

**Researchers**

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**Timeline**

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**Sample Size**

400 maize traders

**Research Implemented by IPA**

Yes

# Competition and Collusion Among Maize Traders in Rural Kenya

## Abstract

In Sub-Saharan Africa, farmers are often paid low prices for their produce, yet customers often pay high prices for staple foods. There are multiple potential explanations for this phenomenon, one of which is that traders may hold market power and collude, leading to higher food prices than there would be if those traders offered competing prices. In Kenya, researchers worked with Innovations for Poverty Action in open-air maize markets to conduct a series of randomized evaluations of three different interventions: a subsidy given to traders; a discount given to customers; and an incentive for traders to enter markets in which they had not participated before. The study found that traders in the Kenyan maize markets have considerable market power, and the introduction of a small number of new traders to markets did little to lower prices for consumers in those markets. The results suggest that interventions to decrease transaction costs for traders may not be sufficient to lower prices for consumers.

## Policy Issue

As is true in many developing countries, agricultural markets in Kenya are “fragmented”: Farmers in areas with a grain surplus face low prices for their produce while consumers in grain deficit areas pay high prices for staple foods. Why do traders not take advantage of this difference in prices by buying more grain in surplus areas and selling more in deficit areas? One potential explanation for this inefficiency is high transaction costs: it is difficult and expensive for traders to transport goods, obtain information about prices in different areas, and conduct other activities necessary to fulfill their role as intermediaries. However, another possibility is that the existence of a limited number of traders leads them to use market power to their advantage by colluding (agreeing not to compete with one another in a given market), paying farmers less and charging consumers more than they would if they had to compete more intensely with one another. If traders do in fact collude, then they may not

pass on the money they save from policies designed to reduce their transaction costs to farmers or consumers of the products they trade.

## Context of the Evaluation

This study took place in 60 open-air markets in six counties surrounding the town of Bungoma in Western Kenya. These markets generally occur once a week, with traders usually working in the same set of markets each week and developing high levels of familiarity with one another.

The participants in this study were maize traders who buy or sell from more than one location. These regional traders collect, store, and transport the maize that they buy from farmers or other traders. While there are few legal barriers to entering the maize market in Kenya, significant economic barriers exist: traders need to have a considerable amount of capital available for the costs involved, and to have large networks of contacts in order to obtain the necessary information on prices and product availability.

## Details of the Intervention

Researchers worked with Innovations for Poverty Action to carry out three evaluations in maize markets in Kenya. Each intervention was designed to evaluate a different outcome relating to the competitiveness of maize markets.

*Trader Subsidy Intervention:* In markets receiving this intervention, all traders were offered a subsidy at the beginning of the day, calculated per kilogram of maize sold, for four weeks. The markets in this intervention were divided into a “low” subsidy group, which represented about 7.5 percent of the average price, and a “high” subsidy group, which represented about 15 percent of the average price.

*Discount Intervention:* In this intervention, customers were offered an opportunity to have a random discount applied to their purchase. After receiving this discount, the customer was offered the opportunity to select a quantity of maize to purchase at this discount.

Researchers studied how much of the subsidies received by traders were “passed through” to customers through price reductions, as well as how discounts affected the amount of maize customers chose to purchase, in order to create a model to estimate the competitiveness of the market.

*Entry intervention:* In this intervention, traders were offered the opportunity to work in a nearby market in which they had not previously worked. Traders who received the offers were randomly assigned to receive a “low” payment of 5,000 KSH (around US\$50), a “medium” payment of 10,000 KSH (around \$100), or a “high” payment of 15,000 KSH (around \$150) each time they visited the new market. Researchers made offers to three traders per market to increase the likelihood of a market having at least one additional trader. Researchers studied how the entrance of new traders in a market affected the prices that customers were charged in these new markets.

## Results and Policy Lessons

Overall, results suggest that traders exert considerable market power in markets for maize in rural Kenya. New traders entering markets did not significantly lower prices for maize in those markets. Taken together, these results indicate that interventions to decrease transaction costs for traders may not be sufficient to lower prices for consumers.

### *Results of the Trader Subsidy Intervention and Discount Intervention:*

Researchers estimate that traders passed through 22 percent of the subsidy they received to consumers through reductions in prices. The reductions among traders who received the “low” and “high” subsidies were very similar. These results suggest a market with little or no competition between traders, which could be the result of collusive agreements (though they may be tacit and informal).

In combination with the results of the discount intervention, researchers used these findings to estimate the impact of the lack of a competitive market on consumer welfare. Results suggest that traders reaped a large majority of the benefits from their exchanges, relative to the consumers, and that a more competitive market could lower prices and have significant benefits for consumers.

### *Results of the Entry Intervention:*

Enough traders accepted offers to enter new markets that market size across the markets studied increased 13 percent. Over half of market days had at least one additional trader, while over a quarter had more than one additional trader.

Despite the presence of newly-entering traders unfamiliar with the market, customers on average did not see lower prices for maize.

These results suggest that new traders enter into collusive price agreements with the existing traders, and that small numbers of new traders may not be sufficient to increase competition and lower market prices.

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