



“You Are Where You Shop”: Channel Associations and the Drivers of Cross-channel Variation in Shopping Behavior

J. Jeffrey Inman, Venkatesh Shankar, and Rosellina Ferraro

WORKING PAPER • REPORT NO. 02-117 • 2002



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The authors thank ACNielsen, Meyers Research Center, and Spectra for providing the data used in this research, and Nitika Garg, Adwait Khare, and Vikas Mittal for their assistance and comments.

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Although consumers purchase packaged goods from a variety of channels—grocery stores, drug stores, mass merchandisers, club stores, and convenience stores—the where-to-buy decision is largely unexplored in consumer behavior research.

In this study, authors Inman, Shankar, and Ferraro examine product category-channel associations, attribute-channel associations, and channel patronage behavior. Using data from consumer surveys and the ACNielsen wand panel, they address these questions: What “signature” product categories or attributes drive channel selection? What factors influence channel switching? What types of people tend to shop more from one channel than another?

Their results suggest that some channels have signature associations with certain product categories—grocery channels with food products and mass merchandiser channels with household items, for example.

Similarly, channels have signature attribute associations, both positive and negative—club stores and mass merchandisers with lower prices and better selection, grocery stores with promotions and shopping-related factors such as ambience, parking, and convenience, and drug stores with less frequently purchased categories, high prices, and poor selection.

Their analysis of channel switching behavior finds that consumers are heterogeneous in their channel-switching behavior: while some segments exhibit relatively strong loyalty to a single channel, others split their loyalty across multiple channels. In addition, these segments may be different for different product categories.

Finally, consumers’ product and attribute associations do not seem to drive their channel patronage behavior. Rather, channel patronage seems to be explained by behavioral and demographic structural factors such as purchase frequency, affluence, and life stage.

Managerial Implications

Manufacturers and retailers can use information regarding signature products and attributes for strategic purposes. For example, since household items are associated

with mass merchandisers, mass merchandisers may locate these items strategically to spur in-store need recognition of other categories less associated with their channel.

In addition, an improved understanding of channel-switching behavior across households, coupled with a profile of these segments, will enable manufacturers and retailers to better coordinate their promotional efforts across channels.

Finally, the demographics of channel selection may be of interest from a public policy standpoint. Specifically, lower-priced club channels tend to be patronized by more affluent households, who are more likely to have transportation as well as knowledge of price differences. Less affluent households thus suffer a “double whammy” of lower income and higher prices typified by other channels such as drug stores and convenience stores.

While further analysis on the drivers of channel choice across categories and over time is needed, these findings could be succinctly described as “you are where you shop.”

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Introduction

Consumers are voting with their dollars when it comes to their willingness to shop around for the products they want, the products that best enhance their life and the outlet that best satisfies their various needs. Supermarkets and drugstores remain important players . . . according to the statistics. But it could be the mass merchandisers who hold all of the vital cards unless supermarket retailers can display more winning hands (Janoff 1999, p. 34).

Consumer goods are typically available through a variety of channels or retail formats. For example, consumers can purchase dishwashing liquids from grocery stores, mass merchandisers, club stores, and drug stores. The trend toward multi-channel strategies is continuing; more consumer packaged goods are offered through convenience stores, for instance (Beirne 1999). Thus, product category availability may be less important as consumers select a purchase channel. Rather, consumers may select channels based on factors such as price, convenience, assortment, service, and channel expertise or association for the product categories considered. This implies that channels must position themselves and undertake initiatives that allow them to successfully compete with one another for consumers (Webster 2000). Evidence that mass merchandisers are gaining ground at the expense of other channels (Levy 2000) has led to efforts such as grocery stores' Efficient Consumer Response initiative (Kahn and McAlister 1997).

Several managerially important questions arise in this multi-channel environment. Does a channel have "signature" products that come to mind when consumers think of that channel? If the basket of goods drives the channel selected (e.g., "if we need detergent, soaps, and other cleaning items, we go to Target"), understanding the products most closely associated with particular channels becomes key to developing relationship marketing programs with retailers. Relatedly, what "signature" attributes (e.g., price, convenience) come to mind when consumers think of each channel? Retailers need to know how the attributes with which they are most closely associated compare to those attributes that are the important drivers of channel patronage decisions. Finally, is there heterogeneity in consumers' tendency to switch among channels? If so, what are the drivers of channel share of consumer requirements? That is, what types of people tend to shop more from one channel than another? An improved understanding of the variation in channel-switching behavior across households, coupled with a profile of these segments, would enable practitioners to better coordinate their promotional efforts across channels (e.g., a soft drink manufacturer may promote differently to mass merchandiser buyers and club store buyers). Further, the sociodemographic make-up of the shopper base across channels may have public policy implications. For example, if lower sociodemographic groups tend toward higher priced channels (e.g., drug stores, convenience stores), they experience a "double whammy" of lower incomes and higher prices.

The determinants of brand choice have been studied extensively, including the role of promotion (Guadagni and Little 1983) consideration sets (Roberts and Lattin 1991), and variety seeking (Inman 2001; Kahn and Raju 1991). Determinants of store choice have also been studied (Kumar and Leone 1988; Solgaard and Hansen 2001). However, little is known about choice behavior at the highest level in the decision tree—the selection of the channel. In this paper, we focus on the channel decision and address the aforementioned questions through two studies using various methods (i.e., correspondence analysis, cluster analysis, discriminant analysis) and two very different data sources (i.e., survey data and ACNielsen wand panel data).

Channel Patronage

Although there is surprisingly little research in the area of channel choice, the store patronage literature is relevant. Researchers have examined the impact of store or shopping center attributes (e.g., price level, convenience, quality, ambience) on patronage (Arnold, Oum, and Tigert 1983; Louviere and Gaeth 1987; Nevin and Houston 1980), as well as temporal variations in store patronage behavior (Kahn and Schmittlein 1989; Popkowski-Leszcyc and Timmermans 1997). While this literature has made evident contributions to our understanding of the general factors that motivate store switching, it has neither explored differences in the evoked attributes or product categories across channels, nor examined the geodemographic and behavioral drivers of channel patronage and cross-channel switching.

Research examining the factors that influence store patronage focus on consumer choice between grocery stores with varying price formats (everyday low price versus “HiLo” stores) (Bell, Ho, and Tang 1998; Bell and Lattin 1998; Lal and Rao 1997; Popkowski-Leszcyc and Timmermans 1997). In general, the results suggest that consumers with larger shopping lists (and concomitantly larger basket sizes) prefer everyday low price (EDLP) stores. Further, consistent with retail location theory (Huff 1962), consumer affinity for a store tends to be inversely related to the distance thereto. Lal and Rao (1997) employ a game-theoretic approach, concluding that EDLP and HiLo stores should develop strategies to appeal to differing segments of consumers in terms of service and price (see also Corstjens and Corstjens 1995). Bell, Ho, and Tang (1998) segment consumers in terms of the relative importance of fixed costs (store loyalty, distance) and variable costs (e.g., basket cost, category-specific store loyalty). They estimate their model on a sample of 520 households across five supermarkets, finding that both fixed and variable costs influence consumers’ choice of supermarket. Further, consumers appear to be heterogeneous in terms of the relative importance of these factors. Unfortunately, Bell, Ho, and Tang (1998) did not consider other channels and only estimated a general category-specific parameter (i.e., they did not examine which categories were most closely associated with particular stores).

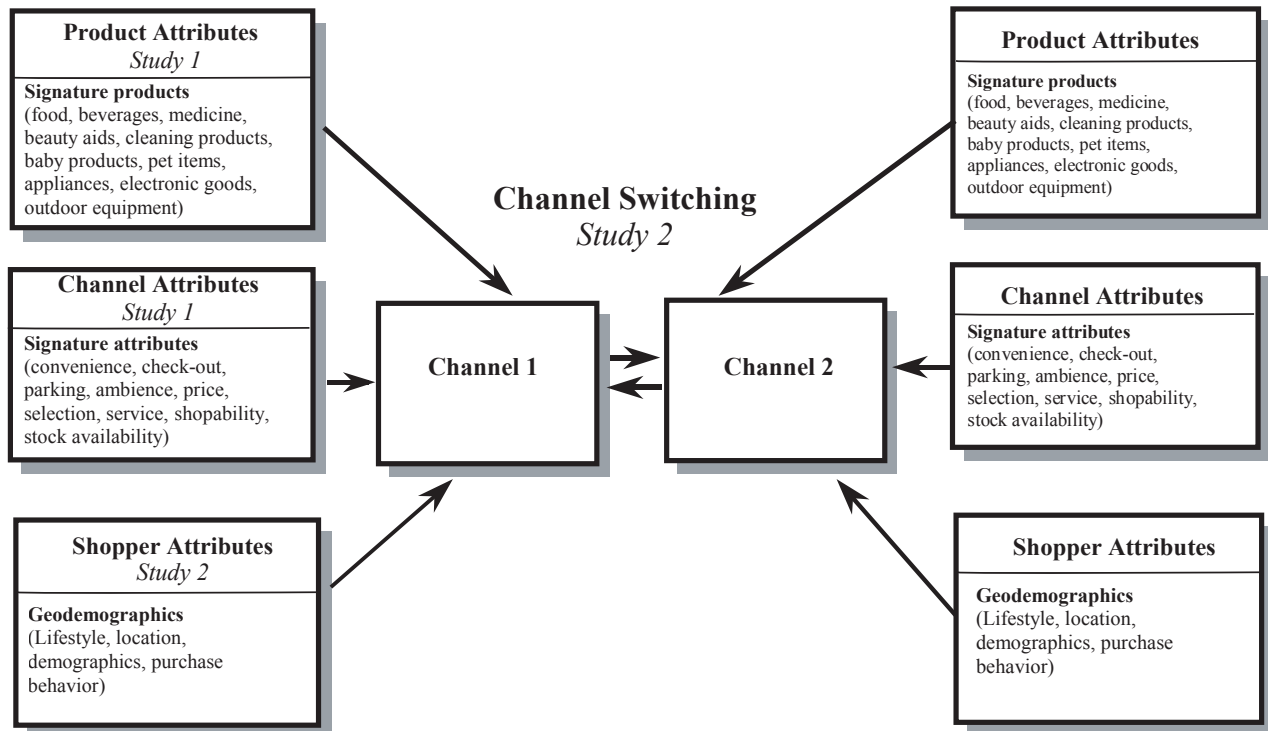
Clearly, consumers engage in a substantial amount of store switching. Popkowski-Leszcyc and Timmermans (1997) examine store switching between 21 grocery stores in a small Midwestern city and report that over 65 percent of the households shopped at 7 stores or more during the three-year period studied. Further, over 74 percent shopped 3 stores or more at least five times during the same time span. Sociodemographic variables (e.g., income, hours worked, education) and behavioral variables (e.g., shopping frequency, amount spent per trip, fill-in trip, time since last trip) were predictive of store switching.

Zettelmeyer (2000) examines the implications of competing through multiple channels on pricing and communication strategies using a game-theoretic approach. His findings suggest that firms can leverage multiple channels to achieve finer consumer segmentation. However, he assumes that firms are vertically

integrated (that is, his results apply to firms with direct distribution), and he does not empirically examine whether different types of consumers shop at different channels. His work, however, sets the stage for our research by demonstrating that the analysis of inter-firm competition can be improved by considering all the channels in which they compete. A better understanding of channel-level consumer dynamics presents the opportunity for firms to leverage the differentials in consumer utility and composition across channels.

We address these gaps in prior research. Our interest is in managerially important questions that are associated with channel choice. From Figure 1, we can view the channel decision as being driven by three broad sets of factors: product attributes, channel attributes, and shopper attributes. Product attributes include the attributes associated with types of products such as food items, beverages, and appliances (signature products). Channel attributes include convenience, price, selection, price, and parking (signature attributes). Shopper attributes refer to the geodemographics of the consumer, including demographic and behavioral indicators. Each channel is likely to be associated with certain signature products, signature channel attributes, and a particular geodemographic customer base. Consumers may switch from one channel to another, each driven by its own product, channel, and shopper attributes. Our purpose is to identify the signature products and channel attributes and to examine switching behavior among channels and its drivers.

Figure 1. Channel Factors



Our research, to the best of our knowledge, is the first to examine cross-channel consumer behavior and makes several contributions. First, we address the issue of whether channels differ in terms of the types of products (e.g., detergent, cosmetics) and attributes (e.g., pricing, convenience, service) that are evoked. Study 1 addresses our first two research questions and offers implications for channel-based geodemographic segmentation. Specifically, in Study 1 we employ a field study to generate maps of “signature” products and attributes positioned vis-à-vis each channel. Second, we explore the issue of heterogeneity in consumers’ tendency to switch channels. In Study 2, we segment consumers based on their channel-switching behavior for two product categories, analgesics and facial tissues, and profile the resulting segments to address the factors that explain segment membership.

Study 1: Channels' Signature Products and Signature Attributes

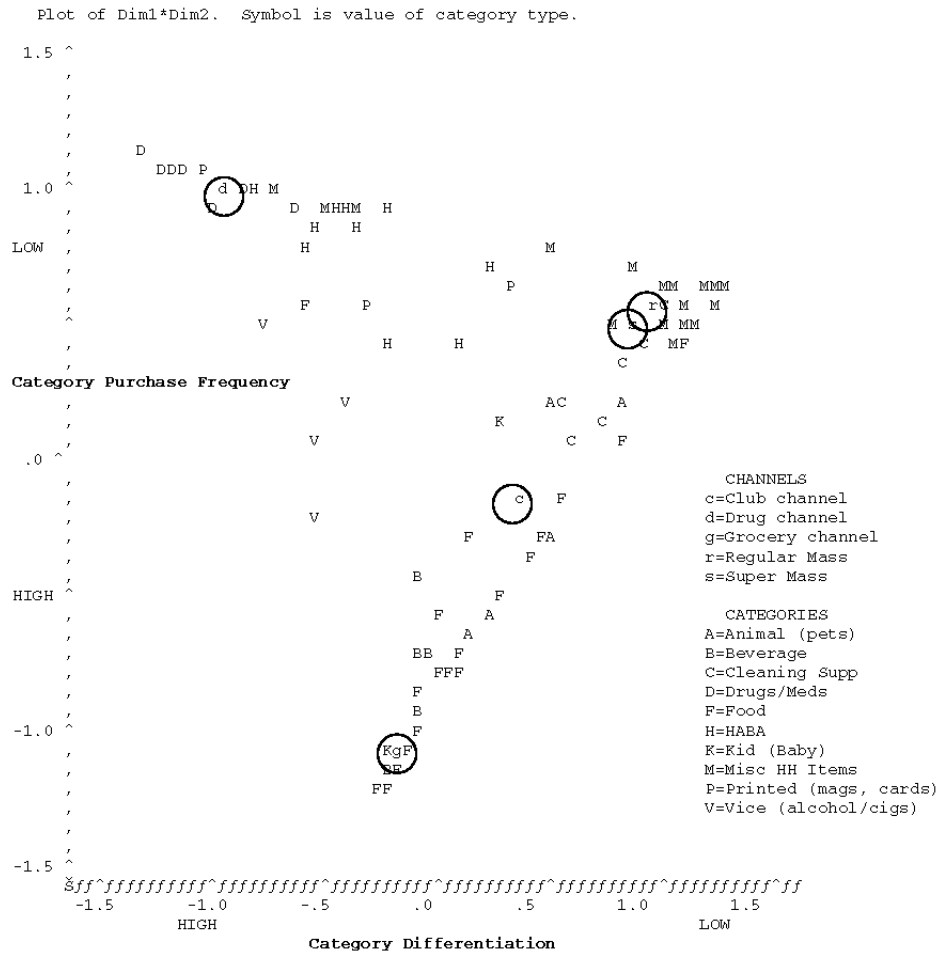
The data for this study were provided by Meyers Research Center in New York. In the fall of 1999, 1,698 consumers from five cities participated in a field intercept survey. They were asked to indicate which of the following channels they shop in within a typical month (number of affirmative responses shown in parentheses): “supermarkets” (1,698), “drug stores”(1,165), “superstores like Big K or Super Wal-Mart” (729), “regular discount department stores like Kmart, Wal-Mart, or Target” (966), and “warehouse club stores like Costco or Sam’s Club” (351). Respondents were then asked to list the “first three products that come to mind” when they think about the particular type of channel, followed by the first three words or thoughts, other than kinds of products, that come to mind for each store type or channel. As one would expect from an open-ended format, a wide variety of products were mentioned: 113 for supermarkets, 100 for drug stores, 105 for superstores, 98 for regular mass merchandisers, and 107 for club stores.

To identify which products are most likely to be considered “signature” products for a channel, we perform a correspondence analysis (cf. Hoffman and Franke 1986), depicted in Figure 2. Correspondence analysis is a mapping technique that uses cross-tabulation data as input (the number of product mentions for each channel) and converts the data into a joint space map using the chi-square value for each cell. Correspondence analysis is applicable to this study for several reasons. First, its ability to simultaneously consider multiple categorical variables enables us to jointly map the product categories elicited by the open-ended responses. Second, as with other graphical algorithms (e.g., multidimensional scaling, factor analysis), correspondence analysis can assist in uncovering the structural relationship between the variables. For instance, food products may cluster together on the map. Third, the only data requirement for correspondence analysis is a rectangular data matrix with non-negative entries. Thus, it is perfectly suited for the open-ended elicitations that were the source of the data.

The primary caveat of correspondence analysis is that the distances between the row (products in this case) variables and column (channels in this case) variables cannot be interpreted because the distances do not represent a defined metric (Hoffman and Franke 1986). While the between-set distances cannot be strictly interpreted, a channel will tend toward a position in its space corresponding to the products that are the most prominent in its profile. In other words, the specific distances between the channels and the products should not be interpreted, but the ordinal proximity of particular products to certain channels has meaning. For example, if the food categories tend toward the upper right quadrant of the plot and the club format is the only channel in this quadrant, we can conclude that

food products are generally more closely associated with club stores than with other channels. However, the specific distance of milk from club stores versus its distance from grocery stores is not meaningful.

Figure 2. Correspondence Analysis Map of Categories and Channel Data



Both channels and products are plotted in Figure 2. The analysis suggests that two dimensions adequately capture the variation in product mentions across channels. Dimension 1 captures 55 percent of the variance, while dimension 2 captures 36 percent, for a total of 91 percent of the variance. A “channel triangle” is revealed, with the drug channel in the upper left corner, the grocery channel in the bottom corner, and the superstores and regular mass merchandiser channels in the upper right corner. The proximity of the superstores to regular mass merchandisers suggests that consumers perceive them quite similarly in terms of the products that each evoke. The club channel is located roughly equidistant between grocery and super/regular mass merchandisers.

Regarding the product categories, the food and beverage items tend toward the bottom of the plot. The pet food and supplies are near the middle of the plot, as are the vice products (e.g., liquor and cigarettes). Less differentiated or “commodity” products like general household items (e.g., toys, clothing, lawn and garden supplies, domestics) and cleaning supplies tend toward the upper right quadrant, while personal care products (e.g., oral care, feminine hygiene, deodorants) and health-related categories (e.g., cold and flu medication, analgesics, vitamins) are in the upper left quadrant. Grocery tends to be associated with food items, drug is associated with personal care and health-related categories, club tends to bring food items and pet supplies to mind, while the two mass merchandiser channels are related to less differentiated, infrequently purchased, general household items. Thus, we called the vertical dimension “category purchase frequency” and the horizontal dimension “category differentiation.” This analysis is very relevant to positioning channels vis-à-vis the products they carry. It appears that consumers associate certain products with certain channels. A listing of product category associations along the two dimensions appears in Table 1, while the categories that were mentioned by at least 2 percent of the panelists for a particular channel are shown in Table 2.

The open-ended question regarding non-product thoughts yielded attributes of the channel almost exclusively, such as convenience, parking, selection, and pricing. The breakdown of responses by channel is shown in Table 3 (p. 14). Since respondents generated positive, negative, and neutral thoughts about the channels, we grouped the thoughts in terms of similarity and valence. Again, we performed a correspondence analysis to ascertain the signature attributes of each channel, shown in Figure 3. The first dimension, shown on the vertical axis, explains 58 percent of the variance while the second dimension explains 31 percent of the variance, a total of 89 percent of the variance. As was the case in the product-based analysis, the regular mass merchandisers and super mass merchandiser formats were perceived almost identically in terms of attributes. Drug stores and club stores are the most different channels (i.e., the furthest apart), while grocery falls between drug and mass merchandisers.

Most of the positive attributes cluster in the lower left-hand corner of the graph. Short check-out lines are on the lower right, while low price and good selection are in the upper part of the graph. Most of the negatively valenced attributes are relatively far away from their positive counterpart, particularly price. However, the mentions of well-stocked and poorly stocked are quite close to one another on the graph. Evidently, the channels do not differ significantly in their perceptions of stock levels. We name the vertical dimension “price/assortment” and the horizontal dimension “attribute valence.”

Table 1. Study 1: Product Categories and Correspondence Analysis Dimensions

Purchase Frequency	Differentiation	
	Low	High
Low	Automotive Beauty care Cleaning products Clothing Cooking utensils Domestics Electronics Footwear Fresh flowers/plants Furniture Gifts Groceries Hair care Health and beauty aids Hosiery Household cleaners Hardware/electrical/plumbing Jewelry and watches Lawn and garden Office/school supplies Pre-recorded videos/tapes Seasonal items Small appliances Sporting goods/toys	Analgesics Batteries Candy Cards/wraps/party Cold and flu medications Cosmetics Deodorants Feminine hygiene First aid supplies Gastrointestinal products Health care/over-the-counter medications Hobby and crafts Liquor Magazines/newspapers Oral care Photo finishing Photo supplies Prescription drugs Shaving supplies Skin care Soap Vitamins/supplements
High	Baby products Canned food Cat food Crackers Diapers Dishwashing detergent Dog food Food Frozen dinners Frozen foods Frozen meat Frozen pizza Household products Laundry supplies Oil/shortening Paper goods Pet food Pet supplies Salad dressing Snacks	Baby food Beer/wine Beverages/drinks Cereal Chips Cigarettes Coffee Cookies Deli Eggs Fresh baked goods Fresh meat Ice cream Juice/juice drinks Milk/dairy Packaged baked goods Packaged cheese Packaged cold cuts Produce Side dish items Soft drinks

Table 2. Study 1: Product Categories Associated with Channels

(Percent of total channel mentions in parentheses)

	Grocery	Club	Super Mass	Regular Mass	Drug
Analgesics	1 (0%)	2 (0%)	1 (0%)	4 (0%)	124 (5%)
Automotive	0 (0)	13 (2)	23 (1)	24 (2)	3 (0)
Beauty care	4 (0)	3 (0)	41 (2)	22 (2)	42 (2)
Candy	22 (1)	12 (2)	11 (1)	8 (1)	77 (3)
Canned food	43 (1)	12 (2)	2 (0)	3 (0)	1 (0)
Cards/wraps/party	1 (0)	2 (0)	12 (1)	10 (1)	162 (7)
Cereal	127 (3)	15 (2)	1 (0)	7 (1)	0 (0)
Cleaning products	11 (0)	22 (4)	66 (4)	48 (4)	8 (0)
Clothing	0 (0)	19 (3)	328 (20)	230 (18)	2 (0)
Cold and flu medications	0 (0)	0 (0)	4 (0)	3 (0)	82 (4)
Cooking utensils	2 (0)	3 (0)	39 (2)	26 (2)	0 (0)
Cosmetics	1 (0)	3 (0)	42 (3)	35 (3)	156 (7)
Diapers	33 (1)	6 (1)	30 (2)	20 (2)	22 (1)
Domestics	0 (0)	1 (0)	50 (3)	27 (2)	0 (0)
Eggs	123 (3)	2 (0)	0 (0)	0 (0)	0 (0)
Electronics	0 (0)	18 (3)	47 (3)	28 (2)	2 (0)
Feminine hygiene	0 (0)	1 (0)	10 (1)	12 (1)	40 (2)
First aid supplies	0 (0)	0 (0)	1 (0)	0 (0)	57 (2)
Food	10 (0)	26 (4)	10 (1)	29 (2)	0 (0)
Footwear	0 (0)	0 (0)	49 (3)	25 (2)	0 (0)
Fresh meat	586 (16)	60 (10)	0 (0)	17 (1)	0 (0)
Frozen foods	26 (1)	20 (3)	0 (0)	1 (0)	0 (0)
Gifts	0 (0)	9 (1)	22 (1)	22 (2)	3 (0)
Hair care	5 (0)	0 (0)	43 (3)	34 (3)	126 (5)
Health care/OTC medications	5 (0)	2 (0)	23 (1)	9 (1)	89 (4)
Hosiery	0 (0)	0 (0)	31 (2)	19 (1)	10 (0)
Household products	5 (0)	6 (1)	42 (3)	52 (4)	8 (0)
Juice/juice drinks	98 (3)	14 (2)	2 (0)	6 (0)	1 (0)
Laundry supplies	26 (1)	21 (3)	33 (2)	38 (3)	4 (0)
Magazines/newspapers	6 (0)	29 (5)	8 (0)	10 (1)	52 (2)
Milk/dairy	678 (18)	13 (2)	0 (0)	7 (1)	3 (0)
Oral care	5 (0)	1 (0)	21 (1)	10 (1)	73 (3)
Paper goods	70 (2)	57 (9)	111 (7)	88 (7)	46 (2)
Photo supplies	0 (0)	4 (1)	17 (1)	10 (1)	91 (4)
Pkgd. baked goods	404 (11)	12 (2)	0 (0)	2 (0)	0 (0)
Pkgd. cheese	54 (1)	11 (2)	0 (0)	1 (0)	0 (0)
Prerecorded videos/tapes	3 (0)	4 (1)	27 (2)	29 (2)	1 (0)
Prescription drugs	4 (0)	0 (0)	18 (1)	23 (2)	586 (25)
Produce	554 (15)	13 (2)	2 (0)	8 (1)	0 (0)
Small appliances	0 (0)	5 (1)	27 (2)	17 (1)	2 (0)
Snacks	30 (1)	12 (2)	12 (1)	3 (0)	7 (0)
Soap	18 (0)	6 (1)	19 (1)	5 (0)	37 (2)
Soft drinks	177 (5)	10 (2)	21 (1)	11 (1)	18 (1)
Sporting goods/toys	0 (0)	5 (1)	103 (6)	76 (6)	15 (1)
Vitamins/supplements	1 (0)	1 (0)	8 (0)	10 (1)	80 (3)

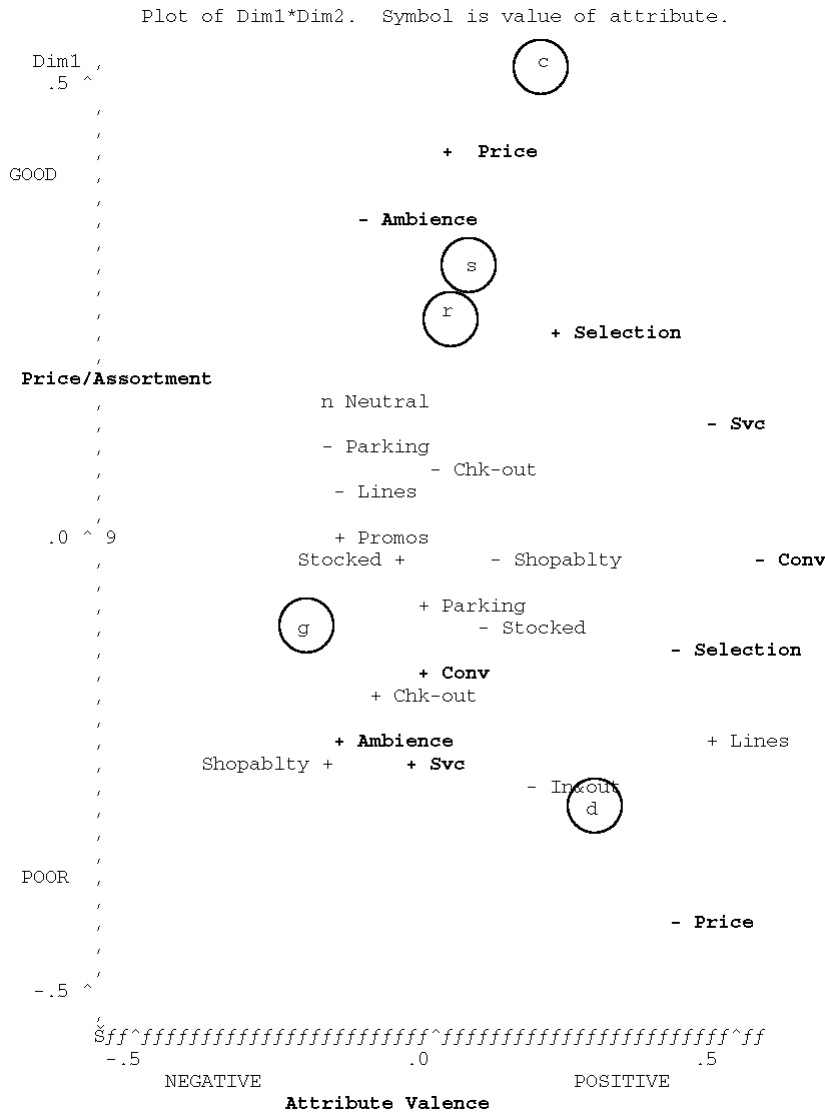
Table 3. Study 1: Attributes Associated with Channels

(Percent of total channel mentions in parentheses)

	Grocery	Drug	Super Mass	Regular Mass	Club
Convenience +	417 (14%)	276 (14%)	144 (13%)	138 (9%)	27 (5%)
Convenience -	7 (0)	20 (1)	10 (1)	8 (1)	3 (1)
In & out +	108 (3)	29 (2)	13 (1)	15 (1)	4 (1)
In & out -	33 (1)	34 (2)	10 (1)	10 (1)	4 (1)
Check-out +	51 (2)	29 (2)	13 (1)	15 (1)	4 (1)
Check-out -	31 (1)	19 (1)	13 (1)	19 (1)	4 (1)
Lines +	19 (1)	41 (2)	4 (0)	20 (1)	7 (1)
Lines -	114 (4)	43 (2)	28 (3)	41 (3)	19 (4)
Parking +	83 (3)	53 (3)	20 (2)	41 (3)	11 (2)
Parking -	80 (3)	28 (1)	19 (2)	37 (3)	13 (3)
Ambience +	393 (13)	202 (10)	72 (7)	107 (7)	19 (4)
Ambience -	152 (5)	42 (2)	80 (7)	96 (7)	33 (7)
Price +	332 (11)	144 (7)	225 (21)	294 (20)	118 (23)
Price -	55 (2)	90 (5)	13 (1)	14 (1)	11 (2)
Promotion +	207 (7)	92 (5)	59 (5)	92 (6)	22 (4)
Selection +	322 (10)	289 (15)	211 (19)	222 (15)	146 (29)
Selection -	17 (1)	26 (1)	2 (0)	10 (1)	9 (2)
Service +	426 (14)	290 (15)	81 (7)	149 (10)	22 (4)
Service -	20 (1)	54 (3)	31 (3)	40 (3)	9 (2)
Shopability +	97 (3)	49 (3)	13 (1)	33 (2)	3 (1)
Shopability -	35 (1)	28 (1)	16 (1)	16 (1)	6 (1)
Stocked +	75 (2)	42 (2)	14 (1)	37 (3)	13 (3)
Stocked -	14 (0)	13 (1)	3 (0)	14 (1)	0 (0)
Neutral	162 (5)	50 (3)	57 (5)	53 (4)	33 (7)

Several attributes tended to be more associated with the grocery channel, regardless of valence. For example, parking, product availability (stocked), and shopability were most closely associated with grocery. Presumably, these are more salient issues when considering grocery stores. In fact, grocery tends to be the channel that is most associated with 7 of the 10 positively valenced attributes. Club stores and mass merchandisers tend to be more associated with low prices and good assortment/selection, but also more closely associated with poor ambience than the other channels. Drug stores seem to be in the weakest position, as this channel is more closely associated with poor selection, higher prices, and slower in and out. The positive attributes of superior service and short check-out lines work in its favor. The most frequently cited attributes from Table 3 are bolded in Figure 3. This yields insights regarding the proximity to the key attributes. Club stores and mass merchandisers are relatively associated with low price and selection, but also with poor ambience. Grocery is most closely tied to convenience, ambience, and service, while drug stores are associated mainly with heavily cited negatives such as high price and poor selection.

Figure 3: Correspondence Analysis Map of Signature Attributes for Each Channel



Why shop at a particular channel? We can address this question to some extent because respondents were asked to provide the most important reason for having visited the store (see Table 4). The most commonly mentioned reasons were convenience (41 percent), prices/promotions (37 percent), trip type (12 percent), and assortment/selection (9 percent). Arguably the reasons most commonly mentioned by respondents are the most important factors in their choice of channel. Comparing these results to those of the correspondence analysis suggests which channel-attribute associations are the most important. For example, club and mass merchandiser’s strengths of low price and good selection represent 25 percent of the reasons mentioned (167 for low price and 85 for assortment-related). Further, grocery’s strengths of good promotions and convenience represent 38 percent of reasons mentioned (413 convenience mentions less the 230 in-store decision mentions plus 191 promotion-related mentions). Again, drug stores are

seemingly in the weakest position, as their strengths of short lines and better service received few mentions as reasons to shop a particular store.

Table 4. Reasons for Shopping in Channel

Convenience	413	(41%)
Convenient location	86	(21)
In-store decision	230	(56)
Faster in and out	24	(6)
For convenience	64	(15)
Other convenience-related	9	(2)
Price/Promotion	368	(37%)
Look for sales/specials	169	(46)
Shop by price	167	(45)
Save by buying large sizes	10	(3)
Good coupons/double coupons	9	(2)
Other price/promotion-related	13	(4)
Assortment/Selection	85	(9%)
Get larger sizes	25	(29)
Get size I want	4	(5)
Good variety/selection	44	(52)
Other store didn't stock it	11	(13)
Other assortment-related	1	(1)
Quality	12	(1%)
Get good quality/freshness	12	(100)
Trip Type	118	(12%)
Major trip vs. fill-in	80	(68)
Planned purchase vs. impulse	32	(27)
Holiday shopping vs. everyday	6	(5)
TOTAL REASONS	996	(100)

These results indicate that non-product reasons are also important for deciding which channel to patronize. Further, this finding illustrates the benefit of carrying a wide assortment of products. The probability of in-store cuing is positively related to the number of items offered. The results of Study 1 suggest that in general, certain channels are associated with certain product categories and attributes. However, does the switching behavior across channels for consumers of a particular category vary across consumers? If so, what are the drivers of these differences in channel-switching behavior? We address these questions in Study 2.

Study 2: Channel Switching Segmentation

Our purpose in this study is to examine the nature of cross-channel switching. Specifically, we explore consumer segments and profile those segments demographically and in terms of their category purchase behavior (e.g., purchase frequency, average purchase size). To do this, we cluster-analyze consumers in terms of their first-order switching behavior, and then use discriminant analysis to identify variables that predict cluster membership. This enables us to (a) examine cross-channel switching heterogeneity and (b) explore the behavioral factors (e.g., number of trips, average quantity purchased) and demographic factors (e.g., presence of children, income) driving heterogeneity in cross-channel switching.

Our data come from ACNielsen, which provided wand panel data for two different product categories (analgesics and facial tissue). The datasets track purchases from approximately 2,500 households in St. Louis over a three-year period (1993-1995) across four channels, club, drug, grocery, and mass. Over 20,000 purchases of analgesics and 36,000 purchases of facial tissue are captured during this period. Consumers in the ACNielsen Homescan® panel are given electronic wands and are instructed to scan all products purchased upon arriving home from each shopping trip. This methodology captures purchases from grocery stores, mass merchandisers, drug stores, and club stores. Along with the UPC code, panelists are asked to input additional information such as the store from which the purchase was made, quantity purchased, price, and promotions (if any). Product attributes (e.g., pills/tissues per package) are retrieved from the ACNielsen product library using the 12-digit UPC.

In the first phase, we use cluster analysis to create segments of panelists that are relatively homogeneous in their cross-channel switching behavior. We first created a joint probability matrix for each household, which was then the basis of the cluster analysis. While transition matrices are useful in examining the conditional probability of switching to a different channel, we used joint probability matrices as the input to the cluster analysis because each cell represents the percentage of switches from one channel to another using the total number of purchases for the panelist as the base rather than using the row total as the base (see Table 5). Thus, a heavy grocery buyer would have greater weights in the grocery cells, which is more consistent with our purpose.

The cross-channel transition matrices for the entire panel for analgesics and facial tissues are shown in Table 5. The table suggests a relatively high channel loyalty for both categories (i.e., the within-channel transition probabilities are the greatest in each row). Focusing first on analgesics, the average repeat probability was .53 (i.e., averaging the values in the diagonal). That is, having purchased in a particular channel, panelists were likely to purchase from that channel again on the next occasion. For example, if analgesics were purchased from a grocery store on the

previous occasion ($t - 1$), analgesics were purchased from a grocery store on the next occasion (t) more than half the time (53 percent). The loyalty to mass merchandiser is highest, that is, purchases from a mass merchandiser were followed by another purchase from a mass merchandiser 70 percent of the time. Switching to and from the club channel was relatively low, comprising only 10 percent of all the panel purchases. Turning to facial tissues, the channel loyalty rate is slightly higher than in the case of analgesics (56 percent versus 53 percent). The grocery repeat probability is highest at .75, followed by mass at .65. Similar to analgesics, the switches to and from the club channel were the least, involving only 7 percent of all purchases.

Table 5. Cross-channel Transition Matrixes for Analgesics and Facial Tissues

	Analgesics				Facial Tissues			
	Groc _t	Mass _t	Drug _t	Club _t	Groc _t	Mass _t	Drug _t	Club _t
Groc _{t-1}	.53	.25	.16	.06	.75	.18	.04	.04
Mass _{t-1}	.15	.70	.10	.05	.29	.65	.03	.03
Drug _{t-1}	.25	.20	.50	.05	.40	.20	.40	.00
Club _{t-1}	.25	.25	.13	.38	.29	.29	.00	.43

We first discuss the cluster results for analgesics (see Table 6). Of the 2,443 panelists, 1,976 purchased analgesics during the three years. Six clusters for analgesics emerged (based on the cubic clustering criterion and pseudo F statistic in SAS), explaining 47 percent of the variance in switching behavior. Clusters ranged in size from 72 to 725 panelists. Three of the six segments are composed of consumers who purchase predominantly from grocery stores and mass merchandisers. These segments represent 1,369 of the 1,976 panelists (69 percent). As shown in Table 6, the switching nature in these segments is quite different. In Segment 1, the “mass primary” segment, 71 percent of the purchases were repeat purchases from a mass merchandiser and 11 percent of the purchases involved switching from grocery to mass or from mass to grocery. In contrast, in Segment 2, the “grocery primary” segment, repeat purchases in grocery occurred 69 percent of the time and switches between grocery and mass occurred on 8 percent of the occasions. Segment 3, the “grocery-mass switchers,” exhibited little repeat purchasing behavior (only 19 percent in grocery or mass), but switched from mass to grocery (30 percent) and grocery to mass (31 percent) quite heavily.

Table 6. Analgesic Segments Joint Probability Matrices*

(Proportions at or greater than .05 shaded)

	Mass Primary Cluster (N = 725; 37%)				Grocery Primary Cluster (N = 409; 21%)			
	Groc _t	Mass _t	Drug _t	Club _t	Groc _t	Mass _t	Drug _t	Club _t
Groc _{t-1}	.01	.06	.01	0	.69	.05	.06	.02
Mass _{t-1}	.05	.71	.03	.02	.03	.02	.01	0
Drug _{t-1}	.01	.03	.01	0	.07	.01	.02	0
Club _{t-1}	0	.02	0	.01	.02	0	0	0

	Grocery-Mass Switch Cluster (N = 235; 12%)				Drug Primary Cluster (N = 313; 16%)			
	Groc _t	Mass _t	Drug _t	Club _t	Groc _t	Mass _t	Drug _t	Club _t
Groc _{t-1}	.10	.31	.04	.01	.04	.02	.08	0
Mass _{t-1}	.30	.09	.02	.01	.01	.02	.05	0
Drug _{t-1}	.03	.03	.01	0	.08	.06	.57	.02
Club _{t-1}	.01	.01	.01	.01	0	0	.03	.01

	All-Channel Switch Cluster (N = 222; 11%)				Drug-Mass Switch Cluster (N = 72; 4%)			
	Groc _t	Mass _t	Drug _t	Club _t	Groc _t	Mass _t	Drug _t	Club _t
Groc _{t-1}	.03	.02	.12	.08	.01	0	.06	0
Mass _{t-1}	.01	.02	.02	.07	.02	.06	.27	.01
Drug _{t-1}	.11	.01	.01	.05	.03	.46	.05	0
Club _{t-1}	.10	.12	.05	.20	0	0	.02	.01

* Note: The joint probabilities can be converted to transition probabilities by dividing each entry by the row total.

The fourth segment, the “drug primary” segment, is composed of 313 households (16 percent) and tends to repeat-purchase from drug stores (57 percent). Further, another 32 percent of this segment’s purchases involve either a switch from or a switch to a drug store. The fifth segment, comprising 11 percent of the panel, switches among all four channels, thus we term this segment the “all-channel switchers.” However, most of their purchases (67 percent) involve club stores and they show the greatest propensity of any channel to repeat-purchase from a club store (20 percent). Finally, a relatively small segment (4 percent), the “drug-mass switchers,” purchase primarily from mass merchandisers and drug stores (84 percent) and very few of these purchases are repeat purchases.

Turning to the facial tissue results (see Table 7), 2,195 panelists purchase facial tissues. Five clusters emerge, explaining 56 percent of the variation in switching probability across the 16 cells of the transition matrix. Clusters range in size from 64 to 1,022 households. Similar to the analgesics analysis, three clusters are composed of panelists who purchase primarily from grocery and mass. These three clusters represent 72 percent of the panel versus 70 percent in analgesics. Purchases

of facial tissue are much more confined to grocery stores than are purchases of analgesics. Almost half of the households (47 percent) are members of the grocery primary segment in the facial tissue analysis compared to 21 percent in analgesics. Further, 78 percent of the facial tissues purchases are repeat purchases from grocery in this segment compared to 69 percent in analgesics. A small club primary segment emerges (4 percent) wherein 54 percent of the purchases are repeat purchases in club and 84 percent of the purchases involve club stores. Interestingly, no club-related segment is revealed in the analgesics analysis. The final segment is an all-channel switcher group and comprises 24 percent of the households. This segment's purchases are more concentrated in grocery (67 percent) and mass (56 percent) than in drug (24 percent) or club (19 percent), while the all-channel switcher segment in analgesics is less centered around grocery (47 percent) and mass (27 percent) and more so in drug (37 percent) and particularly in club (67 percent). The all-channel switcher segment in analgesics seems to be a combination of the all-channel switch and club primary clusters from facial tissues.

Table 7. Facial Tissue Segments Joint Probability Matrices

(Proportions at or greater than .05 shaded)

	Mass Primary (N = 492; 22%)				Grocery Primary (N = 1,022; 47%)			
	Groc _t	Mass _t	Drug _t	Club _t	Groc _t	Mass _t	Drug _t	Club _t
Groc _{t-1}	.04	.09	0	0	.78	.06	.02	.02
Mass _{t-1}	.07	.70	.01	.02	.05	.02	0	0
Drug _{t-1}	0	.01	0	0	.02	0	.01	0
Club _{t-1}	0	.02	0	.01	.01	0	0	0

	Grocery-Mass Switchers (N = 64; 3%)				Club Primary (N = 83; 4%)			
	Groc _t	Mass _t	Drug _t	Club _t	Groc _t	Mass _t	Drug _t	Club _t
Groc _{t-1}	.13	.15	.03	.02	.06	.02	.01	.07
Mass _{t-1}	.58	.04	0	0	.02	.05	0	.05
Drug _{t-1}	0	.03	.01	0	.01	0	.01	.01
Club _{t-1}	0	.01	.01	0	.08	.08	.01	.54

	All-Channel Switchers (N = 534; 24%)			
	Groc _t	Mass _t	Drug _t	Club _t
Groc _{t-1}	.17	.20	.04	.04
Mass _{t-1}	.13	.11	.03	.03
Drug _{t-1}	.05	.03	.05	.01
Club _{t-1}	.04	.03	.03	.01

Comparing the transition matrices across the categories reveals some strong similarities. For instance, 90 percent of the purchases in the mass primary segment are in grocery or mass, compared to 83 percent in the mass primary analgesics

segment. Further, the percentage of repeat purchases in mass is practically identical in the mass primary segments (71 percent and 70 percent for analgesics and facial tissue, respectively). In the grocery-mass switching segment, 90 percent of purchases are repeat in, or switching between, grocery and mass, compared to 80 percent of purchases in the grocery-mass switching segment for analgesics. Interestingly, the size of the grocery-mass switching segment is much smaller in facial tissue (3 percent) than in analgesics (12 percent). There are several possible reasons for the differences between the cluster types for analgesics and facial tissues. First, since analgesics are drugs, there is a drug-primary cluster and a drug-mass switch cluster. As Study 1 showed, health-related categories are closely associated with the drug store channel. Second, the lack of a club primary segment for analgesics may be due to the fact that club store purchases are typically in large sizes and drug expiration dates make it less desirable to buy in bulk.

Table 8 shows the relationship between the segments across analgesics and facial tissue. Those panelists who did not purchase in one or the other category (i.e., the “Don’t Buy” column and row) do not display a strong proclivity to come from a particular segment. Ignoring the small segments (i.e., drug-mass in analgesics and grocery-mass in facial tissue), the falloff from analgesics ranges from 10 percent (mass primary segment) to 19 percent (all-channel segment) while the facial tissue falloff ranges from 18 percent (all-channel segment) to 28 percent (club primary segment). There is little migration between the two unique analgesics segments (drug and drug-mass) and the unique facial tissue segment (club), as only 15 (4 percent) members of the two drug-related segments move to the facial tissue club segment. With no drug-related segment in facial tissue, one might expect these analgesics segment members to end up in the all-channel segment and many did (33 percent). However, the majority (51 percent) are in the facial tissue grocery primary segment. Only 11 percent move to the facial tissue mass primary segment.

The two product categories have four segments in common (mass, grocery, grocery-mass, and all channel). Of the 652 analgesics mass primary segment panelists, 44 percent (287) are assigned to the facial tissue mass primary segment, while another 26 percent are assigned to mass-related segments (12 in grocery-mass and 156 in all-channel). Of the 30 percent who migrate to other segments, most (28 percent) move to the facial tissue grocery segment. Thus, most analgesic mass segment panelists remain in a mass-related segment in facial tissue. Of the 357 analgesic grocery primary segment members who also purchase facial tissue, 71 percent remain in the facial tissue grocery segment and another 21 percent are assigned to the grocery-related segments of grocery-mass (4 percent) and all-channel (17 percent). Again, this suggests relatively stable behavior. However, such is not the case in the analgesics grocery-mass segment; of the 205 grocery-mass panelists from analgesics who purchase facial tissue, only 3 percent are also assigned to the facial tissue grocery-mass segment, with another 32 percent in the all-channel segment. The lion’s share (51 percent) migrate to the grocery primary segment. Thus, while these consumers gravitate toward grocery and mass for analgesics, they satisfy their requirements for facial tissue mainly from grocery. Finally, of the 179 all-channel analgesics panelists who also purchase facial tissue, 32 percent remain in the all-channel segment in facial tissue, while 10 percent migrate to the club segment.

About half (49 percent) migrate to the grocery primary segment. Across these two multi-channel segments (grocery-mass and all-channel), the surprising finding is how few migrate to the mass primary facial tissue segment—only 48 of the 384 panelists (12 percent). These results attest to the asymmetric draw of mass merchandisers in analgesics and grocery stores in facial tissue.

Table 8. Segment Membership across Categories

		Facial Tissue						Total
		Mass	Grocery	Groc-Mass	All-Channel	Club	Don't Buy	
Analgesics	Mass	287	185	12	156	12	73	725
	Grocery	15	255	15	60	12	52	409
	Groc-Mass	33	104	7	58	3	30	235
	All-Channel	15	88	0	58	18	43	222
	Drug	23	150	4	90	12	34	313
	Drug-Mass	17	30	1	17	3	4	72
	Don't Buy	102	210	25	95	23		
	Total	492	1,022	64	534	83		

We next performed a discriminant analysis to ascertain if household demographics and/or behavior are predictive of cluster membership. The file with the household demographic data did not provide complete information for all households, so the analysis was performed for 1,731 of the 1,976 (88 percent) households who purchase analgesics and 1,813 of the 2,195 (83 percent) households who purchase facial tissues. The demographic variables are income, female head-of-household (HOH) age, and presence of children. The behavioral variables are total number of purchase occasions, proportion of purchases on deal, total number of brands purchased, and average quantity. To account for variation in package sizes, average quantity is calculated as the number of pills for analgesics and the number of tissues for facial tissue. Tables 9 and 10 show the results of the discriminant analysis, followed by the mean of each variable for each cluster.

Table 9 (analgesics) reveals some interesting patterns across the segments. One can see that households in the mass primary segment tend to make more trips, have a lower income, and are more likely to have children than households in the other segments. Households in the grocery-mass segment are similar to this segment except that they purchase the category much less often (7.0 times in the three years). Surprisingly, households in the drug primary segment have the greatest total volume ($9.8 * 133 = 1,303$ total pills). They are also much more likely to purchase on deal (37 percent), are the least likely to have children, and tend to be older. The households in the drug-mass segment are the lightest buyers (499 total pills). This is because they make fewer category purchases (4.3), even though their average volume per purchase is relatively the same as that of the other segments. They buy the

fewest brands (2.2), are less likely to have children, and are older. Households who purchase from all channels are relatively lighter buyers (924 total pills) than the other channels, as they make fewer category purchases (5.6) but buy the greatest quantity per purchase of any segment (165). They tend to buy only two brands, have higher incomes, and are younger.

Table 9. Means of Discriminant Analysis Variables across Analgesics Channel Clusters

	Mass	Groc-Mass	Drug	All-Channel	Grocery	Drug-Mass
N	725	235	313	222	409	72
Trips*	10.7	7.0	9.8	5.6	10.1	4.3
% on deal*	23%	25%	37%	21%	27%	26%
Average amount*	121	101	133	165	85	116
# of brands*	3.0	2.8	3.0	2.3	3.0	2.2
Income**^a	16.0	16.1	16.3	17.0	17.0	16.5
Presence of children*	40%	37%	21%	31%	37%	26%
Female HOH age**^b	5.1	4.7	5.3	4.6	5.0	5.4

* $p < .0001$

** $p < .05$

^a16 = \$30,000-34,999, 17 = \$35,000-39,999

^b4 = 35-39 years, 5 = 40-44 years, 6 = 45-49 years

Table 10. Means of Discriminant Analysis Variables across Facial Tissue Channel Clusters

	Mass	Groc-Mass	Club	All-Channel	Grocery
N	492	64	83	535	1,021
Trips*	15.7	2.9	9.6	13.6	18.0
% on deal*	26%	26%	26%	35%	34%
Average amount*	315	257	686	319	270
# of brands*	2.6	1.7	2.2	2.8	2.8
Income*^a	16.0	15.2	18.5	16.4	16.6
Presence of children**	41%	22%	33%	34%	32%
Female HOH age*^b	4.6	4.4	5.4	5.0	5.3

* $p < .001$ in discriminant analysis

** $p < .05$ in discriminant analysis

^a15 = \$25,000-30,000, 16 = \$30,000-35,000, 17 = \$35,000-40,000, 18 = \$40,000-45,000

^b4 = 35-39 years, 5 = 40-44 years, 6 = 45-49 years

Turning to the facial tissue discriminant analysis (Table 10), the grocery primary segment makes the most category purchases (18), while the grocery-mass segment

makes the fewest (2.9). The grocery primary segment and the all-channel segment households are the most likely to purchase on deal (34 percent and 35 percent, respectively) compared to the other segments. The club primary segment engages in the greatest average purchase by far, buying 686 tissues per purchase. In terms of number of brands purchased, the club (2.2) segment tends to buy fewer brands. This is probably due at least in part to the smaller brand assortment available at club stores. The segments exhibit a sizable range in income, with the grocery-mass segment earning between \$25,000 and \$30,000 and the club segment earning about \$45,000. Households in the mass primary segment are the most likely to have children and households in the club and grocery segments tend to be older.

Behaviorally, there are more differences between the segments. While the mass primary segment in analgesics and the mass segment in facial tissue are similar in terms of likelihood of buying on deal and number of brands purchased, the grocery and all-channel segments are much more likely to buy on deal in facial tissue than their analgesic counterparts. Further, while the all-channel and grocery segments tend to have a lower total volume than the mass primary segment in analgesics (924 and 859 versus 1,295 pills), they purchase about the same volume in facial tissues (4,338 and 4,860 versus 4,945). The grocery-mass segments are very different across categories. The analgesics grocery-mass segment makes more purchases and buys more brands than the grocery-mass facial tissue segment. These differences in profiles explain why many households fall into different segments across the categories.

Conclusions and Implications

Conclusions

Taken together, the results of the two studies provide answers to our research questions and offer important insights into channel shopping behavior. First, the channels form a “channel triangle” with drug, mass, and grocery near the vertices and club in the middle, and each vertex is associated with certain product categories. As shown in Study 1, channels tend to have signature associations with certain product categories—grocery channel with food products, drug channel with medications and health-related products, and mass merchandiser channel with household items. However, other channels, like the club channel, exhibit more heterogeneity in terms of product categories that readily come to consumers’ minds. In terms of attribute associations, club stores and mass merchandisers are associated with lower prices and better selection, while grocery tends to be associated with promotions and shopping-related factors such as ambience, parking, and convenience. Drug stores are associated with less frequently purchased categories and tend to be associated with high prices and poor selection.

Our analysis of channel-switching behavior for two categories in Study 2 suggests that there is quite a bit of heterogeneity among consumers in their channel-switching behavior, leading to multiple segments for each product category. Segments like grocery primary, mass primary, grocery-mass switch, and all-channel switch may be common across product categories. Interestingly, while some of the segments exhibit relatively strong loyalty to a single channel, some exhibit the “polygamous loyalty” identified by Dowling and Uncles (1997). That is, they split their loyalty across multiple channels. However, other segments may be different for other product categories. Furthermore, the relative size of the segments should vary across product categories. These sizes may depend on the signature associations of product categories with the channels. Thus, for example, for analgesics, the drug primary segment may be large because of the association of analgesics with the drug channel, whereas for facial tissues, the all-channel segment may be large because facial tissue is not perceptually identified with any particular channel.

Finally, consumers do not tend to go to the optimal channel in terms of price, assortment, or convenience. While consumers have relatively well-defined perceptions of channels in terms of the products they carry and their strengths and weaknesses, these do not seem to drive their patronage behavior. Rather, their channel patronage seems to be explained more by structural factors such as purchase frequency, affluence, and life stage. Study 2 shows that consumers tend to switch between only two or three channels and that segment membership is driven by behavioral and demographic factors. This relationship could be succinctly described as “you are where you shop.”

Ancillary Analysis

To replicate the findings from Study 2 regarding the geodemographic drivers of channel patronage, we performed a hierarchical analysis assessing the role of affluence, urbanicity, presence of children, and age of head of household in driving channel share of requirements across 74 categories, and used the inter-category distances from Study 1 to explain the heterogeneity in these results across channels and categories. Specifically, we employed the Spectra geodemographic segmentation database that segments consumers into a 54-cell lifestyle by lifestage grid to generate 269 channel-category datasets (each consisting of 54 observations). We computed channel share of requirements by product category (e.g., the percent of total soft drink volume sold through grocery stores for each of the 54 grid cell groupings) and regressed this against four geodemographic variables derived from the database (i.e., affluence, urbanicity, presence of children, and HOH age). In the second stage, we then modeled the heterogeneity in the parameters across channel categories by regressing each first stage parameter on channel indicator variables and the channel-category associations reflected by the two dimensions from Study 1.

Comparing the geodemographics analysis with the discriminant analysis across the two product categories from Study 2 (tables 9 and 10) yields some striking similarities. The signature channel-category associations from Study 1 explain much of the differences in effects of the geodemographic variables on channel share of requirements across categories. As in Study 2, mass merchandiser share of requirements is driven by younger, less affluent, non-urban households with children, while drug channel share of requirements tends to be driven by less affluent, older households without children. Club share of requirements factors tend to be quite similar to those of grocery—both have higher incomes and are more likely to have children. The R^2 for each second stage model is reasonably good: .40 for presence of children, .44 for head-of-household age, .87 for affluence, and .89 for urbanicity. Details of this study are available from the authors.

Managerial and Public Policy Implications

Our findings have several managerial implications. From Study 1, manufacturers and retailers can use information regarding channels' product associations for strategic purposes. For example, since household items are associated mostly with mass merchandisers, mass merchandisers can promote household items to reinforce this association and locate these items strategically to spur in-store need recognition for other categories less associated with mass merchandisers (Inman and Winer 1998). Alternatively, since the association between their channel and household products is secure, mass merchandisers can move to securing an association between their channel and other types of products.

The same logic holds regarding attribute associations. Here, drug stores appear to be in the weakest position, as they are associated with negative characteristics such as high prices and poor selection.

The implications of Study 2 results are fairly broad. First, from a public policy standpoint, the households patronizing the lower priced club channel tend to be

more affluent (see Table 10). This is probably driven by access and knowledge of price differences. Less affluent households are less likely to have transportation to club stores, thereby suffering a “double whammy” of less affluence and higher prices. This is compounded by the tendency of club and grocery stores to be located in suburbs. It is interesting that less affluent rural households do not suffer from this price disadvantage, as they have more ready access to mass merchandisers, particularly Wal-Mart, which tends to locate its stores in small towns.

Study 2 also provides managerial insights into the switching behaviors for the facial tissue and analgesic categories. Our analysis of channel-switching behavior for these two categories suggests that managers can leverage the channel-switching heterogeneity among consumers. With information regarding the switching and loyalty segments, manufacturers and retailers can better assess competition among the appropriate channel types.

Our results also suggest that segments should not be automatically generalized across all product categories. Segments like grocery primary, mass primary, grocery-mass, and all-channel may be common across product categories, but other segments may not be. Managers can assess the size of the segments based on the signature associations of product categories with the channels.

In summary, our research addresses a key but largely unexplored aspect of consumer behavior, that is, the where-to-buy, or which-channel-to-shop, decision. Our results offer new insights into product category-channel associations and channel patronage behavior. The analyses should be viewed as a first step toward better understanding complex cross-channel shopping behavior. They merit further analysis on the drivers of channel choice across categories and over time.

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For Further Reading

MSI working papers on related topics include the following:

- 00-104 **The Role of Package Color in Consumer Purchase Consideration and Choice**
by Lawrence L. Garber, Jr., Raymond R. Burke, and J. Morgan Jones
- 98-122 **Where the Rubber Meets the Road: A Model of In-store Consumer Decision Making**
by J. Jeffrey Inman and Russell S. Winer
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