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Informational and/or transactional websites: Strategic choices in a distribution channel ☆

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ABSTRACT

While most businesses have faced the decision of whether to operate an informational and/or a transactional website, the literature on website selection in marketing channels remains very sparse. This paper proposes an analytical framework that compares scenarios where a manufacturer uses either an informational, a transactional, or both transactional and informational website in a distribution channel formed by one manufacturer and one retailer. We find that the selection of the optimal website depends on the online market base of the product, the effectiveness of the manufacturer-controlled online communications, and the cross-price effect between online and offline channels. For both the manufacturer and retailer, informational websites are preferable when the online market base is small. With larger online markets, the manufacturer may prefer either informational and transactional websites or exclusively informational websites, while the retailer is always better off with an exclusively informational website. Theoretical and managerial implications of these findings are discussed.

1. Introduction

A crucial issue facing marketing managers when developing their digital channel strategy is whether to develop an informational or a transactional website (Lee and Grewal, 2004). An informational website is a support tool designed to offer information to various stakeholders, including consumers, about products, services, and all relevant aspects of the business; a transactional website offers the possibility for consumers to purchase products online (Van Nierop et al., 2011). Although it is believed that these two types of websites are developed to improve the company's performance, their strategic implications as well as their impacts on channel members' decisions and profits are different. Because transactional websites are alternative distribution channels, they change the nature of vertical interactions between manufacturers and their traditional offline retailers. Generally, manufacturers that sell their products to consumers online are not only partners with their offline retailers, but also compete with them to a certain extent (Biyalogorsky and Naik, 2003; Chiang et al., 2003; Neslin et al., 2006; Pu et al., 2017; Yan and Pei, 2011, 2015; Yoo and Lee, 2011). On the other hand, informational websites contribute to expanding consumer knowledge about the product and promotional offers with the goal of increasing offline sales at the retail level, avoiding competition with traditional retailers (Van Nierop et al., 2011).

Choosing between a transactional and informational website is an important managerial issue that virtually all major companies have faced or will face. Casual observations and published works provide many interesting examples. Almost two decades ago, Levi Strauss & Co. started a transactional website that was soon turned into an exclusive informational website due to conflicts with offline retailers (Chiang et al., 2003; Yan, 2011). Today, this company operates a website that is both transactional and informational. Gibson Musical Instruments (GMI) stopped online sales operations just one month after their start to content dealers (Lee et al., 2003). Since then, GMI has operated a state-of-the-art informational website. Zara first operated an informational website that was later upgraded to a transactional and informational website (Lee and Grewal, 2004; Van Nierop et al., 2011). On the other hand, The Gap is reported to have launched, in 1996, a website that was transactional and informational (Lee and Grewal, 2004). These few examples raise several unanswered questions, including: Why do manufacturers operate a specific type of website? Why, over time, do some manufacturers change or upgrade the type of websites they operate? Clearly, there is a need for a comprehensive framework that can help answer these questions and also guide

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the selection of the type of activities that manufacturers can perform online.

The purpose of this paper is to analytically investigate, in a two-member channel, the conditions under which the manufacturer should offer either an informational, a transactional, or both an informational and transactional website. To reach this goal, we consider a situation where the manufacturer and retailer in a bilateral monopoly play three games: *I*, *T*, and *TI*. Game *I* is played when the manufacturer supports the retailer's offline activities by providing online communications that stimulate offline sales. In Game *T*, the manufacturer develops a transactional website that competes with the retailer's traditional offline offering. Game *TI* is the combination of the first two games, in which the manufacturer develops a transactional website and also offers online marketing communications to stimulate sales. In each of the three games, the manufacturer and retailer set their pricing decisions to maximize their own profits. We identify the conditions under which each of these three games can be played and compare the players' payoffs to establish their preferences. We show that, under certain conditions, the two channel members can agree to play either Game *I* or Game *TI*.

To the best of our knowledge, this paper is the first analytical attempt to formally investigate the role manufacturers' own websites can play in their channel strategy. The premise of our work is that the addition of either type of website influences the performance of channel members. Operating a transactional website corresponds to an online market expansion strategy, which allows manufacturers to reach consumers who will not purchase otherwise, while the adoption of an informational website refers to a penetration strategy via online communications that aims at increasing offline sales. In particular, this paper builds on previous empirical and analytical works which are discussed below.

Research on the use of transactional websites in marketing channels has mainly investigated whether such sites increase overall sales or cannibalize offline sales, with the idea that cannibalization is negative for firm performance. For instance, using the data from Tower Records, an offline music retailer that expanded to online retailing, Biyalogorsky and Naik (2003) find that online sales operations do not significantly cannibalize offline sales, but contribute to building online equity that positively affects future online sales. Deleersnyder et al. (2002) use data from 85 Internet channel additions over 10 years in newspaper industries in the UK and The Netherlands and conclude that cannibalization of offline sales is minimal, unless online channels closely mimic the positioning of offline channels. Geyskens et al. (2002) study the addition of a transactional website in the newspaper sector and find both positive and negative effects on the company's stock prices. Wolk and Skiera (2009) use survey data from multichannel retailers and find that transactional websites fail if they are not differentiated from offline channels, but their net effect on performance is positive, with a stronger positive effect on strategic than on financial performances. A more recent related study by Waterman and Ji (2012) on ten U.S. major media categories over six decades reports that increasing revenues from Internet distribution are exceeded by declines in revenues from offline channels. This work supports the view that not only are the total market sizes of these media declining, but cannibalization does occur at the expense of traditional offline channels as well.

A few empirical works investigate the impact of informational websites on firm performance. For example, Lee and Grewal (2004) study the financial market valuation of 106 firms over 9 years and find that markets reward firms for developing informational websites. Pauwels et al. (2011) consider the case of a traditional offline department store with various product categories and study the revenue implications of the introduction of an informational website. They find, among others, that the impact of the introduction of an informational website depends both on the product category and on the customer segment. In particular, the revenue impact of an informational website is higher for sensory products than for non-sensory products, and it is also higher for consumers who live far away from the store.

On the other hand, several analytical works have studied the addition of a transactional website in the context where the manufacturer already sells the products to offline retailers. These works are strategic in nature as they consider the interactions between channel members and establish the conditions under which manufacturers can operate dual channels. Channel decisions are made so as to help channel members keep or improve their individual performance, and to avoid or lessen channel conflicts compared to situations where manufacturers deal exclusively with offline retailers (e.g., Chiang et al., 2003; Yan, 2011; Yan and Pei, 2011; Yao and Liu, 2005). The introduction of a transactional website by a manufacturer in such a context is known to mitigate the double marginalization effect, increase market coverage, generate price competition, and potentially lead to price discrimination to better serve both online and offline consumers (Yoo and Lee, 2011). The effect of channel cannibalization is believed to be minimal due to the fact that more channels serve a wider variety of consumers.

The main innovation of this paper, compared to previous analytical works, is the recognition of the importance of informational websites in marketing channels. Until now, analytical works have been limited to the introduction of transactional websites in conventional channels where manufacturers deal exclusively with retailers without any other online presence (e.g., Cheng and Xiong, 2015; Yan, 2011; Yan and Pei, 2011; Yoo and Lee, 2011). While situations where manufacturers do not provide commercial information online from their own websites to stimulate sales either online or offline do exist, they are increasingly very scarce. The real challenge for manufacturers may not be choosing between selling or not selling online as in the current analytical literature, but finding the right mix of commercial activities that can be performed online to improve channel efficiency. In any case, research on the effects of informational websites on firm performance discussed above and on the effects of online information on consumer behavior (e.g., Kulkarni et al., 2012; Van Nierop et al., 2011; Ratchford et al., 2007; Viswanathan et al., 2007) indicates that online controlled-information by manufacturers should not be ignored in strategic interactions with retailers.

The remainder of the paper is organized as follows. Section 2 describes the three models. Section 3 describes the derivation of the equilibrium solutions and discusses their feasibility conditions. Section 4 discusses the players' preferences. Finally, Section 5 concludes.

2. Models

Consider a typical two-member channel in which a manufacturer sells a product to a retailer, who then sells it to consumers offline or in a physical store. We assume that there is either no external competition at the manufacturing and retail levels, or if competition does exist, it does not change vertical interactions between the two channel partners. The manufacturer contemplates the possibility of developing a website that can help to increase her profits and, if possible, also enhance the profitability of the retailer. The manufacturer has to decide whether to use the website for informational, transactional, or for both informational and transactional purposes. These three situations correspond to three different games as described below.

2.1. Game I: Informational website

In this game, the manufacturer opts for an exclusively informational website that supports offline sales. The manufacturer sets