Policy brief
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Rwanda Commodity Exchange (RCX)

In brief

- Commodities exchanges act as matching platforms between supply and demand, bridging fragmented markets, with the aim of reducing counter-party risk, greater price transparency, and to facilitate the creation of a value chain.
- Since 1990, a number of commodities exchanges have been established in Sub-Saharan Africa with limited success. Operating costs of exchanges tend to be high and not reaching a sufficient trading volume appears to be the most common reason for failure.
- When considering the viability of the RCX, one should consider the following: market linkages are currently not problematic; the question of economic viability of the RCX can be answered by analyzing individual commodities' value chains; attracting international buyers will be challenging; the RCX should target domestic staples and focus on the spot market; expansion into the regional market requires careful planning.
- Attracting private sector financing is the best financing option.
- The RCX business plan mentions tax incentives for the company running RCX and buyers using the RCX. However, tax incentives are generally inefficient forms of support.
- The authors recommend the following to help decide whether to set up the RCX:
    - Commission in-depth studies of existing value chains of considered commodities and a study of the working other regional commodity markets.
    - Clarify whether the objectives of the exchange could be debundled.
    - Identify potential in-country buyers and investigate their sourcing strategy
    - Consider alternative investments to improve market linkages
    - Ensure that the RCX should not become a compulsory trading place

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Commodities exchanges in sub-Saharan Africa

Commodities exchanges act as matching platforms between supply and demand, bridging fragmented markets

The objectives for establishing a commodities exchange are to reduce counter-party risk to traders, introduce greater price transparency, and to facilitate the creation of a value chain. By introducing futures as well as spot contracts, a commodities exchange helps smooth out price fluctuations by providing insurance against seasonal production, weather and other types of shocks. These latter are financial products that usually build upon financial expertise available in the market and require a certain scale and financial knowledge to manage risk.

A commodities exchange is no panacea for large post-harvest losses, poor quality of production and poor infrastructure

Solving these problems requires targeted interventions and is a prerequisite for the functioning of a commodities exchange. A commodities exchange can only guarantee the quality of the production transiting through it and facilitate trade once the commodities have reached the approved storage facilities; it will not automatically fix poor links between the storage facilities and the location of production, which will still rely on traders.

"By introducing futures as well as spot contracts, a commodities exchange helps smooth out price fluctuations by providing insurance against seasonal production, weather and other types of shocks."

Since 1990 a number of commodities exchanges have been established in Sub-Saharan Africa with limited success and the only sustainable example in the South African SAFEX

An overview of commodities exchanges in the African continent is given in IFPRI 2010. In Zambia and Zimbabwe commodities exchanges set up in the 1990 suspended their operations following unusual price hikes and subsequent government intervention. In Kenya and Uganda the Kenyan Agricultural Commodity Exchange (KACE) and the Uganda Commodity Exchange (UCE), although still active through donor support, have never been able to attract sizable trade volumes. The African Commodity Exchange (ACE) in Malawi established in 2004, has so far been limited to providing price information and facilitating procurement for the World Food Program. The Abuja Securities and Commodity Exchange (ASCE) in Nigeria began trading in maize and soybeans in 2006 on a very limited scale. The most recent exchange established has been the Ethiopia Commodities Exchange (ECX). The ECX, a government-owned exchange, initially focused on trading maize, wheat, and beans, but was unable to attract a significant volume of these commodities. Since December 2008, the ECX has turned its focus to export commodities, with the support of policies discouraging export through other arrangements.

In general, the operating costs of commodities exchanges tend to be high and not reaching a sufficient trading volume appears to be the most common reason for failure of regional exchanges.

Scope and viability in Rwanda

In Rwanda the Crop Intensification Program (CIP) has substantially increased the supply of key crops, but quality is still relatively low

This is due in some cases to lack of experience of farmers with non-traditional crops, like maize, where WFP (2011) and USAID (2010) suggest the presence of post-harvest losses of 20 to 30%.

Market linkages do not seem to be problematic

A commonly cited concern is that of markets not being able to clear due to excess production not reaching the market. Interviews with MINAGRI suggest this not to be the case. A bumper season recorded in 2009/10 indeed resulted in exceptionally high production of maize which could not be absorbed by the market and required government intervention. This however was an extraordinary event, worsened by the lack of familiarity of farmers with the crop and absence of suitable storage facilities. The maize market in Rwanda appears to absorb local production (see WFP (2011)).

The question of economic viability of the RCX can be answered by analysis of individual commodities' value chains

"A commonly cited concern is that of markets not being able to clear due to excess production not reaching the market. Interviews with MINAGRI suggest this not to be the case"

The RCX's profits are determined by trading volume. For commodities to reach the RCX in sufficient quantity, the value chain up to the RCX needs to leave better profit margins at all nodes than alternative options. Supply side problems reported from the Ethiopian (ECX) experience are:

- Farmers, farmer's cooperatives or primary traders unable to access the ECX's storage facilities because poorly connected or too stringent in standards.
- Storage facilities poorly equipped to ensure quality and not sufficiently liquid to buy farmers' or traders' entire stock.
- Farmers or traders facing complex calculations to assess the value of their options.

From the demand side, for buyers to be interested, the exchange should be able to guarantee sufficient quantity and quality simultaneously with lower prices than either imported commodities or commodities traded outside the commodities exchange.

Attracting international buyers to the RCX will be challenging

International buyers might be interested in Rwanda's export (either commodity or specialty) or staple crops. Interviews with coffee exporters confirm that the domestic coffee markets clear and the connections to international markets already exist. The commodity coffee sector in Rwanda appears to be competitive as about 7 established exporters compete over a limited supply. It is not clear that foreign buyers could be interested in entering this market as their entry would raise the buying price further against a fixed resell price – set at the New York Exchange – squeezing their potential profits margins. Specialty exports, such as fully roasted coffee, are unlikely to be traded at all on RCX as exporting firms that have invested heavily in their upstream value chain make better profits in selling directly to their overseas buyers.

"If the RCX…could guarantee meeting their standards, local millers could find it cheaper to source locally"

In Ethiopia, where commodity coffee is compulsorily traded on the ECX, specialty coffee is allowed to be traded directly internationally. Similar reasoning should apply to tea and other export crops.

Staple crops too are unlikely to attract international buyers, but for different reasons. Rwanda's limited production, due to its small size, and high transport costs make its staples exports uncompetitive on international markets.

Target the domestic staples market

Large Rwanda-based maize and wheat millers import all of their raw materials from outside the EAC incurring into high transport costs and import tariffs. Their sourcing strategy is justified by the poor quality and insufficient quantity of the local production. If the RCX – in combination with the right micro-policies – could guarantee meeting their standards, local millers could find it cheaper to source locally. Since the number of potential large national buyers is very limited, it is important to initiate discussions with them in the set-up phase of the RCX to ensure that it meets their requirements.

Focus on the spot market

Staple crops show limited price fluctuations due to Rwanda's stable climate, multiple harvest seasons and potentially also due to Rwanda's integration in the EAC market. A 2012 study carried out by ACDI-VOCA, a NGO seeking to promote economic opportunities, failed to identify seasonal patterns in prices of maize and bean, concluding that an inventory credit system would be not viable. In absence of seasonal price fluctuations, spot contracts are more likely to be understood and viable. While there might however remain a market for insurance against adverse weather and other forms of shocks, this might be more difficult to establish this in absence of a well-functioning spot market (IFPRI 2010).

Expansion to the regional market requires careful planning

The business plan contains reference to the possibility of the RCX being the stepping stone to an EAC-wide commodities exchange (the EACX) leveraging Rwanda's ICT infrastructure to generate a virtual trading platform connected to a network of warehouses in the region. It is unclear however what the timeline and costs would be and such an ambitious plan seems to hide formidable logistical complications.

"A crucial precondition for the RCX to evolve into the EACX is for Rwanda's connectivity to be stepped up"

Unless the virtual trading platform was located elsewhere, a crucial precondition for the RCX to evolve into the EACX is for Rwanda's connectivity to be stepped up. Despite heavy investments in Rwanda's fiber optic network, internet connectivity remains slow and expensive. It is unclear that at present it can reliably sustain large volumes of virtual trading.

Similarly to the RCX, viability of the EACX should be assessed on a commodity-by-commodity level making a clear case on who the purchasers would be – regional or international – and why they would prefer the EACX over their existing sourcing strategy. Given the larger volumes and more seasonal production in the region future contracts seem more viable in the regional context.

Financing

It is unclear from the business plan how this project will be funded

A PPP arrangement is mentioned – this is an option that should be treated with care. PPPs that are not adequately justified, designed and monitored can turn out to be very expensive (See Fischer (2011)).

Attracting private sector financing is the best option

This leaves the government with no financial exposure or obligation. Most of the functioning commodities exchanges, including the Chicago Board of Trade, were privately initiated and remain privately owned. In seeking to attract foreign private investors, the government should be careful to avoid guaranteeing returns or promising inappropriate market interventions. Forceful interventions are unlikely to result in a good outcome. Financing – and expertise – could be also be sought at the AfDB and IFC as suggested in the business plans.

"Attracting private sector financing is the best option [as] this leaves the government with no financial exposure or obligation."

The business plan mentions tax incentives both for the company running RCX and for buyers making use of RCX. **Tax incentives are generally inefficient forms of support** that distort competition and seldom generate the intended behavior[1]. A number of tax incentives to which the RCX Company would have automatic access to are embedded in the Rwanda Investment Code.

- The "investment allowance", helps the company recover more quickly the investment cost by allowing the expensing of 40% to 50% of it and generating a large tax credit. Such tax credit can be carried forward for up to 5 years, but should the investment be very large – or profits be delayed – this rule could be bent to allow the company to carry the tax credit forward for say an additional 2 years.
- The tax discount for newly listed companies on the Rwanda Stock Exchange (RSE) grants a partial tax holiday depending on the percentage of shares listed.

The combination of the two would guarantee tax relief in the first years of profit making and a more generous tax treatment thereafter. Additional fiscal support to the company is unlikely to be necessary.

In the light of its unique role, granting other types of budgetary support to the RCX Company would not be problematic from a competition standpoint but could turn expensive and generate incentives for the government to intervene in case of failure. Support to the RCX Company – if any – should be time- bound, have clear evaluation metrics and only be granted if the expected social returns are greater than the cost of the support (See Rodrick(2004)).

1. See Savini, Ollson and Argent(2012) for an analysis of Rwanda's tax incentives and Zee Stotsky and Ley (2002) for a comprehensive review of tax incentives

Tax incentives for buyers would be expensive and harmful for competition

Only large companies would be able to source from RCX. Even an even small tax discount would cause a large revenue loss. An incentive for buyers would also increase the wedge between large and small companies, with large companies having access to cheaper raw materials and a preferential tax regime.

Weigh RCX against alternatives

Value chains tend to be more efficient the lower the number of steps. There are benefits from a commodities exchange if it greatly simplifies a supply chain. If conversely a commodity exchange replaces one middle-man for another, the benefits depend on its marginal costs.

Should the marginal costs of the RCX be higher than the existing traders', investing in improving the value chain might be a better option to improve market linkages. This can be done by means of training programs, improving infrastructure and facilitating large domestic buyers in investing in vertical integration.

Recommendations

In deciding whether to set up the RCX, the government might wish to garner further evidence to ensure its eventual form will be successful by:

"Under no circumstance should the RCX become a compulsory trading place – creating a monopoly would only harm buyers and sellers and generate a black market"

- Commission in-depth studies of the existing value chains of considered commodities and analyze how introducing RCX would change incentives at every node of the value chain
- Commission a study of the workings of other regional commodity markets to aim at understanding success factors and pitfalls
- Clarify whether the objectives of the exchange -- clearing house, spot market pricing, forward contracts, crop insurance, improved infrastructure, etc -- could be de-bundled and achieved with other, more targeted or sequenced interventions that would lead to a commodities exchange.
- Identify potential in-country buyers and investigate their sourcing strategy: what are the conditions under which they would start sourcing from the RCX?
- Under no circumstance should the RCX become a compulsory trading place – creating a monopoly would only harm buyers and sellers and generate a black market.
- Consider too alternative investment to improve market linkages

In financing the RCX

- Seek private investment to own and operate the market, limiting government intervention to facilitation.
- Commit public funds through a PPP arrangement only if absolutely necessary, seeking informed professional advice
- Seed funding and advice can and should be sought from the IFC and AfDB

"Avoid tax incentives to encourage the use of RCX"

- Avoid tax incentives to encourage the use of RCX, and other policies that would encourage or require sellers to participate in the market through distortion market signals.
- If direct government investment is to be consider, weigh the costs and beneifts of such investment against investing in enhancing the existing value chains by improving infrastructure and encouraging vertical integration.

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