Household Preference Heterogeneity for Organic and Fairtrade Yellow Chilli in Lima, Peru

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Abstract

Certifying agricultural goods as organic and Fairtrade opens up two niche markets with potential benefits for both the environment and farmers in developing countries. Those certifications are expanding among farmers with access to external markets, but not among marginal farmers supplying internal markets in Peru. Those latter farmers state that national consumers are not willing to pay differential prices for certified products. In this research, we used a choice experiment to evaluate household marginal willingness to pay (mWTP) for three Organic and Fairtrade certification attributes: environmental protection, product without pesticides, and improvement in the quality of life of farmers. Yellow chilli was used as case study, because it is widely used for food preparation in Lima, Peru.

A face-to-face survey was conducted with 205 households. Each respondent answered two choice sets. Those choice sets included different combinations of organic and fair-trade attributes (indicated as present or absent) as well as five price levels (S/.6, 7, 8, 9, 10) plus the status quo, which was the current product without certifications with a base price of S/.5. The population sampling procedure was random and stratified by districts. The results were evaluated under homogeneous assumptions using a Conditional Logit (CL) model, and under heterogeneous assumptions using a Random Parameter Logit (RPL) model.

The RPL was preferred to the CL model based on the Bayesian Information Criterion estimates. This suggests that there is continuous preference heterogeneity across households. In addition, the standard deviations of Organic and Fairtrade attributes were statistically significant. This indicates that different households possess individual-specific parameters that are different from the sample population mean parameter estimates for those attributes.

The average mWTP were calculated from the individual-specific mWTP for Organic and Fairtrade attributes. The results suggest that households derive positive and significant values from both types of attributes, with a larger preference for yellow chilli cultivated without pesticides (S/.16.0, Peruvian Soles), and almost equal preference for environmental protection (S/.9.5) and improvements in farmer's quality of life (S/.9.3). Therefore, it is recommended that farmers advertise their yellow chillies as "cultivated free of pesticides" in Lima, Peru.

Keywords: *Capsicum*, marginal willingness to pay, Peru, random parameters model

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