

Cross-Channel Integration and Consumer Loyalty: Mediating Effect of Consumer Empowerment and Satisfaction

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DOI: <https://dx.doi.org/10.47772/IJRISS.2023.7012101>

Received: 29 November 2023; Revised: 07 December 2023; Accepted: 12 December 2023; Published: 11 January 2024

ABSTRACT

The field of marketing is constantly evolving, and consumers' interactions with brands have changed considerably over time. Companies must therefore adapt by developing effective strategies to attract and retain customers. By adopting a cross-channel strategy, retailers can maintain a strong relationship with them. Our study is based on the stimulus-organism-response model, which conceptualizes how Cross-Channel Integration influences consumers' feelings of empowerment and satisfaction, thus stimulating their loyalty behavior. A survey was conducted, and an online questionnaire administered to a sample of 255 consumers. The results suggest that Cross-Channel Integration promotes Consumer Loyalty. Consumers' relationship with retailers is strengthened because they feel more empowered and satisfied with the product and/or service provided.

Keywords— Cross-Channel Integration, phygital experience, consumer retention, consumer empowerment, consumer satisfaction, retailer's uncertainty

INTRODUCTION

Consumers are increasingly interacting with brands through different channels (online, in-store, on social networks, etc.). This trend has led companies to rethink their marketing approach and develop cross-channel strategies. Cross-channel commerce innovations have transformed the way companies reach their customers and offer them products and services (Lee et al., 2019). The barriers between the company's different channels need to be eliminated in order to reshape customers' purchasing behavior and offer them exceptional shopping experiences (Shi et al., 2020).

Therefore, the main concern of multichannel commerce is how to eliminate distinctions between channels in order to create synergy between them (Zhang et al., 2018), to offer a seamless and complete cross-channel experience (Hickman, et al., 2019). For retailers, the benefits of channel integration may be offset by the lack of complementarity between different channels (Wagner et al., 2020).

However, leveraging Cross-Channel Integration to assimilate and coordinate multiple online and offline channels to engage and retain customers remains an elusive challenge for retailers (Zhang et al., 2016).

THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Stimulus-organism-response model

Our research is based on the Stimulus-Organism-Response (S-O -R) model proposed by Mehrabian and Russell (1974). This model describes how perceived stimuli evoke consumers' internal feelings (i.e. the organism), which then trigger their actions and behavior (i.e. the response). Specifically, the S-O-R typology refers to stimuli external to an individual, encompassing environmental variables (Bagozzi & Yi, 1988). Our

research considers channel integration as a stimulus, consumers' sense of empowerment and satisfaction as an organism, and consumers' choice to remain loyal to the brand as a response. As noted earlier, retailers tend to use channel integration to increase consumers' psychological empowerment and perceived satisfaction, which then result from channel synergistic management (Wu & Chang, 2016).

In this context, we can reaffirm that channel integration can impact Consumer Loyalty by satisfying their evolving shopping needs, manifested through promotion, pricing and order fulfillment (Saghiri et al., 2017), while reinforcing their perception of increased control over the wider shopping process (Zhang et al., 2018). Building on S-O-R, our study proposes Cross-Channel Integration as the external stimuli controlled by retailers for consumers, which develop a sense of empowerment and satisfaction aimed at driving their loyalty behavior.

Hypothesis formulation

Channel integration describes a retailer's efforts to ensure close collaboration between its multiple channels to achieve synchronized operations (Saghiri et al., 2017; Hamouda, 2019). Consequently, this concept has been deemed essential in managing the relationship with customers who use and combine multiple channels (Lee et al., 2019). Much work has been conducted to explore the effects of channel integration, including in multichannel and omnichannel contexts. This research has revealed that channel integration positively influences customers in terms of satisfaction (Seck & Philippe, 2013), engagement and word of mouth (Lee et al., 2019), empowerment (Zhang et al., 2018), perceived fluidity (Shen et al., 2018), switching costs (Li et al., 2018), perceived value (Hamouda, 2019), and cross-purchase intentions (Hossain et al., 2020).

According to Singh & Agrawal (2019), retaining customers is less costly than attracting new customers. Researchers have shown that when customer retention increases by one per cent, company profits increase by five per cent (Hawkins & Hoon, 2019).

In fact, as part of our research and on the basis of these observations, we can suggest that Cross-Channel Integration promotes Consumer Loyalty. Hence the first hypothesis, which is as follows:

H1: Cross-Channel Integration positively impacts Consumer Loyalty.

Nevertheless, in this whole process of Cross-Channel Integration, consumer empowerment also plays an important role in Consumer Loyalty. It has been defined as giving someone the authority and capabilities to control or manage others (Cattaneo & Chapman, 2010). Cross-Channel Integration, in conjunction with consumer empowerment, allows consumers to have all kinds of information from online and offline channels, which facilitates their decision making (Zhang et al., 2014).

Furthermore, through the consistent integration of data, consumers can also choose which channel they prefer (i.e. online or offline). Based on this statement, we posed the following hypothesis:

H2: Consumer empowerment mediates the relation between Cross-Channel Integration and customer loyalty.

Consumer satisfaction represents a consumer's expectations of a product/service before the actual purchase, as well as their evaluation after the purchase/consumption. In other terms, consumers will only be satisfied if their purchase journey has at least lived up to their expectations.

Zhang et al. (2018) have argued that satisfaction represents a "positive psychological state" of the consumer. Similarly, Lemon & Verhoef (2016) studied consumer satisfaction in the context of multichannel retailing, noting that it is influenced by Cross-Channel Integration, i.e. it is favored by the multichannel strategy, which influences consumer behavior (Wallace et al., 2004). Consumers continue to buy if they are satisfied with one channel and show a favorable intention to buy from other channels belonging to the same brand (Yang et al., 2013). Given these results, we can state the following hypothesis:

H3: Satisfaction mediates the relation between Cross-Channel Integration and Consumer Loyalty.

Cross-Channel Integration has been found to increase empowerment, which leads to satisfaction (Cao & Li, 2015; Lemon & Verhoef, 2016). As a result, satisfaction creates a positive attitude and increases the companies' reliability (Heinberg et al., 2018), which increases customer loyalty.

In contrast, if consumers have low trust and perceive high risk in the service/product provided by a brand, the brand becomes untrustworthy (Pavlou, 2003) and, as a result, this impacts negatively on the empowerment of consumers. The lack of trustworthiness and of their reliability has been identified as a major constraint for multichannel commerce to achieve customer retention and loyalty with Cross-Channel Integration (Flavián et al., 2016). Therefore, we developed the following hypotheses:

H4: The mediating effect of Cross-Channel Integration on loyalty through empowerment is moderated by retailer uncertainty such that this effect is lower when the degree of retailer uncertainty is high.

H5: The mediating effect of Cross-Channel Integration on loyalty through satisfaction is moderated by retailer uncertainty, so that this effect is lower when the degree of retailer uncertainty is high.

The conceptual framework proposed in our study describes the relationship between Cross-Channel Integration and Consumer Loyalty, as well as the mediating effects of consumer empowerment and satisfaction and the moderating effect of retailer uncertainty.

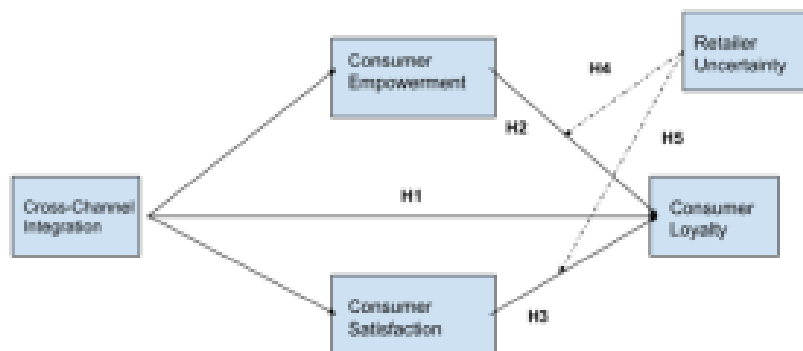


Figure 1. Conceptual Model of Research

RESEARCH METHODOLOGY

The qualitative exploratory study

We decided to conduct an exploratory qualitative study to gain a better understanding of the phenomenon under study in the context of emerging markets on the one hand, and to familiarize with the concept in question by interviewing consumers about their behavior and validating the variables we had chosen, on the other.

Some respondents were recruited based on their purchases both online and offline. All respondents were aged between 18 and 59, 12 were employees and 4 were students. Interviews were conducted face-to-face, then recorded and transcribed.

Preliminary results of the qualitative study:

Respondents demonstrate a strong preference for multi-channel retailers proficient in managing diverse channels, emphasizing the importance of reciprocity and uniformity in prices and promotions. Their positive shopping experience is defined by the freedom to make purchase decisions at their convenience. The majority favor multi-channel shopping, citing empowerment in researching, comparing offers, and making decisions through their preferred channel, be it online or offline. They possess the capabilities to engage in various stages of the purchasing process at their discretion

Factors influencing satisfaction with cross-channel retailers include qualified staff, a positive buying experience, product quality, efficient delivery, responsive after-sales service, delivery times, product integration, consistency of information, and the effectiveness of direct marketing. Loyalty is contingent on multiple elements, including product quality, a pleasant in-store environment, qualified staff, brand reputation, satisfaction with previous purchases, loyalty programs, promotions, and overall credibility.

The above results summarize the nuances of consumers’ multi-channel purchasing behavior, and lead us to validate the choice of the research’s conceptual model.

The quantitative study

The aim of our research is to measure consumers’ perceptions of Cross-Channel Integration in a phygital context and its effect on customer empowerment, satisfaction and loyalty.

• **Sampling and data collection procedure:**

To test the hypotheses, an online questionnaire was administered to respondents. The questionnaire is composed of 5 main topics related to our study : consumers’ perception of channel integration; consumer empowerment; consumer satisfaction; consumer loyalty; retailer’s lack of reliability

We pre-tested the survey questionnaire, using subject-matter experts and a random selection of online consumers. The study focused on individuals aged 18 years and above, those with previous experience of cross-channel retailing.

• **Survey participants and demographic profile:**

273 questionnaires were completed. 18 respondents mentioned that they never frequent cross channels retailers, so we were limited to 255 valid responses.

The demographic profile of respondents is as follows (see Table 1): most respondents are women (61.2%), aged 26 to 39 (50.8%) and with a postgraduate degree (87.8%).

(87.8%). In terms of monthly income, most respondents earn between 1000DT and 2000DT (51%).

Table 1. Demographic profile of respondents

Demographic characteristics	Items	Sample size (%)
Age	18–25 years	87 (34%)
	26–39 years	130 (50.8%)
	40–59 years	32 (12.5%)
	60 and above	7 (2.7%)
Gender	Male	99 (38.8%)
	Female	156 (61.2%)
Educational Qualification	Below graduation	0
	Graduation	31 (12.2%)
	Post-graduation and higher	224 (87.8%)
Monthly income	1000 DT and below	
	1000-2000 DT	76 (31.3%)
	2000-3000 DT	124 (51%)
	3000 DT and above	31 (12.8)
		12 (4.9)

Each construct comprised multiple reflective items, adhering to a multi-item structure (see table 2.). Drawing on validated scales from prior studies, the instrument was meticulously developed. Notably, the measurement of cross-channel integration (CCI), Consumer Loyalty (CL), and retailer uncertainty (RU) integrated items adapted from Li et al. (2018), encompassing ten CCI items, six CL items, and nine RU items to assess consumers' efforts in evaluating consumer behavior. Additionally, consumer empowerment (CE) was gauged using five items initially adapted from Zhang et al. (2018), with one item excluded due to low factor loading, resulting in a final set of four items. Furthermore, consumer satisfaction (CS) was measured using five items adapted from Zhang et al. (2018).

Table 2. Construct and measurement assessment

Construct & Items	Estimate	CR	Cronbach's Alpha (α)
<p>Cross-Channel Integration (CCI)</p> <p>CCI1: The Website highlights in-store promotions that are taking place in the physical store.</p> <p>CCI2: The Website advertises the physical store by providing the address and contact information of the physical store.</p> <p>CCI3: The Website allows customers to search for products available in the physical store.</p> <p>CCI4: The firm allows checking of inventory status at the physical store through the Website.</p> <p>CCI5: The physical store allows customers to self-collect their online purchases.</p> <p>CCI6: The firm allows customers to choose any physical store from which to pick up their online purchases.</p> <p>CCI7: The firm maintains integrated purchase history of customers' online and offline purchases.</p> <p>CCI8: The firm allows customers to access their prior integrated purchase history.</p> <p>CCI9: The in-store customer service centre accepts return, repair or exchange of products purchased online.</p> <p>CCI10: The Website provides post-purchase services such as support for products purchased at physical stores.</p>	<p>0.884</p> <p>0.852</p> <p>0.906</p> <p>0.873</p> <p>0.822</p> <p>0.942</p> <p>0.705</p> <p>0.567</p> <p>0.930</p> <p>0.929</p>	<p>0.981</p>	<p>0,978</p>

<p>Consumer Empowerment (CE)</p> <p>CE1: Talking to the salespersons and/or visiting the website of the retailer helps me compare the price and quality of the items of the store with other competitors.</p> <p>CE2: Through various social media, the retailer provides me with an opportunity to learn about the experiences/choices of other consumers.</p> <p>CE3: Through emails, SMSs, in store promotions and POS communication systems, the retailer provides relevant information on items, brands and their usage.</p> <p>CE4: I feel great if my feedback and preferred choice set is included in the retailer's future collection.</p> <p>CE5: For me, the larger the choice set, the higher is the shopping satisfaction.</p>	<p>0.854</p> <p>0.886</p> <p>0.948</p> <p>0.465*</p> <p>0.889</p>	<p>0.971</p>	<p>0,960</p>
<p>Consumer Satisfaction (CS)</p> <p>CS1: In general, I am satisfied with the products and services offered by this company.</p> <p>CS2: I am totally convinced by this brand</p> <p>CS3: This brand meets all my expectations</p> <p>CS4: I have had very good experiences with this company</p> <p>CS5: This brand offers me exactly what I'm looking for</p>	<p>0.863</p> <p>0.928</p> <p>0.875</p> <p>0.909</p> <p>0.828</p>	<p>0.974</p>	<p>0,966</p>
<p>Customer Loyalty (CL)</p> <p>CR1: I feel loyalty toward this retailer.</p> <p>CR2: Even if this retailer was difficult to reach, I would still keep buying there.</p> <p>CR3: I am very committed to this retailer.</p> <p>CR4: I am willing to make an effort to shop at this retailer.</p> <p>CR5: I do most of my shopping at this retailer.</p> <p>CR6: I care a lot about this retailer from which I frequently purchase.</p>	<p>0.984</p> <p>0.986</p> <p>0.959</p> <p>0.984</p> <p>0.854</p> <p>0.965</p>	<p>0.992</p>	<p>0,991</p>

Retailer Uncertainty (RU)			
RU1: I am doubtful that this retailer has accurately portrayed his or her true characteristics.			
RU2: I am uncertain that this retailer has truthfully described his or her selling practices.	0.917		
RU3: I feel that this retailer may have misrepresented the product in his or her website description.	0.955		
RU4: I am uncertain that this retailer has fully disclosed all product defects.	0.915		
RU5: I am doubtful that this retailer will deliver the product as promised in a timely manner.	0.949		
RU6: I am concerned that this retailer may back out on our agreement.	0.915	0.917	0.905
RU7: I am afraid that this retailer may attempt to defraud me.	0.901		
RU8: I am certain that this retailer will follow through on all of his or her promises and guarantees.	0.950		
RU9: I feel that dealing with this retailer involves a high degree of uncertainty about the retailer's quality.	0.803		
RU10: I am certain that this retailer will follow through on all of his or her promises and guarantees.	0.789		
* Items deleted due to poor fit indices.			

STUDY RESULTS

Measurement model

The structural model in this study demonstrates a strong overall fit, as indicated in Table 3. Specifically, both R² and adjusted R² values surpass the 0.1 threshold recommended by Falk and Miller (1992).

Table 3. The structural model's good fit

	R2	R2 adjusted
Consumer Empowerment	0.757	0.756
Consumer Satisfaction	0.940	0.939
Consumer Loyalty	0.775	0.774

Additionally, the Average Variance Extracted (AVE) scores, ranging from 0.655 to 0.955, comfortably exceed the 0.5 threshold set by Fornell and Larcker (1981).

Consequently, the measurement model displays satisfactory convergent validity. Furthermore, the square root of the AVE for each construct is greater than its correlation with any other construct, as evidenced in Table 4, confirming the model's discriminant validity.

Table 4. AVE scores and discriminant validity of measuring scales

	AVE	CE	CL	CCI	RU	CS
CE	0.894	0.945				
CL	0.955	0.935	0.977			
CCI	0.841	0.870	0.915	0.917		
RU	0.655	0.720	0.769	0.757	0.809	
CS	0.880	0.905	0.917	0.880	0.722	0.938

CCI-Cross-Channel Integration, CL- Consumer Loyalty, CE- Consumer empowerment, CS- Consumer satisfaction, RU- Retailer uncertainty, AVE-Average Variance Extracted.

In summary, the proposed model exhibits favorable fit indices, demonstrating reliability, convergent validity, and discriminant validity.

• **Hypothesis testing**

Data analysis using SMART-PLS(4) shows that Cross-Channel Integration has a positive and significant effect on Consumer Loyalty ($\beta = 0.506$; $T_{student} = 21.862$; $p\text{-value} = 0.000$). **Hypothesis H1 is then confirmed.**

We used Baron and Kenny’s (1986) method to test the mediating and moderating variables effect between both Cross-Channel Integration and Consumer Loyalty.

• **Mediating effects**

According to Baron and Kenny (1986), the independent variable (Cross-Channel Integration) must have a significant effect on the mediating variable (Consumer Empowerment), which is the case here, a positive and significant effect ($\beta = 0.870$; $T_{student} = 74.151$; $p\text{-value} = 0.000$). The mediating variable (Consumer Empowerment) has a positive significant effect on the dependent variable (Consumer Loyalty). This relationship is verified by the results reported ($\beta = 0.117$; $T_{student} = 1.791$; $p\text{-value} = 0.000$). Nevertheless, the relationship between Cross-Channel Integration and Consumer Loyalty remained significant following the introduction of the mediating variable. This leads us to confirm that Consumer Empowerment mediates the relationship between Cross-Channel Integration and Consumer Loyalty. **Hypothesis H2 is therefore confirmed.**

Second, the independent variable (Cross-Channel Integration) must have a significant effect on the mediating variable (Consumer Satisfaction), which is the case here according to our results ($\beta = 0.880$; $T_{student} = 78.756$; $p\text{-value} = 0.000$), a positive and significant effect. Also, the mediating variable (Consumer Satisfaction) has a positive significant effect on the dependent variable (Consumer Loyalty). This relationship is also verified by the results reported ($\beta = 0.587$; $T_{student} = 8.827$; $p\text{-value} = 0.000$). Nevertheless, the link between Cross-Channel Integration and Consumer Loyalty remained significant following the introduction of the mediating variable (Consumer Satisfaction). This allows us to consider that consumer satisfaction mediates the relationship between Cross-Channel Integration and Consumer Loyalty. **Hypothesis H3 is therefore confirmed.**

• **Moderating effects**

Following the method advocated by Baron and Kenny (1986), we found that the moderator variable “retailer uncertainty” had a significant and negative effect on the dependent variable “loyalty” ($\beta = -0.088$; $T_{student} = 3.668$; $p\text{-value} = 0.000$).

The interaction test between Consumer Empowerment and Retailer uncertainty on loyalty is also significant and negative ($\beta = -0.326$; $t = 4,831$; $p = 0.000$), effectively showing that retail uncertainty moderates the relationship between Cross-Channel Integration, empowerment and loyalty; consequently, hypothesis H4 is confirmed.

Also, the moderator variable ” retailer uncertainty ” has a significant and negative effect on the dependent variable ” loyalty ” ($\beta = -0,088$; $T_{student} = 3.668$; $p\text{-value} = 0,000$)

The interaction test between satisfaction and retailer uncertainty on loyalty is also significant and negative ($\beta = -0.287$; $t = 4,406$; $p = 0.000$), effectively showing that retailer uncertainty moderates the relationship between Cross-Channel Integration, satisfaction and loyalty. **Hypothesis H5 is therefore confirmed.**

The results obtained and the hypotheses tested are summarized as follow (see table 5)

Table 5. Results of hypothesis testing

Hypothesis	β Beta	T_Statistics	P_Values	Results
H1: Cross-Channel Integration → Consumer Loyalty	0.893	21.862	0.000	Confirmed
H2: Cross-Channel Integration→ Empowerment → Consumer Loyalty	0.102	1.787	0.037	Confirmed
H3: Cross-Channel Integration→ Satisfaction → Consumer Loyalty	0.517	8.719	0.000	Confirmed
H4: Retailer Uncertainty X Empowerment → Consumer Loyalty	-0.329	4.831	0.000	Confirmed
H4: Retailer Uncertainty X Satisfaction → Consumer Loyalty	-0.287	4.406	0.000	Confirmed

DISCUSSION

Research results suggest that Cross-Channel Integration has a significant effect on consumer loyalty, indicating that retailers who opt for channel integration can successfully retain their customers. We can also assume that retailers who combine digital and physical channels to reach many customers, can succeed in retaining them over a long period (Lemon & Verhoef, 2016). It’s important to note that combining the physical and digital into a single entity, known as “phygital”, while initiating communication with customers, offers multiple benefits for both retailers and customers. Several researchers (Gao et al., 2021; Choi et al., 2020; Li et al., 2019; Saghiri et al., 2017) have confirmed that Cross-Channel Integration positively affects Consumer Loyalty. The result of our research supports the assumptions of all these researchers.

The obtained results reveal that a sense of empowerment and consumer empowerment play an important mediating role in the relationship between Cross-Channel Integration and Consumer Loyalty. Consumer empowerment is about “providing customers with ways to genuinely engage with retailers in order to

modulate the nature of transactions, to connect and collaborate by sharing information, praise, criticism, suggestions and ideas about products, services and policies” (Ramani & Kumar, 2008, p. 28).

Importantly, our findings are consistent with research by Cao & Li (2015), Zhang et al. (2018) and Mishra et al. (2021). In this sense, retailers seeking to build consumer loyalty should design retailing strategies that encourage customer empowerment. Retailers therefore intend to integrate channels to ensure that their customers are not confused when making decisions. The present study explored the significant mediating role of satisfaction in the relationship between Cross-Channel Integration and loyalty. Consumers who are satisfied with their digital (i.e., on the retailer’s website) and physical (i.e., in the store) experience are likely to maintain their relationship with that retailer. Lemon and Verhoef (2016) studied consumer satisfaction in multichannel commerce and observed that it is impacted by Cross-Channel Integration. According to the principle of reciprocity, if customers perceive retailers’ omnichannel integration-building efforts, this is more likely to stimulate a positive emotional state, which in turn, fosters a closer relationship between retailers and their customers to deliver higher satisfaction and promote customer loyalty (Fassnacht et al., 2019).

According to the research results, as retailers’ uncertainty increases, the relationship between cross-channel integration, satisfaction and loyalty becomes weaker. The results can therefore be summarized as follows: the more unreliable the retailer, the lower the satisfaction, while the more reliable the retailer (Li et al., 2018), the greater the customer’s trust, which translates into higher positive customer feelings. Unreliable signs lead to lower consumer satisfaction and loyalty, as found by Luo et al. (2012) and Díaz (2017). Similarly, the results of our study show a significant relationship between sign Consumer Uncertainty, Consumer Empowerment and Consumer Loyalty in cross-channel retailing. Consumers need to be sure of the information they receive via different online and offline channels in order to feel empowered (Broniarczyk & Griffin, 2014). This uncertainty of retailers is seen as a limit to loyalty in cross-channel retailing, as highlighted by Flavián et al. (2016).

In conclusion, by ensuring a robust channel integration strategy, retailers can manage multiple channels, helping to empower consumers and improve their level of trustworthiness (Keller, 2010), which in turn boosts Consumer Loyalty.

IMPLICATIONS AND LIMITATIONS

Theoretical implications

Our study contributes to the literature’s understanding of the impact of Cross-Channel Integration on Consumer Loyalty in a phygital context. First, this research is among one of the first to test the relationship between Cross-Channel Integration and Consumer Loyalty using mediation and moderation analysis. Most previous studies have focused on the physical aspect of the customer experience (Roy et al., 2020), while few have focused on the phygital customer experience (Gao et al., 2021; Shi et al., 2020). Also, noteworthy is that, except for the work of Cao & Li, (2018), Lee et al., (2019), most published work on cross-channel retailing has been based on a qualitative research approaches (Bell et al., 2014)

Second, this study also validated the role of empowerment and satisfaction in predicting consumer attitudinal behaviors, still in the context of cross-channel retailing. The findings reaffirm that satisfied and empowered consumers are more likely to maintain a long-term relationship with an omnichannel retailer. They are therefore even more motivated to give their opinion, try out new products and become advocates of that brand.

We suggest that Cross-Channel Integration is most effective when it leads to Consumer retention, and that the relationship between Cross-Channel Integration and loyalty is reinforced when empowerment and

satisfaction are present. Our results are consistent with research conducted by Gao et al.,2021; Li et al., 2018; M. Zhang et al., 2018; Fassnacht et al., 2019; Saghiri, Wilding, Mena, & Bourlakis, 2017; Schramm-Klein et al. 2011; Lemon et Verhoef, 2016; Cao et Li, 2015 et Mishra, S.,et al., 2021; Prentice et al., 2016; Yim et al., 2012. Thus, we suggest that retailer uncertainty negatively moderates the relationship between Cross-Channel Integration and loyalty. The stronger this effect, the more the relationship between these two variables diminishes. The results of our research reinforce previous studies presented in this issue by Luo et al.,2012; Díaz, 2017; Broniarczyk and Griffin, 2014; Flavián et al.,2016 and Keller, 2010.

Practical implications

Fierce competition is forcing retailers to rethink their marketing strategies so as not to lose touch with customers. This is why retailers often think of combining online and offline channels to improve their customers' cross-channel/phygital experience. However, such integration will not bear fruit if customers do not trust the brands. Given the moderating effect of brand uncertainty between Cross-Channel Integration and loyalty, brands adopting cross-channel strategies should take greater care to reduce the risks perceived by their customers regarding the brand's degree of trust in terms of reputation, trust, sales practices and information dissemination. In addition, retailers should be more transparent in sharing information about their platforms and prices across channels to minimize customer doubts, while encouraging customers to find out more and share their opinions. They should offer adequate, efficient and effective customer service across all channels, enhancing customer engagement through mobile apps or other relevant channels.

Retailers are constantly looking for ways to improve customer satisfaction and build loyalty. To achieve this, they need to use personalization techniques to further engage their customers.

For example, retailers can adopt category-specific strategies to help customers make their choices. From a marketing point of view, retailers can offer features that enable customers to better understand how a specific product fits them, triggering the intention to buy the product, possibly by visiting the store. According to Rizzo (2018), the use of augmented reality technologies has the potential to facilitate the online product research process, and generate deeper and more meaningful product knowledge for customers, helping them to reduce perceived purchase risks.

Merle et al, (2012) claims that the personalization of on-line visualization resources leads to a positive impact on the trust toward wearing the product by the e-consumer. Similarly, Bastide (2021) claims that the visualization tools of the augmented reality application are customizable and aimed at improving consumer confidence towards wearing the product. Consequently, real-time product visualization can reduce the uncertainty associated with purchasing on mobile apps. Therefore, by emphasizing consumer empowerment, companies could be more reliable.

Feddane et al (2022) have highlighted the importance of considering both the human and experiential aspects of technology in stores. Although technologies bring many advantages to stores, such as utilitarian and hedonic benefits, they should in no way replace or substitute work performed by sales representatives. On the contrary, these shopping technologies enrich the customer experience and improve perceived value, especially when social interactions are involved. Consequently, managers need to promote their technology while ensuring the presence of the sales staff.

In conclusion, cross-channel/phygital commerce is seen as the next big strategy for marketers, as it combines the benefits of physical stores and online sales channels. By adopting a cross-channel approach, retailers can offer their customers a consistent, personalized experience across all sales channels. This approach strengthens customer loyalty and boosts sales, while offering a pleasant and satisfying shopping experience.

Limitations and future research

Our study has a number of limitations, which we would like to point out. However, we see these limitations as additional avenues of research that we encourage researchers in the field to explore.

We have chosen to test our research model on consumers in general, without limiting ourselves to a specific brand or sector. Future work should test this model on other brands to obtain more interesting results. This would allow us to validate, or even extend, the results obtained and their scope of application. The inclusion of moderating variables such as the generation effect would undoubtedly be of great importance. Furthermore, we have used a survey-based approach to understand the determinants of Consumer Loyalty; however, future researchers should conduct field experiments to better explore the relationship between Cross-Channel Integration, empowerment and loyalty.

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