indicators. In: FAO. Rome. Cited April 2023. <http://www.fao.org/faostat/en/#data/MK>

The global agriculture value added grew on average by 2.8 percent between 2012 and 2021. In particular, Africa and Asia had the highest growth of agriculture value added (3.5 percent and 3.3 percent respectively), while Europe and the Americas had a growth rate of 0.6 percent and 1.5 percent respectively.

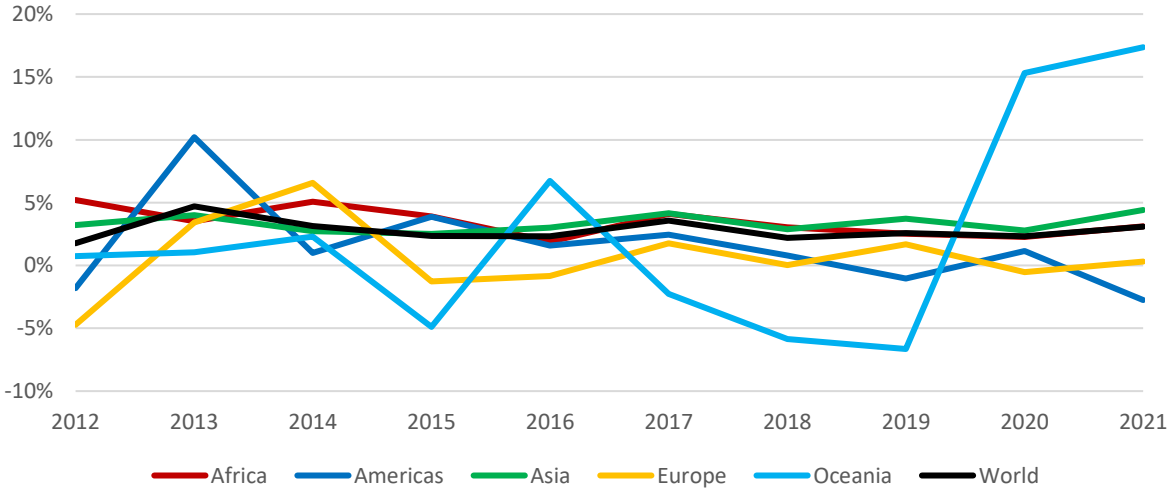
At 1.5 percent, the average annual growth rate of the Americas' agriculture value added over the 2012–2021 decade masks large interannual variations between 10.2 percent in 2013 and -2.8 percent in 2021. Europe presents a similar situation, with the smallest average growth rate of agriculture value added among regions during the period (0.6 percent), ranging between -4.7 percent in 2012 and 6.6 percent in 2014. The largest fluctuations occurred in Oceania, with the growth rate ranging between -6.6 percent in 2019 and 17.4 percent in 2021 due to repeated extreme weather conditions such as flooding and droughts (Table 4, Figures 10 and 11).

Table 4: Average annual growth rate of agriculture value added

	1972–1981	1982–1991	1992–2001	2002–2011	2012–2021	1972–2021
Africa	1.0	3.2	2.9	5.4	3.5	3.2
Americas	2.4	2.1	2.6	2.3	1.5	2.2
Asia	2.4	3.9	2.9	3.5	3.3	3.2
Europe	2.7	1.0	-0.2	1.1	0.6	1.1
Oceania	2.2	2.3	4.0	2.0	2.4	2.6
World	2.3	2.9	2.4	3.2	2.8	2.7

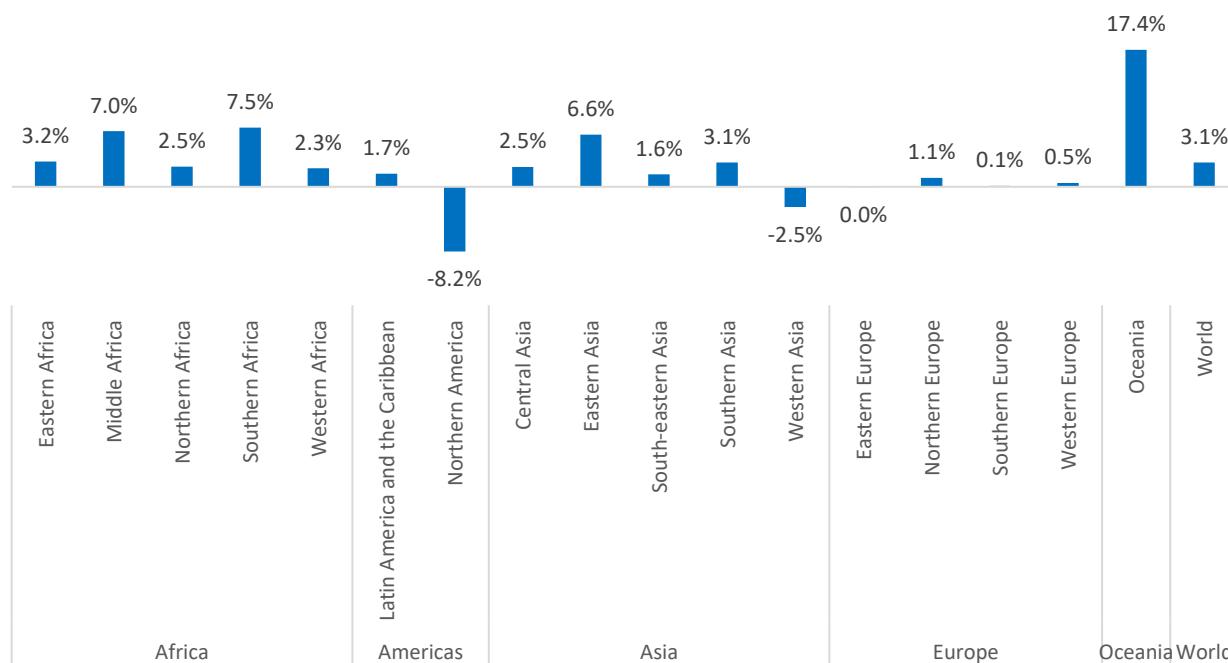
Source: FAO. 2023. FAOSTAT: Macro Indicators. In: FAO. Rome. Cited April 2023. <http://www.fao.org/faostat/en/#data/MK>

Figure 10: Agriculture value added growth rate by region



Source: FAO. 2023. FAOSTAT: Macro Indicators. In: FAO. Rome. Cited April 2023. <http://www.fao.org/faostat/en/#data/MK>

Figure 11: Regional growth rate of agriculture value added in 2021

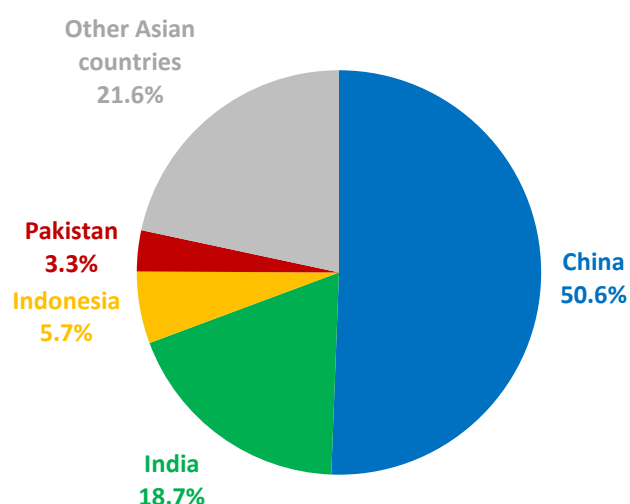


Source: FAO. 2023. FAOSTAT: Macro Indicators. In: FAO. Rome. Cited April 2023. <http://www.fao.org/faostat/en/#data/MK>

A CLOSER LOOK AT AGRICULTURAL VALUE ADDED IN ASIA

China was by far the largest agricultural economy of Asia in 2021, accounting for more than half of the region's agriculture value added, followed by India (18.7 percent), Indonesia (5.7 percent) and Pakistan (3.3 percent). The rest of Asian countries account for the remaining 21.6 percent (Figure 12).

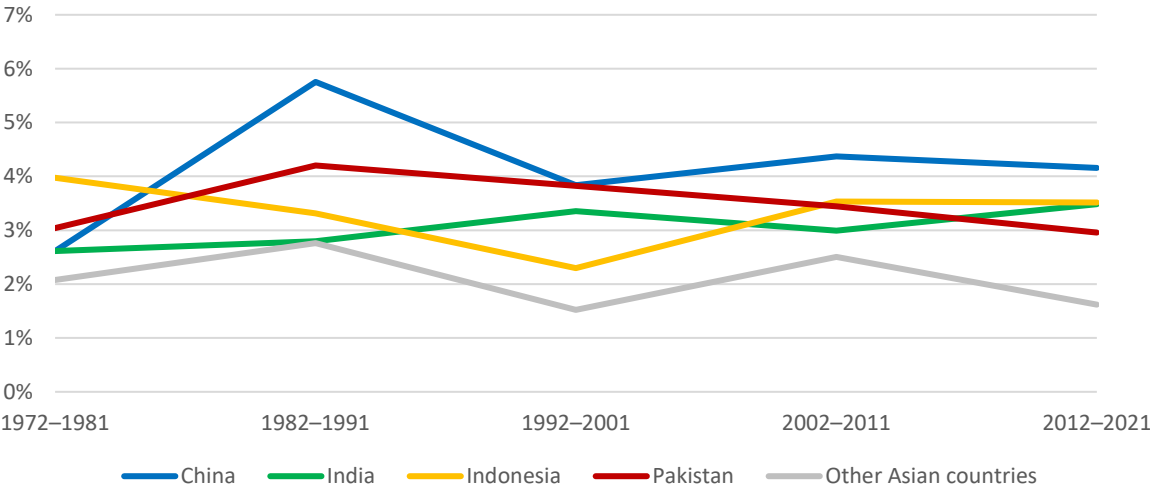
Figure 12: Share of agriculture value added in Asia by country, 2021



Source: FAO. 2023. FAOSTAT: Macro Indicators. In: FAO. Rome. Cited April 2023. <http://www.fao.org/faostat/en/#data/MK>

Figure 13 shows the growth rates of agriculture value added for the Asian countries mentioned above, broken down by decade. China has the fastest growth of agriculture value added for most of the period, with a notable acceleration during the 1982–1991 decade, with an average of 5.8 percent. Between 2012 and 2021, China had the highest annual average growth rate of agriculture value added (4.2 percent), followed by India (3.5 percent), Indonesia (3.5 percent) and Pakistan (3.0 percent); the other Asian countries had the lowest average growth rate (1.6 percent).

Figure 13: Average annual growth rate of agriculture value added in Asia by country



Source: FAO. 2023. FAOSTAT: Macro Indicators. In: FAO. Rome. Cited April 2023. <http://www.fao.org/faostat/en/#data/MK>

Download data at: <http://www.fao.org/faostat/en/#data/MK>

EXPLANATORY NOTES

- > Gross domestic product (GDP) is the most frequently quoted indicator of economic performance, is a comprehensive measure of economic growth, as it measures the total value added generated within an economy over a specific time period. Value added is calculated as output less intermediate consumption. In this brief, the agriculture sector includes agriculture, forestry and fishing.
- > To adjust for inflation, this brief analyses macro indicators at constant prices of 2015 in US dollars. Deflation is based on the GDP deflator, the GFCF deflator, the value added deflator of Agriculture, forestry and fishing and the value-added deflator of Manufacturing derived from the United Nations Statistics Division (UNSD) National Accounts Analysis of Main Aggregates database (UNSD AMA). Deflators are obtained by dividing the time series in current prices by the series in constant 2015 prices (base year) and multiplying by 100. These deflators are reported in FAOSTAT.
- > Gross domestic product per capita in US dollars is an important economic indicator that enables cross-country comparisons, particularly in the context of economic development, as it takes into

account differences in population size and growth, and can signal the extent to which economic growth reflects productivity increases.

- > Investment in physical capital is measured by the gross fixed capital formation, which captures the net additions (acquisitions less disposals) to the stock of fixed capital assets such as machinery, transport equipment, infrastructure and buildings within an economy. It is a useful indicator to identify and monitor developments in investment trends over time, particularly as capital accumulation increases the overall productive capacity of an economy, making large-scale production possible and promoting a greater degree of specialization.
- > The FAOSTAT Macro Indicators database provides macroeconomic indicators at the country and regional levels relating to total economy; agriculture, forestry and fishing; manufacturing; agriculture sub-industry (agriculture) and manufacturing sub-industry (food and beverages products; tobacco products; food, beverages and tobacco products). It releases time series for a selection of national accounts variables, including gross domestic product, gross fixed capital formation, value added of agriculture forestry and fishing and of manufacturing, gross national income, value added and gross output of agriculture sub-industry. The database also proposes additional indicators such as gross domestic product per capita, gross national income per capita, and year-on-year growth rates and shares of industries' contribution to gross domestic product.
- > Data are available in both national currency and in US dollars, in current prices and in constant 2015 prices. The breakdown of economic activities follows the International Standard Industrial Classification of All Economic Activities (ISIC).
- > The territorial coverage consists of 218 countries and territories, including former countries. The Food and Agriculture Organization of the United Nations (FAO) compiles aggregate values at the regional and global levels. The time coverage is annual from 1970 to 2021.
- > All data relating to total economy, agriculture, forestry and fishing, and total manufacturing originates from the UNSD-AMA database, which consists of a complete and consistent set of time series of the main national accounts aggregates of all United Nations member states and other territories in the world for which national accounts information is available. Series relating to the agriculture sub-industry are obtained from the National Accounts Official Country Data in UNdata, while series on the manufacturing sub-industry (food and beverages; tobacco products; food, beverages and tobacco products) originates from the United Nations Industrial Development Organization (UNIDO) INDSTAT2 databases.
- > The regional aggregates are calculated by the Social and Economic Statistics Team in the Statistics Division in FAO.

Data are released at the end of first quarter of each year.



This analytical brief was prepared by Eun Jeong Lee and Naglaa Elsodany under the supervision of Veronica Boero, leader of the Social and Economic Statistics Team, FAO Statistics Division.

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