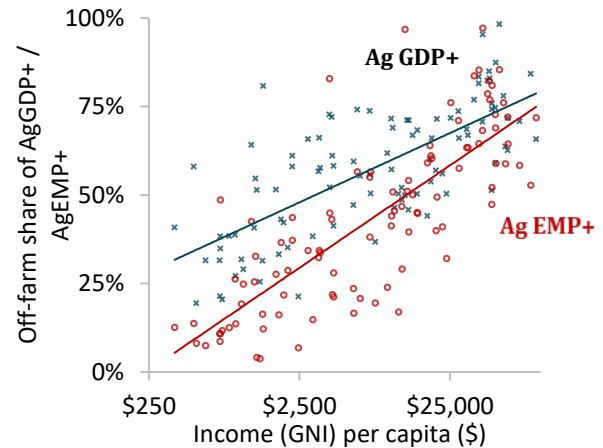


Measuring Changes in Nepal's Agri-Food System

Transformation of the agri-food system (AFS) is a leading pathway to achieve the USG Global Food Security Strategy Objective 1 of “Inclusive agriculture-led growth”. The AFS encompasses the primary agricultural sector, as well as all upstream and downstream agriculture-related activities. An expansion of the AFS's off-farm components is central to the process of agricultural transformation and is strongly associated with economic development. The *Percent change in value-added in the agri-food system (AgGDP+)* and *Employment in the agri-food system (AgEMP+)* indicators are useful to track this process.

Off-Farm Components of the AFS Become More Important as Countries Develop



Actual Results for 2017-2020 and Projections to 2022 Using Historical Trends

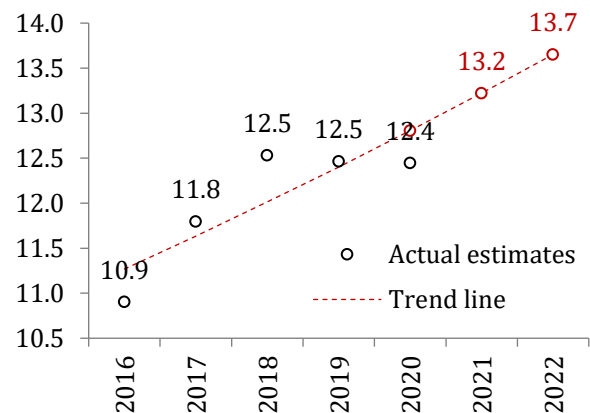
Indicators (* FTF indicator)	Units	Actual estimates				Projected estimates	
		2017	2018	2019	2020	2021	2022
Total GDP	\$ bil.	27.4	29.3	29.9	30.1	32.3	33.7
Agriculture	\$ bil.	7.2	7.4	7.7	7.9	8.2	8.5
Agri-food (AgGDP+)	\$ bil.	11.8	12.5	12.5	12.4	13.2	13.7
* Change from 2017	%	-	6.2	5.7	5.5	12.1	15.7
Total employment	Mil.	15.3	15.8	16.3	15.3	16.0	16.2
Agriculture	Mil.	9.8	9.9	10.1	9.6	9.9	9.9
* Agri-food (AgEMP+)	Mil.	12.0	12.3	12.6	11.9	12.3	12.4

Summary

- In 2020, the AFS generated 41.3% of total GDP in Nepal and 77.6% of total employment, while agriculture alone represented 26.1% and 62.8%, respectively.
- AgGDP+ and AgEMP+ fell by 0.1% and 5.6% respectively between 2019 and 2020, reaching \$12.4 billion and 11.9 million workers in 2020.
- If 2016-2020 trends continued, AgGDP+ and AgEMP+ would have reached \$13.7 billion and 12.4 million workers by 2022.

Note: GDP is measured in constant 2017 US\$

Projecting AgGDP+ in Nepal (\$ bil.)



Nepal's Agri-Food System in 2020

This section provides data on the structure of Nepal's economy as a whole and of its agri-food system in 2020. Table 1 shows the breakdown of national GDP, employment, and trade. Table 2 reports AgGDP+ and AgEMP+ estimates broken down by the components of the AFS. Table 3 disaggregates the latest AgGDP+ estimate across major products or value chains.

Table 1 shows how agriculture is an important part of Nepal's economy – it generated 26% of national GDP and 63% of total employment in 2020. Crops dominate the agricultural sector, while livestock is also an important source of GDP and employment. Part of agriculture's output is supplied to the manufacturing sector for processing, and total manufacturing generated only 5% of GDP and 8% employment. Nepal depends on nonagricultural exports, especially textiles and tourism, and most foreign earnings are used to pay for imported manufactured goods, such as machinery and vehicles. More than half of the national GDP is generated from services with trade & transport the largest service subsector.

Table 1. Structure of Nepal's Economy in 2020

Economic sector	Share of total (%)			
	GDP	Employment	Exports	Imports
Total	100	100	100	100
Agriculture	26.1	62.8	16.7	4.5
Crops	18.2	44.6	16.6	3.7
Livestock	7.3	16.0	0.0	0.7
Forestry	0.3	1.0	0.0	0.0
Fishing	0.3	1.2	0.0	0.2
Industry	15.1	15.8	33.1	85.9
Mining	0.7	2.3	0.0	1.6
Manufacturing	5.3	7.8	33.1	83.6
Electricity & water	2.1	4.7	0.0	0.6
Construction	7.1	1.0	0.0	0.0
Services	58.8	21.4	50.2	9.6
Trade & transport	21.1	4.4	14.6	5.8
Hotels & food services	1.5	8.2	11.2	3.1
Finance & business services	17.1	2.8	15.1	0.4
Government, health & education	16.2	4.7	9.3	0.2
Other services	3.0	1.3	0.0	0.0

Source: IFPRI estimates using supply-use tables, national accounts, and ILO employment data.

Note: GDP is gross domestic product measured in constant 2017 US\$.

The importance of agriculture for the economy extends well beyond the sector itself, with many industrial and service sectors forming parts of the AFS. Table 2 reports estimates of AgGDP+ and AgEMP+ by component of the AFS. Agriculture generated \$7.9 billion in GDP and employed 9.6 million workers in 2020. Agro-processing generated a further \$0.7 billion in GDP and 0.5 million jobs. Both sectors use domestic inputs, whose production created more value-added and jobs. However, the supply of inputs to farmers and processors account for a relatively small share of the AFS. A larger off-farm component is the trading of agriculture-related products between farmers, processors, and consumers. This created \$2.7 billion in GDP and employment for 0.3 million workers, making it the second largest component of Nepal's AFS and responsible for three-fifths of

the total trade and transport GDP (shown in Table 1). In total, Nepal's AFS generated 41% of total GDP and 78% of employment in 2020.

Table 2. GDP and Employment in Nepal's Agri-Food System in 2020

Economic sector	Value		Share of total	
	GDP (\$ billion)	Employment (millions)	GDP (%)	Employment (%)
Total	30.1	15.3	100	100
Agri-food system	12.4	11.9	41.3	77.6
Agriculture	7.9	9.6	26.1	62.8
Agro-processing	0.7	0.5	2.4	3.3
Input supply	0.7	0.3	2.4	1.7
Trade & transport	2.7	0.3	9.1	2.0
Hotels & food services	0.4	1.2	1.4	7.7
Rest of the economy	17.7	3.4	58.7	22.4

Source: IFPRI estimates using supply-use tables and ILO employment data.

Note: GDP is gross domestic product measured in constant 2017 US\$.

Table 3 breaks down the AFS into different value chains based on major product groupings. The cereals value-chain, for example, includes the on-farm cultivation of rice and other cereals (agriculture); the husking of rice and milling of cereals (manufacturing); the trading and transporting of cereal products; and the preparation of meals in hotels and restaurants using raw and processed cereal inputs (food services). The cereals value-chain makes up 28.5% of Nepal's AFS. Off-farm components of the cereals value-chain generated about a fourth of all cereals-related value-added (final column).

Table 3. Breakdown of Nepal's Agri-Food System by Value Chains, 2020

Value chains	GDP (\$ billion)			Share (%)			Off-farm share of total (%)
	Total	On-farm	Off-farm	Total	On-farm	Off-farm	
Agri-food system (AFS)	12.4	7.9	4.6	100	100	100	36.9
Cereals	3.5	2.5	1.0	28.5	32.3	21.9	28.5
Pulses & oilseeds	1.3	0.8	0.5	10.5	10.4	10.6	37.2
Roots	0.4	0.3	0.1	3.3	3.6	2.9	31.8
Horticulture	2.5	1.6	0.8	19.8	20.6	18.5	34.4
Livestock products	3.3	2.2	1.1	26.2	28.1	22.9	32.3
Fish products	0.2	0.1	0.1	1.5	1.2	2.1	51.1
Export-oriented foods	0.3	0.1	0.1	2.2	1.8	2.8	47.4
Export-oriented nonfoods	0.3	0.1	0.2	2.5	1.3	4.4	65.8
Forestry products	0.2	0.1	0.1	1.6	1.0	2.6	59.4
Beverages & other foods	0.5	0.0	0.5	4.0	0.0	10.8	100.0

Source: IFPRI estimates using supply-use tables.

Note: GDP is gross domestic product measured in constant 2017 US\$. Off-farm GDP includes agri-food processing; trading and transport of agricultural and food products; food services; and the domestic production of inputs (see Table 2). Final column is the ratio of off-farm to total GDP generated by each value chain (column 3 divided by column 1).

Cereals and livestock products were the largest agricultural value chain in 2020, which also generated most of its value-added on the farm. In contrast, export-oriented nonfood products, including cotton for yarn, are a small part of the AFS, but most of their value-added is generated off the farm (i.e., processing and trading). Finally, “beverages and other foods” include highly processed products whose agricultural origins are difficult to determine (e.g., baby foods and baked goods) or whose value-added is already assigned to other value chains (e.g., cereals used in the production of alcoholic beverages). As such, all the value-added for beverages and other foods is reported as occurring entirely off the farm.