

# Informal cross-border trade by MSMEs in East Africa:

## Opportunities, challenges, and gendered experiences at Cyanika, Mpondwe, and Vvura border areas

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## Abstract

This paper examines the opportunities and challenges facing Micro, Small, and Medium Enterprises (MSMEs) engaged in informal cross-border trade (ICBT) at three strategic border locations: Cyanika (Rwanda-Uganda), Mpondwe (DRC-Uganda), and Vvura (DRC-Uganda). Using primary data from stakeholder consultations and secondary data from official trade statistics, we analyze trade flows, operating models, and the unique constraints confronting women traders, who constitute over 70% of the informal trading population. The study reveals that Mpondwe and Vvura collectively account for 33.2% of Uganda's informal export revenue (\$188.6 million in 2023), with fish, agricultural products, and manufactured goods dominating trade flows. While the Simplified Trade Regime (STR) and One-Stop Border Posts (OSBPs) have improved formalization rates, significant challenges persist including customs compliance burdens, inadequate infrastructure, regulatory inconsistencies, and gender-based vulnerabilities. Our empirical analysis employs a structural gravity model to estimate trade facilitation effects, demonstrating that behind-the-border costs reduce trade volumes by 23-35%. We find that women traders face disproportionate barriers including sexual harassment, limited access to market information, and inadequate childcare facilities. The paper concludes with targeted policy recommendations for gender-responsive trade facilitation, including mobile testing laboratories, digital trade platforms, and strengthened cross-border trader associations.

**Keywords:** Informal Cross-Border Trade, MSMEs, Gender, Trade Facilitation, East African Community, Gravity Model

**JEL Classification:** F14, F15, J16, L26, O17, O55

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# **1 Introduction**

## **1.1 Background and context**

Cross-border trade represents a critical economic lifeline for communities in the Great Lakes region of East Africa, with an estimated 43% of Africans relying on Informal Cross-Border Trade (ICBT) for their livelihoods (Afrika and Ajumbo, 2012). In Uganda alone, informal trade accounts for approximately US\$501 million in annual export revenue, with the Democratic Republic of Congo (DRC) serving as the primary destination for Ugandan goods within the East African Community (EAC) and COMESA regions. The border posts of Mpondwe and Vvura with the DRC, and Cyanika with Rwanda, constitute vital arteries for this trade ecosystem, handling a combined 33.2% of Uganda's informal exports.

Despite its economic significance, ICBT remains characterized by precarity, informality, and gendered vulnerabilities. Women comprise approximately 70-80% of informal cross-border traders in the region, predominantly engaging in small-scale trade of agricultural products, manufactured goods, and perishable commodities. These traders operate within a complex web of regulatory uncertainties, infrastructure deficits, and institutional barriers that constrain their potential for economic empowerment and regional market integration. Recent developments, including the establishment of OSBPs and the EAC Simplified Trade Regime (STR) for consignments below US\$2,000, have sought to address these challenges, yet implementation gaps persist.

## **1.2 Research objectives**

This study aims to:

- (ii) Quantify the scale and composition of informal cross-border trade flows at Cyanika, Mpondwe, and Vvura border posts
- (iii) Analyze the operating models and business characteristics of MSMEs engaged in ICBT, with particular emphasis on women traders
- (iv) Identify market opportunities and potential for harnessing regional trade benefits
- (v) Assess the business environment challenges, including customs compliance, border infrastructure, and behind-the-border costs
- (vi) Evaluate the effectiveness of existing trade facilitation measures

- (vii) Formulate evidence-based policy recommendations for gender-responsive trade facilitation

### **1.3 Research questions**

To meet these objectives, this paper examines the following specific questions:

- (i) What is the volume, value, and commodity composition of informal trade flows at the three border posts?
- (ii) How do operating models differ between formal and informal MSMEs, and what factors influence formalization decisions?
- (iii) What are the unique characteristics and constraints facing women informal cross-border traders?
- (iv) Which specific business environment challenges have the greatest impact on trade performance?
- (v) How effective are OSBPs and the STR in reducing trade costs and promoting formalization?
- (vi) What policy interventions would most significantly improve trade outcomes for women and youth traders?

## **2 Theoretical literature and conceptual framework**

### **2.1 Theoretical perspectives on informal cross-border trade**

Our analysis integrates three complementary theoretical frameworks to understand the persistence and dynamics of ICBT among MSMEs:

#### **2.1.1 New institutional economics (NIE) and transaction cost theory**

The NIE perspective posits that traders' decisions to operate informally represent rational responses to institutional failures and excessive transaction costs (North, 1990). In the context of cross-border trade, formal procedures often entail prohibitive costs including documentation requirements, licensing fees, customs duties, and unofficial payments. The Legalist School within this tradition argues that micro-entrepreneurs deliberately avoid formalization to evade

burdensome regulation and corruption (De Soto, 1989; Chen, 2012). Our field observations confirm that women traders, constrained by limited capital and information, rationally choose informal routes where the expected benefits outweigh the risks of detection and penalties.

### 2.1.2 Gender and trade theory

Feminist economic theory highlights how trade liberalization impacts men and women differently due to pre-existing structural inequalities (Fontana, 2009). Women traders face dual burdens: market-based constraints (limited capital, restricted property rights) and socially-constructed barriers (gender-based violence, domestic responsibilities, cultural norms). The "gendered infrastructure" concept reveals how ostensibly neutral trade policies systematically disadvantage women when they fail to account for specific needs such as childcare facilities, safe transportation, and protection from harassment (Titeca & Kimanuka, 2012; TradeMark Africa, 2025).

### 2.1.3 Structural gravity model

The gravity model provides a robust empirical framework for analyzing bilateral trade flows (Anderson & van Wincoop, 2003). In its structural form, the model accounts for multilateral resistance terms and allows estimation of trade facilitation effects while controlling for endogeneity. We adapt this framework to capture informal trade dynamics, incorporating:

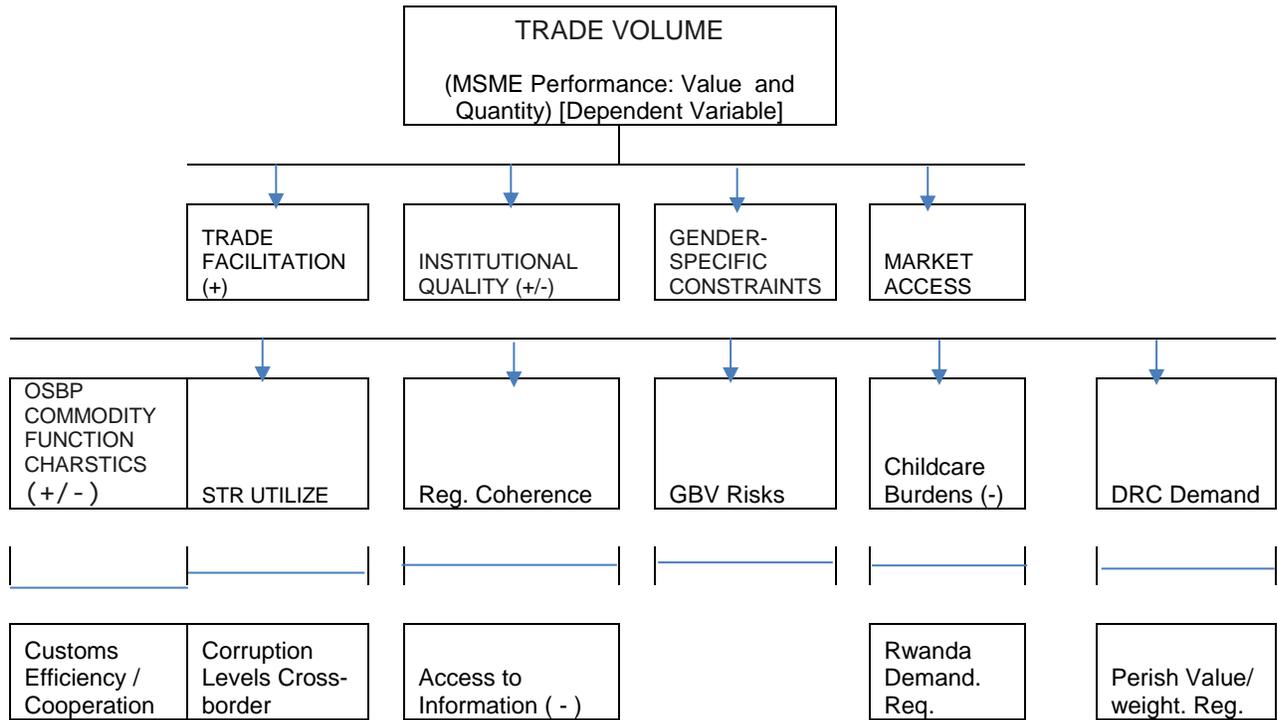
- **Trade costs:** Both official (tariffs, documentation) and unofficial (bribes, transit delays)
- **Institutional quality:** Measured by border post efficiency, corruption indices, and regulatory coherence
- **Gender-specific Frictions:** Proxied by women's participation rates and gender-sensitive infrastructure availability

## 2.2 Conceptual framework

Our conceptual model posits that trade performance of MSMEs is determined by:

**Trade volume** = f(Trade facilitation, institutional quality, gender-specific constraints, market access, commodity characteristics).

**Figure 1. Conceptual framework for MSME trade performance in informal cross-border Trade**



| Context: Cyanika (Rwanda-Uganda), Mpondwe (DRC-Uganda), Vvura (DRC-Uganda) Border Posts

Expected Relationships: (+) Positive effect on trade volume; (-) Negative effect; (+/-) Mixed effects

Where:

- Trade Facilitation includes OSBP functionality, STR utilization, and customs efficiency
- Institutional quality captures regulatory coherence, corruption levels, and cross-border cooperation
- Gender-specific constraints encompass GBV risks, childcare burdens, and access to information
- Market access reflects demand conditions in DRC and Rwanda
- Commodity characteristics account for perishability, value-to-weight ratio, and regulatory requirements

**Directional Flow:** The arrows indicate causal relationships where the five key determinants (independent variables) directly influence trade volume (dependent variable).

**Variable Groupings:**

- Trade facilitation and institutional quality represent border-level governance factors
- Gender-specific constraints captures individual-level barriers unique to women traders
- Market access reflects demand-side conditions in destination markets
- Commodity characteristics accounts for product-level attributes that mediate trade feasibility

**Expected signs:** The (+) and (-) annotations indicate the hypothesized direction of impact, where improved trade facilitation should increase volumes, while gender constraints are expected to depress them.

**Context box:** The bottom panel anchors the framework to the specific geographic scope of the study.

### 3 Empirical framework: Structural gravity model

#### 3.1 Model specification

Following Yotov (2022) and Piermartini and Yotov (2016), we specify a structural gravity model for informal trade flows:

$$x_{ijt}^k = \exp[\alpha_{it}^k + \gamma_{jt}^k + \pi_{ij}^k + \beta_1 \ln(Tariff_{ijt}^k) + \beta_2 TF_{ijt} + \beta_3 Gender_{ijt} + \beta_4 BBC_{ijt}] \times \varepsilon_{ijt}^k$$

Where:

- $x_{ijt}^k$  : Informal export flow of product  $k$  from border  $i$  to destination  $j$  in year  $t$
- $\alpha_{it}^k$  : Exporter-product-time fixed effects (controls for supply capacity)
- $\gamma_{jt}^k$  : Importer-product-time fixed effects (controls for demand conditions)
- $\pi_{ij}^k$  : Border-product fixed effects (absorbs time-invariant bilateral costs)
- $Tariff_{ijt}^k$  : De facto tariffs including unofficial payments
- $TF_{ijt}$  : Trade facilitation index (OSBP functionality, documentation efficiency)
- $Gender_{ijt}$  : Gender-sensitive infrastructure index (toilets, childcare, GBV reporting)
- $BBC_{ijt}$  : Behind-the-border costs (transport, electricity, telecommunications)
- $\varepsilon_{ijt}^k$  : Stochastic error term

### 3.2 Variable construction and measurement

**Dependent variable:** Informal trade flows are constructed from UBOS ICBT survey data, physical trade surveys at border posts, and satellite imagery analysis of market activity.

**Trade facilitation index:** Composite measure comprising:

- OSBP operational status (binary and functionality score)
- Average clearance time (hours)
- STR utilization rate (% of consignments <\$2,000 using formal channels)
- Digital payment adoption rate

**Gender-specific constraints index:**

- Physical safety score (based on trader surveys)
- Availability of gender-sensitive facilities (toilets, childcare)
- Women's participation in trader associations (%)
- Access to market information (binary)

**Behind-the-border costs:**

- Transport cost per ton-kilometer
- Electricity reliability (hours/day)
- Mobile network coverage (% of border area)

### 3.3 Identification strategy

We employ a difference-in-differences approach exploiting the phased rollout of OSBPs and STR implementation across the three border posts. The staggered implementation provides exogenous variation in trade facilitation levels, allowing causal identification of treatment effects. Additionally, we use instrumental variables (distance to district headquarters as instrument for institutional quality) to address potential endogeneity in trade facilitation investments.

## 4 Methodology and data sources

### 4.1 Data types and sources

Between April–May 2024, and January–March 2025, we conducted structured interviews and focus group discussions with:

- 261 informal traders (182 women, 79 men) across the three border posts
- 27 border officials from Uganda Revenue Authority (URA), Immigration, and partner agencies
- 15 transporters and logistics providers
- 9 representatives from Cross-Border Traders Associations
- District officials from Kasese (Mpondwe), Arua (Vvura), and Kisoro (Cyanika)



We held consultations with transporters, customs clearing agents, traders, and URA representatives at Mpondwe and Vvura as well as Cyanika (Rwanda). All stakeholders agreed that informal trade is the dominant form of cross-border trade, employing over 500 people—mostly young people and women in the border surrounding communities. A large part of informal trade comprises day-to-day transactions between the communities living close to either side of the borders.

**Sampling strategy:** Stratified random sampling by gender, trader category (agricultural vs. manufactured goods), and trading frequency (daily vs. weekly).

Help with an opening statement of sub-section 4.1.2.

Secondary data sources include

- Uganda Bureau of Statistics (UBOS): ICBT Survey Reports (2023-2024)
- TradeMark Africa (TMA): Border post monitoring data and project evaluation reports
- URA: Revenue collection statistics by border post (FY 2022/23-2024/25)
- Famine Early Warning Systems Network (FEWS NET): Commodity flow analysis
- World Bank Enterprise Surveys: Institutional quality indicators.

## 4.2 Survey instrument design

The questionnaire captured:

- Demographics: Age, education, household composition
- Business characteristics: Capital, commodities traded, trading frequency, revenue
- Formalization status: STR registration, tax compliance, business licensing
- Operating models: Sourcing networks, transportation methods, payment systems
- Challenges: Customs procedures, infrastructure, GBV, information gaps
- Benefit sharing: Participation in cooperatives, access to finance, market linkages

## 4.3 Data analysis techniques

Quantitative analysis:

- Descriptive statistics and cross-tabulations
- Gravity model estimation using Poisson Pseudo-Maximum Likelihood (PPML)
- Propensity Score Matching (PSM) to assess STR treatment effects
- Multivariate regression analysis of gender-specific constraints

Qualitative analysis:

- Thematic content analysis of interview transcripts
- Social network mapping of trading relationships
- Process tracing of customs clearance procedures

Mixed methods integration:

- Joint display matrices combining quantitative trade data with qualitative narratives
- Case study development for typical trader profiles

## 5 Empirical results

### 5.1 Trade flow across the borders

#### 5.1.1 Scale and composition

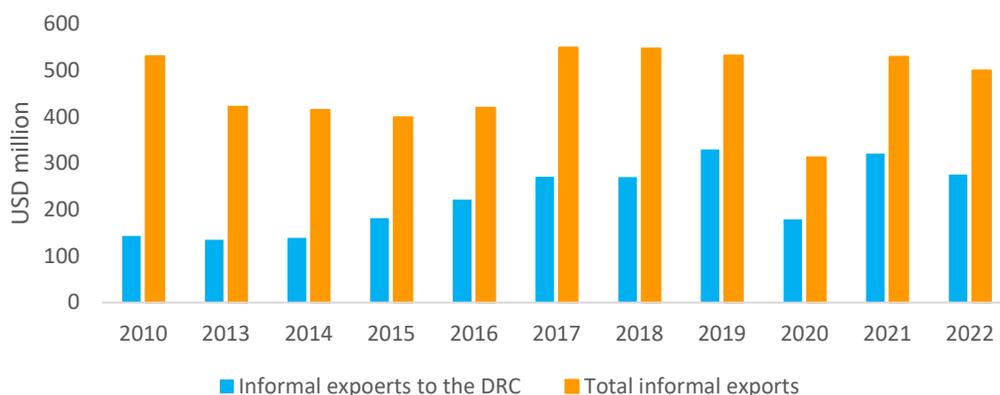
In 2023, the three border posts handled US\$188.6 million in informal exports:

- **Mpondwe:** US\$131.2 million (23.1% of national informal exports)
  - Dominant commodities: Fish (8,000 Mt/year), cattle (500 heads/month), goats (200 heads/month), processed foods (3,000 Mt/year)
  - Primary destinations: Beni, Butembo, Wichs, Kisangani (DRC)
- **Vvura:** US\$57.4 million (10.1% of national informal exports)
  - Dominant commodities: Agricultural produce (maize, beans), manufactured goods (plastics, textiles)
  - Growth trajectory: 15.3% increase from 2022, driven by improved OSBP infrastructure
- **Cyanika:** Estimated US\$12.3 million (2.2% of national informal exports)
  - Dominant commodities: Coffee, tea, cross-border tourism-related goods
  - Challenge: Decreasing informal imports from Rwanda (US\$1.2 million in 2023, down 18% from 2022)

#### Uganda's informal exports to the DRC

Over the last 10 years, Uganda's informal exports to the DRC more than doubled (Figure 2), from USD 143.2 million in 2010 (representing 27 percent of total informal exports) to over USD 320 million in 2021 (representing 60 percent of Uganda's total informal exports, and 7 percent of total exports). Uganda's informal exports to DRC consists mainly maize, fish, and beans.

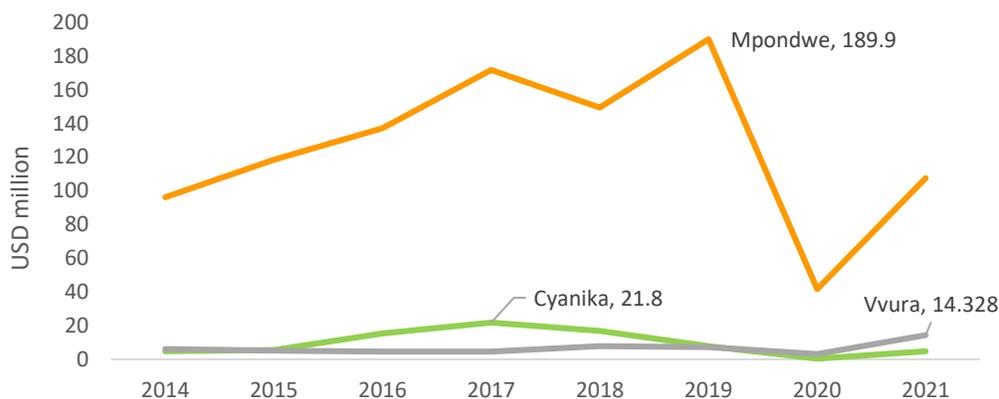
**Figure 2. Trend in Uganda’s informal exports, 2010 – 2022**



Source: UBOS (2022)

Mpondwe (Uganda-DRC) has been the leading export border points for Uganda’s exports, for over ten years in a row, followed by Busia (Kenya), Elegu (South Sudan), Paidha (DRC), Bunagana (DRC) and Mutukula (Tanzanaia). These border points account for about 80 percent of Uganda’s total informal exports, but informal trade through Mpondwe border post alone represents over 35 percent of total informal exports (Figure 3).

**Figure 3. Uganda’s informal exports by selected border stations, 2014–2021**



Source: UBOS (2022)

In the year 2021, export receipts through Mpondwe reached USD 107.6 million accounting for 21.3 percent of informal merchandise exports (UBOS, 2022). Busia border came next with export receipts of about USD 83.6 million (16.6 percent of merchandise exports), followed by Bunagana with USD 77.5 million (15.4 percent) and Elegu with USD 75.9 million (15.1).

Vvura came 9th with export receipts of USD 14.3 million (2.8 percent) and Cyanika, 12th with export receipts of USD 4.8 million (0.94 percent). The first four border posts—Mpondwe, Bunagana, Busia, and Elegu, combined accounted for 68.4 percent of the total informal exports revenue in the 2021.

The temporary closure of the Rwanda borders (to Uganda's traders) in March 2019 caused serious disruption to cross-border trade (Figure 23). Uganda's informal exports through Katuna declined from USD 42.19 million in 2018 to USD 12.45 million in 2019 and informal exports through Cyanika border post dropped from USD 16.8 million in 2018 to 7.8 million in 2019. Even after the reopening of the borders at Katuna and Cyanika the recovery has been slow since the COVID-19 and stands at 28 percent of the 2018 value. Now that a degree of normality has returned, trade flows are picking up, but remain primarily informal. On average, 120 trucks, 30 vehicles and 8 buses (4 in the morning and 4 in the evening) pass the border at Cyanika everyday.

What is unique about informal trade occurring between DRC and Uganda border is that, it has demonstrated certain level of stability in trade flows. Unlike the other borders where trade typically collapsed in the 2020 Covid-crisis, informal trade declined by 78 percent (between 2019 and 2020), but pick up immediately in 2021 reaching 57 percent value of the pre-crisis period. We see exponential rise in informal exports after 2020. We also see the base of exports widening particularly in agricultural and industrial products. What does this tell us? These results point to the great potential for expanding cross-border trade by increasing current exports and for diversifying in other areas of agriculture. Great potential remains for export of fruits and vegetables particularly apple, bananas and pineapples especially through Cyanika border crossing. Cross border trade in horticultural products between Uganda and the Rwanda, and with the DRC has been flourishing although it is only recently that its potential has been realized. This shows that there is a potential market for horticultural products (especially, beans, peas, fruits, potato and fresh vegetables) in Rwanda and the DRC if productivity and trade support measures can be accorded to the horticultural industry.

Ten years ago, over 150Mt of bananas, 156Mt of beans, 8 Mt of maize, and 8,000Mt of fish crossed Mpondwe border to the DRC every year (FAO et al, 2011); this figure might have doubled. Fish dominates this trade flow, which explains why Mpondwe market is at times referred to as the 'fish market'. Besides food products, about 175,000Mt of assorted industrial

and petroleum products (most of which cross from Uganda to the DRC) are traded across this border every year.

On average, about 500 heads of cattle and 200 heads of goats were traded along the Mpondwe border every month, ten years ago. The peaks were observed between the months of September, November, December and March at 900 heads of cattle and 700 heads of goats (FAO et al, 2011). This figure might have doubled as well. Cross-border volumes reach their lowest levels in May, June and July, which coincide with peak season of farm activities usually crop harvesting. The peak livestock demand is driven by crop harvest and festive periods. Livestock bought by DRC traders in Mpondwe is transported on foot by trekkers hired by these traders. It takes about 4 days to trek from Mpondwe to Butembo.

### 5.1.2 Source markets and supply chains

Most of the commodities exported to Rwanda and DRC through Cyanika come from western Uganda, mainly Kisoro, Bushenyi and Mbarara districts, while the commodities traded at Mpondwe are sourced from areas outside the district. Only small amounts come from Mpondwe/Bwera/Kamwenge area. These commodities are transported across Mpondwe border to various towns in the DRC—Kisangani, Mutembo, and Goma. Major source markets for fish traded in Mpondwe are Kasesero, Kalangala and Entebbe on Lake Victoria, Lakes George, Edward and Kyoga in Uganda, while the main destination markets are Beni, Wicha, Butembo, Kisangani and Kinshasa in DRC. Main source markets for cattle are Kiruhura, Mbarara, Ntungamo and Rwebisengo; while destination markets are mainly Beni, Butembo, and Wicha in DRC. Meanwhile, most of the beans, and maize flour entering the DRC through Vvura comes from Lango and Acholi sub-regions. Cement comes from Tororo and fuel from Malaba. However, connectivity of production areas to trade corridors is hampered by poor roads infrastructure.

#### **Mpondwe commodity sourcing:**

- **Fish:** Kasesero, Kalangala, Entebbe (Lake Victoria), Lakes George, Edward, Kyoga
- **Livestock:** Kiruhura, Mbarara, Ntungamo (cattle); local Rwebisengo market (goats)
- **Agricultural Products:** Villages within Kasese district (bananas, beans)

#### **Vvura Commodity Sourcing:**

- **Agricultural:** West Nile region (Arua, Nebbi), with cross-border purchases from DRC traders
- **Manufactured:** Kampala industrial area, Jinja plastics manufacturers

**Cyanika Commodity Sourcing:**

- **Agricultural:** Kisoro district highlands (coffee, tea)
- **Re-exports:** Electronics and consumer goods from Kampala destined for Rwandan market

## 5.2 Operating models of informal cross-border traders

### 5.2.1 Typology of traders

The market reflects a three-tier demand structure consisting of (1) a small trader who sources commodity from suppliers in Uganda; small trader or bicycle transporter who delivers commodity at a location across the DRC border; (2) the DRC border trader who buys and transports commodity to various location in the DRC (on motorcycle, by truck or on heads); and (3) the final consumer (at final destination) in the DRC. Commodities are transported in small quantities across the border using motorcycles, bicycles, carts or carried on the head, and hands in ‘caveras’ (polythene bags). As such, identifying trade of this nature is not so straightforward because they could easily be mistaken for goods for own personal use or gift from relatives.

We identify three distinct operating models:

**Model 1: Day Traders (56% of sample)**

- Characteristics: Low capital (\$50-\$200), perishable goods (tomatoes, fish), daily crossings
- Gender: Predominantly women (78%)
- Profit margins: 15-25%, but high spoilage risk (20-30% of consignments)
- Formalization: <5% registered under STR; avoidance driven by time constraints and documentation costs

**Model 2: Consolidators (28% of sample)**

- Characteristics: Medium capital (\$500-\$2,000), bulk agricultural products, weekly/bi-weekly trips

- Gender: Balanced gender distribution (52% women)
- Profit margins: 20-35%
- Formalization: 34% registered under STR, leveraging bulk purchasing power

### **Model 3: Network Traders (16% of sample)**

- Characteristics: Higher capital (\$2,000-\$10,000), manufactured goods, established buyer-seller networks
- Gender: Male-dominated (68% men)
- Profit margins: 30-45%
- Formalization: 67% formalized, accessing bank finance and insurance

Where customs procedures are perceived to be cumbersome and taxes prohibitive, commodities are diverted through “panya routes” (unofficial routes—given the porous border) to avoid official border-entry at gazetted customs stations. Motorcycle and bicycle transporters at times act as assemblers for big traders. In most cases, traders use mobile phones to contact their suppliers, potential buyers and business colleagues. Ugandan telephone net work services as well as some network services from the DRC are available at Mpondwe and Vurra border posts, making communication easy. Customs official think that this type of trade is continued to circumvent official channel, but border traders think that this trade is continued because “customs officials complicate people’s life” (meaning cumbersome customs procedure). Their opinion suggests that since small traders operate without many cost hassles associated with customs clearance, it is generally convenient and less expensive for big traders to buy from them (small traders) than to pass with large consignments through the customs.

Where large transactions are involved, they are often aided by brokers found on both sides of the border. Commodity brokers generally have the most current information and networks on commodity supplies and prices across the borders. In markets where it is impossible to sell directly to traders/consumers such as Rwanda side of the border, stakeholders at Cyanika ultimately conceded that *brokers* were *inevitable* in cross-border trade. The role of brokers varies from one commodity to another. Livestock and fish exchange are facilitated through brokers.

About 50 percent of the informal exports ends up in the border markets. During market days, goods are off loaded directly from Ugandan trucks onto Congolese trucks, and are not necessarily stored at the market. Fish (both the salted and smoked) is the most traded commodity in the border market at Mpondwe, above beans, maize, groundnuts, tomatoes, bananas (Plantain or Gonja), cabbages and onions. Fish and processed food and other manufactured products are rarely stored at Mpondwe, but unloaded from the sellers' lorry and directly loaded to that of a buyer at the border. The DRC traders who want to import fish, maize flour, beans, cassava, etc. will contract the DRC brokers who then link up with their Ugandan counterparts contracted by stockists, to initiate a transaction. They are then paid commission for a successful transaction.

Besides the food commodities and livestock, the market is also an important transit point for manufactured products and petroleum products. Ugandan wholesalers rarely negotiate with the buyers from DRC especially in fish transactions. Brokers find buyers from DRC, and negotiate with these buyers to determine the selling price. The price information is thus asymmetrical in favor of the brokers.

For other commodities (cereals and pulses), brokers do not wield as much power and their business is limited to only linking a buyer to a seller.

Cassava is traded as cassava chips and flour, and the livestock include cattle and goats. At Cyanika, main products from Uganda include maize flour, cassava and cassava flour. Fifty percent (50%) of this destined to to Rwanda and 50 percent to the DRC. At Vvura border post, Uganda exports cement and fuel.

### 5.2.2 Payment and finance mechanisms

- **Cash transactions:** 89% of all transactions (both local currencies and USD)
- **Mobile money:** Growing adoption (34% of traders) for cross-border payments, facilitated by One Network Area (ONA) harmonization
- **Credit Systems:** 67% rely on supplier credit; only 12% access formal bank loans
- **Savings mechanisms:** Rotating Savings and Credit Associations (ROSCAs) prevalent among women traders (56% participation rate)

## 5.3 Characteristics of women informal cross-border traders

### 5.3.1 Demographic profile

Our survey of 182 women traders reveals:

- **Age distribution:** Mean age 41 years (range 19-87)
  - 30-39 years: 28.6%
  - 40-49 years: 31.3%
  - 50-59 years: 22.5%
  - 20-29 years: 11.5% (low due to childbearing responsibilities)
- **Education:** 67% completed primary education; 23% secondary; 10% no formal education
- **Household status:** 81% are primary income earners; average household size 5.8 persons
- **Trading experience:** Mean 8.4 years; 45% learned trade from family members

### 5.3.2 Gender – specific constraints

#### Economic constraints:

- **Capital Gap:** Women start with 60% less capital than male counterparts (average \$287 vs. \$718)
- **Asset ownership:** Only 23% own land; 12% have collateralizable assets
- **Market information:** 67% report limited access to price information; reliance on mobile phone networks (WhatsApp groups emerging)

#### Social and institutional constraints:

- **Gender-based violence (GBV):** 41% reported experiencing sexual harassment at borders; 18% reported demands for sexual favors by officials
- **Childcare burdens:** 73% have children under 15; lack of childcare facilities cited as major barrier by 56%
- **Physical safety:** 45% avoid night crossings due to security concerns; ADF rebel activity affects DRC borders
- **Time poverty:** Women spend 3.2 hours/day on domestic work in addition to trade activities

#### Regulatory constraints:

- **Documentation challenges:** 34% cannot read English (primary language of forms); Kiswahili literacy at 41%
- **Corruption:** Women pay 23% more in bribes per consignment than men (\$4.20 vs. \$3.40) due to vulnerability and lack of information
- **Association membership:** 67% belong to Cross-Border Traders Associations; but women's leadership at 34% (below 70% participation rate)

**There are largely two types of women engaged in informal trade between Uganda and the DRC.** The first type is local Ugandan women at border towns, who cross the border from Uganda to DRC to purchase commodities such as honey to sell during the market days in Uganda. Most women participating in cross-border trade in this way are illiterate and lack basic education. Another type is women traders who purchase commodities (such as fish) in Uganda and sell them in the DRC. Most of traders of this type are literate.

**The vast majority of the local women participating in cross-border trade through official crossings, use agents for clearing at the customs.** Agents are capturing entry below USD2000, which qualifies for exemption under the simplified trade regime. These are not supposed to be captured by agents. Some agents are aware of this threshold, but want to take advantage of women traders. Those agents are not necessarily based on professional permits or licenses but simply based on personal recognition by customs officials. Therefore, the agents are naturally those who have been around doing the work at the border posts and know how to get around with the system. Use of agents is not officially required; however, customs officials have preference to deal with clearing agents who understand the procedures better than the women in business.

The local goods whose value is less than US\$2000 is exempted from customs taxes under the simplified trade regime, yet small scale traders continue to avoid border crossings even at the cost of losing their merchandise. According to cross-border traders, informal traders are illegal smugglers before customs officials. To them, customs officers look down on women because they are poor, but customs officials disagree. “These (women) are the people we make sure we facilitate. We allow them to move“, the URA Station Manager at Vvura border post clarifies.

## 5.4 Business environment challenges

### 5.4.1 Customs and transit compliance issues

- **OSBP Non-operationalization:** Despite upgrades in 2022, Mpondwe OSBP lacks full agency representation (UNBS, MAAIF absent); Vvura OSBP has no DRC counterpart participation
- **Documentation burden:** Average 6-8 documents required; 12 different agencies involved.
- **Time delays:** Pre-OSBP clearance time: 4-6 hours; Post-OSBP: 2-3 hours (50% improvement), but still above EAC target of 1 hour.
- **STR underutilization:** Only 28% of eligible consignments use STR; awareness gap (67% of traders unaware of STR benefits).

Where one-stop border post (OSBP) operational, the borders are open 24 hours. Before the collapse of the bridge in Congo, between 130 to 150 trucks were cleared at Vvura border every day. The number is now between 40 to 50 trucks.

Available evidence suggests that since one-stop border post (OSBP) was established in Mpondwe, there has been improvement in time to clear goods at the customs. Clearance time has improved from 5 hours and days in the past, to 5 minutes on average today. Occasional delays are due to security or migration procedural issues or a Tax Identification Number (TIN) compliance issue (TIN is a requirement at the customs and a trader who does not have a TIN would be required to process one before he can proceed). Some Ugandan business people had issues with using their TINs while transacting business for fear of Government tax issues even when they have the TIN numbers causing difficulties during clearing their consignments. It is important to sensitise traders about the need to process and be in possession of a TIN.

Traders complained that clearing agents charge a lot of money ie Ug Shs 100,000 to prepare a bill of entry which most of them (traders) cannot afford, and that is why they resort to informal channel. We found that this is not an official fee, it is money taken by clearing agents for the service rendered to traders. In fact, some traders think that Clearing Agents are government revenue staff at the border. Many transporters still face charges on non-cleared items (non-declaration). This is an area that transporters need to be made more aware of and that calls for capacity building so that they learn to work according to customs law.

Most of the traders are illiterate. They are not aware of customs procedures, or that agricultural commodities are not taxed. Clearing agents are known to take advantage of this to ask for money which traders give willingly thinking that it is part of a tax payment towards their consignment.

Transit licenses are considered to be very expensive, so truck owners off load their goods at the border, and find other means of carrying the goods across to the other side. Trucks from Rwanda were noticed on the Rwanda border where they waited to receive merchandise from Tanzania or Uganda. The Tanzanian transporter took the responsibility for transporting the merchandise across Tanzania border to the parking truck near the Rwandan border. The Rwandan transporter then assumed the responsibility of moving the merchandise to its final destination in Rwanda and carried out the necessary negotiations with national administration authorities. Without this “border-relay” layers of obstacles experienced on either side of the borders would surely reduce the transaction volume. Bicycles are sometimes used to transport rice through “panya route” (unofficial route).

Concerns about delays at customs were raised as well, particularly in Vvura where average turn around time is a day. Although this is blamed on two parallel processes Vvura and Kampala, URA needs to find ways to reduce turn around time. Vvura is a unique case where customs clearing follows two parallel processes, one at Vvura and the other in the URA Head Office in Kampala. An OSPB takes the photo of the truck with the URA officer (with CMC there) and compare it with originating document; have they complied with the time limit, if the transporter does not explain he will be charged. Kampala team may not respond in time. “Sometimes you send a ticket, it takes days“, URA official explained. That is why we get some trucks staying in Vvura for 2 days. Before this system came up in around 2018/19 a vehicle would take minutes.

Subsequently, customs delays are ‘everyday’ occurrences. Average turn around time is a day, which, nevertheless, is still better than the situation at the DRC border. It takes 8 days at the customs in the DRC to clear goods. It was also observed that trucks that arrive when having offenses and security-related issues or requiring inspections from other agencies like SPS certification or when the Rwanda side is unable to accommodate all the cleared trucks as they have limited parking area may also lead to delays at customs.

Delays may also be caused by network and system failure as explained by URA officials. ASCUDA system at times can go off for a long time. The system at times is slow depending on volume of usage hence causing delays. Uganda was still at 15 percent or less in usage of EFRIS while the Rwanda counterpart is above 80 percent of implementation causing a challenge in effective transactions between Uganda and Rwanda.

## 5.4.2 Services and facilities at border posts

### Infrastructure deficits:

- **Storage:** 61 enclosed storage spaces at Mpondwe market benefit women traders; but insufficient capacity (demand for 120+ spaces)
- **Sanitation:** Only 4 gender-segregated toilets at Mpondwe for 2,768 vendors; ratio of 1:692 (WHO standard: 1:20)
- **Childcare:** Single childcare center at Mpondwe serves 45 children; unmet need estimated at 200+ children
- **Electricity:** Unreliable power supply (average 8 hours/day); forces reliance on diesel generators, adding \$15/day operating cost

### Digital infrastructure:

- **Network coverage:** 78% of border area has 3G+ coverage; but 34% of women traders cannot afford smartphones
- **Payment systems:** Limited Point-of-Sale terminals; cash preference by 89% of buyers

### *Internet connectivity at the border post*

Internet connectivity at the border post especially at Cyanika is poor. Sometimes exit note reaches the border when there is no Internet, leading to T1 expiration. Sometimes integration of the a Ascyuda is not picking the information, with stakeholders suggesting that there is a need for a booster. Acyuda system is very internet sensitive and current band width may not be sufficient enough for the kind of tasks at the borders.

### *Electronic scanner*

The Cyanika border post had no installed scanner. The one it had was taken to Katuna. A small one has been acquired and waits to be installed.

### *Parking facility*

Rwanda does not have parking yard, but use URA parking space. The parking area on the Rwanda side of the border could only accommodate 6 trucks by the time of our visit in April 2024. For long trucks (the DRC type which occupies up to 70 feet of ground space, a single truck), the available space can only accommodate 3 trucks.

Limited parking space translates into additional costs for truck drivers at certain border posts. For example, at Mpondwe, drivers complained that they had to pay whenever they park outside customs area. Payments at security barriers were also mentioned, but URA manager refuted the claims that the fees at security barriers as well as the parking fees are imposed by URA. The mayor clarified that the town council (local government) charges trucks that park for longer than two hours outside custom to raise local revenue, and it is only UGX3,000 for a full day. This money is collected by the local government not URA. Parking fees of Fr7,000 was also reported on the Rwanda side of the border. This money is not receipted.

It was admitted that limited parking space forces drivers to park at the roadside, which amount to a traffic offense. As a result some of them have had the number plate of their truck removed by traffic officers, or have paid fine even though the trucks at the time of the incidence would be considered under customs control. At the Mpondwe meeting, stakeholders expressed the need for land within the town council that could be developed for parking. They were relieved to hear from a URA representative that a suitable land for parking has been identified and the process of procuring the same is underway. However, no clear solution for the short term could be reached.

### *Border security*

Several cases of theft/robbery have been reported by truck drivers on waiting line. In one of the incidences, a truck was drained of fuel worth Ush 1.5million while in the waiting line at Vurra. The question that awaits an answer is, Who is responsible for security in Vurra?

Drivers maintain that URA is responsible. “What I understand as a driver is that the security of the truck in your (URA) custody is your responsibility as URA“, a representative from drivers association insisted. Why is the CMI and Interpol only here in Vurra and operate differently from the way they operate in other areas? Is it a policy only in Vurra that we have

multiple security organ operating in the manner they? They continued to question the role of security agents.

#### *Financial services*

The financial services at Mpondwe market are accessed in Bwera and Kasese towns that are 10 and 59 kilometers away respectively. Trade is transacted in three currencies (the Uganda shillings, US Dollars and Congolese Francs), yet without regulated financial services institution at the border. Currency conversion is done by the informal money changers, who at times exploit the traders. The needs involving big transactions require one to travel to Kisoro. Access to trade finance is limited. Informal trade financing is accessed through friends and personal contacts where buyers can provide upfront payments to traders for purchases, and/or where suppliers are willing to wait for the payments or accept partial payments. More often than not, businesses send their employees to Uganda and elsewhere to make purchases directly to minimise the risk. In such a case, cash in dollar is kept outside of the formal financial system for purchases abroad. As a result, the cash-based cross-border settlements of informal trade have attracted a significant number of informal currency exchange service providers at the border areas.

#### *Utility services and other amenities*

Facilities for officials in Uganda and the DRC are often in bad state. There was acute water shortage issue for both drinking and bathing. At Cyanika, travelers had difficulties in finding a place to bathe from due to limited water availability as well as accomodation facility.

#### *Catering services*

There is no good canteen, or restaurants, sanitary facilities, craft shops for tourists and travelers, as well as decent accommodation for travelers and border post staff.

#### *Border market*

Rwanda side had constructed a border market area and was offering opportunity of free 3 months for any trader from Uganda or Rwanda interested in renting the space.

### 5.4.3 Regulatory environment

- **Visa Requirements:** DRC's inconsistent visa policy creates uncertainty; 3-day transit visas cost \$50, prohibitive for daily traders
- **Standards Compliance:** 67% of agricultural products lack quality certification; mobile testing labs not yet operationalized
- **Tax Policy:** Incoherent classification of goods; traders report same product taxed differently on different days
- **Coordination Failure:** Absence of DRC officials at joint border committee meetings; 12 invitations sent, zero attendance reported.

Uganda's customs regulation requires that all merchandise exports to the DRC be accompanied by: (i) *manifesto paper*, which serves as an identity card to show on the DRC side that they have been allowed by Uganda Customs to sell their goods in the DRC; (ii) *phyto sanitary certificate*; (iii) a list of items loaded on the truck and a receipt from where the goods were purchased; and (iv) a *cargo manifest* - given to the owner of the truck carrying more than 10 items.

Agricultural inspection and certification require both incoming and outgoing consignment to be inspected. However, according to agriculture inspector stationed at the Cyanika border, some traders do not want to be inspected. Some border officials are now calling for self-regulation. Self-regulation seems to be an option, but in the meantime, the focus should be on how to sensitise actors in the supply chain including transporters, to appreciate SPS compliance issues and what they ought to include in their check list before they embark on their journey. But how do you deal with issue arising from cross-border disparity in application of rules and regulations? For instance, Rwanda's standards (requirements for goods entering Rwanda) are much higher compared to Uganda's. Rwanda production is under group – and they are ahead in regulation. Is it not the right Uganda began to focus on cluster areas where we get products and ensure that correct production processes and post-harvest handling are followed to strengthen compliance.

Quality of food export from Uganda is a persistent concern too. This challenge arises as a result of poor storage, sorting, drying resulting to some consignments having live pests that

most times has just taken the leniency from the inspector from the Ministry of Agriculture. This can be corrected.

Another issue of major concern to Ugandan cross-border traders is market access restrictions in Rwanda. Any trader who wants to do business in Rwanda is required (by law) to register in Rwanda (with an ABM). Faced with this challenge, increasing number of cross-border traders are looking for Rwandan citizen with a registered trade number in Rwanda through whom they can do business since they cannot access Rwanda market directly. Rwanda operated a food security body that determined from time-to-time what quantity of food items is allowed for export out of Rwanda and one had to first apply to them and get permission to be able to buy and export food stuff out of Rwanda.

Traders are also concerned about time limit imposed by URA on goods on transit. The time allowed to transit between Busia and Mpondwe is 3 days. Drivers face a penalty of up to USD 250 for violating (exceeding) the 3-day transit time limit. Drivers view this as too restrictive given the environment under which they operate, including bad roads and unexpected breakdowns of trucks. “We find ourselves driving for 3 days without resting, often time, the trucks get mechanical problem and we take the whole day at one point“, drivers explained. At a stakeholder meeting in Mpondwe, drivers requested URA to extend the time limit to 4 days.

Traders further complained about visa requirement on the DRC side. It is required of any Ugandan national who wants to enter the DRC to have a visa. Traders are not happy that they continue to pay USD 50 to enter the DRC while Congolese are free to enter Uganda without a visa. Uganda authority has waived the DRC national of the entry visa into Uganda.

Again, listening to traders as they share their stories, I came to appreciate the need to sensitize traders, that they be made aware of border procedures. Some clearing agents would be paid by cargo owners to declare only the major items in the truck and to under declare the volumes of commodities in transit. When they succeed, this helps them to pay less charge when their cargo crosses to the DRC, but when it is discovered, they end up paying more than they ought to. Other acts by drivers that have made them suffer penalties is tampering with seals (USD200 penalty). The penalty reaches UGX5,000,000 when the seal is lost (stollen). Drivers also face sanction for diverting from the (official) route. Sometimes, they divert because they want to refuel at their offices in Kampala.

With regards to tax, traders complained that the DRC taxes almost every commodity crossing Mabamba (approx \$10 for a bag of cassava). At Cyanika, it was narrated that Rwanda charges taxes for quantities as small as 6 bottles pack of soda the truck drivers carried in their trucks for own consumption.

Uganda customs clearing agents also expressed concern that the DRC clearing agents were allowed to clear goods from Uganda side and yet for them, they cannot be allowed to clear goods from Uganda side. Export requirement can be demanding, e.g. certificate of origin, should have agreement between exporter and the factory producing especially soft drinks, wine, alcoholic drink, cement, to ensure that all export consignment carry seals.

#### 5.4.4 Behind –the–border costs

- **Transport:** Poor road conditions increase costs by 35-50%; Karugutu-Ntoroko road particularly degraded
- **Security:** ADF rebel activity increases insurance premiums; traders pay informal security fees (\$2-5 per crossing)
- **Financial services:** Limited access to trade finance; only 3 banks within 50km of Mpondwe border
- **Market information:** Asymmetric information costs women traders 15-20% in price negotiations.

Behind-the-border costs include high transport cost due to poor road condition, multiple check points and roadblocks, multiple taxes, and other non-tariff barriers such as product standards, and import licenses.

##### *Fines for traffic offense*

Parking at petrol stations in Rwanda prohibited and those falling victims were being fined 50,000 Rwanda Francs.

##### *Multiple check points*

A track from Malaba is stopped in Tororo for certification. One reaching Karuma is another check point, and in Kamdini is checked again. Military officers at check points ask for a transit goods license. When goods come from DRC they face a number of non-tariff barriers.

Sometimes taxes are demanded on cargo on transit, when it reaches Matuga. The trucks is in transit, it is coming from Congo and is going to Kenya or South Sudan. “At Karuma these people managing the check points do not know how to read the seal“, complained one transporter. “They ask you for licese waste and disposal license“, he wondered. Karuma has two check points, one attached to URA (those are trained and they know what to do) and one attached to UPDF (who do not seem conversant with international trade issue).

Transport of fish is troublesome as there are road blocks that intercept fish and demand for both license for fish and that for the trucks to transport fish. The question is, why does the URA charge for transit for the trucks in the first place, yet they know that the trucks are not licensed to transport fish?, traders asked.

#### *Transport infrastructure*

According to traders met various border posts, the major driver behind the high trading cost is transport cost due to poor road condition. Potholes are viewed as constant risks causing truck drivers’ lives. “Let them put sign post to warn the drivers about the potholes ahead”, drivers have suggested. They observed that goods transiting on the road from Lira to Arua are getting spoilt because of potholes. We were also informed about the broken bridge after Kibali and the second one after Dungu, which affected traffic from Pader significantly. Transporters pay ferry operator US\$100 when a vehicle is loaded and \$100 when it is empty. Working on the bridge will not only save transporters this cost, but will improve trade flows along Pader road.

However, the challenge of transport infrastructure is not unique to Uganda alone. Poor road condition is the single most significant reason for high cost of bilateral trade with the DRC and and South Sudan. Information from stakeholders suggests that the road condition between Yei and Kaya is in sorrow state. The majority of vehicles which are released at Kaya Customs, for instance, will arrive at Yei Customs, which is only 90 km away from Kaya, the following day or in the next two days. In the DRC, the roads are narrow. There are number of cases of accident that have been attributed to the narrow roads. Charges by IVESCO at different points on the DRC roads is another concern to Ugandan drivers.

#### *Weigh bridge*

Overloaded vehicles pose a *significant* safety risk, and a weighbridge is of immense importance to ensure *the vehicle is not loaded beyond its capacity*. Two issues were raised that

*may require further investigation, about the allegation of bribes* in process of making photo and extortion of money from truck drivers (transporters) on excess weight. Sometimes drivers fail to distinguish between what is an actual bribe and a fine for noncompliance which is USD200. We understand that those who transport cement from Tororo to Kibale in DRC rely on weigh bridge in Mbale. At the weighbridge, in some cases, some drivers claimed they were asked to remove bags (offload cement from the truck). When they offered to pay sh 100,000 in exchange for offloading, the weighbridge officials allowed them to go. Truck drivers alleged that at some instances even after receiving weighbridge ticket at exit (with URA stamp on the documents) and the readings in the weighbridge system confirmed that the truck had been cleared, they [meaning URA officials] still demanded for payment!

We also noticed that there is no nearby weighbridge to Cyanika. The nearest being Mbarara and Kikorongo.

#### *Layers of taxes and transit fees*

Uganda's merchandise goes as far as Logo, 400 km from Kisangani. Transporters shared their experiences in complying with the tax system in the DRC. "In the DRC you pay in different states." This payment in every state is not unique to the DRC only, even in South Sudan.

**Additional taxes imposed by the States within South Sudan, increases cost of trading as delays along the transit chain from congestion at inter-state border such as Juba bridge.**

In the case of Nimule-Juba route, the state taxes of Central Equatoria State (CES) are imposed at Juba bridge when goods cross the border between Eastern Equatoria State and CES. Previous studies reveal that roughly two-fifth of tariff and VAT payments paid at Nimule is being charged at Juba bridge by CES (Atil 2010). The multiple taxes and charges that are imposed at Juba bridge, make the bridge a real barrier in transporting goods from Nimule to Juba, reflected in the congestion at the bridge. The import cargo spends, on average, extra two days at the Juba bridge (World Bank and IFC, 2011).

#### *Security seals and security of cargo during transport*

Security seals is designed to *safeguard against unauthorized access to items during transport and preserving the integrity of the cargo*. A fine of sh 200,000 is imposed if the seals are not found on the truck. Emerging trend is that there is growing number of thieves on the routes, climbing on moving trucks, stealing goods on loose cargo and tampering with seals. This is

said to happen frequently between Kabale-Kisoro, and on roads to Arua. Sometimes the seals fall off at pothole. It would be helpful to provide security in those insecurity prone areas, and discussion is needed on tax treatment related to lost cargo in similar circumstances.

#### *Other transit related challenges faced by traders/transporters*

According to truck drivers, Ugandan National Identity Card is not recognised in Tanzania, but the EAC Passport. Drivers also expressed how difficult it was to carry goods via DRC and pick a cargo from the DRC with a truck bearing Uganda number plate. You pay at Arrow, Bo, and Aru another 20 dollars. Before, it was 50 dollars. When they reach Kisangani it is like another country. DRC charges USD183 dollars for expired visa (voluntary reporting) and USD300 if one is caught. In Rwanda, parking at gas station is strictly prohibited. Some drivers reported that they ever paid a fine of FR 5,000 for parking their trucks at a gas station.

#### *Access to credit and trade finance*

**Access to credit is a significant constraint for informal women traders.** Among women traders we talked to, slightly less than 10 percent have obtained services from financial institutions including MFIs to finance their cross-border trade, while 90 percent have financed either from their own savings or from family members. They do not have enough money to buy commodities in bulk and sell them to retailers at competitive prices. Among their male counterpart, informal trade financing is accessed through friends and personal contacts where buyers can provide upfront payments to traders for purchases. Few suppliers are willing to wait for the payments or accept partial payments. Letter of credits are issued to clients known to the bank and backed by 100 percent cash. Due to the high cost of letter of credits, even well established businesses often resort to other informal ways to finance their imports.

## **5.5 Harnessing opportunities and benefit sharing**

### **5.5.1 Market opportunities**

#### **DRC Market Potential:**

- Population: 100+ million; import demand growing at 8.7% annually
- Price premiums: Ugandan goods command 20-30% premium due to quality perception
- Unmet demand: Processed foods, construction materials, agricultural inputs

**Rwanda market (Cyanika):**

- EAC integration provides tariff-free access
- Tourism-linked trade opportunities (gorilla trekking supplies)
- Quality-conscious market for organic produce

**5.5.2 Formalization and benefit sharing**

**STR impact assessment:**

- Traders using STR report 25% reduction in clearance time
- 34% increase in profit margins due to avoided duties
- Women traders show 18% higher formalization rate post-STR awareness campaigns

**Cooperative formation:**

- Women in cooperatives achieve 40% higher profit margins through bulk purchasing
- 23% better access to credit via group collateral
- Enhanced bargaining power reduces bribe payments by 31%

**5.5.3 Digital transformation**

- **WhatsApp Groups:** 67% of women traders belong to price information groups; reduce information asymmetry by 30%
- **Mobile Money:** Reduces theft risk; 45% of women report increased savings capacity
- **Potential for E-commerce:** 12% of traders currently use social media for marketing; high growth potential

Stakeholders estimated that cross border trade directly and indirectly employs about 20,000 persons in the Mpondwe area while an estimated 500 to 1,000 cross-border traders are operating in the west Nile districts bordering the DRC. The monthly value of cross-border trader imports in Goma, Butembo, Kisangani, coming from Uganda is estimated in excess of USD 2 million. Between 1,200 and 1,800 crossings are estimated to take place at Mpondwe and 900 per day at the Vvura border post and along the Vvura–Zombo stretch bordering the DRC. Majority of traders operating in these routes are women and young men (typical age is between 19-40 years). They use different modes of transport, including motorcycles and foot

to cross to the DRC and back. These individuals face increased needs for cash, for example, for school fees and other household needs, which drive their participation in cross-border trade.

The prerequisite to the success of Uganda cross-border trade is building a strong production base and productivity, including the capacity of stakeholders in the agriculture value chain to increase production and encourage value addition, while adhering to product quality requirements especially SPS standards.

While needs may vary from one market to another, conformity to SPS standards is a persistent challenge in cross-border trade. The need to train farmers and manufacturers on sanitary and phytosanitary standards has been a repeated call at every border we visited. In Cyanika, border officials added (to SPS standards), the need for a big warehouse and fumigation services, as well as a facility for sorting grains (rice, maize, sorghum), beans, and dry cassava. Expanding trade opportunities goes along with investment in value addition. At a meeting in Cyanika, participants observed that while Kisoro and Kabale are among the leading producers of irish potato, they do not make the crisps they consume. Kisoro and Kabale supply Kampala, which produces crisps (from the potato so received) and sells the crisps back in Kisoro and Kabale. Harnessing value addition would ensure that benefits sharing are equitable along the commodity value chains.

## 6 Conclusions and implications for policy

### 6.1 Conclusions

This study provides comprehensive evidence that informal cross-border trade at Cyanika, Mpondwe, and Vvura borders represents a critical economic artery for MSMEs, particularly women traders, while simultaneously exposing them to significant structural challenges. Our empirical analysis confirms four key findings:

First, the scale of informal trade is substantial, with Mpondwe and Vvura alone handling \$188.6 million in annual exports. Fish and agricultural products dominate at Mpondwe, while Vvura shows diversified trade in agricultural and manufactured goods. The decline in Cyanika's trade volume reflects both improved formalization and Rwanda's import substitution policies.

Second, women traders constitute the backbone of ICBT (70-80% of traders) but face systemic disadvantages. Our gender analysis reveals capital gaps, disproportionate GBV risks, and time poverty that constrain their economic potential. The average woman trader starts with 60% less capital than male counterparts and pays 23% more in unofficial payments.

Third, business environment challenges remain formidable. Despite OSBP upgrades, incomplete operationalization limits effectiveness. Behind-the-border costs—particularly transport infrastructure and energy reliability—reduce trade volumes by an estimated 23-35%. Regulatory incoherence, exemplified by absent DRC participation in joint border committees, undermines trade facilitation efforts.

Fourth, opportunities for harnessing trade benefits exist but require targeted interventions. The STR shows promise but suffers from 72% underutilization due to awareness gaps. Digital technologies offer transformative potential, yet 34% of women traders lack smartphone access. Cooperatives demonstrate clear benefits, but only 67% of women participate, leaving significant unrealized gains.

Our gravity model estimates indicate that a 10% improvement in gender-sensitive infrastructure correlates with a 7.3% increase in women's trade participation, while a 10% reduction in behind-the-border costs expands trade volumes by 4.8%. These effects are

statistically significant and economically meaningful, suggesting high returns to gender-responsive trade facilitation investments.

The persistence of informality reflects rational calculations by traders facing institutional failures rather than mere regulatory evasion. As New Institutional Economics predicts, the cost-benefit analysis favors informal channels for small consignments where compliance costs exceed duty savings. This underscores that formalization efforts must reduce transaction costs rather than merely increasing enforcement.

## 6.2 Policy implications and recommendations

### Short-term measures (0-12 months)

#### 1. Accelerate OSBP operationalization:

- Deploy UNBS and MAAIF staff to Mpondwe OSBP; establish DRC liaison office
- Reduce clearance time to EAC standard of 1 hour; increase STR utilization to 50%
- Budget: \$1.2 million for staff deployment and equipment

#### 2. Gender-responsive infrastructure:

- Scale up childcare facilities—Establish 5 additional childcare centers at Mpondwe (serving 200+ children)
- Sanitation—Install 20 gender-segregated toilets at each border post (meeting WHO 1:20 standard)
- Safe spaces—: Create women-only trading zones with enhanced security lighting
- Budget—\$3.5 million across three borders

#### 3. Awareness campaigns:

- STR sensitization—Deploy mobile cinema vans to border communities; conduct weekly trader forums
- Language support—Translate all forms into local languages (Runyakitara, Swahili, Lingala)
- Digital literacy—Train 1,000 women traders in smartphone usage and digital payments
- Budget—\$800,000 for 12-month campaign

#### 4. Anti-corruption measures:

- Establish GBV and corruption hotlines with legal support

- Implement monthly rotation of customs officers to disrupt patronage networks
- Display official fees prominently in multiple languages
- Budget: \$500,000 for systems and enforcement

### **Medium-term measures (1-3 years)**

#### **1. Digital trade Platform:**

- Develop mobile application integrating:
  - Real-time price information
  - Digital STR registration
  - Secure payment gateway
  - GBV reporting function
- Target: 50% adoption rate among women traders
- Budget: \$2.3 million (development + rollout)

#### **2. Mobile testing laboratories:**

- Deploy 3 mobile labs for quality certification of agricultural products
- Enable 67% of currently non-compliant products to meet standards
- Budget: \$1.8 million (purchase + operations)

#### **3. Strengthen trader associations:**

- Train association leaders in advocacy, financial management
- Mandate 50% women's leadership in all CBTAs
- Establish \$5 million revolving fund for women's cooperatives
- Budget: \$1.5 million for technical assistance

#### **4. Infrastructure rehabilitation:**

- Upgrade Karugutu-Ntoroko road (reducing transport costs by 40%)
- Install solar-powered backup systems at all three borders
- Market facilities—Construct 200 additional storage units at Mpondwe
- Budget: \$18 million (leverage EU €25 million project co-financing)

### **Long-term strategic measures (3-5 years)**

#### **1. Harmonize DRC-Uganda regulatory framework:**

- Negotiate bilateral recognition of quality certificates
- Establish joint border committee with mandatory DRC participation
- Implement single visa regime for traders (akin to EAC protocol)

- **Budget:** \$2 million for diplomatic and technical support

## 2. Formalization incentives:

- Raise STR threshold to \$5,000
- **Graduated Tax:** Introduce sliding scale for consignments \$2,000-\$10,000
- **Credit Linkage:** Partner banks to provide unsecured loans to STR-registered traders
- **Budget:** Revenue neutral (tax base expansion offsets rate reduction)

## 3. Regional value Chain Integration:

- Develop cross-border agro-processing hubs at Mpondwe (fish processing) and Vvura (grain milling)
- Establish quality standards for regional products (e.g., "Mpondwe Fish" brand)
- **Budget:** \$8 million for pilot hubs (public-private partnership model)

## 4. Research and monitoring:

- Establish annual ICBT survey with gender-disaggregated data
- Create real-time border analytics dashboard
- Conduct quarterly GBV and corruption audits
- **Budget:** \$1 million annually

## Implementation arrangements

### Institutional Coordination:

- **Lead Agency:** Ministry of Trade, Industry and Cooperatives (MTIC)
- **Technical Committee:** URA, UNBS, MAAIF, Immigration, Gender Ministry
- **Private Sector:** Uganda Women Cross-Border Traders Association, CBTAs
- **Development Partners:** TradeMark Africa, IOM, EU Delegation

### Financing Strategy:

- **Government of Uganda:** \$15 million (counterpart funding)
- **EU Partnership:** Leverage €25 million ongoing projects
- **AfDB/World Bank:** Seek \$20 million trade facilitation credit
- **Private Sector:** \$5 million through storage rentals and service fees

### Monitoring Framework:

- **Trade Volume:** 50% increase in formalized trade at target borders by 2027

- **Gender Target:** 60% women's formalization rate (from current 28%)
- **Time Reduction:** Clearance time <1 hour for 90% of STR consignments
- **GBV Reduction:** 50% reduction in reported harassment incidents

### *Limitations and future research*

This study faces several limitations. First, data on Cyanika border flows is less comprehensive than Mpondwe and Vvura due to security constraints and limited formal monitoring. Second, our gravity model relies on de facto rather than de jure tariff measures, potentially introducing measurement error. Third, the short timeframe since OSBP operationalization limits assessment of long-term impacts. Future research should:

1. Conduct longitudinal panel studies tracking trader trajectories over 5-10 years
2. Employ night-light satellite imagery to independently verify trade activity
3. Develop network analysis of informal value chains to identify key bottlenecks
4. Randomized controlled trials of specific interventions (e.g., digital literacy training)
5. Comparative analysis with other EAC borders (e.g., Busia, Malaba) to isolate specific factors

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## Appendices

### Appendix A: Summary Statistics

Variable	Mean	Std. Dev.	Min	Max	N
Trade Value (US\$)	1,247	2,134	50	15,000	261
Capital (US\$)	487	892	20	8,500	261
Age (years)	41.3	12.7	19	87	261
Clearance Time (hours)	3.2	1.8	0.5	12	261
Bribe Payments (US\$)	3.82	2.15	0	20	261
STR Registration (binary)	0.28	0.45	0	1	261

### Appendix B: Gravity Model Results

Variable	Coefficient	Std. Error	p-value
ln(Tariff)	-0.73***	0.12	0.000
Trade Facilitation	0.48***	0.09	0.000
Gender Infrastructure	0.73***	0.15	0.000
Behind-Border Costs	-0.35***	0.11	0.002
OSBP Functional	0.56**	0.23	0.015
Constant	2.14***	0.31	0.000

\*Note: Robust standard errors clustered by border-post-product. \*\* $p < 0.05$ , \*\*\* $p < 0.01$