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Mozambique's Agrifood System

Structure and Drivers of Transformation

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Introduction

Mozambique was one of the fastest-growing countries in sub-Saharan Africa between 2009 and 2014, with annual growth averaging about 7 percent (INE 2020; World Bank 2023a). However, adverse economic circumstances resulted in a significant weakening of economic growth, which averaged only 4.6 percent over the period 2014 to 2019 (INE 2020; World Bank 2023a). Restrictive COVID-19 policy measures introduced in 2020 further stifled the economy, resulting in negative growth in 2020 and low growth in 2021. Like many other countries, Mozambique was adversely affected by global commodity market disruptions resulting from the onset of Russia-Ukraine war in 2022 and the global recession in 2023 (Arndt et al. 2023; Diao and Thurlow 2023). Mozambique's growth is expected to recover in the coming years, with projections of 5.0 percent growth in 2023 and 8.0 percent in 2024 (World Bank 2023b), suggesting the economy is inching back toward its pre-pandemic growth trajectory.

Agriculture is an important sector in the economy, accounting for nearly 30 percent of GDP and 70 percent of employment in 2019. This sector too performed well during the 2009–2014 period, but growth slowed down in the 2014–2019 period. However, the agriculture sector outperformed other sectors during the COVID-19 pandemic, with growth of 3.9 percent in 2020. Although the sector is exposed to external risks—including climate shocks, weak commodity prices, and conflict in the north of the country—agriculture is expected to play a key role in the economic recovery. In this brief, we examine the historical and projected economic growth trajectory further to better understand the role of agriculture as well as the broader agrifood system (AFS) in the performance and transformation of the economy of Mozambique.

The AFS is a complex network of actors who are connected by their roles in supplying, consuming, and governing agrifood products and jobs. Just as an economy undergoes transformations as a country develops, agrifood systems are also expected to evolve (Diao, Hazell, and Thurlow 2010; Timmer 1988). Subsistence farming typically dominates agriculture during the earliest stages of development; as agricultural productivity rises, however, farmers start to supply surplus production to markets, thus creating job opportunities for workers in the nonfarm economy both within and outside the agrifood sectors (Haggblade, Hazell, and Dorosh 2007). Rising rural incomes generate demand for more diverse

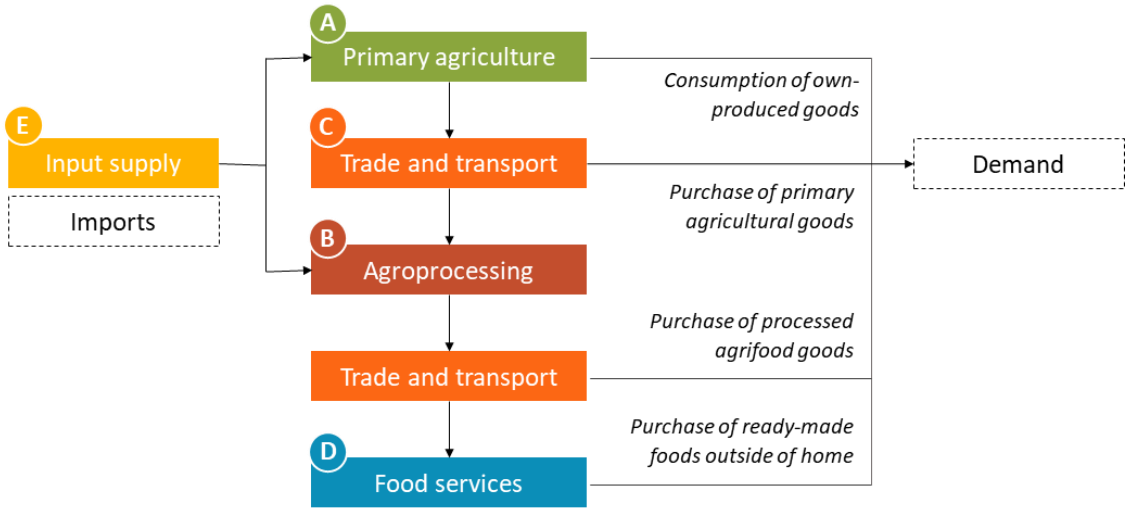
products; this leads to more nonfarm activities such as processing, packaging, transporting, and trading. In the early stages of transformation, the agriculture sector serves as an engine of rural—and even national—economic growth. Eventually, urbanization, the nonfarm economy, and nonagricultural incomes play more dominant roles in propelling agrifood system development, with urban and rural nonfarm consumers creating most of the demand for agricultural outputs via value chains that connect rural areas to towns and cities (Dorosh and Thurlow 2013). The exact nature of this transformation process varies across countries because of the diverse structure of their economies and the unique growth trajectories of their various agrifood and nonfood subsectors.

This brief describes the current and changing structure of Mozambique's AFS and evaluates the potential contribution of different value chains to the acceleration of agricultural transformation and inclusiveness. We start by offering a simple conceptual framework of the AFS and then compare Mozambique's AFS with that of other countries at different stages of development. We go on to disaggregate Mozambique's AFS across agricultural value chains, taking into consideration their different market structures and historical contribution to economic growth and transformation. Finally, we use a forward-looking economywide model to assess the diverse contributions that specific value chains can make to each of a set of broad development outcomes. We conclude by summarizing our main findings.

A Simple Conceptual Framework of the Agrifood System

A country's AFS is a complex network of actors who are connected by their differing roles in supplying, using, and governing agrifood products (see Fanzo et al. 2020 for a detailed conceptual description of the AFS). In this brief, rather than examining all components of Mozambique's AFS, we employ a narrower focus. We first measure its size, structure, and historical contribution to economic growth and transformation through a data-driven exercise; second, we use the International Food Policy Research Institute (IFPRI) Rural Investment and Policy Analysis (RIAPA) model (IFPRI 2023a) to assess the effectiveness of AFS growth (led by productivity gains in different agricultural value chains) in promoting multiple development outcomes in Mozambique. Our measurement of the AFS is done from a supply-side perspective; that is, we use national accounts and employment statistics to either track or simulate growth and employment changes over time. By disaggregating the AFS into several value chain groups, this analysis offers a unique and useful perspective on the drivers of AFS growth and transformation.

Figure 1. A simple conceptual framework of the agrifood system



Source: Thurlow et al. (2023).

Figure 1 provides a simple conceptual framework of the AFS made up of five components, A to E (see Thurlow et al. 2023). *Primary agriculture* (A) comprises the supply and demand of all agricultural products including crops, livestock, fisheries, and forestry products. *Agroprocessing* (B) is part of the manufacturing sector and includes those subsectors that process agriculture-related food or nonfood products. *Trade and transport services* (C) includes those services associated with the transporting, wholesaling, and retailing of agrifood products between farms, firms, and final points of sale. *Food services* (D) includes services such as meals prepared at restaurants, food stalls, or hotels. Finally, *input supply* (E) is the portion of domestically produced intermediate inputs that is used directly in agricultural and agroprocessing production, such as fertilizers and financial services.

Using this conceptual framework, it is possible to measure the size and structure of Mozambique's AFS from a supply-side perspective. Following the definitions of Thurlow et al. (2023), AFS GDP (or AgGDP+) is the sum of the GDP contributions of the five components (A to E), while AFS employment (or AgEMP+) is the total number of jobs across those components. As the economy grows and transforms over time, there will be changes in the relative contributions of the various on-farm and off-farm components of the AFS to total AgGDP+ or AgEMP+. A transforming economy, for example, will typically be characterized by more rapid growth in the off-farm components of the AFS; there will thus be an increased contribution by off-farm components to AgGDP+ and AgEMP+ and a relative decline in the contribution of primary agriculture. By disaggregating AgGDP+ and AgEMP+ by specific agricultural value chains, we can further assess the contribution of each of those value chains to AFS growth and transformation.

Current Structure of Mozambique's Agrifood System

Table 1 presents the structure of Mozambique's AFS in 2019 on the basis of official national accounts data and sectoral employment statistics (INE 2020; ILO 2020), as compiled in a 2019 Social Accounting Matrix (SAM) for Mozambique (IFPRI 2023b). National estimates are broken down into estimates for the AFS (that is, AgGDP+ and AgEMP+) and the rest of the economy. The AFS is further broken down into its on-farm (primary agriculture) and off-farm components. The estimates for manufacturing and

services (including the trade and transport services subsector) at the bottom of the table include activities in both the AFS and non-AFS sectors; they thus provide a perspective on the relative size of the off-farm AFS components within the overall manufacturing and services sectors.

Table 1. Current structure of Mozambique's agrifood system and economy (2019)

	GDP		Employment	
	Value (US$ billion)	Share (%)	Workers (million)	Share (%)
Total economy	**13.7**	**100.0**	**12.8**	**100.0**
Agrifood system	**5.4**	**39.4**	**9.9**	**77.6**
Primary agriculture (A)	**3.7**	**27.2**	**9.0**	**70.2**
Off-farm AFS	**1.7**	**12.2**	**0.9**	**7.4**
Processing (B)	0.5	3.4	0.3	2.2
Trade and transport (C)	0.8	5.7	0.6	4.5
Food services (D)	0.2	1.8	0.1	0.5
Input supply (E)	0.2	1.3	0.0	0.3
Rest of economy	**8.3**	**60.6**	**2.9**	**22.4**
Total manufacturing	1.4	9.9	0.6	4.9
Total services	6.3	46.1	2.7	21.2
Total trade and transport	2.7	19.6	1.5	11.5

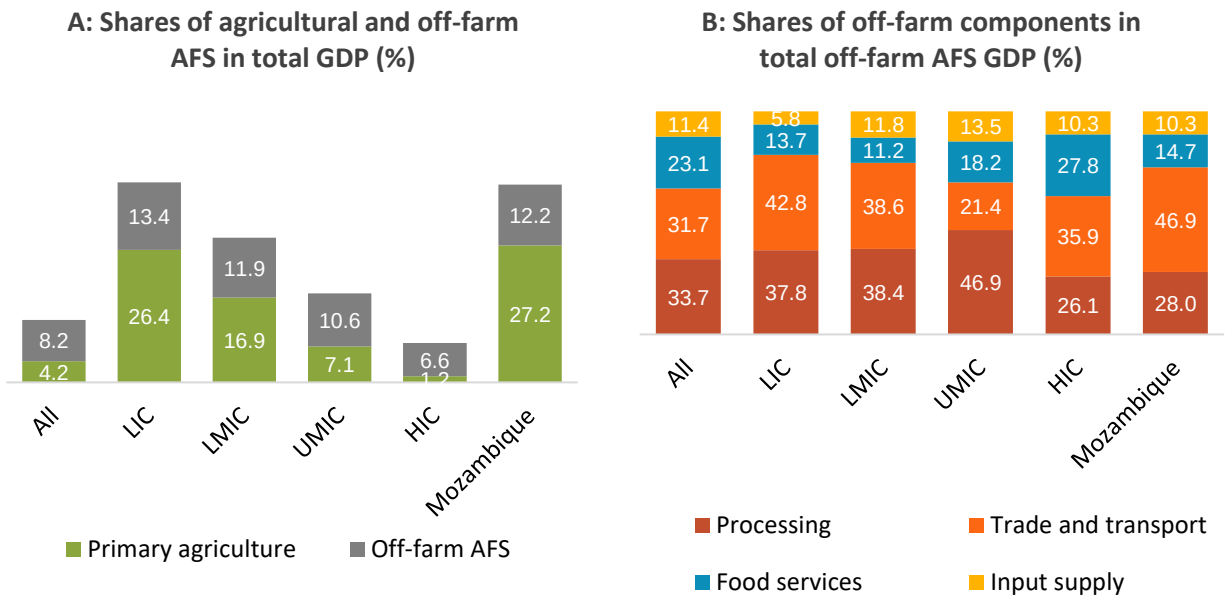
Source: Authors' calculation based on the 2019 Social Accounting Matrix for Mozambique (IFPRI 2023b).
Note: A to E correspond to the five agrifood system (AFS) components from Figure 1.

As shown in Table 1, in 2019 the AFS accounted for 39.4 percent of Mozambique's national GDP and 77.6 percent of employment. Primary agriculture alone contributed more than one-quarter of GDP and two-thirds of employment, while the four off-farm components of the AFS contributed 12.2 percent to GDP and 7.4 percent to employment. Off-farm components of the AFS therefore accounted for roughly 30 percent of AgGDP+ and 10 percent of AgEMP+. The comparison of on- and off-farm GDP and employment shares shows that labor productivity in off-farm components of the AFS is significantly higher than on-farm productivity. The movement of farm workers into these off-farm components—a natural process of agricultural transformation—may thus be beneficial to household incomes.

Comparing Mozambique's Agrifood System to Other Countries

The structure and economic contribution of a country's AFS varies at different stages of its development. Evidence of this is provided in Figure 2, which compares the 2019 AFS structures of low-income (LIC), lower-middle-income (LMIC), upper-middle-income (UMIC), and high-income countries (HIC) in 2019. As an LIC, both the on- and off-farm composition of Mozambique's AFS and its contribution to national GDP are comparable to that of its peer countries (Panel A). Within the four off-farm components of the AFS, however, Mozambique's agroprocessing is relatively smaller than what is seen in other LICs, while the agrifood trade and transport component is relatively larger (Panel B).

Figure 2. Comparing Mozambique's agrifood system to other countries (2019)

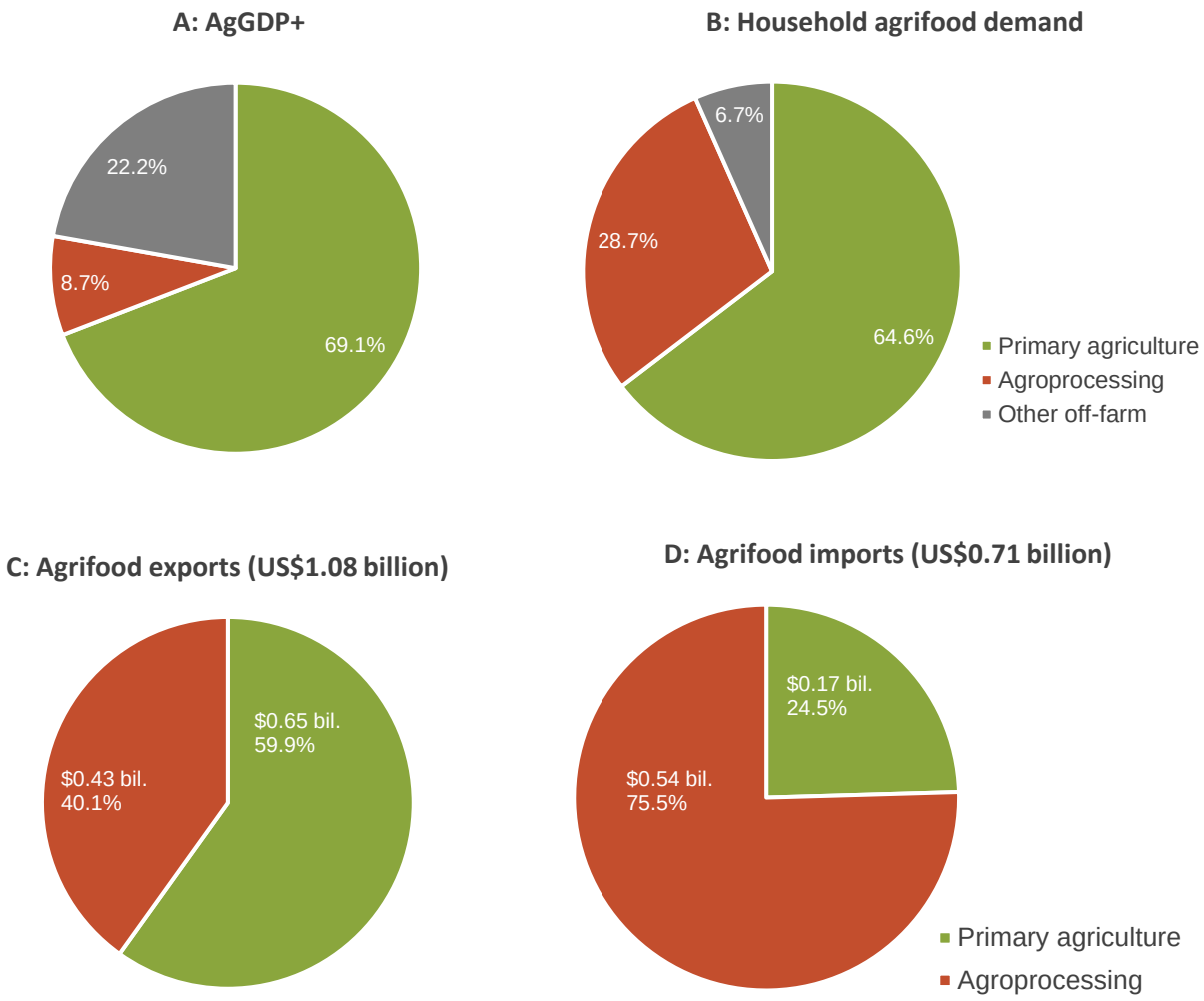


Source: IFPRI's Agrifood System Database (Thurlow et al. 2023) and the 2019 Social Accounting Matrix for Mozambique (IFPRI 2023b).
Note: LIC = low-income country; LMIC = lower-middle-income; UMIC = upper-middle-income; and HIC = high-income; AFS = agrifood system.

Unpacking the Demand Side of Mozambique's Agrifood System

In Figure 3, the structure of Mozambique's AFS from the supply side, as measured by AgGDP+ (Panel A), is compared to the structure of the AFS from the demand side, as measured by household consumption of agrifood products (Panel B). While primary agriculture accounts for nearly 70 percent of both AgGDP+ and total household agrifood demand, processed agrifood products account for a much larger share (28.7 percent) in total household demand than in AgGDP+ (8.7 percent). The bias toward processed agrifood products on the demand side is mirrored in the high share of agrifood imports accounted for by processed products, that is, 59.5 percent of agrifood commodity exports are primary agricultural commodities (Panel C), but 75.5 percent of imports are processed goods (Panel D). Mozambique has a surplus in its total agrifood commodity trade balance but has a deficit in processed agrifood trade—the value of Mozambique's agrifood commodity exports is about 50 percent higher than the value of its agrifood imports.

Figure 3. Composition of agrifood system GDP, household demand, and trade (2019)



Source: Authors' calculation based on the 2019 Social Accounting Matrix for Mozambique (IFPRI 2023b).

Disaggregating the Agrifood System across Value Chains

For a more detailed assessment of structural and historical growth patterns within the AFS, we group Mozambique's agrifood system into 12 value chain groups (see Table A1 in the Appendix for details on how individual value chains or subsectors are mapped to value chain groups). The 12 value chain groups are further categorized into three subgroups on the basis of their trade orientation. Exportable and importable value chains are defined, respectively, as those value chains with export-output and import-consumption ratios above the national average. Trade in both primary and processed agrifood products is considered in the calculation of these trade ratios. The remaining value chains are classified as less-traded value chains.

Table 2 shows the 12 value chain groups, categorized into exportable, importable, and less-traded value chains. The table also reports the contribution of each value chain group to AgGDP+, primary agricultural GDP, and GDP in off-farm components of the AFS. While Figure 3 shows that the country has a small deficit in total agrifood trade, Table 2 shows that Mozambique's export–output ratio of 11.6 is

higher than the import–consumption ratio of 7.9 percent. Six of the 12 value chains are classified as exportable value chains because their export–output ratios exceed the national average for AFS value chains. Some exportable agrifood products require additional processing and trade and transport services; these sectors thus have a slightly larger off-farm AFS GDP share of 45.2 percent than their primary agricultural GDP share of 43.2 percent. Interestingly, some exportable value chains also have high import–consumption ratios. This may reflect urbanization and growing nonfarm income-generating opportunities in rural areas leading to an increase in demand for processed agrifood products, many of which are imported. In the value chains that have both high export–output and import–consumption ratios, it is often the case that exports from the value chain are predominantly primary agricultural products, while imports into that value chain are processed products.

Table 2. Mozambique's agrifood system composition by trade orientation of value chains (2019)

	Share of GDP (%)			Exports / output (%)	Imports / demand (%)
	AFS (AgGDP+)	Primary agriculture	Off-farm AFS		
Total	**100.0**	**100.0**	**100.0**	**11.6**	**7.9**
Exportable	**43.8**	**43.2**	**45.2**	**24.4**	**5.6**
Pulses	7.1	9.3	2.1	13.3	0.6
Oilseeds	5.6	4.8	7.3	34.5	3.2
Fruits and nuts	6.2	7.5	3.2	34.5	4.7
Tobacco	8.0	9.3	5.1	26.6	
Other crops	9.3	7.3	13.6	19.4	11.3
Forestry	7.7	4.9	13.9	23.6	5.4
Importable	**4.2**	**4.0**	**4.6**		**40.0**
Other cereals	4.2	4.0	4.6		40.0
Less traded	**47.9**	**52.8**	**37.1**	**1.1**	**2.7**
Maize	10.4	11.3	8.4	0.0	3.3
Roots	10.3	11.6	7.3	0.0	1.7
Vegetables	13.4	17.1	5.2	0.6	1.8
Livestock	8.1	7.0	10.6	0.1	5.4
Fish	5.7	5.8	5.6	6.9	0.6

Source: Authors' calculation based on the 2019 Social Accounting Matrix for Mozambique (IFPRI 2023b).

Five of the 12 value chains fall in the less-traded group of value chains, together accounting for 47.9 percent of AgGDP+, slightly larger than the share of the 6 exportable value chains in total AgGDP+ (43.8 percent). Many of these less-traded value chains have relatively small off-farm components, and thus contribute a disproportionately smaller share to off-farm AFS GDP (37.1 percent) compared to their primary agricultural GDP contribution (52.8 percent). The livestock value chain is a clear exception in that it is associated with significant value addition off-farm (such as meat processing and dairy products), even though the value chain is less exposed to global and regional markets; expansion of this

sector together with some exportable value chains could thus effectively drive agricultural transformation by boosting value addition and off-farm employment in the value chain.

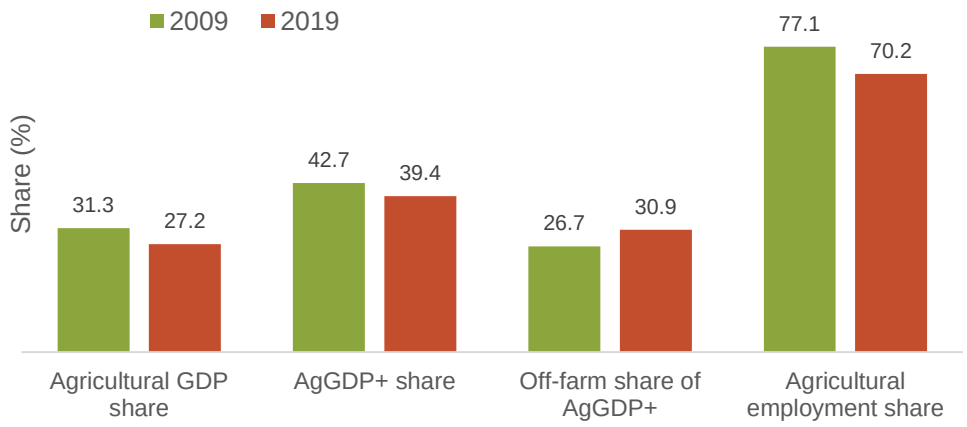
Structural Change and Drivers of Agrifood System GDP Growth

The previous sections have provided a snapshot of the current structure of Mozambique's AFS, the disaggregation of the AFS across the 12 value chain groups, and the trade orientation of those value chains. We have demonstrated that Mozambique has some comparative advantage in agrifood exports, while less-traded value chains are dominant in terms of their contribution to AgGDP+ and primary agriculture. Except for the livestock value chain, these less-traded value chains also are generally less oriented toward value addition in the off-farm components of the AFS (that is, their contribution to off-farm AFS components is small relative to their contribution to primary agriculture, especially when compared to some exportable value chains). Prioritizing growth in some exportable value chains and the livestock value chain could therefore be an effective strategy for expanding off-farm value addition and jobs, which would contribute positively to AFS transformation.

In this section, we assess the performance and structural transformation of Mozambique's AFS in recent years. Labor productivity is typically lowest in primary agriculture, and higher in off-farm activities, such as in agrifood processing and food services, or in sectors outside of the AFS. Economic growth and urbanization are associated with relatively faster growth in these nonagricultural sectors, which can help create higher-paying jobs for both rural and urban households. As such, even smallholder farm households with family members who obtain off-farm employment may benefit from structural transformation.

Figure 4 compares the shares of agricultural GDP and AgGDP+ in Mozambique's national GDP and agricultural employment as a share of total employment in the period between 2009 and 2019. The figure also includes an estimate of the share of the off-farm components in AgGDP+. Agricultural GDP and AgGDP+ shares as well as the agricultural employment share all fell between 2009 and 2019, while the off-farm component of AgGDP+ increased. The rapid economic growth has been accompanied by a structural change in the broader economy and Mozambique's AFS has been transforming. However, primary agriculture remains a large sector in terms of its GDP and employment shares.

Figure 4. Agricultural GDP, agrifood system GDP, and employment shares (2009–2019)



Source: Authors' estimates using the 2009 and 2019 Social Accounting Matrixes for Mozambique (IFPRI 2023b).

Table 3 evaluates the growth performance across AFS value chains over the 2009 to 2019 period. As before, value chains are grouped according to their trade status, that is, exportable, importable, and less traded. Overall, Mozambique's AFS grew modestly, with an average annual AgGDP+ growth rate of 3.8 percent. The off-farm component of the AFS grew much faster (5.4 percent) than primary agriculture (3.2 percent), with agrifood processing, a subcomponent of the off-farm component of the AFS, growing particularly fast at 7.2 percent per year.

Table 3. Agrifood system GDP growth rates by value chain (2009–2019)

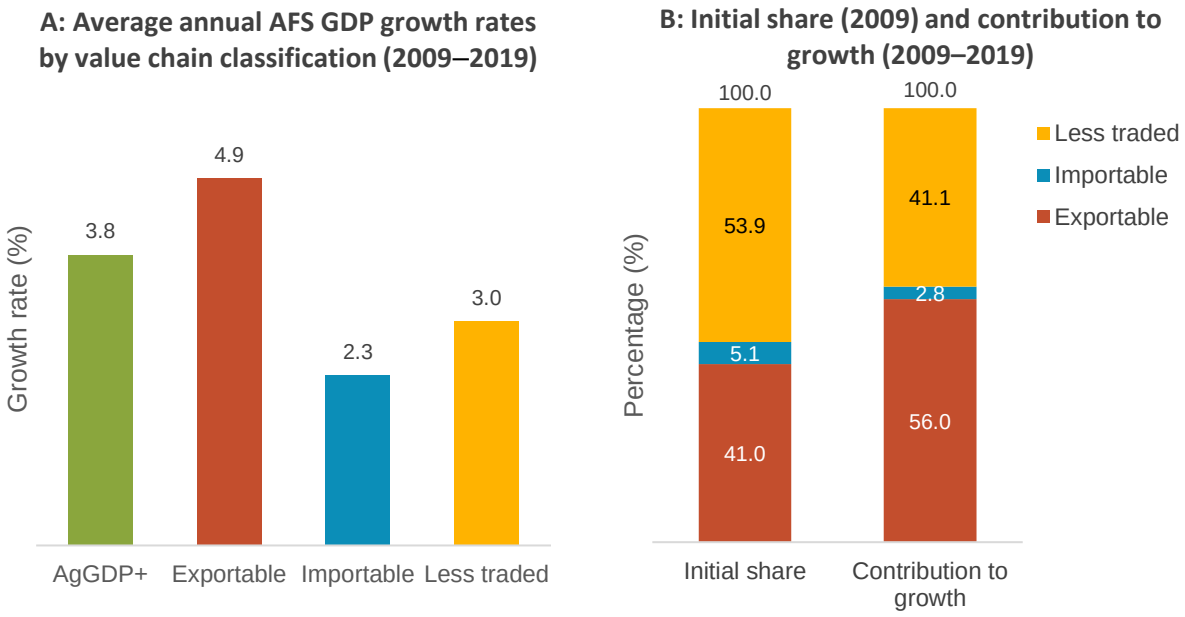
	Average annual GDP growth rate (%)			
	Total AFS	Primary Agriculture	Off-farm AFS	Agro-processing
Total AFS	3.8	3.2	5.4	7.2
Exportable	4.9	4.3	6.2	8.8
Pulses	3.2	3.1	4.4	
Oilseeds*	5.9	5.0	7.4	6.4
Fruits and nuts*	5.3	4.9	7.4	1.0
Tobacco*	7.6	7.7	7.1	6.1
Other crops	3.9	2.1	6.6	10.5
Forestry	4.3	3.4	5.0	9.3
Importable	2.3	1.1	5.1	0.1
Other cereals	2.3	1.1	5.1	0.1
Less traded	3.0	2.6	4.1	4.1
Maize	1.9	1.5	3.1	3.0
Roots	1.1	1.0	1.6	-2.6
Vegetables	3.3	3.2	4.8	6.2
Livestock	4.3	3.4	5.7	6.1
Fish*	6.9	7.2	6.2	5.5

Source: Authors' analysis using the 2009 and 2019 Social Accounting Matrix for Mozambique (IFPRI 2023b).
Note: Value chains that experienced fast AgGDP+ growth rate more than 5.0 percent over the period 2009–2019 are marked with an asterisk (*).

Considering the total economy grew at 5.5 percent during the 2009 to 2019 period, we classify the value chains with a growth rate of more than 5.0 percent as the fast-growing value chains. Among the 12 value chains, 4 achieved such fast growth during the 2009–2019 period, that is, more than 5.0 percent per year (these are marked with an asterisk in Table 3). Among the 6 exportable value chains, 3 of them—oilseeds, fruits and nuts, and tobacco—grew faster than 5.0 percent, while only 1 of the 5 less-traded value chains falls into this category. In several of these rapidly growing value chains, growth in the off-farm components of the AFS was faster than growth in the primary agricultural component. However, in many value chains—including those with growth rates below 5.0 percent—the processing components of value chains grew rapidly. This is consistent with the broader patterns of growth and structural change in Mozambique's AFS, which shows that growth in the off-farm components of the AFS was higher than growth on-farm; furthermore, the agroprocessing component of off-farm AFS GDP grew more rapidly than the off-farm AFS GDP average.

Figure 5 summarizes the key growth trends from Table 3. On average, less-traded (3.0 percent) grew slower than the national AgGDP+ (3.8 percent), while exportable value chains grew faster (4.9 percent) (Panel A). Because the exportable group of value chains has a relatively large initial size (41.0 percent), with its above-average growth, it contributed the most to overall growth (56.0 percent), followed by the larger less-traded value chain group (41.1 percent) (Panel B).

Figure 5. Drivers of Mozambique's AFS GDP growth (2009–2019)



Source: Authors' analysis using the 2009 and 2019 Social Accounting Matrix for Mozambique (IFPRI 2023b).

Assessing Growth Outcomes Using IFPRI's RIAPA Model

IFPRI's Rural Investment and Policy Analysis (RIAPA) model is a tool for conducting forward-looking, economywide country-level analysis (IFPRI 2023a). RIAPA has been used in a wide variety of contexts to simulate the impacts of policies, investments, and economic shocks. Here we employ RIAPA to assess the effectiveness of productivity-led growth in Mozambique's agricultural value chain groups for promoting multiple development outcomes. The analysis was carried out for 10 value chain groups, which were selected from the original list of 12; other cereals and forestry were excluded. We considered five development outcomes:

- A poverty–growth elasticity that measures the percentage-point change in the poverty headcount rate per unit of agricultural GDP growth generated within the targeted value chain;
- A growth multiplier that measures the change in GDP per unit of increase in agricultural GDP in the targeted value chain;
- An employment multiplier that measures the change in the number of jobs created per unit of increase in agricultural GDP in the targeted value chain;
- A diet-quality indicator that measures the percentage change in a diet quality index per unit of agricultural GDP growth generated within the targeted value chain; and
- A hunger–growth elasticity that measures the percentage-point change in the rate of undernourishment per unit of agricultural GDP growth generated within the targeted value chain.

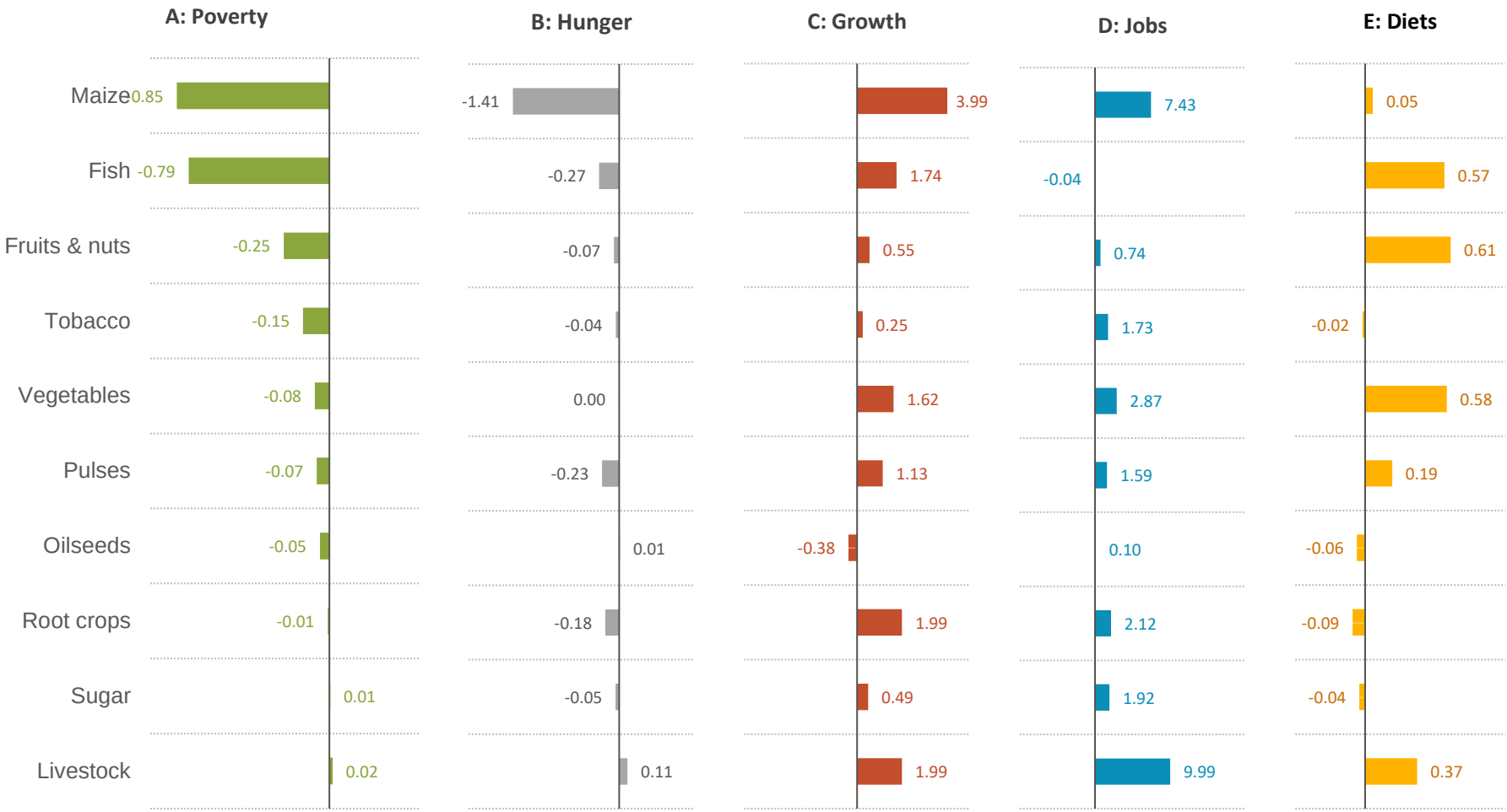
The simulations entail increasing on-farm productivity separately in each targeted value chain and comparing development outcomes across the value chains. While this exogenous productivity shock is imposed only in the primary agriculture component of each value chain, there are spillover effects into that value chain's off-farm components as well as into other agricultural value chains or sectors outside the AFS. These spillovers are captured by the economywide model and provide an indication of the transformation effect that agricultural productivity growth in the value chain has within the AFS and the broader economy. There are also structural differences across value chains; for example, value chains have unique links to other sectors as suppliers or users of intermediate inputs, or they have unique links to rural or urban households in different income groups because of the types of workers they employ or the consumption preferences of households for the agrifood products produced by those value chains.

As such, each value chain growth scenario is expected to have a unique impact on the development outcome; moreover, not all value chains will be equally effective at improving outcomes. In some cases, there may even be trade-offs due to competition for resources across value chains. With the aid of the RIAPA model, these complex effects can be unpacked, thus providing information to governments or development partners that can be used to prioritize across different value chains; this is subject, of course, to the development outcomes they value most highly.

Figure 6 shows the scores each value chain achieves across the five development outcome indicators. We arbitrarily rank the value chains by their poverty score. Value chains clearly differ significantly in terms of their effectiveness in improving different development outcomes. The maize value chain, for example, has strong poverty effects and is most effective at reducing hunger, but it is much less effective in improving diet quality. The vegetable value chain, in contrast, has a relatively high score on the diet outcome, but it ranks much lower on the poverty outcome and has no impact on hunger reduction.

These results highlight the possible trade-offs that may emerge when prioritizing individual value chains, as there is no single value chain that is the most effective at achieving every development objective. Promoting a few value chains jointly will not only diversify agricultural growth but can also help to simultaneously achieve multiple development objectives.

Figure 6. Impact of value chain growth on development outcomes



Source: RIAPA model results.
Note: Panel A shows the percentage point changes in poverty rate that are associated with a 1 percent increase in agricultural GDP; Panel B shows the percentage point changes in hunger rate that are associated with a 1 percent increase in agricultural GDP; Panel C shows the changes in total GDP (in US$ millions) that are associated with a US$1.0 million increase in agricultural GDP from the targeted value chain; Panel D is the change in total economywide employment (in thousand persons) that is associated with a US$1.0 million increase in agricultural GDP from the targeted value chain; and Panel E is the percentage improvement in diet quality that is associated with a 1 percent increase in agricultural GDP. The figure is ordered by the poverty rate outcome.

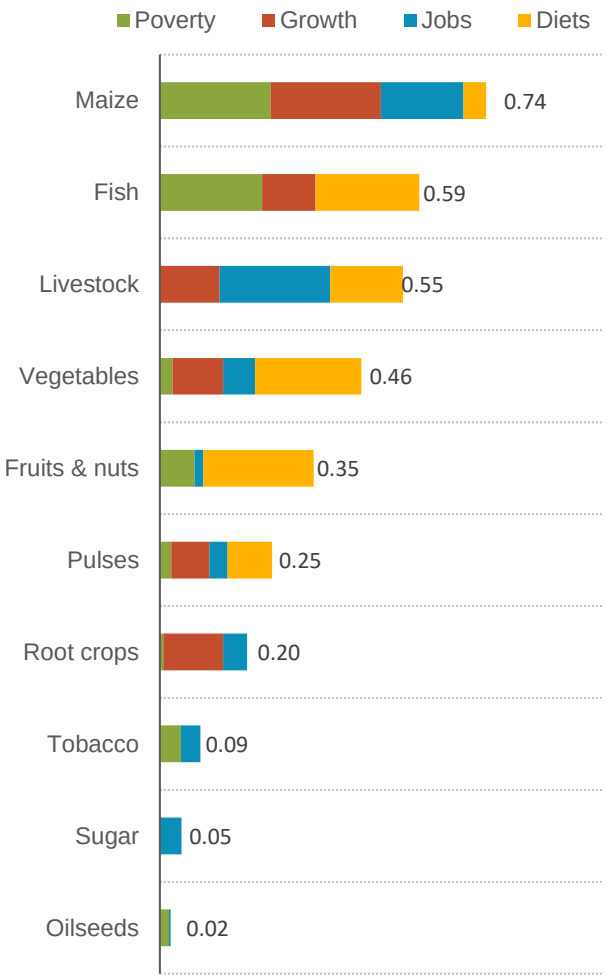
A composite score across different outcome indicators is created to narrow down the number of value chains that might be prioritized. Because of a high correlation between poverty and hunger impacts across value chains, the hunger score is omitted from the composite score. Also, since the different outcome indicators have different underlying units, the individual outcomes are normalized so that they are comparable while still retaining their ranking within the outcome category. Normalization entails assigning a score of 1 to the value chain that is most effective within an outcome category, and a score of 0 to the least effective value chain. All value chains with adverse effects on an outcome are also assigned a score of 0. This includes value chains with a growth multiplier of less than one (fruits and nuts, tobacco, and oilseeds) or those with negative employment effects (fish). The remaining value chains receive a score between 1 and 0 that is proportionate to their original score relative to the highest-ranked value chain. The individual normalized scores for the outcomes are then combined into a composite score for each value chain.

The default approach assumes that each of the four outcome indicators is equally important, so an equal weight is assigned to each score; however, if policymakers consider a particular development outcome to be more or less important than the other outcomes, the weights assigned to each particular outcome score can be adjusted accordingly.

Figure 7 presents the composite scores using equal weights across the four development outcome indicators (that is, excluding hunger). Each component in the bars shows the relative contribution of a particular outcome indicator in the final score. The maize, fish, livestock, and vegetable value chains are ranked highest. For maize, the highest-ranked value chain, each of the four outcome components makes some contributions to the composite score.

By contrast, in the second- and third-ranked fish and livestock value chains, there is no contribution from the job component (fish) or from the poverty component (livestock). While a ranking of their impacts on multiple development outcomes on the basis of composite scores allows us to identify and prioritize value chains, trade-offs clearly exist as to which outcomes are most significantly affected by productivity-led growth in each value chain.

Figure 7. Composite score of development outcomes: Equal weights



Source: RIAPA model results.
Note: The composite score is a simple average (equally weighted) of the scores for each of the four outcome categories; the figure is ordered according to the highest composite score.

Summary

In the decade prior to the COVID-19 pandemic, Mozambique's economy grew rapidly at 5.5 percent per year. Although the agrifood system (AFS) did not grow as fast, it still achieved a respectable growth rate of 3.9 percent per year. The rapid growth in the broad economy led to structural change within Mozambique's AFS. The growth rate for the off-farm component of the AFS was higher than growth on-farm—5.4 and 3.2 percent, respectively—and the off-farm share of the AFS increased between 2009 and 2019. While both the agricultural GDP and agricultural employment shares declined over this period, agriculture remains a large sector in Mozambique in terms of both GDP and total employment.

Exportable value chains made an important contribution to Mozambique's overall AFS growth between 2009 and 2019 (56.0 percent). The large contribution from the group of exportable value chains is explained both by its large initial size and above-average growth rate. Growth in the group of less-traded value chains was below average, and its significant contribution (41.1 percent) to overall AFS growth can be explained by its relatively large size.

The RIAPA model-based comparison of future sources of growth shows that there is no single value chain group that is the most effective in achieving all desired development outcomes, that is, declining poverty, declining hunger, economic growth, job growth, and improved diets. The maize, fish, livestock, and vegetable value chains rank highly in their composite outcome scores for poverty (and hunger), GDP, jobs, and diets. Some of these value chains already displayed above-average growth rates in the preceding decade. Promoting these value chains together offers an effective and broad-based way to achieve these development outcomes.

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Appendix

Table A1. Value chain groups and their corresponding agricultural subsectors

Value chain groups and their share of AgGDP+	Individual value chains (or agricultural subsectors) in the group and their share of the group's agricultural GDP
Maize (10.4%)	Maize 100%
Other cereals (4.2%)	Sorghum and millet 43.2% | Rice 54.2% | Wheat and barley 2.6%
Oilseeds (5.6%)	Pulses 100%
Pulses (7.1%)	Groundnuts 63% | Other oilseeds 37%
Roots (10.3%)	Cassava 69.7% | Irish potatoes 12.3% | Sweet potatoes 16.5% | Other roots 1.4%
Vegetables (13.4%)	Vegetables 100%
Fruits and nuts (6.2%)	Nuts 30.9% | Bananas 18.3% | Other fruits 50.8%
Tobacco (8.0%)	Tobacco 100%
Other crops (9.3%)	Sugarcane 81.5% | Cotton & fibers 18.3% | Leaf tea 0.1%
Livestock (8.1%)	Cattle meat 28.5% | Raw milk 3.5% | Poultry meat 30.2% | Eggs 5.7% | Small ruminants 1.5% | Other livestock 30.5%
Fish (5.7%)	Aquaculture 0.6% | Capture fisheries 99.4%
Forestry (7.7%)	Forestry 100%

Source: Authors' calculation based on the 2019 Social Accounting Matrix for Mozambique (IFPRI 2023b).

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