Journal of Marketing Management
June 2019, Vol. 7, No. 1, pp. 94-104
ISSN: 2333-6080(Print), 2333-6099(Online)
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Published by American Research Institute for Policy Development
DOI: 10.15640/jmm.v7n1a8
URL: https://doi.org/10.15640/jmm.v7n1a8

Evaluating the House of Brands Strategy Using Brand Equity and Intra-Firm Loyalty

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Abstract

A common strategy of large firms is to own several brands in the same product category space (i.e., the 'house of brands') to segment the market and leverage product capacity and distribution networks. However, a purely financial view of this strategy often overlooks whether these brands have truly segmented the market to find loyal consumer segments or the value of the brand relative to the competitive space. This research proposes evaluating the house of brands strategy through two measures: brand loyalty when competing against its sibling brands (intra-firm loyalty) and the brand's ability to generate value to consumers (brand equity). A framework using these two measures proposes four brand types (resonant, change of pace, niche, do-or-die). The framework is examined using large-scale household purchases of laundry detergent brands from two large firms. The results show that each firm has brands occupying varying positions in the framework, with a linkage between intra-firm loyalty and brand equity. Importantly, some brands are seemingly kept in the marketplace despite neither finding a loyal consumer segment nor generating brand equity. The research concludes with managerial implications in using the framework as a tool for evaluating the house of brands strategy.

Keywords Brand portfolio; House of brands; Intra-portfolio loyalty; Brand equity; Markov chain

1. Introduction

A focal issue for brand managers is how to grow the brand, especially in a mature product category where growth is often stagnant. Indeed, growing the existing product category often relies on two strategies: line extensions or new brands (Kotler and Keller, 2012). Line extensions and new brands can segment the market and offer varieties to appeal to more fragmented tastes or needs. Brand architecture theory (Aaker and Joachimsthaler, 2000) notes that the branding decision depends on whether to extend the brand name (a 'branded house') or introduce new brands (a 'house of brands'), and this decision is often based on whether a brand extension risks harming the core brand. For instance, launching a lower-priced variant with reduced features (a 'fighter brand': Ritson, 2009) may de-value the brand if the same brand name is used, but can find a new consumer segment with minimal cannibalization to the brand if a new brand is created (e.g., Intel's Celeron microchip is cheaper but less powerful than its Pentium microchip).

However, an issue for new products is whether having multiple brands in a product space (or category) encourages cannibalization (such as switching between brands) or solidifies brand loyalty to any given brand. Two competing views highlight this dilemma. On one hand, consumers are at times variety-seeking, gaining utility through stimulation of something different (McAlister and Pessemier, 1982), by alleviating boredom from repeat purchasing (Howard and Sheth, 1969; Van Trijp et al., 1996), or reducing risk (Simonson, 1990). On the other hand, consumers are seen as brand loyal, repurchasing the same brand within a product category because of the inherent value of the brand. This reduces search and switching costs (Howard and Sheth, 1969; Wernerfelt, 1991) and minimizes risk through brand trust (Chaudhuri and Holbrook, 2001). Even in the branded house strategy, consumers have shown highly loyal behaviors to particular variations of a given brand (Koschmann and Sheth, 2018). This research focuses on the house of brands strategy.

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The house of brands strategy is a type of brand portfolio, and brand portfolio performance is often evaluated on financial metrics like net present value or internal rate of return (Cooper et al., 1999). Yet, these metrics may be limited in describing brand health in a house of brands. Consider the example pointed out by Aaker and Joachimsthaler (2000) of Procter & Gamble, which owns several brands of shampoo: Head & Shoulders, Pert Plus, Pantene, and Herbal Essences. Each brand emphasizes a particular function, such as dandruff control, fragrance experience, or hair strengthening. Evaluating these brands on financial measures alone does not address whether each brand has found its core consumer group; it could be the case that the brands create more variety-seeking among each other. This *intra-portfolio* loyalty (Morgan and Rego, 2009) speaks to marketing effectiveness, and without considering this loyalty the firm may be wasting resources. We use the term *intra-firm* loyalty here to specify that brands may be competing with each other in the same product category. Brands that fight each other for the same customers are likely missing out on the differentiation needed to keep distinct consumer segments. A second difference with brand portfolios in general is that brand equity is more salient in the house of brands. Whereas a brand portfolio has an interest in the brand's value (brand equity), the focus on meeting the needs of different customer segments speaks to whether the brand can deliver a value proposition relative to an unbranded product offering (i.e., private label). While revenues and net present value speak to a brand's performance, it does not address if the brand is losing ground to unbranded competitors.

This research contributes to our understanding of the house of brands strategy by developing and examining propositions regarding brand intra-firm loyalty and brand equity in a house of brands. Namely, brands will have different levels of intra-firm loyalty and that intra-firm loyalty is greatest for the brands with the highest brand equity. The propositions are explored using large-scale panel household data of brand purchases in a product category in which two large companies use the house of brands strategy. For this analysis, laundry detergent was chosen; the parent companies are Procter & Gamble (P&G), which owns ten brands in this space, although only five brands exhibited any substantial sales, and Sun Products (SP), which owns four brands. Collectively, these two companies are the largest in the product space, and the nine brands make up more than half the volume market share for the category. The intra-firm loyalty is measured behaviorally as repurchasing the same brand by households within the P&G and SP brands as Markov chains. The data examines households that purchased any of the five P&G or four SP brands (39,343 households and 28,636 households, respectively) during the 2013-2014 calendar years.

This study finds that many consumers are indeed brand loyal: of households that purchased any particular brand of P&G (SP) laundry detergent, 76.7% (79.0%) of those households only purchased that particular brand of P&G (SP) detergent. However, these 100% intra-firm loyalty rates varied, with the greatest P&G intra-firm loyalty being for Tide (70.9% of households as well as the P&G brand with the highest brand equity) and the lowest intra-firm loyalty being for Dreft (35.8% of P&G households and also the P&G brand with the lowest brand equity). Among SP brands, the brand with the highest intra-firm loyalty was All (71.6% of SP households and the highest brand equity among SP brands) while Surf had the lowest intra-firm loyalty (38.6%) and lowest brand equity among SP households. As far as switching within the P&G households, Tide exhibited the highest intra-firm loyalty in the next purchase occasion (90.7%) and was also the brand most switched to from sibling brands Gain, Cheer, Era, and Dreft. This asymmetric effect was also seen in SP households, as All (86.9% intra-firm loyalty in the next purchase occasion) was also the most switched to brand from its sibling brands Sun, Surf, and Wisk.

2. Theoretical Development

2.1 The house of brands strategy

The house of brands strategy stems from portfolio theory and finance in which there is a drive to maximize gains while minimizing risks (e.g., Markowitz, 1952). Brand portfolios in general aim to increase gains and decrease risks, primarily by holding brands that have meaning and value to consumers. Brand portfolios often seek out new consumer segments, balance successes and failures, and explore synergies (Chailan, 2008). Importantly, it clarifies the role of each brand in the portfolio, as the brands should not be a mere collection but instead utilized to achieve a competitive advantage (Chailan, 2010). This is similar to the idea put forth by Macrae and Uncles (1996) of 'brand chartering': brands need to communicate their distinct values and be organized and structured (particularly in a portfolio). As such, brand roles are important since a market consists of consumers with heterogeneous wants and needs; brands are positioned to provide value to meet these wants and needs. The house of brands is a specific brand portfolio, focusing on brands within a single product category.

The house of brands strategy is designed to provide a clearer position on a brand's functional elements, enabling niche segmentation (Aaker and Joachimsthaler, 2000) within the category. Consider Kellogg's, which could be described as a portfolio of a house of brands – it owns several brands of breakfast cereal (Froot Loops, Frosted Flakes, Special K), cookies (Keebler, Famous Amos, Mother's), and crackers (Cheez-It, Carr's, Austin). By holding multiple brands in the same product category, the firm attempts to utilize existing elements such as distribution networks and production capabilities (Petromilli et al., 2002). Using existing production can bring down the cost of a new brand, while carrying the new brand in existing retail channels provides a means of reaching consumers.

2.2 Brand intra-firm loyalty

By owning multiple brands in the same product category, the firm ideally seeks to have each brand find its own distinct segment. For instance, when Coca-Cola wanted to launch a low-calorie cola to appeal to consumers who normally would not consider Coca-Cola, the company launched Tab as its diet soda. Thus, finding a new consumer segment is important for a new brand. At the same time, if the consumer segment for a new brand is primarily causing consumers to switch from the original brand, this could cannibalize the brand. Typical portfolio evaluations such as net present value or cash flow represent a financial outcome but do not necessarily speak to how well this target segment is met. Rather, the brand manager is interested in a measure that suggests consumer willingness to choose the brand among given alternatives. For this, we turn to brand loyalty within the portfolio.

Brand loyalty has several meanings to marketers. Loyalty is defined as "the deeply held commitment to rebuy" (Oliver, 1997, p.392). This has been interpreted in both behavioral terms, such as repurchase rates, or attitudinal as in the beliefs a consumer has towards the brand. Repeat purchasing is outward behavior that should reflect the consumer's internalized attitude toward the brand. Yet, an attitudinal approach suggests a brand may be grudgingly repurchased by consumers; examples of this are a contract with the cable company or having no viable alternative from one healthcare provider.

With a house of brands, however, brand loyalty is approached differently. Here, the firm aims to maintain (and acquire) customers by offering different brands. We treat brand loyalty to be the loyalty to a specific brand in the house of brands. That is, repeat purchasing to a particular brand when other brands offered by the parent firm are an option. We use the term loyalty and intra-firm loyalty synonymously hereafter.

Against this backdrop, a degree of 'healthy' internal competition should be considered among brands (Wang and Chung, 2015). A healthy sign of the house of brands should be high repurchase rates (behavioral loyalty) among the brands within a house of brands. This suggests that the brands have found a loyal consumer segment. However, a brand that has not found a dedicated consumer segment is likely to experience low repurchase rates (i.e., consumers are switching to other brands within the brand portfolio). This might not be such a bad position for the brand if it can make up for the lack of loyalty through some combination of price and volume premiums (i.e., brand equity: Ailawadi et al., 2003).

2.3 Linking brand equity and intra-firm loyalty

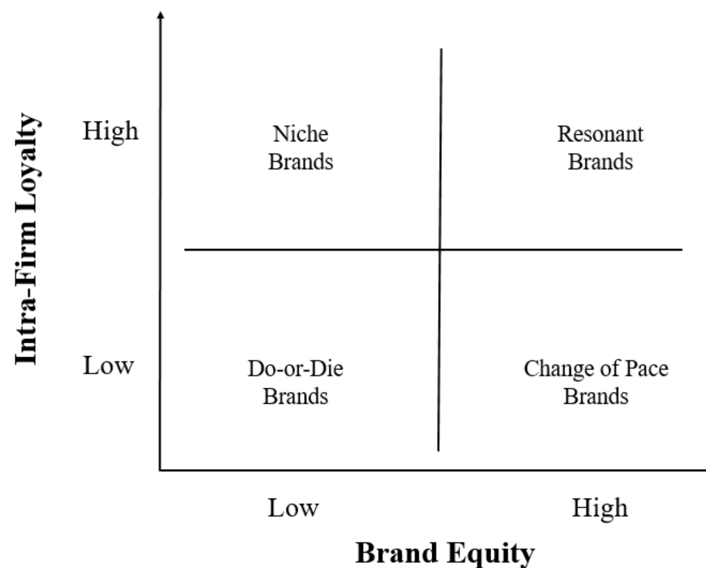
Although intra-firm loyalty informs whether brands are finding a loyal audience, a second measure is needed to suggest the health of that loyalty. Generally, brand and product portfolios emphasize brand health through measures such as revenues, profits, and cash flows; this can also be gauged by net present value or internal rate of return (Cooper et al., 1999). While these measures help gauge the *financial* health of the brand, the house of brands strategy should be evaluated on the *brand's* health. What makes the house of brands different is the emphasis on brands, as opposed to treating the portfolio merely composed of products. This focus on brands indicates that some measure of brand performance is in order. A measure such as market share (such as used in the Boston Consulting Group (BCG) growth matrix) can guide managers regarding brand performance, but share does not capture the pricing premium that a brand should attain. Instead, we turn to brand equity as a focus since a brand can have high market share at the expense of profitability.

Two views of brand equity highlight previous brand research. Consumer-based brand equity (CBBE) treats brand equity as the value a brand has in the hearts and minds of consumers; alternatively, market-based brand equity (MBBE) is the behavioral outcome, as measured by the brand's ability to perform in the market (Keller, 2013; Schultz, 2015). The MBBE measure reflects whether the brand can achieve price and volume premiums (Ailawadi et al., 2003) over a non-branded offering (i.e., private label). In product categories with no private label presence, the brand with the lowest revenues is treated as the baseline, and other brands have a revenue premium as a function of the brand's price and volume power above this baseline.

Examining the house of brands through the lens of brand equity has an advantage over traditional measures like market share and revenues. While market share, as a function of volume, constitutes one part of revenues, the other element (price) plays a contradictory role. If the brand were to lower its price, it should increase its sales volume (and hence market share). However, lowering the brand's price may give the perception of reduced quality since price and quality are strongly linked. This price-volume trade-off presents an issue for identifying the health of the brands in the category.

By focusing on brand equity, the portfolio manager has a better gauge of brand health. Since intra-firm loyalty is a measure of hitting the identified market segment within the product category, and brand equity is a measure of the brand's health, the combination of the two presents a managerial tool. In the spirit of Reinartz and Kumar (2000), which examined brand loyalty and profitability of consumers, the view here is intra-firm loyalty and brand equity from the *brand* perspective. Figure 1 presents four scenarios of intra-firm loyalty and brand equity within the house of brands and is explained further below.

Figure 1. House of brand types based on intra-firm loyalty and brand equity



In the upper right quadrant of Figure 1 are 'resonant' brands, which exhibit both high degrees of intra-firm loyalty by consumers and high brand equity. Resonant brands come from Keller (2013), as the highest level of brand building, the "ultimate relationship" a consumer has with the brand. Brands in this quadrant have established a substantial degree of consumer loyalty to the point that customers engage with the brand and invest in the brand. This can include participating in brand communities and instances where the consumer is willing to go out of their way for the brand (i.e., willing to pay a price premium or seek out the brand in a different channel if currently out of stock). These brands are typically 'large brands' (Jarvis and Goodman, 2005), offering wide appeal, with large penetration rates and repurchase rates.

The lower right quadrant of Figure 1 represents 'change of pace' brands, which demonstrate high brand equity but lower intra-firm loyalty. Prior research (Kahn et al., 1988) defines such brands as exhibiting lower loyalty levels yet remaining popular with consumers; a brand may be chosen by consumers to address some variety-seeking or if the preferred brand is out of stock. One explanation for this quadrant is high household penetration (Ehrenberg, 1972) of the brand. Although loyalty is lower, these brands typically exhibit some degree of brand equity stemming from greater distribution and penetration. Even within a branded house strategy, some varieties of Coca-Cola and Pepsi serve as resonant brands while other flavors (such as Cherry Coke) may serve as change of pace brands (Koschmann and Sheth, 2018).

The upper left quadrant of Figure 1 represents 'niche' brands. Brands in this space are typically the opposite of change of pace brands (Kahn et al., 1988) by demonstrating high degrees of consumer loyalty yet smaller market shares. Niche brands should achieve some degree of price premium through the differentiation of meeting a specific customer segment's needs. Yet, even in meeting the specific needs of one consumer segment (and generating high intra-firm loyalty), this may limit the brand's broader appeal, resulting in reduced volume.

Despite achieving a price premium, the volume deficit makes it a niche brand (if it had sizeable volume, it would be a resonant brand). Other research has identified niche brands as having low market share but superior financial performance (Sheth and Sisodia, 2002), which would similarly map onto Figure 1 (in this case, high intra-firm loyalty may relate to high financial performance through the reduced cost of customer retention).

The lower left quadrant of Figure 1 represents 'do-or-die' brands. Brands in this space are a problem for the house of brands; these brands have neither a loyal following nor have the brand equity that results from achieving pricing power or sales volume. A parallel to brands in this space is a brand suffering from 'double jeopardy' (Ehrenberg et al., 1990) in having few buyers and low purchase frequency. The designation is not unlike a 'ditch dweller' (Sheth and Sisodia, 2002), or a brand with low market share and low return on assets, which is at risk of being eliminated in favor of directly capital elsewhere. A decision looms for these brands: invest in the brand so it can become a niche or change of pace brand, or let it run its course and exit the market. However, sometimes weak brands are retained for non-strategic or non-financial reasons; eliminating even a weak brand can create negative emotions (both internally and from consumers) and upset channel suppliers/retailers (Shah, 2015).

For managers, Figure 1 might resemble the BCG growth matrix but with several differences. The BCG matrix treats 'dogs' as do-or-die brands, in which case the strategies are to divest the brand, harvest the brand (let it ride out without further investment), or invest to become a niche brand. In practice, firms often enable brand managers to keep these brands afloat by low and continued minimal levels of investment. What these brands need is a decision: invest in the brand to move up (either in intra-firm loyalty or brand equity) or end the brand. Unlike killing a product, brand death (e.g., Ewing et al., 2009) means relinquishing the emotional attachment that may exist to the brand as well as the managerial belief that consumers might leave the firm's brand portfolio entirely. Hence, purely assessing the house of brands along traditional financial reasons may be problematic. Another difference from the BCG matrix is that 'question marks' correspond to niche brands. These brands also face an invest or harvest mindset. Yet, niche brands have a loyal following, which is one goal of a brand in the house of brands strategy. In keeping a loyal customer segment, an appropriate response might be to change nothing with the brand. An issue for niche brands will arise if its brand equity becomes too low (i.e., despite a loyal following the customer base is shrinking, resulting in lower revenues). Rather, the question for niche brands is seldom to exit the market, but instead continue investment to either maintain its niche status or elevate the brand to resonant status.

2.4 House of brands propositions

Ideally, the brands in a house of brands strategy will exhibit high degrees of intra-firm loyalty as well as high brand equity. However, managers rarely find themselves in this ideal situation. The more likely case is that there are brands with varying degrees of intra-firm loyalty and brand equity, occupying multiple quadrants from Figure 1. Of interest is whether there is a relationship between intra-firm loyalty and brand equity; if there is brand switching between sibling brands (which indicates a brand is struggling to meet a dedicated consumer segment), to which brands are those consumers switching to in the house of brands?

In evaluating brand performance in the house of brands, brands with the highest brand equity might not have the highest intra-firm loyalty (i.e., niche brands have higher intra-firm loyalty than resonant brands). In one sense, niche brands have an advantage over larger resonant brands by focusing on a particular aspect, such as price or performance. Private label offerings, which typically position as a price leader, exhibit high degrees of loyalty among price conscious consumers (Rubio et al., 2015). Loyalty is even greater among heavy buyers, who make up a disproportionate share of volume sold (Sheth and Koschmann, 2019), which drives revenues (and brand equity). Brands that emphasize performance should find a dedicated consumer group by providing a salient feature like performance or quality. The emphasis on such a feature suggests that these consumers are knowledgeable and engaged in the product category, and product involvement has a positive effect on loyalty (Ferreira and Coelho, 2015), as more engagement solidifies the brand in the mind of the consumer.

Conversely, the brand with the highest brand equity might also exhibit the highest intra-firm loyalty. Research into buyers of industrial equipment has shown that brand equity precedes both attitudinal and behavioral intra-firm loyalty (Taylor et al., 2004) by fostering trust. In consumer packaged goods, private label brands enjoy excess loyalty while market leaders (i.e., resonant brands) also achieve superior loyalty (Pare and Dawes, 2011). One driver for this is that resonant brands typically have high degrees of penetration (Jarvis and Goodman, 2005). Large brands make use of greater distribution and awareness to appeal to consumers.

Even when brands have similar distribution, intra-firm loyalty is greater for the 'flagship' brand than other brand variants within a branded house (Koschmann and Sheth, 2018). This would indicate that resonant brands might exhibit greater intra-firm loyalty than other sibling brands (including niche brands).

Proposition 1. In a house of brands, the highest brand equity brand will have the highest intra-firm loyalty.

A second question of interest to managers is which brands might be switched to the most in the house of brands. The most switched to brand could be a niche brand for price or performance, especially for price reasons to drive excess loyalty (Pare and Dawes, 2011). Still, other research indicates that variety-seeking moderates loyalty (Jensen and Hansen, 2006), suggesting that change of pace brands might be switched to more often for reasons of seeking out variety or the occasional change.

Although switching among the sibling brands in a house of brands might be most geared towards a niche brand or change of pace brand, resonant brands might garner the most switching in a house of brands. Resonant brands often offer consumers a value proposition by balancing the trade-off between price and quality (i.e., value-conscious consumers consider price and quality constraints: Manzur et al., 2011). Resonant brands attain high brand equity from a combination of volume and price premiums. Since price and quality are perceived trade-offs which influence brand loyalty (e.g., Ferreira and Coelho, 2015), a brand that can sell more volume at a higher price indicates the brand has desirable qualities to consumers. Consumers also prefer to balance attributes (Dhar and Simonson, 1999). Rather than seek out price or performance-oriented brands, resonant brands offer a value proposition of achieving a degree of performance at a reasonable price. Given this, brands with the highest brand equity should be the most switched to brand within a house of brands.

Proposition 2A. In a house of brands, the brand with the highest brand equity will be switched to most often.

Proposition 2B. In a house of brands, any switching from the highest equity brand will be to the brand with the second highest brand equity.

3. Methodology

To investigate the propositions of intra-firm loyalty and variety-seeking in a house of brands, a product category is needed in which a parent company owns several brands. Laundry detergent is analyzed since most households purchase the product, with an 84.8% penetration rate in U.S. households in 2011, according to Information Resources Inc. (IRI). The category is purchased several times a year, with an average time between purchase of 81 days according to IRI. Additionally, category purchases are believed to suit all members of the household. Unlike breakfast cereal or carbonated beverages, which offer flavor variations to appeal to different members of the same household, there is likely one person in the household in charge of laundry. Finally, the house of brands strategy is common to this category, which (as explained further in the Data below) finds itself in 'The Rule of 3' in which the category has matured to the point of three large parent companies dominating the category (Sheth and Sisodia, 2002).

3.1 Data

Household shopping history is calculated based on data from the Nielsen Company (U.S.), LLC and marketing databases provided by the Kilts Center for Marketing Data Center at the University of Chicago Booth School of Business. Available to academic researchers, the representative panel contains information on approximately 1.4 million UPC bar codes, as well as purchase location, household demographics, and product information. The data used here covers calendar years 2013-2014, tracking purchases of consumer packaged goods for some 62,000 households across the United States during the year. Hereafter, consumer and household are used interchangeably.

In the laundry detergent category, the two largest companies make up about 55% of the volume market share (IRI 2011 data). At the time of the data, the top two parent companies collectively had nine brands with meaningful sales in the United States: Procter & Gamble (P&G) owns five brands (Tide, Gain, Cheer, Dreft, and Era) while Sun Products (SP) owns four brands (All, Sun, Surf, and Wisk). A third parent company, Church & Dwight, owns Xtra and Arm & Hammer brands. However, this parent company is excluded from analysis as the switching within a house of brands can only be between the two brands. These three parent companies collectively make up approximately three-fourths of the laundry detergent market; other notable brands are Purex (owned by Henkel Corporation, which acquired Sun Products in 2016), private label (8.5% of the market), and Ajax (of Phoenix Brands). No other brand had more than 0.8% market share. As such, the data and analysis focus on the P&G and SP brands.

Furthermore, P&G owns additional laundry brands (Ariel, Daz, Dash, Bonux, and Bold), but sales are essentially non-existent so these brands are not included in the analysis.

Over the two years, 39,343 households purchased a P&G brand laundry detergent on 174,133 shopping trips. Of these shopping trips, 98.7% involved the purchase of a single P&G laundry brand. The remaining 1.3% of shopping trips involved the purchase of two or more P&G laundry brands in the same purchase trip. There were 28,636 households that purchased any of the four SP brands during the same time period on 95,596 shopping trips. During these SP trips, 99.3% of purchase occasions involved just one SP brand. Since multi-brand purchases made up such a small percentage of trips, these trips are excluded from further analysis. Table 1 presents key statistics around the nine brands of interest.

Table 1. Key statistics of the five P&G and four Sun Products laundry detergent brands

Brand	Households buying[2]	Purchase Trips[3]	Ounces Sold[4]	Total Revenue	Price Per Ounce	% of Purchases On Deal[5]	100% Loyal Households	Brand Equity[6]
Procter & Gamble (P&G):								
Cheer	1,740	4,669	514,146	$51,211	$0.10	36.0%	37.6%	-$250,916
Dreft	679	1,108	103,792	$18,034	$0.17	16.9%	35.2%	-$284,093
Era	5,349	13,198	1,601,086	$98,484	$0.06	49.0%	44.8%	-$203,643
Gain	13,692	41,796	3,338,218	$363,418	$0.11	30.4%	48.2%	$61,291
Tide	28,263	122,509	11,428,667	$1,528,240	$0.13	51.9%	69.7%	$1,226,113
Sun Products (SP):								
All	19,155	56,111	6,233,402	$508,453	$0.08	56.4%	71.6%	$206,326
Sun	8,274	21,146	2,422,578	$82,601	$0.03	20.4%	66.8%	-$219,526
Surf	1,631	3,519	479,197	$29,766	$0.06	36.2%	38.6%	-$272,361
Wisk	6,383	15,472	1,264,306	$125,712	$0.10	65.2%	43.3%	-$176,415

From Table 1, the five P&G brands and four SP brands have different purchase activity among consumers in terms of penetration, share, revenues, prices paid, deal proneness, loyalty, and brand equity. Nielsen rates a deal if there is a 5% price cut or greater or use of a coupon in purchase. In the case of 'pods' (laundry detergent capsules rather than liquid or powder that is poured into the washing machine), one pod is treated equivalent to one ounce of liquid/powder detergent. Tide is the most purchased brand of P&G laundry detergent, while Dreft is the least purchased. Among SP brands, All is the most purchased brand and Surf is the least purchased. Brand equity is calculated as the brand's revenues less the private label revenues (Ailwadi et al. 2003). Each house of brands has a clear top-brand in brand equity: Tide (P&G) and All (SP). While neither brand has the highest price paid per ounce (each is the second highest within their respective parent companies), each has the dominant share of the volume within their parent companies. Tide and All also have the highest percent of households with 100% intra-firm loyalty (i.e., of households that purchased P&G (SP) brands, this is the percent of households that only purchased that P&G (SP) brand of detergent).

3.2 Model

Brand loyalty is measured here as probabilistic switching, or the proportion of households that stay or switch brands from one purchase occasion to the next. Loyalty is treated as repurchasing the same brand in the house of brands from the purchase trip in time t to the next purchase occasion of the category, $t+1$. Switching is not purchasing the same brand within the house of brands. The proportion of households repurchasing the same brand represents intra-firm loyalty as a Markov chain, or the probability of switching from one state to another in the subsequent time period, and has been used in marketing research (e.g., Ehrenberg, 1965; Koschmann and Sheth, 2018; Lattin and McAlister, 1985; Poulsen, 1990; Sheth and Koschmann, 2019; Styan and Smith, 1964).

[2] Totals exceed 39,343 P&G households and 28,636 Sun Products households due to some households purchasing more than one brand within each family of brands.

[3] Total exceeds 174,133 P&G purchase trips and 95,596 Sun Products purchase trips as some variants of the brand were multi-purchased in the same trip (e.g., Regular Tide and Tide with Febreze), or different pack sizes of the same brand.

[4] In the case of 'pod' capsules, one pod is treated equivalent to one ounce of detergent.

[5] Nielsen uses a deal indicator if the purchase reflects a coupon or deal (5% price discount or more). The price paid reflects any discounts.

[6] Numbers in parentheses denote negative brand equity (i.e., private label has greater revenues).

4. Results

Table 2 presents the aggregated intra-firm loyalty and switching rates from purchase occasion in time *t* to *t+1*. Intra-firm loyalty rates represent the diagonal of the table, from a high of 90.7% for Tide to a low of 41.8% for Dreft across P&G brands. That is, when a household purchases Tide, there is a 90.7% chance that Tide will be their next brand of P&G laundry detergent purchased. Intra-firm loyalty rates for Gain (75.4%), Cheer (66.8%), and Era (66.7%) suggest a degree of intra-firm loyalty for these brands.

Table 2. Markov chain as percent of households choosing P&G detergent on next purchase

	Time t+1				
Time t	Cheer	Dreft	Era	Gain	Tide
Cheer	66.8%	0.5%	2.7%	8.1%	22.0%
Dreft	2.4%	41.8%	4.4%	10.7%	40.7%
Era	1.0%	0.4%	66.7%	10.5%	21.4%
Gain	0.9%	0.3%	3.0%	75.4%	20.4%
Tide	0.7%	0.3%	1.8%	6.5%	90.7%

Note: n=132,695 purchase occasions.

Markov chain as percent of households choosing SP detergent on next purchase

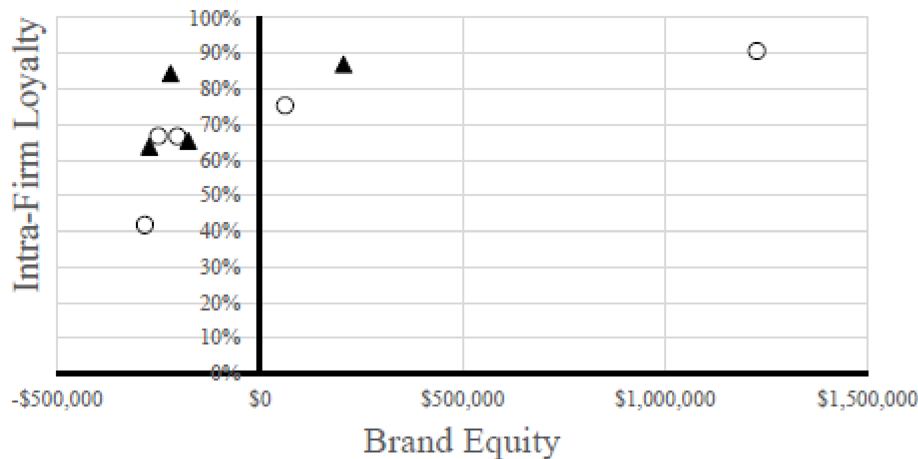
	Time t+1			
Time t	All	Sun	Surf	Wisk
All	86.9%	4.1%	0.8%	8.2%
Sun	11.7%	84.3%	1.5%	2.5%
Surf	19.7%	10.5%	63.7%	6.1%
Wisk	30.4%	3.3%	0.9%	65.4%

Note: n=66,362 purchase occasions.

Table 2 also displays the intra-firm loyalty and switching rates for SP brands. Among SP brands, All (86.9%) displayed the highest intra-firm loyalty, with Sun (84.3%) close behind, Wisk (65.4%) ranked third, and Surf (63.7%) the least loyal. Like P&G, these findings indicate differing degrees of intra-firm loyalty within the house of brands.

Figure 2 presents the intra-firm loyalty rates with the total brand equity during the data collection period (i.e., revenues in excess of private label offerings). The circles represent P&G brands while the black-filled triangles represent SP brands. The figure shows that only three brands generated positive brand equity (Tide at the far right, along with Gain and All). Taking the mean averages for all nine brands for each intra-firm loyalty (71.3%) and brand equity ($9,642) indicates that each of these three brands are resonant brands within the framework presented in Figure 1.

Figure 2. Brand equity and intra-firm loyalty of P&G and SP detergent brands



Note: circles represent P&G brands and filled triangles are SP brands

Since the data appears skewed regarding brand equity, if all nine brands are examined together, Era is the median brand in brand equity (-$203,643) and Cheer is the median brand in intra-firm loyalty (66.8%). These two represent the touching, adjacent circles of the figure.

Using these measures to divide Figure 2 into four quadrants would place Sun as a niche brand. Dreft would be a do-or-die brand with its low loyalty and low brand equity. Less apparent are the cluster of four brands near where the four quadrants intersect: Surf, Cheer, Era, and Wisk. While no brands jump out as change of pace brands, Wisk appears closest (-$176,415 in brand equity and 65.4% intra-firm loyalty).

Tide and All were highlighted as having the highest revenues within their respective companies in Table 1. Their intra-firm loyalty rates (both 100% loyal households in Table 1 and the intra-firm loyalty in Table 2) are also the highest within their respective house of brands. At the opposite end are Dreft and Surf, which have the lowest brand equities within their respective parent companies. These two brands also display the lowest 100% intra-firm loyalty rates and lowest purchase occasion intra-firm loyalty. From these findings, there appears to be a relationship between brand equity and intra-firm loyalty, providing support for Proposition 1.

While intra-firm loyalty differs across brands, of further interest is which brands are switched to within the house of brands. An asymmetrical relationship exists for switching between brands: P&G households are more likely to switch to Tide (between 20.4% to 40.7%) first and Gain (6.5% to 10.7%) second. Tide households that switch do so primarily to Gain (6.5%). Switching is much less to Era (1.8% to 4.4%), Cheer (0.7% to 2.4%), and Dreft (0.3% to 0.5%). For SP households, the brand most switched to is All (between 11.7% to 30.4%) from each of the other three brands. Households that switch from All are most likely to switch to Wisk (8.2%). The SP brand least switched to is Surf (0.8% to 1.5% of switching). The brand most (least) switched to also has the most (least) brand equity, supporting Proposition 2A. The results also show that any switching from leaders Tide and All were to the brands with the second highest brand equity, Gain and Wisk respectively, supporting Proposition 2B.

As a robustness check, the IRI 2011 data confirmed the directionality of the Nielsen data regarding brand equity (i.e., the brands which had negative or positive brand equity were confirmed in the other data set). While repurchase rates were used to gauge intra-firm loyalty, a correlation of this measure with 100% loyal households shows a Spearman correlation of $r = 0.88$. The small sample size ($n = 9$ brands) suggests preference for non-parametric statistics (the Pearson correlation is similarly $r = 0.89$). As such, alternative measures of intra-firm loyalty should lend evidence to the propositions.

5. Discussion

This research contributes to our understanding of the house of brands strategy by proposing and examining brand equity and loyalty to a specific brand (intra-firm loyalty) for gauging the effectiveness of the house of brands strategy. First, the study proposes that when a parent firm owns multiple brands in a product category, that each brand ideally exhibits substantial consumer loyalty by meeting the needs of a particular consumer segment. The house of brands is evaluated on this loyalty as well as brand equity (to assess brand health) to suggest four brand positions: resonant, niche, change of pace, and do-or-die. Two propositions tie together intra-firm loyalty rates with brand equity. Second, large-scale consumer panel purchase data of nine laundry detergent brands evaluates the propositions. Third, the results find that the brands with the highest (lowest) brand equity exhibit the highest (lowest) intra-firm loyalty and are the brands most (least) switched to from the other sibling brands.

For managers, the house of brands strategy is designed to meet the wants and needs of different consumer segments within the product category (such as price or performance orientations). However, introducing new brands has the potential of cannibalizing existing brands owned by the parent company. This research proposed evaluating the house of brands portfolio through intra-firm loyalty and brand equity. Ideally, brands have high intra-firm loyalty and high brand equity. These 'resonant brands' (such as Tide, Gain, and All from this analysis) are gems in the house of brands, but often in practice few brands achieve this status. Brands with high brand equity but less loyalty (change of pace brands) or brands with high intra-firm loyalty but low brand equity (niche brands) are not undesirable positions, as these can still possess profitable or popular positions. Such brands, with the right investment, can be moved closer to becoming resonant brands. An issue arises for brands that exhibit low levels of intra-firm loyalty and low brand equity. The laundry detergent analysis showed Dreft as facing such an issue. IRI data of U.S. consumers shows a similar case for house of brands examples like Harp beer (owned by Diageo), Heath chocolate bars (owned by Hershey's), Smorz breakfast cereal (owned by Kellogg's), Whiskas dry cat food (owned by Mars), and L&M cigarettes (owned by Altria).

Whereas traditional portfolio analysis based on financial metrics like internal rate of return or net present value might calculate divesting or ending such brands, the demise of certain brands could trigger emotional loss to employees and consumers. Thus, brands that struggle with loyalty and brand equity require marketing investment to hopefully become a niche brand or change of pace brand.

For marketing academics, this study sheds light on two areas. One, little research has investigated the house of brands strategy, particularly from an empirical standpoint. Although more attention has been paid to brand extensions and brand portfolios in general, the house of brands is a prevalent marketing strategy with strategic differences to brand extensions or the branded house. Two, brand loyalty has frequently been examined with regard to competing brands. However, competition among brands within the same parent company has received much less attention. By exploring whether brands within the same parent company exhibit more loyalty or more switching, this study adds a new dimension to how customer loyalty is assessed.

Several challenges persist in conducting this research. This research analyzed intra-firm loyalty for nine brands in one product category of two parent companies. While the decision to use laundry detergent has some desirable properties (usually one brand purchased per trip and one brand usually serves the entire household), intra-firm loyalty rates may be different in other product categories that feature a house of brands strategy. Additionally, this paper examines mature brands in mature product categories. For growing product categories, the goal may be to expand the market first through a core brand before introducing additional brands. To this, pre- and post-launch measurement of the brand is of interest as it may take some time for a brand to find a loyal consumer following.

Amid the limitations, possible research directions emerge. Durable goods and services may exhibit different intra-firm loyalty. Product upgrades may keep consumers buying newer versions of products, and durables often have aspirational elements: price points and product feature distinctions help to segment the market but also create a natural direction for ‘moving up’. For instance, General Motors employed a similar strategy with its Chevrolet, Buick, and Cadillac brands of automobiles. Services also present research opportunities for intra-firm loyalty of brands; banks and insurance companies offer varying financial products to appeal to different consumers. The paperwork and process from switching costs makes it unlikely customers change accounts frequently (whether for personal or business, or having multiple accounts such as individual and joint accounts between spouses). A third area of future research would be to look at business-to-business (B2B) relationships. Stable relationships and partnerships allow for business efficiencies and reduced switching costs. Still, switching rates of 3-5% (Sharp, 2010) indicate some switching takes place in this context. Switching within an existing relationship (for example, between account managers or between doctors within the same company) presents an additional research avenue.

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