

Cross-Channel Product Ordering and Payment Policies in Multichannel Retailing: Implications for Shopping Behavior and Retailer Profitability

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The explosive growth of non-store retailing channels and consumers' desire to gain shopping benefits and cost advantages by shopping across multiple channels has made multi-channel retailing a key source of competitive advantage. Commercial reports and academic research suggest that the successful implementation of multi-channel retailing depends on how well multiple channels are integrated and cross-channel policies are developed to offer a seamless shopping experience to customers. However, less attention has been given to their impact on increasing competition or cannibalization within the firms' own channels. Thus the impact of successful multi-channel integration will vary across retailers depending on the type of consumers they attract through different channels and may explain why some retailers may choose not to offer or integrate multiple channels.

In this research, we investigate customer shopping orientations that influence consumer choice of channels during the purchase transaction (ordering, payment, and fulfillment) stages and how differences in cross-channel ordering and payment policies have consequences for purchase outcomes. We used multiple sources of data to examine our hypotheses. Data from store, web, and cross-channel shoppers show that consumers differ in their selection of multiple and cross-channel retailers based on their shopping orientations. Retailer satisfaction, unplanned purchasing, and sizes of purchase orders are higher for cross-channel retailers. The impact of simultaneous (prepayment) and separable (no prepayment) cross-channel ordering and payment policies shows that separable policies lead to greater satisfaction, unplanned purchases, and purchase order sizes. An exploratory survey of the number and types of channels used, cross-channel and multiple channel ordering, and payment and fulfillment policies of retailing firms in several SIC (or NAICS) codes was used to identify experimental contexts for our study. Managerial implications for pricing consistency, customer segmentation, and retail market structure are discussed.

Introduction

Retailing firms face market pressures to transact with consumers across multiple channels – brick-and-mortar stores, catalogs, kiosks, and Web sites – and consequently, to exploit the synergies across them. A retailer's objective is to distribute resources across the channel mix to satisfy customers and maximize profits. An important strategic decision facing any retailing firm in this case is whether various distribution channels should be integrated so consumers can seamlessly use multiple channels to complete a single purchase transaction. Or, should multiple channels be independently managed, so consumers are restricted to a single channel for a particular transaction? While the integration of remote retail channels like catalogues and online stores has been widely accepted (and hence not addressed in this research), the integration of remote and store-based retail channels presents a challenging issue because of costs, channel conflicts and other strategic implications. Most research on multichannel

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strategy by firms and multichannel use by consumers focuses on the information search stage of the purchase process (Baal and Dach, 2005). However, the implications of a multichannel strategy on the transaction stage (product ordering, payment and fulfillment) of the purchase process, which involves the transfer of money, information and goods across distribution channels, have not been adequately addressed in the existing literature. The consequences on consumer shopping outcomes and retailer profitability differ based on whether transaction operations of multiple channels are independent or integrated. To this end, the cross-channel policies adopted by firms are the focus of this research.

Current research on multi-channel retailing does not distinguish between multiple channel retailers that operate multiple channels with independent transaction operations (i.e., order and pick-up in-store, order online and get product delivered) and cross-channel retailers that integrate multiple channels and allow cross-channel transfers of information, money and goods (order online and pick-up in store, order in-store and get product delivered). Similarly, the research on multi-channel consumers does not distinguish between the consumers that use one channel (e.g., web) for information search and buy the product in-store (and vice versa), and those that prefer to use multiple channels not only during the information search phase but also the purchase transaction itself. Retailers with bricks-and-mortar stores increasingly use the localized e-commerce model, whereby consumers view product information and order products through the website (or print catalog) and can opt to pick up the product at the local store. Hence research on multichannel usage during the purchase transaction stage –ordering, payment and fulfillment is seriously needed.

Existing commercial and academic research demonstrates that by offering an array of delivery channels, retailers can increase customer satisfaction, loyalty and firm value (Lee and Grewal, 2004); however, it does not indicate if additional gains accrue from their integration. Frequently expressed hypotheses made by proponents of multi-channel retailing suggest that the benefits of using multiple marketing channels go beyond the sales generated through each of these modes, and are realized with the exploitation of the synergies across channels (Kim et al., 2002), savings on transaction costs (Dutta, Heide, Bergen, and John, 1995), and increases in market coverage (Friedman and Furey, 2003). The primary hypothesis advanced by this research is that multiple channel retailers increase consumer value by offering shopping convenience through a seamless experience across all of the firm's channels, which allows the consumer to choose when, where and how they want to interact with the retailer. This will lead to even higher consumer value if the multiple channels are integrated. Consumers reward such retailers by purchasing more and concentrating the share of their purchases compared to single-channel customers (Baal and Dach, 2005). In today's highly competitive retail environment, offering multiple integrated channels is the predominant way for retailers to differentiate and pursue a service-oriented business strategy. By not integrating channels, retailers might in fact forgo profit-maximizing opportunities.

A contrary stream of research on channel cannibalization suggests that the total demand for a specific retailer's goods is rather rigid and not contingent on the number of the company's channels (Deleersnyder, Geyskens, Gielens and Dekimpe,

2001). If multiple channels compete for rigid, exogenous sales potential, integrating channels will increase channel maintenance costs without adding to overall sales. Further, integrating channels restricts the retailer to balancing pricing, positioning and merchandising strategy across channels, thus limiting their flexibility to respond to competition in the online and offline marketplaces and to differentiate their market offerings across various segments of consumers. Further channel integration requires heavy investment in standardizing data about customers and interactions with them from different systems which are individually efficient but not interoperable, and can destroy a previously well run multiple channel system. Thus, a multichannel retailer could be at a disadvantage compared to competitors with multiple independently-managed channels or those with fewer channels.

Most importantly, though, the behavioral consequences of cross-channel delivery options on consumer shopping experiences have been largely unexplored. Commercial studies report that multi-channel shoppers spend more and have higher incomes (Stringer, 2004). However, survey data cannot identify whether multi-channel shoppers purchase more due to their higher incomes or due to greater accessibility to multiple channels. Baal and Dach (2005) find that 20% of customers switch retailers when they switch channels between information collection and purchase transaction stages. Hence there is a tendency towards free-riding, and multichannel retailers could retain substantially fewer customers. Please note that these findings apply to retailers that did not allow channel switching during the transaction process. The implications for retailers allowing customers to change channels during the transaction process are largely unknown. Consequently it is not clear if integrating multiple channels can further increase sales revenues, satisfaction with shopping experience and retailer profitability. Despite the important strategic reasons for or against integration, it is critical for both managers and researchers to gain insight into consumer-level responses to multichannel retailing strategies and their implications for retailer profits.

We seek to answer several basic managerial questions in this paper. First, how do consumer shopping goals identified in prior research influence cross-channel usage during the purchase transaction process? Second, do consumers with different shopping orientations differ in their propensity to seek information on competitive offerings? Third, how do cross-channel pre-payment policies impact channel usage (single channel, multiple channel or cross-channel) during the purchase transaction process and purchasing outcomes (purchase incidence, purchase order size, unplanned purchasing, purchase abandonment/returns and satisfaction with retailer). Fourth, do these effects differ if the fulfillment is through a remote (i.e. online) channel or a physical (i.e. store) channel?

In the next section, we discuss determinants of multiple and cross-channel use by consumers during the transaction process and their impact on consumer shopping behavior. Next, we provide a conceptual framework for the examination of different types of cross-channel ordering and payment policies used by firms and propose hypotheses. Then, we describe the research design, which incorporates multiple data sources: (a) quasi-experiment using web-based (at online stores) and paper surveys (in brick-and-mortar stores) to examine how consumers respond to cross-channel ordering, payment and delivery policies in university bookstores; (b) consumer surveys at brick-

and-mortar stores in various industries to validate our findings; and (c) an exploratory survey of retail managers to investigate adoption, level of integration of multiple channels and types of cross-channel strategies used in several major retail sectors to guide our selection of retail stores and contexts for our experiments and surveys in (a) and (b). We discuss our empirical findings and conclude with managerial implications for retailers.

Conceptual Framework and Hypotheses

Retailers often differentiate themselves from their competition by augmenting their core product offerings with service outputs (e.g., product selection, attribute information, and extended hours of operation) provided before, during, and after a purchase, all of which facilitate ordering, payment and product delivery/pick-up stages in a purchase process (Bucklin 1966; Stern and El-Ansary, 1992). The strategic implications of offering multiple independent channels as service outputs differ from multiple integrated channels that allow cross-channel movements of consumer information, money and products. At a multiple channel retailer, the transaction stages of the purchase process have to be executed in a single channel, either in-store or remotely. In contrast, a cross-channel retailer allows all three stages of the transaction to be unbundled (i.e., conducted within a channel or across channels) based on the consumer's preferences. At a cross-channel retailer, not only can the consumer search online and go to the store to purchase or vice versa, the consumer can also change channels across the stages of the same transaction to exploit benefits of each channel while avoiding costs inherent in each channel.

Kim et al. (2002) suggest that consumer's choice of a retail channel to complete purchase transactions is significantly affected by costs and benefits incurred to satisfy shopping goals. Channel types differ in their abilities in performing various retail service outputs and the benefits and costs they impose on consumers (Bucklin, Ramaswamy, and Majumdar, 1996). Pure-play online stores provide expanded temporal and geographical accessibility, larger assortment, factual product information, and novelty (Grewal, Iyer, and Levy, 2004). The availability of search capabilities and tools to manage and compare objective information imply that prominence of factual information (as opposed to sensory information) and price search facilitate the information search and processing stage of the purchase process not only within a retailer's site but also across retailers (Balasubramaniam, Raghunathan, and Mahajan, 2005). However, the remote nature of the channel implies that product fulfillment is temporally separated from the ordering and payment process. Hence transportation (shipping) and waiting time costs for product fulfillment have to be borne by the consumer.

In contrast, the traditional in-store retailer bears most of the transportation and waiting time costs and offers physical accessibility and immediate product possession. However, consumers bear the effort and time costs of collecting factual and sensory product information given limited geographical and temporal accessibility. The differences between physical and online channels gain greater significance as cross-channel firms operating within these channels, as well as across channels, compete by

leveraging channel features to create and deliver different value propositions while selling the same physical product or commodity. While multiple independent channel retailers allow consumers to self-select themselves into one of the channels provided to complete their transaction, consumers bear the shopping costs inherent in the chosen channel not unlike shopping with a single channel retailer.

A portfolio of complementary channels makes a greater and deeper mix of service outputs available to the final customer (Frazier and Shervani, 1992). Cross-channel retailers offering “order online and pick up in-store” or “order in-store and have it delivered home” services allow consumers to switch channels at various stages of the transaction process to subsidize the transaction and search costs across channels while including the option of using a single channel for the entire process. With more service outputs seamlessly available across several channels, customers have the opportunity to engage a retailer across multiple contact points during a single purchase, enhancing customer satisfaction and retailer loyalty (Wallace, Giese and Johnson, 2004). Therefore, the following hypothesis would appear plausible:

H1a. For firms with the same number of channel modes, retailer satisfaction will be higher for firms that allow cross-channel transactions than for multi-channel retailers who restrict consumers to transact in one of their multiple channels.

Furthermore, cross-channel integrated systems allow returns across channels, reducing the risks of shopping. This suggests:

H1b. Purchase incidence will be higher at a cross-channel retailer compared to a multiple channel retailer.

Influence of Consumer Shopping Orientations On Cross-Channel Usage

The extant published research on the goals that consumers seek to satisfy during the transaction stage of the purchase process suggest that customers’ desire for convenience and their quest for self-affirmation related to decision expertise and thrift can drive their selection of channels when pursuing purchase transactions (Balasubramaniam, Raghunathan, and Mahajan, 2005). These goals affect choice of channel modes as follows.

A *convenience* orientation is a distinct consumption strategy, defined as “seeking to accomplish a task in the shortest time with the least expenditure of energy,” and is related to a person’s general preference for convenient goods and services, possibly at a higher cost. In the retail context, convenience has been defined as consumers’ time and effort perceptions related to buying or using products or services, and is comprised of decision, access, transaction, benefit and post-benefit conveniences. At each stage of ordering, payment and fulfillment, a consumer’s choice of a particular channel depends on the tradeoffs they are willing to make between the time and effort needed to complete each process in the channel, which varies over shopping occasions and across consumers. The addition of remote or delivery channels like catalogs or websites by conventional retailers is a response to the needs

of consumers with high effort costs who resent the inconvenience of traveling to the store. In contrast, the addition of physical stores or store-based affiliates by Internet-only retailers is a response to reduce time costs associated with waiting for product delivery (positive time discounting). Hence, when consumers are heterogeneous in their desire for shopping convenience, consumers have different unit travel costs or unit time costs, suggesting the following hypotheses:

H2a. Consumers with high effort costs are more likely to use the online channel compared to cross-channels or physical store channel.

H2b. Consumers with high time costs are equally likely to use the physical store or cross-channel (order online and pick-up in store) and are less likely to use the online channel.

Self-perception theory suggests that individuals examine their own behavior and its attendant circumstances to determine their attitudes towards themselves. This need to maintain positive self-impressions, characterized as the “need for self-enhancement,” includes the tendency to perceive greater control over one’s environment than actually exists. A shopping experience can provide consumers with an opportunity to affirm certain positive traits like expertise and thrift.

Self-affirmation of expertise refers to the consumer’s perception of being empowered to skillfully select the best product from a choice set (Brucks, 1985). Such subjective expertise is more likely to give them confidence in their decisions, and can permit them to take credit and find satisfaction with them (Brucks, 1985). Hence, consumers seeking self-affirmation of expertise will prefer the channel that provides the greatest opportunity to exercise their perceived expertise. Further channel integration reduces consumer search costs across channels, and the greater confidence in search decisions can attenuate the consumer’s desire to search for competitive offerings. Hence, we suggest the following hypotheses:

H3a. Consumers seeking self-affirmation of expertise will prefer a cross-channel retailer over a multiple channel retailer.

H3b. Consumers seeking high self-affirmation needs of expertise are likely to search for fewer competitive offerings when patronizing a cross-channel retailer compared to those patronizing a multi-channel retailer.

Thrift is the tendency to seek to acquire products or services inexpensively, and is an affirmation that one has been careful in spending money. Online channels generally offer greater potential for price comparisons and for finding bargains than physical stores. However, this increased perception of thrift online compared to physical stores can be negated in practice with the shipping and handling charges for online purchases. Allowing consumers to search for price bargains across multiple channels and to cherry-pick products they wish to buy across channels increases the perception of thrift among consumers who buy from cross-channel retailers, as compared to those

that restrict consumers to complete transactions in one of the multiple channels used by the retailer. In this case, rather than objective savings, it is the *perception* of savings that drives self-affirmation of thrift. Since consumer perception of thrift is positively associated with the extent of pre-purchase price search, we hypothesize that:

H4. Consumers with high self-affirmation needs of thrift are likely to search for fewer competitive offerings when patronizing a cross-channel retailer compared to those patronizing a multichannel retailer.

Impact of Cross-channel Integration and Separability on Shopping Outcomes

In the cross-channel retailing context, the separability of ordering and payment stages is a strategic decision with implications for the behavioral outcomes of the shopping process and consequently, retailer profitability. Retailers with bricks-and-mortar stores that follow the localized e-commerce model encourage consumers to view product information, order products through the website (or print catalog) and pick them up at the local store. On the other hand, some retailers offer web-based kiosks at stores that allow consumers to view product information and order products that are not stocked in stores for store or home delivery. In this case, the consumer benefits from an increase in the available assortment size. In either case, cross-channel shopping temporally separates the order placement and product acquisition stages, which presents challenges and opportunities not encountered when the shopping process is completed within the same channel (online or offline).

Cross-channel separability of ordering and payment options is manifested in two ways:

- retailers may allow online consumers to pick up their orders at a store, but they require that they order and pay for the product online (ordering and payment simultaneous); or
- retailers may allow online consumers to order a product online, but allow payment and pickup at the store (ordering and payment separable).

The separability of ordering and payment represents an additional service output offered by the retailer and additional contact points with the customer, which can lead to higher retailer satisfaction compared to competing cross-channel retailers that require simultaneous ordering and payment. This suggests:

H5a. Satisfaction with retailer will be higher for separable ordering and payment cross-channel retailer compared to simultaneous ordering and payment cross-channel retailer.

H5b. Satisfaction with retailer will be higher for simultaneous ordering and payment cross-channel retailer compared to multi-channel retailer.

If online consumers simply visit stores to pick up products ordered online, the

cost of merchandising and customer service at the store is wasted. If instead, online consumers make “unplanned” or impulse purchases at the store in addition to picking up online orders, the cost of merchandising and customer service can be justified. The temporal separation between order placement and product acquisition can be examined in the context of a two-stage decision process in behavioral theory (Alba et al., 1997). When consumers prepay (i.e., when payment and pick-up are simultaneous), merchants reduce the likelihood that a customer will simply abandon the purchase. However, research in consumer goal-setting suggests that “mere ownership” or possession effects (Sen and Johnson, 1997) are activated without actual possession of the product, and consumers are more likely to have “spent” their budget and are less likely to make impulse purchases with prepayment. Therefore, they are more likely to define their goals in terms of product pick-up alone, and they are less likely to make unplanned purchases at the store (Soman and Lam, 2002). On the other hand, not paying at the time of order placement (i.e., separable payment and pick-up) increases incidence of no-shows at the stores, but is more likely to lead to impulse purchases at the store when an online purchase is picked up. Consumers shopping at physical stores of multi-channel retailers are likely to have higher unplanned purchases compared to simultaneous ordering and payment with cross-channel retailers because merchandising and store atmospherics have been shown to induce impulse purchases (Kotler, 1974). Hence:

H6a. Unplanned purchases will be higher for separable ordering and payment cross-channel retailers compared to simultaneous ordering and payment cross-channel retailers.

H6b. Unplanned purchases will be higher for multi-channel retailers compared to simultaneous ordering and payment cross-channel retailers.

H6c. Unplanned purchases will be higher for separable ordering and payment cross-channel retailers compared to a multi-channel retailer.

An important consequence of a firm’s channel separability of ordering and payment stages on consumer behavior is free-riding. Consumers can enjoy a “free ride” when a firm cannot feasibly charge separately for its services, such as displaying product information and accepting returns, and when it cannot distinguish free-riders from other customers (Carlton and Chevalier, 2001). Bricks-and-mortar stores face a dilemma in defining the role stores play in supporting cross-channel activities in this case, particularly the necessary effort required by salespeople and the merchandising necessary in stores. Many cross-channel retailers also testify to internal conflicts resulting from different perceptions of the magnitude of free-riding across a retailer’s channels, even if a single company owns all of the touchpoints (Tang and Xing, 2001). In the following sections, we classify free-riders as only those consumers who abandon purchases or orders (ordered online to be picked up at local store) after they switch channels, with no time, effort or financial costs to them.

The implications of free-riding differ for cross-channel and multiple channel

retailers. Physical stores cannot charge for standard pre-sale or post-sale services with an entrance fee or shipping charges; therefore, the pre-sale and post-sale services that the physical stores provide effectively become public goods. Multiple channel retailers can discourage free-riding behavior across channels for pre-sale services by creating differences in assortments, prices and promotions available in stores and through remote channels. They can also restrict the use of post-sale services through restrictive return policies, but cross-channel retailers cannot. Hence, the consequences of free-riding are more severe for the physical stores of cross-channel retailers, as they have to maintain consistency in prices and product assortment, and allow returns and order cancellations across channels. It should be noted that free-riding in the other direction (i.e., order in-store and have it delivered home) is not as severe a problem, primarily because the costs of online shops are largely fixed, while the costs of traditional retailers are largely dependent on the number of visitors to their stores (Carlton and Chevalier, 2001). Also, consumers bear the time and effort costs of physically going to the store and bear the shipping costs for delivery which cannot be recouped through returns at store or online, so there is lower incentive for frivolous ordering and purchase abandonment. This suggests:

H7a. Intent to return or abandon purchases will be higher at separable ordering and payment cross-channel retailers compared to multichannel retailers.

H7b. Intent to return or abandon purchases will be higher at separable ordering and payment cross-channel retailers compared to simultaneous ordering and payment cross-channel retailers.

In a competitive market, integrated channel strategies may reduce consumers' propensities to consolidate purchases with a retailer. As channels multiply, the retailer's market coverage increases. It leads to a decrease in the customers' information search costs and an increase in price transparency, since firms have to maintain consistency in prices across channels. The increased competition may lead to lower prices, higher price elasticities, frequent price changes, and narrow price dispersion — classic symptoms of market competition (Brynjolfsson and Smith, 2000; Tang and Xing, 2001). All of these factors decrease customer switching costs, while at the same time increasing customer motivation to distribute purchases across firms, and enables customers to cherry-pick the best offers available if competing firms engage in price competition. This can lead to a decrease in order sizes and an erosion in customer loyalty. This effect will be more pronounced for separable ordering and payment retailers, since there is low penalty for defaults compared to simultaneous ordering and payment retailers. This is because consumers must prepay and may be required to invest the time and effort to visit a store or website if they wish to cancel their order. Therefore, we hypothesize that:

H8. Purchase order sizes will be lower at separable ordering and payment cross-channel retailers compared to simultaneous ordering and payment cross-channel retailers.

Overview of Empirical Context and Methodology

We used a multiple method approach to examine the motivations driving consumer use of cross-channel systems for purchase transactions, and the impact of the separability of cross-channel ordering and payment policies on the behavioral outcomes of the consumer shopping process. Testing our hypotheses on how shopping motivations drive self-selectivity of channels during purchase transactions in real-world commercial stores is difficult, as store managers are reluctant to intercept consumers prior to entering stores, and there are significant differences between stores in assortment, price and service. These drawbacks can bias our results and lead to misleading inferences.

With this in mind, we collected data from a campus bookstore chain that had introduced “order online and pick up in-store” (OOPS) at one of its locations, thus offering us an opportunity to examine our hypotheses (*H1a-H4*) on shopping motivations in a quasi-controlled environment (Study 1). Since prices, assortment and service are similar across stores for this retail chain, we can control for factors not accounted in our analyses. However, we cannot test our hypotheses on separability of ordering and payment, since the cross-channel only offered the simultaneous order and payment option, as pre-payment was necessary for OOPS.

We examined hypotheses *H5-H8* on purchase outcomes due to pre-payment policies with data collected from three commercial stores (Study 2). To identify economic sectors where cross-channel systems have gained acceptance, and firms where a critical mass of consumers are making cross-channel purchases (for Studies 1 and 2), we conducted a study of the adoption and integration of multiple channel strategies in several sectors of the retailing industry (Study 3).

Study 1: Identifying Consumer Motivations for Cross-Channel Usage for Purchase Transactions

Procedure

This study was conducted with the cooperation of two campus bookstores from the same northeastern university, located 40 miles apart. Both bookstores A and B sold products through bricks-and-mortar stores on campus and their online website. With both online stores, consumers can order, pay online, and have the products shipped for a fee. However, only bookstore A allows online consumers to order or pay for books online and pick up at the store. There were at least two other bookstores within the vicinity of the campus (within a 1 mile radius) that only had physical stores.

Consumers visiting the physical stores and the websites for the two bookstores were randomly solicited for participation in the study by student researchers at entrances of the physical stores and through clickable pop-ups on homepages at online stores. Furthermore, they did not have to make a purchase in order to participate in the study. Our data collection method involved two distinct stages which were described to participants along with the incentive of \$10 for completing both stages of the study, and

subjects were informed that participation would require 10 minutes prior to entering the store and 20-30 minutes at the end of their shopping visit.

In the *first* stage at the start of the shopping trip, shoppers filled out a survey (on paper at physical store, and online at a dedicated webpage). After this first stage was completed, shoppers were given a respondent ID to track their information across all three stages, and to qualify for the survey incentive and a sweepstakes drawing. The respondents proceeded to shop, and after they finished shopping they proceeded to complete the second stage of the study.

In the physical stores subjects completed the second stage of the study in the lobby outside the exit. For the online stores, a pop-under invited subjects to click on the link to answer questions for the second stage of the study when they jumped to visit another website or closed their browser. In this second stage (at the end of the shopping trip) shoppers submitted their shopping receipts. The shopping receipts were photocopied and the respondent's ID was noted on the copies by researchers while subjects filled out a survey using the same mode as in the first stage. Shopping receipts for online consumers were collected electronically by email submission. Respondents were thanked for their participation and asked to sign a participation form, after which they were given the cash incentive.

Variables and Measures

In the *first* stage, respondents provided demographic information: age, household income, household size, gender, employment status, annual expenditure in the category, whether they lived on campus, city of residence (to calculate distance to stores), and propensity to use the Internet for purchase and shopping (information collection and transaction) purposes. In addition, subjects provided the following pre-purchase behavior information: (a) shopping list (to determine planned purchases), (b) number of items on shopping list purchased before (online or offline), and (c) number of stores or websites they visited to search for information prior to current visit (search for competitive offerings). At bookstore A, store subjects also indicated if they had come to pick up an order placed online.

In the *second* stage, the following information was collected from shopping receipts¹: (a) total purchase amount in dollars, (b) number of items in the shopping list (collected in first stage) that were purchased (*number of planned purchases*), (c) total planned purchase amount in dollars, (d) number of items purchased that were not mentioned in the shopping list in first stage, (e) total amount of unplanned purchase in dollars, (f) number of items bought on promotion and the purchase amount in dollars, and (g) at bookstore A number of items ordered / paid online that were picked up. Consumers who did not make any purchase only answered the survey questions and recorded zero purchase amounts in the survey.

The following attitudinal measures and measures of shopping orientation were collected in the survey as well: (a) *retailer satisfaction* (5-point Likert scale), (b) multi-item scale for *convenience time and effort orientation* (Morganosky 1986), (c) multi-

¹ Names, loyalty card numbers, credit card information and other identification information were blackened out due to security and privacy concerns.

item scale for *self-affirmation of search expertise* (Putrevu and Ratchford 1997), (d) multi-item scale for *self-affirmation of thrift* (Urbany et al., 1996), and (d) likelihood of *abandoning* order (at cross-channel retailers) or returning products bought (at multi-channel retailers) during the shopping visit. For the shopping orientation measures, scores on all items in a scale were summed and standardized with respect to the mean. Then, a median split was used to determine if the shopper was high or low on a particular orientation.

Results and Discussion

A total of 2,459 respondents agreed to participate in the study, with 412 completing both stages of the study (16.7% response rate). The majority of shoppers were female (54%), employed more than 20 or more hours per week (87%), well-educated (averaging more than three years of college education), and living off-campus, as shown in Table 1. The average annual expenditure for Books, Computer, Software and Educational Products was \$1578, which represents roughly 9% of the average annual pre-tax income, including scholarships and alimony, per household member in the sample. Our results show that the distance to the closest campus bookstore is less than to the farthest one for respondents in our sample, but that the difference is not statistically significant ($p < 0.1$). This is probably because the part-time student population at the university is relatively large. In addition, many students take classes on both campuses as both are located on a major public railway system, and they are also used to commuting long distances to work.

Further results from the pre-purchase survey of shoppers, shown in Table 2, indicate that cross-channel shoppers do not differ significantly in the number of items on their shopping list as compared to single-channel web or store shoppers ($p > 0.05$). A two-step data analysis procedure was performed to test our hypotheses. First, a one-way ANOVA was used to test whether there are significant differences in the statistical means for shoppers at cross-channel vs. multi-channel retailers, and between cross-channel, web and store shoppers. If significant differences exist across the means, pairwise comparisons of the means were conducted to ascertain where significant differences lie.

Do Shopping Orientations Drive Cross-Channel Usage?

As we hypothesized, Table 2 indicates that average retailer satisfaction is significantly higher for the cross-channel retailer (mean = 4.04 , s.d. = 0.9) as compared to the multi-channel retailer (mean = 3.8, s.d. = 1.1), irrespective of whether shoppers at the retailer used a single channel or a cross-channel system for transactions ($p < 0.01$), which supports *H1a*. Contrary to our hypothesis *H1b*, however, overall purchase incidence at the cross-channel retailer is not significantly higher than that of the multi-channel retailer ($p > 0.05$). Hence, *H1b* is not supported. However, we find that the incidence of purchases at the cross-channel retailer website is significantly higher than for the multi-channel retailer. This issue warrants closer attention in future

Table 1.
Summary Statistics on Shopper Respondents.

Respondent Profile	
Female (%)	54
Average age (years)	33
Household income/member (US\$)	11,500-23,000
Campus resident (%)	12.3
Employment status, Full time (%)	29
Employment status, Part time (%)	58
Employment status, Unemployed (%)	13
Average years of college education	3.4
Annual expenditure in category (US\$)	456 - 3,200
Average hours spent shopping each week	3.28
Average number of Internet purchases in last 6 months	2.79
Average weekly Internet use for shopping purposes (hours)	1.3
Average distance to closest campus store (miles)	11.8
Average distance to farthest campus store (miles)	17.3
Number of respondents	412

research, in terms of whether the capacity for cross-channel transactions increases trust and reduces shopping risks at the retailer website.

Consumers with high effort costs that are convenience-oriented with respect to effort are not more likely to use the online channel as compared to cross-channel or physical store channel ($p > 0.1$). Therefore, *H2a* is not supported. This result might be due to the low number of respondents characterized to be high in effort costs in the survey, or to the fact that most shoppers do not perceive the visit to the physical store to be a significant effort since they can schedule their shopping trips around their class schedule. In contrast, respondents with high time costs are significantly more likely to use the cross-channel or the online channel than the physical store channel ($p < 0.01$), thus supporting *H2b*.

Our analysis indicates that consumers with high self-affirmative needs for expertise are not significantly more likely to choose a cross-channel retailer compared to multi-channel retailer; hence, *H3a* is not supported. This may be a characteristic of the product category; since books and software are standardized products, there is no brand choice involved, only choice of the retailer and purchase price. We find that store, web and cross-channel shoppers seeking a high level of self-affirmation of expertise in our sample differ significantly from each other in the number of websites or stores they visit prior to their current shopping occasion, which supports hypothesis *H3b*. The number of competitive websites and stores visited by respondents with high self-affirmation needs of thrift at a cross-channel retailer (mean = 7.38, s.d. = 1.3) is significantly lower ($p < 0.01$) than those who transact with a multi-channel retailer (mean = 9.29, s.d. = 1.8) thus supporting *H4*. Further, store and web shoppers search

Table 2.
Summary Statistics on Store, Web and Cross-Channel Shoppers at Cross-Channel (Bookstore A) and Multi-channel (Bookstore B) Retailers.

Bookstore	Bookstore A			Bookstore B	
	Store	Web	Cross-channel	Store	Web
Transaction Channel Used by Shopper					
No. of respondents	76	62	106	97	71
Pre-Purchase Behavior					
Avg. number of items on shopping list	8.1	10.2	9.3	7.3	10.7
Avg. number of items on shopping list bought before	2.0	5.3	3.8	2.4	4.1
Avg. number of websites visited prior to visit	1.3	2.2	1.9	1.9	2.3
Avg. number of stores visited prior to shopping visit	1.1	0.59	0.12	0.6	1.3
Avg. number of competitive options searched ^a	2.4	2.79	2.02	2.5	3.6
Shopping Orientations Driving Channel Choice					
Convenience oriented w.r.t. effort (% , 76) (H2a: not supported)	0.22	0.25	0.14	0.20	0.18
Convenience oriented w.r.t. time (% , 141) ^a (H2b: supported)	0.23	0.09	0.33	0.29	0.06
Self-affirmation of expertise (% , 69) (H3a: not supported, H3b: supported)	0.11	0.06	0.09	0.16	0.30
Self-affirmation of thrift (% , 126) ^b (H4: supported)	0.15	0.17	0.31	0.18	0.19
Avg. # of websites & stores visited by high thrift ^b (H4: supported)	6.42	7.20	5.00	7.95	8.05
Avg. # of websites & stores visited by low thrift	1.1	0.5	0.3	0.8	1.3
Purchase Outcomes					
Retailer Satisfaction ^b (H1a: supported)	3.9	3.8	4.3	3.8	3.7
Purchase Incidence (H1b: not supported)	41	13	38	46	8
Unplanned Purchase Amount (\$) ^{a,b}	14.71	2.33	13.94	8.11	4.16
Purchase Return/Abandonment Intent ^a	1.9	1.2	2.3	2.1	1.3
Purchase Order Size ^b	89.76	214	284.17	98.71	149

^a Significant differences ($p < 0.05$) found for this measure for cross-channel and store vs. web shoppers.

^b Significant differences ($p < 0.05$) found for this measure for cross-channel vs. multi-channel retailer.

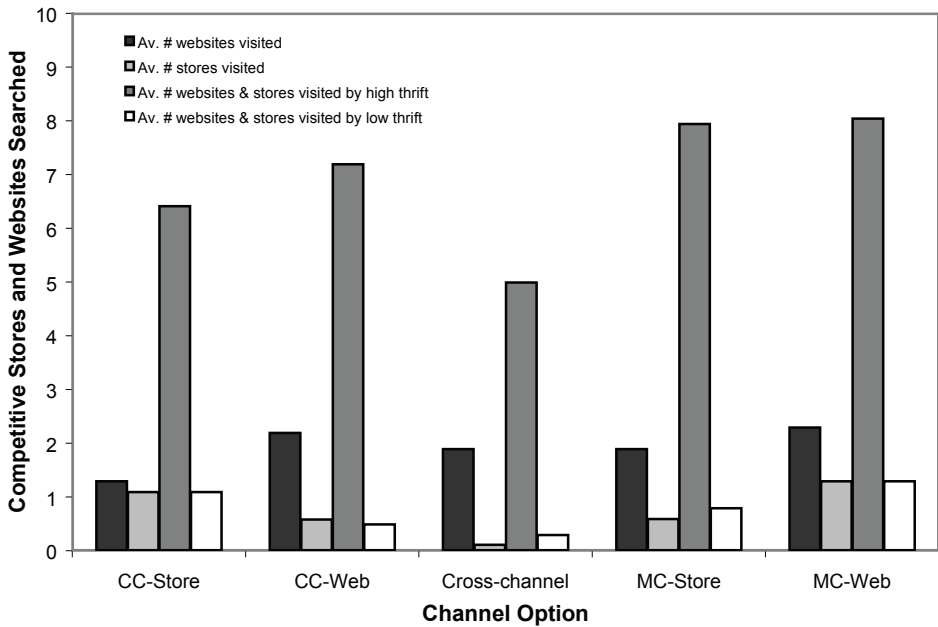


Figure 1.
Competitive Options Searched by Channel Choice and Thrift Level (Pre-Purchase).

significantly more competitive options than cross-channel shoppers ($p < 0.05$) as shown in Table 2 and graphically in Figure 1. Therefore, we find that cross-channel integration by a retailer decreases price-based search by thrifty consumers, perhaps by creating the perception that both online and offline competition leads to lower prices.

Other findings

Our analysis shows that unplanned purchase amounts are significantly higher at the cross-channel retailer compared to the multi-channel retailer ($p < 0.05$), and significantly higher in-store (note that we combined store and cross-channel unplanned purchase amounts) than at a website ($p < 0.01$). This conclusion has been supported by other research in the literature, which has indicated that online activities do not cannibalize offline sales (Biyalogorsky and Naik, 2003). However, we do find that purchase abandonment and return intentions are statistically higher at cross-channel retailers as compared to multi-channel retailers. When we analyze purchase return intentions by transaction channel mode, we find that return intentions are marginally higher ($p < 0.1$) for in store purchases as compared to purchases on websites. Further post-hoc analyses indicate that high-thrift consumers in cross-channel stores are significantly more likely to return/abandon purchases (mean = 3.1, s.d. = 1.4) compared to those at multi-channel retailers (mean = 1.8, s.d. = 0.8). However the difference in

means is not significant for low thrift consumers (mean = 2.1, s.d. = 0.9 versus mean = 1.2, s.d. = 0.4, respectively). Purchase order amounts are significantly higher at cross-channel retailers compared to multi-channel retailers ($p < 0.01$), but do not differ significantly by transaction channel.

These findings must be interpreted in the context of the market for standardized products like textbooks, software and computer equipment, and a captive shopper population – mostly students. However, our findings do not suffer from purchaser bias, and we are able to determine retailer choice and purchase behavior across the population of purchasers and non-purchasers to obtain an accurate measure of unplanned purchases.

Study 2: Does Prepayment (Non-separability of ordering and payment) Improve Purchase Outcomes in Cross-Channel Retailing?

Procedure

This study was conducted with the cooperation of three commercial stores (X, Y and Z) selling specialty consumer electronics products within a 55 mile radius of each other in the northeastern USA. All sell products through both bricks-and-mortar stores and websites, and consumers can have products shipped for a fee. Store Z is a multi-channel retailer. Stores X and Y allow cross-channel transactions (OOPS), but only store X required consumers to pre-pay for OOPS with simultaneous ordering and payment.

As discussed before, we could only intercept and collect data from customers after they completed their purchases and left the store. Since we could not collect data from the retailers' online consumers, our measures for multi-channel consumers only apply to consumers who make purchases at the stores. For cross-channel consumers, we collected data for only those customers who had ordered products online earlier, and had come to the store for pick-up. Therefore, all respondents in our sample have purchased or picked up at least one item during their trip to the store, leading to purchaser bias. Further, we had to limit our data collection time to 10 minutes per customer because of traffic concerns, so we could not collect any pre-purchase information or shopping orientation information as in Study 1. After reading a description of the study, each participant was assigned a respondent ID. We photocopied their receipts² and participants marked self-reported unplanned purchases on their receipts. To increase participation rates, participants for this survey were offered an entry to a sweepstakes drawing for one \$100 gift card (total of 3 cards, one for each store) in return for sharing their shopping receipts and answering survey questions.

Variables and Measures

The following information was collected from shopping receipts: (a) total purchase amount in dollars, (b) purchase amount of planned purchases in dollars, (c)

² Names, loyalty card numbers, credit card information and other identification information were blackened out due to security and privacy concerns.

Table 3.
Summary Statistics on Shoppers (Study 2).

Respondent Profile (Study 2)	
Male (%)	64
Average Age (years)	41
Household Income/per member(US\$)	7,300 - 84,671
Employment status, Full time (%)	69
Avg. years of college education	1.4
Annual expenditure in category (US\$)	69 – 15,678
Avg. hours spent shopping each week	1.28
Avg. no of Internet purchases in last 6 months	4.1
Avg. weekly Internet use for shopping purposes (hours)	2.2
Avg. distance to store (miles)	16
No. of respondents	239

total amount of unplanned purchases in dollars, and (d) any purchase cancellations and product returns. The following attitudinal measures were reported by retailers in the survey: (a) retailer satisfaction (5-point Likert scale), (b) intent to abandon order at cross-channel retailers or return products bought at multi-channel retailers during the shopping visit, and (c) percent of annual category expenditures spent at this retailer. Participants provided demographic information similar to Study 1 and were given a flyer with their respondent ID and dates and times of the sweepstakes drawing.

Results and Discussion

A total of 239 respondents participated in the study. The majority of shoppers were male (64%), employed full time (69%), and had relatively high household incomes, as shown in Table 3.

The findings of the one-way ANOVA show that significant differences exist with retailer satisfaction in Table 4. Consumers shopping at a cross-channel retailer that does not require pre-payment to order online and pick up at the store are significantly more satisfied than those at a cross-channel retailer with simultaneous ordering and payment OOPS ($p < 0.05$), thus supporting *H5a*. However, the reported satisfaction with a simultaneous ordering and payment cross-channel retailer was statistically similar to that of a multi-channel retailer ($p > 0.1$), thus *H5b* is not supported.

As results showed that significant differences existed in the mean amount of unplanned purchase amounts across the three groups, pairwise comparisons were conducted. The results of this analysis show that unplanned purchase amounts are significantly higher ($p < 0.05$) at separable ordering and payment cross-channel retailers, as compared to simultaneous ordering and payment cross-channel retailers,

Table 4.
Purchase Outcomes Across Separable, Simultaneous Ordering and Payment Cross-Channel Retailers and Multi-channel Retailers.

Level of Channel Integration	Cross channel (simultaneous), OOPS Prepay		Cross channel (separable), OOPS No prepay		Multichannel Store		Prepay vs. N. Prepay	N. Prepay vs. MC
	Mean	s.d.	Mean	s.d.	Mean	s.d.	t	t
Avg. Retailer Satisfaction (H5b: n.s.)	3.18	0.9	3.69	1.2	3.31	1.1	-3.048 (H5: s)	2.087
Unplanned Purchase Amount (\$; H6b:s)	57.79	0.6	58.94	3.1	59.42	0.8	-3.258 (H6a: s)	-1.334 (H6c: n.s.)
Intention to Return	1.7	0.7	1.9	1.5	1.87	0.4	-1.082 (H7a: n.s.)	0.172 (H7b: n.s.)
Purchase Order Size (\$) (H8: supported)	235.86	10.9	201.58	52.4	198.8	37.1	5.7300	0.374
No. of Respondents (239)	80	0.9	81	1.4	79	1.1		
% using OOPS Retailers in Data	12		19		0			
	X		Y		Z			

n.s.: not supported. s: supported

which supports H6a. While the mean scores on intention to return or abandon purchases are similar, it is the variability in consumer scores for separable ordering and payment retailers that makes the difference in means significant. Further, unplanned purchase amounts at multi-channel retailers are significantly higher than that at simultaneous ordering and payment cross-channel retailers, supporting hypothesis H6b. However, H6c is not supported by our data, as unplanned purchase amounts are statistically similar at separable ordering and payment cross-channel and multi-channel retailers ($p > 0.1$).

Contrary to our hypotheses, the intention to return or abandon purchases is not significantly higher at separable ordering and payment retailers compared to a multi-channel retailers (H7a is not supported) or a simultaneous ordering and payment cross-channel retailer (H7b is not supported). From this, it would appear that consumers do not appear to be making frivolous purchases only to return them later. The fact that most consumer electronics retailers charge a 15% restocking fee for returns if the packaging was opened may be a deterrent to making frivolous purchases. Further, purchase order sizes are significantly higher at simultaneous ordering and payment cross-channel retailers as compared to separable ordering and payment retailers ($p < 0.01$), supporting H8. In the real-world shopping context of consumer electronics, the profitability of retailers is expected to be higher for simultaneous ordering and payment retailers that require consumers to prepay than those separable ordering and payment systems who don't require consumers to prepay.

Study 3: Industry Usage of Multiple Independent and Integrated Channels

Procedure

Earlier research has shown that retailers differ in their adoption and usage of multiple distribution channels (Lee and Grewal, 2004). Therefore, a systematic investigation is needed to characterize the level of heterogeneity across firms in the integration of customer-facing functions among multi-channel retailers: ordering, payment and fulfillment processes. Such structural differences between different sectors of the retail industry might drive multiple channel use and integration. For this industry-level analysis, we used the COMPUSTAT database to identify firms and collect publicly available information, followed by a combination of web and in-person surveys of strategic planning and marketing directors or vice-presidents obtained from several online databases to collect information on integration policies which are not publicly available.

Respondents

We drew the sample of retailer firms for this study primarily from the COMPUSTAT database, supplemented with other sources of data. The COMPUSTAT database records for firms with Standard Industrial Classification (SIC) codes 53 (general merchandise), 54 (food stores), 56 (apparel and accessories), 57 (home furniture and furnishings), and 59 (non-store retailers) include 291 retailers. We used a historical approach to data collection (Golder, 2000) that involved a careful examination of relevant published records. We followed the recommendations of Golder (2000), and evaluated the criticality of archival data obtained from at least two different sources to ensure that at least one data source was neutral, that all data sources were reliable, and that the data sources were independent. We carried out a structured content analysis of company annual reports, press releases, and articles available on LexisNexis, *BusinessWeek*, *The Economist*, *Fortune*, *Forbes*, and *The Wall Street Journal*, as well as respective company Web sites, to identify the order in which a retailer adopted different channels, the product lines carried or dropped in a channel, the level of integration of each channel with all others, and the ownership characteristics of the different channels (wholly owned, independent entity, in partnership, in alliance).

Note that the key focus of this research is to understand strategic decisions taken by the firm towards use and integration of multiple channels. Since such decisions are made at the corporate level³ and are driven by managers' perceptions of the business environment, our analysis is at the level of the retailing firm rather than for individual stores. We solicited responses from multiple managers within each of these firms to increase the number of representatives and to reflect the participation of multiple entities within channel integration decision-making. A random sample of

³ Our data indicates that while individual store managers provide critical information inputs when top management evaluate channel integration alternatives, they do not have decision-making authority. Most receive straight directions from headquarters or parent organizations and are only responsible for coordinating and implementing the strategy.

strategic planning managers, marketing directors and marketing vice-presidents of retailing firms included in the SIC categories mentioned earlier was collected from a commercial database provider in the US. Each executive was then contacted by email and invited to participate in an online survey, and the URL for the online survey (<http://andromeda.rutgers.edu/~patrali/multi/step1.php?id=xxxx>) was sent immediately to those who agreed to participate. Each respondent was assigned an identification number (used in place of the “xxxx” in the URL) which was used to track responses across several parts of the survey. As an incentive to participate, managers were told that they would receive a report on the state of multiple channel use and integration in the retail industry, and would qualify to enter a sweepstakes drawing for a \$150 gift card. To balance the needs of detailed data on channel integration policies with the demands of executive time in answering long surveys, information collection in the online survey was limited to managerial perceptions of the direct antecedents and consequences of multiple channel integration. To increase the response rate, two email reminders were sent two weeks apart to those who agreed to participate but had not yet answered the survey.

Questionnaire Development and Testing

Since retail firms differ in the number of channels they use and the level of integration between them, we developed an online survey that allowed conditional jumps across several parts of the survey based on responses to certain key questions. This reduced the total time required to complete the survey while maintaining relevance and interest to the manager’s firm. All respondents answered parts A (types of channels used), E (organization and customer characteristics), and F (contact information and willingness to participate in in-depth interviews) of our six-part questionnaire. Respondents from retail firms that use bricks-and-mortar stores and websites to sell to consumers also answered part B. Managers of retail firms that use physical stores only to sell to consumers answered parts C, and those from firms that use websites alone for sales answered part D. Data from firms that use physical stores or websites alone establish the baseline measures for the variables of interest in our study.

The questionnaire was developed in English and standard psychometric scale development procedures were followed. This questionnaire was pretested with 12 managers whose responses were not included in the final analyses. Some questions were reworded and order of questions altered based on their recommendations.

Results and Discussion

In total, 151 respondents from 80 firms responded to the survey out of 1132 executives that were solicited for participation. The response rate of 13% was similar to other studies conducted with retail executives.

Table 4 lists the summary statistics for the constructs of interest in our study. The analysis indicates that most retailers (83%) started operations with bricks-and-mortar stores and 89% have retained their original channels. Forty-five (56%) retailers have two channels, 17% have three channels and 6% have more than three channels.

There is considerable heterogeneity among multi-channel retailers in how they have integrated channels and their levels of integration. Twenty-one retailers offer the “order online pick up in-store” (OOPS) feature at their website and 13 have in-store kiosks that consumers can use to have products delivered at home⁴.

Most retailers (71%) using OOPS report that 25%-50% of their consumers shop at both their stores and website. However, only 20% of multiple independent channel retailers report that more than 10% of their consumers shop at both their stores and website. On average, about 25% of online purchases are OOPS orders, with those not requiring prepayment (separable ordering and payment) reporting slightly higher proportions of OOPS orders (approximately 30%). On average, 10-25% of OOPS purchases are abandoned regardless of whether prepayment is required or not, similar to our findings. Surprisingly, only 56% of retailers that offer OOPS accept returns of items ordered on web and delivered at home. This suggests an important disconnect between the inferences that consumers may make about cross-channel retailer return policies and their policies in practice. This suggests that there is potential for service failures and dissatisfaction if consumers who use the online channel of cross-channel retailers believe stores will accept online purchases and stores are not equipped to do so. Clearly, cross-channel firms that do not accept online returns should make their policies visible and educate their online customers or bear costs of mailing returns.

Retailers are more likely to have integrated operations across their channels if they completely own all of their channels (as indicated by public records) and believe that their store and web-based consumers are similar in terms of frequency of visits, average dollar value and units bought per transaction. Further, managers who believe their store sizes are smaller but have larger and technologically superior websites than their closest competitors are more likely to have integrated channels. The majority of OOPS retailers (61%) report that OOPS can be a critical advantage over multi-channel or single channel retailers.

Influencing Practice

By integrating and managing multiple channels as a holistic system, retailers can expect that each channel will support and complement the others, which will lead to increased total sales (Brynjolfsson, Smith and Hu, 2003). Cross-channel options like “order online and pick up in-store” are becoming a critical differentiating factor for retailers. Concerns about “bricks-and-mortar” stores merely becoming product pick-up counters for online customers plague many retailers who have invested in merchandising and customer service. Our research shows, however, that the OOPS not only succeeds in attracting online consumers with high time costs to the retailer but also offers convenience, and greater confidence and control in the product search process for store-consumers. Retailer satisfaction is higher for cross-channel retailers as compared to multi-channel retailers irrespective of the transaction channel used by consumers. Furthermore, cross-channel customers are less likely to search for competitive offerings online or offline than multi-channel customers. Cross-channel

⁴ Please note that we differentiate in-store kiosks that consumers can use to have products delivered from employee using their computers to order products consumers may want to be delivered to store.

Table 4.
 Summary Statistics for Retail Sectors in Study 3.

Retail Sector	Apparel	Bkstores	Consumer Electronics	Dept Stores	G. Merchandise	O. Supplies	Grocery
Data collected from Public Sources							
# C-C public firms	49	12	21	9	18	21	26
Store (%)	96	99	88	100	100	90	100
Online (%)	42	32	76	38	12	68	14
Catalog (%)	48	24	54	56	19	89	37
Total Revenue (\$B)	91.9	4.6	37.8	84.4	298.7	3.8	66
Net Profit Margin (%)	6.3	0.54	3.2	3.4	3.4	3.7	-1
Data Collected from Web Survey/ Interviews							
# in Sample	16	5	14	2	13	15	10
% sales from stores	64	58	76	95	92	82	94
% sales from web	13	26	16	2	0	8	1
OOPS	0	3	8	0	2	4	4
Web Kiosks	5	1	2	4	1	0	0
# years sold @ store	18.8	31.5	12.4	26.7	11.8	7.4	12.6
# mths sold @ web	-	18.5	61.5	8.4	16.8	43.8	9.1
Require Pre-pay	5	2	4	4	2	1	4

retailers that do not require prepayment for OOPS have higher satisfaction and more unplanned purchases than cross-channel retailers requiring prepayment. These results suggest that “brick-and-click” retailers can exploit synergies between their channels through OOPS strategies for greater profitability than those who operate multiple channels independently.

Our research has practical implications for retailers that sell standardized products. Our industry survey suggests that cross-channel retailing to date has been adopted primarily by retailers selling standardized products, and most products available for OOPS are standardized as well. Retailers selling non-standardized products or a combination of the two face a dilemma, however. Self-affirmation for expertise becomes especially salient for hedonic products, as the difficulty of evaluating subjective or credence attributes of these products increases online. Development of online decision aids to evaluate relevant attributes, trust advisors, virtual models and return guarantees will play an important role in bridging this gap. Therefore, research is needed to examine if our findings hold true for retailers selling non-standardized or hedonic products.

We find that thrift-seeking consumers are more likely to reverse their purchase decision at a cross-channel retailer compared to a multi-channel retailer. We could not test if this effect holds true under both simultaneous and separable ordering and payment policies due to restrictions on data collection at commercial stores in Study 2. Hence, firms with larger proportions of consumers who are thrift-seeking may prefer to avoid allowing cross-channel transactions to protect their margins, provided their close competitors follow the same strategy. Alternatively, a cross-channel strategy may be used as customer segmentation strategy by firms with mixed customer bases, where quality-sensitive consumers may be willing to pay a premium for using OOPS.

A critical assumption made in this research is cross-channel retailers maintain consistency in prices online and in their physical stores. Gap, Wal-Mart, Office Depot, Home Depot, Circuit City and Schwab are examples of firms that have successfully synchronized their pricing strategies along with their operations online and offline. This perception of consistent pricing reduces competitive search behavior by thrift-seeking consumers. However, in Study 3, approximately 12% of cross-channel retailers reported that prices are not always synchronized online and in store. This has implications for consumer welfare and post-purchase outcomes. A few well-publicized pricing discrepancies can lead to customer concerns about retailer fairness, and a cross-channel strategy could even be a liability for non-offending firms. Maintaining consistency in pricing has possible implications for retailer profitability as well. Several brick-and-click firms have been forced to match their competitors’ prices online, creating a conflict with prices in their physical stores and consequently, with their operating margins offline, as stores have higher costs of operations. Therefore, the volume of cross-channel transactions and the ability to attract competitors’ consumers will be key to maintaining profits. The optimum solution might be a “winner takes all” approach, and most retail sectors may soon be dominated by a few large, successful, cross-channel retailers with such a strategy. This is an issue that warrants serious investigation, however, as retail margins decline over time and retailers seek to break out of the commoditization trap by creating new ways to offer value.

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