Food and Agriculture Organization of the United Nations

ISSN 2709-006X [Print]
ISSN 2709-0078 [Online]

FAOSTAT ANALYTICAL BRIEF 23

Gross domestic product and agriculture value added 1970–2019

Global and regional trends

>> FAO Statistics Division

HIGHLIGHTS

→ **The global gross domestic product* (GDP) grew from USD 66.4 trillion in 2011 to USD 83.5 trillion in 2019, at an average annual rate of 3.0 percent. Over the same period, the global value added of the agriculture sector** rose from USD 2.8 trillion to USD 3.5 trillion, at an average rate of 2.9 percent.**

→ **Investment in capital, measured by the share of the gross fixed capital formation (GFCF) in GDP, remained relatively stable, ranging from 24.1 percent to 25.7 percent between 2011 and 2019.**

→ **The share of agriculture value added in GDP remained stable between 4.23 percent in 2011 and 4.27 percent in 2019.**

**** All values in the paper are measured in 2015 constant USD.***

***** The agriculture sector includes agriculture, forestry and fishing.***

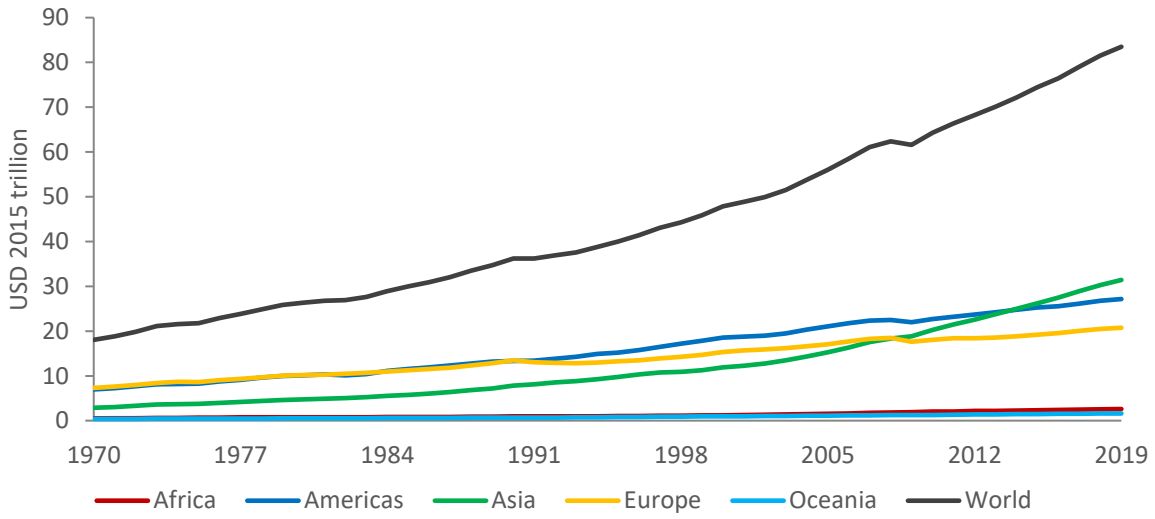
FAOSTAT DOMAIN NAME

GLOBAL AND REGIONAL

Global GDP increased by 3.2 percent annually on average from USD 18 trillion in 1970 to USD 83.5 trillion in 2019. However, during the last decade, its increase slowed a little to 3.0 percent annually on average, from USD 66.4 trillion to USD 83.5 trillion.

Europe's GDP growth rate of 1.3 percent in between 1991 and 2000 was the smallest during the whole period: this significant decrease is mainly due to the impact of the collapse of the Soviet Union. The drop in Africa's GDP growth between 1981 and 2000 stems from a combination of internal conflicts, adverse weather conditions and a deterioration in the terms of trade, while the reduction experienced between 2011 and 2019 is largely due to the dramatic contraction of Libya's GDP between 2013 and 2016. Throughout the 1970–2019 period, Asia showed the highest growth rate during each decade, sharing the top spot with Africa during the 2000s (Figure 1 and Table 1).

Figure 1. Global and regional GDP, 1970–2019



Source: United Nations Statistics Division (UNSD) and Food and Agriculture Organization of the United Nations (FAO) for the calculation of regional trends of macro indicators.

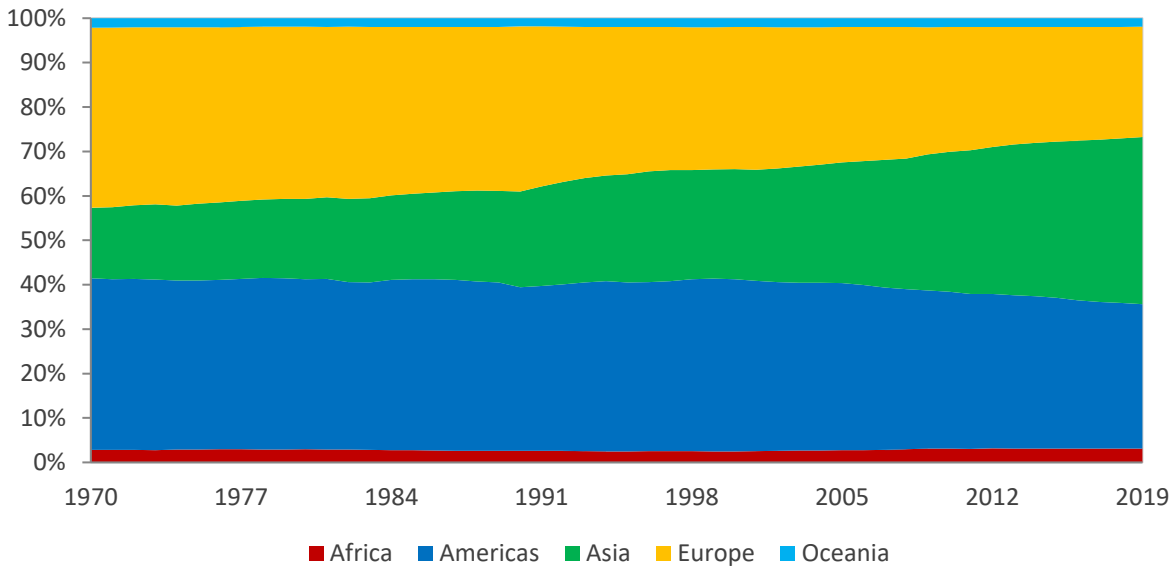
Table 1: Regional growth rate of GDP, annual average (percent)

	1971–1980	1981–1990	1991–2000	2001–2010	2011–2019	1971–2019
Africa	4.4	1.9	2.4	5.5	2.9	3.4
Americas	3.8	2.9	3.3	2.0	2.0	2.8
Asia	5.2	5.1	4.3	5.5	5.0	5.0
Europe	3.4	2.8	1.3	1.7	1.6	2.2
Oceania	2.8	2.8	3.5	3.1	2.5	2.9
World	3.9	3.3	2.8	3.0	3.0	3.2

Source: UNSD and FAO for the calculation of regional trends of macro indicators.

Asia's contribution to global GDP increased greatly from 32.3 percent in 2011 to 37.6 percent in 2019, with Eastern Asia (which includes China, Japan and the Republic of Korea) accounting for 25.1 percent of global GDP in 2019. Throughout this period, Europe's share in world GDP shrank from 27.7 percent to 24.8 percent, and America's share decreased from 34.9 percent to 32.5 percent. The contribution of Africa and Oceania to global GDP remained stable at 3.1 percent and 2 percent respectively (Figure 2).

Figure 2. Regional contribution to global GDP, 1970–2019



Source: UNSD and FAO for the calculation of regional trends of macro indicators.

World GDP per capita increased by 14.8 percent, from USD 9 459.0 in 2011 to USD 10 860.3 in 2019. Over the same period, Asia experienced the highest increase, of 35.3 percent, followed by Europe (11.3 percent), Oceania (6.8 percent), the Americas (9.0 percent) and Africa (5.6 percent) (Table 2).

Table 2. Regional GDP per capita (USD)

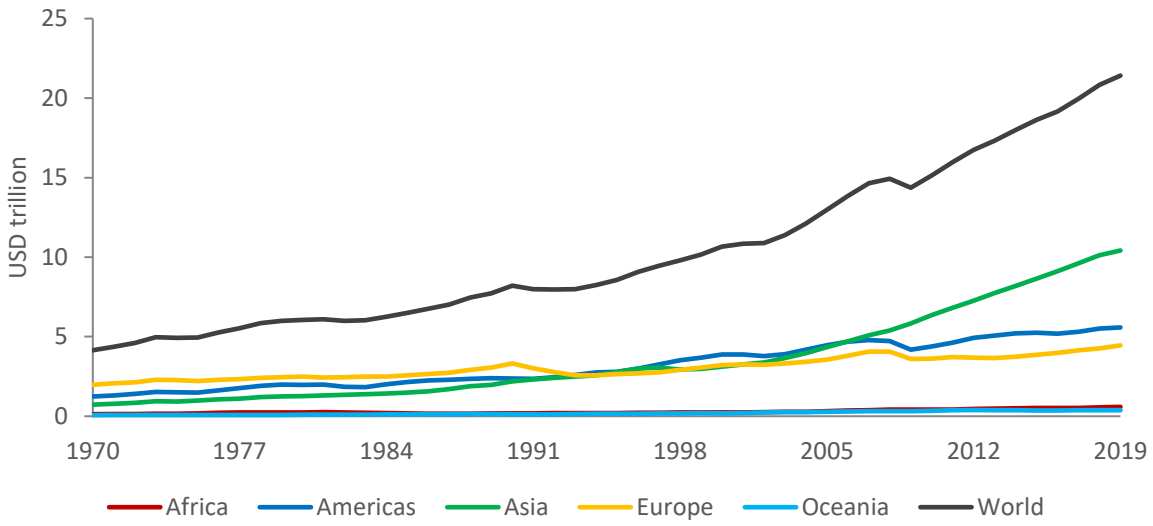
	1970	1980	1990	2000	2010	2019
Africa	1 244.9	1 455.0	1 424.4	1 402.3	1 939.3	1 983.7
Americas	13 475.8	16 407.2	18 490.6	22 251.4	24 279.5	26 793.0
Asia	1 346.5	1 799.7	2 431.9	3 194.7	4 840.2	6 863.6
Europe	7 821.7	10 239.3	15 607.2	21 041.3	24 448.8	27 691.0
Oceania	19 494.6	22 067.2	24 827.3	30 364.4	34 888.9	37 987.8
World	4 498.9	5 478.7	6 616.5	7 775.6	9 270.6	10 860.3

Source: UNSD and FAO for the calculation of regional trends of macro indicators.

INVESTMENT DRIVES GDP GROWTH

Investment in capital, measured by the gross fixed capital formation (GFCF), was a key driver of GDP growth globally. It increased by 416 percent, or 3.4 percent per year on average, thus more than the 3.2 percent average annual growth rate of GDP. Over the last decade, GFCF went up 34 percent from USD 15.97 trillion in 2011. (Figure 3).

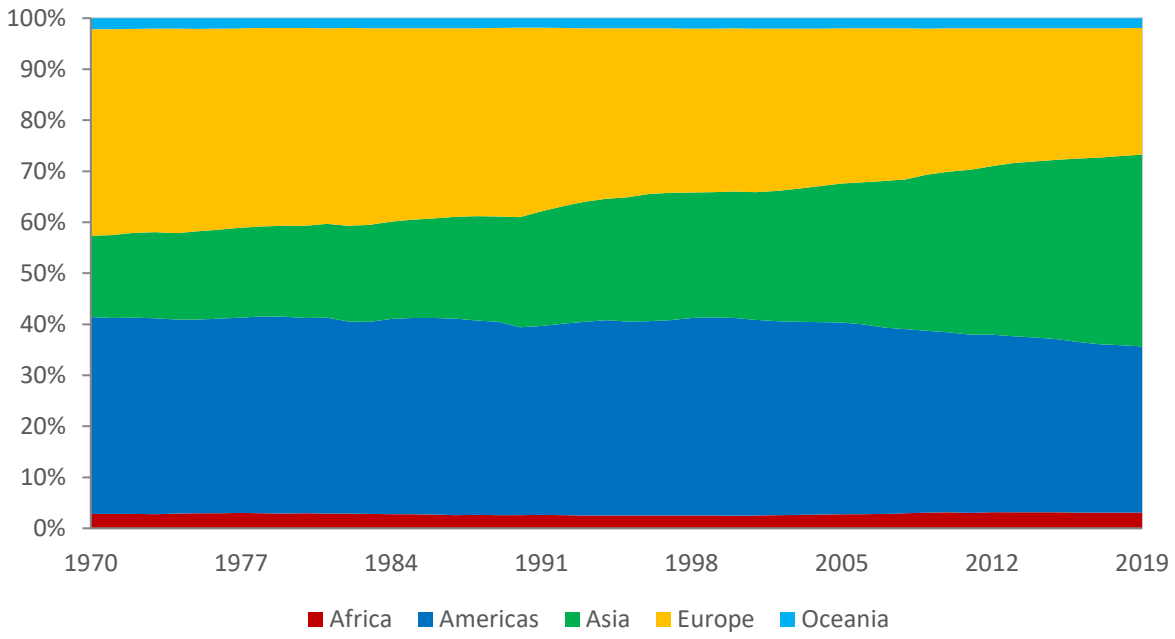
Figure 3. Global and regional gross fixed capital formation, 1970–2019



Source: UNSD and FAO for the calculation of regional trends of macro indicators.

Asia witnessed the highest increase in investment in the last decade, from USD 6.82 trillion in 2011 to USD 10.4 trillion in 2019, thus increasing the region's share in global investment from 42.7 percent to 48.7 percent, with Eastern Asia alone accounting for 35.5 percent of global GFCF in 2019. The share of all the other regions in the world total decreased for the same period (Figure 4).

Figure 4. Regional contribution to global gross fixed capital formation, 1970–2019



Source: UNSD and FAO for the calculation of regional trends of macro indicators.

The investment ratio, which is the ratio of GFCF to GDP, remained relatively stable globally between 1970 and 2019, ranging between 21.8 percent and 24.8 percent. Overall, it is the lowest in the Americas, with an average value of 19.4 percent during the period and very small fluctuations. It steadily declined in Europe, while it kept increasing each decade in Asia and Oceania. Africa experienced a decline between the 1970s and the 1990s, but grew again during the 2000s and 2010s (Table 3).

Table 3. Regional investment ratio (GFCF share of GDP), annual average (percent)

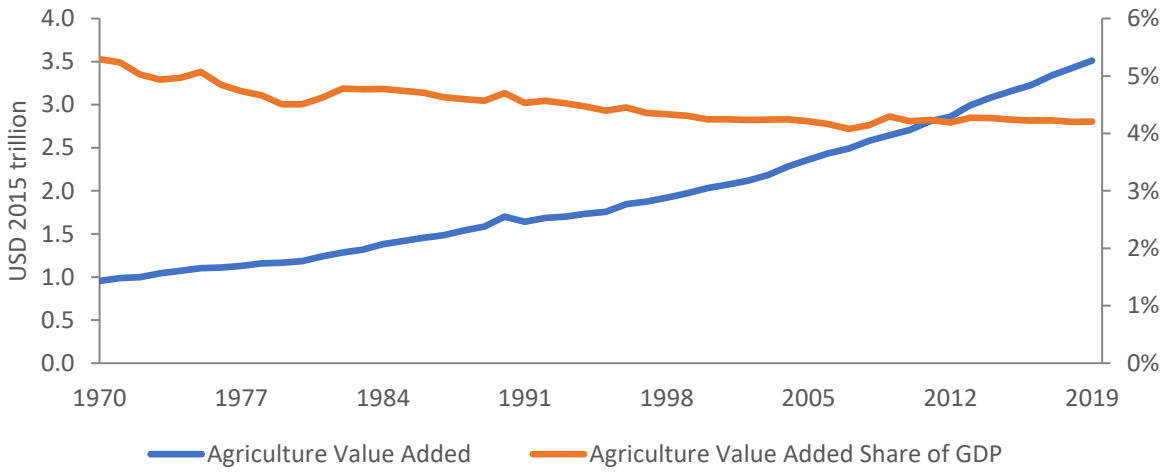
	1970–1980	1981–1990	1991–2000	2001–2010	2011–2019	1970–2019
Africa	29.4	23.9	20.5	20.9	21.9	23.5
Americas	18.8	18.4	19.1	20.5	20.6	19.4
Asia	26.2	26.7	27.9	28.6	32.8	28.3
Europe	25.9	23.4	20.7	20.9	20.4	22.4
Oceania	17.2	19.5	19.8	24.9	25.9	21.3
World	23.1	22.1	21.8	23.0	25.0	23.0

Source: UNSD and FAO for the calculation of regional trends of macro indicators.

THE SHARE OF AGRICULTURE VALUE ADDED IN GDP KEEPS DECLINING

Global agriculture value added rose from USD 0.95 trillion in 1970 to USD 3.5 trillion in 2019, while the sector's contribution to GDP fell from 5.3 percent to 4.2 percent (Figure 5). This relative decline was due to a faster growth of non-agricultural activities than agriculture. The sector, however, affects the quality of the environment and food security beyond what is captured by its contribution to the overall GDP.

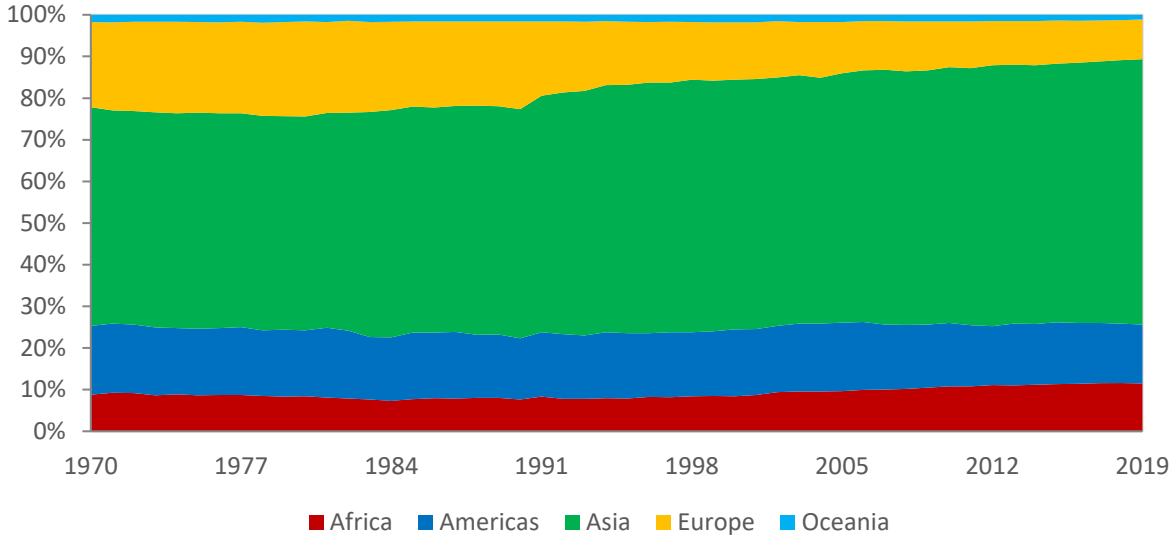
Figure 5. Global agriculture value added and contribution to GDP, 1970–2019



Source: UNSD and FAO for the calculation of regional trends of macro indicators.

During the last decade, Asia was the main contributor to the global value added of agriculture, accounting for 61.8 percent in 2011 and 63.7 percent in 2019, driven by the contribution of Eastern Asia with 34.8 percent and Southern Asia with 16.7 percent in 2019. In contrast, the share of Europe significantly declined from 11.2 percent in 2011 to 9.5 percent in 2019. The changes to the contribution of other regions were more limited: from 10.7 percent to 11.5 percent for Africa, from 14.7 percent to 14.1 percent for the Americas, and from 1.6 percent to 1.2 percent for Oceania (Figure 6).

Figure 6. Regional contribution to global agriculture value added, 1970–2019



Source: UNSD and FAO for the calculation of regional trends of macro indicators.

The global agriculture value added grew on average by 2.7 percent each year between 1970 and 2019, with the strongest growth in the 1980s (3.7 percent) and the weakest in the 1990s (1.8 percent) – it stabilized after 2000 to 2.9 percent. In particular, the growth of Africa's value added of agriculture accelerated significantly between 2001 and 2010, to an average of 5.6 percent; to some extent, this is linked with the commitments of the signatories to the Maputo Declaration, who in 2003 pledged "the allocation of at least 10 percent of national budgetary resources to agriculture and rural development policy implementation within five years".[1] The negative growth rate in Europe in the 1990s is due to the collapse of the Soviet Union, which severely impacted agriculture in Eastern European countries. The growth rate of the Americas' value added of agriculture accelerated significantly from 0.2 percent in 2011 to 10.2 percent in 2013 before falling again to 1.4 percent in 2019. The growth rate during the 2010s was higher than the average of the whole period in all regions except Oceania and the Americas. (Table 4).

[1] Maputo Commitments and the 2014 African Union Year of Agriculture. According to the latest figures from the AU and ReSAKSS, ten countries (Angola, Eritrea, Ethiopia, Burkina Faso, the Republic of the Congo, Gambia, Nigeria, Senegal, and the United Republic of Tanzania) have met the 6 percent agriculture growth target. In 2010, overall agricultural GDP growth across all of Africa was 2.9 percent – significantly lower than the Maputo target. Agriculture growth rates vary significantly across regions: between 2003 and 2010, the highest growth rate for agriculture-based GDP in sub-Saharan Africa was in West Africa (4.4 percent), while Central Africa had the lowest (2.7 percent).

Table 4. Regional growth rate of agriculture value added, annual average (percent)

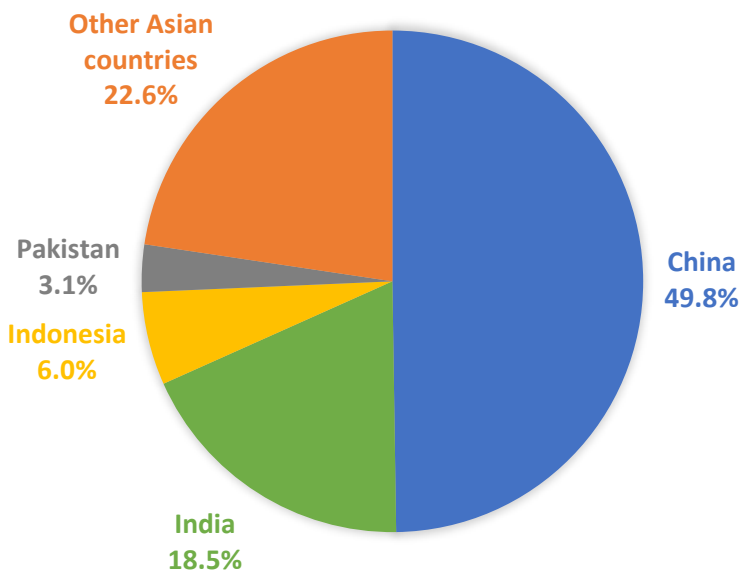
	1971–1980	1981–1990	1991–2000	2001–2010	2011–2019	1971–2019
Africa	1.8	2.8	2.8	5.6	3.7	3.3
Americas	1.8	3.0	2.8	2.4	2.1	2.4
Asia	2.0	4.4	2.7	3.2	3.4	3.1
Europe	3.3	2.9	-2.2	0.8	1.3	1.2
Oceania	1.7	3.9	3.5	1.8	-0.4	2.2
World	2.2	3.7	1.8	2.9	2.9	2.7

Source: UNSD and FAO for the calculation of regional trends of macro indicators.

A CLOSER LOOK AT AGRICULTURAL VALUE ADDED IN ASIA

China was by far the largest agricultural economy of Asia in 2019, accounting for almost half of the region's agriculture value added, followed by India (18.5 percent), Indonesia (6.0 percent) and Pakistan (3.1 percent). The other Asian countries account for the remaining 22.6 percent (Figure 7).

Figure 7. Share of agriculture value added in Asia by country, 2019

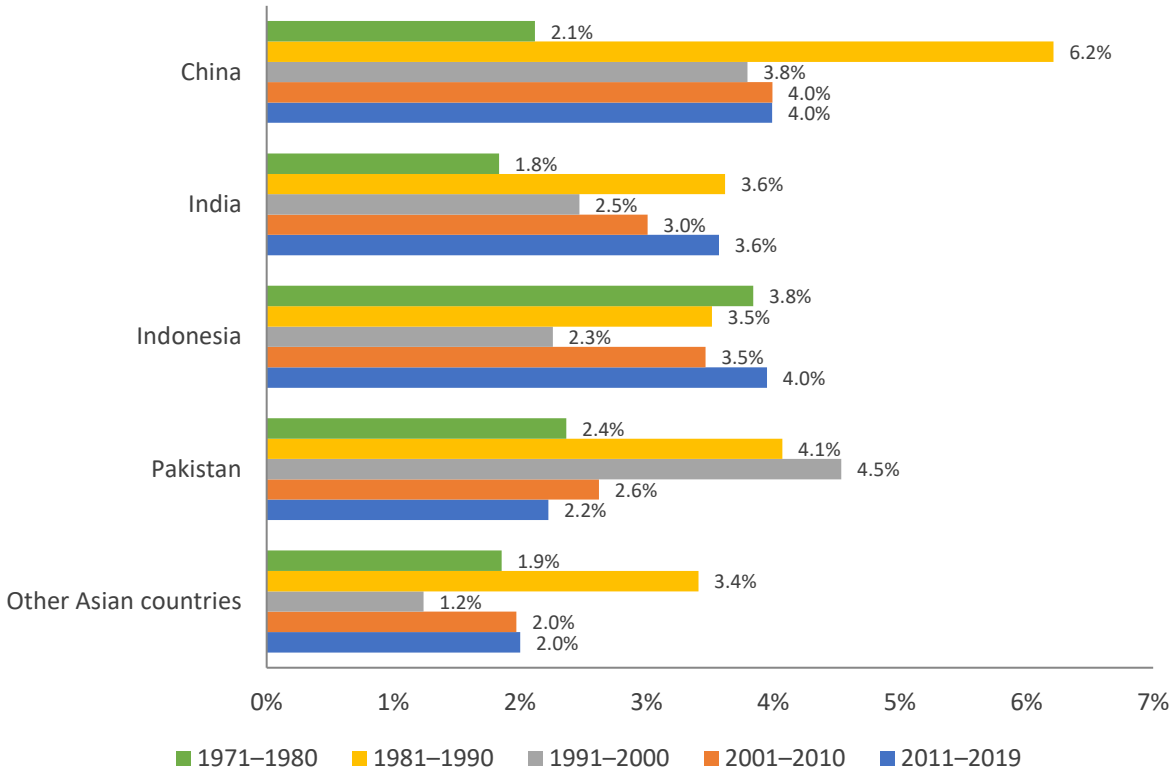


Source: UNSD and FAO for the calculation of regional trends of macro indicators.

Figure 8 reports the growth rates of agriculture value added for the Asian countries mentioned above broken down by decade. China drives the growth of agriculture value added throughout the period, with a notable acceleration in the 1980s. Pakistan and Indonesia follow opposite patterns, with growth

accelerating in Pakistan between the 1970s and the 1990s and decelerating between the 1990s and the 2010s, and growth decelerating in Indonesia between the 1970s and the 1990s and accelerating between the 1990s and the 2010s (mostly due to the development of palm oil production). In the last decade, China and Indonesia had the highest annual average growth rate of agriculture value added (4.0 percent), followed by India (3.6 percent) and Pakistan (2.2 percent); the other Asian countries had the lowest average growth rate (2.0 percent).

Figure 8. Agriculture value added growth rate in Asia (annual average), 1971–2019



Source: UNSD and FAO for the calculation of regional trends of macro indicators.

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

EXPLANATORY NOTES

- Gross domestic product (GDP), 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 (VA) is calculated as Output less Intermediate Consumption. In this brief, the agriculture sector includes forestry and fishing.
- To adjust for inflation, this brief analyses macro indicators at constant prices of 2015 in USD. Deflation is based on the GDP deflator, the GFCF deflator, the value added deflator of agriculture, forestry, fishery 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.
- GDP per capita in USD 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 (GFCF), 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 (AFF); manufacturing (MAN); agriculture sub-industry (agriculture) and manufacturing sub-industry (food and beverages; tobacco products; food, beverages and tobacco products). It releases time series for a selection of National Accounts variables, including GDP, GFCF, VA, gross national income (GNI), agriculture sub-industry VA and gross output. The database also proposes additional indicators such as per capita GDP, year-on-year growth rates and measures of industries' contribution to GDP.
- Data are available in both national currency and in USD, 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. FAO compiles aggregate values at the regional and global levels. The time coverage is annual from 1970 to 2019.
- All data relating to total economy, agriculture, forestry and fishing, and total manufacturing comes from the United Nations Statistics Division (UNSD) National Accounts Analysis of Main Aggregates (UNSD-AMA) database, which consists of a complete and consistent set of time series of the main national accounts (NA) 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) come from the United Nations Industrial Development Organization (UNIDO) INDSTAT2 databases.

- The regional aggregates are calculated by the Economic Statistics Team in the Statistics Division in FAO.
- The release calendar is the end of first quarter.

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Suggested citation: FAO. 2021. *Gross domestic product and agriculture value added 1970–2019: Global and regional trends.* FAOSTAT Analytical Briefs Series No. 23. Rome.

Cover photo: ©FAO/Aamir Qureshi

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CB4651EN/1/05.21