IMPACT BRIEF

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Rwanda

Project for Rural Income through Exports (PRICE)

About the project

Objective. The Project for Rural Income through Exports (PRICE) has been designed to achieve sustainable increased returns to farmers from export-driven value chains. It pursues this objective by helping farmers gain access to financing and markets and increase the production and quality of their cash crops. PRICE has five components: (1) coffee, (2) tea, (3) silk (sericulture), (4) horticulture, and (5) financial services.

Financing. PRICE is in line with the Transformation of Agricultural Sector Program Phase III (PSTA III) and was jointly funded by the Government of Rwanda, IFAD and beneficiary farmers for a total amount of US$65.8 million. Of this amount, IFAD initially committed to financing US$37.4 million but later approved a top-up of US$11.3 million. In April 2018 IFAD approved a second round of additional financing amounting to US$8.5 million, combined with an 18-month extension. The National Agricultural Export Development Board (NAEB) is the lead implementing agency.

Timing. The full project implementation period runs from December 2011 to June 2020.

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The project's theory of change

Through the Turnaround Programme (TAP), PRICE has provided **support to previously unprofitable coffee cooperatives** to help them turn around and become profitable. Members of coffee cooperatives were trained in business management as well as technical aspects of operating their coffee-washing stations. The cooperatives' mini–washing stations for processing coffee were improved through the installation of **15 water-recycling machines**, which were used to wash the parchment after pulping and which reduced the cost of production by reusing water. As a result, the cooperatives have enhanced the quality of their coffee cherries and increased the quantity of coffee cherries procured from their members.

A separate component of the PRICE project has sought to enable horticulture farmers to access **financial services** by providing **performance-based matching grants** and **technical support** for the development of business proposals, which were submitted to savings and credit cooperatives (SACCOs), microfinance institutions (MFIs) and commercial banks. The aim was to increase horticulture farmers' access to investment capital, allowing them to expand production capacity as well as to improve their horticulture farming business activities and ultimately their returns. Farmers submitted their business proposals to NAEB, which then vetted them and selected the best for endorsement and support through performance-based matching grants that were administered by the SACCOs, MFIs and commercial banks.

The project also supported other export-oriented value chains such as tea and silk and helped farmers increase production, sales, and the prices they received. Through these numerous activities, PRICE has helped increase farmers' incomes and assets thus increasing resilience, food security and dietary diversity.

Project outreach and outputs

Determining the overall impact of the project requires first understanding whom the project reached and what outputs it generated.

Beneficiary households: **125,824**

Female beneficiaries: **28%**

Total beneficiaries: **494,443**

Cooperatives formed or strengthened: **174**

Coffee washing stations rehabilitated or established: **129**

Performance-based grants: **179**

SACCOs co-lending with grant facility: **35**

Project impact

As part of IFAD's Development Effectiveness Framework, PRICE has been subject to a rigorous impact assessment.

Data and methods

Estimation of the project's impacts was based on comprehensive quantitative and qualitative survey data. To establish a valid comparison group, coffee cooperatives that did not participate in PRICE were included in the sample. In addition, the scores used to rate the business proposals of the horticulture farmers who applied for loans under the grant facility managed by the Business Development Fund (BDF) were used to generate valid controls. Three data sets were analysed: (1) a panel dataset of 85 coffee cooperatives observed over the period 2012–2017; (2) a dataset of 2,894 coffee farmers divided equally between treatment and control groups; and (3) a dataset of 358 horticulture farmers whose business ideas were selected and 1,220 horticulture farmers who were rejected. Having different datasets coupled with different selection criteria for beneficiaries led to the use of various identification strategies to assess the impact of the project on different outcomes: (1) difference-in-differences (DID); (2) propensity score matching (PSM); and (3) regression discontinuity design (RDD).

Key impact estimates

Coffee

+32% Coffee **income** per year

+11% Overall **assets**

+9% Coffee **price**

Horticulture

+93% Farmer's horticulture **income** per year

Coffee intervention

At the cooperative level, TAP increased the price of coffee offered by cooperatives to farmers by **9 per cent** and raised cooperatives' use of coffee-washing stations by 24 per cent. Farmers who were members of cooperatives that received the PRICE interventions were 5 per cent more likely to deliver all their coffee cherries to their cooperative. Moreover, they were 7 per cent more likely to report that their cooperative is transparent.

At the household level, on average, TAP had a positive impact on coffee farmers' household assets and incomes sourced from coffee. Farmers' coffee income increased by **32 per cent**, whereas total crop income increased by 28 per cent.

The increased income was reflected in an **11 per cent** increase in overall assets, consisting of livestock assets (20 per cent increase), durable assets (17 per cent increase) and a housing asset index (3 per cent increase).

Horticulture-finance intervention

At the household level, on average, the business idea selection and performance-based grant had a positive impact on horticulture farmers' assets and horticulture income, especially income from seasonal horticulture crops. Farmers' horticulture income increased by **93 per cent** for those whose business ideas were selected by NAEB, and by 540 per cent for those who received performance-based grants. Such an upsurge in income stems from increases in horticulture harvests and sales (these quintupled for farmers who had their business idea selected and more than quintupled for farmers who received a performance-based matching grant). The increases in horticulture harvests and sales emanated from increased productive assets that the farmers used to expand their horticulture-related activities; (productive assets increased by 49 per cent for farmers whose business ideas was selected by NAEB, while they tripled for farmers who received performance-based matching grants).

Lessons learned

Coffee intervention

- The sequencing of TAP1 and TAP2 interventions enabled the project to integrate lessons from TAP1 into TAP2, contributing to the greater impact of TAP2. Future designs may benefit from similar **sequencing or piloting to draw lessons for further implementation**.
- Interventions designed to enhance the quality and quantity of coffee production often come with high input and marketing costs. Therefore the project design should **incorporate ways of minimizing the increased costs to ensure increased incomes**.
- **It is crucial to follow up** on the TAP-supported cooperatives **to guarantee the sustainability of the impacts** realized; some farmers claimed that the one-year programme was insufficient to tackle the issues they currently face.

Horticulture-finance intervention

- Farmers who were selected to receive support through performance-based grants were understandably relatively better off to begin with, so limited impact could be detected ex post on resilience, food security and diet diversity. **Whenever designing a grant facility tied to a loan, one should acknowledge that it is more adapted to economically and commercially active segments** of the target population.
- Smallholder farmers might not be able to secure a loan on their own owing to the lack of sufficient collateral; even if they could get loans, the loan amounts would likely be smaller. In future designs, to guarantee equitable access to grants, the **selection criteria for large farmers and large investments should be drafted differently from the ones for smaller farmers**.
- **Helping farmers develop business plans and officially vetting the plans could motivate them to implement their business ideas** using their personal savings and external loans, thereby creating significant development impacts even if those farmers do not receive capital from the project.

About the brief

This brief draws upon the findings of an IFAD-funded impact assessment of the PRICE project in Rwanda, which was prepared by Athur Mabiso, Mohamed Abouaziza, Benjamin Wood and Tim Balint.

The impact assessment report on PRICE is available upon request.

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