

Does Service Quality Perception in Omnichannel Retailing Matter? A Systematic Review and Agenda for Future Research



Shahriar Akter, Muhammad Ismail Hossain, Steven Lu, Sutapa Aditya, Tasnim M. Taufique Hossain, and Uraiporn Kattiyapornpong

Abstract The retailing landscape has been transformed in the past decade with the emergence of web, mobile and social media. Multichannel retailers are focusing on establishing seamless omnichannel service experience. Omnichannel retailing is not only addition of channels, rather integration of service elements, price, promotion, product assortment, information and transactional data within all available channels of a company. Within omnichannel retailing, the concept of brand experience is highly specific as it includes interactive channels such as social media and review sites. To complete even a single purchase, customers nowadays are using multiple channels. Customers are trying out products in a physical store but at the same time ordering it online using smartphones after comparing price and checking reviews. Remember the customer who did not complete her purchase in store? She may have ordered similar product using other channels offered by competitors. To create a successful omnichannel strategy, companies need to integrate all the channels and customer touchpoints to provide a consistent experience. Whereas multi-channel has focused on enhancing customer value incorporating digital tools, omnichannel has introduced a wider perspective in influencing consumer decision making. With the emergence of omnichannel and related complexities, this study calls for a broader conceptualization of virtual, physical and integration quality. The study also puts forward challenges and future research directions for quality modelling in omnichannel research.

S. Akter (✉) · T. M. T. Hossain · U. Kattiyapornpong
University of Wollongong, Wollongong, NSW, Australia
e-mail: sakter@uow.edu.au

M. I. Hossain
University of Dhaka, Dhaka, Bangladesh

S. Lu
University of Sydney, Camperdown, NSW, Australia

S. Aditya
Long Island University, New York, NY, USA

1 Introduction

Technology has not only changed retailing in the last two decades, but also created new channels of doing business. Specifically, in services marketing where economic activities are performed by one party to another (Wirtz and Lovelock 2016), the online channel has played a critical role in creating, offering and capturing value; for example, [Booking.com](#) in travel, Netflix in movie, and Amazon in the publication industries. To tackle the emerging challenges emanating from the digital disruption, many traditional retailers have embraced multi-channel strategies (Verhoef et al. 2015). However, both the traditional brick and mortar players and the new online players face constant challenges on how to deliver seamless quality experiences within and across multiple channels. The advent of mobile platforms (e.g., smartphone and tablet), social media (e.g., Facebook, Twitter or Instagram), and the integration of these channels in the retail mix has created a new phase in multi-channel retailing (Verhoef et al. 2015). This new channel mix basically indicates the emergence of an omnichannel retailing model (Rigby 2011) or seamless omnichannel experience by turning the world into a showroom without a wall (Brynjolfsson et al. 2013). As multi-channel is based on separate channels with no overlap, omnichannel aims to provide seamless experiences across all integrated channels including store, web, mobile, social media and direct marketing (Verhoef et al. 2015). Although omnichannel creates new opportunities, it also represents complexities in maintaining seamless service quality, which indicates excellence or superiority of the overall service delivery performance (Cao and Li 2015; Leeftang et al. 2014; Sousa and Voss 2006). There are growing concerns about the perceived quality of these channels due to a lack of reliability of the system, knowledge and competence of providers, privacy and security of information, and their effects on outcome constructs (Sousa and Voss 2006). A review of the literature reveals that this research stream has predominantly focused on the impact of the addition or deletion of channels on firm performance (Cao and Li 2015; Cheng et al. 2007; Homburg et al. 2014; Konuş et al. 2008; Xia and Zhang 2010), with little empirical evidence about the impact of perceived quality within and across omnichannels and their effects on service outcomes. Thus, this study fills these voids by aiming to conceptualize an omnichannel service quality model using a systematic review. As such, the current study seeks to answer the question.

RQ What are the dimensions of omnichannel service quality?

To answer this research question, we focus on perceived service quality to evaluate the effectiveness of omnichannel services marketing for two reasons: first, the extant literature identifies quality as a critical construct to measure service performance (Sousa and Voss 2006) and second, service quality is a significant predictor of various outcome constructs, such as satisfaction and customer lifetime value (Brady and Cronin 2001; Brady and Robertson 2001; Cronin et al. 2000; Dagger and Sweeney 2006; Dagger et al. 2007; Parasuraman and Grewal 2000; Parasuraman et al. 1988, 2005).

This research makes several contributions to omnichannel research by addressing the abovementioned research question. First, it offers a comprehensive theoretical framework of quality dimensions in omnichannel. Second, it extends knowledge on the ‘quality’ implications of omnichannel integration. The structure of this paper is as follows: first, we present the literature review by defining omnichannel retailing and illuminating the importance of quality in omnichannel retailing. Second, we discuss our research approach and findings in terms of in-store, digital and integration quality. Finally, we present challenges, opportunities and future research directions for omnichannel retailing.

2 Literature Review

2.1 Defining Omnichannel Retailing

The multichannel setting of the present world has dramatically changed the service industry and exposed us to a new set of complexities (e.g. in distribution, communication), which mandates a renewed conceptualization of services and service quality (Ackermann and von Wangenheim 2014; Sousa and Voss 2006; Van Bruggen et al. 2010). This calls for acknowledging customer experience to be formed across all moments of truth and/or contact with the firm through multiple channels (Neslin et al. 2006). Sousa and Voss (2006, p. 358) therefore define multichannel service as “*a service composed of components (physical and/or virtual) that are delivered through two or more channels*”. This conceptualization of service and its quality is an extension of traditional service quality research that has been anchored on a single-channel mind set considering primarily the characteristics of either physical or virtual facilities associated with the service. The multichannel service can be contemplated as a point of departure from these single-channel mind-sets to conceiving service experience as a multi-interface system (Patrício et al. 2008) that has three components of quality: virtual (e.g. website, the Internet and smart phone apps), physical (e.g. people-delivered, including logistics), and integration quality (seamless service experience across channels) (Sousa and Voss 2006). Prior research finds that customers’ experience in the virtual retail setting affects their behaviours and expectations in the physical retail setting (Burke 2002). In addition, in a multichannel service setting, the levels of virtual and physical service provided by service providers independently may be good, however, the overall perceived service and the consequent satisfaction may be low due to poor integration between different channels and their attributes (Hammerschmidt et al. 2016; Sousa and Voss 2006). Thus, the integration (i.e. consistency across service interactions, integration quality, integration of different channels and attributes) has been suggested as one of the keys to facilitate purchase and to provide uninterrupted service experience across the channels (see Banerjee 2014; Falk et al. 2007; Ganesh 2004; Johnston and Clark 2001; Montoya-Weiss et al. 2003; Patrício et al. 2008; Sousa and Voss 2006). Meanwhile the recent evidence suggests that the integration

itself is not enough to offer a seamless customer experience due to a customer's need to have comparable/alienable channel features across every moments of truth in a typical service encounter (Hammerschmidt et al. 2016). This leads to the notion of omnichannel strategy.

In addition, a special issue on the role of technology in retailing by Piotrowicz and Cuthbertson (2014) has articulated factors impacting the current retailing landscape. The authors highlight the need for channel integration due to the growing role of social media, the changing role of physical brick and mortar stores, the impact of mobile technologies, the need to respond to diverse customer requirements, supply chain redesign, and the balance between personalization and privacy as key issues shaping today's retailing environment. Furthermore, the scope of multichannel marketing which is limited to offline, online and direct marketing (Verhoef et al. 2007, 2015) is not able to address the current trend in retailing. Hence, the retailing industry requires a new emerging theme, omnichannel marketing, in order to address the current revolution of technology in retailing (Piotrowicz and Cuthbertson 2014; Verhoef et al. 2015).

Additionally, the term "*Omni*" is a Latin word meaning "*all*" or "*universal*" which business practitioners introduce and define 'omnichannel' as an evolution of the multichannel where channels are used simultaneously rather than in parallel (Lazaris and Vrechopoulos 2014). In academia, Rigby (2011, p. 4) first coined the term 'omnichannel' by defining it as "*an integrated sales experience that melds the advantages of physical stores with the information-rich experience of online shopping*". This definition is later extended by incorporating the simultaneous use of channels as well as the experience that derives from their integrated combination. Moreover, Levy et al. (2013) introduce the term "*omniretailing*" where multichannel offering is considered to be coordinated with the aim to provide a seamless service/shopping experience using all of retailers' shopping channels. Besides, these omnichannel definitions have one thing in common; service/shopping experience must be integrated/seamless while using all channels. Although the traditional multichannel and e-commerce literature discusses about such integration and seamless experience across the channels, the firms' independent development and management of these channels in order to offer seamless experience across channels are still limited (Verhoef 2012).

The service and retail landscape in general is profoundly changing due to the proliferation of mobile channel, tablets, social media and the integration of these new channels in both online and offline settings which suggest a movement from multichannel to omnichannel (Rigby 2011; Verhoef et al. 2015). Brynjolfsson et al. (2013) thus rightly say that the distinction between physical and online settings is disappearing; it is instead transforming the world into a showroom without a wall. The change from multichannel phase facilitates the emergence of omnichannel that essentially involves more channels which eventually is affecting the competitive strategies of retailers, service providers and the supply-chain partners (Brynjolfsson et al. 2013; Verhoef et al. 2015). Unlike multichannel the traditional division between one-way and two-way communication channels appears less apparent in omnichannel due to the inclusion of customer touchpoints, for example, one-way or

two-way interaction between customers and firms and even between Customer to Customer (Baxendale et al. 2015). In omnichannel context, media that once considered as parts of a broader channel are increasingly presumed to be separate channels facilitating one- or two-way communication or interaction. For example, search, display, email, affiliates and referral websites appear as separate channels within the online media as well as a branded app within the context of mobile medium (Li and Kannan 2014). While undertaking and/or undergoing a service or shopping experience, customers frequently switch across the different channels and devices (e.g. desktop, laptop, mobile). Therefore different channels and touchpoints that used continuously, interchangeably, and simultaneously by customers and firms/providers are needed to be taken into account by the firms/providers to provide a seamless service/shopping experience. In omnichannel environment, the interplay as well as the integration between customer-brand-channel-providers bear significant importance than the standalone consideration of multiple channels of multi-channel world (Verhoef et al. 2015).

The differences as laid down in the preceding paragraphs between omni- and multi-channel management lead Verhoef et al. (2015, p. 176) to define omnichannel management as *“the synergetic management of the numerous available channels and customer touchpoints, in such a way that the customer experience across channels and the performance over channels is optimized”*. Meanwhile as suggested by Neslin et al. (2006), this definition is generally applied in retail/brand rather than in customer management. Therefore, in order to have a holistic perspective regarding omnichannel and omnichannel management, we need to bypass the distinctions between different channels and consider them under a single umbrella. It consists of the conceptualization, planning, operation/implementation and monitoring of all different channels as components of a seamless, integrated single platform that will perform the task of creating, developing and maintaining awareness, interest, desire, conviction, action and post-action for a brand, product, and company. Marketers need to consider the shopping/service experience in omnichannel as an entire process where every customer touchpoint contributes towards the overall service/shopping process and/or experience. They should have the view of co-producer of services or co-shoppers in helping customers along the entire touchpoints across those media. Bagging these thoughts, the omnichannel can be defined as an integrated single system characterized by systematic interdependencies and a series of simultaneous and/or sequential value adding functions/services/touchpoints across channels serving both ends of the value chain- the customer and the marketer.

3 The Importance of Quality in Omnichannel Retailing

Now that we have defined omnichannel, it is important to establish the importance of quality for success in omnichannel setting. There are various definitions of quality (Crosby 2006). It differs for products and services, for different industries and for different levels of dimensionality (Wicks and Roethlein 2009). According to Kara

et al. (2005), quality does not have a universally accepted definition. However, commonly accepted definition of quality can be stated as “*the degree to which a set of inherent characteristics fulfils requirements*” (International Organization for Standardization (ISO) 2005). Garvin (1988) segments quality into five categories: (1) Transcendent definitions-these definitions are subjective to individuals and related to emotional perceptions such as beauty and love, hence, are not measurable or follow a logical pattern; (2) Product-based definitions-quality is measured according to objective attributes of products such as reliability, durability; (3) User-based definitions-quality is measured according to the satisfaction level of individual users; (4) Manufacturing-based definitions-quality is seen as meeting production standards such as “zero defects”; and (5) Value-based definitions-quality is defined according to the benefit customers perceive compared to the cost they incur.

In regards to the usage of multiple channels, “Integration Quality” is important for organizations. One of the key premises of multichannel experience is the commitment to customers for channel choice and convenience. However, the breadth of channel choice is no longer a differentiator for companies in today’s world, it rather has become a norm (Banerjee 2014). What rather differentiates companies from their competition is the integration quality of resources, infrastructures and processes to deliver highest customer value through these multichannel experiences. Integration quality relates to the level of seamlessness in customer experience a company can deliver within and across multiple channels (Sousa and Voss 2006). A company needs to achieve the highest level of cooperation between functional areas, processes and capabilities to deliver a seamless experience to their customers (Banerjee 2014). When customers interact with a company via any platforms in a multichannel setting, they evaluate the experience through the same set of quality standards they use for a traditional in-person interaction experience at a physical store. For instance, a retailer may have excellent customer service delivered in their physical stores, however, when customers shop from the same retailer through web or mobile platforms, the shopping or post purchase experience may not match with the level of quality delivered at physical stores. Such disconnection fails to deliver a seamless experience with the brand for the customers leading to lower perception of service quality and therefore, lower level of loyalty towards the brand.

Therefore, it is important to acknowledge that multichannel experience bring its own advantages and disadvantages. The multiple added touchpoints open up opportunities for companies to interact with customers via multiple channels of communication. When managed effectively and efficiently, this can possibly lead to stronger and deeper level of commitment between the company and its valued customers, and possibly develop more loyal relationship with the company. The comfort, convenience and habitual practices that customers develop through multichannel experiences increase the switching cost for them and lead to longer term relationship with the brand. However, on the down side, when not managed optimally, multiple touchpoints can open up possibilities for customers to perceive service failure and develop negative attitude and opinion about the company’s service quality.

In addition to offering a wide breadth of channel choice, it is important for marketers to help customers manage their service expectations from each touchpoint in order to avoid dissatisfaction and disappointment. Marketers and managers need to understand the appropriateness and benefit of each channel as well as the different service attributes of each channel to manage customer expectations related to each channel experience accordingly (Banerjee 2014). Although all channels may not be capable of performing all activities, it is important for marketers to match channel capabilities with the tasks that are appropriate for each channel (Banerjee 2014). Implementation of the technology and infrastructure alone will not be sufficient in creating the seamless experience that is demanded from every company in today's world. Companies have to be transparent and specific about how each channel contributes to the delivery of optimal customer value.

4 Research Approach

The study followed a systematic literature review to synthesize the current knowledge on the definitional aspects and quality dimensions of omnichannel retailing in services marketing context. A systematic approach was applied throughout the review following the guidelines of Ngai and Wat (2002), Vaithianathan (2010) and Benedettini and Neely (2012). The protocol adopted by the review embraced a scientific and transparent process to establish its due rigor.

The review process aimed to answer the research question: *what are the dimensions of omnichannel service quality?* This question paved the path for proper identification of the subject areas, relevant studies, sources of materials, and the inclusion and exclusion criteria. The findings of the review also aimed to present pragmatic solutions to the research question by tapping into the omnichannel contexts with the support of empirical evidence. As such, the core components of omnichannel retailing (e.g., bricks and mortar, web, mobile and social media) were studied in relation to service outcomes. We have conducted a search from 2006–2016 (February) that was considered to be representative since the research on omnichannel is emerging. We set the lower boundary at 2006 because the seminal papers on “multi-channel retailing” were first published by Sousa and Voss (2006) and Neslin et al. (2006). In addition, the review protocol has identified these two papers as the triggers for subsequent multi-channel/omnichannel retailing research.

In order to identify the relevant publications, the study formed search strings that combined the keywords ‘multi-channel retailing’ with a different range of terms and phrases. Using wildcard symbols (*), the study reduced the number of search strings, for example, ‘multi-channel retailing’ could return hits for ‘cross-channel retailing’ and ‘omni-channel retailing’. The study initially focused on marketing, retailing and services research fields as the source of relevant papers. A rigorous database search was conducted by combining the keywords ‘multi-channel retailing’ with the terms ‘omni-channel retailing’, ‘digital services marketing’ and ‘interactive services marketing’. The study also constructed further search strings focusing on quality

dimensions in multi-channel retailing such as, ‘in-store quality’ with the terms ‘retailers’, ‘e-retailers’. An initial search was carried out for the two major keywords ‘multi-channel retailing’ and ‘quality’. This search was supplemented by searches that focused on two specific areas where ‘quality’ was grounded, for example: (a) ‘web quality’, ‘mobile quality’, and ‘social media quality’, and (b) ‘satisfaction value’, ‘loyalty’. The study also constructed analogous search strings on the area keywords ‘omnichannel’ OR ‘quality’. Finally, the study used the search terms ‘omnichannel’ and ‘quality’ in combination with ‘review’. The study came up with a total of 25 search strings to a panel of experts ($n = 5$) from marketing, retailing and services studies to validate the review protocol.

The search commenced on January 15, 2016 and ended on February 29, 2016. We reviewed scholarly peer reviewed journals, periodicals, and quality web content by exploring five databases: Scopus (Elsevier); Web of Knowledge (Thomson ISI); ABI/Inform Complete (ProQuest); Business Source Complete (EBSCO Host); and Emerald, IEEE Xplore and ScienceDirect (Taylor & Francis). The searches provided a total of 30,616 hits. We first analysed each citation by searching for the keyword ‘multi-channel’ or ‘omnichannel quality’ within titles and abstracts. We ensured the adequacy of screening criterion to confirm the relevance of the study to the research objective. To address any ambiguity, we downloaded the full papers and checked each paper’s relevance in the context of omnichannel quality. Consequently, a total of 75 papers were downloaded and reviewed. As we aimed to gather the maximum number of papers in omnichannel quality, a screening criterion (i.e., what are the dimensions of omnichannel service quality?) was established aligning the target papers’ contributions to the research questions (Birnik and Bowman 2007). Following this process 10 papers were identified. The study also found five more papers applying cross-referencing technique on seminal papers, yielding the final list of 15 papers in the context of omnichannel service quality.

5 Findings

Following the guidelines of thematic analysis of the literature review by Ezzy (2002) and Braun and Clarke (2006), the paper presented the following three themes of omnichannel quality dimension in services marketing. Firstly, we discuss in-store service quality dimensions. Secondly, we present digital (e.g., web, mobile or social media) service quality dimensions. Finally, we synthesize integration quality dimensions in the context of omnichannel service quality.

5.1 *In-Store Quality Dimensions*

Traditionally, generic models (Parasuraman et al. 1985; Rust and Oliver 1994) have played a predominant role in service quality literature and have been applied in

different disciplines, such as, services marketing, information systems and health care. In fact, marketing literature has played a crucial role in establishing the foundation for traditional service quality theory (Brady and Cronin 2001). The following section discusses the study findings of key service quality theories in measuring in-store quality.

Firstly, the findings focus on the Nordic model which was introduced by Grönroos (1984). This model suggests that perceptions of service quality should be measured under two dimensions: functional quality (how) and technical quality (what). Although this is one of the foundational theories and famous for its seminal conceptualization among researchers, it has been seriously criticized for its limited dimensions (Oliver et al. 1997; Rust et al. 1994).

Secondly, the findings focus on the SERVQUAL model (Parasuraman et al. 1985). This model is quite dominant in services literature and applied widely in various industries such as, health care, public recreation centres, and banking which sometimes indicate that scholars around the world use SERVQUAL as a basis for their own industries (Parasuraman 1990). It may be noted that the initial exploratory research came up with 10 dimensions (*tangibles, reliability, responsiveness, communication, credibility, security, competence, courtesy, understanding and access*) for assessing any service by customers. Due to the overlapping nature of the initial dimensions, this model was later modified into five dimensions (*reliability, responsiveness, assurance, empathy and tangibles*) and named as the SERVQUAL model.

Thirdly, according to Rust and Oliver (1994), overall perception of service quality is influenced by three factors: customer-employee interaction (functional quality), service benefit (technical quality) and service environment. The model highlights the support for Grönroos (1984) model and service environment to measure service quality and solidify the positioning of this three-component model. Although the model was not tested empirically, similar models were applied in retail banking and health care settings (Dagger et al. 2007).

Finally, the findings focus on multilevel and multidimensional model introduced by Brady and Cronin (2001) which consists of three primary dimensions (*interaction quality, outcome quality and physical environment quality*) and nine sub-dimensions (*attitude, behaviour, expertise, ambient conditions, design, social factors, waiting time, tangibles and valence*) based on users' perceptions to capture overall service quality. This study successfully synthesized the previous works of Grönroos (1984) and Rust and Oliver (1994) and proposed a hierarchical service quality model.

Although the extant literature has evidenced multiple dimensions of in-store service quality, for example, two (e.g., Grönroos 1984), three (e.g., Brady and Cronin 2001; Rust and Oliver 1994), five (e.g., Parasuraman et al. 1988) and ten dimensions (Parasuraman et al. 1985), there is no standard agreement on the nature or content of dimensions in defining service quality (Brady and Cronin 2001; Dagger et al. 2007). Therefore, it is generally agreed that in-store service quality should be defined from the users' viewpoint and its conceptualization should result in multilevel, multidimensional constructs.

Most service quality literature has conceptualized quality dimensions of offline and online channels in an incoherent manner. However, indication of quality

dimensions from an integrated perspective can be observed in some articles. Table 1 provides a snapshot of key literature in multichannel and omnichannel marketing and a brief overview of the quality dimensions addressed by each article.

5.2 Digital Quality Dimensions

In order to recognize the critical role of service quality in digital contexts, many researchers have initially adopted SERVQUAL to measure service performance, but they face enormous challenges because of the reliability and validity of the generic SERVQUAL measures and lack of Information Technology (IT) artifact in the Information Systems (IS) context (Jiang et al. 2000; Kettinger and Lee 1994; Orlikowski and Iacono 2001). Critics in IS, for example, Van Dyke et al. (1997) highlight that the confusion of SERVQUAL's expectation component and its difference score measurement approach make the model perform poorly in establishing discriminant validity for those five dimensions. Although such studies are important in explaining IT usage, they are relatively weak in capturing human–technology interactions and provide limited guidance for system designers (Nelson et al. 2005). Orlikowski and Iacono (2001) have highlighted that such IT research, which employs a “proxy view” of technology, has lost its connection to the field's core subject matter—the IT artifact itself. Besides, some researchers found that when applying the SERVQUAL model to e-services' collapse, most dimensions lose their reliability and validity (Gefen 2002). Overall, the extant literature on the SERVQUAL model in IS does not focus on *human–technology interaction (system quality)*, *interpersonal interaction* and *outcome (or information) benefits* separately to measure overall IS service quality.

Service quality theories in a web-based electronic service strongly influence mobile service because in both cases, services are delivered over an electronic platform. Several powerful models have been developed to address the issues of service quality over this platform, such as SITEQUAL (Yoo and Donthu 2001), eQUAL (Barnes and Vidgen 2002), web quality (Aladwani and Palvia 2002), E-S-QUAL (Parasuraman et al. 2005). In order to overcome the pitfalls of the earlier models, Parasuraman et al. (2005) develop the E-S-QUAL or electronic service quality model to measure service quality of web-based electronic services. The uniqueness of the E-S-QUAL model lies in its capacity to capture perceptions on human–technology interaction for any web-based e-service platform (Sousa and Voss 2006). Similarly, (Fassnacht and Koesel 2006) introduce quite a broad model by focusing on online electronic networks. They proposed to measure service quality through *environment quality*, *delivery quality* and *information quality*. However, this model does not address the unique characteristics of the mobile platform (e.g., network quality, interaction quality) and it is again restricted to measuring service quality of all web-related services.

Although service quality failures are frequently related to back office operations (i.e., information systems), most web-based electronic service quality studies are

Table 1 Quality dynamics in omnichannel

Studies	Theory and context	Quality dimensions		
		In-store quality	Digital quality	Integration quality
The Impact of Cross-channel Integration on Retailers' Sales Growth (Cao and Li 2015)	The paper proposed a conceptual framework to illustrate the firm-level conditions of cross-channel integration that impacts firms' sales growth.	Cross channel integration stimulates sales growth but firms with a stronger focus on a specific channel (i.e., online, or physical store as measured by physical store presence) benefit less from cross-channel integration.	N/A	Five mechanisms by which cross-channel integration affects firm sales growth have been proposed i.e. (1) improved trust, (2) increased customer loyalty, (3) higher customer conversion rates, (4) greater opportunities to cross-sell, and (5) the loss of special channel features
Integrating Bricks with Clicks: Retailer-Level and Channel-Level Outcomes of Online–Offline Channel Integration (Herhausen et al. 2015)	Utilizing technology adoption research and diffusion theory, this paper conceptualized a theoretical model to examine the impact of online–offline channel integration (OI).	OI does not negatively affect the physical store.	OI directly increases perceived service quality of the Internet store. Perceived service quality of the Internet store increases overall and Internet outcomes.	OI indirectly increases overall and Internet outcomes via perceived service quality of the Internet store. OI is moderated by customers' Internet shopping experience.
Building with Bricks and Mortar: The Revenue Impact of Opening Physical Stores in a Multichannel Environment (Pauwels and Neslin 2015)	A multichannel customer management framework has been proposed which is used to identify revenue and cannibalization impact of adding a physical channel for a retailer with existing Internet and catalogue channel.	Study concluded that adding a physical channel would cannibalize catalogue sales but not Internet sales. Total number of returns and exchanges increased and was diverted towards store. Overall value of exchange increased; creating a positive net		N/A

(continued)

Table 1 (continued)

Studies	Theory and context	Quality dimensions		
		In-store quality	Digital quality	Integration quality
		<p>impact on adding physical stores.</p> <p>Little impact on customer acquisition was observed.</p> <p>Overall, the study established that adding channels is definitely a way to grow revenue.</p>		
<p>Leveraging Distribution to Maximize Firm Performance in Emerging Markets (Kumar et al. 2015)</p>	<p>An econometric model encompassing own-marketing mix, competitive actions, brand-level heterogeneity, and dependencies has been proposed for firms developing a multichannel distribution strategy in emerging markets.</p>	<p>Firms must match store formats to the right customer segments to leverage brand.</p> <p>Study found that each distribution format affects sales differently and sales vary according to product form.</p> <p>Further, depending on the product form, price and advertising elasticities could vary even though the brand is essentially the same.</p>	N/A	N/A
<p>From Multi-Channel Retailing to Omnichannel Retailing: Introduction to the Special Issue on Multi-Channel Retailing (Verhoef et al. 2015)</p>	<p>This paper conceptually developed the omnichannel retailing notion and has discussed existing research in this multi-channel</p>	N/A	N/A	<p>Multi-channel retailing is shifting towards Omnichannel retailing.</p> <p>The contributions of the paper can be classified along two dimension:</p>

(continued)

Table 1 (continued)

Studies	Theory and context	Quality dimensions		
		In-store quality	Digital quality	Integration quality
	retailing. Whereas the multi-channel world mainly considers retail channels, the Omnichannel environment is putting more emphasis on the interplay between channels and brands.			(1) Multi-channel versus omnichannel focus and (2) The three research streams i.e. (a) Impact of channels on performance (b) Shopper behaviour across channels and (c) Retail mix across channels
Managing Marketing Channel Multiplicity (Van Bruggen et al. 2010)	The authors proposed a notion “channel multiplicity” which is characterized by the customer’s reliance on multiple sources of information and increasing demand for a seamless experience throughout the buying process.	N/A	Following Channel Multiplicity, issues have been proposed in the literature: (a) View of products and marketing channels (b) Channel leadership (c) Channel structure (d) Distribution intensity	N/A
Channels in the Mirror: An Alignable Model for Assessing Customer Satisfaction in Concurrent Channel Systems (Hammerschmidt et al. 2016)	The research paper utilized the structural alignment framework to conceptualize customer satisfaction in their concurrent channel system	The 5C Model-Choice (assortment breadth and depth), Charge (availability of fair prices), Convenience (efficiency of the purchase process), Confidence (security of transactions), and Care (assurance of promised quality)	N/A	N/A

(continued)

Table 1 (continued)

Studies	Theory and context	Quality dimensions		
		In-store quality	Digital quality	Integration quality
		have been proposed.		
Understanding consumers' multichannel choices across the different stages of the buying process (Gensler et al. 2012)	Developed a model that explains consumers' channel choices in the different stages of the buying process in a retail banking setting.	Accounted for channel experience and spill-over effects and its impact on consumers' channel choices over and above channel attributes. This article provides a more integrative approach toward channel choice.	N/A	N/A
The value proposition in multichannel retailing (Helbling et al. 2011)	A report on consumers' inclination towards lower price in comparison to shoppers perceive value online and in stores.	Report concludes that price is not the only important factor while buying products, degree of trust on the retailer, its product assortment, and their previous buying experiences influences purchase significantly.	N/A	N/A
Multichannel Shopping: Causes and Consequences (Venkatesan et al. 2007)	Through a longitudinal analysis this paper explores the drivers of multichannel shopping for customer profitability.	Proposed a model of several interaction characteristics i.e. Channel-Related attributes, Purchase-Related attributes, Frequency-Related attributes and Customer Heterogeneity and their impact on Channel Adoption	N/A	N/A

(continued)

Table 1 (continued)

Studies	Theory and context	Quality dimensions		
		In-store quality	Digital quality	Integration quality
		Duration. Concluded that multichannel results in higher customer profitability, improved customer retention and customer growth.		
Service Quality in Multichannel Services Employing Virtual Channels (Sousa and Voss 2006)	This article developed a framework for conceptualizing multichannel service quality and has distinguished between virtual, physical, and integration quality.	Proposed Domain of the Physical Quality Construct: 1. Interpersonal service 1.1 Routine 1.2 Exception (customer support) 2. Logistics fulfilment	Proposed Domain of the Virtual Quality Construct: 1. Virtual fulfilment 2. Efficiency 2.1 Ease of use 2.2 Speed (response time) 3. System availability 4. Privacy	Proposed Domain of the Integration Quality Construct: Channel-service configuration 1.1 Breadth of channel choice 1.2 Transparency of channel-service configuration Integrated interactions 2.1 Content consistency 2.2 Process consistency
Misalignment and Its Influence on Integration Quality in Multichannel Services (Banerjee 2014)	Using a qualitative, multi-method, multisite, case research this study identified different factors affecting integration quality and how it impacts multichannel management.	N/A	N/A	Proposed the following dimensions of Integration Quality: Channel-service configuration Breadth of Channel Choice Transparency of channel-service configuration Appropriateness of channel-service configuration Integrated interactions

(continued)

Table 1 (continued)

Studies	Theory and context	Quality dimensions		
		In-store quality	Digital quality	Integration quality
				Content Consistency Transaction data and interaction data integration Process consistency Within channel and across channel integration

primarily based on front office (i.e., quality of interaction between the end-user and the virtual platform). Since overall customer satisfaction is strongly influenced by service quality at all moments of contact, few studies (e.g., Sousa and Voss 2006) integrate both front office and back office operations in evaluating service quality. In this case, Sousa and Voss (2006) proposed a powerful service quality model focusing on system quality, interpersonal quality and interaction quality to measure any service which contains both electronic (e.g., mobile channel) and physical components (service provided by persons). Therefore, they proposed the dimensions of the E-S-QUAL model (Parasuraman et al. 2005) to measure system quality and the SERVQUAL model (Parasuraman et al. 1985, 1988) to measure interpersonal interaction quality for any service over an electronic platform. However, Sousa and Voss (2006's) conceptual model was not empirically tested and, again, it was proposed as a generic model for all electronic services ignoring the contextual influence of service quality settings. In the case of mobile services, Chae et al. (2002) develop a quality model focusing on the characteristics of a generic mobile platform. They identified four primary quality dimensions and these were *connection quality*, *content quality*, *interaction quality* and *contextual quality*.

In addition to web and mobile, Social Media (SM) or Social Networking Sites (SNS) are affecting the lives of individuals across the globe in numerous ways which include but not limited to the way people communicate, socialize, learn, entertain themselves, or even the way they conduct their information search, make decisions and do their shopping (Constantinides and Fountain 2008; Mangold and Faulds 2009; Vollmer and Precourt 2008). These changes forced almost all marketers (e.g. B2B, B2C) to adopt social media as a central element while marketing their products and services. For example, in a recent survey 88.2% of B2C and 93% of B2B firms indicated that they have started social media initiatives and almost half of them fully integrates social media into their business strategies (Holden-Bache 2011; Insites 2011). Kim and Nitecki (2014)'s research on measuring the quality of social media services by adopting and modifying E-S-QUAL approach suggests four dimensions; namely, efficiency, system availability, privacy and fulfilment and two endogenous constructs; namely, perceived value and loyalty intentions. While

defining the dimensions of online social value by utilizing Social Exchange Theory, Hu et al. (2015) suggests that utilitarian benefits (such as relational and informational), hedonic benefits (such as enjoyment and curiosity fulfilment), information risk and effort work as inputs in the assessment of online social value.

5.3 Integration Quality Dimensions

Organizations are increasingly linked to the proliferation of e-services, which are embedded in omnichannel environment, combining the web with physical facilities i.e. phone and other channels of service delivery. Evidence from different literature argue that companies which integrate their physical presence with internet based channels are more successful compared to companies operating in a single channel environment (Gulati and Garino 1999; Michael 2001; Vishwanath and Mulvin 2001). A seamless customer experience within and across physical and virtual channels reflects the integration quality of multichannel services.

Sousa and Voss (2006) develop a conceptual framework for multichannel service quality. They have illustrated the distinguishing factors of three service quality components; namely, virtual, physical and integration quality. Sousa and Voss (2006) argue that even though an organization offering good level of virtual and physical quality, they may lack in terms of the overall perception of multichannel service offering. Hence, they have proposed “Integration Quality”, a third component of quality in multichannel services. Sousa and Voss (2006, p. 359) define integration quality as “*the quality of the overall service experienced by a customer, encompassing all the existing physical and virtual components*”. The types of channels range from in-store (e.g., hotel reception desks, and retail stores), to digital (e.g., phone-based customer contact centres and airline self-check-in kiosks), and to virtual channels (e.g., the Internet and smart phone apps).

The first dimensions of integration quality proposed by Sousa and Voss (2006) is “*Channel-Service Configuration*”. This refers to the quality of service combination of the existing channels. The first sub-dimension of channel service configuration is *breadth of channel choice* that refers to the degree to which customers can chose and accomplish specific tasks through alternative channels. The second sub-dimension proposed by Sousa and Voss (2006) is *transparency of the existing channel-service configuration* which refers to the degree to which customers are aware of the existence of all available channels and of differences between service features across different channels.

The second dimension of integration quality proposed by Sousa and Voss (2006) is “*Integrated Interactions*” which refers to the consistency of service provided through all the channels. Integrated interactions quality dimension has two components. The first component is *content consistency* referring to the consistency of both outgoing and incoming information between the service provider and the customer. The second component is *process consistency* referring to the consistency between

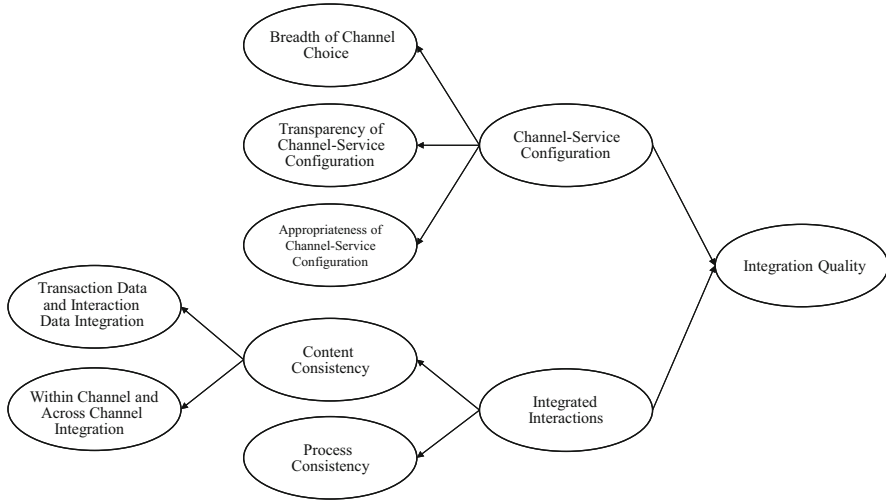


Fig. 1 Conceptual framework of quality dimensions in omnichannel (Adapted from: Banerjee 2014; Sousa and Voss 2006)

the relevant and comparable process aspects of the front offices linked with the different channels.

Extending the work of Sousa and Voss (2006), Banerjee (2014) reports several dimensions of integration quality using a qualitative, multimethod case research within a banking context. The study explores the misalignment between the organizational perception and the design of a multichannel system and customer expectations of a multichannel service experience in banking. The dimensions of integration quality proposed by Banerjee (2014) include *channel service configuration quality* (e.g., breadth of channel choice, transparency of channel-service configuration, appropriateness of channel-service configuration) and *integrated interaction quality* (e.g., content consistency, transaction data and interaction data integration, process consistency, within channel and across channel integration). Figure 1 illustrates a conceptual framework of integration quality dimensions proposed by Sousa and Voss (2006) and Banerjee (2014).

6 Future Research, Challenges and Opportunities

Omnichannel retailing is a step forward from multi-channel retailing as it aims to integrate all the relevant channels seamlessly aiming to provide a satisfying overall shopping experience (Verhoef et al. 2015) to multi-channel shoppers. It takes into account the customers' entire shopping process including: information search, purchase and post-purchase behaviour. Hypothetical examples are given to show how omnichannel can better serve customers during the purchasing process (Rigby

2011). Among different issues related to omnichannel retailing, integration quality is a major one. In this paper, we have developed a comprehensive conceptual framework of quality dimensions in omnichannel and demonstrated how they impact service outcomes. However, there are still issues and difficulties remaining for properly defining and measuring omnichannel service quality. We further include a general discussion of these challenges, which we believe are important for the future research agenda.

There are several challenges of having a comprehensive definition of service quality in an omnichannel setting. First, the cross-channel synergies of different channels within which customers purchase a product are important in the omnichannel environment (Montoya-Weiss et al. 2003). However, the synergy of the complementary platforms in the omnichannel setting and its dimensions are still not fully investigated. For example, customers may use an online channel mainly for information and go to a physical channel to make a purchase. One may check the quality of online information and ease of purchase in the store while measuring service quality. However, customers, who have obtained most of the information online, may still use the complementary information in the store to make a final purchase decision. Thus, there is a synergy between online and offline information, which requires more in-depth analysis in terms of conceptualizing the dimensions and finding out behavioural outcome related to synergy. Second, service quality in omnichannel environment is difficult to measure as it is not as straight forward as measuring physical or virtual channels, instead it involves the factors related to customer perception towards integration of physical and virtual channels. Research in omnichannel is still in its early stage. Firms are forming and implementing their omnichannel strategy. As a result, the structure of a firm's omnichannel is changing to achieve the best outcome. At the same time, the definition of service quality in an omnichannel setting is very dependent on the specific components of the channel, making it difficult to come up with a complete definition of service quality in the omnichannel in advance. Finally, technology is changing very fast in this era, making the definition of service quality even more difficult. For example, new technology is being developed to allow customers to have completely virtual online shopping experiences and even have virtual fitting room (Kim et al. 2017). This can dramatically influence how customers evaluate the quality of the service provided by a firm. Generally speaking, three channels have been considered in omnichannel retailing: online, offline and catalogues (Verhoef et al. 2015). However, within each channel, there are different platforms that function differently and appeal to different types of customers at different times. For example, within the context of online channel, customers who make online purchases through a computer and a mobile phone app may have different preferences, experience and expectation. The criteria that those customers use to judge service quality can vary as well. Therefore, it is important to consider these factors when firms measure service quality.

With the development of Web 2.0 technology, social media (e.g., Facebook, Twitter, and Instagram) have gained in popularity. Many firms adopt social media as their information distribution channel. Although social media allow firms to interact with the users, social media are also used as an information distribution (marketing)

channel. Firms need to respond to their customers' inquiries promptly and efficiently, and customers also generate lots of information online—referred to as user generated content (Goh et al. 2013), which firms do not have direct control over. As more and more customers go to social media to seek information and share their thoughts and experience, social media gains higher importance in service quality perception. Therefore, a firm's social media presence and performance should be considered while measuring its service quality in omnichannel environment.

7 Conclusion

Integration quality plays a vital role in omnichannel retailing. Research related to omnichannel retailing and integration quality is still at a conceptual level. Through extensive literature review, this study answered the research question: what are the dimensions of service quality in omnichannel retailing? Based on the findings of a systematic review, this study conceptualises several dimensions of integration quality within omnichannel retailing i.e. channel service configuration quality, integrated interactions quality and their sub-dimensions i.e. breadth of channel choice, transparency of channel-service configuration, appropriateness of channel-service configuration, content consistency and process consistency. This research is largely a first step towards understanding the service quality dimensions of omnichannel retailing. Using the knowledge of this research, future studies can investigate omnichannel implementation by integrating physical and virtual quality dimensions. Additionally, the findings of this research also lead to several contributions towards managerial and theoretical practice as discussed below.

7.1 Recommendations for Practice

Omnichannel retailing is becoming into a strategy for success. Managers need to introduce diverse channels and integrate all service components within these channels to provide higher customer satisfaction and avoid losing customers to competitors. The findings of this research will provide managers with valuable guideline to create a blueprint of service quality management process.

First, this research will enable managers to understand the role of integration within omnichannel. Identification of factors which influence integration quality will allow managers to allocate resources in those areas. Managers should include diverse range of channels for customers to avail services from. Additionally, managers should also utilise the power of social media and interactive channels to inform and aware customers about available channels and their service capabilities. On the contrary, managers should be careful about appropriateness of channel service configuration. Organisations might be tempted to increase the number of channels. However, this research shows, adding channels without focusing on service

appropriateness will cause customer dissatisfaction. Hence, addressing the appropriateness of the channel-service configuration will also play a vital role in designing omnichannel service pattern within organisations. Within an omnichannel environment it is critical to create a balance between number of channels offered with cost and benefit of each channels.

Moreover, the findings of this research indicate the importance of content consistency and process consistency to be achieved within the channels. Managers should create a database to collect information from customers and integrate the information within all the channels. This will help the firm to address customer individually through all customer touchpoints and ensure satisfaction within customers. Not only inbound information, but outbound information needs to be integrated as well. Managers should ensure consistency regarding price, features and other related information within all the channels.

Finally, this research has stressed highly on the importance of integration within channels. Customers want the advantages of digital shopping, such as wide selection, rich product information, feedback from customers as well as the advantages of physical stores such as personal service, and ability to experience the product. Therefore, the integration of multiple platforms to create a seamless shopping experience for customers has become the key to success in today's retailing world. Specifically, in industries where competitors are utilising and integrating multiple channels, a firm with disintegrated channels will create dissatisfied customers and eventually lose customers to competition. In this backdrop, companies need to invest their resources, in the form of human, capital and infrastructure, to create this seamless omnichannel experience for their customers.

Retailers can introduce Click and Collect service, where customers can order products online and collect in store, or even order in store from their mobile devices. Retailers can also incorporate technologies such as interactive screens, augmented realities or provide tablets to its staffs to address their customers. Customers will be able to order or do some research on products through different self-service kiosks, communicate with other customers and also receive reviews of different products in store. Retailers should also consider redesigning their stores to facilitate omnichannel integration.

7.2 Recommendation for Future Research

Future research should focus on developing specific measures to understand how marketers can conceptualize as well as measure quality perceptions of customers and other related business outcomes in an omnichannel setting. Research on channel performance, customer/shopper behaviour and retail mix should focus more on omnichannel services.

In regards to channel performance, issues such as, impact of store performance due to integration of different channels, impact on purchase behaviour due to

integration of mobile channels within stores, importance of seamless channel experience among customers can be addressed in future research.

In regards to shopper behaviour, issues such as generalisation of important drivers of channel choice, generalisation of behavioural outcome of integration quality can be addressed in future research. In terms of retail mix across channels, issues such as the extent of integration of different channels, role of brands in relation to integration, shopper's control on integration (customisation), effect of promotions in omnichannel performance can also be addressed in future research.

In regards to integration quality, the next step in future research is to develop/generate scale items for dimensions proposed in previous studies. In addition, future research can measure customer and organisational perception of integration quality and the similarities or differences between these viewpoints.

Questions for Review and Discussion

1. How can organizations better incorporate functional differences to implement integrated channel system?
2. Should firms integrate all components within all the channels or keep some services unique for specific channels? Such as, should price be same for all channels? Should there be specific promotion for utilizing specific channel?
3. How can organizations collect and integrate customer transaction data and customer interaction data within all its available channels?
4. How customer transaction data collected from different channels enable organizations to create more personalized products and services and offer dynamic pricing?
5. What factors influence consumer equity due to integration quality?
6. How can organizations better use data and insights from multiple channels to achieve operational excellence?
7. What are the different evaluation criteria and metrics appropriate for cross-channel performance measurement?
8. What is the cost of adding a new channel and whether channel integration results to net benefit for organizations—how to measure the benefits?
9. What factors influence security and privacy within multichannel usage and what steps multichannel service providers should undertake to mitigate these concerns?
10. What type of organizational culture is appropriate to adapt channel integration?

References

- Ackermann, S., & von Wangenheim, F. (2014). Behavioural consequences of customer-initiated channel migration. *Journal of Service Research*, 17, 262–277.
- Aladwani, A. M., & Palvia, P. C. (2002). Developing and validating an instrument for measuring user-perceived web quality. *Information Management*, 39, 467–476.

- Banerjee, M. (2014). Misalignment and its influence on integration quality in multichannel services. *Journal of Service Research, 17*, 460–474.
- Barnes, S. J., & Vidgen, R. T. (2002). An integrative approach to the assessment of E-commerce quality. *Journal of Electronic Commerce Research, 3*, 114–127.
- Baxendale, S., Macdonald, E. K., & Wilson, H. N. (2015). The impact of different touchpoints on brand consideration. *Journal of Retailing, 91*, 235–253.
- Benedettini, O., & Neely, A. (2012). Complexity in services: An interpretative framework. *POMS 23rd Annual Conference*.
- Birnik, A., & Bowman, C. (2007). Marketing mix standardization in multinational corporations: A review of the evidence. *International Journal of Management Reviews, 9*, 303–324.
- Brady, M. K., & Cronin, J. J. (2001). Some new thoughts on conceptualizing perceived service quality: A hierarchical approach. *The Journal of Marketing, 65*(3), 34–49.
- Brady, M. K., & Robertson, C. J. (2001). Searching for a consensus on the antecedent role of service quality and satisfaction: An exploratory cross-national study. *Journal of Business Research, 51*, 53–60.
- Braun, V., & Clarke, V. (2006). *Using thematic analysis in psychology qualitative research in psychology* (Vol. 3, pp. 77–101). Bristol: University of the West of England.
- Brynjolfsson, E., Hu, Y. J., & Rahman, M. S. (2013). Competing in the age of omnichannel retailing. *MIT Sloan Management Review, 54*, 23–29.
- Burke, R. (2002). Technology and the customer interface: What consumers want in the physical and virtual store. *Journal of the Academy of Marketing Science, 30*, 411–432.
- Cao, L., & Li, L. (2015). The impact of cross-channel integration on retailers' sales growth. *Journal of Retailing, 91*, 198–216.
- Chae, M., Kim, J., Kim, H., & Ryu, H. (2002). Information quality for mobile internet services: A theoretical model with empirical validation. *Electronic Markets, 12*, 38–46.
- Cheng, J. M.-S., Tsao, S.-M., Tsai, W.-H., & Tu, H. H.-J. (2007). Will eChannel additions increase the financial performance of the firm?—The evidence from Taiwan. *Industrial Marketing Management, 36*, 50–57.
- Constantinides, E., & Fountain, S. J. (2008). Web 2.0: Conceptual foundations and marketing issues. *Journal of Direct, Data and Digital Marketing Practice, 9*, 231–244.
- Cronin, J. J., Brady, M. K., & Hult, G. T. M. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioural intentions in service environments. *Journal of Retailing, 76*, 193–218.
- Crosby, D. C. (2006). Quality is easy. *Quality, 45*, 58.
- Dagger, T. S., & Sweeney, J. C. (2006). The effect of service evaluations on behavioural intentions and quality of life. *Journal of Service Research, 9*, 3–18.
- Dagger, T. S., Sweeney, J. C., & Johnson, L. W. (2007). A hierarchical model of health service quality scale development and investigation of an integrated model. *Journal of Service Research, 10*, 123–142.
- Ezzy, D. (2002). *Qualitative analysis: Practice and innovation*. Crows Nest: Allen & Unwin.
- Falk, T., Schepers, J., Hammerschmidt, M., & Bauer, H. H. (2007). Identifying cross-channel dissynergies for multichannel service providers. *Journal of Service Research, 10*, 143–160.
- Fassnacht, M., & Koese, I. (2006). Quality of electronic services conceptualizing and testing a hierarchical model. *Journal of Service Research, 9*, 19–37.
- Ganesh, J. (2004). Managing customer preferences in a multi-channel environment using Eeb services. *International Journal of Retail & Distribution Management, 32*, 140–146.
- Garvin, D. A. (1988). *Managing quality: The strategic and competitive edge*. Simon and Schuster.
- Gefen, D. (2002). Customer loyalty in e-commerce. *Journal of the Association for Information Systems, 3*, 27–51.
- Gensler, S., Verhoef, P. C., & Böhm, M. (2012). Understanding consumers' multichannel choices across the different stages of the buying process. *Marketing Letters, 23*, 987–1003.

- Goh, K.-Y., Heng, C.-S., & Lin, Z. (2013). Social media brand community and consumer behaviour: Quantifying the relative impact of user- and marketer-generated content. *Information Systems Research, 24*, 88–107.
- Grönroos, C. (1984). A service quality model and its marketing implications. *European Journal of Marketing, 18*, 36–44.
- Gulati, R., & Garino, J. (1999). Get the right mix of bricks & clicks. *Harvard Business Review, 78*, 107–114, 214.
- Hammerschmidt, M., Falk, T., & Weijters, B. (2016). Channels in the mirror: An alignable model for assessing customer satisfaction in concurrent channel systems. *Journal of Service Research, 19*, 88–101.
- Helbling, J., Leibowitz, J., Rettaliata, A. (2011). The value proposition in multichannel retailing. *McKinsey Quarterly*.
- Herhausen, D., Binder, J., Schoegel, M., & Herrmann, A. (2015). Integrating bricks with clicks: Retailer-level and channel-level outcomes of online-offline channel integration. *Journal of Retailing, 91*, 309–325.
- Holden-Bache, A. (2011). Study: 93% of B2B marketers use social media marketing. *BtoB Magazine*.
- Homburg, C., Vollmayr, J., & Hahn, A. (2014). Firm value creation through major channel expansions: Evidence from an event study in the United States, Germany, and China. *Journal of Marketing, 78*, 38–61.
- Hu, T., Kettinger, W. J., & Poston, R. S. (2015). The effect of online social value on satisfaction and continued use of social media. *European Journal of Information Systems, 24*, 391–410.
- Insites, C. (2011). *Social integration survey*. Ghent, Belgium.
- International Organization for Standardization (ISO). (2005). *Quality management systems – Fundamentals and vocabulary*. ISO Standard 9000/2005, Geneva.
- Jiang, J. J., Klein, G., & Crampton, S. M. (2000). A note on SERVQUAL reliability and validity in information system service quality measurement. *Decision Sciences, 31*, 725–744.
- Johnston, R., & Clark, G. (2001). *Service operations management*. Harlow: Pearson Education.
- Kara, A., Lonial, S., Tarim, M., & Zaim, S. (2005). A paradox of service quality in Turkey: The seemingly contradictory relative importance of tangible and intangible determinants of service quality. *European Business Review, 17*, 5–20.
- Kettinger, W. J., & Lee, C. C. (1994). Perceived service quality and user satisfaction with the information services function. *Decision Sciences, 25*, 737–766.
- Kim, H. M., & Nitecki, D. A. (2014). *A proposed scale for measuring the quality of social media services: An E-S-QUAL approach*. Seattle, Washington: ASIST.
- Kim, H.-Y., Lee, J. Y., Mun, J. M., & Johnson, K. K. (2017). Consumer adoption of smart in-store technology: Assessing the predictive value of attitude versus beliefs in the technology acceptance model. *International Journal of Fashion Design, Technology and Education, 10*, 26–36.
- Konuş, U., Verhoef, P. C., & Neslin, S. A. (2008). Multichannel shopper segments and their covariates. *Journal of Retailing, 84*, 398–413.
- Kumar, V., Sunder, S., & Sharma, A. (2015). Leveraging distribution to maximize firm performance in emerging markets. *Journal of Retailing, 91*, 627–643.
- Lazaris, C., & Vrechopoulos, A. (2014). *From multichannel to “omnichannel” retailing: Review of the literature and calls for research 2nd International Conference on Contemporary Marketing Issues (ICMI)*. Greece: Athens.
- Leefflang, P. S., Verhoef, P. C., Dahlström, P., & Freundt, T. (2014). Challenges and solutions for marketing in a digital era. *European Management Journal, 32*, 1–12.
- Levy, M., Weitz, B., & Grewal, D. (2013). *Retailing management* (9th ed.). New York: McGraw-Hill Education.
- Li, H., & Kannan, P. K. (2014). Attributing conversions in a multi-channel online marketing environment: An empirical model and a field experiment. *Journal of Marketing Research, 51*, 40–56.

- Mangold, W. G., & Faulds, D. J. (2009). Social media: The new hybrid element of the promotion mix. *Business Horizons*, *52*, 357–365.
- Michael, P. (2001). Strategy and the internet. *Harvard Business Review*, *79*, 63–78.
- Montoya-Weiss, M. M., Voss, G. B., & Grewal, D. (2003). Determinants of online channel use and overall satisfaction with a relational, multichannel service provider. *Journal of the Academy of Marketing Science*, *31*, 448–458.
- Nelson, R. R., Todd, P. A., & Wixom, B. H. (2005). Antecedents of information and system quality: An empirical examination within the context of data warehousing. *Journal of Management Information Systems*, *21*, 199–235.
- Neslin, S. A., Grewal, D., Leghorn, R., Shankar, V., Teerling, M. L., Thomas, J. S., & Verhoef, P. C. (2006). Challenges and opportunities in multichannel customer management. *Journal of Service Research*, *9*, 95–112.
- Ngai, E. W. T., & Wat, F. K. T. (2002). A literature review and classification of electronic commerce research. *Information Management*, *39*, 415–429.
- Oliver, R. L., Rust, R. T., & Varki, S. (1997). Customer delight: Foundations, findings, and managerial insight. *Journal of Retailing*, *73*, 311–336.
- Orlikowski, W. J., & Iacono, C. S. (2001). Research commentary: Desperately seeking the “it” in it research—a call to theorizing the it artifact. *Information Systems Research*, *12*, 121–134.
- Parasuraman, A. (1990). *Delivering quality service: Balancing customer perceptions and expectations*. New York: Free Press; London: Collier Macmillan.
- Parasuraman, A., & Grewal, D. (2000). The impact of technology on the quality-value-loyalty chain: A research agenda. *Journal of the Academy of Marketing Science*, *28*, 168–174.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *The Journal of Marketing*, *49*, 41–50.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). Servqual. *Journal of Retailing*, *64*, 12–40.
- Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-S-QUAL: A multiple-item scale for assessing electronic service quality. *Journal of Service Research*, *7*, 213–233.
- Patrício, L., Fisk, R. P., & Falcão e Cunha, J. (2008). Designing multi-interface service experiences: The service experience blueprint. *Journal of Service Research*, *10*, 318–334.
- Pauwels, K., & Neslin, S. A. (2015). Building with bricks and mortar: The revenue impact of opening physical stores in a multichannel environment. *Journal of Retailing*, *91*, 182–197.
- Piotrowicz, W., & Cuthbertson, R. (2014). Introduction to the special issue information technology in retail: Toward omnichannel retailing. *International Journal of Electronic Commerce*, *18*, 5–16.
- Rigby, D. (2011). The future of shopping. *Harvard Business Review*, *89*, 65–76.
- Rust, R. T., & Oliver, R. L. (1994). *Service quality: New directions in theory and practice*. California: Sage.
- Rust, R. T., Zahorik, A. J., & Keiningham, T. L. (1994). *Return on quality: Measuring the financial impact of your company's quest for quality*. Probus Chicago.
- Sousa, R., & Voss, C. A. (2006). Service quality in multichannel services employing virtual channels. *Journal of Service Research*, *8*, 356–371.
- Vaithianathan, S. (2010). A review of e-commerce literature on India and research agenda for the future. *Electronic Commerce Research*, *10*, 83–97.
- Van Bruggen, G. H., Antia, K. D., Jap, S. D., Reinartz, W. J., & Pallas, F. (2010). Managing marketing channel multiplicity. *Journal of Service Research*, *13*, 331–340.
- Van Dyke, T. P., Kappelman, L. A., & Prybutok, V. R. (1997). Measuring information systems service quality: Concerns on the use of the SERVQUAL questionnaire. *MIS Quarterly*, *195*–208.
- Venkatesan, R., Kumar, V., & Ravishanker, N. (2007). Multichannel shopping: Causes and consequences. *Journal of Marketing*, *71*, 114–132.
- Verhoef, P. C. (2012). Multi-channel customer management strategy. In V. Shankar & G. Carpenter (Eds.), *Handbook of marketing strategy*. Cheltenham: Edward Elgar.

- Verhoef, P. C., Neslin, S. A., & Vroomen, B. (2007). Multichannel customer management: Understanding the research-shopper phenomenon. *International Journal of Research in Marketing*, 24, 129–148.
- Verhoef, P. C., Kannan, P., & Inman, J. J. (2015). From multi-channel retailing to omnichannel retailing: Introduction to the special issue on multi-channel retailing. *Journal of Retailing*, 91, 174–181.
- Vishwanath, V., & Mulvin, G. (2001). Multi-Channels: The Real Winners in the B2C Internet Wars. *Business Strategy Review*, 12, 25–33.
- Vollmer, C., & Precourt, G. (2008). *Always on: Advertising, marketing, and media in an era of consumer control*. New York: McGraw-Hill.
- Wicks, A. M., & Roethlein, C. J. (2009). A satisfaction-based definition of quality. *The Journal of Business and Economic Studies*, 15, 82.
- Wirtz, J., & Lovelock, C. (2016). *Services marketing: People, technology, strategy*.
- Xia, Y., & Zhang, G. P. (2010). The impact of the online channel on retailers' performances: An empirical evaluation. *Decision Sciences*, 41, 517–546.
- Yoo, B., & Donthu, N. (2001). Developing a scale to measure the perceived quality of an internet shopping (SITEQUAL). *Quarterly Journal of Electronic Commerce*, 2, 31–47.

Shahriar Akter is an Associate Professor at the Sydney Business School, University of Wollongong, Australia. Shahriar was awarded his PhD from the UNSW Business School, with a doctoral fellowship in research methods from the Oxford Internet Institute, University of Oxford. He completed his BBA in Marketing, MBA in Marketing and a Master by research degree in E-Business Management. Shahriar has published top ranked business journals including *International Journal of Production Economics*, *Information & Management*, *Journal of the American Society for Information Science & Technology*, *International Journal of Operations and Production Management*, *Journal of Business Research*, *International Journal of Production Research*, *Behaviour & IT*, and *Electronic Markets*. His research areas include big data analytics, digital and social media marketing, digital innovations, service systems and variance based SEM techniques.

Muhammad Ismail Hossain is a Professor at the Department of Marketing, Faculty of Business Studies, University of Dhaka, Bangladesh. He holds a Master in International Business from University of Melbourne, Australia and a PhD from Monash University in Melbourne, Australia. His academic research focuses on the role of emotions and age-based generational division in consumer behaviour and branding, in particular in service encounters across online and offline contexts. His industry related research work focuses on diverse social issues including employment and investment and their impact on Bangladesh and its wellbeing. He has over twenty five academic and industry publications. He presented his academic work at several local and international academic conferences. His industry based work is showcased to leading trade and investment bodies of the People's Republic of Bangladesh.

Steven Lu is the co-director of Consumer Insights Research Group at the University of Sydney Business School. He obtained his PhD in Marketing from the University of Toronto, and MA in Economics from York University. His research interests are: Multichannel Consumer Behavior and Insights: this stream of research examines the behavior of multichannel consumers and relevant marketing strategy. Big Data Analytics: this stream of research aims at extracting invaluable information from companies' big data. He has published in several internationally acclaimed journals such as *Marketing Science*, *Statistical Science*, *Annals of Tourism Research*, *Journal of Business Research*, *Journal of Interactive Marketing*, *International Journal of Production Research*, and *Customer Needs and Solutions*. He has served on the editorial board of *Marketing Science*.

Sutapa Aditya is an independent marketing consultant working in the Greater New York area. She worked as an assistant professor of marketing at LIU Brooklyn's School of Business, Public Administration and Information Sciences. In addition, she taught various marketing courses in different business schools in Canada and Bangladesh. She obtained her B.B.A. with a specialization in marketing at the Institute of Business Administration of the University of Dhaka in Bangladesh. Later, she obtained her M.B.A. degree from Simon Fraser University in Canada and her Ph.D. degree in marketing from the Schulich School of Business at York University in Canada. Her research focuses on consumer-to-consumer communication on brands, persuasion knowledge and implicit cognition and attitudes. She has presented at various conferences, including the Association of Consumer Research, Society of Consumer Psychology and Southern Ontario Behavioral Decision Research Conferences.

Taufique Hossain is a PhD candidate in Marketing at the University of Wollongong, NSW, Australia. His research focus is towards multichannel service quality, omnichannel marketing, customer engagement and customer equity. Have experience in teaching several marketing courses including marketing strategy and marketing communication. Worked as a strategic marketing analyst at a global telecommunication company in Bangladesh. Experienced in formulating company's marketing strategies, budgeting, forecasting, creating pricing models, preparing business models for new packages, segments and promotions. Completed Masters in Advertising and Marketing from University of Leeds, UK and Bachelors in Business majoring in Marketing and Finance from North South University, Bangladesh.

Uraiporn Kattiyapornpong or Ping is a Lecturer in Marketing at the School of Management, Operations and Marketing, Faculty of Business, University of Wollongong. She teaches a variety of marketing subjects at undergraduate and postgraduate levels. She holds a Bachelor of Arts in Business Administration (Marketing) (Bradford Business School, University of Bradford, UK), Master of Business (International Marketing) (University of Technology Sydney, Australian) and a Graduate Certificate in Higher Education (Deakin University, Australia). Ping completed her PhD (Marketing) at Thammasat University, Thailand. Ping's research interests are International Marketing, Business to Business Marketing, Services Marketing, Tourism Marketing, and Consumer Behaviour.