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# RWANDA CROSS-BORDER AGRICULTURAL TRADE ANALYSIS

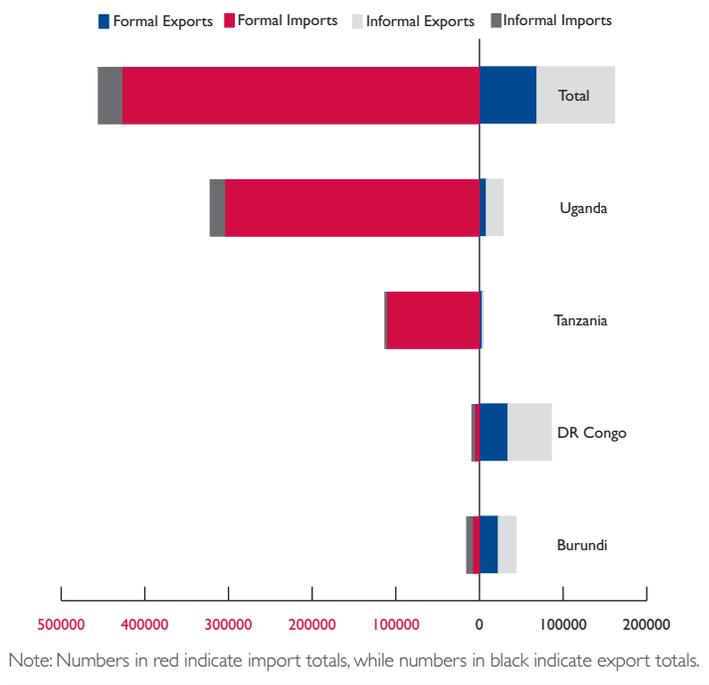
## EXECUTIVE SUMMARY

**This study assesses trade between Rwanda and its four cross-border neighboring countries: Burundi, Democratic Republic of the Congo (DRC), Tanzania, and Uganda, and focuses on staple crops (maize, wheat, beans, Irish potatoes, cassava and rice), livestock (cattle, milk, eggs), and agricultural inputs (fertilizer, seed). The analysis examines cross-border trade, where appropriate, through four lenses: price, processing potential, seasonality, and trader demographics, to uncover unfilled demand in cross-border markets and to outline trade opportunities for actors along agricultural value chains in Rwanda.**

Over the past decade, Rwanda has experienced substantial economic growth and poverty reduction, driven by ambitious government programs on productive agriculture, human resource development, infrastructure development, and regional economic integration and cooperation.<sup>1</sup> Agriculture is the backbone of the Rwandan economy, contributing 32 percent to gross domestic product (GDP). Therefore the Government of Rwanda (GoR) considers agriculture a major catalyst for growth and poverty reduction.<sup>2</sup> To that end, the GoR has adopted a two-pronged approach to agricultural development, targeting substantial public sector investments along selected agricultural value chains and boosting productivity among smallholder farmers through the Crop Intensification Program (CIP). Since 2007, the CIP has achieved enormous gains:<sup>3</sup>

- » Maize and wheat production have **increased six-fold**.
- » Irish potato and cassava **production have tripled**.
- » Rice and bean production have **increased by 30 percent**.

**FIGURE 1: TOTAL CROSS-BORDER TRADE IN CIP CROPS (2009-2012)**



<sup>1</sup> Ministry of Finance and Economic Planning (MINICOFIN), Rwanda Vision 2020 (July 2000).

<sup>2</sup> National Institute of Statistics of Rwanda (NISR), Third Integrated Household Living Conditions Survey (EICV3), 2011.

<sup>3</sup> Ministry of Agriculture and Animal Resources (MINAGRI), Strategies for Sustainable Crop Intensification in Rwanda (2010).

These production increases have highlighted the need for Rwanda to develop cross-border and regional markets as a means of utilizing surpluses to sustain agricultural growth and further reduce poverty. The Government's Strategic Plan for the Transformation of Agriculture (PSTA) recognizes limited market development as a potential constraint to continued agricultural development. The PSTA emphasizes improved market access, increased prices of Rwandan exports, and increased value added as essential components of future market development. The Economic Development and Poverty Reduction Strategy (EDPRS) defines some of the elements of this development, including increased private sector participation and the improved integration of stakeholders into the market.

Cross-border and regional trade also has considerable potential for Rwandan agriculture to develop a competitive advantage. The eastern portion of the Democratic Republic of the Congo (DRC) is currently Rwanda's largest regional export market, comprising more than two million consumers who are not well-supplied by their own domestic agricultural sector. There are other potential markets for Rwandan products—an additional two million people in the Akagera region of Tanzania (adjacent to Rwanda), and substantial populations in Burundi and Uganda. Increased integration with the East African Community (EAC) provides Rwanda with easy access to these markets, although regional integration brings challenges as well as opportunities. With increased integration, trade is likely to flow from the lowest-cost producer. Because Rwanda tends to have comparatively higher costs of production within the EAC, increased imports should also be expected. Nevertheless, it is well recognized that successful export trade depends as much on competitive advantage as it does on comparative advantage.<sup>4</sup> The export trade out of Rwanda demonstrates this. In a number of instances, exports occur despite high basic production costs, because of specific trade linkages, market segmentation, or branding.

This analysis has assessed the extent and nature of existing trade and used that data to assess the potential for further exports, based not only on cost but also on the specific characteristics of the Rwandan products and potential markets.

## KEY FINDINGS

**Although Rwanda may not necessarily be the lowest-cost producer of agricultural commodities, it can nevertheless access cross-border markets based on aspects other than price, including appropriate processing, seasonality, quality, and branding, and above all, the capacity (not yet adequately developed) to respond to changing market requirements in neighboring countries.**

A key aspect of cross-border trade development highlighted by this analysis is the need to improve market linkages between producers and buyers, and most importantly between traders within Rwanda and their end markets in other countries. Opportunities are being missed in the export of potatoes, beans, and dairy products as a result of limited market linkages that:

- » Restrict the accumulation of marketable volumes (especially of beans).
- » Result in inconsistent supply—thereby reducing market penetration.
- » Prevent identified export opportunities from being acted on by growers.

Cooperatives could play a major role in linking growers to markets but the clear message from trading/processing stakeholders was that further development of cooperatives is necessary, especially in commercial aspects of trade, before they could be considered to be filling this role effectively.

Another key opportunity highlighted by this analysis is in processing. A simplistic assessment of comparative advantage would suggest that there is no clear benefit to processing raw materials in Rwanda, especially given high levels of electricity costs, relatively high labor costs, and the additional “burden”<sup>5</sup> of an effectively implemented system of taxation. In practice, however, Rwanda frequently demonstrates the opposite, especially for maize meal, cassava flour, and even wheat flour. In each case, the competitive export of these products depends on the specific characteristics of the products or of the markets in which they are sold, suggesting a sound export potential for these products that could be developed further.

<sup>4</sup> Porter, M.E. *The Competitive Advantage of Nations*. New York: Free Press (1990).

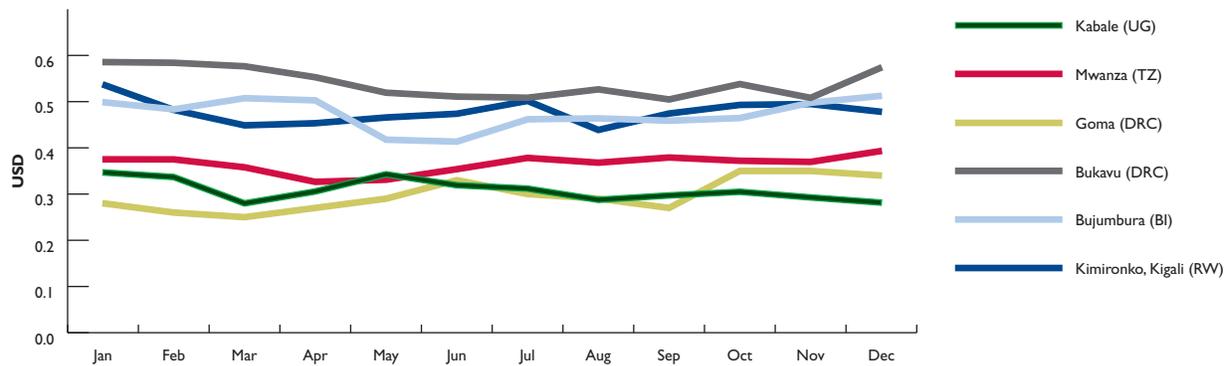
<sup>5</sup> This represents an additional cost only by comparison with other countries where taxes are less efficiently collected.

## OPPORTUNITIES

This analysis has identified a number of specific export expansion or import substitution opportunities, including:

1. **Maize** – The potential to increase Rwanda’s maize exports is limited, but increased import substitution is possible. This will likely be more cost-effectively achieved through improved post-harvest handling and storage than through increased production.

**FIGURE 2: AVERAGE RETAIL PRICES OF MAIZE, 2010–2012**



Sources: FAO, InfoTrade Uganda; Rwanda eSoko; WFP.

2. **Maize meal** – There is a market for maize meal based on the production of a lower-quality product that is highly demanded in a cost-sensitive market.
3. **Beans** – Rwandan beans can be produced at a price that is competitive in neighboring markets, especially in Uganda. The main constraint to increased export trade lies in the cost of accumulating a marketable volume of beans of consistent quality. Increased exports will be possible if the transaction costs between the farm-gate and exporter can be reduced.
4. **Potatoes** – Rwandan potatoes can be produced at a price that is competitive in neighboring markets. The main constraint to increased export trade appears to lie in the development of efficient trade networks into Uganda and Tanzania and to take advantage in particular of the substantial haulage capacity that is returning empty through Kampala and Mwanza.
5. **Cassava** – The potential to increase exports of cassava out of Rwanda is limited by the perishability of the product. Nevertheless, marginal increases in import substitution are possible. Given the dramatic increase in productivity that has been achieved to date, it now appears reasonable to look for further gains from improved post-harvest handling and processing, especially the drying of fresh cassava and the production of garri.<sup>6</sup>
6. **Rice** – Though Rwanda is unlikely to be able to develop a substantial export market for rice, there is scope to increase the degree of import substitution. However, since the productive area for rice is inherently limited and yields are already high, reduced imports would result mainly from reduced post-harvest losses in Rwanda itself.
7. **Milk** – Rwanda produces a surplus of milk which appears likely to grow as increases in demand lags behind increasing supply. Irrespective of cost, Rwandan UHT milk<sup>7</sup> and cheese have established and receptive markets in the DRC, Burundi, and Uganda. There is an advantage to be gained from developing brand awareness of Rwandan dairy products. There is also a need to strengthen the supply chains in Rwanda and neighboring countries to ensure the consistency of supply.

<sup>6</sup> Garri is a popular and staple West African food made by fermenting and roasting cassava tubers.

<sup>7</sup> UHT milk means milk that has been undergone Ultra High Temperature processing.

A number of key observations were made, including:

1. **Seed** – There is an undeveloped market for quality maize, beans, and potato seed in neighboring countries, especially in Uganda and Tanzania.
2. **Fertilizer** – There is little evidence of fertilizer export to any country other than Burundi, where trade occurs at a village level and amounts cannot be quantified.
3. **Livestock** – Although exports of livestock represent a substantial proportion of all trade, the exports into the DRC are mainly in the form of live animals. This is because the value added during the slaughter process in the DRC is greater than in Rwanda. As a result, investment in abattoir and cold chain facilities may develop the domestic livestock market, but will do little to enhance cross-border trade.
4. **Wheat** – Despite considerable effort, Rwandan wheat producers have so far failed to produce quality wheat suitable for bread flour. Given the availability of suitable wheat on the world market, farmers would be better served by developing a trading and processing network that would allow them to sell their existing wheat production more effectively for processing into biscuit and chapatti flour, rather than focusing on local production of quality bread wheat.
5. **Women** play a significant role in cross-border trade. They are well represented in the formal sector. Though women dominate informal trade into the DRC, informal trade elsewhere depends on the activities of men and women working together.

## CONCLUSION

Overall, this analysis indicates that the current state of cross-border trade depends less on the obvious comparative advantages associated with agricultural production and more on post-production factors, including processing and marketing. The EDPRS has already recognized the need to promote the development of business alliances and the integration of firms into value chains, which are both critical to efficient market development. From this perspective, Rwanda can expect to develop a number of export markets (as outlined in this report), but success in doing so will depend more on increased support for developing a vibrant trading network that can supply specific commodities into identified markets than on efforts to increase efficiency in agricultural production.

**In some instances, Rwandan exports may benefit from developing niche markets based on quality and brand awareness. In other instances, however, Rwanda is able to benefit from being the lowest-cost exporter of lower quality products. This is especially true of:**

- » Maize meal exported into the DRC and Burundi (and sold on the domestic market).
- » Fermented milk informally exported into Burundi.
- » Livestock informally exported to the DRC.

As the agricultural trade sector develops, care should be taken to avoid the erosion of these comparative advantages. Imposing domestic and export grades and standards, for example—while necessary to ensure public health—should avoid excluding these export products from the markets they currently enjoy. Therefore, the development of an enabling environment will need to be sensitive to the specific needs of small businesses and the products they trade in.

Nate Kline, Chief of Party  
EAT/Fintrac  
+1.202.621.7349  
nkline@fintrac.com

Steven Fondriest, COR  
USAID  
+1.202.712.0314  
stfondriest@usaid.gov

Kelley Cormier  
USAID  
+1.202.712.4492  
kcormier@usaid.gov