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“Preliminary results of cross-category purchasing of extensions”

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Preliminary results of cross-category purchasing of extensions

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Short abstract:

Brand extensions are a popular way to increase the breadth of the product portfolio. Little research, however, has looked at whether purchasing a brand in one category affects a consumer's propensity to purchase the same brand in another category. This preliminary study uses Duplication of Purchase (DoP) analysis and panel data to measure the level of customer sharing between brands in multiple categories. Our findings show that, across a 52-week period, purchasing a brand in one category increases the propensity to purchase the same brand in a second category by 63% more than the propensity to purchase a different brand in the second category. These findings provide support to a previous study by Mundt (2011) which found between categories, a brand shared customers 60% higher with its extension than with another brand in the second category. This research is significant as it verifies the validity of these findings.

Keywords: brand extensions, cross-category purchasing, consumer behaviour

Introduction and research aim

When a company releases a new product in a category they have not previously entered, the company has the option of creating a new brand name or using an existing brand name and extending it to the new category. Brand extensions are a popular choice among companies with many choosing to release a brand extension instead of a new brand name (Lury 2016). Many theorists claim releasing brand extensions should be chosen over a new brand due to reduced marketing costs (Aaker 1990), a lower risk of failure (Lury 2016), and their ability to leverage existing brand equity (Tauber 1988).

Many studies into brand extensions have used attitudinal data to assess hypothetical brand extensions (such as Aaker and Keller 1990; Romeo 1991; Zimmer and Bhat 2004). Attitudes however are poor predictors of future behaviour (Sharp 2010). Thus, behavioural data (such as purchasing data) can be more useful to marketing practitioners as they explain what is occurring in market. The aim of this preliminary study is to investigate whether purchasing a brand in one category increases the likelihood to purchase the same brand in another category. This will be explored through the following research question:

RQ1: When a brand is present in two or more categories, does the brand share more customers with each other than with the other brands in the category?

Background

Several studies have used behavioural data to analyse cross-category purchasing of brand extensions. Lomax et al. (1996) used panel data to analyse the cannibalisation of line extensions and found more buyers of an extension came from the original brand than other brands in the category. Romaniuk and Nenycz-Thiel (2015) used survey data to analyse private labels and found the purchase of a private label in one category positively impacted choice in another category, where the two categories were similar. Dawes (2017) looked at sub-brands and found customer duplication between an original brand and its sub-brand was 76% higher than two different brands in the category. These studies display products under the same brand name share customers at a higher rate than they do with other brands in the category.

To the best of the authors' knowledge, the largest and most comprehensive study that has looked at the cross-category purchasing of brand extensions was a study by Mundt (2011). This research applied DoP analysis to UK panel data across 41 brand extensions to measure the sharing between a brand and its extension compared to the rest of the category. This research found if a brand was purchased in Category A, it was 60% more likely to be purchased in Category B than any other brand in the category. This research aims to replicate and extend the work of Mundt (2011). Replication is an important element of scientific knowledge as it provides further evidence an observed pattern exists (Hubbard and Armstrong 1994). Further, extension is necessary to understand the generalisability of patterns. Extensions are able to extend the scope of a pattern, as well as defining boundary conditions (Lindsay and Ehrenberg 1993). This study reports preliminary results of analysis of one category pairing with the aim of verifying the results of Mundt (2011).

Method

The DoP Law explains the level of customer sharing between brands is largely determined by size (Ehrenberg et al. 2004). That is the number of buyers of *Brand A* who also bought *Brand B* is influenced by the size of *Brand B* (Uncles et al. 1995). This is a robust law that has been observed across a range of categories, such as soft drink (Bass 1974), wine (Cohen et al. 2012) and personal care (Faulkner et al. 2014). This study has applied the DoP Law to data

provided by Nielsen academic datasets provided through the Kilts Centre at University of Chicago. The DoP Law has been used in other cross-category studies such as Mundt (2011) and Lomax et al. (1996) as it displays the expected level of customer sharing between two brands, thus allowing researchers to see if there is over- or under-sharing between brands. It is therefore appropriate for this study.

Results and discussion

Table 1 displays results for the category pairing of frozen vegetables and canned vegetables across a 52-week period. Preliminary results show, on average, a brand in Category A shares 63% more customers with its extension in Category B than with other brands in the category.

Table 1: Frozen vegetables and canned vegetables sharing (52-week period)

Buyers of...	% who also bought... Frozen vegetables			% who also bought... Canned vegetables		
	Green Giant	Hanover	Fresh	Green Giant	Hanover	Fresh
Frozen veg.						
Green Giant		8	5	39	5	4
Hanover	25		3	36	18	6
Fresh	23	5		38	4	2
Canned veg.						
Green Giant	22	6	4		6	4
Hanover	18	22	3	40		2
Fresh	20	8	2	35	2	
Ave. cat. dup (%)	19	7	4	35	5.5	5
Pen. (%)	15	5	3	28	3.9	3
Dev. from ave. (%)	14	215	-46	13	238	-52
Ave. dev. (%)						63

Results from Mundt (2011) showed between categories, a brand shared customers 60% higher with its extension than with another brand in the second category. The preliminary results of this study provide support for these findings, thus verifying the validity of Mundt's (2011) results. The results reported here from guide further analysis of other category pairings across a range of food, non-food and durable categories.

Implications

This research has important implications for marketing practitioners. Nielsen (2015) report that of the 20,000 new CPG products that have been launched in the United States between 2008 and 2015, only 24% were still in the market after a year. While Dimitriu and Ryals (2011) estimate the cost of releasing a new supermarket product can be up to USD\$50 million, making new product launches an expensive and risky venture. Understanding the level of cross-category purchasing of brand extensions can decrease the risks associated with the launch of new products.

Understanding consumer cross-category purchasing behaviour will provide a benchmark for the level of customer sharing that can be expected between brands in multiple categories. Based on this benchmark, companies will have a preliminary understanding of the level of sharing between categories when releasing an extension. As this research employs the use of behavioural data, it gives marketing practitioners an understanding of what is occurring in the market and allows them to make marketing decisions based on real world occurrences.

References

- Aaker, D. (1990). Brand extensions: The good, the bad, and the ugly. *Sloan Management Review*, 31 (4), 47-56.
- Aaker, D. and Keller, K. L. (1990). Consumer evaluations of brand extensions. *Journal of Marketing*, 54 (1), 27-41.
- Bass, F. M. (1974). The theory of stochastic preference and brand switching. *Journal of Marketing Research*, 11 (1), 1-20.
- Cohen, J., Lockshin, L. and Sharp, B. (2012). A better understanding of the structure of a wine market using the attribute of variety. *International Journal of Business and Globalisation*, 8 (1), 66-80.
- Dawes, J. (2017). Sub-brands: How much substitution occurs between them, and is combined brand penetration lowered as a result? Ehrenberg Bass Institute for Marketing Science. Adelaide, Australia:
- Dimitriu, R. and Ryals, L. (2011). Launching a brand. *WARC Best Practice*, (October), 1-5.
- Ehrenberg, A., Uncles, M. D. and Goodhardt, G. G. (2004). Understanding brand performance measures: Using dirichlet benchmarks. *Journal of Business Research*, 57 (12), 1307-1325.
- Faulkner, M., Truong, O. and Romaniuk, J. (2014). Uncovering generalized patterns of brand competition in china. *Journal of Product & Brand Management*, 23 (7), 554-571.
- Hubbard, R. and Armstrong, J. S. (1994). Replications and extensions in marketing: Rarely published but quite contrary. *International Journal of Research in Marketing*, 11 (3), 233-248.
- Lindsay, R. M. and Ehrenberg, A. (1993). The design of replicated studies. *The American Statistician*, 47 (3), 217-228.
- Lomax, W., Hammond, K., East, R. and Clemente, M. (1996). The measurement of cannibalization. *Marketing Intelligence & Planning*, 14 (No. 7), 20-28.
- Lury, G. (2016). How to extend a brand. *WARC Best Practice*, (June 2016), 1-7.
- Mundt, K. (2011). To what extent does cross category brand loyalty exist for brand extensions. PhD, University of South Australia.
- Nielsen. (2015). Looking to achieve new product success. The Nielsen Company. United States:
- Romaniuk, J. and Nenycz-Thiel, M. (2015). Buying of private labels across categories: How far is too far? In *Advances in national brand and private label marketing: Second international conference*. Switzerland: Springer.
- Romeo, J. B. (1991). The effect of negative information on the evaluations of brand extensions and the family brand. *Advances in Consumer Research*, 18399-406.
- Sharp, B. 2010, 'Our buyers are different', in B. Sharp (ed), *How brands grow*, Oxford University Press, Melbourne, Australia, pp. 56-73.
- Tauber, E. M. (1988). Brand leverage: Strategy for growth in a cost-control world. *Journal of Advertising Research*, 28 (4), 26-30.
- Uncles, M. D., Ehrenberg, A. and Hammond, K. (1995). Patterns of buyer behavior: Regularities, models, and extensions. *Marketing Science*, 14 (3), G71-G78.
- Zimmer, M. R. and Bhat, S. (2004). The reciprocal effects of extension quality and fit on parent brand attitude. *Journal of Product & Brand Management*, 13 (1), 37-46.