Engaging consumer through the storefront: evidences from integrating interactive technologies

Abstract. Although previous studies identified the importance of storefront windows on consumer's entry decision, there is still a lack of research on engaging consumers at the storefront through the integration with interactive technologies.

The purpose of this study is to carry out an exploratory investigation into the consumers preference for a certain store based on the storefront windows (in terms of entry decision), with emphasis on the current most attractive interactive technologies. Thus, we examine the extent to which an exploratory sample of consumers is influenced by storefront interactive technologies.

Emotional aspects emerge as the most influencing ones in the case of traditional storefronts, while both emotional and functional aspects emerge as the most influencing factors while considering the integration of interactive technologies. In particular, our results shed light on the way these elements can be managed for the design of future attractive storefront windows, by providing important insights for scholars and practitioners.

1. Introduction

Prior studies figured out the importance of exterior store atmospherics with emphasis on the storefront windows on consumers behaviour (Sen et al., 2002; Cornelius et al., 2010; Oh and Petrie, 2012; Jain et al., 2014). These represent the first contact point between consumer and retailer, while it is able to persuade consumers to enter the store and subsequently purchase (Jain, 2014). Hence, in a short time these visual elements need to (i) create a visual impact, (ii) differentiate retailers from other competitors, and (iii) anticipate a further exceptional experience in the store.

Moreover, changes in consumer demand, and the availability of innovations for enhancing retail process including new interactive tools for supporting shopping experience may affect consumers' preferences of a certain store, which in turn pushes marketers to understand the extent to which consumer's behaviour towards retailers varies as a function of different characteristics (Jain et al., 2014; Pantano, 2014). For instance, in the last decades a huge number of points of sale changed their format and layout, service offer, and delivering modalities, by integrating advanced technologies with the promise of superior shopping experiences (Kourouthanassis et al., 2007; Papagiannidis et al., 2013; Ngo and O'Cass, 2013; Rese et al., 2014). As a consequence, there was a shift from traditional points of sale with basic service functions to technology-based services, under the principle that the combination of technological, interactive and entertaining technologies would attract more consumers (Demirkan and Spohrer, 2014; Pantano and Viassone, 2015). In fact, offering more services while enriching the traditional ones may induce consumers to engage more

purchases in stores. To achieve this goal, few retailers recently introduced some interactive technological elements within the storefront window for a trial period, such as Lacoste and Kate Spade. In particular, for celebrating the 80th anniversary, the first one introduced an interactive sculpture on the storefront window at the 5th Avenue, New York, consisting of 50 tennis balls attached to a stepper motor, while the motion tracking camera (located within the window) tracked the movement of pedestrians as they walked, and moved the tennis balls accordingly, to catch consumers interest and invite them to enter the store. Similarly, another interactive storefront concept has been tested in July 2013 in New York by the partnership between eBay and Kate Spade, which allowed consumers to select and buy anytime products of the brand through the touch screen located within one of the 4 storefronts window who introduced the technology. Thus, customers were able to choose among 30 different products available, while new products have been added each Saturday during the opening hours of the sore. Another example set in October 2014 in Italy, when the Italian Luxury Department store, *LaRinascente*, launched innovative mannequins in Milan for the brand Moschino. These new mannequins consisted of a screen (based on three-message trivision sign) displaying the virtual image of the 3 different clothes, which in turn changed in order to frequently provide mannequins wearing new clothes, while the "head" was a traditional mannequin head. These changes in storefront were able to catch pedestrians' attention.

Despite the increasing interest of scholars and practitioners towards the power of storefront and the enhancements prompt by new technologies (Paradiso and Leo, 2005; Reitberg et al., 2009; Dennis et al., 2010; Oh and Petrie, 2012; Jain et al., 2014), a comprehensive view of the advantages of the introduction of interactive technologies and related services directly at the storefront window is still missing.

The aim of this study is to examine consumers' store choice based on the storefront windows, with emphasis on the integration with interactive technologies available directly from the storefront. The study focuses on the Italian context, involving a sample of 52 consumers.

The reminder of this paper is organized as follows. First, we summarize prior studies on consumers' preference of storefront window and discuss the importance of entry decision. Next, we outline the design of our experiments, followed by a discussion of the sample and data collection. Then, we provide details of the set elements emerging as the most influencing ones. This paper is completed with a discussion of the findings, and future research directions and implications for storefront design and development.

2. Theoretical Background
2.1 Store atmosphere and shopping behaviour

Store environment is able to solicit consumers' emotional response, by affecting their purchasing decision making (Thang and Tan, 2003; Oh et al., 2008; Michon et al., 2005). In fact, the physical surroundings stimulate either positive or negative behaviours within the shopping environment, in terms of time spent, amount of purchases, positive word-of-mouth, loyalty to retailer and brand, etc.. Hence, creating a pleasant store atmosphere plays a key role in the development of the most efficient retail strategies (Thang and Tan, 2003; Pantano, 2014; Poncin and Mimoun, 2014).

Baker (1986) classified these elements into three main groups: ambient factors, design factors and social factors. Ambient factors consist of the conditions of the store, including non-visual elements such as music, lights, scent, temperature (Chebat et al.,

2001; Dube and Morin, 2001; Michon et al., 2005; Oh et al., 2008). Design factors includes store architecture, dimension, layout, product display, colours, style, etc., (Thang and Tan, 2003; Kent and Kirby, 2009; Kirby and Kent, 2010, Paswan et al., 2010). While social factors refer to the people within the store, including the number salespersons (if limited consumers may perceive an inadequate access to service encounters), number of consumers, behaviour of salespersons (Michon et al., 2005; Oh et al., 2008; Noon and Mattila, 2009). In particular, the high number of consumers, perceived as crowding, might discourage consumers to continue the activity, by soliciting negative feelings towards the human density. The crowded store environment results from a limited human space, scarcity of merchandise allocation, and insufficient floor layout design, with negative consequences on clients' satisfaction and purchase intentions (Li et al., 2009; Noon and Mattila, 2009; Lee et al., 2011).

The introduction of advanced technologies might improves the physical store features, by enhancing product display, location, information access, purchase modalities, etc. (Papagiannidis et al., 2013; Demirkan and Spohrer, 2014; Poncin and Mimoun, 2014; Pantano and Timmermans, 2014; Baek et al., 2015). Examples include self-checkout cash desks at groceries, informative touch screen displays in large department stores for identifying and searching items in the stores, mobile apps providing a sort of shopping guide within the store, etc.. In the one hand, these innovative systems enlarges the products offer; in the other one they while provide enriched information on the items, while evoking consumers' positive feelings (Dennis et al., 2010).

Starting from the technology acceptance model (Davis, 1989) and its extension (Kim and Forsythe, 2009; Kim and Lee, 2013; Gross, 2015; Evanschitzky et al., 2015; Yang et al., 2015), the majority of the studies declined consumers acceptance of the technological innovations in retail settings as a consequence of perceived ease of use, usefulness, enjoyment, trust in the employed technology, etc.. The above mentioned studies agreed on the possibility to influence consumer purchase behaviour through the store environment, referring to the interior variables (including atmosphere, enriched service prompted by technology, etc.), while the external ones, mainly devoted to the visual appeal of the storefront window, provides the first impression of the store and influence consumer entry decision (Oh and Petrie, 2012). Hence, the external atmosphere, with emphasis on the storefront window is still under investigated.

2. 2 Storefront windows and consumer behaviour
Storefront windows are a powerful tool for communicating products and motivating consumers' to enter the store (Yildrin et al., 2007). This decision might be further influenced by need of collecting more information on products they saw on the window display or learning more about the sales and promotions announced there, etc. (Sen et al., 2002; Oh and Petrie, 2012).

Similar to the role of store atmospherics, effectiveness of a store window relies to the visual stimuli used to positively influence consumers' behaviour (Oh and Petrie, 2012; Kernsom and Sahachaisaeree, 2012). These stimuli involve (i) design elements, such as brightness, saturation, colour, light intensity, texture, shapes, textual style, and merchandise display; (ii) product and product positioning (including price); and (iii) window display style (including concept, content, season and product) (Oh and Petrie, 2012; Kernsom and Sahachaisaeree, 2012). Concerning the design elements, certain colours are able to solicit more positive feelings in consumers creating a particular

mood potentially pushing consumers to make a purchase (Jain et al., 2014). For instance, before the Valentine's Day, the most of the stores are characterized by red colour, usually associate with the passion and love, inviting consumers to buy a Valentine's gift. Concerning the product and product positioning, products can be located in the center of the display surrounded by other elements, or they can occupy only a limited part of the scene. Similarly, the price or details on price and promotion might be or not visible from the storefront. The right number of displayed information might solicit consumers attention without totally satisfying it, in order to influence their entry decision. Concerning the display style, windows often tend to reproduce the season, for instance in the winter time they tend to recreate winter and snowing scenarios, or in the Christmas time, they propose Christmas trees and other elements recalling the holiday.

Prior studies proposed a further classification of the window typologies, such as (i) the merchandise-one able to support *understating*, and the artistic one promotes the *exploration* (Oh and Petrie, 2012); (ii) the flat, arcade or corner window (Yildrim et al., 2007). The flat category consists of a straight line with the entrance aligned on this line, arcade category extends from the shop's entrance set back between two windows in order to increase the surface for showing products, whereas the third category is specifically employed for those stores located in corners; and (iii) the thematic and non-thematic based on the design (Oh et al., 2008), where the thematic design presents the products according to a story or a concept, a lifestyle-type atmosphere. Meaningful examples of thematic windows are often available for large department stores, for instance, in March 2015, Harrods (London, UK) celebrated the launch of the new Disney movie based on Cinderella tale devoting each window to a certain scene of the movie. These windows further invited pedestrians to enjoy the collection of Cinderella-inspired shoes, created by designers such as Stuart Weitzman and able to solicit the dream of both fairy-tale lovers and fashion fans.

To date, literature provides studies offering preliminary indications on the basic factors for the design of an effective storefront window (see Oh and Petrie, 2012), without taking into account the possible ripple effects of interactive technologies on these factors, or how traditional elements of a window and new technologies can be successfully merged.

2.3 Storefront windows and advanced technologies
As anticipated, in the recent years scholars investigated the integration of advanced technologies within the physical point of sale for positively influencing consumer behaviour (Papagiannidis et al., 2013; Demirkan and Spohrer, 2014; Pantano, 2014; Poncin and Mimoun, 2014; Pantano and Viassone, 2015). More recently, some preliminary studies highlighted the extent to which the higher innovative storefront increases the higher positive store image evaluation (Cornelius et al., 2010), by exploiting the innovativeness offered by virtual elements such as digital signage and mannequins (Bauer et al., 2011; Campos et al., 2012; Reitberger et al., 2009). In fact, interactive and touch screen displays might increasingly replace the traditional static signage. This represents the extension of multimedia applications to the urban spaces (Muller et al., 2009). As anticipated for in-store digital signage (Dennis et al., 2010), the benefits of this technology are manifold. It acts as an effective stimulus able to positively influence consumers' mood and subsequent purchase decision. To achieve this goal, some studies developed new storefront windows equipped with a new technology able to display information inside the window glass according to consumers' knock on the surface (even while the store is closed), by figuring out the

large pedestrian usage and appreciation in terms of number of people approaching the window and number of people starting interacting with the system (Paradiso et al., 2002; Paradiso and Leo, 2005). Similarly, few studies compared the interactive and the traditional mannequins on the storefront, by investigating the influence on the interactive ones on time spent in front of the shop window (Reitberger et al., 2009). These studies figured out the longer time spent in the case of interactive mannequins. Meschtscherjakov and colleagues (2009) also hypothesized the replacement of the traditional window mannequins with the new interactive ones able to react according to consumers' (pedestrians') presence while displaying information.

Although these preliminary studies introduced a specific technology and figured out a positive consumers' reaction, literature still lacks of theoretical and empirical researches on generic technology integration directly in storefront, which would be able to provide clear analysis of consumers' responses. Hence, the research on this direction is still in the early stage.

Summarizing, despite the role of storefront displays for augmenting consumers' flows and the spread of advanced technologies within the points of sale, little attention has been paid on the factors consumers' judge more important for their choice including the integration of technologies directly on the storefront windows. While real examples of integration of interactive technologies within the storefront windows are increasing, scientific literature still lack of studies in this direction.

3. Methodology of research

The present studies employs an exploratory qualitative approach to provide insights on consumers' experiences and opinions largely used in academy for exploring new phenomena and draw up new theories (Bailey 2014). In particular, this approach allows interpreting subjects of the study and exploiting the emerging knowledge to contribute to the literature. Focus group has been largely employed by market researches for achieving data-rich insights and depth analysis on consumers' attitudes (Harris and Dennis, 2011). Through this method, respondents felt free to share their personal opinions, while the interviewer accumulated the responses from all participants, as suggested by Hines (2000).

We conducted 6 focus groups of 8 participants based on open-ended questions allow consumers experience with storefronts windows to emerge., Therefore, a convenience sample of 48 respondents was drawn from two Italian universities. We assumed this sample as well suited to our research because young participants have a certain expertise of advanced technologies (i.e. smartphones), and are aware of internet and mobile tools for shopping (Papagiannidis et al., 2013). Similarly, current literature on technological innovations in retail settings frequently involves this kind of subject for research (Papagiannidis et al., 2013; Rese et al., 2014), since they can be considered the "shoppers of the future" (Harris and Dennis, 2011).

The six focus groups were of between 1 hour and 1 hour 30 minutes duration and took place in January and February 2015.

Each focus group was moderated by the researcher and audio-recorded. After some introductory questions such as "do you know why you are here" and "Can I assume that you entered a shop only because of the windows at least once", the moderator invited respondents to focus on their experience with the physical channel for shopping, by excluding the e-stores and online storefronts, mobile stores, etc.. Subsequently, moderator investigated their attention towards the storefront windows and the influences on their entry decision and purchase intention.

Finally, participants were invited to reflect on some possible touch screen displays and other interactive technologies introduced on a limited number of storefront windows and for a limited time, and to comment on whether they would be attracted by this type of service and why/why not.

We adopted a systematic approach to data analysis, which supported researcher to focus on the most important findings. MaxQda software supported the coding process for listing key concepts and ideas, by uploading the responses emerging from the focus groups.

All participants usually purchase in a physical point of sale (5 rarely, 25 twice per month and 18 at least once per week), and based the entry decision only on the storefront window (17 participants often and 24 very often).Table 1 summarizes the age of focus group participants.

Age	Number
20-24	35
25-30	13
Total	**48**

Table 1: Ages of focus group participants

4. Findings
4.1 Storefronts influences on consumer behaviour
4.1.1 Storefront and positive consumer behaviour

As anticipated, the first step of the research consisting of figuring out the drivers of consumers' entry decision associated with the storefront. Therefore, the moderator invited members of the focus groups to freely suggest their points of view, by indicating the most important elements for a successful storefront. Participants indicated a large attention towards the lights and brightness of the windows, as well as the right usage of bright colours.

For instance, a male respondent stated:

"*I expect to see products properly lighted and bright colours. I don't like shadows… they don't allow to see well the products!*"

While two female respondents stated:
"*I like the lights and brightness. It makes me feel better. Thus, a store presented in this way makes me feel better. It would be a sort of source of happiness and I need to enter in this such a store!*".
"*The brightness of the windows is fundamental! How can I enter or even look a store with a dark window? The lights underline the products. Otherwise it seems dead!*".
Similarly, another (male) participant specified:
"*I would buy in a store just because of the storefront totally in green!*".

These findings confirm the extent to which visual stimuli influence consumers at the storefront, in terms of color, brightness, and lights, as anticipated by previous studies (Oh and Petrie, 2012; Kernsom and Sahachaisaeree, 2012; Jain et al., 2014).

Moreover, respondents also showed an interest towards the presence of the product price for each presented item. Especially male respondents reported comments

concerning the price, by indicating a larger interest towards the presence of this element in the storefront if compared with the female ones:

"I would never enter a store without the price indication on the windows. It means that the products are too expensive. It is not for me!"
"If I don't' see the price I don't understand if it is a storefront window or even a warehouse".

This data sheds light on the price as the main feature of product, by extending the work of Kernsom and Sahachaisaeree (2012). Secondly, concerning the number of products presented and size of the storefront, respondents agreed on preferring the large windows displaying a huge number of products, by specifying that these products should be displayed with a certain order, for instance by recalling a particular theme:
"An empty windows does not focus on the one product, just communicates a sense of absence!" (female respondent)
"I love the stores in the Christmas time, because their windows are full of Christmas tales" (female respondents).
"I want to see many products, thus I can have a clear idea of the store offer and decide to enter or not. It makes me save time. If the storefront is huge, it would be a good summary of the store offer. You cannot propose your best sellers in a small space, and you must present your bestsellers into your window!" (male respondent).

Therefore, in the one hand respondents expressed a preference for thematic windows in certain periods of the year (such as Christmas); whereas in the other one, they put emphasis on the product displaying in terms of product position within the window as less important than price for soliciting positive behaviours. These findings extend the past researches (Oh and Petrie, 2012; Kernsom and Sahachaisaeree, 2012), by providing a sort of hierarchy of the main influencing factors characterizing the storefront for soliciting favourable consumers responses.

Other noteworthy insights concern the innovativeness of the window, the number of product displayed, the dimension of the storefront, and the scenario illustrated.
In particular, respondents underlined the importance of an innovative window to catch their attention. Hence, they highlighted a causal relationship between the innovative storefront and the subsequent positive store image evaluation, in accordance with Cornelius and colleagues (2010). This innovation might rely on the innovative way for displaying products, while implying that consumers do not limit the concept of innovative storefront to the integration of innovative technologies. In fact, respondents showed a particular interest for the windows exhibiting original elements, in terms of innovative (creative) products displaying. For instance, one respondent remembered the windows of *La Rinascente* in Milan dedicated to Andy Warhol in March 2012, when an exhibition devoted to the US artist were opened in the city in a palace in front of the luxury department store, which supported the exhibition thought the storefront resulting very authentic:

"I would be so happy to finally see something really eccentric, uncommon, memorable! Like the Warhol windows in Milan some years ago!".
While another female participant stated:

"I live in a city full of stores, thus I understand that for the competition among store windows is quite hard. But if I have to choose a store, I would prefer the one with the most original window. This would solicit my curiosity. But it is very rare, actually the stores propose so trivial windows!".

4.1.2 Storefronts and negative consumer behaviour
We further investigated the elements that discouraged consumers' entry decision or solicited negative feelings towards the retailer. As emerged from previous studies (Oh and Petrie, 2012; Kernsom and Sahachaisaeree, 2012; Jain et al., 2014), visual stimuli and (external) atmospherics are able to solicit also negative feelings in consumers, with negative consequences on their entry decision. For instance, a female participant specified that *"If the windows are ugly, I don't even see them"* and a male one reinforced: *"I even do not see the bad windows, I go further"*.
Nevertheless, when asked what makes ugly a storefront, our participants agreed on the disorganization, limited number of products and ordinary windows:

"When I see a storefront, I want to understand why the products are displayed in that way. Otherwise, I have the feeling to see something thrown away" (female respondent).
"The order of the product display makes the difference between a storefront window and a warehouse" (male respondent).

Later some of them also associated the idea of disorganization with the limited number of the product:

"Once I saw a storefront with only one bag in the middle. Where were the other items? I was wondering if the stores had also other items to sell" (female participant).
"I simply don't like empty windows. They are the businesscard of the store, it is like giving your businesscard only with your name printed. It doesn't work" (male participant).

While these findings reinforce the role of product displaying in the storefront decision (Oh and Petrie, 2012; Kernsom and Sahachaisaeree, 2012), they further distinguish the weight of this elements when soliciting positive either negative behaviours, by specifying that is more important for discouraging consumers entry decision. In fact, if storefront solicits positive reactions, the price emerges as more the most important element related to product displaying; whereas if the storefront solicits negative feelings, consumer consider the product position in the windows as the main cause.
Another participant further specified the negative effect of ordinary windows:

"I usually prefer the most authentic and original storefront. An ordinary storefront is so trivial, no effort for capturing my attention, just a common presentation of the product. I don't like this kind of windows" (male respondent).

To support these statements, another (male) participant later added:

"I can provide you an example: the windows of bookstores are ugly and boring!".

4.2 Technology integration within storefronts

Although the most of participants were previously unaware of storefront windows enriched with interactive technologies, (a justification lay in the fact that in Italy only in Milan innovative storefronts have been introduced and for a limited time), they showed interest in them when they were introduced through several (accessible through supporting videos). This unawareness might justify the absence of interactive technologies in the list of important elements for soliciting consumers' interest and positive entry decision emerged in the first section of the focus group. Participants first impression was very positive:

"*It seems exciting. I would discover all the new arrivals and promotions directly from the storefront*" (female participant).

Similarly to the previous studies identifying usefulness as a driver of consumers acceptance of in-store technologies (Kim and Forsythe, 2009; Kim and Lee, 2013; Gross, 2015; Evanschitzky et al., 2015; Yang et al., 2015), this element emerged in the case of interactive technologies integrated within the window as the main factor able to influence consumers positive evaluations. In fact, participants appeared to be also influenced by the possibility to save time thanks to these new technologies:

"*If I can even order and pay from the storefront, I would avoid in/store queues*" (female participant).

This statement is further supported by the decreasing interactions with salespersons, perceived as a positive element:

"*Wow. It is lovely. I would avoid the interactions with stupid shopping assistants for purchasing. They usually try to oblige me to buy something that I don't like*" (female participant).

"*It is perfect when I'm in hurry, and I really need to avoid the stress coming from the interaction with the shopping assistant!*" (male participant).

Further characteristics rely on the innovativeness of the systems and on their ability to catch consumers attention:

"*I've never seen something like this. I would definitively try it!*" (female participant).
"*I would approach this kind of store for sure. Where can I find one?*" (female participant).
"*It is very innovative. It catches my attention, even if I usually don't like very much walking and observing the windows*" (male participant).

Only one participant declared to be not able to evaluate the benefits of the integration of interactive technologies within the storefronts on the basis of the proposed examples.

5. Conclusion
The present study is the first one to examine the storefront window elements able to influence consumer entry decision and the effects of the integration with interactive technologies. Starting from previous studies on the influence of storefront on

consumer behaviour (Sen et al., 2002; Yildrin et al., 2007; Kent and Kirby, 2009; Cornelius et al., 2010; Oh et al., 2012; Jain et al., 2014), we selected a sample of consumers who based their entry decision only on the windows at least once.

Firstly, our analysis allowed identifying a sort of hierarchy of the main factors influencing consumers, which are in order: lights and brightness, colour, price, originality/authenticity, number of product, dimension of the window, and theme. Our study further figured out three elements soliciting negative feelings in consumers as disorganization, limited number of product and not original element displayed.

Secondly, our insights contribute to the current literature that provides small evidences on the positive consumers' reactions towards new technology-enriched storefront windows, by extending previous studies (Campos et al., 2012; Reitberger et al., 2009; Paradiso et al., 2005) with a more comprehensive view of the emerging benefits. In particular, these are both hedonic and functional. Hedonic value emerges from the introduction of entertaining elements able to solicit consumers attention and to make them to approach the storefront (i.e. see the example of Lacoste windows with motion capture). Functional value emerges from the possibility to visualize store offer from outside, and choose the favourite item before (or without) effectively entering (i.e. see the example of Kate Spade storefronts). According to respondents, this would help to save time and to avoid uncomfortable contacts with salespersons.

Thirdly, we did not find significant differences on the preferences according to gender. Both male and female respondents agreed on the same factors influencing their entry decisions, and had a similar reaction towards the introduction of interactive elements directly on the storefront.

Summarizing, past studies have argued that innovative technologies are becoming prevalent in the actual retail settings (Kourouthanassis et al., 2007; Papagiannidis et al., 2013; Rese et al., 2014; Demirkan and Spohrer, 2014; Pantano and Viassone, 2015), while proposing only few qualitative testing of storefronts enriched with specific technologies such as virtual mannequins or glasses equipped with haptic sensors (Paradiso et al., 2002; Paradiso and Leo, 2005; Reitberger et al., 2009; Meschtscherjakov et al., 2009). Our research figured out the possible consequences of an interactive technology introduction already in the storefront, independently of the specific system.

The results of our qualitative study led us to propose some implications for retail managers, store designers, and marketers in general. In fact, a key finding of this study is related to the large importance consumers give to the aesthetical elements of the storefront, with emphasis on the brightness and lights, then to the price. While the integration with interactive technologies would further provide entertaining and informative sources.

Although the current examples of this integration are quite isolated and limited to few cities for a short period, consumers reacted positively. This means that retailers should consider integrating interactive technologies within the storefronts to catch consumers' attention, by displaying informational and entertaining attributes. In the one hand, storefronts might become a sort of interactive store catalogue that consumer can access before entry the store to support their further shopping (utilitarian and functional value); in the other one, they provide a sort of entertaining scenario, where "playing" with products before effective purchasing (hedonic value). For these reasons, it seems to be the most effective improvement for attracting consumers towards the real (physical) stores and competing with the online ones offering interactive and frequently updated contents. Moreover, to elicit positive responses, retailers might include virtual mannequins connected to a motion camera and other

elements able to recognize consumer proximity, touch screen displays, digital (interactive) signage, etc.. The benefits would be a major consumers' flow inside the store and more satisfied clients.

6. Limitations and future research directions

As a preliminary and explorative research in a promising topic of modern retailing, the empirical part of the study is limited to a qualitative data setting with a convenience sample, who were not experienced users with the new interactive storefronts. For this reason they appreciated the novelty of the new windows. Therefore, our findings to not support evidence on consumers positive response if the interactive storefront is *common* to the majority of the stores, or if it will be still able to attract consumers without the actual characteristic of innovativeness. Future studies could investigate the features that make this integration appealing beyond the grade of novelty.

Moreover, the present study does not take into account the cost of the technology that might reduce retailers' willingness to adopt. The cost may vary according to the complexity of the technological infrastructure and related novelty, realism and input devices. In this paper, we limit suggesting retailers to be aware of the benefits coming from the interactive storefronts, without providing any specific details on the cost for introducing and efficiently managing the technology.

Another limitation that future studies might encompass relates the examples of interactive storefronts. Our study focused on windows redesigned for fashion and accessories, without providing any indications in the case of food and drinks, or electronics, etc.. Future researches might extend our insights by considering storefronts devoted to different product categories, in order to carry out more generalizable consumers' responses.

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