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The Blurring Line Between Electronic and Physical Channels: Reconceptualising Multichannel Commerce

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THE BLURRING LINE BETWEEN ELECTRONIC AND PHYSICAL CHANNELS: RECONCEPTUALISING MULTICHANNEL COMMERCE

Complete Research

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Abstract

This paper proposes a revision of the multichannel concept as it has been applied in previous studies on multichannel commerce. Digitalization and technological innovations have blurred the line between physical and electronic channels. A structured literature review on multichannel consumer and firm behaviour is conducted to reveal the established view on multichannel phenomena. By providing empirical evidence on market offerings and consumer perceptions, we expose a significant mismatch between the dominant conceptualization of multichannel commerce applied in research and today's market realities. This tension highlights the necessity for a changed view on multichannel commerce to study and understand phenomena in converging sales channels. Therefore, an extended conceptualization of multichannel commerce, named the multichannel continuum, is proposed.

This is the first study that considers the broad complexity of integrated multichannel decisions. It aims at contributing to the literature on information systems and channel choice by developing a reference frame for studies on how technological advancements that allow the integration of different channels shape consumer and firm decision making in multichannel commerce. Accordingly, a brief research agenda contrasts established findings with unanswered questions, challenges and opportunities that arise in this more complex multichannel market environment.

Keywords: multichannel, e-commerce, business transformation, channel convergence, conceptualisation.

1 Introduction

Multichannel commerce is becoming increasingly important, since both consumers and retailers engage in both channels simultaneously. This has led to phenomena such as “showrooming” (Weisen-thal, 2012) where consumers visit local stores to inspect the product and subsequently purchase online. In another type of “research shopping” (Verhoef et al., 2007), consumers gather information in one channel, e.g., read product recommendations, and purchase the product in another one, e.g. a local store. These developments are challenging for retailers, since electronic and physical channels have very different characteristics. The internet is a fast growing sales channel having generated revenues of €39.1 billion in Germany in 2013 (U.S.: \$208 billion, Euromonitor International, 2014a). The revenue in this channel has more than doubled within the last three years. Furthermore, its expansion is accelerating with a predicted growth rate of 24% in 2014 (U.S.: 16% in 2013, Euromonitor International, 2014a), already reaching a share of more than 9% of the overall retailing market (BHV, 2014). At the same time, while retailing overall offers only marginal growth rates, the majority of transactions still take place offline (cp. Figure 1).

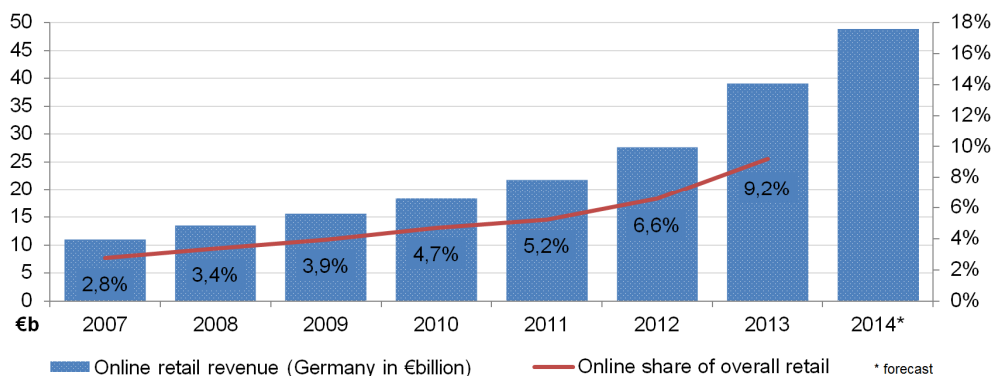


Figure 1. Growth and importance of electronic commerce in Germany¹ (Source: BHV 2014).

This tension between revenue and growth has incentivised both brick-and-mortar and online retailers to extend their business to become multichannel retailers. First, the popularity of the internet, its growing market size and share has pushed many traditional retailers to expand to electronic channels and offer their customers a choice between different channel options (Zettelmeyer, 2000). Examples include Best Buy or Walmart in the U.S. or MediaMarkt in Europe. These retailers still generate most of their revenues in the conventional retailing business when entering the online channel. Since the markets are not separate (Goolsbee, 2001), information is exchanged and customers can move between the channels (Verhoef et al., 2007). Therefore, management decisions of multichannel retailers need to consider their consequences on both online and offline channels simultaneously. Having both channels in mind, it is difficult for multichannel retailers to compete via price on the internet with retailers that only operate online (pure play retailers). Competitive online prices are unsustainable in physical channels, because they are grounded on fundamentally different cost structures. Since knowledge about the issue of multichannel price discrimination is scarce (Neslin et al., 2006; Wolk and Ebling, 2010), many multichannel retailers still charge the same conventional prices online and offline (Tang and Xing, 2001; Ancarani, 2002; Pan, Shankar, et al., 2002; Wolk and Ebling, 2010), choosing to prevent cannibalization or harm from customer confusion over the opportunities of growth in the online channel. These implementations of “same price strategies” turned out to be not competitive in the online channel for most products while the few competitively priced products could not be sold profitably due to high overhead costs created by the physical stores. Others such as Best Buy have tried to compete via price by matching Amazon’s online prices. However, this competition with companies that have considerably different cost structures has massively shrunk Best Buy’s margins to a point where it is unclear whether it can remain profitable (Matthews, 2013). In this realm, classical retailers attempt to leverage their infrastructure by offering additional services such as in-store pickup or in-store repair and thereby integrate electronic and physical channels to create additional customer value. Although it is still uncertain whether, how, and in which situations multichannel retailers can leverage such services to compete with pure play retailers on the internet (Neslin and Shankar, 2009), these services extend the variety of channel options beyond pure offline or pure online transactions. Second, online retailers extend their business to physical channels and thus also become multichannel retailers. For instance, Amazon, the largest online retailer in the U.S. and Germany, has announced to open its first physical store in New York (Bensinger and Morris, 2014). Thereby, they try to mimic multichannel service attempts by their traditional competitors (Bensinger and Morris, 2014) and to receive a share of the huge revenues still generated in physical stores. Accordingly, both online and traditional

¹ Germany, as the largest market in Europe, is used as an exemplary country to illustrate the phenomena. This European perspective is complemented by data from the U.S. in section three to present a broader view on the issue.

retailers strive towards multichannel commerce, defined as the “set of activities involved in selling merchandise or services to consumers through more than one channel” (Zhang et al., 2010, p.168).

These developments have blurred the lines between electronic and physical channels. They indicate a strong tendency towards convergence of electronic and physical channels where characteristics or elements of one channel are exploited to enhance transactions pursued in the other one. The aim of this paper is (1) to identify the prevalent conceptualization of multichannel commerce, (2) to reveal that a reconceptualization is necessary and (3) to highlight that this enhanced view on multichannel commerce is a powerful enabler of new research avenues. Subsequently, we address this goal in three steps. First, we present a structured overview on the current knowledge base on multichannel commerce and its underlying conceptualization. Second, empirical evidence illustrates why the perspective on multichannel that has been applied in previous research may not be sufficient to incorporate its technological advancements. Third, a revised conceptualization of multichannel commerce is suggested, followed by an illustration of its implications for existing and future research in the field.

2 Consumer decisions in multichannel commerce

To gain a full overview of previously generated insights on consumer decisions in multichannel environments, a structured literature review was performed. The review was conducted along the eight-step guide for systematic literature reviews provided by Okoli and Schabram (2010) as well as the guide for literature reviews in the IS field by Webster and Watson (2002). Since the topic is multidisciplinary and potentially of interest to many research areas, such as information systems, marketing, computer science, operations, tourism and others, no restriction on a particular set of journals was made. Instead, a key word search in the abstracts of peer reviewed journal articles was conducted using three main literature search services (EBSCO Host, ProQuest and ISI Web of Knowledge). Details on the methodology of the literature review are given in Appendix A.

Three main themes have emerged from this analysis: channel choice, multichannel shoppers and channel switching behaviour. The knowledge base within these streams of research is discussed in the following. After the discussion of each theme, its underlying conceptualization of multichannel commerce is depicted graphically.

2.1 Channel choice

Determinants of the trade-off between electronic and physical channels have been studied in surveys (e.g., Gupta et al., 2004; Konuş et al., 2008; Verhagen and van Dolen, 2009), using secondary data (Forman et al., 2009; Janakiraman and Niraj, 2011; Avery et al., 2012; Chintagunta et al., 2012; Yang et al., 2013) or using experiments (Keen et al., 2004). To structure the knowledge about consumers' channel choice, the plentitude of factors is classified into four groups that emerged from the analysis: channel determinants, purchase specifics, external influences and individual differences.

While earlier research covered questions of online channel adoption (Pavlou and Fygenson, 2006; e.g., Datta, 2011), the research scope widened to identify factors to explain and predict the choice between mature channels (Verhoef et al., 2007; e.g., Gensler et al., 2012). Due to the complexity of consumer channel decisions (Balasubramanian et al., 2005), most papers identify influence or contingency factors of channel choice instead of being able to develop an all-encompassing model that explains preferences for certain channels. Balasubramanian et al. (2005) analyse the issue on a higher level and differentiate between product utility and process utility as major drivers of the channel evaluation process. Their influential conceptual model describes the comparison between the utility of different channels that finally leads to a channel decision. However, the economic value of the transaction is only one of several factors that can drive the channel utility.

A wide range of factors has been identified as *channel determinants*. Channel determinants describe variables that are based on characteristics or the configuration of the channels. Similar to choices between vendors, prices (e.g., Goolsbee, 2001) and perceived service quality (e.g., Montoya-Weiss et al.,

2003) are found to be important drivers of decisions to purchase online or offline. Unfortunately, evidence is ambiguous with other studies not finding any impact of service on channel choice (Verhagen and van Dolen, 2009). Further studies focused on general positive or negative channel characteristics that influence the choice. For instance, ease of use, purchase effort, and convenience determine channel choice mostly towards online channels (e.g., Chiang et al., 2006; Frambach et al., 2007), while risk, privacy, and security considerations are potential inhibitors of online channel usage (e.g., Pavlou and Fyngenson, 2006). Assortment can play an important role when people develop expectations of which products that can or cannot be found in offline or online channels (e.g., Verhagen and van Dolen, 2009). Generally, sensory attributes are said to be more difficult to evaluate online while electronic channels have an advantage when non-sensory attributes are of interest (Degeratu et al., 2000). Empirical studies support the thesis that product diagnosticity largely influences channel choices (e.g., Levin et al., 2005; Lim et al., 2012). Beyond that, single studies investigated the impact of payment options (Chiang et al., 2006), possibilities to negotiate (Verhoef et al., 2007), the enjoyment of the transactions (Verhoef et al., 2007), and the importance of personal contact (Chiang et al., 2006). Three studies find that the speed of the purchase is a major driver towards offline channels (Noble et al., 2005; Chiang et al., 2006; Verhoef et al., 2007). The availability of post-purchase services is generally determined by the channel choice. Differences in these potentially demanded service offerings are also influential for the channel preference (Chiang et al., 2006; Verhoef et al., 2007).

Purchase specifics refer to differences between purchase situations. This includes types of purchases and the product characteristics. With regards to the first category, Chintagunta et al. (2012) find that the online transaction costs are relatively lower when the basket of purchased products is large and vice versa, saying the online channel is preferred for certain types of purchases. Regarding product categories, some papers simply test differences between product types (Levin et al., 2005; Chiang et al., 2006) while others choose a level of abstraction such as high or low touch requirements (Levin et al., 2003) or size and perishability of the product (Chintagunta et al., 2012).

External influences can either stem from the marketing communication of the firm or from peers of the consumer. Three studies find an influence of marketing communication on channel choice and thereby confirm that channel choice is also prone to the effects of marketing (Ansari et al., 2008; Valentini et al., 2011; Chintagunta et al., 2012). The social influence was studied in terms of the three processes of attitude changes (compliance, identification or internalization) (Datta, 2011), social contagion effects due to geographical proximity (Janakiraman and Niraj, 2011) or social norms (Keen et al., 2004; Verhoef et al., 2007; Johnson, 2008).

Individual differences incorporate demographics, geographic differences, and experiences and skills of the consumer. It is surprising that very little support has been found for the influence of demographics on channel choice. Single studies point towards the fact that males (Bendoly et al., 2005) and younger people (Ansari et al., 2008) might have a preference for online channels. In contrast, other studies explicitly state that demographics are irrelevant for the channel choice decision (Konus et al., 2008). Several studies find an influence of the geographic proximity to a store to drive offline channel choice (Forman et al., 2009; Janakiraman and Niraj, 2011; Chintagunta et al., 2012). Lastly, it is unquestioned that previous experiences with certain channels (Ansari et al., 2008; Valentini et al., 2011) as well as internet or IT skills (e.g., Frambach et al., 2007) make a difference for channel outcomes.

It is interesting that most of these studies focus on empirical insights without building upon specific theories to explain these effects (few exceptions are brand extension theory, expectation-confirmation theory (Yang et al., 2013) and theory of planned behaviour (Pavlou and Fyngenson, 2006)) or use a mixture of many different theoretical perspectives (Lim et al., 2012). Accordingly, there seems to be a lack of theoretical lenses to understand consumers' channel choice. While many factors have been empirically validated, the explanations for these findings are barely grounded on previously established coherences and theories.

Having investigated and structured the studies covering consumers channel choices, it becomes evident that those studies treat both channels as two detached poles. Although a large number of influ-

ence factors for channel choice have been identified, they study binary consumer decisions and conceptualize multichannel decisions as depicted in Figure 2.

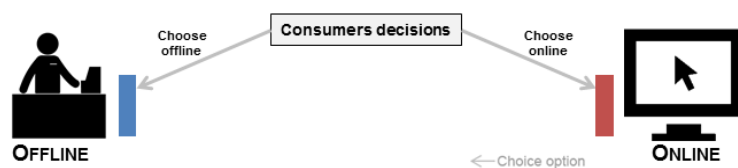


Figure 2. Multichannel conceptualization applied in channel choice studies.

2.2 Multichannel shoppers

Moving away from single purchase decisions, a second research stream investigates channel decisions on an aggregate level. Thereby, these papers examine a specific type of consumer: multichannel shoppers, i.e., consumers that use different channels for different purchases. Two major research questions have been addressed with regards to multichannel shoppers: who are the consumers that use different types of channels and how do they differ in terms of their shopping behaviour apart from channel choice.

Several attempts have been made to classify shopper types. Keen et al. (2004) find one group of purchasers that have a very strong preference for a specific channel, while other types of buyers are driven by product, price, or experience and thereby would move between channels. Dholakia et al. (2005) study a multichannel retailer and find that the channel of entry influences multichannel shopping behaviour since most multichannel shoppers were acquired via the online channel. Konoş et al. (2008) identify that customers who are enthusiastic multichannel shoppers are characterized by innovativeness, shopping enjoyment, and price consciousness. Unfortunately, they do not find stable clusters; instead the characteristics differ widely between product categories (Konoş et al., 2008). Due to the many influence factors that have been identified for channel choice, it is not surprising that there is no simple classification for multichannel shoppers either.

With regards to the value of multichannel shoppers, early empirical studies suggest that multichannel shoppers are generally more valuable than consumers that stick to one channel in terms of revenue (Kumar and Venkatesan, 2005; Venkatesan et al., 2007) and retention (Venkatesan et al., 2007). A recent study by Kushwaha and Shankar (2013) challenges this general belief and shows that multichannel shoppers are the most valuable customer segment only for products with hedonic properties while consumer segments that are focused on only one channel create more revenue in all other cases.

Again, these studies describe consumer decisions between online and offline channels as binary. However, the complexity of the studies is increased because these studies also investigate time series, where decisions between the two channels can evolve and consumers choose different channels for different transactions. The underlying enhanced conceptualization of multichannel decisions in these studies is depicted in Figure 3.

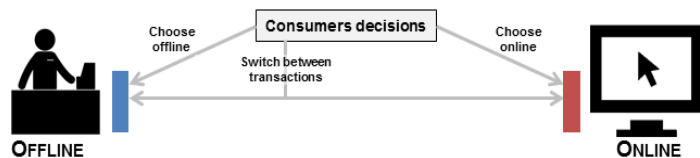


Figure 3. Multichannel conceptualization applied in studies on multichannel shoppers.

2.3 Channel switching

While the studies on multichannel shoppers investigate the switching between channels for different purchases, customers can also use different channels within one purchase. Often information is searched in one channel while another one is used for the actual purchase, a behavioural pattern referred to as the research shopper phenomenon (Verhoef et al., 2007). Customers that use several channels of one vendor during the purchase are characterized by higher satisfaction and higher loyalty (Wallace et al., 2004). This view is supported by Pauwels et al. (2011) who find that online information can increase purchases in the physical store of the same vendor. However, the switch between channels often also includes a switch of the vendor. This behaviour is called cross-channel free riding (Chiu et al., 2011). It has severe consequences for the firm that provides the information since consumers use their services but generate no revenues. Chiu et al. (2011) identify multichannel efficacy and the within-firm lock-in as major drivers and inhibitors of this behaviour. Therefore, customers that are used to moving between channels may exhibit this behaviour to a greater extent. Verhoef et al. (2007) identify three mechanisms that drive research shopping: attribute-based decision making, cross-channel synergies and lack of channel lock-in. The attribute-based decision making refers to channel attributes that lead to advantages of one or the other channel (cp. 2.1 for attributes with regards to channel choice). Since consumers' requirements and preferences differ widely between the information and the purchase stage, it is not unlikely that different channels' attributes are preferred for different steps of the purchase (Frambach et al., 2007). Cross-channel synergies occur if searching in one channel improves the purchase in the other. For instance, an effective search in one channel may enable better decisions in the other. Lock-in refers to issues that occur with a channel switch. For instance, a product that was found online might be difficult to locate in a store, thereby inhibiting the channel switch (Verhoef et al., 2007). Without calling it lock-in, other studies provide support for these spill-over effects between the different stages of the purchase (Pavlou and Fygenson, 2006; Gensler et al., 2012). Whether a channel switch occurs is also conditional on the type of information retrieved online. Finding more price information online decreases the probability of a channel switch while the retrieval of product information increases the probability of switching to an offline vendor (Kuruzovich et al., 2008).

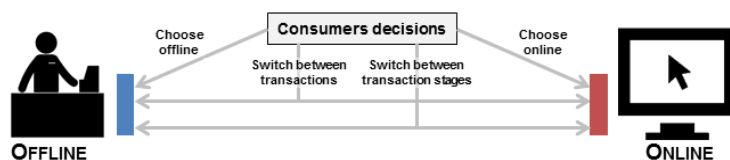


Figure 4. Multichannel conceptualization applied in studies on channel switching.

To conclude, there is a multitude of factors that have been found to be influential for within and between purchase channel choices. As anticipated by Balasubramanian et al. (2005), it is difficult or impossible to develop an integrated model of all the different influence factors of these complex decisions. Studies that cover channel switching again increase the set of decisions that need to be incorporated to understand multichannel decision making. However, all studies covering consumer decision making in multichannel environments describe them as a binary decisions at different granularities (channel switching between purchase phases) or time frames (multichannel shoppers) (cp. Figure 4).

3 Firm decisions in multichannel commerce

Besides consumers, firms also have to decide whether and how to position themselves within the multichannel environment. A similar picture arises when research on firm decisions is reviewed, although fewer studies have focused on this perspective of channel decisions. Early research discussed why maintaining physical and electronic channels simultaneously can have desirable consequences for firms such as potential cost savings or market extension (Steinfield et al., 2002). Consequently, a se-

ries of studies focused on single channel retailers' decisions whether to add a second channel to become a multichannel retailer (Biyalogorsky and Naik, 2003; Kauffman et al., 2009; Zhang, 2009; Avery et al., 2012). For instance, Avery et al. (2012) find that the synergy and cannibalization effects are different when a retail store is added to a present direct channel compared to the addition of an internet channel to an existing retail store. Other studies find that the advantages of using multiple channels depend on the strength of consumer channel migration (Kauffman et al., 2009), products, cost structures and the competitive situation (Zhang, 2009).

In the realm of whether or not to add a second channel, one research stream investigates spillover effects that occur when multiple channels are maintained simultaneously. The transfer of information and perceptions from the offline to the online channel was studied for trust (Doong et al., 2011; Badrinarayanan et al., 2012; Bock et al., 2012), satisfaction (van Birgelen et al., 2006) and brand image (Kwon and Lennon, 2009; Verhagen and van Dolen, 2009). There is strong evidence that trust is transferred from the offline to the online channel, especially when product uncertainty is high (Bock et al., 2012). Others assert that this only holds for certain cultural settings (Badrinarayanan et al., 2012). Doong et al. (2011) add that offline brand loyalty also influences online trust. Opposite effects were identified by Falk et al. (2007) in the banking industry who show that high satisfaction with the offline channel can also lead to dissynergies with the online channel in terms of reduced usefulness and increased risk perceptions. Moving away from unidirectional influences, van Birgelen et al. (2006) identify interaction effects between the performance satisfaction levels of traditional and technology-enabled channels. Bidirectional effects were also identified for the brand image, where previous brand image of one channel shapes the brand image of the other (Kwon and Lennon, 2009). Beyond these spillover effects, the integration of the channels on a coordination level can also help to generate synergies in terms of labour, for instance through centralized administration or inventory (Steinfield et al., 2002; Neslin and Shankar, 2009), and more effective communication with the customer (Thomas and Sullivan, 2005). On the consumer side, Bendoly et al. (2005) investigate how having multiple channels can deliver additional value to the consumer, especially in situations of a stockout. Overall, this research stream tries to identify synergies, negative effects and contextual variables that help to determine whether a retailer should service multiple channels at the same time.

Other authors argued that the enormous success of online retailers has shifted the focus of this question from "whether" to "how" (Enders and Jelassi, 2009). Major issues in this area relate to inventory systems, warehousing, marketing and pricing. Keeping track of the inventory is a major challenge even for single channel retailers, where inventory inaccuracy is a ubiquitous phenomenon (DeHoratius and Raman, 2008). However, when different channels try to make use of the same warehouse, the complexity and importance of these activities increases even further. Stock-outs in retail stores have been shown to produce serious costs (Fitzsimons, 2000; Anderson et al., 2006), but must not occur in an uncontrolled way when multichannel information or services are offered. While the coordination between a manufacturer's direct online presence and the traditional retail channel have been investigated by a series of studies (Yan and Pei, 2011; Lee et al., 2013), this issue has not been addressed for multichannel retailers.

More research has been done with regards to multichannel marketing and customer management, where a series of approaches were developed to address these issues (Venkatesan and Kumar, 2004; Thomas and Sullivan, 2005; Kumar, 2010). All of these approaches require firms to integrate their customer data to be able to analyse it jointly and address the right customers through the right communication channel. Very little research has been done on multichannel pricing. While early studies indicate that multichannel retailers are pricing uniformly between channels (Tang and Xing, 2001; Pan, Ratchford, et al., 2002; Ancarani and Shankar, 2004), a more recent study by Wolk and Ebling (2010) finds that some multichannel retailers apply price differentiation. This indicates that retailers are experimenting with price discrimination opportunities between channels, but the question whether prices should be different or need to be identical between channels has not been resolved yet.

To conclude, literature on firm decision making in multichannel environments has primarily focused on two questions. First, researchers addressed whether or not firms should extent their business towards multichannel within their specific setting. Second, design issues of the multichannel offerings with regards to branding, inventory or pricing were discussed in detail. However, similarly to the consumer decisions described in the previous section, all studies covering firm decision making in multichannel environments describe them as a binary decisions towards or against becoming a multichannel retailer. Vendors can therefore appear only offline, only online or address the associated challenges and engage as multichannel retailers (cp. Figure 5). In the following section, we illustrate how the multichannel environment has evolved beyond this conceptualization.

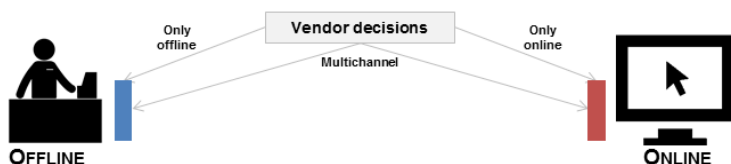


Figure 5. Multichannel conceptualization applied in studies on firm channel decisions.

4 Empirical evidence

In the previous section, we argued that multichannel research has applied a binary view on consumers' and firms' multichannel decisions. Factors that influence both vendors' and consumers' choices have been identified. We argue that this view is no longer sufficient to understand the complexity of integrated multichannel environments. To support this claim, two sets of empirical evidence are provided in the following. In order to motivate an extended conceptualization of multichannel commerce, it would be necessary to show that existing developments or technological advancements are not covered by current research. Based on this, one must provide evidence that these innovations are actually different from what has been studied before and do matter for consumer decision making. Therefore, we first show that today's vendors are already offering channel configurations that are not covered by the existing conceptualization of multichannel. Second, we provide evidence that these channel configurations are indeed relevant and differ in their appeal from both online and offline channels.

4.1 Channel configurations

In order to gain a structured overview on the channel options present today, the offerings of multichannel retailers were reviewed. We covered Germany as the largest European market and the U.S. market for this review. All retailers that have a substantial share in online retailing (at least 1% of the overall online revenues in 2013) were selected. The data on their offerings were gathered using company websites, press articles as well as talks to company representatives and test purchases. An overview is given in Table 1.

The results indicate that all thirteen retailers in the sample offer channel options that go beyond the dichotomy of electronic and physical channels. The variety of integrated transactions ranges from the rather simple delayed pickup, where consumers purchase online and are allowed to pick the product up from a local store a few days later, to fully-integrated hybrid channels where online orders can be picked up immediately and service offerings are fully integrated. As outlined above, these alternatives have been widely ignored in previous studies on firms and consumer decision making.

Retailer	Country	Internet Retailing Company Share 2013	Purchase online and have the opportunity to use the store for...			
			Immediate pickup	Delayed pickup	Service in store	Returns in store
Walmart	US	2.6	X ¹⁾			X
BestBuy	US	1.7		X	X	X
Macy's	US	1.6		X		X
Target	US	1.3	X ¹⁾			(X) ²⁾⁵⁾
Sears	US	1.0	X ¹⁾		(X) ⁶⁾	X
Otto	DE	7.5				(X) ⁴⁾
Notebooksbilliger	DE	2.0		X	X	(X) ⁴⁾
Conrad	DE	1.9	X ¹⁾		X	X
Cyberport	DE	1.9		X	X	X
Weltbild	DE	1.5		(X) ³⁾		
Bonprix	DE	1.5				(X) ⁴⁾
C&A	DE	1.1		X		(X) ⁴⁾
Mediamarkt	DE	1.0	X ¹⁾		X	X

Source: Own research as of August 2014; revenues from the Passport Internet Retailing reports (Euromonitor International, 2014a, 2014b); selection criteria: Internet retailing share of at least 1%. Direct channels of manufacturers have been excluded (e.g., Apple, Dell, Tchibo).

1) For selected products available in store; 2) selected items; 3) free shipping to store; 4) store ships return; 5) online registration of the return necessary; 6) service via phone, then service appointment (same as for in-store purchases).

Table 1. Multichannel integration services offered by the largest multichannel retailers in the United States and in Germany.

4.2 Consumer perceptions of integrated channels

The literature review has revealed that previous studies have focused on either consumer decision making between physical and electronic channels in general, between purchases or within purchases. However, the analysis of current multichannel offerings indicates that hybrid transactions using integrated channels are offered in practice that cannot be explained by these studies. In order to justify an extension of the multichannel conceptualization by these multichannel offerings, such hybrid transactions need to differ in their appeal from pure offline and pure online transactions. Evidence for this difference is provided by an experimental survey (between subjects) among 175 consumers from a consumer panel conducted in between October and November 2013. Consumers were asked about their perceptions of a vendors physical store and either a pure online offering or an online channel that offers certain offline services (option to pick up in store, service in store and returns in store). If transactions in the latter channel evoke perceptions that differ from the perceptions that consumers have in pure online and pure offline channels, we would have evidence to claim that it is necessary to consider those hybrid channels within multichannel commerce as well. Due to the length limitations of this paper, the evidence cannot be provided in terms of a structural model. Differences in mean values are tested as anecdotal evidence to support our conceptual arguments.

Customer valuations of different alternatives can be explained through varied convenience and risk perceptions (Keh and Pang, 2010). These convenience and risk perceptions reflect customers' positive and negative reactions. *Transaction convenience* refers to the time and effort of finalizing the transaction (Seiders et al., 2007). *Post-benefit convenience* refers to the time and effort costs associated with reestablishing subsequent contact with the firm (Seiders et al., 2007). *Performance risk* is related to

whether the shop can perform as expected and thus satisfy customer needs (Keh and Pang, 2010). The notion of performance risk is in line with the notion of the “failure to gain product benefit risk” in e-commerce research (Glover and Benbasat, 2011). *Psychological risk* refers to the possible loss of psychological well-being due to transacting with this shop (Keh and Pang, 2010).

The different perceptions are measured using established scales as depicted in Appendix B. Comparing pure and hybrid online transactions, the results indicate that hybrid channels offer significantly higher post-benefit convenience ($t(173)=-6.44$, $p=.00$) while lowering the psychological risk of the transaction ($t(173)=2.52$; $p=.013$). The perceptions in all four dimensions are graphically depicted in Figure 6 including the perceptions of transactions in physical stores as a baseline comparison. It becomes apparent that that the innovative channel configurations of multichannel retailers differ widely from transactions in physical stores and at pure online retailers in the view of consumers. Therefore, consumer behaviour in such integrated channels cannot be explained by established insights on either offline or online transactions.

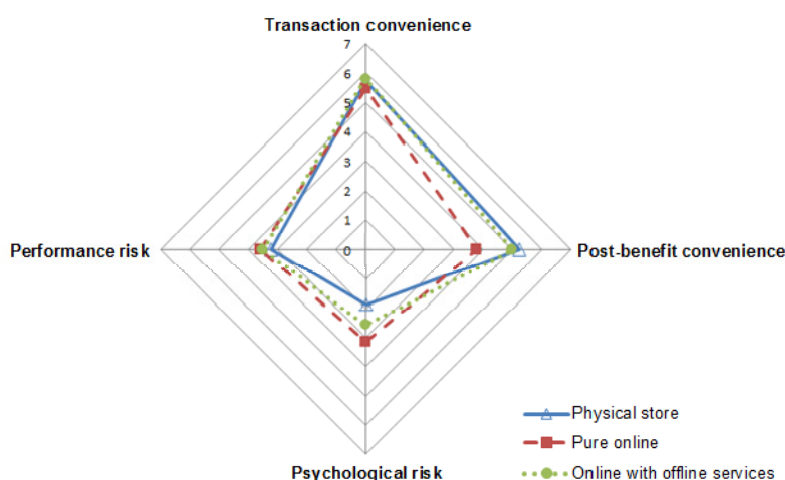


Figure 6. Consumer perceptions of different channel configurations.

5 An extended conceptualization of multichannel commerce

Multichannel research has focused on consumers’ decision making between physical and electronic channels and firms’ strategies to organize optimally to serve their needs (Neslin et al., 2006). The systematic literature review has revealed insights on both consumer and firm decisions in a multichannel environment. The investigated firm decisions can be reduced to the question whether firms should do multichannel and if so, how arising challenges can be addressed. Looking at multichannel decisions from a consumer perspective, studies have identified a broad set of factors driving consumers’ decisions to purchase in offline or online channels and to switch channels within or between purchases. Thereby, multichannel environments are characterised as binary at different granularities (channel switching between purchase phases) or time frames (multichannel shoppers). The emerging conceptualization of multichannel underlying these studies is depicted in Figure 7a. It becomes apparent that almost all of these studies treat offline and online channels as two detached poles.

These perspectives have allowed great progress in the area of multichannel commerce within the last years. However, our empirical evidence illustrates a mismatch between this conceptualization of multichannel applied in research and today’s market realities. It demonstrates that this conceptualization may no longer be sufficient to fully encompass the complexity of a converging multichannel environment. Firms do already offer channel options that cannot be classified within the old “black-and-white”-systematisation of online and offline channels. The integration of features of both channels for single transactions has led to many tones of grey between these options. A transaction where consum-

ers search and purchase online, but use the store to pick their order up, followed by service and retailers in store can hardly be classified as any of the decisions covered by the established conceptualization of multichannel commerce. Accordingly, existing insights on firms' decision making in multichannel environments hardly describe, explain or prescribe firm decisions within this multichannel continuum. Going further, we also indicated that consumers' evaluation for such (semi-)integrated channels differs fundamentally from both, their perception of physical as well as their evaluation of electronic channels. Therefore, insights on consumer behaviour on either of these channel types can hardly be applied to channels on the inside of the multichannel continuum. The resulting reconceptualization extends the variety of available alternatives for vendors and consumers engaging in multichannel environments by manifestations of channel-spanning configurations. The multichannel continuum is and will be shaped by ongoing multichannel innovations leading to a further increment of choice options available to vendors and customers across all stages of the purchase process (cp. Figure 7b).

Figure 7a) Established conceptualization of multichannel

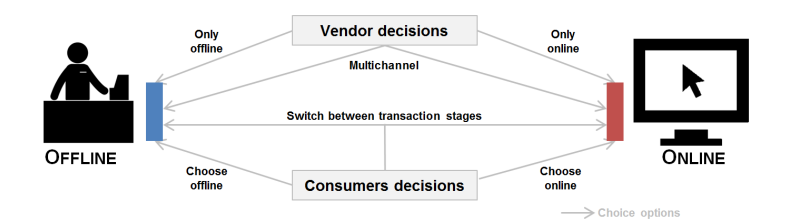
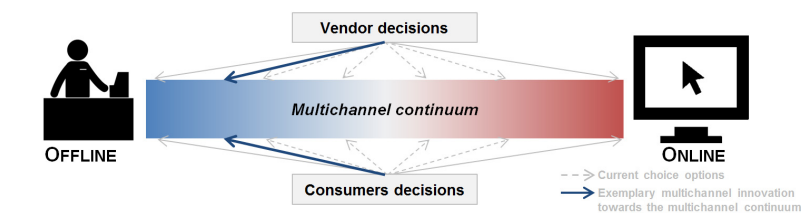
Figure 7b) Extended conceptualization of multichannel (for each transaction stage)

Figure 7. Established and extended conceptualization of multichannel.

Applying this extended conceptualization to existing studies opens whole variety of opportunities for research. Many studies have treated offline and online commerce as two separate alternatives. Studies taking a vendors perspective investigated whether a second channel should be added (e.g, Avery et al., 2012) and how the different vendors behave in physical and electronic channels (e.g., Brynjolfsson and Smith, 2000). Studies applying a consumer perspective explored which of the two channel options is preferable depending on certain conditions (e.g., Gensler et al., 2012) and how consumers switch between the channels (e.g., Verhoef et al., 2007). However, the desirability, consequences and value of channel integration is one of the most under-investigated issues in multichannel research (Neslin et al., 2006; Neslin and Shankar, 2009; Zhang et al., 2010). The perspective of the multichannel continuum allows researchers to revisit and adapt these effects and models to the dynamic, more complex environment where channel convergence blurs the boundaries between online and offline channels. Clustered along the research areas discussed above, Table 2 summarizes the established perspective on these areas and exemplifies selected opportunities that arise within the multichannel continuum.

Research area	Established perspectives	Opportunities in the multichannel continuum
Channel choice	Channel determinants, purchase specifics, external influences and individual differences that can predict channel choice.	Which types of integrated multichannel services provide additional customer value over existing offline and online alternatives? What are the contingency factors for consumer preferences of multichannel services? More specifically, how do purchase specifics, external influences and individual differences influence consumer's choice towards more or less IT-driven channel options? Which models can be applied to represent and understand consumer choices within great variety of alternative channel setups in the multichannel continuum? How can technology guide consumer decisions of the optimal multichannel configuration?
Multi-channel shoppers	Consumer characteristics that lead to multichannel shopping. Outcomes of multichannel shopping behaviours.	How do situational differences change individuals' preferences for channel characteristics? How do consumer decisions on the multichannel continuum evolve over time? How does the large amount of options influence the processing of information about alternatives and their choice strategies?
Channel switching	Mechanisms that drive consumers' switching between of online and offline channels between.	Which models and theories can be applied to study the customer journey within complex multichannel environments? How can integrated multichannel services be designed to create vendor lock-in and prevent cross-channel free riding?
Firm decision making	Conditions to describe whether firms should extend their established offerings towards multichannel. Solutions to the coordination challenges of multichannel retailers with regards to supply chains, inventories, pricing, branding and communications.	When and how can online and offline channels be integrated to create additional customer value? What is the optimal level of differentiation? How many different options should be offered? Do multichannel services offered by brick-and-click vendors differ stores (e.g., immediate pick-up) differ from multichannel services offered by pure online retailers (e.g., same-day delivery) in terms of their perception and valuation? How should the information flow between online and offline channels and the interfaces be designed? How can operational issues be resolved to provide a broad variety of integrated multichannel services?

Table 2. Selected research opportunities arising in the multichannel continuum.

6 Conclusion

The rise of electronic commerce largely increased the importance of multichannel and at the same time yielded many technological innovations. The comparison of previous studies on firms' and consumers' multichannel decisions has revealed a conceptualization of multichannel that depicts online and offline as two detached poles. However, empirical data indicates that there is a mismatch between research and today's market realities. To resolve this tension, an extended conceptualization of multichannel commerce was proposed. This conceptualization allows researchers to extend and adapt established insights to a more dynamic and complex multichannel environment and thereby opens a broad range of new research challenges and opportunities.

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Appendix A: Methodology of the structured literature review

The literature review was undertaken in January 2014 to include all papers published until the end of 2013. Since the topic is multidisciplinary and potentially of interest to many research areas, such as information systems, marketing, computer science, operations, tourism and others, no restriction on particular set of journals was made. Instead, a key word search in the abstracts of peer reviewed journal articles was conducted using three main literature search services (EBSCO Host, ProQuest and ISI Web of Knowledge). The search string was carefully developed based on the pre-conception, terms used in known literature on the topic and the aim of the literature review. The string has been iteratively improved before the final search term was deployed to generate the results.

Search string²: “consumer OR customer” AND “internet OR on*line OR electronic OR multi*channel” AND “choice OR prefer* OR purchase OR switch* OR decision OR valu*”

Using a set of exclusion rules that were refined continually following Okoli and Schabram (2010), the abstract and, if necessary, the full text of each article was scanned for inclusion. Exclusion rules were applied if the study did not cover any electronic channel, did not focus on consumer behavior, did not study consumers’ channel choices or preferences in any way, or was in any other way unrelated to the topic. So-called backward and forward searches were conducted to identify articles that the search string may have missed. *Backward search* was conducted by screening the references of the papers in the relevant set. *Forward search* was performed using the citations in the ISI web of knowledge database.

The analysis and synthesis of the literature was organized using a concept matrix which was steadily adjusted during the work (Webster and Watson, 2002). The concepts were derived iteratively based on the reviewed papers. The matrix categorizes the research topic, methodology, context, data sources, product type, retailer types, dependent and independent variables. From this analysis, three main themes emerged: channel choice, channel switching and multichannel shoppers. The detailed findings on these matters are discussed and presented in the respective sections.

Appendix B: Measurement model for latent variables

<p>(Offline / online) Transaction convenience (Seiders et al., 2007)</p> <p>OTRC1 [ITRC1]: The store [online-shop] makes it easy for me to conclude my transaction.</p> <p>OTRC2 [ITRC2]: It is effortful to complete this purchase at the store [online-shop]. [reversed]</p> <p>OTRC3 [ITRC3]: I am able to complete my purchase quickly at the store [online-shop].</p>
<p>(Offline / online) Post-benefit convenience (Seiders et al., 2007)</p> <p>OPBC1 [IPBC1]: The retailer takes care of product exchanges and returns promptly.</p> <p>OPBC2 [IPBC2]: Any after-purchase problems I experience are quickly resolved at the retailer.</p> <p>OPBC3 [IPBC3]: The exchange or return of goods at the retailer can cause problems. [reversed]</p> <p>OPBC4 [IPBC4]: It can be complicated to return or exchange products at this retailer. [reversed]</p>
<p>(Offline / online) Psychological risk (Keh and Pang, 2010)</p> <p>OPSR1 [IPSR1]: The thought of using this store [online-shop] makes me feel psychologically uncomfortable.</p> <p>OPSR2 [IPSR2]: The thought of using this store [online-shop] gives me a feeling of unwanted anxiety.</p> <p>OPSR3 [IPSR3]: The thought of using this store [online-shop] causes me to experience unnecessary tension.</p> <p>OPSR4 [IPSR4]: I would worry a lot when buying this store [online-shop].</p>
<p>(Offline / online) Performance risk (Keh and Pang, 2010)</p> <p>OPER1 [IPER1]: There is a high chance that something goes wrong when buying at this store [online-shop].</p> <p>OPER2 [IPER2]: There was a high chance that I would suffer some loss when transacting with this store [online-shop].</p> <p>OPER3 [IPER3]: The risk of purchasing at this store [online-shop] is low. [reversed]</p>

² The search string was adapted to the syntax of the respective search engine. Individual adaptations were made to search for the root word only and thereby include plurals as well as verbs and nouns.