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## **Engaging consumers on new integrated multichannel retail settings: challenges for retailers**

### **Abstract.**

The rapid diffusion of more channels for shopping posits new challenges for retailers, who need to compete in a complex environment for avoiding the problem of consumer cross-channel free riding. To discourage this behaviour, we propose a new environment where one retailer simultaneously handles more channels. The emerging integrated environment would engage more consumers if compared to the single handled channel, which in turn would avoid switching behaviours towards competitors' channels. Our empirical research, based on the stimulus-organism-response paradigm, involves a sample of 237 consumers who were asked to explore the new retail settings simulated in a university lab. The results lead us to suggest the effective combination of multiple channels managed by one retailer as the new challenge for scholars and practitioners. We note that our participants showed positive emotional reactions towards the environment, which lead them to choose this environment for purchases.

**Keywords:** multichannel marketing, retailing, technology management, shopping experience, consumer behaviour, cross-channel free riding

### **1. Introduction**

For a long time, the purchase of goods held through two main channels: retailer's web site and/or traditional point of sale, considered as independent channels. To date, web sites offer new interactive features to catch consumers, i.e. the possibility to virtual try the product, to

achieve customized recommendations, etc. (Pantano, 2014), while mobile channel is emerging as the new mainstream for shopping activity based on ubiquitous access to product anytime and anywhere through consumer own mobile device (Pantano and Timmermans, 2014).

Moreover, the number of channels through which consumers may freely access, compare, choose and buy different items is increasing rapidly (Kim and Park, 2005; Kumar, 2010; Wagner et al., 2013; Pantano, 2014), with dramatic consequences for the traditional retail settings. Hence, retailers face new challenges to successfully compete in the emergent scenario (Neslin et al., 2006). For instance, consumers may use one channel for collecting information and a different one for effective buying managed by independent actors (Verhoef et al., 2007; Chiu et al., 2011; Hsieh et al., 2012; Blazquez, 2014). Past studies provide evidence that in the emerging multichannel scenario, consumers engage more purchases if compared to one-channel buyers (Dholakia et al., 2005; Seck and Philippe, 2013). Therefore, the complexity of the competitive market grows up, by soliciting retailers to perform simultaneously in different retail settings (i.e. the physical, online and mobile scenario). For these reasons, multichannel retailing occurs as hot research topic as it stresses retailers' ability to integrate different channels for shopping (Jin and Kim, 2010), by identifying the channel choice as a fundamental step for competing (Neslin & Shankar, 2009; Hsieh et al., 2012).

Prior works showed a huge interest by scholars and practitioners towards the multi-channel phenomenon, by largely focusing on the effect of multichannel on brand equity and loyalty (Keller, 2010; Hsieh et al., 2012), on the comparison of multichannel retailing and *pure* e-tailing (Jin and Kim, 2010), on the linkage between attitude toward physical retailer and online one (Kim and Park, 2005), on consumer switching behaviour and subsequent costs for

retailers (Wallace, et al., 2004; Dholakia et al., 2010), and on targeting consumers based on their channel preferences (Dholakia et al., 2010).

Although some retailers started being aware of the importance to develop new practices for handling more channels within the same environment (e.g. Walmart is trying to expand online grocery along with in-store pickup test), there is still a gap in the literature concerning consumers' response towards the emerging retail settings and management practices.

In this paper we refer to a new multichannel environment characterized by the integration of different channels managed by one retailer and available within the same (physical) store. In particular, we explore the interactions between consumers and products on the emerging retail settings in order to examine the extent to which an exploratory sample of participants is willing to adopt this multichannel environment for purchases, while reducing the switching behaviour to other competitors.

To achieve this goal, we developed an integrated store devoted to fashion accessories within the university lab, investigated through the Stimulus-Organism-Response (S-O-R) paradigm to demarcate consumers' response towards the new multichannel retail settings. We propose that the new store (stimulus) influences shopping experience in terms of perception of service quality satisfaction, and attitude (organism), which in turn influence their purchase intention (response).

The present paper is organized as follows: the first part develops the conceptual framework and hypotheses; the subsequent one describes the research design, including the survey with consumers who experienced the new store. Empirical results are then discussed. Finally, the paper presents some implications for scholars and practitioners and future research suggestions.

## **2. Theoretical background**

Traditionally, store is a single (physical) marketing channel, which supports firm-consumers (and *vice versa*) interactions (Hsieh et al., 2012). Nowadays, this channel is no longer only a face-to-face contact point where consumers access the firms services, but it further provide interactive touch-points also to create and accomplish the service. For instance, these systems might act as a guide during the shopping experience and perform some tasks traditionally executed by humans and mediate the shopping experience, such as the automatic cask desks for self check-out (Pantano and Timmermans, 2014).

Past studies largely exploited the S-O-R paradigm within retail settings for understanding the effects of some elements on consumers' behaviour, i.e. for investigating the influence of store atmosphere on consumers purchasing behaviour (Kim et al., 2009; Kim and Lennon, 2010; Hsieh et al., 2012; Fan et al., 2013; Floh and Madlberger, 2013; White et al., 2013). In the present study, we adopt this paradigm to evaluate the new retail settings, consisting of the integration of multiple channels within the same points of sale and handled by one retailer (stimulus), which influences consumers' perception of the emerging service in the environment, satisfaction and attitude (organisms), which in turn influence their purchase intention (response).

In particular, "S" refers to the stimulus external to the human such as the atmospherics, "O" consists of the organism (the effect of stimuli on human affective response) such as the perceived retail quality, satisfaction and attitude, and "R" stands for human behavioural reaction, such as consumers' retention, loyalty, etc. (Neslin and Shankar, 2009; Hsieh et al., 2012).

Since several retailers have adopted advanced technologies for enhancing the delivered service and influencing consumers shopping behaviour (Schmitt and Zarantonello, 2013;

Demirkan and Spohrer, 2014; Pantano and Timmermans, 2014, 2014; Pantano and Viassone, 2014), we employ purchase intention to describe the response, in terms of intention to purchase in this kind of store (which includes consumers' choice to use one of the retailer's channels for purchasing). As to "organism", the present study considers three key elements: perceived service quality, satisfaction and attitude. First, satisfaction is a driver of consumers purchase behaviour (Cheng et al., 2009; Keller, 2010; Parsons, 2011). Second, in a multichannel perspective, the positive benefits of the usage of a certain channel for consumers' purchases influence their switching behaviour across channels, and the subsequent channel choice, as well as the overall success of the multichannel strategy (Wallace et al., 2004; Chiu et al., 2011; Hsieh et al., 2012; Heitz-Spahn, 2013; Banerjee, 2014). Therefore, these elements have a key role in the S-O-R paradigm.

The current research further investigates the multichannel service quality perception as the benefit that leads to consumer satisfaction in a multichannel retail environment (Dholakia et al., 2010; Verhoef et al., 2007; Nelin and Shankar, 2009; Hsieh et al., 2012; Blazquez, 2014). Finally, to understand the nature of service in multichannel settings (Stimuli), this study considers two main constructs: "store atmosphere" and "channels availability". Store atmosphere refers to layout, product display, colour and lights, etc., while channels availability refers to the degree to which consumers are aware of the existence of different channels (Neslin et al., 2006; Vrechopoulos, 2010; Oh et al., 2012; Seck and Philippe, 2013; White et al., 2013). Accordingly, combining the above mentioned aspects of the new multi channels environment and the S-O-R paradigm, we propose the framework illustrated in Figure 1. This model states that the new multichannel characteristics in terms of atmosphere and channels availability (stimuli) influence consumers' perception of the service quality,

satisfaction and attitude (organism), which in turn influence their purchase intention (response).

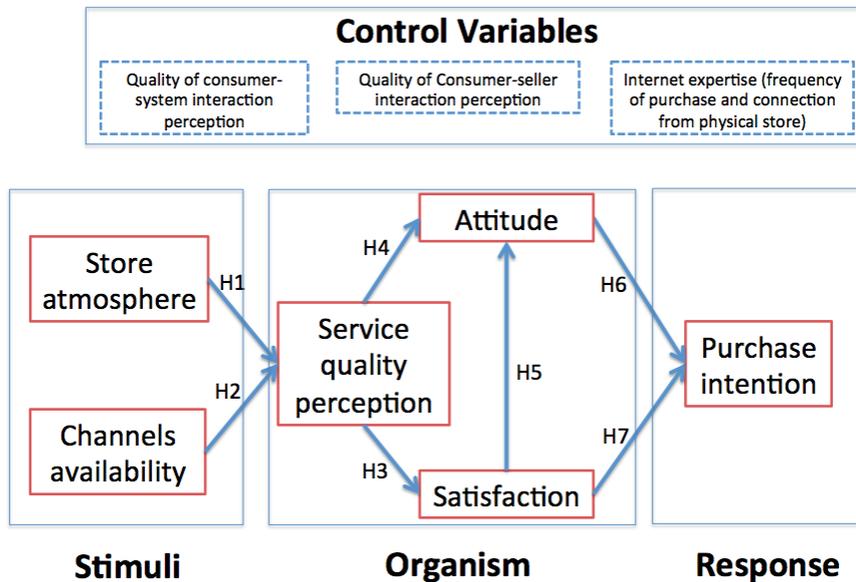


Figure 1: Research framework

## 2.1 Store atmosphere and channels availability

Past studies explained the huge impact of store atmosphere on retail patronage (Parsons, 2011), underlying the extent to which this element is a driver of such behaviours, with emphasis on apparel stores (Spies et al., 1997; Keller, 2010; Parsons, 2011). In fact, the positive feelings emerging during consumers' interaction with the environment lead to positive shopping outcomes (i.e. more purchases), pushing consumers to consider some stores as more appealing than others.

Past studies also agreed that consumers are exposed to many sensory stimuli while shopping, which in turn are able to alter their affective response (Cheng et al., 2009). These stimuli consist of lightening, colours, products display, etc. (Porat et al., 2007; Cheng et al., 2009;

White et al., 2013). The introduction of advanced technologies changes the traditional store atmosphere, by leading consumers to new shopping experiences based on the interaction with an automated system (Schmitt and Zarantonello, 2013; Demirkan and Spohrer, 2014; Pantano and Timmermans, 2014). For instance, large interactive displays (i.e. digital signage) have a large influence on consumer experience, by soliciting feeling of entertainment and pleasure (Dennis et al., 2014).

In the one hand, the presence of new technologies might provide an image of futuristic and innovative store able to influence that part of population interested in technological innovation (Pantano and Viassone, 2014); in the other one, they enhance products displaying, provided information and the information access points, while proposing entertainment elements that may engage more consumers (Pantano and Timmermans, 2014; Poncin and Mimoun, 2014).

Summarizing, current scenario is characterized by a huge consumers' demand of entertaining and efficient shopping experiences suggests an extension of traditional offer through innovative technologies, by maintaining the same quality of service and products across different channels and a spreading of channels/technologies through which consumers can select, compare, purchase products, and interact, such as Internet, ATMs, bricks-and-mortar stores, mobile apps, etc. (Neslin et al., 2006). Therefore, this innovative force pushes retailers to consider new actions contrasting consumers' switching behaviours across channels (cross-channel free riding) (Wallace et al., 2004; Neslin et al., 2006; Chiu et al., 2011; Heitz-Spahn, 2013; White et al., 2013; Pantano and Viassone, 2012). In the case of channels that are independent from each other, handled by different retailers/service providers and offering different services or prices of the same product, consumers cross channel free riding acquires a dramatic role for retailers' survival (Wallace et al., 2004). A solution might rely on the

efficient integration of different channels that would involve the collaborative combination of the multiple functions offered by the available technologies. The recent progresses in informatics support the integration of more technologies within the same point of sale, creating innovative and technology-enriched environments (Pantano and Timmermans, 2014). For these reasons, the management of multiple channel retailing, usually allocated and handled by different actors, becomes a major issue for the current literature.

While recent studies consider each channel as a stand-alone unit (Blazquez, 2014; Heitz-Spahn, 2013; Hsieh et al., 2012), our paper aims at evaluating the role of multiple channels handled by the one retailer within the same retail settings, for improving the benefits of each channel and supporting retailers in managing consumers and products across channels. The idea of multichannel systems relies on delivering superior experiences for consumers within and across different channels, which involves the integration of information, negotiation, exchange, and financial flows (Banerjee, 2014). The service offered would impact both the channel design and the quality of service output, while addressing the success of multichannel integration (Banerjee, 2014).

Hence, we hypothesize:

*H1: The more pleasant the store atmosphere, the higher the multichannel service quality consumers will perceive.*

*H2: The higher the channels accessibility of a retailer, the higher the multichannel service quality consumers will perceive.*

## **2.2. Perceived service quality**

Physical stores are traditionally characterized by a huge number of interpersonal relationships between client and seller (Herhausen et al., 2012; Pantano and Timmermans, 2014). The extensive use of advanced technologies affects these relationships, by mediating the usual communication among the actors while reducing the quantity of the interpersonal interactions (Chen et al., 2009; Williams et al., 2012; Zhu et al., 2013; Pantano and Viassone, 2014). In fact, these systems support service delivery without the direct frontline employees' assistance, while enhancing the service quality through the increasing speed and level of detail and customization of delivered information. At the same time, they collect data on consumers' behaviour (i.e. they might compare the items visualized and the ones purchased), which can be used for a deeper understanding of market trends and for developing more efficient strategies.

As anticipated, multiple channel strategies improve the delivered services portfolio, with benefits for consumers overall satisfaction (Wallace et al., 2004). The multichannel service quality represents the quality of the overall service experienced by consumers, and it is based on the quality of the (i) physical service (products and services delivered through a human interface), (ii) virtual service (quality of the service delivered through a technology-based interface), and (iii) integrated service (quality of the service experienced across multiple channels) (Sousa and Voss, 2006; Banerjee, 2014). The strength of multichannel systems relies on delivering superior experiences for consumers within and across different channels, by including the integration of information, negotiation, exchange, and financial flows (Banerjee, 2014). Indeed, the service offered would impact both the channel design and quality of service output, and plays a fundamental role on the success of multichannel integration (Banerjee, 2014). Similarly, the huge availability of channels for promoting a

certain product might cause an over exposure to the item, which might discourage consumers' purchase intention.

### **2.3 Satisfaction and attitude**

Satisfaction is a human feeling, a sort of overall pleasure emerging from a past experience (Taylor and Strutton, 2011). It is based on the disconfirmation of multiple attributes that influences the subsequent behavioural intention (Finn et al., 2009). In retail settings, it refers to consumers' evaluation of in-store experience as a sort of affective response towards the shopping experience (Wallace et al., 2004; van Riel et al., 2012; Marques et al., 2013).

Since the waiting time and the limited access to the service (for instance caused by the absence of shopping assistance, or by the high number of other consumers) reduce the perceived quality of a service, the slow service limits consumers' satisfaction, (Li et al., 2009; Noon and Mattila, 2009; van Riel et al., 2012; White et al., 2013). Thus, consumers perceive the service quality on the basis of their personal experience through the evaluation of several elements such as time for assistance, seller ability to respond to their requests, products offer and availability, etc.. Their positive perception of the in-store store service is considered an important antecedent of satisfaction (Lombart and Louis, 2012; De Canniere et al., 2010; Marques et al., 2013), retention and purchase intention, which leads to repeat the patronage behaviour (De Canniere et al., 2010).

Moreover, past studies highlighted the differences of satisfaction in online and offline scenarios, by emphasizing the dual role of consumers in the online retail environment as consumers and computer users, where the decision are mediated by the system interface (Finn et al., 2009).

Hence, we hypothesize:

*H3: The higher the degree of multichannel service quality that consumers will perceive, the higher their satisfaction will be.*

Accordingly, the new store environment might influence both satisfaction and other positive responses such as pleasure, arousal, attitudes that lead to positive behavioural reactions (i.e. purchase intention) (Wu et al., 2013; Groeppel-Klein, 2015). Moreover, different environmental factors solicit different affective and behavioural reactions (Wu et al., 2013).

Past authors further demonstrated that if the quality service delivered is evaluated as high, consumers would show more favourable attitudes (Carlson and O’Cass, 2010). In particular, attitude refers to a disposition to reply to a certain stimulus resulting positive, neutral or negative affective state (Fishbein and Ajzen, 1975). Extending this definition to our new store, consumers’ attitude toward the new integrated environment refers to a predisposition to reply in a favourable or unfavourable way.

Therefore, consumers’ positive experience with the new environment, in terms of satisfaction, would increase their likelihood of showing positive attitudes towards our store.

Therefore, we hypothesize:

*H4: The higher the consumers’ perception of the quality of the multichannel retail service, the higher consumers’ attitude towards this store will be.*

*H5: The higher the satisfaction of the new multichannel integrated store will be, the higher consumer’s attitude towards this store will be.*

## **2.4 Purchase Intention**

According to the S-O-R paradigm, response might be considered as the final outcome of performing a certain behaviour (Wu et al., 2014). In fact, previous studies showed the extent to which positive attitudes lead to purchase intention (Davis, 1989; Carlson and O’Cass, 2010; Pantano and Viassone, 2014; Poncin and Mimoun, 2014). Since an individual is more likely to behave if he/she believes that the emerging outcome will be beneficial, consumers who have a good experience in the store may have more favourable intentions to purchase within the environment, if compared to those who have a negative experience (Wu et al, 2014). Hence, we hypothesize that the new environment based on the multichannel integrated store would influence consumers to consider this store as (more) beneficial for their purchases, due to the both high quality of service emerging from the simultaneous interaction among different channels managed by one retailer and satisfactory experience.

Therefore, we hypothesize:

*H6: The higher the attitude towards the new store, the higher consumers’ purchase intention to buy in this store.*

*H7: The higher the satisfaction of the new multichannel integrated store, the higher consumer’s purchase intention to buy in this store.*

## **2. 4 Control variables**

Several control variables were included to enhance the robustness of the findings. Since building strong relationships with consumers is a key issue for retailers to be positively associated with satisfaction and purchase (Reynolds, 1999), new technology-based services need to take into account the influence of consumer-technology interaction on firm’s capability to build and reinforce relationships with clients. Although the availability of more channels increases the points of contacts between consumer and firm (Seck and Philippe,

2013), it reduces the time for accessing a certain service to the favoured channel (Wiertz et al., 2004). For instance, exploitation of Internet adds a complementary service to the traditional physical channel based on face-to-face interactions between client and seller, by offering the possibility to compare online products (Seck and Philippe, 2013; Pantano and Viassone, 2014). In the present study, consumer's perception of the service quality from different channels includes the interaction with both the automatic machine and physical seller, thus it is reasonable to control the differences in their interactions in our research model. For this reason, consumer's preference of traditional service instead of the technology-based one would act as an obstacle towards their usage and should be investigated as a control variable in this study. Therefore, consumers' interaction with the technology and real seller can be considered as control variable of the service quality perception. Similarly, internet expertise with the technology has been found to play a role during the shopping experience (Gao and Bai, 2014). Thus, we assume that the usage of internet for shopping, in terms of frequency of purchases through this medium and connection to internet from a physical shop, might act as control variable for shopping in a multichannel environment.

### **3. Methodology of research**

#### **3.1 The new multichannel integrated store**

The modern retail scenario has shifted from a state where consumers usually interact with the firm through one channel, to a scenario where consumers interact through several channels (such as internet, physical stores, mobile devices, etc.) that might be available (and integrated) within the same point of sale. In addition to the single-channel consisting of the

traditional point of sale, our new store offers opportunities for creating synergies across channels that can be managed by one retailer, and for discouraging consumer' switching behaviours. In fact, consumers might access different channels from the point of sale (i.e. a consumer might access amazon or eBay web site from a physical point of sale before deciding to buy there and then switch to another retailer), which are usually handled by independent actors. Our new environment enriches the experience by adding further services to the traditional sellers' assistance based on the integration of advanced technologies (self-service, mobile, online systems, etc.). Hence, consumers are invited to switch across channels managed by the same retailer to achieve a richer service. This possibility should avoid consumers' switching to channels handled by competitors, by focusing on the multiple offer available in the integrated retail settings.

This new integrated store is devoted to the fashion accessories, due to the increasing access to fashion products from smartphones and tablets and the huge opportunities this sector offers to retailers (Blazquez, 2014). Toward this aim, we simulated the new retail environment in a university lab, where we made accessible the following channels for the choice of fashion accessories (bags and belts): (i) the physical channel consisting of the physical interaction between client and product seller, (ii) the mobile channel consisting of a mobile application that allows users to access product (selecting information, choosing and paying) based on a mobile app connecting consumer own mobile and QR code related to each product, (iii) and the internet (online) channel consisting of online catalogue accessible through touch screen display or mobile (based on the use free Wi-Fi) for achieving more information, selecting items, ordering and paying (Figure 2).

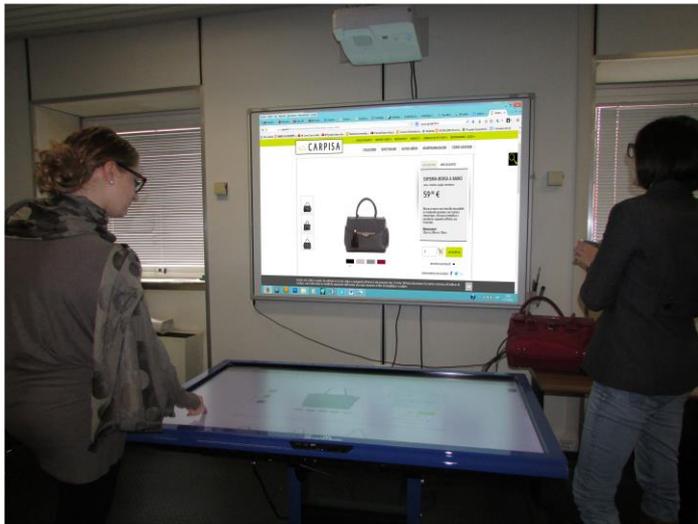


Figure 2: Consumers interacting within the multichannel integrated store.

In particular, the products available physically in our store consisted of 20 bags, while the ones available online (through the mobile catalogue) consisted of 40 bags and 5 belts, in order to make the online channels extend the physical offer of the store.

### **3.2 Sample and procedure**

The research involved 237 customers recruited between December 2013 and March 2014 in Northern Italy, who were asked to simulate the choice and purchase of the favourite item within the new retail settings, by having the possibility to access the products through the favourite available channel.

To enhance experimental realism, participants could freely ask information on the products to a salesperson (a researcher simulated this role). Afterwards, each participant was asked to fill a questionnaire organized in two parts: the first one based on the five-points Likert scale (1 = strongly disagree, 5 = strongly agree) for testing the model variables, while the second one devoted to the collection of the sample profile.

Women represented 59.9% of the participants, while 63.2% of all the participants were between 18 and 25 years of age (Table 1). Preliminary results also showed the large diffusion of smartphones among the respondents (84%) and their large usage of internet for acquiring information on products before effective purchasing (83.5%). Nearly 97% of the sample reported purchasing products in a physical shop at least once a week, while 42% stated to purchase at least once a week via internet. Noteworthy result further concerns the small number of consumers who usually consult Internet from the physical store before the choice. In fact, 54.9% has never connected from the store for achieving information on products on sale. Thus, the participants align with the profile of consumers who are likely to consult internet for supporting buying decision and for buying online from home, but who still make a limited use of this channel from the physical point of sale.

Table 1: Sample demographics.

	Percentage
<b>Sex</b>	
<i>Male</i>	40.1%
<i>Female</i>	59.9%
<b>Age</b>	
<i>18-20</i>	12.1%
<i>21-25</i>	51.1%
<i>26-35</i>	3.4%
<i>36-45</i>	4.2%
<i>46-50</i>	11%
<i>Over 50</i>	17.6%
<b>People with a smartphone</b>	
<i>Yes</i>	84%
<i>Not</i>	16%
<b>Usage of internet to look for information about products</b>	
<i>Yes</i>	83.5%
<i>Not</i>	16.5%
<b>Frequency of purchases in a physical shop</b>	
<i>Never</i>	3.4%
<i>Once a week</i>	48.1%
<i>2-3 times a week</i>	38.4%
<i>Almost once a day</i>	10.1%
<b>Frequency purchases on the internet</b>	
<i>Never</i>	57.6%
<i>Once a week</i>	36.9%
<i>2-3 times a week</i>	3.8%

	<i>Almost once a day</i>	1.7%
<b>Have you connected to internet from a shop?</b>		
	<i>Never</i>	54.9%
	<i>At least once</i>	25.3%
	<i>Often</i>	18.1%
	<i>Always</i>	1.7%

### 3.3 Measurement scale and preliminary results

Data emerging from questionnaire were analyzed using the SPSS 19.0 suite. Table 2 summarizes the preliminary results.

Concerning the mean value, it fluctuates between 3.46 (the minimum, with reference to the level of security in using the available technologies) and 4.32 (the maximum, registered for the different possibilities to find the desired product in the shop); while standard deviations oscillate between 0.431 and 0.966. These findings imply that for all items the values are concentrated in the high part of the scale. Furthermore, the high value of Cronbach's alpha denotes a high degree of internal consistence of the scale.

Table 2: Preliminary results.

	<b>Cronbach' alpha</b>	<b>N=237</b>	<b>Mean</b>	<b>S. D.</b>
<b><i>Store Atmosphere</i></b>	<b>.887</b>			
The shop seems a nice place for shopping			3.82	0.790
I like the shop atmosphere			3.79	0.774
<b><i>Channel availability</i></b>	<b>.853</b>			
The shop offers several possibilities to find the desired product			4.32	0.731
I can choose the channel that best fits my needs			4.09	0.828
<b><i>Store quality perception</i></b>	<b>.860</b>			
The shop offers a good service			4.02	0.739
I feel comfortable in accessing the offered services			3.46	0.941
The shop offers a service adaptable to my needs			3.73	0.945
<b><i>Satisfaction</i></b>	<b>.843</b>			
The experience in this shop seems satisfying		237	3.72	0.700
The offered services seem satisfying		237	3.86	0.692
I'm satisfied because I've the possibility to chose which technology to use or to not use		237	4.04	0.885

<i>Attitude</i>		<b>.701</b>		
	I like this kind of store		237	3.65 0.431
	I would prefer this store		237	3.96 0.882
<i>Purchase intention</i>		<b>.924</b>		
	I would purchase in this kind of shop		237	3.62 0.966
	I would suggest my friends to purchase in this kind of shop		237	3.60 0.913
	I would like to repeat my experience in this kind of shop		237	3.55 0.940

Participants originally stated large interest towards advanced technologies for supporting shopping activity, while indicating their perception of our store as a convenient place for shopping. These findings emphasize the effect of advanced technologies on the store capability to provide innovative and attractive shopping experiences (Vrechopoulos, 2010; Pantano, 2014), this also leads us to speculate that the presence of innovative technologies is a basic element for attracting young consumers (18-25 years old).

Concerning the construct related to the channels availability, the most of interviewees appreciated the possibility to choose among different technologies for searching/finding/buying the favored item, in accordance with Neslin and colleagues (2006), including the possibility to choose between human-based and technology-based channels, under the guarantee of the same service quality across the channels. On the one hand, the simultaneous integration of different channels handled by one retailer enhances the traditional service by in turn limiting consumers' willingness to switch across retailers; on the other one it forces retailers to consider the different channels as one integrated retail environment, which would be able to provide the multiple access to each item under the same service quality.

Service quality perception in the new store achieved high appreciation. The role of quality of interactions with both technology and real seller emerges as determinants of service quality

perception. In fact, each available channel requires consumer's active participation in the service delivery, resulting high customized. Correspondingly, the data emerged from the analysis of satisfaction and attitude constructs confirms the extent to which each channel contributes to the overall service quality formation, by underlying that each channel should provide the same quality level.

#### **4. Key findings and discussions**

The statistical validity of the proposed model constructs and their relationships were further investigated by assessing the fit indexes value through LISREL software, which are in details:  $\chi^2$ /degrees of freedom 1.9,  $p=.00$ , GFI (goodness-of-fit-index)= .944, AGFI (adjusted goodness-of-fit-index)= .905, NFI (normed fit index)= .971, CFI (comparative fit index) = .989, and RMSEA (root mean square error of approximation)= 0.068. Since these fitness measures overcome the acceptable value suggested by literature, our model yields a suitable fit.

Figure 3 summarizes the relationships and the force and the significance of each hypothesis along with the variance explained for each construct. Findings support all hypothesized relationships, while the standardized path coefficients indicate both strength and nature of influence, and the t-values and  $p$  values ( $=0.000$ ) indicate statistical significance.

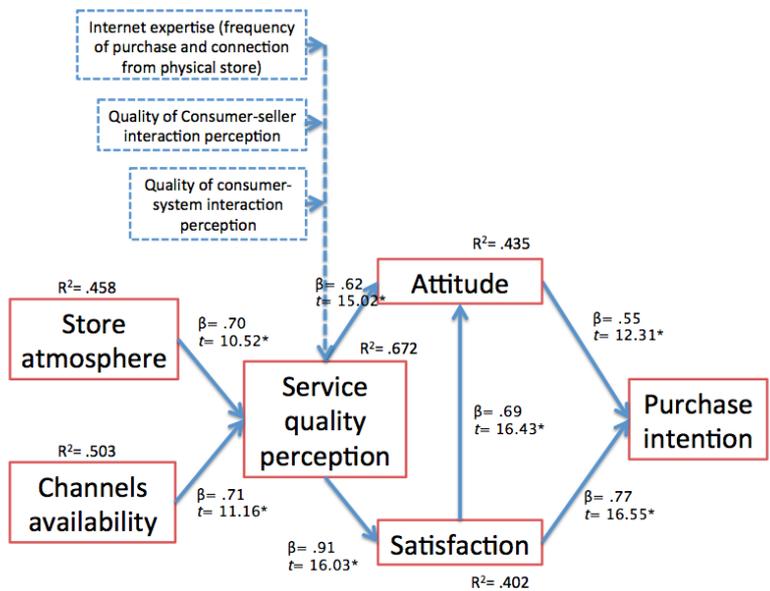


Figure 3: Structural equation analysis results.

### Stimuli

Our model assumes that the identified stimuli (store atmosphere and channels availability) have similar influence on the *response*. In particular, the correlation between these two measures was positive and statistically significant,  $\beta = 0.70$  and  $t\text{-value} = 10.52$ , and  $\beta = 0.71$  and  $t\text{-value} = 11.16$  respectively. Thus, H1 assessing a causal relationship between store atmosphere and quality of perceived service, and H2 assessing a direct correlation between availability of channels and quality of perceived service result to be effective, with  $R^2$  values of .458 and .503 respectively, excluding the presence of other latent variables. The new multichannel integrated store emerges as a pleasant environment able to influence consumers' behaviour (i.e. motivate them to shop at that certain store), by incorporating the technologies that they consider relevant for supporting the decision-making. Both stimuli (store atmosphere and channels availability) influence the service quality perception, which in turn is influenced by the interaction with the technology and/or physical seller. Due to the

advanced technologies able to integrate the benefits of the physical stores with the services provided by the digital scenario (Wu et al., 2014), atmosphere results a successful factor for the new store enriching the traditional services with the virtual ones.

These results also confirm to extent to which the store atmosphere is based on both traditional (such as layout, product display, colour and lights, etc.) and technological elements for supporting shopping (such as interactive touch screen displays, mobile app for mobile payments, etc.). The combination of these factors influences consumers' evaluation of the final service, which can be simultaneously delivered through multiple channels. These results contribute to the understanding of consumers' perception of a retail environment characterized by a high number of different channels for purchasing. Our experiment analysed a combination of channels, by leading us to reflect on the need to include the simultaneous effects of the channels handled by one retailer when investigating the antecedents of consumers' satisfaction.

### *Organism*

As assumed, service quality perception influenced respondents' satisfaction while shopping in the new retail settings ( $\beta = .91$  and  $t\text{-value} = 16.03$ ), with  $R^2$  values of .672 and .402, respectively, which might exclude the presence of other variables. These findings support the critical role of service quality perception as determinant of consumer's satisfaction, which is largely influenced by the interaction with the available technologies (multi channel/technology-based services) and salesperson (human-based service). Consistent with prior studies (Noon and Mattila, 2009; Hsieh et al., 2012; Seck and Philipp, 2013), these results extend the relationship between service quality and satisfaction in the multichannel environment. The different channels deliver distinct types of services, while consumers' evaluation of the multichannel service quality derives from aggregating the evaluation of

each service encounter (both human and technological). The possibility to choose among the channels (switching) might further increase consumers' positive perception of the overall service quality. Hence, retailers are pushed to consider new strategies for improving the current strategies by offering more technologies able to increase the traditional human-based service, the perception of the store service quality and, ultimately, the overall consumers' satisfaction, as well as by enhancing the integration and connections among the service encounters, otherwise the cross channel free riding behaviour among competitors might increase dramatically.

### *Response*

Attitude is in turn influenced by both service quality perception and satisfaction ( $\beta = .62$  and  $t\text{-value} = 15.02$  and  $\beta = .69$  and  $t\text{-value} = 16.43$  respectively), by mediating the effect of service quality perception on purchase intention ( $\beta = .77$  and  $t\text{-value} = 16.55$ ), suggesting that if consumers are satisfied and have a positive attitude towards this store, they will be more inclined to purchase. Similarly, the positive effect of satisfaction while experiencing the store encourages the choice of this store for purchasing ( $\beta = .77$  and  $t\text{-value} = 16.55$ ). Accordingly, perceived service quality and satisfaction explain more than 40% of variance in the attitude towards the new store ( $R^2 = .435$ ). Hence, findings reveal that consumers' needs, including the continuous demand of entertaining shopping experiences and the availability of innovative technologies (Pantano and Viassone, 2014), are more likely to be satisfied within the emerging multichannel integrated store based on the synergetic combination of different service outputs. While satisfaction and attitude based on multichannel service result in consumers' willingness to choose this store format for their future purchases. Our research also indicates that when consumers evaluate this store, they take into account the availability of more channels, which in turn impacts their perception of service, satisfaction, attitude and

purchase intention. Therefore, these elements contribute to a positive evaluation of the emerging store and are able to influence purchase behaviour and retailer adoption choice.

Summarizing, results propose the effectiveness of an empirical model linking multiple channel strategies to consumer's purchase intention, resulting in the effective integration and management of different channels by one retailer as more effective than the availability of different channels handled by independent retailers within the same point of sale. In fact, retailers cannot limit consumers' access to other retailers' offer from their physical point of sale, but they might solicit consumers to access their own channels for integrating/extending the physical store service. Not surprisingly, consumers are high satisfied and show a positive attitude, and presumably they would not switch to other competitors.

## **5. Conclusions and future works**

The aim of this paper was to explore the interactions between consumers and products within the multichannel retail environments resulting from the integration of different channels handled by one retailer within a physical store devoted to fashion accessories.

First, our results demonstrate to what extent the integration of multiple channels within a single point of sale handled by one retailer is feasible and successful, by extending the previous studies focusing on different channels managed by independent retailers (Dholakia et al., 2010; Jim and Kim, 2010; Chin et al., 2011; Heitz-Sphan, 2013; Seck and Philippe, 2013).

Second, findings reveal the extent to which the store quality perception is composed by both human- and technology-based services. In fact, consumers' interactions with available technologies (multi channel/technology-based services) and salesperson (human-based

service) have a joint influence on the overall service quality perception. In fact, retailers should pay attention to the importance of consumers' interaction with each channel (including the face-to-face interactions with the physical seller), which lead to favourable behaviours.

As anticipated, results demonstrate that consumers evaluate the overall quality of the services encounters simultaneously, by pushing retailers to devote investments on the successful integration of the different channels, rather than concentrating efforts on improving each channel separately. Similarly, this study demonstrates that available channels for shopping cannot be considered anymore as stand-alone units. Hence retailers need to reconsider the store as a new environment providing multichannel experiences, in order to contrast the availability of competitors' channels.

Third, the integration of the three different channels would involve the collaborative combination of different functions offered by the available channels, as hypothesized by prior studies (Wallace et al., 2004; Wagner et al., 2013), such as the possibility to buy online when the favoured item is not available in the physical point of sale and, at the same time, ask the support of a (real) shopping assistant. In this way, online service completes the physical service, by overcoming the traditional limit of online channel concerning the support of a (real) shopping assistant. Therefore retailers should consider all the devices that are part of online/mobile channel (i.e. iBeacon, mobile app, smartphone, etc.) and the ones part of the physical self-service context simultaneously, facing the challenges that the continuous progresses of technology in this direction propose. As a consequence, the distinctive channels should complement each other to increase the possibility that consumers may easily find the most relevant one for their needs. In the one hand, this increases the level of complexity for retailers, who are pushed to coordinate online catalogue, apps for mobiles, in store touch

screen technologies, etc. to engage more consumers; in the other one, they allow retailers to be rewarded with more satisfied consumers willing to engage more purchases. As a consequence, channels integration is essential to ensure the shopping across channels handled by one retailer and avoiding the cross- retailers free riding.

Obviously, the channel integration might involve additional costs for the service delivering and a duplication of the resources for guaranteeing a high quality service for consumers. Concerning the cost of new technologies to be placed within the store, some technologies might result quite expensive, since they require advanced 3D interfaces or input modalities while easily encountered the obsolescence risk (Pantano, 2014). Similarly, they involve costs for maintaining online and mobile services. To reduce these disadvantages, retailers should reflect on the possibility of partnerships with more experienced online retailers. For instance, some retailers are developing partnerships with Amazon or national post services for orders delivering at home, or new strategies for pushing consumers to prefer the collection points within the store (instead of the home delivery).

Although our study provides interesting contributions for both literature and practice, it also shows some limitations. First, it is based on a simulated environment proposed to a convenient sample in Northern Italy. Hence, a limitation concerns the external validity of our model. Additional researches might therefore verify the results of our study in other geographic areas, characterized by a high level of technology diffusion among retailers and consumers such as in Korea and figure out common frameworks. Similarly, it would be beneficial to extend the research with quantitative analysis taking place in a real point of sale, specifically in relation to the influence of the interaction with a real seller (in our experiment a researcher simulated the seller role). In this context, other variables might be further taken into account such as the word-of-mouth communication and social influences.

Another limitation is based on our assumption that channel switching difficulties do not exist under the same service provider who introduces the multiple channel environment. Future studies might include some construct concerning these difficulties.

Finally, we focused on a certain product category (fashion accessories consisting of bags and belts), while further researches focusing on different products category would provide indications on the most successful channel management strategy according to each different product category.

## **References**

Banerjee, M. (2014) "Misalignment and its influence on integration quality in multichannel services", *Journal of Service Research*, 17, 4, 460-474.

Blazquez, M. (2014) "Fashion shopping in multichannel retail: the role of technology in enhancing the customer experience", *International Journal of Electronic Commerce*, 18, 4, 97-116.

Carlson, J., and O'Cass, A. (2010) "Exploring the relationships between e-service quality, satisfaction, attitudes and behaviours in content-driven e-service web sites", *Journal of Services Marketing*, 24, 2, 112 – 127.

Chen, S.-C., Chen, H.-H., and Chen, M.-F. (2009) "Determinants of satisfaction and continuance intention towards self-service technologies", *Industrial Management & Data Systems*, 109, 9, 1248-1263.

Cheng, F.-F., Wu, C.-S., and Yen, D.C. (2009), "The effect of online store atmosphere on consumer's emotional responses- an experimental study of music and colour", *Behaviour & Information Technology*, 28, 4, 323-334.

- Chiu H.-C., Hsieh Y.-C., Roan J., Tseng K.-J., Hsieh J.K. (2011), "The challenge for multichannel services: cross-channel free riding behaviour", *Electronic Commerce Research and Applications*, 10, 268-277.
- Davis, F. D. (1989) "Perceived usefulness, perceived ease of use, and user acceptance of information technology", *MIS Quarterly*, 13, 319–339.
- Demirkan, H., and Spohrer, J. (2014), "Developing a framework to improve virtual shopping in digital malls with intelligent self-service systems", *Journal of Retailing and Consumer Services*, 21, 5, 860-868.
- Dennis, C., Brakus, J.J., Gupta, S., and Alamanos E. (2014), "The effect of digital signage on shopper behavior: the role of the evoked experience", *Journal of Business Research*, 67, 11, 2250-2257.
- Dholakia, R.R., Zhao, M., and Dholakia, N. (2005), "Multichannel retailing: a case study of early experiences", *Journal of Interactive Marketing*, 19, 2, 63-74.
- Dholakia, U.M., Kahn, B.E., Reeves, R., Rindfleisch, A., Stewart, D., Taylor, E. (2010), "Consumer behaviour in a multichannel, multimedia retailing environment", *Journal of Interacting Marketing*, 24, 86-95.
- Fan, X., Liu, F., and Zhang, J. (2013), "To be familiar or to be there? The roles of brand familiarity and social presence on web store image and online purchase intention", *International Journal of Electronic Marketing and Retailing*, 5, 3, 199-221.
- Finn, A., Wang, L., and Frank, T. (2009), "Attribute perceptions, customer satisfaction and intention to recommend e-services", *Journal of Interactive Marketing*, 23, 3, 209-220.
- Fishbein, M., and Ajzen, I. (1975), *Belief, attitude, intention, and behavior: An introduction to theory and research*, Addison-Wesley, Reading, MA.

Floh, A., and Madlberger, M. (2013), "The role of atmospheric cues in online impulse-buying behaviour", *Electronic Commerce Research and Applications*, 12, 6, 425-439.

Gao, L., and Bai X. (2014), "Online consumer behaviour and its relationship to website atmospheric induced flow: insights into online travel agencies in China", *Journal of Retailing and Consumer Services*, 21, 653-665.

Grewal, D., Baker, J., Levy, M., and Voss, G.B. (2003), "The effects of wait expectations and store atmosphere evaluations on patronage intentions in service-intensive retail stores", *Journal of Retailing*, 79, 4, 259-268.

Groppel-Klein, A. (2005), "Arousal and consumer in-store behaviour", *Brain Research Bulletin*, 67, 5, 428-437.

Herhausen, D., Schogel, M., and Schulten, M. (2012), "Steering customers to the online channel: the influence of personal relationships, learning investments, and attitude toward the firm", *Journal of Retailing and Consumer Services*, 19, 3, 368-379.

Heitz-Spahn, S. (2013), "Cross-channel free riding consumer behaviour in a multichannel environment: an investigation of shopping motives, sociodemographics and product categories", *Journal of Retailing and Consumer Service*, 20, 570-578.

Hsieh, Y.-C., Roan, J., Pant, A., Hsieh, J.-K., Chen, W.-Y., Lee, M., and Chiu, H.-C. (2012), "All for one but does one strategy work for all? Building consumer loyalty in multi-channel distribution", *Managing Service Quality*, 22, 3, 310-335.

Jin, B., and Kim, J. (2010), "Multichannel versus pure e-tailers in Korea: evaluation of online store attributes and their impact on e-loyalty", *The International Review of Retail, Distribution and Consumer Research*, 20, 2, 217-236.

Keeling, K., Keeling, D., and McGoldrick, P. (2013), "Retail relationships in a digital age", *Journal of Business Research*, 66, 847-855.

Keller, K.L. (2010), "Brand Equity Management in a multichannel, multimedia retail environment", *Journal of Interactive Marketing*, 24, 58-70.

Kim, J., and Park, J. (2005), "A consumer shopping channel extension model: attitude shift toward the online store", *Journal of Fashion Marketing and Management*, 9, 1, 106-121.

Kim, J.-E., Ju, H.W., and Johnson, K.K.P. (2009), "Sales associate's appearance: links to consumers' emotions, store image, and purchases", *Journal of Retailing and Consumer Services*, 16, 5, 407-413.

Kim, H., and Lennon, S.J. (2010), "E-atmosphere, emotional, and behavioural responses", *Journal of Fashion Marketing and Management*, 14, 3, 412-428.

Kumar, V. (2010), "A customer lifetime value-based approach to marketing in the multichannel, multimedia retailing environment", *Journal of Interactive Marketing*, 24, 71-85.

Li, J.-G. T., Kim, J.-O., and Lee, S.Y. (2009), "An empirical examination of perceived retail crowding, emotions and retail outcomes", *The Service Industries Journal*, 29, 5, 635-652.

Neslin, S.A., Grewal, D., Leghorn, R., Shankar, V., Teerling, M.L., Tomas, J.S., and Verhoef P.C. (2006), "Challenges and opportunities in multichannel customer management", *Journal of Service Research*, 9, 2, 95-112.

Neslin, S.A., and Shankar, V. (2009), "Key issues in multichannel customer management: current knowledge and future directions", *Journal of Interactive Marketing*, 23, 70-81.

Noon, B.M., and Mattila, A.S (2009), "Consumer reaction to crowding for extended service encounters", *Managing Service Quality*, 19, 1, 31-41.

Oh, L.-B., Teo, H.-H., and Sambamurthy, V. (2012), "The effects of retail channel integration through the use of information technologies on firm performance", *Journal of Operations Management*, 30, 368-381.

Pantano, E. (2014), "Innovation drivers in retail industry", *International Journal of Information Management*, 34, 344-350.

Pantano, E., and Timmermans, H. (2014), "What is smart for retailing?", *Procedia Environmental Sciences*, 22, 101-107.

Pantano, E., and Viassone, M. (2014), "Demand pull and technology push perspective in technology-based innovations for the points of sale: the retailers evaluation", *Journal of Retailing and Consumer Services*, 21, 1, 43-47.

Pantano, E., and Viassone, M. (2012), "Consumers' expectation of innovation: shift retail strategies for more attractive points of sale", *International Journal of Digital Content Technology and its Applications*, 6, 21, 455-461.

Poncin, I., and Momoun, M.S.B. (2014), "The impact of "e-atmospherics" on physical stores", *Journal of Retailing and Consumer Service*, 21, 5, 851-859.

Porat, T., Liss, R., and Tractinsky, N. (2007), "E-store design: the influence of e-store design and product type on consumers' emotions and attitudes", *Lecture Notes on Computer Science*, 4553, 4, 712-721.

Reynolds, K.E., (1999), "Customer benefits and company consequences of customer-salesperson relationship in retailing", *Journal of Retailing*, 75(1), pp. 11-32.

Schmitt, B., and Zarantonello, L. (2013), "Consumer experience and experimental marketing: a critical review", *Review of Marketing Research*, 10, 25-61.

Seck, A.M., and Philippe, J. (2013), "Service encounter in multi-channel distribution context: virtual and face-to-face interactions and consumer satisfaction", *The Service Industries Journal*, 33, 6, 565-579.

Sousa, R., and Voss, C.R. (2006), "Service quality in multichannel services employing virtual channels", *Journal of Service Research*, 8, 4, 356-371.

- Spies, K., Hesse, F., and Loesch, K. (1997), "Store atmosphere, mood and purchasing behavior", *International Journal of Research in Marketing*, 14, 1, 1-17.
- Taylor, D., and Strutton, D. (2011), "Has e-marketing come of age? Modeling historical influences on post-adoption era Internet consumer behaviors", *Journal of Business Research*, 63, 950-956.
- Van Riel, A.C.R., Semeijn, J., Ribbink, D., and Bomert-Peters, Y. (2012), "Waiting for service at the checkout: negative emotional responses, store image and overall satisfaction", *Journal of Service Management*, 23, 2, 144-169.
- Verhoef, P., Neslin, S.A., and Vroomen, B. (2007), "Multichannel customer management: understanding the research-shopper phenomenon", *International Journal of Research in Marketing*, 24, 129-148.
- Vrechopoulos, A.P. (2010), "Who controls store atmosphere customization in electronic retailing?", *International Journal of Retail & Distribution Management*, 38, 7, 518-537.
- Wagner, G., Schramm-Klein, H., and Steinmann, S. (2013), "Effects of cross-channel synergies and complementarity in a multichannel e-commerce system: an investigation of the interrelation of e-commerce, m-commerce and IETV-commerce", *The international Review of Retail, Distribution and Consumer Research*, 23, 5, 571-581.
- Wallace, D.W., Giese, J.L., and Johnson, J.L. (2004), "Customer retailer loyalty in the context of multiple channel strategies", *Journal of Retailing*, 80, 249-263.
- White, R., Joseph-Mathews, S., and Voorhees, C.M. (2013), "The effects of service on multichannel retailers' brand equity", *Journal of Services Marketing*, 27, 4, 259-270.
- Wiertz, C., de Ruyter, K., Keen, C., and Streukens, S. (2004) "Cooperating for service excellence in multichannel service systems: an empirical assessment", *Journal of Business Research*, 57, 4, 424-436.

Williams, C., Nadin, S.J., and Windebank, J.E. (2012), "Explaining participation in the self-service economy", *The Service Industries Journal*, 32, 11, 1811-1822.

Wu, W.-Y., Lee, C.-L., Fu, C.-S., and Wang, H.-C. (2013), "How can online store layout design and atmosphere influence consumer shopping intention on a website?", *International Journal of Retail & Distribution Management*, 42, 1, 4 – 24.

Wu, W.-Y., Lee, C.-L., Fu, C.-S., and Wang, H.-C. (2014), "How can online store layout design and atmosphere influence consumer shopping intention on a website?", *International Journal of Retail and Distribution Management*, 42, 1, 4-24.

Zhu, Z., Nakata, C., Sivakumar, K., and Grewal, (2013), "Fix it or leave it? Customer recovery from self-service technology failure", *Journal of Retailing*, 89, 1, 15-29.