Price Incentives to Improve Coffee Quality in Uganda

Researchers:

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Sector(s): Agriculture

Fieldwork: Innovations for Poverty Action (IPA)

Sample: 172 parishes with 989 villages

Initiative(s): Agricultural Technology Adoption Initiative (ATAI)

Target group: Farmers Agricultural cooperatives Agricultural traders

Outcome of interest: Earnings and income Business investment Productivity Profits/revenues

Intervention type: Incentives Information

Partner organization(s): Gates Foundation, UK International Development

In international markets, high-quality coffee that is ripe, undamaged, and washed can be sold for substantially higher prices than lower-quality coffee. However, for many reasons, farmers in low-income countries produce coffee that does not always meet the quality standards demanded by international buyers. Researchers are conducting a randomized evaluation to test whether providing traders “bonuses” for high-quality coffee affects the prices traders offer farmers for their coffee and whether this, in turn, affects farmers’ incentives to invest in the quality of their production.

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In international markets, high-quality coffee that is ripe, undamaged, and washed when processed can be sold for substantially higher prices than lower-quality coffee. Practices and technologies to improve the quality of coffee cherries, the fruit that yields coffee beans, are well established, but many farmers appear to lack the incentives to invest in adopting more intensive practices to meet international quality standards. This may be because coffee has a long supply chain of intermediary traders and processors, where only a small portion of value offered on the world market trickles up to the farmers. This project studies how the market structure of Uganda’s coffee supply chain affects the transmission of quality incentives up to producers and, in turn, how this affects the quality of coffee farmers produce.

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Coffee is almost exclusively produced in low- and middle-income countries, and smallholder farming accounts for up to 80 percent of global coffee production. Close to 1.32 million Ugandan farmers rely on coffee as their primary source of income. In Uganda’s Rwenzori region, rural households earn an average of US$624 a year, the majority of which comes from coffee sales. With an average family-size of just under six people per household, many coffee farmers in Uganda live under the US$2 a day extreme poverty line.

At the top of the supply chain, small-scale farmers grow coffee cherries. Traders, then, buy the cherries raw or minimally processed from smallholder farmers, process it, and sell it to large coffee exporters. Coffee exporters pay traders based on a

price scale that mirrors a quality rating gradient.

Premium quality is defined as sun-dried coffee that has a moisture content of 14 percent or lower, foreign matter below 2 percent, and total defects below 30 percent. There are a number of ways in which farmers can enhance the quality of their coffee cherries, including applying fertilizer appropriately, trimming trees at the recommended intervals, selectively harvesting only ripe cherries, and engaging in appropriate post-harvest drying, processing, and storage behaviors.



Coffee farmer in Uganda spreading beans in the sun to dry.

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Researchers, in partnership with a large coffee exporting company and Innovations for Poverty Action, will conduct a randomized evaluation to test whether providing traders “bonuses” for high-quality coffee affects the prices traders offer coffee farmers and farmers’ incentives to invest in the quality of their production. The researchers will offer randomly-selected traders across 172 market areas (parishes) a bonus for buying and selling high-quality coffee. The researchers will offer eligible traders an extra bonus of UGX 250 per kilogram of high-quality coffee (about US$0.07). They will then measure how much of this quality premium is passed on to farmers.

In order to examine the role played by competition, researchers will randomly vary the number of traders that receive the bonus in each parish, dividing these market areas into three groups:

1. *High competition*: All traders in these parishes will be offered the bonus for buying and selling higher-quality coffee.

2. *Medium competition:* Half of the traders in these parishes will be offered the bonus for buying and selling higher-quality coffee.
3. *Comparison*: No traders in these parishes will be offered the bonus for buying and selling higher-quality coffee.

Researchers will conduct surveys with traders and farmers throughout two agricultural seasons, in March to May 2021 and again in September to November 2021. They will examine how the bonus affects the prices traders pay farmers for high- versus low-quality coffee, measuring whether traders "pass through" some of their bonus to farmers. They will measure if the bonus affects coffee quality by measuring the traders' own investments, in terms of sourcing and processing efforts, as well as if farmers' quality investments change (e.g., changes to production practices). Researchers will also observe farmers' coffee gardens and collect coffee samples from traders to be analyzed in a professional lab to assess the quality of coffee available in the market. The coffee export company will also provide administration data on purchases and sales, containing information on the transacting partner, quantity, price, and detailed quality specifications from their professional testing lab.

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Research is ongoing; results are forthcoming.