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Complementarity and Cannibalization of Offline-to-Online Targeting: A Field Experiment on Omnichannel Commerce

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Abstract

As the online channel is crucially important, traditional offline retail stores seek to induce their existing consumers to buy online with incentives (i.e., offline-to-online targeting). However, it is debatable whether such targeting is truly effective. While advocates argue that online shopping should complement a firm's store channel, critics counter that doing so may result in cannibalization. Drawing on the channel interplay literature and considering customers' travel costs, we examine whether and how inducing online shopping complements or cannibalizes a firm's offline sales. Using a randomized field experiment on over 11,200 customers of a large department store, we provide causal evidence for both the complementarity and cannibalization effects of online and offline channels. Offline-to-online targeting engenders higher online purchases (as intended) than no targeting. The local average treatment effects models suggest that once induced to buy online, consumers who live near the retailer's physical store tend to increase their offline spending and total sales by 47% (i.e., complementarity effects for nearby consumers). However, for consumers who live far away from the brick-and-mortar store, inducing them to buy online can backfire by reducing offline and total sales by approximately 5.7% for each additional kilometer of distance (i.e., cannibalization effects for distant consumers). Explorations of these mechanisms suggest that distant consumers who are induced to buy online may fail to return to shop in the offline store and purchase less experiential category products with a smaller basket size than other customers, thus leading to a negative net impact on the total sales. These findings alert managers to the dangers of improper targeting and investment in information technology (IT) and the importance of consumer heterogeneity for omnichannel commerce across online and offline channels.

Keywords: Omnichannel, online, offline, location distance, mobile promotions