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A COMPARISON OF FMCG INDUSTRY IN INDIA AND THE USA: THE CASE OF LAUNDRY DETERGENT MARKET

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ABSTRACT

The Indian fast moving consumer good (FMCG) is projected to grow significantly over the next decade or so. In this paper, a detailed comparison of the detergent category for the Indian and the US markets has been presented. Using brand level sales, price, and promotion data, Logit demand functions has been estimated for both Indian and the US markets. The model provides us estimates of the “equity” enjoyed by various brands as well as measures of price elasticity. The results show striking differences between the two markets suggesting the need for MNC’s operating in India to globalize their strategies to adequately reflect the preferences of Indian consumers.

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INTRODUCTION

Products which have a quick turnover, relatively low cost and get replaced within a year are known as Fast Moving Consumer Goods (FMCG). The Fast Moving Consumer Goods (FMCG) industry primarily deals with the production, distribution and marketing of consumer goods, i.e. those categories of products that are used at regular intervals. Its principal constituents are Household Care, Personal Care and Food & Beverages. A few of the examples of FMCG generally include a wide range of frequently purchased consumer products such as toiletries, soap, cosmetics, tooth cleaning products, shaving products and detergents, as well as other non-durables such as glassware, bulbs, batteries, paper products, and plastic goods. FMCG may also include pharmaceuticals, consumer electronics, packaged food products, soft drinks, tissue paper, and chocolate bars. India’s FMCG sector is the fourth largest sector in the economy and creates employment for more than three million people in downstream activities. The total FMCG market is currently growing at double digit growth rate and amounts to about more than Rs. 85,000 Crores. It is characterized by a well established distribution network, low penetration levels, low

operating cost, lower per capita consumption and intense competition between the organized and unorganized segments. Evidence suggests that urban people spend large sum on FMCG products every month. Table 1 provides information about top ten towns/cities with high spending on FMCG products. Detergents are one of the important items of FMCG market and its market is estimated to be Rs. 12,000 Crore. The Indian fabric wash market consists of synthetic detergents (comprising bars, powder and liquids) and oil-based laundry soaps. Household care segment is characterized by high degree of competition and high level of penetration. With rapid urbanization, emergence of small pack size and sachets, the demand for the household care products is flourishing. The demand for detergents has been growing but the regional and small unorganized players account for a major share of the total volume of the detergent market. In washing powder HUL is the leader with 38 per cent of market share. Other major players are Nirma, Henkel and Proctor & Gamble. There is an upward trend in urban as well as rural market and also an increase in spending in organized retail sector. An increase in disposable income of household mainly because of increase in nuclear family where both the husband and wife are earning has leads to growth rate in FMCG goods. People are becoming conscious about health and hygiene. There is a change in the mind set of the consumers, who are now looking at “Money for Value” rather than “Value for Money”. Consumers are

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switching from economy to premium product even we have witnessed a sharp increase in the sales of packaged water and water purifier. Although the per capita consumption of detergents in India (2.7 kg pa) is comparable to some countries like Indonesia, China and Thailand (around 2 kg pa), it is lower than in others such as Malaysia, Philippines (3.7 kg) and the USA (10 kg). The Indian detergent market is expected to grow at 7-9% pa in volume terms. However, the synthetic detergent market can be classified into premium (Surf, Ariel), mid-price (Rin, Wheel) and popular segments (Nirma), which account for 15%, 40% and 45% of the total market, respectively. The product category is fairly mature and is dominated by two players, HLL and Nirma. Nirma created a revolution in the market by pioneering the concept of low-cost detergents. High consumer awareness and penetration levels have enabled the market to grow at a reasonably higher rate with slightly higher growth in the rural areas. Higher penetration stems from popularity of low-cost detergents. Hence, besides increase in per capita consumption, there is tremendous scope for movement up the value chain.

Vast Rural Market: Rural India accounts for more than 700 Million consumers, or about 70 per cent of the Indian population and accounts for about 50 per cent of the total FMCG market. An average citizen in rural India has less than half of the purchasing power as compared to his urban counterpart. Still there is an untapped market and most of the FMCG Companies are taking different steps to capture rural market share. The market for FMCG products in rural India is quite high and estimated to be about 60 per cent. Large young population in the rural and semi-urban regions is driving demand growth, with the continuous rise in their disposable income, life style, food habits etc. While, on the supply side, the wide availability of raw materials, vast agricultural produce, low cost of labor and increased organized retail have helped the competitiveness of players. FMCG products have a few main characteristics both from the consumers' perspective: (1) Frequent purchase, (2) Low involvement (little or no effort to choose the item -- products with strong brand loyalty are exceptions to this rule), and (3) Low price and from the marketers' angle: (1) High volumes, (2) Low contribution margins, (3) Extensive distribution networks, and (4) High stock turnover ((Ramanuj Majumdar, 2004):^[1]

Table 1. Top ten highest spending on FMCG products

Rank	Towns	States	Average Monthly Spending on FMCG Products* in Rs.
1	Chandigarh	Chandigarh	3,418
2	Greater Mumbai	Maharashtra	2,955
3	Chennai	Tamil Nadu	2,886
4	Ahmedabad	Gujarat	2,869
5	Vadodara	Gujarat	2,816
6	Pune	Maharashtra	2,804
7	Coimbatore	Tamil Nadu	2,684
8	Ludhiana	Punjab	2,674
9	Faridabad	Haryana	2,596
10	Hyderabad	Andhra Pradesh	2,533

Source India Today - R K Swamy BBDO Guide to Urban Markets

Objective of the Paper: The objective of this paper is to provide a detailed analysis of Laundry Detergent, and draw comparison between the US and Indian market. In particular, sales, price, and promotion information from both the US and Indian markets have been used to draw inferences on the market structure of the detergent industry and compare the price/promotional elasticity in the two markets. Before getting

into the specifics of the detergent industry, it would be useful to compare the two markets in terms of two broad factors that could be relevant to the FMCG industry: (1) Macroeconomic indicators that determine the size of an economy and provide a broad indication of actual and potential growth opportunities, and (2) Distribution channels through which majority of the frequently purchased products are sold.

RESULTS AND DISCUSSION

The growth rates in GDP of USA and India presented in Table 2 shows that there is sharp differences as one would expect between a developed and developing economy. While the population of India is almost 3.5 times that of USA, over two-third of the Indian population is dependent on the agricultural sector. However, the growth in Indian economy is quite evident both in absolute and per capita terms. This table highlights two important aspects of Indian economy that can be potentially relevant for the FMCG manufacturers. First, there is a large proportion on Indian population that relies on the agricultural sector and hence resides in a rural environment. Second, the growth rate of the economy is quite astounding, and is likely to trickle down to rural India over time. While the poor infrastructure and limited product availability in rural India may seem discouraging as of now, it also presents an opportunity for firms to expand into this untapped market. On the other hand, similar opportunities are limited in the US particularly for matured FMCG products.

Table 2. Relative position of USA and India in terms of population and GDP Growth (2003-04)

Particular	India	USA
Total Population (million)	111	29.3
% Dependent on Agriculture	71	8
Growth in GDP (%), 2003-04	6.9	4.2
Per Capita Growth in GDP (%), 2003-04	5.4	3.2

A second major difference between the US and Indian market lies in the channels of distribution. Like most other products, FMCG are sold exclusively through retail outlets. The distribution network in India is primarily comprised of small unorganized outlets. India has the largest retail network with 1.2 crore outlets but only a small proportion (less than 4%) is larger than 500 sq. feet in size. On the other hand, USA has 9 Lakh outlets that tend to be significantly larger in size. For instance, one of the fastest growing formats in the US is super center that combines traditional discount **sotre** format (such as Wal-Mart) with a full range grocery store and is approximately 200,000 square feet. Many of these outlets include wide range of services such as a vision center, Tire and Lube Express, a hair salon, and so forth, providing consumers with a true "one-stop shopping" experience. On the other hand, organized retail in India is still in its infancy and comprises only 3% of the total retailing market. However, organized retailing is projected to grow at the rate of 25%-30% per annum and is estimated to reach an astounding Rs 1,00,000 crore by 2010.

Marketing Strategy: Marketing strategy is a process that can allow an organization to concentrate its limited resources on the greatest opportunities to increase sales and achieve a sustainable competitive advantage ^[1]. Marketing strategies serve as the fundamental underpinning of marketing plans designed to fill market needs and reach marketing objectives.^[2]

Plans and objectives are generally tested for measurable results. Commonly, marketing strategies are developed as multi-year plans, with a tactical plan detailing specific actions to be accomplished in the current year. Time horizons covered by the marketing plan vary by company, by industry, and by nation, however, time horizons are becoming shorter as the speed of change in the environment increases.^[3] Marketing strategies are dynamic and interactive. They are partially planned and partially unplanned. Marketing strategy involves careful scanning of both the internal and external environments. Internal environmental factors include the marketing mix, plus performance analysis and strategic constraints.^[4] External environmental factors include customer analysis, competitor analysis, target market analysis, as well as evaluation of any elements of the technological, economic, cultural or political/legal environment likely to impact success.^{[3][7]} A key component of marketing strategy is often to keep marketing in line with a company's overarching mission statement.^[6] Marketing strategies may differ depending on the unique situation of the individual business. However there are a number of ways of categorizing some generic strategies. A brief description of the most common categorizing schemes is presented below:

- Strategies based on market dominance - In this scheme, firms are classified based on their market share or dominance of an industry. Typically there are four types of market dominance strategies such as : (1) Leader, (2) Challenger, (3) Follower, and (4) Nicher
- Porter generic strategies - strategy on the dimensions of strategic scope and strategic strength. Strategic scope refers to the market penetration while strategic strength refers to the firm's sustainable competitive advantage. The generic strategy framework (porter 1984) comprises two alternatives each with two alternative scopes. These are *Differentiation* and *low-cost leadership* each with a dimension of *Focus*-broad or narrow.
 - Product differentiation (broad)
 - Cost leadership (broad)
 - Market segmentation (narrow)
- Innovation strategies - This deals with the firm's rate of the new product development and business model innovation. It asks whether the company is on the cutting edge of technology and business innovation. There are three types of such strategies such as (1) Pioneers, (2) Close followers, and (3) Late followers.
- Growth strategies - In this scheme one can ask the question, "How should the firm grow?" There are a number of different ways of answering that question, but the most common gives four answers such as (1) Horizontal integration, (2) Vertical integration, (3) Diversification, and (4) Intensification. Moreover, a more detailed scheme uses the categories^[8] namely (1) Prospector, (2) Analyzer, (3) Defender, and (4) Reactor.
- Marketing warfare strategies - This scheme draws parallels between marketing strategies and military strategies.

Table 3. India's vs USA : Different Distribution Structure

Country	USA	INDIA
Total Retail Value (US \$ billion)	2325	180
% Share of Traditional Trade	15	98
% Share of Modern Trade	85	02

Source: A C Nielsen

The growth of organized retail in India can be expected to follow a similar pattern as in the USA, where grocery retailing traditionally consisted of small general stores, most of which were independent, family-owned businesses. These stores generally operated on the principle of high margins and low turnover. The Atlantic and Pacific Tea Company (A&P) introduced the concept of an organized multiple-store network in the US, marking the transition to a new phase in grocery retailing and the birth of the chain store. With multiple stores, A&P generated the high volumes necessary to obtain quantity discounts from manufacturers while reaping economies-of-scale benefits on their self-produced private label items.

In the US, the supermarket format emerged in the 1930s. While A&P first brought high volume and low prices to the grocery industry, supermarkets took this concept to new level. Supermarkets were much larger than the existing grocery stores and were located primarily in low-rent areas. They offered limited store services and relied on nationally advertised brands as opposed to private labels. Over time, supermarkets grew in importance, and by 1970 they had become the primary food distributor, replacing the smaller grocery stores. Over the past couple of decades, food retailing in the US has gone through another transition with the rapid growth of alternative retail formats that have entered the grocery business on a large scale. These formats range from value-oriented retailers (e.g., Supercenters and Price Clubs) that are typically significantly larger in size compared to supermarkets, to smaller high-end specialty stores (e.g., Trader Joe's, Whole Foods) that provide consumers with an upscale product offerings.

The organization of the retail sector has important implication for the FMCG manufacturers for several reasons. First, the sheer size of organized chains gives them significant bargaining power with the manufacturers. Second, retailers have the ultimate authority in setting prices to the consumers and often use "loss leader" pricing where a particular brand (e.g. Pepsi) may be sold at a significant discount, quite often below cost to the retailer. This phenomenon is rarely if ever observed in the Indian market. Similarly, the practice of slotting allowance, which is a lump sum payment by manufacturers to retailers just to carry their products in their stores, is a common practice in the US which is non existent in India. A consequence of the growth of downstream firm is the change in marketing practices by manufacturers in the US that rely significantly on trade promotions (given to the retailer) as opposed to advertisements and promotions directed towards the consumers as in the Indian market. Finally, another common practice in the US is for retailers to sell their own brands often referred to as private labels. These "store brands" constitute approximately one-fourth of total sales of FMCG products and the retailers are responsible for all aspects of sales including procurement, warehousing, merchandising and marketing. For instance, one of the leading national retailers in the US, Kroger, operates nearly 40 manufacturing plants for its three quality tiers private labels encompassing 7,800 products. While organized retail in India is growing at a fast pace, it has a long way to go before reaching a similar structure as in the US. In addition, the vast urban/rural divide and different retail formats like Kirana, Paan shops, General stores, and so on makes the distribution structure of India vastly different from the US.

Table 4. Price and Sale of Top 10 Products of Detergents in USA (1993-2000)

Brand	Size (In Oz)	Market Share (%)	Average Retail Price (US \$)	Average Wholesale Price (US \$)	Sold on Promotion (%)
WISK	64	8	4.50	3.91	27
WISK	128	9	7.65	6.57	29
ALL	64	7	3.30	2.63	18
ALL	128	15	5.39	4.33	32
ERA	128	3	6.67	5.45	14
CHEER	64	4	4.08	3.40	7
CHEER	100	5	7.30	6.25	18
TIDE	64	10	4.64	3.96	8
TIDE	96	29	6.37	5.67	26
TIDE	128	9	9.47	8.20	20

Source:

Table 5. Average annual sales, prices, and number of retail outlets of different brands of detergents in India

Brand	Sales (MT)	Price (Rs/Kg)	Advertisement/ Promotion	No. of Retail outlets (000)
NIRMA	25653.25	20.81	7.42	1884
WHEEL	25501.58	21.09	10.71	2159
RIN ADVANCE	4514.11	45.43	14.52	1645
TIDE	3411.15	52.88	11.87	1505
SURF BLUE	2155.65	77.64	7.98	1969
SURF EXCEL	1828.91	100.96	4.27	942
ARIEL	1637.97	102.62	12.45	1670
HENKO	651.41	83.74	2.7	367

The detergent market: data description: In this section, data from the detergent product category used in this study have been described. For the US market, data from a single market (Chicago) has been used that is summarized in the Table 4. It is clear from Table 4 that the shares and retail prices of top ten products in the detergent category, which jointly account for over 85% of the total category sales and thus are quite representative of the total detergent market. Wisk and All are brands owned by Unilever whereas Era, Cheers and Tide are owned by Proctor and Gamble. Detergents are sold in primarily two sizes in the US: small (64 oz) and large (96oz, 128 oz). Large size is clearly more popular with an overall market share of approximately 70%. In terms of brands, Tide is most popular capturing almost half of the market. Interestingly, it is also the brand with highest price. For example, the 128 oz of Tide is approximately 75% more expensive than all, the cheapest brand available in this size. A potential reason for this the use of frequent price promotions in the US market, which allows the more price sensitive segment to purchase during the promoted weeks. The use of frequent promotions is reflected in the last column that shows the total percent of units sold on retail promotion. For example, of the total units sold for Whisk 64oz, 27% were sold in weeks where there was a price discount. Finally, the column labeled "wholesale price" is the price of the product charged to the retailer and thus represents the cost to the retailer. On average, the retail margin is approximately 15%. For the Indian market we use data from 8 major brands of detergents of various MNCs. These 8 brands are HENKO, RIN ADVANCED, WHEEL, NIRMA, ARIEL, TIDE, SURF EXCEL, and SURF EXCEL BLUE. This data includes monthly sales, price, advertisement expenditures, and distribution reach (as measured by number of retail outlets these brands are sold). The data are available for three years, from 2004 to 2006. Thus, we are somewhat constrained in terms of available data from the two markets. The advantage of the Indian data is that it covers nationwide sales (as opposed to only one city in the US data) and includes measures of advertisement expenditure

and distribution reach. However, it is only recorded at a monthly level rather than weekly observations.

Sales, Prices, and Retail Outlets: Sales (MT), prices (Rs/kg) and number of retail outlets where these brands of detergent are available are presented in Table 5. This table also includes promotion/advertisement based on the average of three years (2004 to 2006). It is evident from Table 4 that the detergent market is fairly concentrated with two brands--Nirma and Wheel-- accounting for almost 80% of total sales (Figure 1). In absolute terms the average annual sales of these two detergents is more 25.5 thousand metric tons (Average of 2004-06) while sale of three next important brand (RIN ADVANCE, TIDE, and SURF EXCEL BLUE) is quite low i.e. about 4.4, 3.4 and 2.1 thousand metric tons respectively (Figure 2). Compared to SURF EXCEL BLUE, the sale of SURF EXCEL is relatively low i.e. 1.8 thousand metric ton. The HENKO brand is not very popular as its sale is very low i.e. about 0.6 thousand metric ton. It was also evident from Table 5 and Figure 3 that the price of highest selling brands is lowest with price of SURF EXCEL and ARIEL nearly 5 times higher than NIRMA and WHEEL. This could be related to general income effects in a developing country like India where detergents are treated like commodities with significantly higher emphasis on price. Furthermore, with the exception of Surf Blue, the two highest selling brands also have the largest distribution network. Note also that certain lagging brands such as Tide, Rin, and Ariel spend a significantly higher amount in advertisement, perhaps as a tool to catch up with the market leaders.

Advertisement/Promotion: Comparative picture of average expenses on advertisement and promotional activities for various brands as well as their share in total distribution network is given in Table 5 and figures 5. Finally, in Figure 6 we plot the total category sales and a polynomial trend line that shows that the total sales for detergents in India are increasing over time. This could be driven due to an increase in population, increased consumption from existing customers, or perhaps more likely due to increased penetration in the rural

markets. Unfortunately, we can only speculate on this since our data is not broken down by sales in urban and rural regions.

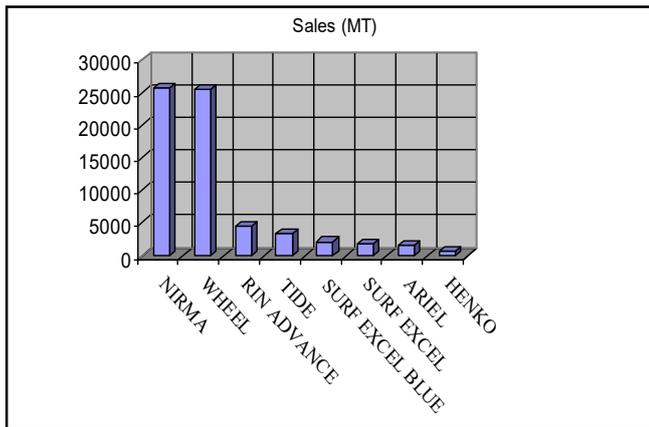


Figure 1. Share of different brands in total sales

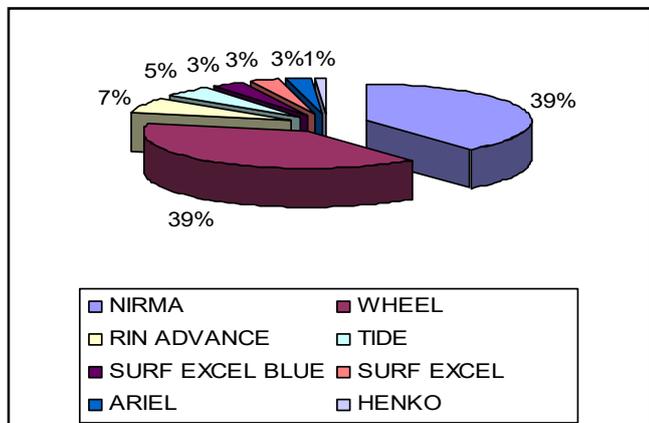


Figure 2. Average annual sales of various detergents (MT)

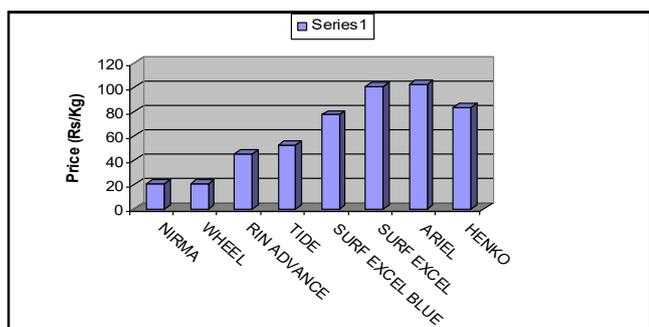


Figure 3. Average Price (Rs/Kg) of various detergents

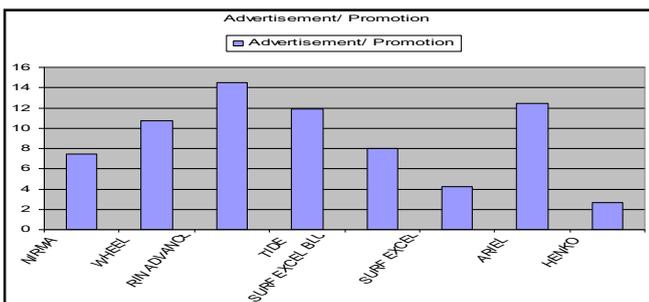


Figure 4. Average expense on promotion of various brands of detergents

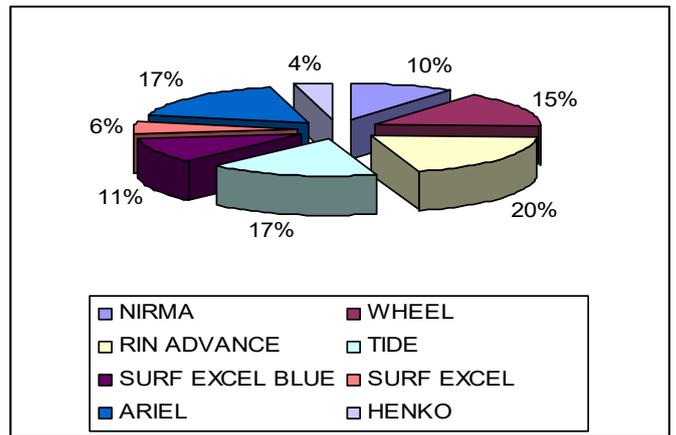


Figure 5. Share of various brands in total distribution network

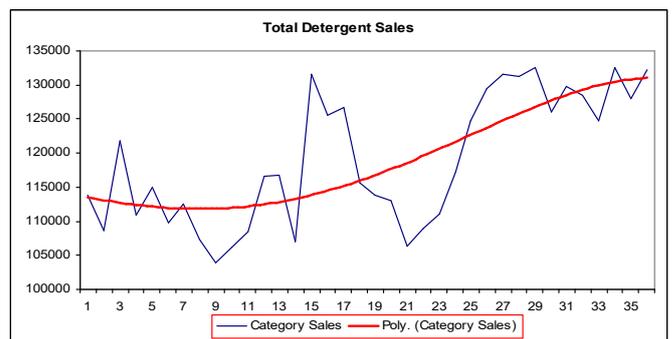


Figure 6. Total Detergent Sales (Polynomial Trend Line)

Demand model for laundry detergent

We next estimate a demand model for laundry detergents for both the US and Indian market using the data described above. Our approach is to use an aggregate Logit demand model that provides us with estimates of “intrinsic brand preference” or “brand equity” using market share data. In addition this model is significantly more parsimonious compared to say a log-log or linear demand using regression techniques. The model is specified at an individual level, where the utility for household *h*, from buying product *j* at time period *t* can be specified as follows:

$$U_{hjt} = \alpha_j - \beta \ln(p_{jt}) + \delta X_{jt} + \varepsilon_{hjt} \dots\dots\dots(1)$$

Here, α is the intrinsic brand utility that a consumer derives from purchasing brand *j* and is a measure of brand equity for brand *j*. P_{jt} and X_{jt} are the price and other marketing mix elements for product *j* that impact the probability that consumer buys product *j*. For example, for the data from the Indian market, *X* would include advertisement and reach of distribution for each brand. Similarly, for the US market, *X* would be the promotion variable described previously. Finally, ε_{hjt} is unobserved random term that is distributed iid extreme value and is assumed to be independent of the observed component. Note the utility function above is specified for an individual but the data we observe is at an aggregate level. For example, for the Indian market we have sales (and hence share) data for each brand at the monthly level. Similarly, the data from the US market is aggregate sales for each brand at a weekly level. However, the key to estimating this model is to realize that the market shares that we observe are just an aggregation of individual choices in the marketplace. Given

the extreme value assumption for the error term, the market share for brand j in time period t is given by the Logit function:

$$S_{jt} = \frac{\exp(\alpha_j - \beta_j \ln(p_{jt}) + \delta X_{jt})}{\sum_{k=1}^N \exp(\alpha_k - \beta_k \ln(p_{kt}) + \delta X_{kt})} \dots\dots(2)$$

Here, S_{jt} is the share of brand j in week t . For identification of this model we need to set the utility of one of the brands to zero. In the empirical application, we set the utility for Henko (in the Indian market) and Era 64oz (US market) as the base with utility zero. Note that all measures of brand preference would now be with respect to the base brand. In other words, if for example we find the intrinsic brand preference--the α parameters-- for say Nirma to be positive and that of Tide to be negative, we would conclude that Nirma enjoys a positive brand equity over Henko while consumers prefer Henko to Tide. Noting that exponent of zero is 1, and pulling out the utility for the base brand from the summation in the denominator, we get:

$$S_{jt} = \frac{\exp(\alpha_j - \beta_j \ln(p_{jt}) + \delta X_{jt})}{1 + \sum_{k=1}^N \exp(\alpha_k - \beta_k \ln(p_{kt}) + \delta X_{kt})} \dots\dots\dots(3)$$

$$S_{0t} = \frac{1}{1 + \sum_{k=1}^N \exp(\alpha_k - \beta_k \ln(p_{kt}) + \delta X_{kt})} \dots\dots\dots(4)$$

where S_{0t} is the share of the base brand. Given the above formulation, an easy estimation is strategy for this model is to take the ratio of market shares for each brand with respect to the base brand, and then taking the log on both sides. Simple manipulations would result in:

$$\ln(S_{jt}) - \ln(S_{0t}) = \alpha_j - \beta \ln(p_{jt}) + \delta X_{jt} + \varepsilon_{hjt} \dots\dots\dots(5)$$

Thus, with J total brands in the data we have a system of $J-1$ linear equations (since one of the brands is the base) that can be estimated in a straightforward manner in SAS using the "proc model" command. For example, for the Indian market we used the following program in SAS to estimate the model. Note that $a1-a7$ are the parameters for the intrinsic brand preference for 7 brands (one of them set to zero for identification), "bad" is the parameter for Advertisement, "bd" is the parameter for distribution, and "bp" is the parameter for price sensitivity. The results from the two markets are presented in Table 6.

Table 6. Nonlinear SUR Estimates for Detergent: Indian Market

Variable	Parameter	Std Error	t-value
Rin	-0.013	0.769	-0.020
Wheel	1.152	0.737	1.560
Nirma	1.194	0.730	1.640
Ariel	-0.529	0.817	-0.650
Tide	-0.228	0.774	-0.290
Surf Excel	-0.237	0.792	-0.300
Surf Blue	-0.462	0.805	-0.570
Advertisement	0.001	0.001	1.440
Distribution	0.304	0.042	7.290
Price	-0.627	0.084	-7.490

NOTE: Henko is the base brand

Looking first at the estimates from the Indian market, we find that Nirma and Wheel enjoy the highest brand equity as

reflected by the positive coefficients. This is not surprising since these two brands enjoy a significantly higher share in category. However, note that the intrinsic brand preference need not necessarily correspond to observed market shares. The estimates presented above from the Logit model are obtained after controlling for all other marketing mix elements namely price, advertisement, and distribution network. Thus these estimates are a measure of true "brand equity" after controlling for the impact of these marketing mix elements. This is evident b the fact that Henko (the base brand and also the brand with lowest market share) enjoys higher equity by Indian consumers compared to all other brands (except Nirma and Wheel) since the coefficients for all other brands are negative. This in turn implies that it is necessary to control for other factors in estimating brand equity and that a naïve measure using market shares can be misleading. Turning to the marketing mix estimates, we find that all coefficients have the expected sign. Higher advertisement expenditures and wider distribution network increase consumer utility, while a high price decrease utility. However, we should point out that the estimate of advertisement expenditure while in the correct direction is not statistically significant.

In Table 7, we present the results from the US market. Note that the base brand is Era-64 oz, which as shown in the summary statistics has the lowest market share. Since the estimates for all included brands are positive we can conclude that the base brand has lowest equity in this market. In general, Tide enjoys highest equity in the US market as reflected by large positive coefficients. It is also interesting that the large size of respective brands enjoy higher equity than the corresponding smaller sizes within the same brand, suggesting that consumers in the US market strongly prefer larger sizes. This could have implications for MNC's operating in the Indian markets since it is well known that Indian consumers prefer smaller unit packs, suggesting that these firms need to focus more affordable packaging as opposed to their strategies in the US market. The promotion coefficient has a positive significant sign indicating that consumers derive higher utility when products are sold on promotions. On the other hand, higher prices decrease utility as reflected by the negative and statistically significant coefficient for the price parameter.

Table 7. Nonlinear SUR Estimates for Detergent: US Market

Variable	Parameter	Std Error	t-value
WISK-64oz	2.182	0.060	36.680
WISK-128oz	3.196	0.076	42.030
ALL-64oz	1.957	0.046	42.260
ALL-128oz	2.739	0.062	44.260
CHEER-64oz	1.722	0.056	30.530
CHEER-128 oz	2.967	0.072	41.410
TIDE-64oz	2.479	0.052	47.280
TIDE-96oz	3.736	0.075	50.160
TIDE-128oz	3.879	0.091	42.590
Promotion	0.975	0.026	37.580
Price	-0.352	0.008	-42.740

NOTE: Era-64oz is the base brand

In Table 8, we convert the price parameter estimates to elasticity for all brands in the US and Indian markets. Note that the elasticity estimates reflect the change in choice probability of a brand for a unit change in price. In the logit demand model, it is a function of the price parameter, and respective price and market shares for each brand. All the estimates of own price elasticity for brands and in both the markets is greater than 1 which is consistent with standard economic theory. In relative terms, it is noteworthy that in the

Indian market, the brands with highest equity (Nirma and Wheel) have the lowest price sensitivity which is to be expected. However, in the US market, Tide 128 oz which enjoys the highest equity is also most price elastic. This is in part driven the use of frequent promotions and has been a concern for manufacturers in the US market since frequent price drops are often associated with a decline in equity in the long run since it starts to shift consumer focus away from the brand quality to price.

Table 8. Price Elasticity Estimates

WISK-64oz	-1.43	Rin	-2.22
WISK-128oz	-2.43	Wheel	-1.17
ALL-64oz	-1.06	Nirma	-1.15
ALL-128oz	-1.65	Ariel	-2.83
CHEER-64oz	-1.36	Tide	-2.36
CHEER-128 oz	-2.43	Surf Excel	-2.81
TIDE-64oz	-1.26	Surf Blue	-2.64
TIDE-96oz	-1.73		
TIDE-128oz	-3.01		

Conclusion

The Indian FMCG sector is the fourth largest sector in the economy with a total market size of over \$13 billion. The sector is projected to grow drastically over the next decade fuelled by burgeoning middle class and increased penetration in the rural sector. In this paper we provide a comparison of one product category, Laundry Detergent, and draw comparison between the US and Indian market. Using sales, price, and promotion information from both the US and Indian markets, we draw inferences on the market structure of the detergent industry and compare the price/promotional elasticity in the two markets. In addition we provide an overview of the FMCG sector with particular emphasis on the distribution channels in India which is primarily comprised of small unorganized outlets. The US market on the other hand is highly consolidated with chain grocery outlets including new players like Wal-Mart accounting majority of sales. Since consumer packaged goods are exclusively sold through retail outlets, these differences are critical and drive the adaptation of marketing strategies that multinationals need to pursue to operate in the Indian market. For instance, dominant retailers in the US have significant bargaining power with the manufacturers that have resulted in manufacturers following a “push” strategy via numerous trade promotions and deals offered to the retailers. In contrast the traditional “pull” strategy of using advertising to create awareness, build brand equity and generate demand is likely to dominate in the Indian market for the foreseeable future. Our next objective in the paper was to provide a detailed comparison of the laundry detergent market. We use sales, price, and promotion data from both the US and Indian market and estimate Logit demand functions. The model is quite appealing as it provides us with estimates of relative equity for various brands while controlling for the short term marketing mix activities. Our results again shed light on the differences between the two markets that have implications for the established and new multinationals operating in the Indian sector. For instance, we find that large package size is more popular in the US comprising over 70% of the detergent sales, while Indian consumers have a higher preference for smaller sizes. This may be driven by differences in disposable incomes in the two countries as well differences in shopping behavior, with Indian markets providing easy access to local mom and pop outlets for frequent shopping. There are also differences in relative

brand equity in the two markets. Nirma enjoys highest market share and equity in the Indian market and it is also the cheapest product in the detergent category. In contrast, the most expensive brand (Tide) enjoys highest equity and sales in the US market. A primary reason for this is the use of frequent price promotions in the US market that allows the manufacturers to capture both the price sensitive segment that buy during promotion weeks as well less price sensitive and brand conscious buyers have a higher preference for Tide. Finally, we find that the breadth of distribution network (i.e. the number of outlets that the product is available) is an important driver of sales in the Indian market. While not surprising, this is an important finding for the manufacturers operating in the Indian market since, as mentioned above, the distribution is highly unorganized in India and consumers typically shop in their neighborhood stores. Thus product availability at local shops becomes critical, which is a mute issue where all stores tend to carry major national brands. There are of course several caveats to our analysis and directions for future research. First, due to data limitations our work is focused on only one product category and it will be useful to provide a similar comparison in other categories to generalize the findings in this paper. Even in the laundry detergent category, the data and available variables are not completely compatible. For instance, the Indian data is observed at monthly level and represents sales at the national level. In contrast, the US data are drawn from a single city (Chicago) from store scanner and does not include advertising information. Finally, the Logit demand model in the paper while specified at individual consumer level is estimated using aggregate market share data. Although the logic of aggregating individual choices to obtain market shares that allows inference in our model is reasonable, it misses the detailed substitution patterns and preference estimates that can be obtained using individual choice data. In the US market research firms such as IRI and Nielsen have made available such individual purchase data using home scans, similar information is not widely available for the Indian market. In future work, making a direct comparison of Indian and US market using individual level survey or purchase information might provide significantly better insights in the mid sets of consumers in the two markets to direct marketing strategies.

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