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"Bargaining in the Supply Chain" (Dissertation)

I show how the presence of private label products affects retailer-manufacturer bargaining and market outcomes. I first introduce a novel bargaining protocol in which firms bargain not only over wholesale prices, but also over retail prices. I show that bargaining over both wholesale and retail prices allows firms to earn higher profit than by bargaining over just wholesale prices. This is consistent with the observation made by various empirical studies that there is a high degree of channel coordination between manufacturers and retailers. Moreover, I show that bargaining over wholesale and retail prices is pro-competitive, as it leads to lower predicted retail prices in equilibrium than wholesale-only bargaining.

I then apply my model to data on U.S. domestic wine sales in 2015 and estimate the effects of private label wines on pricing and surplus-sharing in vertical relationships. Since both the cost of production and wholesale prices are unobserved, I identify the model parameters by supplementing private retailer data with data from states in which the sale of wine is controlled by the state and retail markups are fixed. I observe wholesale prices in the state data, which I use in the optimal pricing equation to identify the marginal cost. I then combine this (pseudo) marginal cost with my data on private retailer wine sales to identify the demand and bilateral bargaining parameters. My estimates suggest that bargaining power and the resulting division of channel profits are roughly even between retailers and manufacturers, but larger firms tend to have higher bargaining power and channel profit share. Using these model-based estimates, I next study how retailers use private label products to improve their bargaining position with manufacturers. I find that offering private label products significantly increases retailers' profit from national brands compared with a scenario in which private labels are treated as national brands. Consumer surplus is unambiguously larger in the presence of private labels, but competing retailers and manufacturers are harmed. As a result, the average net effect of private labels on welfare is slightly negative. Finally, I find evidence that the wholesale and retail price bargaining model provides a better fit to the data than previously used models.

JEL Codes: L14, L81, M31

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