2006

A value-based approach to developing a multi-channel shopper typology

Lih-Bin Oh
Department of Information Systems, National University of Singapore, ohlb@comp.nus.edu.sg

Hock Hai Teo
National University of Singapore, teohh@comp.nus.edu.sg

A VALUE-BASED APPROACH TO DEVELOPING A MULTI-CHANNEL SHOPPER TYPOLOGY

Lih-Bin, Oh, National University of Singapore, 3 Science Drive 2, Singapore 117543, Singapore, ohlb@comp.nus.edu.sg

Hock-Hai, Teo, National University of Singapore, 3 Science Drive 2, Singapore 117543, Singapore, teohh@comp.nus.edu.sg

Abstract

Consumers are increasingly expecting retailers to provide them with information, products and services through multiple retail channels ranging from physical stores, catalogue to Website. However, there is currently a lack of understanding in what multi-channel shopping attributes consumers really value. This poses a challenge to retailers who are attempting to integrate their retail channels. Drawing upon prior work in retail patronage behaviour and synthesizing research in traditional retailing and single-channel e-commerce, this paper identified six dimensions that can be used to classify consumers into a shopper typology based on their utilitarian values. Based on the pilot study's preliminary results, we derived a typology comprising of three types of multi-channel shoppers that differed in terms of information and service expectations. The results offer useful insights to retailers when formulating multi-channel retail strategies. This exploratory study also laid the foundation for future research in the domain of multi-channel retailing.

Keywords: multi-channel retailing, shopper typology, retail patronage behaviour, utilitarian value

1   INTRODUCTION

Increasingly, technology savvy consumers are demanding the ability to reach out to retailers through multiple channels. They also expect to be able to access to pre-sales and after-sales information and services through a channel or medium that is most convenient to them. According to *The Economist* (2004), one in five customers who enters a major U.S. departmental store has researched their purchase online, while half of the 60 million European consumers bought products offline after having investigated prices and details online. In addition, thirty-five percent of the shoppers who browsed online before purchasing offline have bought from the same merchant they found online (Rasch and Lintner 2001). Multi-channel consumers have also been found to spend more and are more loyal to retailers than single channel consumers (Forrester Research 2004).

Such evolving consumer forces have intensified the imperative for the both incumbent retailers and their virtual counterparts to expedite their transformations into multi-channel retail enterprises. Established retail organizations such as Tesco in the U.K. and Sears, CompUSA, Staples, Circuit City and Best Buy in the U.S. have been very aggressively building up their cross-channel capabilities. On the other hand, Web-based companies are also expanding into the physical world. For example, CHL.it, Italy's largest online retailer has established many small offline shop known as POPITT (point of presence in the territory) to allow customers to seek customer advice, pick up online orders and get after-sales service.

Retail channel integration requires the effective exploitation of information technologies (IT) such as Internet connectivity, data warehousing and customer relationship management systems to provide a seamless flow of synchronized information across channels. In addition, the frontline service employees interacting with multi-channel consumers through the Website and at physical stores need to be able to provide cross-channel services that enhance customer experiences at various touchpoints. However, the sheer complexity of integrating all functions requires tremendous financial investments and organizational redesign. Many retail organizations are unsure of which aspects of their physical and virtual channels to integrate that will create the greatest value for their consumers.

Regrettably, the extant research on multi-channel retailing is limited and do not add much understanding to this evolving e-business model. The available conceptual frameworks (Steinfield 2002), exploratory case studies (Daniel and Wilson 2003; Steinfield et al. 2002) and managerial guidelines on multi-channel retailing implementation (Prasarnphanich and Gillenson 2003) do not shed light on how best to meet the expectations of the Net-generation consumers. The building of sustainable capabilities by using IT to create customer value is a key objective of net-enabled firms and therefore it is important to understand the organizational level routines that drive innovation towards value creation (Wheeler 2002). However, to date, there is a lack of studies that deepens our knowledge about what do multi-channel consumers value, and which integrated activities enhance consumer value. Are there distinctive segments of multi-channel shoppers that can help in retail strategy formulation?

In response to the dearth of empirical research on the value of integrated channels, we draw upon the retail patronage behaviour literature and synthesize the existing works on traditional retailing and single-channel electronic commerce to derive a typology of multi-channel shoppers based on their utilitarian value of the integrated channel activities. The profiling of multi-channel shoppers would provide an important guide for retailers to align their multi-channel retail strategies with the needs of consumers.

2   CONCEPTUAL DEVELOPMENTS

2.1   Retail Patronage Behaviour

The successful transformation into multi-channel enterprises requires retailers to understand the patronage behaviour of consumers. It is critical for them to know which attributes are important to which shoppers so that they can tailor the appropriate retail strategy accordingly. Patronage behaviour researchers have derived profiles of shoppers to identify consumers' motivations for shopping, and the store attributes that are most important to them. Many shopper typologies have been developed in various traditional retailing contexts (e.g. Darden and Ashton 1975; Gehrt and Shim 1998; Westbrook and Black 1985). More recently, the emergence of electronic shopping has led researchers to develop typologies of online shoppers. Using the six behavioural dimensions of brand comparison, online shopping, deal proneness, information seeking, ad orientation and offline shopping, Kau et al (2003) derived a typology of six types of online shoppers. Rohm and Swaminathan (2004) developed a typology comprising of four online shopper types: convenience shoppers, variety seekers, balanced buyers, and store-oriented shoppers based on the consumers' motivations for shopping online.

Building on prior work in retail patronage behaviour typology development, our study extends the literature by adopting a consumer value-based approach to profile multi-channel shoppers. Consumer value can comprise of utilitarian and hedonic value (Babin et al. 1994). Utilitarian values are mainly functional, instrumental and cognitive in nature and are a means to an end and are often related to rational motives of time, place and possession needs. On the other hand, hedonic values are non-instrumental, experiential and affective, often linked to non-tangible retailer/product attributes. The effect of utilitarian value in the context of multi-channel retailing has been suggested to be stronger compared to hedonic value (Noble et al. 2005). Hence, in the current study, we assessed consumers' utilitarian value toward multi-channel retailing to derive the shopper typology.

2.2   Multi-channel retailing

The multi-channel retailing processes that generate utilitarian value for consumers were selected to cover critical retail functional areas based on a review of literature in traditional retailing, single-channel electronic commerce and multi-channel retailing (Keeney 1999; Mason et al. 1993; Prasarnphanich and Gillenson 2003, Samli 1989; Steinfield et al. 2002). The retailing mix by Samli (1989) and Mason et al. (1993) served as the basis for the development of an integrated multi-channel retailing strategy. Retailing mix comprises of product (breadth and depth), people (customer service, information), promotion (advertising, publicity), presentation (atmosphere), place (location, hours) and price. It can also be classified into goods and service mix (variety and assortment, exchanges, customer services and delivery), communication mix (advertising) and pricing mix. By contextualizing these to the multi-channel retailing context, the six retail functions that we have identified are Integrated Promotion, Integrated Product and Pricing Information, Integrated Transaction Information, Integrated Information Access, Integrated Order Fulfilment and Integrated Customer Service. These are next mapped to the three stages of consumer purchase of pre-purchase, purchase and post-purchase to ensure that we have covered the domain representatively. These six multi-channel retailing areas are briefly discussed below:

Integrated Promotion is the advertising and publicity of one channel by the other channel, to encourage customers of one to use the other and to increase awareness of both channels (Bahn and Fischer 2003). The physical store can be used as an advertising medium for the Website, through brochures, receipts, carrying bags, posters and in-store promotions. Similarly, the Website can provide contact information about the physical stores and make announcements of in-store events (Steinfield et al 2002).

Integrated Transaction Information Management involves collecting customers' online and offline transaction information, managing this integrated information, and making it available across multiple channels (Kalakota and Robinson 2004). Integrated transaction information would increase the richness of the information available and the quality of the services that can be provided based on this information. Retailer would be able to provide many value-added personalized services such as customized Web pages, allow customers to review their previous purchases and to provide them with suggestions for future purchases.

Integrated Product and Pricing Information Management involves ensuring the consistency of product and pricing information in both retail channels. This can be achieved by integrating product catalogues and ensuring that information related to product descriptions, product categories, prices and discounts are consistent in both channels (Daniel and Wilson 2003). This would lead to a transparent flow of information between the processes and reduces confusion due to information inconsistencies (Rangaswamy and Bruggen 2005).

Integrated Information Access provides customers with the ability to access information available in one channel from another channel. The Website can allow customers to search for products available in the physical store through an integrated database. Likewise, information kiosks at the physical stores can help customers search for product information, availability and store location of products from the Website (Gulati and Garino 2000). Information on real-time inventory can be made available online so that customers will not make wasted trips to the store when the product is out of stock (Prasarnphanich and Gillenson 2003).

Integrated Order Fulfilment is the provision of support for customers to choose their preferred channel to complete their purchases. It includes allowing customers to use the online channel to order products and pick them up at local physical outlets and allowing gift coupons issued by the store to be redeemed either online or offline (Wallace et al. 2004). Consumers can also choose to make payment for their online purchases at the physical stores. An integrated product cataloguing system can allow customers to quickly place online orders based on catalogue numbers (Saeed et al. 2003). Customers can also place orders for out-of-stock items using self-serve Internet kiosks.

Integrated Customer Service is the provision of services for customers to access service support in either channel. Support can be provided at the physical stores for problems related to online purchases such as allowing customers to return goods ordered online at the physical stores (Prasarnphanich and Gillenson 2003). It also involves having an integrated communication channel where the Website provides after-sales services such as email support for products bought in physical stores as well as real-time live chat, where online customers have access to in-store customer service assistants (Amit and Zott 2001).

3   DATA COLLECTION AND MEASURES

A questionnaire comprising of multiple items under each of the six multi-channel retailing areas has been developed. Some sample measurement items are: 1) "The online store highlights in-store promotions that are taking place in the physical store."; 2) "The information on stock availability of the products is consistent both online and offline."; 3) "The store keeps an integrated purchase history of my online and offline purchases."; 4) "The physical store provides me with access to the information on the online store through the Internet kiosks."; 5) "The physical store allows me to self-collect my online purchase."; 6) "The in-store customer service centre accepts return, repair or exchange of products that I purchased online." In the survey, the respondents will be asked to indicate the importance and the extent to which they value each of the multi-channel shopping attributes on a scale of 1 (not at all) to 7 (very much). Such an approach to developing shopper typology has been employed by Reynolds et al. (2002).

4 USE OF CLUSTER ANALYSIS TO DEVELOP TYPOLOGY

The main data analytic method used will be cluster analysis. The average value score of the items under each of the six variables will used for cluster analysis. Following Ketchen and Shook (1996), we will adopt a two-step approach to the cluster analysis process. First, a hierarchical cluster analysis using WARD algorithm with square Euclidean distances will be performed. The number of clusters will be determined by visual inspection of the dendrogram and by visual examination of the graph showing the agglomeration coefficient by number of clusters. Next the variables will be standardized and the hierarchical cluster analysis will be performed. Consistency between these two solutions will determine the number of appropriate clusters. Next, a non-hierarchical cluster analysis using K-means with square Euclidean distances will be performed. This two-stage procedure will increase validity of the cluster solutions (Ketchen and Shook 1996). To ensure reliability of the solutions, the cluster analysis will be performed multiple times, changing algorithms and methods for addressing multicollinearity. Next, the groups clustered will be labelled according to their distinctive characteristics to allow meaningful interpretation. Since cluster analysis has often been criticised as a data-driven technique, in order to ensure that the groups formed do exhibit descriptive validity, the groups formed through cluster analysis will be verified with managers to ensure that the groups make sense to the managers and are relevant for practice. This will ensure that groups are described in a way that is internally homogenous and maximally different from other groups.
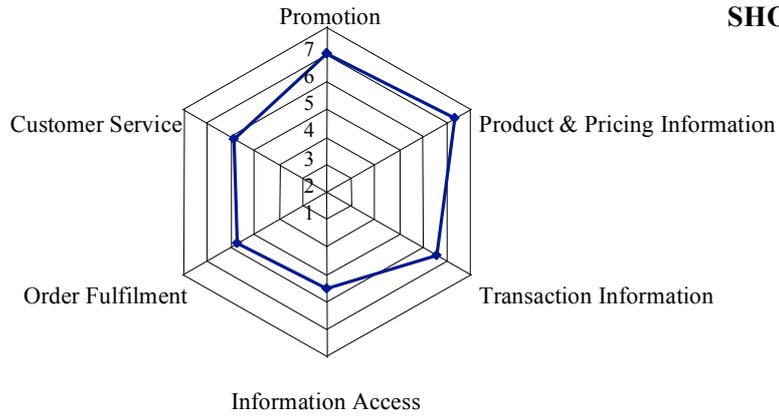
5 PILOT STUDY

A pilot study has been conducted to assess the reliability and validity of the set of questionnaire items to be used for developing the typology. Respondents were 100 undergraduates recruited through emails and online bulletin board advertisements in a large university. Table 2 shows the descriptive statistics of the three clusters derived using the six dimensions. These three types of multi-channel shoppers are labelled as information-oriented shopper, service-oriented shopper and hybrid shopper based on their valuations on the six areas.

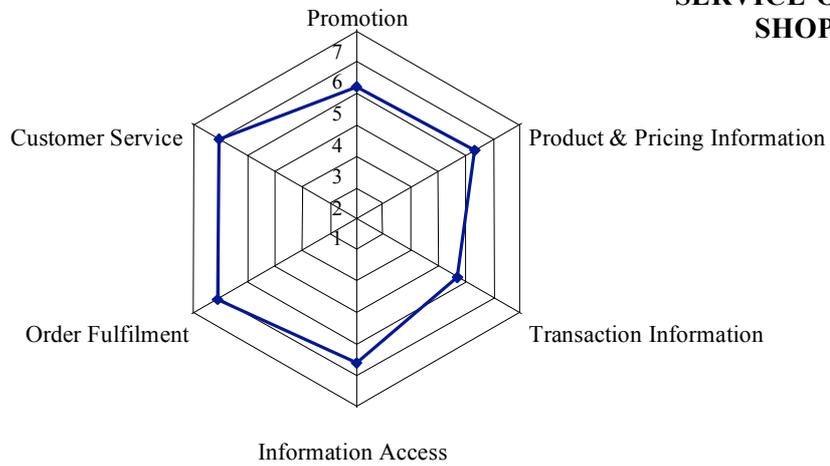|	Information-oriented Shopper	Service-oriented Shopper	Hybrid Shopper
Integrated Promotion	6.0	5.2	6.4
Integrated Product and Pricing Information	6.3	5.3	6.6
Integrated Transaction Information	5.5	4.7	5.8
Integrated Information Access	4.5	5.6	6.1
Integrated Order Fulfilment	4.7	6.1	6.5
Integrated Customer Service	4.8	6.0	6.3
Sample (N)	**31**	**24**	**45**

Table 2. Value Means of Different Multi-channel Shoppers

The largest cluster representing 45% of the consumers are those who highly value all of the six areas of integrated retailing. These consumers have high expectations from retailers to integrate their retail channels across pre-purchase, purchase and post-purchases phases. Next, 31% of the consumers have a high information orientation since they value the ability to get consistent and integrated information to assist in their purchase process greatly. Lastly, 24% of the shoppers highly value the ability to conveniently access to cross-channel information, perform cross-channel order fulfilment and engage in cross-channel service support. Figure 1 shows the radar diagrams of the typology graphically.

INFORMATION-ORIENTED SHOPPER

Promotion
7
6
5
4
3
2
1
Customer Service
Product & Pricing Information
Order Fulfilment
Transaction Information
Information Access

SERVICE-ORIENTED SHOPPER

Promotion
7
6
5
4
3
2
1
Customer Service
Product & Pricing Information
Order Fulfilment
Transaction Information
Information Access

HYBRID SHOPPER

Promotion
7
6
5
4
3
2
1
Customer Service
Product & Pricing Information
Order Fulfilment
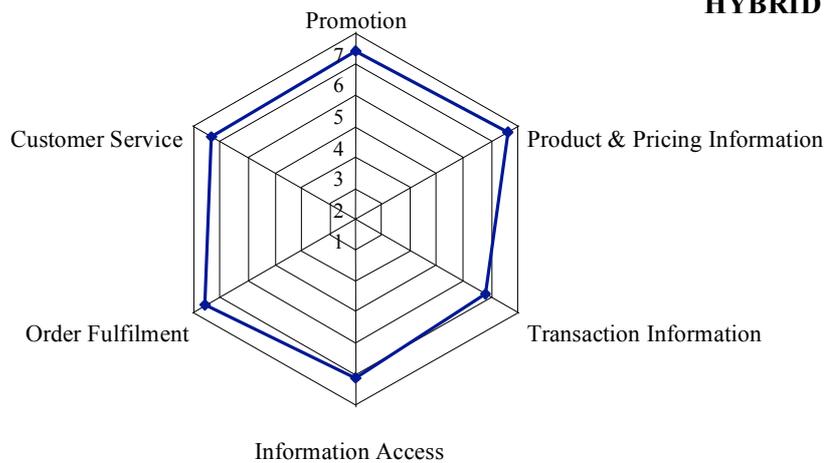Transaction Information
Information Access

Figure 1. Profiles of Multi-channel Shoppers

6   POTENTIAL CONTRIBUTIONS

The results from this research have significant implications to retailers intending to increase the extent of integration between their physical stores and online Website. The identification of the cross-channel shopping attributes that are valuable to consumers provides an indication of the value propositions that drive effective multi-channel retailing. Based on our preliminary results, we found that not all consumers value various multi-channel shopping attributes as equally important. Though we found that majority of the consumers value all the attributes greatly, there is also a group of shoppers who is likely to rely on the Website more for consistent promotion, product and transaction information that are used prior to their purchase process. On the other hand, another group of service-oriented shoppers values the ability to conveniently engage in cross-channel activities and perform a certain degree of self-service at the stores. These two dimensions that characterise multi-channel shoppers have been identified as important shopper motivations in prior research (Noble et al. 2005; Rohm and Swaminathan 2004). Hence, retailers should be mindful of these patronage behaviours and tailor their multi-channel strategies accordingly. Our research also contributes to the research on multi-channel retailing. As conceptual developments and empirical research in this arena are still in their nascent stage, our research has the potential to enrich our understanding of the dimensions for retail channel integration. Our exploratory efforts to develop a multi-channel shopper typology based on value-based approach contribute to the retail patronage behaviour literature. We believe that this research can serve as a useful foundation for future work to advance our knowledge in this important e-business model.

References

Amit, R. and Zott C. "Value Creation in E-business," *Strategic Management Journal* (22), 2001, pp. 493-520.

Babin, B.J., Darden, W.R. and Griffin, M. "Work and/or Fun: Measuring Hedonic and Utilitarian Shopping Value," *Journal of Consumer Research* (20:1), 1994, pp. 644-656.

Bahn, D.L. and Fishcher, P.P. "Clicks and Mortar: Balancing Brick and Mortar Business Strategy and Operations with Auxiliary Electronic Commerce," *Information Technology and Management* (4) 2003, pp. 319-334.

Daniel, E.M. and Wilson, H.N. "The Role of Dynamic Capabilities in E-business Transformation," *European Journal of Information Systems* (12), 2003, pp. 282-296.

Darden, W.R. and Ashton, D. "Psychographic Profiles of Patronage Preference Groups," *Journal of Retailing* (50:Winter), 1975, pp. 99-112.

Forrester Research. "The State of Retailing Online 7.0," *Forrester Research*, 2004.

Gehrt, K. and Shim, S. "A Shopping Orientation Segmentation of French Consumers: Implications for Catalog Marketing," *Journal of Interactive Marketing* (12:Autumn), 1998, pp. 34-46.

Gulati, R. and Garino, J. "Get the Right Mix of Bricks and Clicks," *Harvard Business Review* (May-June), 2000, pp. 107-114.

Kalakota, R. and Robinson, M. "Multi-channel Blueprint: Creating New Customer Experiences," In *Services Blueprint: Roadmap for Execution*. Boston, MA: Addison-Wesley, 2004, pp. 85-116.

Kau, A.K., Tang, Y.E. and Ghose, S. "Typology of Online Shoppers," *Journal of Consumer Marketing* (20:3/3), 2003, pp. 139-154.

Keeney, R. "The Value of Internet Commerce to the Customer," *Management Science* (45), 1999, pp. 533-542.

Ketchen, D.J. and Shook, C. "The Application of Cluster Analysis in Strategic Management Research: An Analysis and Critique," *Strategic Management Journal* (17), 1996, pp. 441-458.

Mason, J.B., Mayer, M.L., and Wilkinson, J.B. *Modern Retailing: Theory and Practice*, (6th ed.) Irwin, Homewood, IL, 1993.

Noble, S.M., Griffith, D.A., and Weinberger, M.G. "Consumer Derived Utilitarian Value and Channel Utilization in a Multi-channel Retail Context," *Journal of Business Research* (58), 2005, pp. 1643-1651.

Prasarnphanich, P., and Gillenson. M.L. "The Hybrid Clicks and Bricks Business Model," *Communication of the ACM* (46:12ve), 2003, pp. 178-185.

Rangaswamy, A. and Bruggen, G.H.V. "Opportunities and Challenges in Multichannel Marketing," *Journal of Interactive Marketing* (19:2), 2005, pp. 5-11.

Rasch, S. and Lintner, A. "The Multichannel Consumer: The Need to Integrate Online and Offline Channels in Europe," *The Boston Consulting Group Report*, July 2001, accessed April 02, 2006 [available at http://www.bcg.com/publications/files/MultichannelConsumer_summary.pdf].

Reynolds, K.E., Ganesh, J. and Luckett, M. "Traditional Malls vs. Factory Outlets: Comparing Shopper Typologies and Implications for Retail Strategy," *Journal of Business Research* (55), 2002, pp. 687-696.

Rohm, A.J. and Swaminathan, V. "A Typology of Online Shoppers Based on Shopping Motivations," *Journal of Business Research* (57), 2004, pp. 748-757.

Saeed, K.A., Grover, V. and Hwang, Y. "Creating Synergy with a Clicks and Mortar Approach," *Communication of the ACM* (46**:**12ve), 2003, pp. 206-212.

Samli, A. *Retail Marketing Strategy: Planning, Implementation, and Control,* Quorum Books, NY, 1989.

Steinfield, C. "Understanding Click and Mortar E-Commerce Approaches: A Conceptual Framework and Research Agenda," *Journal of Interactive Advertising* (2:2), 2002.

Steinfield, C., Bouwman, H., and Adelaar, T. "The Dynamics of Click-and-Mortar Electronic Commerce: Opportunities and Management Strategies," *International Journal of Electronic Commerce* (7:1), 2002, pp.93-119.

The Economist. "A Perfect Market," May 15, 2004, pp. 3-5.

Wallace, D.W., Giese, J.L. and Johnson, J.L. "Customer Retailer Loyalty in the Context of Multiple Channel Strategies," *Journal of Retailing* (80), 2004, pp. 249-263.

Westbrook, R.A. and Black, W.C. "A Motivation-based Shopper Typology," *Journal of Retailing* (61:Spring), 1985, pp. 78-103.

Wheeler, B.C. "NEBIC: A Dynamic Capabilities Theory for Assessing Net-Enablement," *Information Systems Research* (13:2), 2003, pp. 125-146.