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Offline retailers expanding online to compete with manufacturers: Strategies and channel power

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ABSTRACT

As traditional offline retailers complain about manufacturers' decision to compete with them by selling their products directly online, many are responding by starting their own online sales operations. This paper analytically examines when an offline retailer's expansion online is desirable and how it affects channel members' strategies and profits in a dual channel. We found that staying out of the online market when it is still not large enough or is extremely large could be a better alternative for an offline retailer. Otherwise, a retailer's online expansion cannibalizes offline sales, but increases the retailer's overall sales. It increases the retailer's channel power at the expense of the manufacturer, who continues however to have the lion's share of the channel profit. Depending on market conditions, the retailer may or may not set the same price across channels, while the manufacturer always sets a lower price than the retailer in the online channel. Finally, a price war across channels in a relatively large online market further reduces offline prices and can drive the retailer out of the offline market.

1. Introduction

The retailing sector and marketing channel structures are in perpetual mutations (Verhoef, Kannan, & Inman, 2015; Zhang et al., 2010). Increasingly, with the emergence and development of the Internet, leading manufacturers such as HP, IBM, Nike, Procter & Gamble, and Mattel, which have traditionally relied on offline retailers, are developing their own direct online channels to better connect with consumers and to expand their market coverage. As a result, many manufacturers now operate in dual channel structures in which they sell through offline retailers and their own websites. These dual channels are believed to primarily help manufacturers grow sales and enhance their profitability (Neslin et al., 2006; Rangaswamy & Van~Bruggen, 2005), while their benefits to traditional offline retailers are equivocal. Retailers are generally concerned with price competition that comes with manufacturers' online sales in dual channels and its potential adverse effects on their sales and profits. For example, some manufacturers such as Levi Strauss & Co. and Invesco have discontinued online sales to stop channel conflict with offline retailers (Chiang, Chhajed, & Hess, 2003). Other manufacturers have tried to mitigate conflict with retailers by claiming that their online operations target different market segments than those that naturally buy in offline stores (Yan & Pei, 2015).

Because channel structures are perpetually changing, the dual channel structure in which a manufacturer sells online to consumers and via offline retailers may not be sustainable in the long run. Assuming that manufacturers' online offerings effectively target specific market segments in dual channels, the question is: Why should offline retailers stay out of these growing segments to the exclusive benefit of manufacturers? The response of some traditional offline retailers, including Best Buy, Canadian Tire, Costco, and Wal-Mart is unequivocal since they have already embraced online retailing. As the percentage of online sales increases, other offline retailers might not be able to afford leaving online markets to manufacturers. In fact, the percentage of the online grocery sales in the US is expected to gradually increase to reach 11% by 2023 (Melis, Campo, Breugelmans, & Lamey, 2015). In Canada, eMarketer (www.emarketer.com) estimates that ecommerce will represent 10% of total retail sales by 2020. Thus, the observed move toward dual-channel retailing, where retailers sell products both online and offline, seem irremediable (Zhang et al., 2010).

While the emergence of the three-channel configuration in which retailers sell both online and offline in addition to manufacturers' online operations seems to be one of the traditional retailers' preferred responses to manufacturers' move to online retailing, its implications on channel decisions, profits, and power remain unknown. The existing game-theoretic literature on marketing channels mainly consists of

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studies that identify mechanisms that can help manufacturers lessen channel conflict in dual channels and improve members' performances. For instance, Chiang et al. (2003) find that a direct channel may not always negatively affect the retailer if it is accompanied by a wholesale price reduction. Yao and Liu (2005) suggest an optimal wholesale price that can encourage the retailer to accommodate the manufacturer's online offering in a dual channel. Yan (2011) investigates the impact of brand differentiation in a dual channel and finds that although it lessens channel conflict, it should be accompanied by a profit sharing mechanism to achieve full channel coordination. Yan and Pei (2011) support the view that information and profit sharing can improve members' profits in a dual channel. Finally, cooperative advertising is found to alleviate intrabrand competition in a dual channel and improve channel performance (Yan & Pei, 2015).

The above coordination mechanisms may not however apply to channels where retailers sell both online and offline since the addition of retailers' online operations in dual channels changes the dynamic of competition between channel members. From a manufacturer's perspective, a retailer's online expansion may appear as a direct attack in an apparently more profitable market segment. Because the manufacturer sells directly to consumers online, it is generally believed that this channel is more profitable as its margins are not shared with any retailer. In addition, intrabrand competition between the two channel members can no longer be downplayed using segmentation by channel usage. From a retailer's point of view, in addition to potential conflicts with the manufacturer due the intensification of intrabrand competition, there is a need to avoid channel cannibalization, create synergy between online and offline stores, and effectively compete with the manufacturer, especially in the online market segment. Thus, online expansions of traditional retailers in dual channels cannot be overlooked. It does matter whether retailers exclusively sell offline or sell both offline and online in the presence of manufacturers' online channels. For both marketing scholars and managers, there is therefore a need to understand the interplay between channel members' decisions in this new three-channel configuration and its impact on their profits. This paper addresses this issue by tackling the following research questions:

1. Under what conditions should offline retailers in dual channels expand online?
2. How should channel members set price across channels?
3. How does a retailer's online expansion in an established dual channel affect demands, profits, and channel power?

Obtaining reliable cost and profit information from manufacturers and retailers to empirically investigate this type of questions is known to be almost impossible (Ailawadi, 2001). Further, an empirical study that examines this issue would be limited to the data, market and industry it applies to. Accordingly, the purpose of this paper is to develop an analytical framework and provide useful guidelines to traditional retailers that contemplate online expansion as a response to manufacturers' online channels. Our analytical analysis will help generate recommendations for firms operating under different market conditions, and can therefore explain various retailers' multichannel strategies. Particularly, we develop two analytical models. The first model (Model 1) is a typical dual channel in which a manufacturer uses a traditional retailer to sell offline to consumers and owns a transactional website where consumers can make direct purchases. The manufacturer charges a wholesale price to the retailer for the offline market and sets a retail price for her online channel, while the retailer sets a retail price for the offline store. In the second model (Model 2), the channel structure of the first model is modified with the addition of the retailer's online store. The manufacturer's decision variables are unchanged. In addition to the retail price for the offline store, the retailer now also sets another retail price for the online store.

Consumers are assumed to be heterogeneous (Yan, 2011; Yoo & Lee, 2011). Those who purchase online may not purchase offline unless the prices in the rival channel become very attractive. This means that in a simple dual channel (Model 1) where the manufacturer and retailer respectively sell online and offline, the level of competition between the two channel partners is limited as they do not target the same market base. The addition of the retailer's online store (Model 2) changes the nature of competition between the manufacturer and the retailer. They now target the same online market base, which depends on several factors not controlled in this study, including the scope of the market coverage and the product compatibility with ecommerce. The Stackelberg solution concept is used to derive the equilibrium solution for each of the two games. Comparisons between the equilibrium strategies and profits of these two games shed some lights on the strategic implications of the addition of a retailer's online store in a dual channel and its sustainability, which helps us answer the above research questions.

The remainder of the paper is organized as follows. Section 2 presents the theoretical background of this research. Section 3 describes the models and their assumptions. Section 4 describes the derivation of the equilibrium solutions and discusses their feasibility conditions. Section 5 compares the strategies and profits across models to identify the impact of the introduction of the retailer's online store. Section 6 compares strategies and profits within models to understand pricing policies and channel power. Finally, Section 7 concludes and discusses the managerial and theoretical implications of our findings.

2. Background literature

This paper builds on three important themes in the marketing channel literature: multichannel retailing, retail price competition, and channel power. We briefly describe these themes below and discuss the positioning of our research compared to previous works.

2.1. Multichannel retailing

A firm is considered to use multichannel retailing when it sells its products to consumers through at least two different channels (Melis et al., 2015; Sharma & Mehrotra, 2007). This is the case of companies such as Costco, Canadian Tire, Best Buy, and Zara, which not only sell products in store, but also operate transactional websites for online purchases. The benefits of multichannel retailing are numerous (Avery, Steenburgh, Deighton, & Caravella, 2012; Neslin et al., 2006; Pauwels & Neslin, 2015; Rangaswamy & Van~Bruggen, 2005; Verhoef et al., 2015). Zhang et al. (2010) summarize them in the following three categories: access to new markets, increased customer satisfaction and loyalty, and creation of strategic advantages. Based on a comprehensive literature review, Neslin et al. (2006) listed several key questions necessary to understanding the challenges of multichannel organizations. Three of them are relevant for the current research, namely: Does multichannel retailing grow sales? What is the contribution of an additional channel? And, should prices be consistent across channels? There are no definitive answers to these questions in the literature. The addition of a new channel may cannibalize sales of incumbent channels or create synergy with them to further grow sales. Both price integrity and price discrimination across channels may be optimal in some specific situations (see Neslin et al., 2006; Verhoef et al., 2015). Additional analytical research is needed to further investigate these questions.

2.2. Retail price competition

Retail competition occurs when consumers have the opportunity to purchase the same product at more than one retail venue (Ingene & Parry, 1995). Therefore retail competition exists in multichannel retailing as described above. In such a context, a retailer's decision to add a new channel is believed to reduce the retail price of the incumbent channel, and increase the wholesale price and the quantity sold (Yoo & Lee, 2011). In this paper, we consider an additional competitive