Assessing the Impact of Manufacturer Power on Private Label Success in an Equilibrium Framework. Simba Pasirayi W. P. Carey School of Business Arizona State University spasiray@asu.edu

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Introduction

- Private labels have grown rapidly over the past decade I estimate a structural model of the South African bread market 2004 – 2014 annual sales rose by over 40% in wherein retail prices are determined both by consumer supermarkets and by 96% in drug chains. demand, and equilibrium responses by manufacturers.
- Market shares are 43% in the UK, 40% in Germany, 54% in Switzerland, and 18% in the US.
- Private label growth is not uniform globally.
- In Africa, Asia and South America market shares average about 3%.
- In 2012, market shares were, 5.3% in Egypt, 4.5% in India, 3.5% in Brazil, 2.3% in China and 9.5% in South Africa's market.
- Why do Private labels market shares vary between "developed" and "emerging" economies?



Research Objectives

- To explain the relatively low private label penetration rates observed in emerging markets.
- To examine conditions in which Private labels fail.

Hypotheses

- In most emerging economies, national brand manufacturers produce private labels.
- National brand manufacturers in this supply arrangement possess market power.
- NB manufacturers prevent retailers from entering the market.
- NB manufacturers offer retailers high margins on private labels and lower margins on national brands, so the two margins are in equilibrium. This discourages retailers from pursuing aggressive
- private label programs resulting in low private label market shares.

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Model Specification

Consumer Demand

 $U_{ijt} = X_{jt}\beta_i - \alpha_i p_{jt} + \xi_{jt} + \varepsilon_{ijt}$ • x_i is a vector of characteristics for product *j*, p_{it} represents the price of product *j* during time period *t*

Retailer Pricing

$\prod_{j} = \sum_{j \in S_r} M \cdot (p_j - w_j) \cdot S_j (p)$ • w_i is the manufacturer price paid by the retailer for product j, S_i is the quantity demanded of product *j* which is a function of

the prices of all J products, S_r is the set of products sold by retailer r, M is the size of the local market

Manufacturer Pricing

$$\prod_{j}^{m} = \sum_{j \in G_{f}} M \cdot (w_{j} - c_{j}) \cdot S_{j} \quad (m_{j} - c_{j}) \cdot S_{j}$$

• c_i is the marginal cost of producing product *j* incurred by the manufacturer. G_f is the set of products sold by manufacturer m • The implied price-cost margins for the whole channel are obtained by substituting for retail and manufacturer prices.

$p - c = -(T_m * \Delta_m)^{-1}S(p) + \Delta_r^{-1} \cdot S(p)$

Measuring Market Power

 $p = c + \phi m^R + \theta m^M$

•	$m^M = -(T_m * \Delta_m)^{-1}S(p)$ is the man	ufacture r
•	$m^R = \Delta_s^{-1} \cdot S(p)$ which is the retailer	's margin

- Deviation of the manufacturer margin θ and the retail margin ϕ
- θ estimates market power where $\theta = 0$ implies no market
- power.
- $\theta > 0$ and $\phi > 0$ implies market power.

Counterfactual Simulations

- Market where retailers either produce their own private labels or acquire them from independent manufacturers. Market without private labels.

(p(w))

re margin

Results

Demand Parameter Estimates			Supply Side Estimation Results.		
	Parameter	Standard		Parameter	Standard
	Estimates	Errors		Estimates	Errors
Albany Superior	-1.5786*	2.079	Constant	0.312*	2.333
Pick'n Pay	-7.216*	2.786	Electricity	0.95	1.528
Star	-5.316	1.554	Flour Prices	-0.001	-0.912
Sunbake Brown	-3.305*	2.550	Wheat Prices	0.008*	7.443
Spar White	-6.5147*	2.479	Albany Superior	-1.486*	-9.156
Blue Ribbon Brown	-3.541	1.439	Pick'n Pay	-1.952*	-12.065
Shoprite	-8.273	2.654	Star	-1.681*	-10.420
Blue Ribbon Classic	-1.894*	0.284	Sunbake Brown	-1.767*	-10.887
Albany Superior Brow	-4.578	0.211	Spar White	-1.815*	-11.114
Sasko White	-5.478	2.341	Blue Ribbon Brown	-1.477*	-12.985
Woolworths White	0.472	2.008	Shoprite	-2.067*	-12.692
Sasko Premium	-0.907	0.420	Blue Ribbon Classic	-1.511*	-11.578
Sunbake White	0.348*	0.393	Albany Superior Brow	-1.4789*	-11.789
700g	0.412	0.262	Sasko White	-1.3868*	-11.448
Price	-7.843*	4.082	Woolworths White	-1.583*	-10.870
Income	0.227	0.026	Sasko Premium	-1.366*	-10.247
Household Size	-0.713	0.421	Sunbake White	-1.932*	-9.557
Price × Income	3.296	0.672	ϕ	0.056*	2.008
Price × HHSize	-0.641	0.324	θ	0.121*	5.140
R ²	0.654		R ²	0.1478	

Conclusion

- Manufacturers generally price in excess of purely competitive levels implying that they have inherent market power.
- National brand manufactures market power is highest when they are the sole producers of private labels.
- Retailers' private label retail margins increase with manufacturer market power meaning that NB manufacturers offer retailers relatively high margins on private labels.
- Thus, retailers forego private production as they still earn the same margins as on national brands and have no incentives to promote or push private labels across their stores, resulting in low private label market shares.

