

RETAILER, MANUFACTURERS, AND INDIVIDUAL CONSUMERS: MODELING  
THE SUPPLY SIDE IN THE KETCHUP MARKETPLACE\*

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ABSTRACT

We construct a model of a local ketchup market of a city in Texas that accounts for household, manufacturer, and retailer decisions. That is, the model develops both the demand and the supply side of the market. The demand side is modeled through a latent utility framework allowing for the ‘no-purchase’ option. Accounting for both sides of the market allows one to check for any endogeneity problems on the demand side. The supply side is modeled through the profit maximizing decisions of both the manufacturers and a multi-product retailer. Accounting for both the retailer and the manufacturer decisions allows one to evaluate the degree of manufacturer competition, the retailer-manufacturers interactions, and the retailer product-category pricing. Given the model assumptions, and for the market being studied, we find that not accounting for demand endogeneity can create bias in the estimation, that the retailer seems to be pricing below the static profit-maximizing prices for two out of the three brands in the analysis, and that the inferred marginal wholesale prices are below the equilibrium uniform wholesale prices for two brands. We provide a discussion of the results with regard to channel bargaining, quantity discounts, and retailer category pricing.