



ICT-based Market Information Services Show Modest Gains in Ghana's Food Commodity Markets



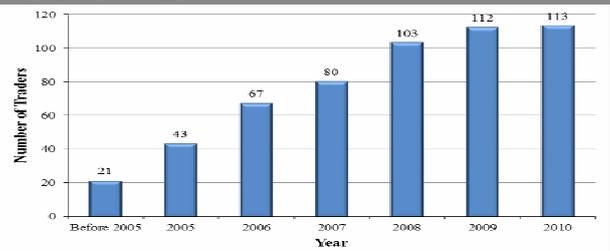
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Introduction

In Ghana, agricultural commodities such as maize, yam and groundnuts are produced to meet both cash and food needs. Price is a key factor directing what volumes are lifted and which places produce are moved to. Since 2005 there has been improvement in ICT-based market information services to improve price and other information dissemination.

It is based on the premise that market-based exchanges that rely on visual inspection result in high transaction costs which impede access to better paying markets and entrenched poverty (Fafchamps and Gabre-Madhin, 2006).

The major objective of this study is to determine the extent to which ICT-MIS is being employed by marketers and measure the level of spatial price integration between four food markets in two regions. Price movements affects farmers willingness to produce and consumers willingness to pay, thus issues of market efficiency and whether origin and destination markets are integrated become pertinent (Mockshell and Egyir, 2010).

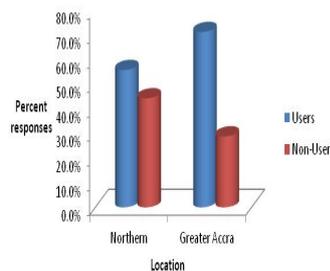


Results

Test for Market Integration

Market Pair	Before ICT intervention (2001-2005)			After ICT intervention (2006-2010)		
	τ^{cs}	ρ^{out}	λ_1	τ^{cs}	ρ^{out}	λ_2
Tam-Tol	0.31	-0.87***	0.34	1.50	-0.97***	0.19
Tam-Agbo	1.86	-0.26***	2.27	4.68	-0.37***	1.48
Tam-Nima	2.22	-0.29***	1.99	4.41	-0.39***	1.42
Tol-Agbo	1.63	-0.25***	2.36	4.21	-0.29***	2.05
Tol-Nima	1.63	-0.31***	1.84	6.36	-0.26***	2.27
Mean	1.53	0.396	1.76	4.23	0.456	1.48

Users of ICT tools for trading



Conduct and Performance of Maize Traders

Variable	Mean		Difference	T-value
	Users	Non-users		
Volume handled (100 kg)	142.89	4.29	138.60	1.34
Price obtained (GH¢)	66.52	72.85	-6.34	1.41
Transaction cost/unit (GH¢)	0.97	0.01	0.96	2.21**
Marketing margin (GH¢)	14.78	12.93	1.85	0.63
Net income (GH¢)	2479.38	1088.89	1390.49	1.78*

Conclusions

- > Food commodity trade actors have responded to improved ICT-MIS by adopting the mobile phone voice option.
- > There is slight improvement in management of transactions (searching, negotiation, enforcing contracts and monitoring contracts) but costs are still high.
- > Complementary market infrastructure (transport and standards enforcement) is under developed.
- > The speed of maize price transmission between selected markets in rural and urban areas has improved slightly.

Recommendations

- **Government:** Local government institutions should do more to improve and maintain the condition of roads all year round. The Ghana Standards Board is called upon to step up domestic trade standards enforcement
- **Private sector:** Telecom companies should improve technology to further reduce charges so that rural and resource poor market actors can get involved fully
- **NGOs:** Awareness programmes and demonstrations at the market level and in small groups should be facilitated by NGOs, to further promote the ICT tools as well as adoption of standard weights and measures in trade.
- **Users:** Attitudinal change is required of market actors (eg. farmers traders and consumers) to enhance adoption of standard measures. Participation in functional adult literacy programmes will aid the inclusion of more actors in innovative and less expensive ICT-MIS (eg. mobile sms).

Methodology

- Quantitative and qualitative survey data from 486 marketers made up of 140 retailers and wholesalers and 318 farmer-traders.
- Simple descriptive statistics and t-test was used to determine level and differences in volumes handled, prices obtained, transaction costs, marketing margins and net incomes of traders who used mobile phone and those who did not use mobile phone to obtain trade information.
- Threshold autoregressive (TAR) model was used to check for spatial market integration between two rural (northern) and two urban (southern) maize markets in Ghana.

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Tropentag 2011, "Development on the Margin", October 5-7, 2011. Bonn-Germany