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Essays on Omnichannel Retailing

By

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Thesis Abstract

In the last decade or so, the retail industry has witnessed a huge shift in customer attitudes as technology has started playing a critical role in shaping customer expectations. Ubiquity of internet, advancement in mobile computing, and emergence of social media have resulted in customers demanding enhanced flexibility and control during their purchase journeys. Customers today expect a convenient and seamless purchase experience regardless of when, where, and how they interact with a retailer. They increasingly prefer to have a single conversation – conducted across multiple channels, often simultaneously – with the retailer. Recent advancements in digital technology have made it possible for the retailers to cater to the changing customer expectations.

Omnichannel approach has been extolled to be the answer to all the problems being faced by the retailers in meeting the enhanced customer expectations. Omnichannel retailing has been envisaged to allow the customers increased flexibility to interact with the retailers of their choice – without any restrictions on the timing, geographic distance, or modalities of such interactions. The ability to offer the customers unified, consistent, and personalized experience by abolishing the barriers across channels enables the concerned retailer to realize increased loyalty and higher per-customer revenue. Encouraged by its promises, many retailers have embarked on 'omnichannel' journeys. Unfortunately, the results have not been very encouraging. The number of success stories has been few and far between. Retailers encounter numerous challenges in executing omnichannel strategies. Among those, lack of clarity on what it entails to become omnichannel and sustain there, limited understanding of the underlying economic logic, and inability to ensure convergence of channel operations have been reported to be some of the most likely reasons why omnichannel initiatives fail. The literature related to omnichannel retailing has attracted significant research focus from both academicians and practitioners in the recent past. However, adequate efforts have not gone into investigating what entails setting up a successful omnichannel business model.

In this thesis, we address some of the aspects that hamper omnichannel endeavors and, in the process, we attempt to enrich our understanding regarding successful design, implementation, and management of omnichannel business models. The thesis discusses three such topics that are in the multi-disciplinary area of Retailing, Operations Research, and Information Systems.

We examine the following topics essential for successful execution of omnichannel strategies: (a) capability identification for omnichannel value delivery in today's ever-evolving business environment; (b) economic sustainability assessment of an omnichannel business model; and (c) optimal inventory policy designing for a specific omnichannel service configuration. The topics are 'interconnected' in the sense that one leads to the other, and each of these topics has a critical role to play in determining the outcome of an omnichannel endeavor.

The first essay proposes a framework for omnichannel capability identification and development. The framework takes into consideration the challenges posed by changing customer behaviors induced by the evolving technological landscape. Dynamic elements in the environment tend to reduce the strategic fit of an omnichannel operation. Moreover, changing customer expectations demand introduction of new omnichannel services and/or modification of existing ones. To preserve its competitiveness in the face of unpredictable changes, an omnichannel retailer needs to continuously innovate and reconfigure its resources and skillset. Moreover, omnichannel philosophy mandates that omnichannel retailers do not deviate from maintaining both cost-effectiveness and customer-centricity of channel operations, which are cornerstones of omnichannel value delivery. The ability to dynamically balance exploitation and exploration assumes critical importance in this endeavor. In this framework, we use a dynamic capabilities-based approach to identify the capabilities necessary for omnichannel retailers to sustain competitive advantage despite environmental dynamism and provide guidelines regarding how to develop those.

In the second essay, we investigate the economic sustainability of an omnichannel business model. Omnichannel service delivery requires investments in infrastructure, processes, and capability development to ensure seamless integration of different channel operations. This additional cost burden, in turn, needs to be charged back to the customers. On the other hand, introduction of omnichannel services aims to make the purchase process more convenient for the customers. Thus, sustainability of an omnichannel business model would depend on the trade-off between the additional cost the customers have to pay vis-à-vis the enhanced value they expect to get from the omnichannel services offered. However, the concerned retailer needs to keep in mind that, while the customers differ in the benefits they expect to obtain from the omnichannel services, all of them would face a single retail price. Therefore, the attractiveness of an omnichannel business model also depends on the distribution of perceived value addition among the target customers. In this essay, we identify different factors

influencing this cost vs. benefit trade-off and suggest how the insights derived from this analysis can help omnichannel aspirants design sustainable omnichannel business models.

The third essay discusses 'buy online and pick up in store' (BOPS) as a specific omnichannel service configuration. Here, a customer places an order online but collects the product from the offline store at her convenience. Apart from the BOPS customers, the offline store also serves regular walk-in demands. Stock-outs at the offline store would result in non-fulfillment of both BOPS and walk-in demands, leading to the possibility of losing customers to the competition. On the other hand, overstocking invariably hurts the store's profitability. Determination of an inventory policy to optimally cater to both BOPS and walk-in demands is a complicated exercise. Moreover, different channel ownerships create additional challenges for the store management. In such a franchisee arrangement, BOPS revenue is to be shared between the channels as both the channels collaborate in serving the BOPS customers. However, the offline store may like to prioritize walk-in demands over BOPS ones as serving a customer from the former category is always more profitable than catering to a BOPS customer. This essay uses a queueing-theoretic approach to determine the optimal inventory management policy for a store participating in a BOPS arrangement under both centralized and decentralized ownership scenarios.

The topics discussed in the thesis have endeavored to deal with three different aspects – strategic, economic, and operational – of omnichannel value delivery. We believe that the insights derived from these studies would enrich both literature and practice with a better understanding of some of the aspects associated with omnichannel strategy execution, which have not been adequately addressed in the extant literature. We also expect the insights to collectively help retailers design and pursue successful omnichannel journeys.