



Customer knowledge and the price-quality gradient

Julia Cajal-Grossi, Lore Vandewalle and Chris Woodruff

- Access to sophisticated markets in high-income countries is a fruitful pathway for firms' quality upgrading in developing economies. However, this opportunity is limited to larger firms that can overcome entry barriers into foreign markets.
- The vast majority of micro and small enterprises in low-income countries cannot reach beyond their local markets, limiting the scale and impact of traditional market access policies for quality upgrading.
- This policy brief presents findings from a framed field experiment showing that providing information to consumers about how to assess quality can improve quality discernment. This, in turn, can increase their willingness to pay for higher-quality products in Uganda's wooden furniture market.

POLICY BRIEF UGA-22234

APRIL 2025

This project was funded
by IGC Uganda

theigc.org

DIRECTED BY



FUNDED BY

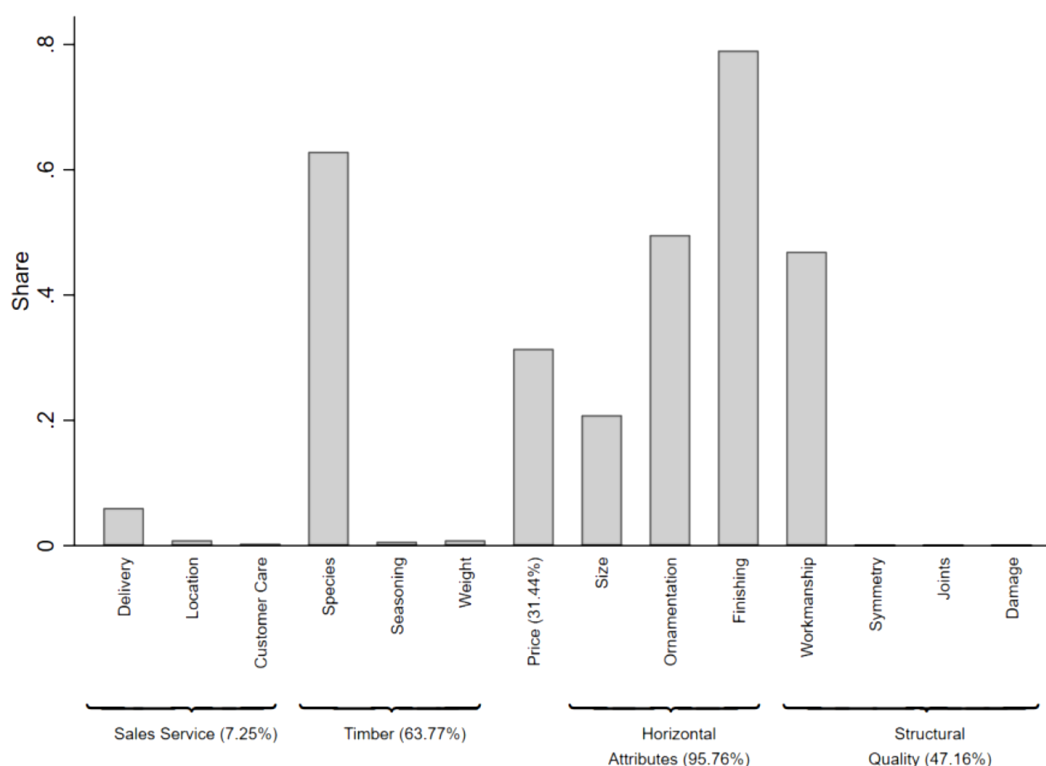


The market for artisanal carpentry in Uganda

The artisanal furniture sector in Uganda exhibits several key features that are common among consumer markets in low-income countries. First, alongside substantial horizontal product differentiation, furniture items vary widely in their vertical quality, intended as measurable physical attributes that affect structural integrity, stability, and durability. Second, the sector is characterised by a high agglomeration of small carpentry workshops serving predominantly non-expert local customers. Most workshops have around three workers, produce multiple product categories, and sell either from stock or to order. Third, the demand side consists primarily of individual consumers with basic education and limited search intensity when purchasing furniture. When choosing what to purchase, these buyers typically focus on price and horizontal attributes (style, colour) rather than vertical quality indicators (Figure 1). A smaller segment of "industry insiders" – wholesalers, middlemen, and other carpenters – represents more knowledgeable buyers in the market.

Crucially, we document a flat price-quality gradient in this market: prices do not increase significantly with measured vertical quality in furniture items. This suggests limited market incentives for carpenters to invest in quality improvements. The question is whether this relationship reflects consumer preferences or simply consumers' inability to discern quality differences.

FIGURE 1: Customers' criteria for buying wooden furniture (ex-ante)



Note: The figure above shows the features that were possible answers to the question, “What are the three most important aspects you consider when buying furniture?”. The bars represent the percentage of the 897 respondents in our experiment who reported each feature as an answer to that question. Multiple responses were allowed. The horizontal curly brackets group related features into categories, with each category displaying the proportion of respondents who mentioned at least one feature within it.

Research design

Our experiment tests whether providing information on quality assessment can improve consumers' ability to discern quality and increase their willingness to pay for higher-quality products. We worked with eleven carpentry workshops across different quality strata in the Ugandan furniture market. We procured sets of identical small tables, controlling for design and wood species to limit horizontal differentiation.

Three master carpenters independently assessed the quality of each table, providing highly consistent ratings that we used as our objective quality measure. We then:

- set up four experimental kiosks in two popular furniture marketplaces in Greater Kampala (Figure 2)
- recruited passing customers looking to buy furniture
- presented each participant with a quasi-random set of five tables of varying quality to assess
- asked participants to rank the tables by quality, with monetary incentives for correct rankings
- elicited willingness to pay for each item
- randomly provided some participants with a short training on how to assess furniture quality (treatment) while others received information about buying Ugandan-made furniture (control)
- allowed participants to revise their quality rankings and willingness to pay statements

Over a three-month period, more than 700 customers participated, with approximately 80% being individual consumers and 20% industry insiders.

FIGURE 2: Framed field experiment in furniture outlets in Uganda

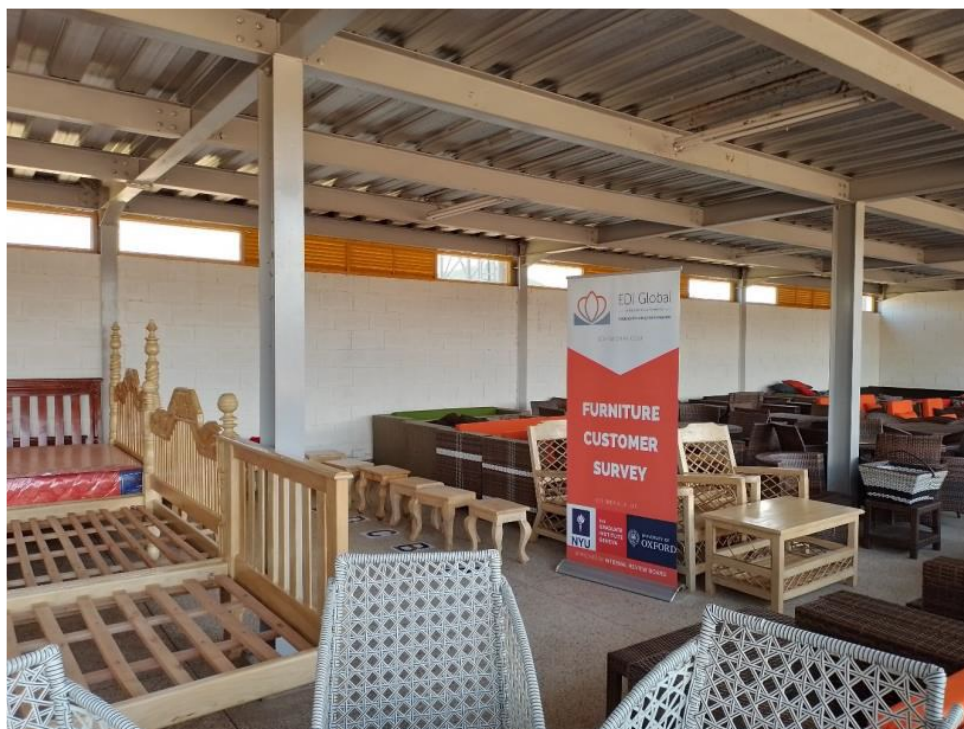


Image credit: research fieldwork team

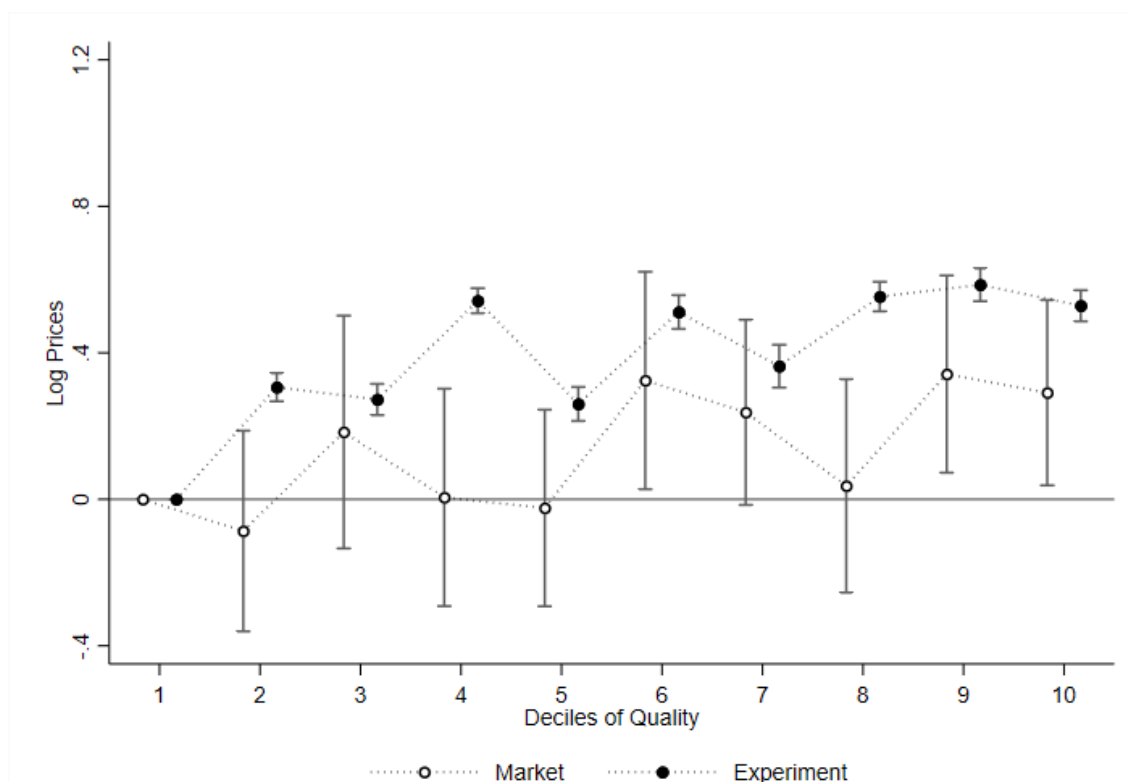
Note: Two major furniture markets with high customer traffic in Greater Kampala were selected: Nateete and Kigo. These markets offer a wide range of products and varying qualities. For seven weeks (March-May 2023), two spaces at each market were rented, and enumerators surveyed a total of 897 respondents who consented to participate. Of these, 727 were individual consumers, and 170 were industry insiders, including 36 resellers and 134 carpenters.

Baseline quality discernment and price-quality gradients

At baseline, we find that individual consumers struggle to accurately assess quality, compared to industry insiders. While most customers (96%) can correctly identify the worst and best items, discernment between items of intermediate quality is challenging. Approximately only one-fifth of all respondents can correctly rank all five tables.

Individual consumers also show a flat price-quality gradient in their willingness to pay, mirroring what we observe in the broader market (Figure 3). By contrast, industry insiders show a steeper price-quality gradient, though not as steep as the expert-recommended prices from a group of master carpenters that supported our study.

FIGURE 3: Price-quality gradient in the market and in the experiment at baseline



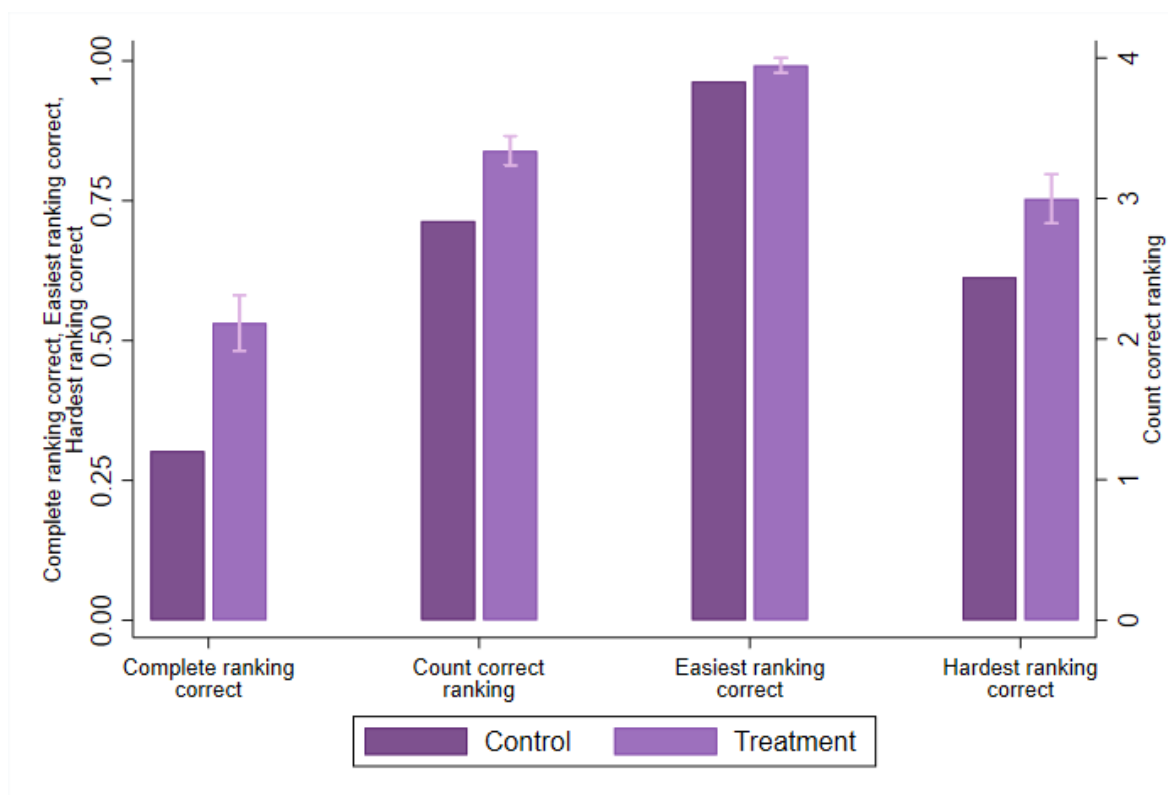
Note: The graph above presents the estimates of the coefficient on each decile of quality in the regressions of the table-level and table-respondent-level logarithmic prices in the Market and the Experiment, respectively. We assign tables in the experiment to deciles of quality in the market such that a table in the experiment that is assigned to bin 1 corresponds to a table comparable to tables in the lowest decile of the quality distribution in the market. Analogously, a table in the experiment assigned to bin 10 has a quality comparable to the top decile in the market. Both Market and Experiment regressions include fixed effects for varieties (product group, type, and size), type of finishing, ornamentation level, wood species, and enumerator. In addition, the Experiment regression further includes respondent-fixed effects. Bootstrapped standard errors are clustered at the carpenter and the respondent level in the Market and the Experiment, respectively. These estimations are performed over a total number of 383 tables in the market and 4,485 observations in the experiment, corresponding to 40 tables and 897 respondents. A regression of the respective specification with the same structure but with a linear restriction on the deciles of the quality measure gives a slope of 0.037 (S.E. 0.009) in the Market and 0.056 (S.E. 0.002) in the Experiment.

Information improves quality discernment and steepens the price-quality gradient

Our intervention produces three key findings. First, individual consumers are significantly worse at assessing furniture quality compared to industry insiders at baseline. Second, our brief training intervention significantly improves consumers' ability to discern quality. Treated individuals are 23 percentage points more likely to rank all items correctly compared to the control group (Figure 4). This improvement is driven primarily by individual consumers, who catch up to the quality assessment abilities of industry insiders. Third, the information intervention steepens the price-quality gradient among individual consumers. Treated consumers adjust their willingness to pay downward for the lowest quality items (by approximately 15% of the average willingness to pay) and upward with increases in quality, offering an additional 1,700 UGX per unit

of quality on a 1-10 scale. Industry insiders, who were already more knowledgeable, show no significant change in their price-quality gradient.

FIGURE 4: Treatment effects on quality discernment



Note: The graph presents the outcome of linear regressions of the experiment outcomes after treatment on the respondent's type and treatment status. A unit of observation is a respondent. In Complete ranking correct, the dependent variable is a dummy for the respondent ranking all tables correctly. In Count correct ranking, the dependent variable is the number of tables the respondent ranked correctly. While each respondent ranks five tables, if four are ranked correctly, the fifth one also is, hence the outcome in Count correct ranking spanning only the [1,4] interval. Due to its different scale compared to the other three outcomes, Count correct ranking is plotted on the secondary axis. In Easiest ranking correct, the dependent variable is a dummy for the respondent ranking correctly the tables for which the ratings of the master carpenters differ most. In Hardest ranking correct, the dependent variable is a dummy for the respondent ranking correctly the tables for which the difference in the ratings of the master carpenters is the smallest. The correctness of the respondent's rankings is based on the ratings of the master carpenters. The regressions include location-fixed effects (Kigo stall or Nateete stall).

These results demonstrate that simple information provision can effectively improve consumers' ability to discern quality. This, in turn, increases their willingness to pay for higher-quality products.

This suggests that targeted information policies may be a viable, low-cost alternative to traditional market access interventions for stimulating quality upgrading among the vast number of small-scale producers in low-income countries.