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Policy and Program Interventions for Improving Agricultural Value Chain Competitiveness and Regional Trade in Eastern Africa: Opportunities for Rwanda

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Abstract

This brief summarizes the findings from a study that assessed agricultural trade policy and program opportunities in Eastern Africa that can help Rwanda improve its agricultural value chain competitiveness and regional trade. The synthesis focuses on the experiences of five high-performing African countries – Egypt, Kenya, Morocco, Rwanda, and South Africa – under eight areas of good practices aimed at improving agricultural value chain competitiveness and regional trade expansion. The eight areas of good practices that serve as policy and program options are related to: technologies and innovation; competition; trade logistics and facilitation measures; investment in productive infrastructure; access to finance; skills development; elimination of harassment at borders; and trade promotion. In addition, the brief presents an assessment of Rwanda's performance to identify the priority practices to implement or strengthen in terms of policy and program interventions. The assessment clearly indicates that there are untapped policy and program opportunities in Rwanda that can help improve the country's competitiveness and participation in regional trade.

1 . INTRODUCTION

In most African countries, strengthening competitiveness in regional agricultural trade is a key government objective under the trade policy agenda. Regional trade provides larger markets for producers enabling economies of scale which benefit both producers and consumers. Despite the existence of the Common Market Protocols for the free flow of goods and services, the East African Community (EAC) still has persistent trade barriers and capacity challenges that continue to constrain trade competitiveness in the region. These constraints include deficient infrastructure, inefficient customs and ports services, inadequate use of information and communication technology (ICT), poor access to insurance and trade finance, and pervasive non-tariff barriers.[1] However, there are several African countries that have managed to sustainably improve their competitiveness in regional agricultural trade. The identification and learning of good experiences from some of these high-performing African countries in regional agricultural trade can help EAC countries in their decision-making to improve competitiveness.

This brief summarizes the findings from an analysis that reviewed domains of good practices within and outside Eastern Africa in terms of agricultural competitiveness and trade, to draw useful lessons for other countries. Eight areas of good practices, policy and program options have been identified based on drivers and determinants of competitiveness and trade and the different pillars of the global competitiveness index. This index is the most comprehensive and widely used multidimensional measure of competitiveness that considers both microeconomic and macroeconomic drivers of competitiveness. The identified domains of good practices are related to: technologies and innovation; competition; trade logistics and facilitation measures; investment in productive infrastructure; access to finance; skills development; elimination of harassment at borders; and trade promotion. These areas of good practices were drawn from the experience of five high-performing African countries, viz., Egypt, Kenya, Morocco, Rwanda, and South Africa. The five countries were selected based on the agribusiness competitiveness index. In addition, the brief provides an assessment of Rwanda's performance, under each dimension to identify priority options which can be implemented or strengthened. Subsequently, key policies and program opportunities to enhance trade competitiveness are suggested.

The rest of the document is organized as follows: Section 2 presents the eight practices and provides some policy and program options under each practice. Section 3 provides an assessment of Rwanda's performance and highlights policy and program opportunities for improving agricultural value chain competitiveness and trade in the country. Section 4 presents the conclusion.

2 . POLICY AND PROGRAM OPTIONS

2.1 Promotion of technology adoption and innovation along agricultural value chains

Increasing agricultural value chain competitiveness requires innovation and the adoption of technologies such as mechanization and ICT tools and services at different stages of the agricultural value chain. On the one hand, technology adoption increases productivity, which is an important driver of competitiveness. It also increases efficiency which reduces the costs of production, processing, and trade, and expedites overall processes. On the other hand, innovative new technologies and solutions can enhance business development. For example, the use of digital technology service tools is likely to increase competitiveness along agricultural value chains. In Kenya, a study found that farmers, benefiting from ICT-based market information systems, reported a higher use (or value) of seed and fertilizer per acre, as well as increased labor and land productivity.[2] In addition, digital technologies help value chain actors to better connect to businesses and speed up transactions. Another example from Kenya is based on Twiga Foods, an agribusiness enterprise established in 2014, connects small fruit and vegetable farmers in rural Kenya to

small and medium-sized vendors in urban centers through a mobile-based, cashless platform. Use of the platform offers higher price opportunities and a guaranteed market to farmers, reducing post-harvest losses and ensuring that vendors have reliable supplies of produce.[3] Furthermore, Twiga Foods uses M-Pesa (a mobile phone-based payment system) to manage and streamline their payment processes. As of November 2018, over 13,000 farmers and 6,000 vendors in Kenya were working with Twiga. The company pays 20 to 40 percent more than brokers and farmer groups and delivers payment in full within 24 hours via mobile money. This helps farmers know their expected income and aids in financial planning.[4]

Innovation in digital technologies and platforms can also help lift some barriers to regional and international trade participation by facilitating compliance to standards and certification. Information on best practices, certifications, and standards required by regional and international supermarket chains can easily be supplied to traders through digital services. In addition, through ICTs, digital profiles can be created for verification purposes, and technologies such as blockchain technology can enable real-time traceability and certification of products. In Kenya, Selina Wamucii, established a business-to-business platform connecting African smallholders to local and international customers, which uses a mobile phone-based traceability system that tracks the origin of each produce package.[5] The system ensures that buyers from any part of the world can access products of consistent quality, and obtain prices, shipping rates, and logistical information in one place. Producers in turn get fair pricing and a guaranteed market for their fruits, vegetables, herbs, and spices. Such innovations by farmers contribute to the export of Kenya's agricultural products.

2.2 Promotion of competition in the economy

Agricultural value chain competitiveness and increased regional trade require a competitive business environment. The design and enforcement of competition policies and regulations increases efficiencies and incentivizes companies and industries to invest in improving productivity and production capacities. In a competitive environment, economic actors are also more inclined to develop innovations, including product diversification and sophistication, enabling them to become more competitive locally and abroad. A 2022 study found that African food processing firms which sell their products mainly in international markets that are generally regarded as more competitive, innovate at rates that are 17 and 9 percentage points higher than firms that mainly sell in local and national markets, respectively.[6] A study conducted by the International Monetary Fund (IMF) in 2020 using country- and firm-level data over the 2000-2017 period for 39 sub-Saharan African countries, among other emerging market economies and developing countries, found that an improvement in domestic competition is associated with a significant increase in the growth rate of real gross domestic product (GDP) per capita. This is achieved mainly through an improvement in export competitiveness and productivity growth. Moreover, at firm-level, evidence shows that greater competition – proxied through a decline in corporate market power – is associated with increases in investment and labor's share of output.[7] Competition needs to be protected and maintained for a flexible, dynamic market economy through dedicated institutions in charge of promoting competition policy and enforcing related rules and regulations. In developing countries where the adoption of appropriate competition laws and policies is still low, enterprise development tends to be hindered due to a lack of innovation, high production costs, slow adjustment rates and job losses.[8]

South Africa is one such country that has established a successful competition framework. Since the operationalization of the Competition Act (1998), the country has made considerable progress in fostering competition in local markets through active detection and deterrence of anti-competitive behavior such as price fixing, speculative hoarding, and collusive tendering. The country set up a competition authority composed of three bodies – the Competition Commission, the Competition Tribunal, and Competition Appeals Court – which have been granted considerable

powers to foster competition by the Competition Act. South Africa's authorities rank among the most active in Africa in pursing anti-competitive behavior and stand out for being especially effective relative to their peers.[9] For instance, the competition authority dismantled a cartel in the wheat flour milling market formed by four large firms – Pioneer Foods, Premier Foods, Tiger Brands, and Foodcorp – all of which are vertically integrated within the wheat-to-bread value chain. The four firms jointly account for more than 90 percent of the national wheat supply and had been fixing wheat flour and bread prices from 1999 to 2007. The cartel reduced competitiveness by preventing independent bakeries from entering or expanding in the market, exporting their commodities or even offering competitive prices, because the independent operators depended on the major firms for their supply of wheat flour. Bread prices were very high during the period of collusion, due to price fixing by the four major corporations in the bread and flour market which increased input costs for independent bakeries. Independent bakeries paid prices that were 7 to 42 percent higher than they should have been. Since the death of the cartel, new companies have entered the market and expanded the wheat milling sector. In addition, in 2008, the profits of former cartel members decreased by half compared to those during the collusion period, indicating more competitive outcomes.[10] The lower prices of bakery products have made South African commodities more competitive in terms of regional exports. The policy architecture adopted by South Africa to promote competitiveness and limit anti-competitive behavior could serve as a reference for the EAC and the Common Market for Eastern and Southern Africa (COMESA) trading blocs.

2.3 Strengthening trade logistics and facilitation measures

The appropriate logistical and facilitation measures are important for competitiveness and trade as they enhance the ability of traders and firms to trade more efficiently and become competitive in domestic and international markets. Trade logistics and facilitation lower transaction costs, while improving the availability of a consistent, efficient, and timely supply for export. Trade logistics systems include transport networks and storage facilities, while trade facilitation includes the standardization, harmonization and simplification of trade procedures and documentation as well as the improved management of customs and borders. Efficient trade logistics and facilitation measures matter especially for products that require prompt transit.[11]

Evidence shows that the extra cost of delays, bureaucratic inefficiencies and, in some instances, corruption, can add as much as 15 percent to the price of goods, undermining market competitiveness between countries.[12] In addition, the high cost of moving goods within African countries has been identified as one cause of limited trade in Africa despite the significant trade liberalization measures that have been undertaken in the last three decades. The transport of goods over long distances and inefficient clearing of commodities at harbors or border control points constitute the bulk of the high cost of moving goods, decreasing total trade volumes and efficiency. A study found that although the low availability and quality of roads is a well-known hindrance to trade, inefficient logistics, low vehicle quality, and policies restricting competition also represent significant barriers to trade.[13] In addition, studies across Africa have shown the benefits of meeting standards and certifications in improving access to foreign markets and integration to regional and global value chains. Certified firms appear to be more productive and to supply better-quality products than non-certified ones in Africa. Certification also facilitates access to new markets, attracts new investors, and leads to greater buyer satisfaction. It improves competitiveness and signals higher quality as it is often linked to upgrading and modernizing production.[14] Strengthening trade logistics and facilitation measures would therefore improve trade and enhance the economic performance of exporting firms by reducing these costs.

Morocco is an example of a high-performing country that has committed itself to meeting international standards and certifications. In March 2020, Morocco became the first African country to utilize the ePhyto system in an exchange between its Office National de Sécurité Sanitaire des Produits Alimentaires (ONSSA) and the US Department of Agriculture. The ePhyto system is a digital solution that streamlines the storage and exchange of phytosanitary certificates that was initiated in 2019 by the International Plant Protection Convention. The ePhyto system creates uniform certificates that can be stored centrally and transmitted quickly and accurately among multiple countries, eliminating the use of non-standardized paper certificates. This solution prevents fraud, increases transparency, and improves border processes as certificates can be shared well in advance of a commodity's arrival at the post. It also eliminates the need for bilateral agreements between countries to trade their products.[15] To support this, ONSSA has developed a new online portal through which companies can apply for phytosanitary certificates, making the process faster and simpler.[16]

2.4 Investment in productive infrastructure

Agricultural value chain competitiveness and regional trade participation require the availability and access to quality, productive infrastructure including energy, water, telecommunications, and roads.[17] Where energy inputs are available, agricultural value chain actors can adopt modern, productivity-enhancing technologies for food transformation, processing, transport, and distribution, thereby facilitating their integration into high-value and export-oriented food chains.[18] In addition, reliable water supplies increase crop productivity allowing the production of export-oriented crops, such as fruits and vegetables, and help farmers to extend growing seasons. On the other hand, ICT infrastructure is crucial for the efficient use of ICT tools and services by business actors for improved control of their production, inventory, and finances, as well as their access to business opportunities and relevant information. Good roads are vital to reducing travel times and delivery delays resulting in lower costs and less damage to the goods being transported. In addition, roads ensure that production regions are well-connected to market hubs and that transport service providers can efficiently operate. In 2020, a study found that the improved quality of transit roads in the Northern and Central Corridors linking the capital cities of Burundi, Kenya, Rwanda, Tanzania, and Uganda to the seaports of Mombasa in Kenya and Dar es Salaam in Tanzania, lowered both domestic and cross-border trade costs. The effects on cross-border trade were found to be larger than those on domestic trade.[19]

The Agri-park program initiated in 2015 in South Africa is an example of an intervention designed to provide productive infrastructure services for the development of agricultural value chains. An Agri-park is a networked innovation system of agro-production, processing, logistics, marketing, training, and extension services, located within a District Municipality. As a network, it enables market-driven combination and integration of various agricultural activities and rural transformation services.[20] Each Agri-park supports smallholder farmers by providing capacity-building, mentorship, farm infrastructure, extension services, and production and mechanization inputs. Smallholder farmers own 70 percent of an Agri-park, while the remaining 30 percent is owned by the government and commercial farmers. One of the guiding principles of an Agri-park is to strengthen partnerships between government and private sector stakeholders to ensure increased access to services (water, energy, transport) and production on the one hand, while developing existing as well as creating new markets to strengthen and expand value-chains in-line. The government proposed the development of 44 Agri-parks across South Africa's nine provinces, and this is expected to contribute to the country's targets of creating one million new jobs in rural economies by 2030. For instance, between 2015 and 2019, the Agri-park program targeted the development of 300,000 new small-scale farmers and the creation of 145,000 agro-processing jobs.[21]

2.5 Facilitating access to finance

Access to finance is another key factor in enhancing competitiveness and exports as it allows greater investment in productive capacities and trade logistics, reducing

production and transaction costs. In addition, access to finance allows traders to increase their businesses activities, start-up a new business or scale-up an existing one. The majority of small businesses along the agricultural value chain secure their financing from informal sources, such as family and friends, savings, retained earnings, and sale of assets. However, switching from informal to formal sources of finance is crucial for business development as formal entities, such as banks and other financial institutions for debt and equity financing offer much larger amounts of capital to businesses, which can then be invested to scale up production, create new products or expand geographically. In addition, businesses that borrow from the formal sector enjoy more credibility from potential buyers and suppliers. Building a supportive financial environment is therefore key to developing value chains and expanding trade activities.

In Morocco, a special financing institution, Tamwil El Fellah (TEF) was created in 2010 within the Agricultural Bank Group, Credit Agricole du Maroc (CAM) to provide financial services to smallholder farmers. The TEF has a partial guarantee program, which is a risk coverage of 60 percent by the government for the TEF fund. In terms of credit de-risking, TEF does not require collateral from smallholders, instead the fund assesses the client's previous history and repayment behavior as well as their performance indicators. In addition, TEF promotes productivity enhancing and low-risk investments, such as irrigation and mechanization, through credit facilitation for these investments as access to water and timely cultivation reduces the risks of low yields or crop losses. Financial services are also complemented with technical assistance such as extension services, advice on investment planning, and programs providing specific subsidies. The technical support to improve production and marketing capacity helps to reduce the risks that smallholders face.[22]

2.6 Technical, managerial, and enterprise skills development

Competitiveness and regional trade participation are also determined by the technical, business management, and enterprise skills of actors participating in agricultural value chains and trade. The right skills are key to enhancing competitiveness and regional trade and are increasingly important as production and trading is becoming more knowledge and technology intensive, requiring a wide range of professional, technical and artisanal skills. Harnessing the potential of greater regional and international trade opportunities will require professionals trained in marketing strategies, including packaging, labelling, communications, and compliance.[23] While tailor-made 'up-skilling' programs, enterprise-based training, and apprenticeships will address short-term gaps, serious efforts will be required to update and upgrade programs and institutions for higher learning.[24] Studies also show that youth should be at the center of technical, business management, and enterprise skills development interventions to address youth unemployment rates and harness Africa's demographic dividend. This includes the design or revision of policies related to youth and skills development and ensuring coherence in the various related ministries and departments dealing with these issues. For instance, setting up multi-sectoral, national-level, youth advisory councils consisting of all ministries or institutions involved with youth can help ensure cohesion and collaboration among actors. African governments will therefore need to invest in education and skills development, if they are to build a workforce that can successfully enter the labor market, innovate, enhance productivity, and seize trade opportunities in more sophisticated products and markets.[25]

In Rwanda, the TMEA and ProFemmes/TweseHamwe (PFTH) is an umbrella non-governmental organization (NGO) involved in promoting the values of gender, peace, and development. Since 2012, PFTH has engaged in strengthening the capacities of women who do not have access to information on available markets for commodities, the appropriate skills to better execute their business, and the necessary finances to carry out their business. The intervention provides direct training in different business areas such as business cycle management skills, book-keeping and cooperative management. During the first phase, the project targeted female, informal, cross-

border traders at six border districts bordering Burundi, Tanzania, and Uganda, namely, Bugesera, Nyaruguru, Gisagara, Kirehe, Nyagatare and Burera. The objective of this phase was to significantly increase their revenues through formal trade and improved trade facilitation. The initiative was extended for two years (2016-2017) and expanded to cover three more border districts, that is, Rusizi, Rubavu, and Gicumbi bordering the Democratic Republic of Congo (DRC) and Uganda. As a result, about 3,000 women traders in the nine districts gained information on key issues related to cross-border trade. This information has helped them to formalize and improve their businesses. The project has also supported the formation of cooperatives. By 2017, 27 cooperatives for women cross-border traders were operating as a direct result of the project activities. The cooperatives' cash capital ranged between US$ 1,500 and US$ 6,000, compared to US$ 20 to US$ 50 prior to the start of the program.[26]

2.7 Elimination of harassment at borders

Elimination of harassment, including bribery, intimidation, and solicitation of sexual favors in cross-border trade is essential to increase competitiveness and regional trade. Harassment dampens regional trade and is also a principal driver for the uptake of informal cross-border trade as it forces traders, especially those who are small-scale, to choose informality to avoid burdensome illegal administrative procedures and taxes, as well as to escape from abuses committed at the border. The increase in transaction costs due to harassment renders export products uncompetitive.

In addition, small-scale traders are often subject to discrimination at border posts and are more intensely affected by expensive processing and clearance fees than larger traders. For instance, in Zambia, the World Bank estimated that small informal traders pay approximately 62 percent more per ton than large traders, to transfer goods across borders. However, if they switched to small-scale formal trading, they would pay double the current informal rate.[27] Several African countries are therefore working for the elimination of discriminatory practices that affect informal cross-border traders. Other countries such as Ghana, Liberia, Rwanda, and Uganda are even more progressive as they provide small traders with market information, promote direct engagement with informal cross-border trader representatives, link traders directly with international markets, and include their needs in policy and legislative design.[28]

In addition, measures have to be gender sensitive as women face particularly high levels of discrimination, harassment, and extortion while trading across border posts. Lengthy and complicated procedures and documentation (often in foreign languages) provide easy avenues for unfair and illegal practices to persist, including sexual harassment, violence, imprisonment, and confiscation of goods. This often affects illiterate women more intensely. Women traders typically specialize in specific goods, such as rice, wheat flour, and beverages. They are often faced with higher taxes, unclear or misinterpreted rules of origin, and non-uniform sanitary and phytosanitary (SPS) standards.[29]

In Rwanda, where women represent up to 80 percent of cross-border traders, border management and the design and maintenance of border infrastructure have been improved. Further, customs officials have been provided with gender-sensitivity training to address discrimination against women. Several other interventions have been trialed, including awareness-raising and information sharing with women cross-border traders, as well as building their capacity and supporting the strengthening of their collective voices.[30]

2.8 Export promotion policy frameworks

Achieving higher export levels requires sound export promotion frameworks. This can be ensured by creating a dynamic unit or agency (either stand-alone or situated within a ministry) that is dedicated to the promotion of exports and the design of a national export policy or strategy. The establishment of export promotion agencies is widely used around the world to support exporters in establishing initial contacts abroad or to expand from a narrow base. Studies have found that these agencies

have been fairly successful when private sector actors are incorporated within their management structures.[31]

For example, in South Africa, a directorate within the Department of Trade Industry and Competition is mandated to promote South African value-added goods and services abroad by broadening the export base, increasing market shares in targeted high growth markets and sustaining market shares in traditional markets. To achieve these objectives, the directorate provides market intelligence and advice, such as identification and information on new products and new markets. It also facilitates exports by matching potential exporters with foreign buyers. In addition, the directorate assists companies in increasing their competitiveness by supporting patent registrations, quality and product certification and with facilitation to grow foreign direct investments (FDI) through missions and research. South Africa also has a national export strategy (NES). In 2006, the NES aimed to grow exports in volume and value, diversify export products beyond traditional commodities and export markets, while also diversifying the exporter base through inclusion of small and medium enterprises (SMEs) as well as historically disadvantaged individual enterprises.[32] Under the current NES running from 2014 to 2030, the government seeks to improve the enabling export environment and strengthen the export institutional framework. In addition, it aims to increase the demand for South African goods and services through market diversification, while also enhancing the country's value proposition and sector branding. Finally, the NES seeks to broaden the export base and enhance export incentives and trade financing instruments such as the Export Marketing and Investment Assistance.

3 . RWANDA'S PERFORMANCE IN PRIORITY GOOD PRACTICES FOR COMPETITIVENESS AND TRADE

This section provides an assessment of Rwanda under each area of practice. The assessment of country performance relied on two main data sources: the Open Trade and Competitiveness Data (TCD360) and the Biennial Review (BR) Data. For each practice, an indicator or index based on a set of indicators was used to assess country performance. To identify the critical priority interventions which require urgent actions, Rwanda's performance under each practice was compared to various benchmarks including the African average, the average scores of the high-performing countries (BPC) and the maximum scores of the high-performing countries (BPC max). Performance below a certain benchmark reveals the opportunities for policy or programmatic interventions, depending on the benchmark used. The identified priority practices highlight opportunities for policy and programmatic interventions to enhance Rwanda's competitiveness and trade.

Figure 1 displays Rwanda's gaps under each area of practice. Rwanda performs well when compared to the African average. The country is above the African average in terms of most of the practices (7 out of 8), especially, the agricultural value chain finance (25 percent) and trade logistics and facilitation measures (17 percent). This is consistent with the government's efforts whose strategy places a strong focus on trade facilitation. Through the National Trade Facilitation Roadmap of 2019-2024, the government has committed to "ease Rwanda's trade to boost competitiveness and increase trade." However, the country underperforms under the trade promotion practice in comparison to the African average. Policy innovations and programmatic interventions are necessary under that practice to improve the country's performance in regional trade competitiveness.

When comparing Rwanda to the best performing countries, the country has to take steps to enhance its competitiveness and trade flows if these are to attain similar levels as South Africa, Kenya, or Morocco. Several opportunities can also be identified especially under investment in productive infrastructure (-35 percent), technical, business management, and enterprise skills development (-23 percent), elimination of harassment at borders (-19 percent), trade logistics and facilitation measures (-17 percent) and promotion of technology adoption and innovation along agricultural value chains (-13 percent). A strong commitment to trade promotion through policy and programmatic interventions is needed to increase Rwanda's agricultural value competitiveness and the uptake of regional trade.

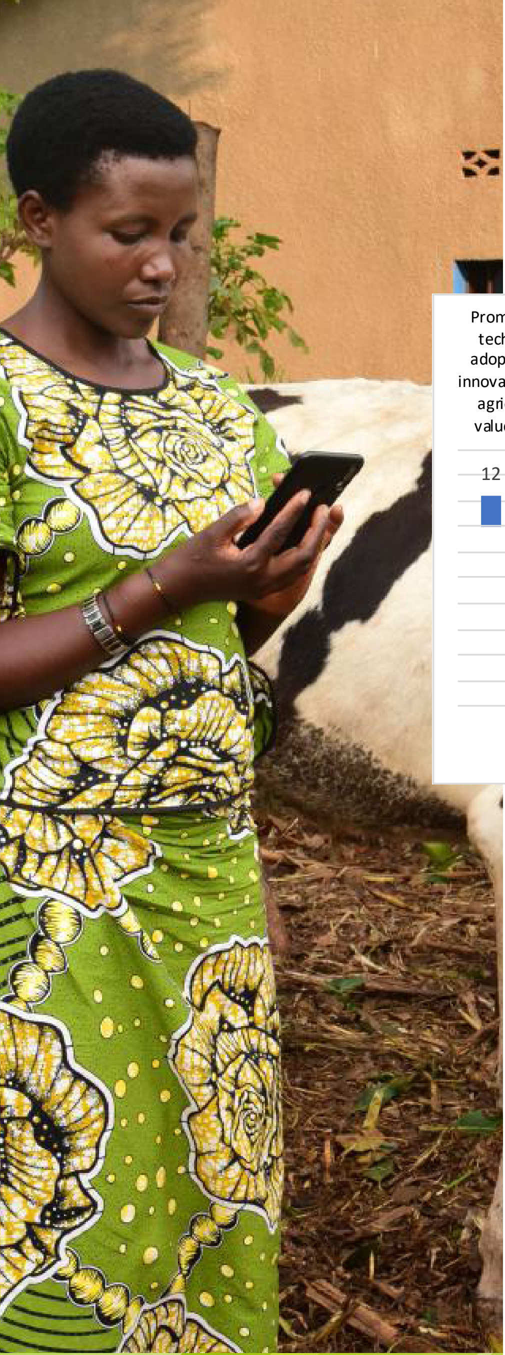
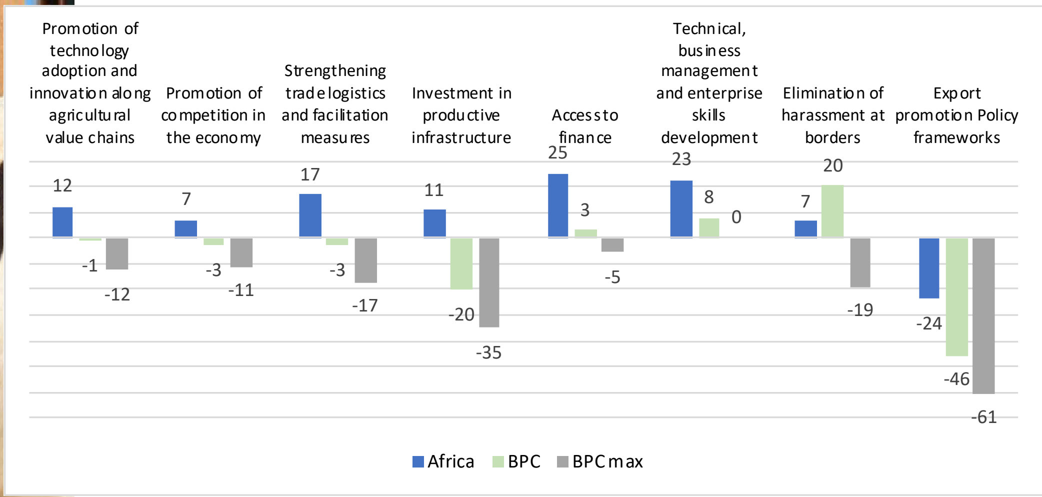


Figure 1: Performance gap assessment in Rwanda (%)



Source: Authors' calculations using TCD360 and BR data

4 . CONCLUSION

This brief summarizes several good practices observed inside and outside of Eastern Africa that boost agricultural value chain competitiveness and trade. It provides potential strategic interventions and policies to enhance Rwanda's competitiveness in regional agricultural trade. Eight areas of good practices inside and outside of Eastern Africa that can effectively help to improve value chain competitiveness and regional trade participation have been identified including:

- Promotion of technology adoption and innovation along agricultural value chains
- Promotion of competition in the economy
- Strengthening trade logistics and facilitation measures
- Investment in productive infrastructure
- Facilitating access to finance
- Development of technical, business management and enterprise skills
- Elimination of harassment at borders
- Export promotion policy frameworks

The study also examined various key policy and programmatic interventions that are likely to produce these outcomes under each practice, by reviewing the experience of some high-performing countries in terms of agricultural competitiveness and trade and drawing lessons from them. The high-performing countries examined are Egypt, Kenya, Morocco, Rwanda and South Africa.

In addition, Rwanda's performance assessment under each practice area based on three benchmarks – the African average, the high-performing countries' average score and the high-performing countries' maximum score – is also provided. The computed gaps between Rwanda and the selected benchmark enabled the identification of those priority good practices that need to be implemented or strengthened. The assessment shows that although Rwanda is performing well in terms of the identified good practices in comparison to the African average (seven out of eight), the country has to make progress if it is to arrive at a comparable level to countries such as Morocco and South Africa. Rwanda can learn from the experiences of other high-performing African countries and develop policy and programmatic interventions to sustainably increase its agricultural value competitiveness and participation in regional trade.

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