

Discussion of Retail Competition and the Dynamics of Consumer Demand for Tied Goods

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Research Question

OBSERVATIONS:

- ▶ Product: One-way complementarity
- ▶ Channel coordination: Incentives not aligned (manufacturer vs. downstream)
- ▶ Asymmetry of competition: Internalization depends on the extent of market power
 - ▶ Manufacturer versus retailers
 - ▶ Yet another form of asymmetry across downstream firms within the same market

AIM: Calibrating the differences in incentives in razor/blade pricing of retailers/manufacturers by looking at differential quantity responses to a price change.

- ▶ Change in quantities in each channel and total in the long run; externality measurement
- ▶ Break down of changes: to competitor, to the outside good, switching between stores

Demand Model

THE STRUCTURE

Estimated parameters of interest: $\alpha, \gamma, \lambda, \phi, c$

- ▶ Partial lock-in; choice set is dependent on state
- ▶ Choice of which store to accumulate inventory
- ▶ Heterogeneity
- ▶ ϕ incorporates market power of a store, drives price expectations, stock-out expectations and the decision of when/how much to purchase
 - ▶ ϕ independent of prices at stores or blade inventory
 - ▶ Estimated, corr. with other demand parameters
- ▶ Choice over package size: Some consumers stock up more than others, due to heterogeneity in α and c
 - ▶ No heterogeneous storage costs
 - ▶ Disposable > Mach3?

Demand Model - some thoughts

SWITCHING

- ▶ Table of switches, how many for each type of switch. What is it mostly out of?
- ▶ If switch, $u_{rj}(\rho, b, p_k) = \gamma_r - \alpha p_{rjk} + \lambda_\rho b + \varepsilon_{rj}$
 - ▶ A way to deal with blades left over from old technology.
- ▶ Higher stock of previous blades: more likely to switch.
 - ▶ Are any of the reasons that induce switching likely to be correlated with (potentially unobservable/misspecified) factors that result in high stock of blades?
 - ▶ Does the identity of blades matter in the magnitude of salvage value beyond price differences?

SWITCHING COSTS BEYOND EXPENDITURE?

$$u_{rj}(\rho, b, p_k) = \gamma_r - \alpha p_{rjk} - \Delta_r + \sum(\text{left-over consumption value of } b_\rho) + \varepsilon_{rj}$$

Give metering another chance

METERING

Preliminary results:

$\text{Corr}(c_i, \gamma_{ir}) < 0$ High usage, less blade utils

$\text{Corr}(\alpha_i, c_i) < 0$ High usage, more sensitivity to price

- ▶ Investigate correlation of WTP for technology and usage
- ▶ Look at *marginal versus the average consumer that has chosen* the technology
- ▶ Investigate metering and lock-in

Looking into the Second Type of Asymmetry

CALIBRATION

- ▶ Second Asymmetry:
 - ▶ How does the incentive difference change with distribution of ϕ of a given store type? (separating "selection" of consumers)
 - ▶ If Costco has higher blade prices, how much less is the misalignment of Safeway's incentives with the manufacturer?

PRICE DISCRIMINATION BEYOND METERING

- ▶ Store visit probabilities determine market power for retailer
- ▶ Store visits correlate with consumer preference parameters
- ▶ Manufacturer can price discriminate: bulk in Costco
- ▶ Preference over bulk buying is incorporated already
- ▶ Measure quantity response to changing the price in different stores; identify the difference that is due to heterogeneity in WTP of consumers who shop at given stores more often.
- ▶ How much of bulk-selling at Costco is a "problem" inducing Safeway to distort prices more, versus a "tool"? Would be great to tradeoff benefits of price discrimination across stores with increased incentive misalignment.