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Managing commodity price volatility: Contrasting Cote d'Ivoire with Ethiopia

by

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Economic Development (CAREED),
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Presentation at UNCTAD Multi-Year Expert
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Background prior to market reforms



Ethiopia

- All commercial farms remained under state control
- Fixed pan-territorial coffee and other grains prices
- Restrictions on private inter-regional grain movements and producers' grain quota (Lirenso 1987 and Franzel, et.al., 1989).
- Government embraced market oriented economic policies in 1991.
- Adoption of structural adjustment programs, abolishment of agricultural price control

CIV

- CAISTAB was under the complete control of the central government and determined payments for all the stages along the marketing chain, including the producers' remuneration (Cardenas 2002).
- 1998 adoption of market reforms
- Intervention of private sector



Current trading systems



Ethiopia

- Ethiopian Commodity Exchange (ECX)
- Spot and online trading
- Centralised trading platform
- Dissemination of market and price data
- Grading and storage facilities
- Risk management

CIV

- Central body le Conseil du Café-Cacao (CCC) responsible for the management, regulation, development and price stabilisation of cocoa and coffee.
- New marketing mechanism involving the forward sale of 70 to 80% of the coming year's crop through auctions.
- Floor price dissemination but ceiling price is not disseminated



Hypotheses



HYPOTHESIS 1

H0: Local Commodity Exchanges have reduced transactions costs and increased small-scale farmers' incomes.



HA: Local Commodity Exchanges have not reduced transactions costs and increased small-scale farmers' income.

HYPOTHESIS 2

H0: Market and pricing dissemination has improved transparency in the trading system



HA: Market and pricing dissemination has not improved transparency in the trading system

HYPOTHESIS 3

H0: The ECX grading standards and storage facilities have improved farmers' incomes.



HA: The ECX grading standards and storage facilities have not improved farmers' incomes.



Types of coffee, currency used & transaction costs data.



Ethiopia

- Arabica
- Higher price than Robusta
- Transaction costs include farm gate price to port of embarkation. Measured by COMMODAFRICA
- All prices and costs are calculated using US cents.

Fixed effects model has been used to deal with the unobserved variable “quality”.

CIV

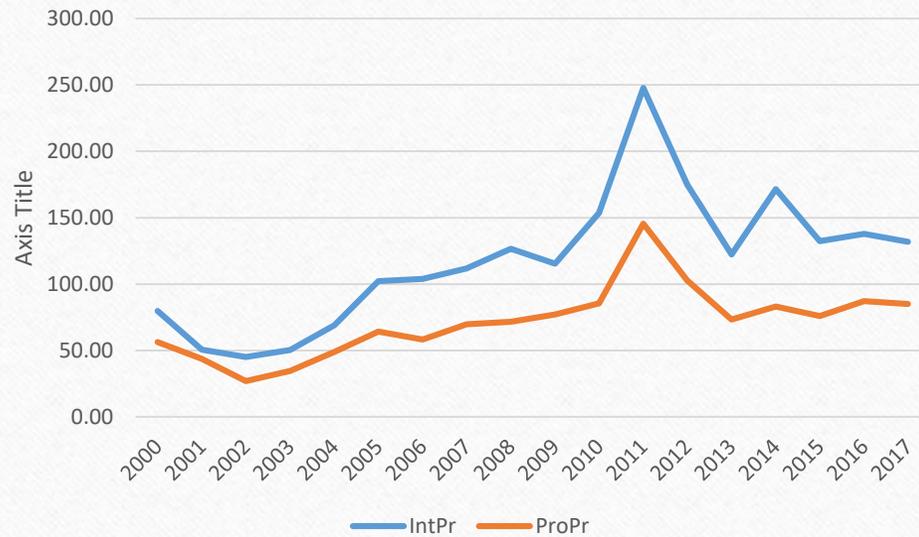
- Robusta
- Lower price than Arabica
- Transaction costs include farm gate price to port of embarkation. Measured by COMMODAFRICA
- All prices and costs are calculated using US cents.



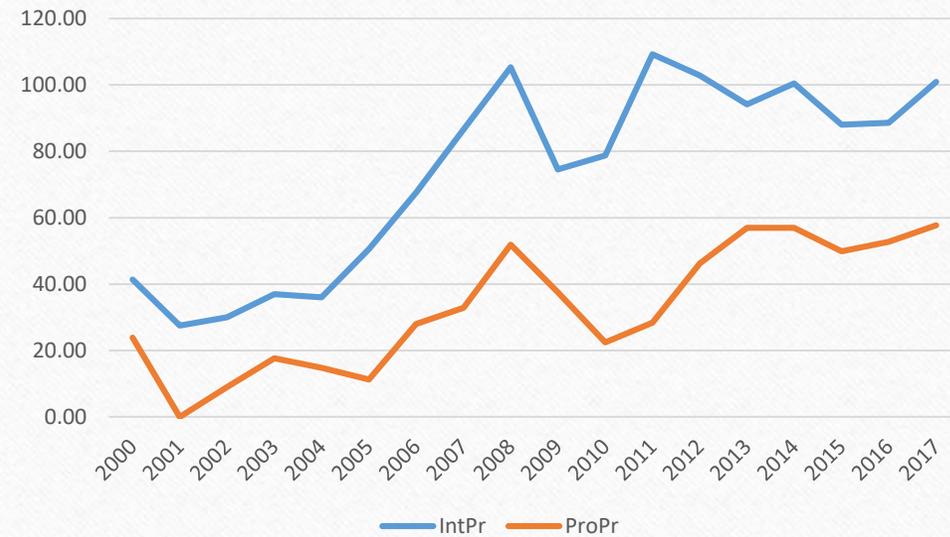
Showing trends in Producer's price in comparison to International price



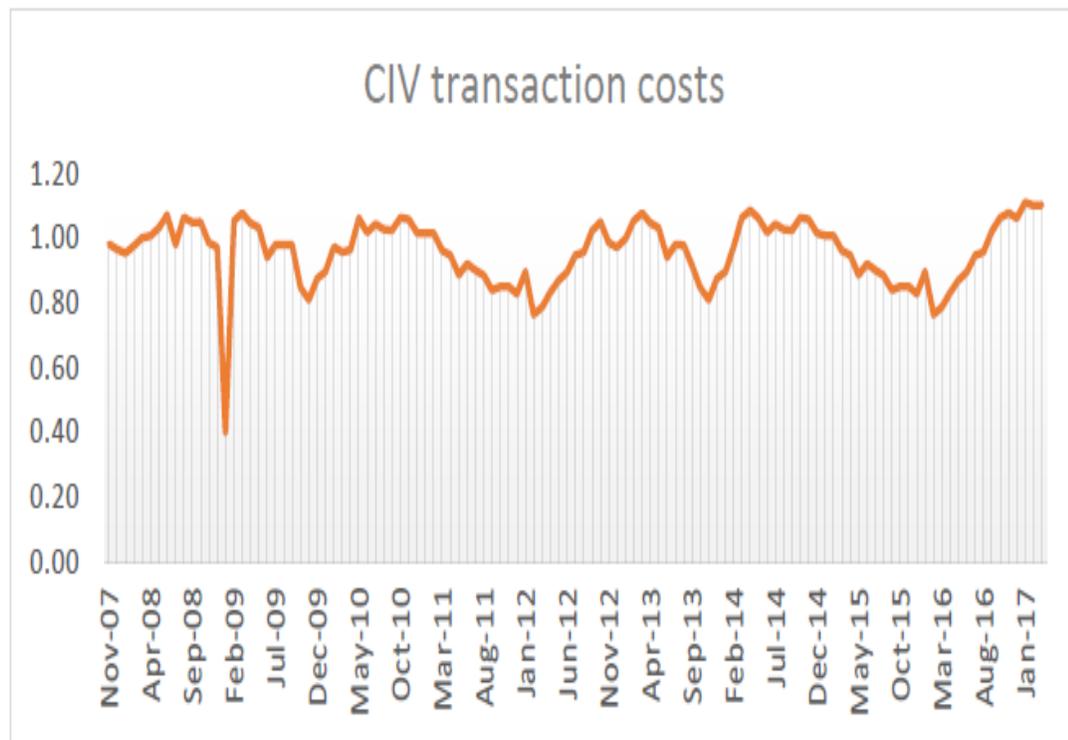
Producer price (ProPr) & International Price (IntPr)
Ethiopia 2000-2017 in US cents



International Price (IntPr) & Producer Price (ProPr)
2000-2017 CIV in US cents



Showing trends in transaction costs in CIV and Ethiopia





Secondary data analysis & Interpretation



- Descriptive statistics
- Correlation Matrix
- Fixed Effects (EF) estimation technique
- Percentage change analysis
- Indexes



Secondary data key findings



Fixed Effects

Holding all other factors constant a 1 US cent increase in transaction costs will cause 26 US decrease in producer's price. This is statistically significant at 5 percent level.

Percentage change Analysis

Percentage Increase in transaction costs:

Ethiopia is 51.74 %

CIV is 62.96%

Transaction costs in CIV have increased **11.22 %** more than in Ethiopia.

Indexes

An overall downward trend in transaction costs and an upward trend in producer's price in **Ethiopia**.

An overall upward trend in transaction costs and a downward trend in producer price in **CIV**.

**Primary data analysis
& interpretation**

Questionnaires
Adopted from
UNCTAD (2009)
(See appendix 5 page
222)

Questionnaires Design
Structure: closed –ended
Sampling: purposive and
quota sampling strategies
Ethical considerations:
follows UWS' ethical
principles, ethical approval
granted

Validity & reliability tests

- ❖ 2 Pilot tests
- ❖ Alpha Cronbach
- ❖ Descriptive statistics
- ❖ Spearman rho Correlation Matrix
- ❖ Ordered Logit regressions
Coefficient
Odds Ratio

Thematic analysis
of Interviews
follows Braun and
Clarke (2006)
suggested 6 steps.

- ❖ Familiarisation
- ❖ Coding
- ❖ Themes and sub-themes matrix
- ❖ Saliency analysis of themes
- ❖ Themes and sub-themes mind
map
- ❖ Quotations used to represent
themes were subject to
'participant checking' with the
relevant interviewee
- ❖ Peer review of the themes



Ordered logit analysis key findings



Transaction costs

- Reduced middlemen
- Increase farmers' access to Primary Trading Centres (PTC)
- Improved farmers' organisation

Transparency

- Facilitated transaction in the industry
- Improved pricing and market data dissemination which has helped farmers to become more informed and get better price for their produce.
- Improved farmers' power to set price for their coffee.

Grading & Storage

- Improved pricing
- Improved quality of production
- Facilitated transactions

Storage

- ECX has not increased smallholder farmers' power to decide nor reduced distressed sales
- The warehouse receipts have not improved farmer's access to bank loans.



Key findings from the Thematic analysis



Ethiopia

Synthesising the main themes in a tentative statement Ethiopia dataset:

- ❖ Efficiency of the **centralised trading system** can be improved by improving **infrastructure**, making use of modern technology for **grading** while providing access to appropriate services that offer **access to storage facilities, credit and training** for farmers and their organisations.

CIV

Synthesising the main themes in a tentative statement CIV dataset:

- ❖ An **efficient trading system** can be achieved by reducing the number of **intermediaries**, improving **transparency** and providing mechanisms for **risk management** while offering access to appropriate services such as **storage facilities and credit** for farmers.



Key recommendations (policies)



- ❖ Futures trading as well as spot trading should be considered to improve transparency (Ethiopia).
- ❖ Policy makers should facilitate the embedment of hedging functionality into the terms of contract intermediaries such as cooperatives, input suppliers, financiers and buyers offer to farmers, and this could be extended to microfinance organisations, relevant to both countries (Rashid et al., 2010).
- ❖ There is “no one size fits all” commodity exchange. Thus, undertaken a research prior to establishing a commodity exchange is essential. This will help countries to establish one that meet the needs of smallholder farmers and other service users (CIV).
- ❖ Provision of storage facilities could be managed through cooperatives, relevant to both countries
- ❖ Best practice can be shared across countries. For example, zero default policy in Ethiopia can be replicated in CIV.



Thank You