



Synopsis: Public investment for Rwanda's inclusive agricultural transformation

A midterm assessment of the contribution of PSTA 4

Emerta Aragie, Xinshen Diao, David J. Spielman, James Thurlow, Serge Mugabo, Gracie Rosenbach, and Gilberthe Benimana

Rwanda's fourth Strategic Plan for the Transformation of Agriculture (PSTA 4), which extends from 2018 to 2024, is currently at its midpoint. This note highlights the contribution of PSTA 4 in its first half (2018–2021) to four key development outcomes: economic growth, job creation, poverty reduction, and diet quality improvement.

Highlighting results from an economywide model exercise combined with data from multiple sources and expert insights, the note draws attention to the importance of using scarce public resources in a cost-effective manner. A synopsis of findings indicates the following.

- Overall, PSTA 4 is well structured in terms of its investment portfolio and the cost-effectiveness of these investments. Each US dollar spent on agriculture corresponds to a US\$2.05 gain in GDP; total gains during the first half of PSTA 4 are estimated to total \$730 million.
- In the absence of agricultural spending under PSTA 4, average yearly GDP growth rates in 2018–2021 could have been as low as 3.6 percent; with PSTA 4 spending, however, annual growth rates reached 4.2 percent, which is a 0.6 percentage point increase in each year of the period.
- These same expenditures contribute to reductions in poverty: during 2018–2021, PSTA 4 spending contributed to a decline in the number of poor people totaling 1.1 million persons, most of whom were located in rural areas. Agricultural spending also contributed to improvements in diet quality.

These findings emphasize the continued importance of public investment in agriculture and rural development for reaching growth and job creation targets and for poverty reduction and diet quality improvements. Increases in budget allocations to agriculture and rural development in Rwanda are well justified by the findings. However, since the beginning of PSTA 4, the budget allocated to MINAGRI (measured in constant prices) has stagnated. This calls for closer consideration of future allocations of public resources.

Overview

As Rwanda is expected to return to its rapid growth trajectory following the COVID-19 pandemic, agriculture will continue to play a central role in the structural transformation of the entire economy. To this end, the Government of Rwanda continues to invest in the agricultural sector by building on the Strategic Plans for the Transformation of Agriculture (PSTAs) that began in the early 2000s. The structural transformation process means that as agriculture becomes more integrated with the rest of the economy, public resource allocations need to address a wider range of issues across the entire food system.

This policy note provides evidence that is designed to assist the Government of Rwanda in a midterm assessment of the fourth Strategic Plan for the Transformation of Agriculture (PSTA 4), which extends from 2018 to 2024. The note focuses on the first four years of PSTA 4, 2018 to 2021, assessing public investments targeting multiple development outcomes that are grounded in the cost-effective use of public resources. It has been produced through close collaboration with colleagues at the Ministry of Agriculture and Animal Resources (MINAGRI). The study uses the Rural Investment and Policy Analysis (RIAPA) economywide model developed by the International Food Policy Research Institute (IFPRI). This model draws on data from multiple sources and on expert insights from MINAGRI to measure the impacts of public expenditures under the current PSTA 4; it focuses on four specific development outcomes: economic growth, job creation, poverty reduction, and diet quality improvement.

Main findings

Findings from the study indicate that the current budget allocation under PSTA 4 is generally effective in terms of promoting economic growth, employment, poverty reduction, and improvements in diet. Estimates indicate that each US dollar of agricultural spending corresponds to a US\$2.05 gain in GDP; the total gains in 2018–2021 are \$730 million (Figure 1). The COVID-19 pandemic constituted an unprecedented economic shock to the Rwandan economy in 2020 and 2021, however agricultural expenditures have helped mitigate its adverse growth effect. Our estimates show that without the agricultural expenditures allocated under PSTA 4, average yearly GDP growth rates for 2018 to 2021 could have been as low as 3.6 percent; with PSTA 4's agricultural expenditures, however, annual growth rates reached 4.2 percent, with a 0.6 percentage point increase in each year of the 2018–2021 period.

Agricultural expenditures under PSTA 4 mainly target the agricultural sector, while the benefit has reached the broader food system. In 2018–2021, total GDP gains for the food system are estimated at \$585 million; of this, \$505 million is in the traditional agricultural sector and \$80 million is along value chains outside of agriculture. Growth in the food system as a whole in response to PSTA 4 expenditures is even more impressive, with an estimated 3.9 percent increase in GDP. Of this, 1.3 percentage points come from PSTA 4 expenditures, as our model shows that without PSTA 4 allocations growth rate would have been as low as 2.6 percent (Figure 1).

Agricultural expenditures allow growth in employment opportunities outside the agricultural sector; they also support the movement of labor from agriculture to rural nonfarm activities within the food system. It is estimated that in 2018–2021, about 116,000 new jobs can be attributed to PSTA 4 agricultural expenditures, with most of these jobs being created outside of agriculture (Figure 2). This movement of labor is accompanied by increasing growth in agricultural production (Figure 1), and hence contributes positively to the transformation process of the whole economy.

Agricultural expenditures under PSTA 4 contribute to reductions in poverty. Our estimates indicate that during 2018–2021, PSTA 4 allocations are responsible for a 1.1 million decline in the number

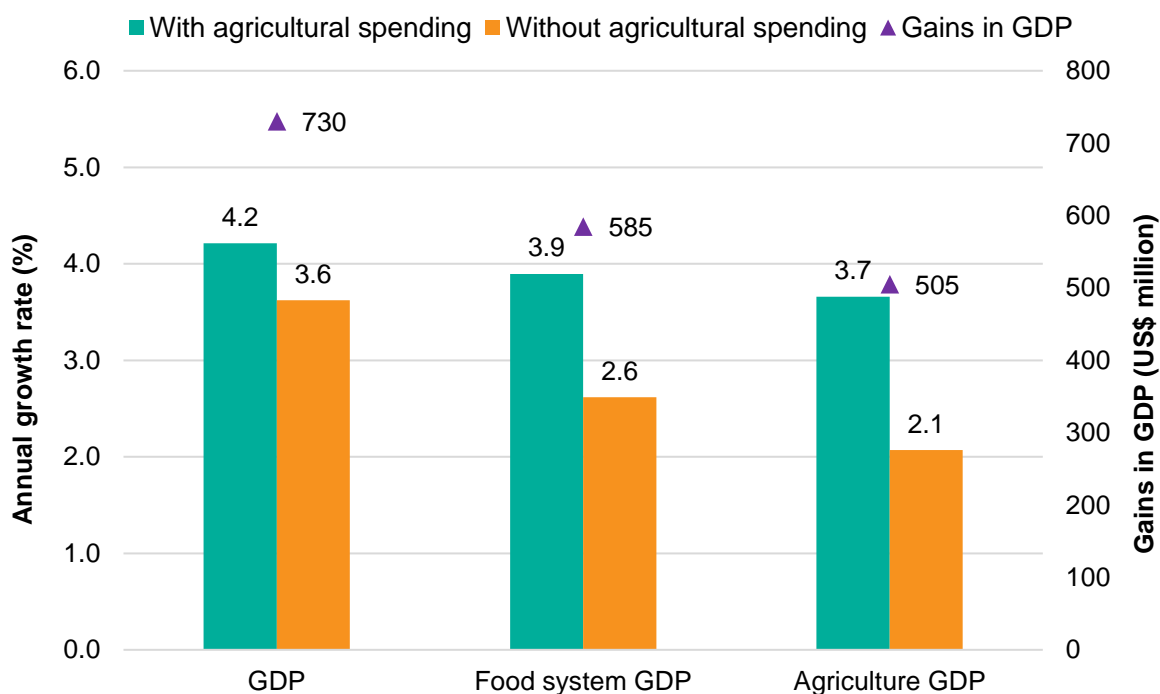
of poor people; there are also indications that most poverty reduction occurs in rural areas, which show higher rates of poverty than do urban areas (Figure 2).

Our estimates further suggest that Rwanda’s agricultural expenditures contribute to improvements in diet. As shown in Figure 2, the diet quality index has improved equally among rural and urban households.¹

Policy recommendations

Taken together, these results suggest that PSTA 4—now at its midterm point—is generally well structured in terms of its investment portfolio and the cost-effectiveness of these investments. Findings in this note demonstrate the continued importance of public policy, investment, and expenditure through agricultural budget allocation for reaching growth and job creation beyond agriculture and for poverty reduction and diet quality improvement among rural and urban households. However, since the beginning of PSTA 4, the budget allocated to MINAGRI (measured in constant prices) has stagnated. Increases in budget allocations to MINAGRI and, more generally, to agriculture and rural development, are well justified by the findings.

Figure 1. Annual growth rates in GDP with and without agricultural expenditures, and gains in GDP from agricultural expenditures, 2018–2021

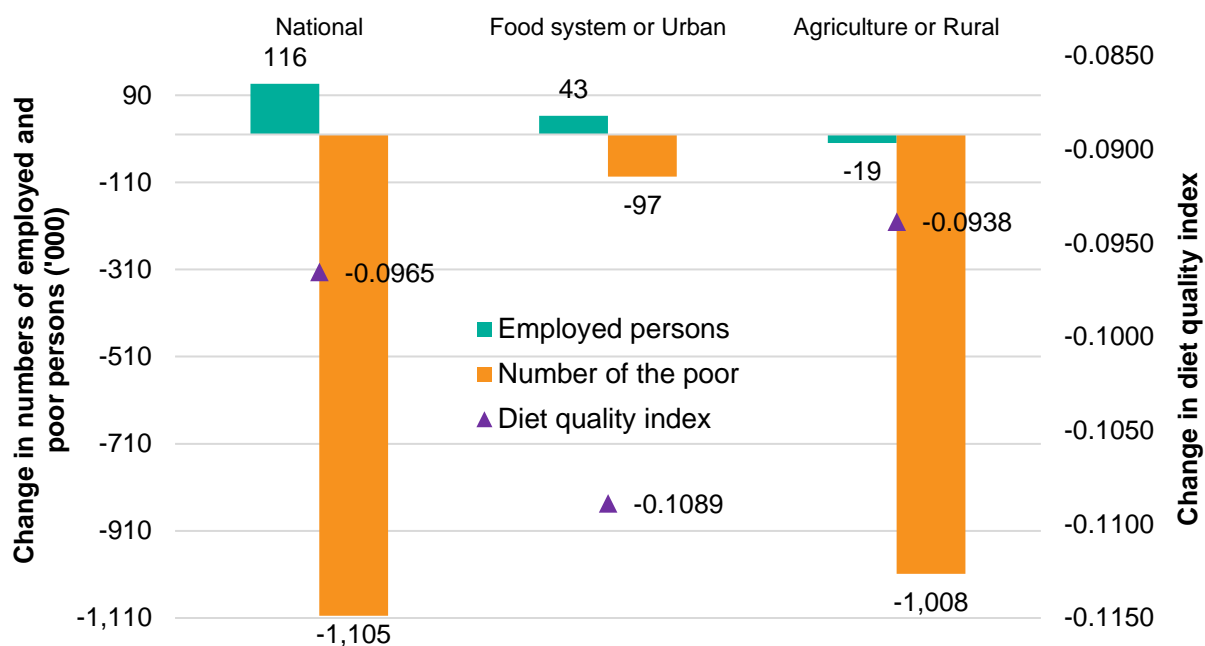


Source: Rwanda-RIAPA model.

Note: Annual growth rates are averages of 2018–2021; gains in GDP are 2018–2021 totals.

¹ The diet quality index used here is a measure of the gap between actual and recommended diet structure which takes price structure into consideration. *Declines* in the index imply that gaps have narrowed; this indicates improvement in diet quality. See the working paper that accompanies this brief for details.

Figure 2. Changes in the number of employed and poor persons and change in diet quality index, as a result of agricultural expenditures, 2018–2021 (total)



Source: Rwanda-RIAPA model.

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