Intern. J. of Research in Marketing 31 (2014) 49–64

Contents lists available at ScienceDirect

Intern. J. of Research in Marketing

journal homepage: www.elsevier.com/locate/ijresmar

The effect of search channel elimination on purchase incidence, order size and channel choice

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ARTICLE INFO

Article history:
First received in 3 April 2012 and was under review for 6 months
Available online 1 October 2013

Area Editor: Harald J. van Heerde

Keywords:
Multichannel
Customer relationship management
Internet
Catalog shopping
Retailing
Panel data analysis

ABSTRACT

This study investigates the impact of eliminating a search channel on purchase incidence, order size, channel choice and, ultimately, sales and profits. We analyze customer panel data from a large retailer over a five-year period. The retailer conducted a randomized field test in which the firm eliminated its catalog for half of the panel. We find that channel elimination decreases purchase incidence, especially for customers who, before the test, were heavy users of the telephone purchase channel that aligns with the catalog search channel. As expected, channel choice for purchases is shifted toward the internet and away from the telephone channel. Interestingly, order size per purchase increases. We investigate the impact of channel elimination on profits across different customer segments. We calculate a net positive impact because the savings from eliminating the catalog compensate for lower sales revenues.

1. Introduction

Recently, we have observed an increased use of multiple channels by firms and their customers (Neslin et al., 2006; Neslin and Shankaar, 2009; van Bruggen, Antia, Jap, Reinartz, & Pallas, 2010; Wilson, Street, & Bruce, 2008). Single-channel catalog companies such as Lands End and LL Bean added the internet to their brick-and-mortar stores as a channel for selling goods. Insurance companies began marketing through not only agents but also the internet and call centers. Traditional brick-and-mortar retail stores ranging from Best Buy to Bloomingdales added the internet to the repertoire of channels through which they interact with customers. Online retailers have also added brick-and-mortar stores to achieve cross-channel synergies (Avery, Steenburgh, Deighton, & Carvella, 2012).

Neslin and Shankar, (2009) emphasize that multichannel customer management requires not just the introduction of new channels but also the elimination of ineffective ones. As customers increasingly use online channels for the various phases of the shopping process (search, purchase, and after-sales support), companies find the idea of eliminating ineffective channels appealing. For example, the Discovery Channel's retail arm closed its mall-based and stand-alone stores but increased its e-commerce presence (Dilworth, 2007). The European low-fare airline Ryanair closed all of its airport check-in desks, forcing passengers to use online check-in (McNamara, 2009).

However, Neslin and Shankar al. (2009) argue that forcing customers to use certain channels may turn them off because it steers them to use channels that are contrary to their preferences. This may cause reactance and dissatisfaction (e.g., Reinders, Dabholkar, & Frambach, 2008). Although several studies investigate the introduction of new channels (e.g., Avery et al., 2012; Deleersnyder, Geyskens, Gielens, & Dekimpe, 2002; Pauwels, Teerling, Huizingh, & Leeflang, 2011; van Nierop, Leeflang, Teerling, & Huizingh, 2011), research on multichannel customer management has neglected the effects of channel elimination. In this study, we aim to address this important gap in the literature.

Specifically, we investigate the behavioral consequences of eliminating a search channel by analyzing a field experiment in which a firm eliminated a search channel for a randomly selected group of customers. We investigate five questions: (1) What is the effect of this channel elimination on purchase incidence, order size and channel choice? (2) Which customer characteristics (e.g., past customer behavior, past channel choice) moderate this effect? (3) Do marketing efforts, such as email, moderate the effects of channel elimination? (4) Do the effects of

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0167-8116/$ – see front matter © 2013 Elsevier B.V. All rights reserved.
http://dx.doi.org/10.1016/j.ijresmar.2013.07.008

channel elimination evolve over time? (5) What is the total impact on sales and profits?

To answer these questions, we estimate purchase incidence, channel choice, and order size models (Ansari, Mela, & Neslin, 2008). We use a cost/benefit framework to develop hypotheses and interpret our results. To our knowledge, this is the first study to investigate the effect of channel elimination on customer behavior and hence, clearly contributes to the literature on multichannel marketing (Neslin & Shankar, 2009; Verhoef, 2012; Verhoef et al., 2010). The scarce research on channel elimination has emphasized attitudinal consequences (Reinders et al., 2008). A unique feature of our study is that we analyze a controlled field test in which a search channel is eliminated for a random group of customers. We have thus strong internal validity (through randomization) as well as external validity (the field test lasted 28 months).

The field test is conducted by a firm that uses two purchase channels — the telephone call center and the internet. The search channel that was eliminated was the firm's catalog. We hypothesize and find that eliminating the catalog search channel decreases purchase incidence, especially for customers who before the experiment were heavy users of the telephone purchase channel that aligns with the catalog search channel. As expected, channel choice for making purchases is shifting toward the internet and away from the telephone. Interestingly, we find that while purchase incidence decreases, order size per purchase increases. However, the net impact on sales revenues of the shift in purchase channels to the internet is negative. Despite this, we calculate an increase in profits over 28 months, primarily due to savings on catalog mailings.

This paper proceeds as follows: First, we review prior research. Then, we present our conceptual framework and hypotheses and describe our data and the variables we employ to examine the consequences of channel elimination. Next, we present our empirical model and report our results. We conclude with a discussion of managerial implications, limitations, and avenues for future research.

2. Literature review

In the customer management context, Neslin et al. (2006, p. 96) define a channel as "a customer contact point, a medium through which the firm and the customer interact." Factors such as enhanced technological capabilities, customer demand, competitive innovation in channel usage, and the promise that a multichannel strategy will help the firm win customers and increase sales and profits have encouraged firms to increasingly rely on multiple channels (Blattberg, Kim, & Neslin, 2008). Research on channel choice has identified several determinants of customer channel decisions, including customer purchase history (Ansari et al., 2008; Fader, Hardie, & Lee, 2005), channel attributes, historical channel usage patterns (Gensler, Leeflang, & Skiera, 2012; Neslin & Shankar, 2009), socio-demographic characteristics (Kushwaha & Shankar, 2008; Strebel, Erdem, & Swait, 2004) and marketing communications (Ansari et al., 2008; Thomas & Sullivan, 2005). Studies have also found that customer responses may vary over time as customers become acquainted with and adopt new channels (Deleersnyder et al., 2002; Venkatesan, Kumar, & Ravishanker, 2007). Valentini, Montaguti, and Neslin (2011) find, for example, that the customer choice process for purchase channels evolves from one that is responsive to marketing to one that is less influenced by marketing.

Previous research reveals that a multichannel strategy offers several positive consequences, as multichannel customers tend to buy more (Blattberg et al., 2008; Kumar & Venkatesan, 2005). Moreover, research suggests positive consequences of channel additions for firm value (e.g., Geyskens, Gielens, & Dekimpe, 2002). However, the use of multiple channels carries risks, such as channel cannibalization (Deleersnyder et al., 2002; Pauwels & Neslin, 2008; Wolk & Skiera, 2009) and cross-channel conflicts (Vinhas & Anderson, 2005). In fact, Chu, Chintagunta, and Vilcassim (2007) find that Dell benefited from exiting the retail channel in 1994. van Nierop et al. (2011) show that adding the internet as a search channel reduced purchase frequency in a department store. Moreover, the use of more channels may become complex and costly (Diakova, 2005; Neslin & Shankar, 2009). Finally, the research has shown negative attitudinal consequences of forcing customers to use a new channel (Reinders et al., 2008).

An interesting concept in the multichannel literature is what Blattberg et al. (2008, p. 647) refer to as "channel congruency" — the notion that information channels naturally link to the purchase channels with which they share the same technology. The obvious example is that information communicated via email naturally routes the customer to the internet purchase channel. Ansari et al. (2008) support this conjecture in that they find email tilts channel choice in favor of the internet, while catalogs tilt choice in favor of catalog orders, which consist of mail and telephone purchase channels.[3]

In summary, the multichannel customer management literature shows that customer decisions in a multichannel environment can be predicted. Substantively, there is evidence for a channel congruency effect, for and against the addition of channels, and some initial evidence that eliminating a channel can have positive performance consequences. In this respect, our research is most closely related to Chu et al. (2007). However, we analyze a different channel, analyze customer-level data and therefore generate insights at that level as well as utilize a controlled field experiment.

3. Conceptual framework

3.1. Costs and benefits of shopping

Central to our framework is the fact that customers make choices on where and how to shop by assessing the costs and benefits of alternatives. Cost/benefit attributes include assortment, prices, convenience, enjoyment, risk, etc. (e.g., Gijsbrechts, Campo, & Nisol, 2008). Research has linked these costs and benefits to catalog and online shopping (e.g., Eastlick & Feinberg, 1999; Forsyth, Liu, Shannon, & Gardner, 2006; Mathwick, Malhotra, & Rigdon, 2001; Reynolds, 1972; Verhoef & Langerak, 2001).

Verhoef, Neslin, and Vroomen (2007) integrate this work to identify several cost/benefit shopping attributes, which we use as a starting point. These include (1) search convenience, (2) information availability, (3) shopping enjoyment, (4) purchase convenience (including speed of delivery), (5) service quality, (6) price & promotion (7) assortment, (8) risk (i.e., payment, privacy), and (9) clientele. Table 1 lists and describes these attributes.

We propose two additional costs – emotion and adjustment – because these may be particularly relevant to the elimination of a channel. Emotion costs occur as the elimination of a channel force's customers to use other channels. Reactance theory suggests that restricting customers' freedom results in strong emotional feelings (e.g., Brehm & Brehm, 1981). Adjustment costs induce thinking and learning in customers to incur as they adapt their behavior (Nilsen, 1992; Shugan, 1980).

3.2. Conceptual model

Fig. 1 shows our conceptual model. Following Neslin et al. (2006) we distinguish between the search and purchase phases of customer buying decisions. In our study, the firm has eliminated a search channel, the catalog. The impact of this action on the costs and benefits in Table 1 governs how this translates into purchase behavior. We assume that the net difference between benefits and costs represents the impact on utility, which we do not directly observe. The purchase behavior we

[3] Note a counter effect to this is "research shopping" (Verhoef et al., 2007), where an email might stimulate Internet information search, but the customer might purchase via the telephone because he or she finds it a better way to make the purchase.