WEBROOMING OR SHOWROOMING, THAT IS THE QUESTION: EXPLAINING OMNICHANNEL BEHAVIOURAL INTENTION THROUGH THE TECHNOLOGY ACCEPTANCE MODEL AND EXPLORATORY BEHAVIOUR

Abstract: The fashion retailing environment is more omni-channel than ever before. The two predominant omni-channel behaviours are webrooming and showrooming. Taking as its basis the Technology Acceptance Model (TAM) and the concept of exploratory consumer behaviour, this paper evaluates how the intention to develop webrooming or showrooming behaviour is affected by both the perceived usefulness and the perceived ease-of-use, as well as by the consumer's personal predisposition to exploratory information seeking and acquisition. The results obtained from a sample of 847 apparel shoppers (462 webroomers and 385 showroomers) show that the higher perception of the usefulness and ease-of-use of omni-channel buying processes, the higher the intention to develop both webrooming and showrooming behaviours. Additionally, the perceived ease-of-use exerts an additional indirect effect on the intention of developing these omni-channel behaviours through perceived usefulness. Finally, exploratory information seeking and acquisition have a relevant influence on webrooming intentions, but not on showrooming.

Keywords: Webrooming, showrooming, exploratory consumer behaviour, omni-channel consumer behaviour, TAM, apparel retailing

1. Introduction

Worldwide fashion industry statistics show that the sector is of great importance to the economy of any developed country. According to FashionUnited (2020), the fashion industry has a per capita GDP of $16,300, representing a market value of $406 billion. However, it is currently facing a challenging environment and profound changes as a result of digitalisation and the effects of the COVID-19 pandemic.

During recent years, the sector has addressed trends such as the appearance of new consumer habits, the growth of e-commerce, the possibility of providing personalised offers by exploiting big data, the vertical integration of brands through direct sales formats, last mile competition, advances in the application of new technologies in physical stores, and so on. The pandemic has only accelerated those developments and the need for the integration of offline and online channels. According to McKinsey (2019), apparel retailing will have to go through a significant restructuring in which a digital presence and online sales will be promoted, and the stores will be reconverted into showrooms where certain products will be on display physically, while others will be offered through electronic devices, encouraging the combination of physical and digital environments, thus providing what is now being termed a "phygital" experience (PwC, 2018).

The fashion industry is therefore immersed in the most significant revolution of recent decades – Omni-Channel Retailing (OCR). This has been defined as a strategy that integrates currently available channels and touchpoints to create a seamless and synchronised consumer experience that breaks down the barriers between the virtual and physical retailer's shopping channels and increases consumer engagement (Grewal *et al*., 2018; Flavián *et al*., 2016), in a situation in which the consumer journey is becoming more complex (Radzevičė and Banytė, 2020), and different types of omni-channel behaviours appear.

Overall, omni-shoppers often look for information through one channel (whether offline or online), but end up purchasing through another (Grewal *et al*., 2016; Vehoef *et al*., 2015). In this context, it is possible to observe two predominant omni-channel behaviours: webrooming (i.e., searching for information online and then buying a product offline) and showrooming (i.e., searching for information offline and buying a product online). The literature on OCR, and in particular research on apparel retailing, has begun to analyse the characteristics of omni-channel shoppers (Heitz-Spahn *et al*., 2018; Mosquera *et al*., 2019; Radzevičě and Banytė, 2020), but specific studies on the antecedents of webrooming and showrooming, respectively, are scarce, although the subject is drawing increasing attention (Aw *et al*., 2021; Fang *et al*., 2021; Fassnacht *et al*., 2019; Flavián *et al*., 2020; Grewal *et al*., 2018; Kleinlercher *et al*., 2020; Raj *et al*., 2020; Kokho *et al*., 2018; Santos and Martins, 2019; Viejo-Fernández *et al*., 2018).

Our research will attempt to contribute to this emerging literature by focusing on two types of drivers, one related respectively to technology (i.e., the individual's willingness to adopt Information and Communication Technology [ICT]) and another to the way in which shoppers search for, select, and evaluate information (considering the degree of cognitive and sensory stimulation of the buyer).

There are few academic studies that focus on studying the acceptance of these modalities. Arora *et al*. (2017) and Rejón-Guardia and Luna-Nevarez (2017) examined the adoption of showrooming behaviour using the theory of planned behaviour (Ajzen, 1991) as a theoretical framework. Arora and Sahney (2017) proposed a conceptual model of webrooming acceptance based on the Technology Acceptance Model (TAM; Davis, 1989), and they have recently developed empirical studies to explain both webrooming (Arora and Sahney, 2019) and showrooming (Arora and Sahney, 2018), although the results are inconclusive and somewhat contradictory.

Previous research has shown that innovativeness, loyalty, shopping enjoyment, time pressure, price consciousness, or product category (utilitarian and hedonic) are important drivers in omni-shopper behaviour, but the range of potential psychological drivers is much wider; it includes variables such as consumer self-concept, personality, lifestyle, motivations, interests, attitudes, opinions, and values.

Our research contributes to the literature on consumer behaviour in the fashion sector by testing a model that might explain the intentions of individuals to adopt webrooming and showrooming, incorporating different psychographic variables linked to the use of ICT and the development of an exploratory consumer behaviour. The study takes as its theoretical framework the TAM (Davis, 1989; Davis et al., 1989), the concept of exploratory consumer behaviour (Baumgartner and Steenkamp, 1996), and the Elaboration Likelihood Model (ELM; Petty and Cacioppo, 1986). We propose that the intent to develop a webrooming or showrooming behaviour is determined both by the consumer's perceived usefulness and ease-of-use of these practices and by their personal predisposition toward each of the two dimensions that make up exploratory consumer behaviour (i.e., exploratory information seeking and acquisition).

2. Literature review and research hypotheses

2.1 Omni-channel consumer behaviour: webrooming versus showrooming

Business practitioners and academics refer to consumers nowadays as omni-shoppers. An OCR literature review highlights that it is possible to observe two predominant behaviours, webrooming and showrooming. According to Flavián *et al.* (2020), both behaviours are two-stage decision processes, which differ in the channels that are used to gather data, to examine the products to be purchased, and to buy the products finally: "Webrooming begins with consumers' product information seeking behaviour through online channels, followed by information verification, and ending with completing their actual purchase in physical store"

(Aw *et al*., 2021; p. 2). Showrooming is the practice by which consumers engage in "gathering information by 'touching and feeling' products offline and then purchasing online" (Fiestas and Tuzoiv, 2021; p.1). An increasing number of studies examining webrooming and showrooming have been published during the last years, and include the drivers that give rise to each of these behaviours.

For example, in the case of webrooming, Kleinlercher *et al*. (2020) have tested a wide set of antecedents classified into four basic types: psychographic variables (customer involvement and pre-purchase certainty), shopping motivation (sales advice, having fun, convenience, and time savings), channel-related variables (in-store shopping and online shopping experiences, the price and assortment attractiveness of the physical store compared with online), and product-related variables. Santos and Martins (2019), based on Flavián *et al*. (2016), have explored three types of webrooming, defined in terms of the kind of device used, and have analysed different types of motivation derived from information processing theory (information attainment, price comparison orientation, and empowerment) and uncertainty-reduction theory (the need for touch, risk aversion, and choice confidence). They have found that information attainment is linked to all kinds of webrooming behaviours, and that price comparison orientation and empowerment are important behaviours in which mobile devices are included.

Research has revealed that price orientation is only one element of showrooming. Gensler *et al*. (2012) established six categories of antecedents: perceived benefits, perceived costs, perceived trade-offs, consumer-related variables, shopping-related variables, and product-related variables. Daunt and Harris (2017) identified product characteristics (i.e., the technological pace of change, product acquisition value, product price, and availability of the product), consumer characteristics (product involvement, in-store shopping savviness, Internet savviness, and shopping enjoyment), and channel characteristics (trust in in-store sales

employees, trust in online stores, perceived value of in-store shopping, and perceived value of online shopping).

In general, retailers have usually considered showrooming as a threat to their physical stores because of its free-riding nature (Daunt and Harris, 2017; Kokho *et al.*, 2018; Viejo-Fernández *et al.*, 2020), so, accordingly, several studies have attempted to suggest strategies to retain previous customers (Fassnacht *et al.*, 2019; Raj *et al.*, 2020). Most recent works, however, have highlighted that these customers may represent a source of potential opportunity for brick-and-mortar retailers, because mobile phone use in stores (1) causes consumers to become distracted and increases consumers' total time spent in the store (and therefore the attention devoted to displays) and loop diversion (Grewal *et al.*, 2018); (2) improves consumers' perceptions of cross-channel integration (Fang *et al.*, 2021); (3) makes consumers more likely to pay a premium price for their purchases compared with online customers (Viejo-Fernández *et al.*, 2020); and (4) generates a varied range of malleable positive and negative emotions during the buying process (Kokho *et al.*, 2018), in such a way that showroomers that have a bad conscience about taking advantage of a retailer's services in the sales room and buying from a competitor online (Schneider and Zielke, 2020).

Our research attempts to contribute to this emerging literature by analysing two additional types of factors related to psychographic variables. The first one is an individual's willingness to adopt ICT, given the technological-based nature of webrooming and showrooming. The classic TAM is used as the conceptual framework. The second kind of factor refers to the different forms of information processing, since webrooming and showrooming practices imply changes in the way in which the consumer searches for, evaluates, and compares information. Past research has analysed the different motivation derived from information processing and uncertainty-reduction theories, but investigating exploratory purchase behaviour allows us to identify other relevant variables not yet explored.

2.2 TAM and omni-channel consumer behaviours

The TAM focuses on the influence of external factors on the beliefs, attitudes, and intentions of users to adopt a new technology (Davis et al., 1989). It identifies two main determinants of the acceptance of technological innovations: perceived usefulness and perceived ease-of-use. The former refers to the degree to which an individual considers that using a particular system will improve the performance of a task, whereas the latter is defined as the degree to which the potential user of a technology expects that its use will not require effort. According to the TAM, the use of a new system or technology is determined by the behavioural intention which, in turn, has two basic antecedents: the perceived usefulness and perceived ease-of-use. The model also postulates that perceived ease-of-use exerts a positive effect on perceived usefulness.

The TAM has been the most widely applied model in research on information systems (Blut and Wang, 2020) and, in particular, e-commerce (Brusch and Rappel, 2020; Hsieh, 2020), and is in force in scientific research. In general, previous studies have supported the main relationships postulated in the theoretical model in the field of e-commerce behaviours. However, the application of this theoretical framework to omni-channel shopping modalities is still very limited, especially in the field of fashion. Arora and Sahney (2017) proposed a conceptual framework of webrooming acceptance based on the TAM, but they did not test it empirically. Arora and Sahney (2018) confirmed that perceived usefulness exerts a positive effect on showrooming intentions and that perceived usefulness is influenced by perceived ease-of-use, although they did not test the effect of this last variable on showrooming intentions. Finally, Arora and Sahney (2019) observed that both perceived usefulness and perceived ease-of-use had a positive and indirect effect on webrooming, through the mediation of the attitudes towards this behaviour. Accordingly, the empirical evidence about the effect of these variables on the intention to follow webrooming and showrooming behaviours is still scarce and

inconclusive. Moreover, the gap in the literature is even wider in the case of fashion, as none of the studies mentioned above concentrate on this sector.

Consistent, therefore, with the more widespread conceptualisation of the TAM (Blut and Wang, 2020; Brusch and Rappel, 2020), we propose that the intention of webrooming and showrooming to purchase fashion products is directly influenced by the usefulness and ease-of-use perceived by consumers. They engage in webrooming or showrooming only if they consider that the behaviour is useful for their purposes and if they perceive that the effort required is limited. In other words, the use of webrooming or showrooming is determined by the degree to which consumers perceive that these omni-channel behaviours are superior to one-stop shopping behaviours (pure offline or pure online) in terms of usefulness and perceived ease-of-use. We therefore propose the following hypotheses:

H_1: The perceived usefulness of webrooming/showrooming positively influences the intention to use those modalities.

H_2: The perceived ease of use of webrooming/showrooming positively influences the intention to use those modalities.

H_3: The perceived ease of use of webrooming/showrooming positively influences the perceived usefulness of those modalities.

2.3 Exploratory consumer behaviour

There can be differences in the way in which the consumers search for, select, and evaluate information. Our research includes the results of some studies that have analysed the way in which individuals process information to make decisions.

Steenkamp and Baumgartner (1992) proposed that the decision-making process is directly related to stimulation, which is the result of the "Optimum Stimulation Level" (OSL) of consumers, defined as their propensity to respond to environmental stimuli. If they

experience a low OSL during their shopping journey, they then try to increase it, giving rise to what is known as "exploratory consumer behaviour".

Baumgartner and Steenkamp (1996) differentiated two dimensions within "exploratory consumer behaviour": (1) exploratory information seeking and (2) exploratory acquisition. Exploratory information seeking refers to the active search for information and the acquisition of knowledge about the products that the consumer is planning to purchase. Exploratory acquisition, on the other hand, involves risk, innovation, or experimenting with new sensations in the purchase of a product. The main difference between the two concepts lies in the types of stimuli they activate.

Exploratory information seeking enhances *cognitive stimulation*. Baumgartner and Steenkamp (1996) associated cognitive stimulation with those individuals who are most involved in the purchase and who are motivated to make the best choice by avoiding any risk in making a wrong decision. Bloch *et al*. (1986) argued that exploratory information seeking may involve satisfying the natural curiosity of an individual concerning new products so they form a reasoned opinion with regard to future purchases. The ELM proposed by Petty and Cacioppo (1986) explains this type of behaviour in terms of the development of a central information processing route. When consumers feel more engaged in the purchasing process, their level of motivation to seek and obtain information will be higher and will be accompanied by a greater investment in time and effort. Therefore, information and messages will be examined through the central route, i.e., by developing proactive behaviour, seeking out and paying more attention to a product's characteristics, and so on.

Exploratory acquisition is linked to the development of *sensory stimulation* (Baumgartner and Steenkamp, 1996). Individuals activate this dimension through the possibility of enjoying more novel, complex, surprising, and challenging experiences; taking

risks when trying new products or changing retailers; or simply exploring new possibilities and avoiding routine shopping (Swati and Sandeep, 2012).

It is likely that both types of exploratory behaviour, i.e., exploratory information seeking and exploratory acquisition, support the development of webrooming and showrooming. On the one hand, both types of behaviours involve a combination of physical and virtual touchpoints. Compared with one-stop shoppers, who use a single channel (either offline or online only), a combination of channels means a planned consumer journey in which more time and effort is invested in searching and comparing information. On the other hand, the relative ease of obtaining information both offline and online sometimes leads consumers to try new products, to look for variety and/or a certain social acceptance, or self-affirmation. However, and according to the characteristics that define webrooming relative to showrooming, one would also expect different degrees of influence from the two dimensions of exploratory consumer behaviour over each of these omni-channel behaviours.

Webroomers first use the Internet to obtain information about a product and its characteristics, making comparisons with other similar products and analysing the ratings of other consumers. Subsequently, they go to the physical store with a firm opinion of what they want to buy. Even within the store, they can increase or improve on the information they have previously obtained by consulting their smartphones (Flavián *et al*., 2016). In addition, they are able to learn more about the intrinsic variables with respect to retailers. For example, retailer advice and consumer service play a significant role in the webroomer profile (Bezes, 2015).

While cognitive stimulation for this kind of consumer seems a key issue, it does not mean that they are not affected by sensory or environmental stimuli, both online and offline. The online channel has to facilitate the user experience, so that web usability in terms of a responsive design and an appropriate categorisation of the portfolio of products can activate sensory stimulation and encourage new purchases. The same can happen with the

environmental stimuli of the physical store (e.g., visual merchandising), which favours the dimension of exploratory acquisition. However, the webroomer acts essentially as a "smart shopper" who follows a central information processing route, so one would expect that within exploratory consumer behaviour, the exploratory information seeking dimension would stand out.

We can also find both dimensions of exploratory consumer behaviour in the case of showrooming, although their relative importance may be slightly different. The showroomer first goes to the physical store to look for information and purchases the product online. By using offline and online channels, the showroomer is involved in the purchase (in particular, searching for the retailer that offers the best price for that product) and some cognitive stimulation when looking for and comparing price information. However, it is possible that showroomers do not always have accurate information about the characteristics of the product when going to the store, where they present a less consolidated attitude than webroomers with regard to their potential purchase (Viejo-Fernández et al., 2018). These leads to a greater predisposition towards variety and a higher tendency to change brands than webroomers.

Showroomer decision-making processes are less planned than those of webroomers. They make simpler evaluations about the product and pay special attention to "signs", such as brands or other attributes unrelated to the technical characteristics of the products. When visiting the physical store for a first impression of the product, it is likely that they will be more intensely attracted by the sensory stimulation of the surroundings. Promotional activities, the novelties, the merchandising, and the in-store availability of the products will be of vital importance in the showroomer's decision to purchase (Bezes, 2015; Viejo-Fernández et al., 2018).

In light of the above, we propose the following hypotheses:

H4: The consumer's exploratory information seeking behaviour positively influences the intention to use both omni-channel behaviours, webrooming and showrooming, but mainly webrooming.

H5: The consumer's exploratory acquisition behaviour positively influences the intention to use both omni-channel behaviours, webrooming and showrooming, but mainly showrooming.

Figure I depicts the research model.

[Insert Figure I about here]

3. Methodology

3.1 Measures and sample design

Quantitative research was carried out to test the hypotheses. Data were collected using two personal questionnaires that measured webrooming and showrooming, respectively. A brief explanation was included in each questionnaire (see Appendix), so that the respondents had a clear understanding of the questions. In particular, the variables of the model were included in both questionnaires and were adapted to each behaviour.

All the variables were measured using multi-attribute instruments adapted from previous work to ensure content validity (see Appendix). A 10-point Likert scale was applied following the recommendations of Wittink and Bayer (2003), due its benefits in terms of greater variance and measurement precision and more opportunities to detect changes than a smaller scale (e.g., a 7-point or 5-point Likert scale). Behavioural intention was selected as the dependent variable, as it has been identified in the general literature on consumer behaviour (Ajzen, 1991) and in past research on innovation adoption (Davis, 1989; Davis *et al*., 1989; Venkatesh *et al*., 2003). The scales for intention, perceived usefulness, and perceived ease of use were developed based on the work of Venkatesh *et al*. (2003). Finally, exploratory information seeking and exploratory acquisition scales were adapted from Christodoulides and Michaelidou (2010).

The target population was people who had purchased online and offline apparel products. A non-probabilistic procedure was used to select the sample and a convenient sampling technique was applied to select potential informants during their visit to different shopping streets and shopping malls. A personal survey was conducted on a convenience basis to select potential informants during their visits. The fieldwork was carried out through a personal survey conducted in different geographical areas of Cantabria, a region in the north of Spain. Cantabria has a wide variety of physical stores, including those of the main manufacturers and retailers in the apparel industry, such as Zara, H&M, and GAP. The context is comparable with other cities or regions in Europe, a consequence of the globalising nature of consumer shopping habits.

Sample selection was made separately for each case, and participants only completed one questionnaire, which verified the independence of the observations. Anonymity and strict data confidentiality were guaranteed at the beginning of the interview. Finally, a total of 462 valid responses were collected for the webrooming sample and 385 for the showrooming sample. Table I shows the characteristics of the samples obtained regarding gender, age, and educational level. Despite the non-probabilistic procedure used, both samples were somewhat similar in terms of these characteristics, thus confirming the relevance of the comparative focus of the research.

[Insert Table I about here]

4. Results

A covariance-based Structural Equation Modelling (SEM) approach was used to test the research hypotheses, using a robust maximum-likelihood estimation procedure. This method avoids the potential problems related to the non-normality of data by providing the outputs "robust chi-square" and "robust standard errors", which were corrected for non-normality (Byrne, 1994) and which, consequently, guaranteed the validity of the model estimation. First,

for the two samples, the measurement model was estimated using Confirmatory Factor Analysis (CFA) to test the psychometric properties of the measurement scales (reliability and validity). Next, the structural model was estimated for each sample (i.e., purchase behaviour) to contrast the direct causal effects established in the research hypotheses.

4.1 Estimation of the measurement model

An SEM approach was used to test the psychometric properties of the measurement scales. Reliability and validity were checked by means of a CFA using the SEM software package EQS 6.1. The results confirmed the reliability and convergent validity of both samples (Table II).

[Insert Table II about here]

Fit criteria indicate the extent to which the factorial model fits the empirical data. There are three main classes of fit criteria: measures of absolute fit, measures of incremental fit, and measures of parsimonious fit (Hair *et al*., 2010). The following measures, which are provided in EQS 6.1, are widely used in the SEM literature (Hair *et al*., 2010): the Bentler-Bonett Normed Fit Index (BBNFI), the Bentler–Bonett Non-Normed Fit Index (BBNNFI), and the Root Mean Square Error of Approximation (RMSEA) are used for the measurement of overall model fit; the Incremental Fit Index (IFI) and the Comparative Fit Index (CFI) are employed as measures of incremental fit; and normed χ^2 is used for the measurement of the parsimony of the model. The results summarised in Table II confirm that, for both samples, the BBNFI, BBNNFI, IFI, and CFI statistics clearly exceeded the recommended minimum value of 0.9. Similarly, in both cases, the RMSEA was located within the maximum limit of 0.08, and the normed χ^2 took a value clearly under the recommended 3.0 (Hair *et al*., 2010).

The reliability of the measurement scales was evaluated using Cronbach's alpha, compound reliability, and AVE coefficients (Bagozzi and Yi, 1988). The values of these statistics were, in all cases, above the required minimum values of 0.7 and 0.5, respectively

(Hair *et al*., 2010), thus supporting the inner reliability of the constructs (Table II). Convergent validity was also confirmed for both samples, since all items were significant at a confidence level of 95%, and their standardised lambda coefficients were higher than 0.5 (Steenkamp and Van Trijp, 1991).

Discriminant validity was tested following the procedure proposed by Fornell and Larcker (1981), which requires the comparison of the average variance extracted for each pair of constructs (AVE coefficient) with the squared correlation estimated between them (Table III). In all cases, the AVE was greater than the squared correlation, so discriminant validity was confirmed.

[Insert Table III about here]

4.2 Estimation of hypothesised structural model

The model was estimated using robust maximum likelihood. Figures II and III and Table IV summarise the results derived from the estimation of the proposed research model for the two samples, and indicate the R^2 statistics for each dependent variable and the standardised coefficients and significance level (p-value) for each relationship.

[Insert Figure II about here]

[Insert Figure III about here]

[Insert Table IV about here]

The goodness-of-fit indices were appropriate for both the webrooming (normed χ^2 = 3.11; BBNFI = 0.90; BBNNFI = 0.91; CFI = 0.93; IFI = 0.93; RMSEA = 0.07) and the showrooming samples (Normed χ^2 = 3.02; BBNFI = 0.89; BBNNFI = 0.90; CFI = 0.92; IFI = 0.92; RMSEA = 0.07). Additionally, for both purchase modalities, the model proposed explained a relevant percentage of the variance of the dependent variable (the R^2 statistic took values over 0.65 for behavioural intentions and over 0.50 for perceived usefulness).

The results supported the basic structure of the TAM for both purchase modalities. Therefore, perceived usefulness (**H₁**) and perceived ease-of-use (**H₂**) had a positive significant effect on behavioural intentions. Moreover, perceived ease-of-use had a significant influence on perceived usefulness (**H₃**) and, therefore, an additional indirect influence on behavioural intentions.

Nevertheless, there were important differences between webrooming and showrooming purchase behaviours with regard to the influence of exploratory information seeking (**H₄**) and exploratory acquisition (**H₅**). Both explanatory variables had a positive and significant influence on the intention to develop webrooming behaviour in the future, but no significant effect was found in the case of showrooming. According to these results, consumers more prone to search for information and variety during the purchase process were more willing to engage in webrooming.

5. Discussion

5.1 Theoretical implications

The present study focused on two basic types of omni-channel behaviours in apparel retail, i.e., webrooming and showrooming, to analyse the potential effects of a range of drivers linked, respectively, to the extent to which shoppers accept the "mixed" technologies or processes involved in an omni-channel environment (in terms of perceived usefulness and perceived ease-of-use), and the predisposition shown by consumers towards the exploratory information seeking and exploratory acquisition during their shopping journey.

The results confirmed the validity of the TAM (and its causal relationships) to explain webrooming and showrooming. The results were consistent with previous research on ecommerce adoption in general (Brusch and Rappel, 2020; Hsieh, 2020), while providing new insights into the scarce and contradictory evidence available to date in relation to webrooming and showrooming. In contrast with Arora and Sahney (2018; 2019) the findings confirmed the

direct influence of perceived usefulness and ease-of-use on behavioural intentions in webrooming and showrooming, without the mediating effect of attitudes. Accordingly, the phenomenon of omni-channel behaviour was clearly associated with the advantages of combining online and offline technologies in terms of performance and effort as perceived by consumers. Additionally, the fact that webrooming and showrooming practices were perceived as easy to engage in increases the perceived usefulness in accepting these "mixed" technologies.

Our study also shows that apparel shoppers who developed an exploratory consumer behaviour in its two dimensions (exploratory information seeking and making an exploratory acquisition) during their shopping journey were more likely to be webroomers, although no conclusions could be drawn in the case of showroomers. These findings support previous studies that have highlighted the relevance of motivation based on information processing theory and risk-reduction in explaining omnichannel behaviours, in particular webrooming (Kleinlercher *et al*., 2020); Santos and Martins, 2019; Viejo-Fernández *et al*., 2018).

According to Viejo-Fernández *et al*. (2018), webroomers (as opposed to showroomers) emerge as individuals who develop a more planned consumer journey, look for in-depth information, and examine it in a more reflective way. These omni-shoppers consider as important decision-making criteria the attributes directly related to the product, and they come to physical stores with a deep-rooted idea about what they want to buy, and are often already looking for a specific product. This is one of the reasons why having access to reviews online is one of the biggest benefits for webroomers (Arora and Sahney, 2018). Then, when they come to the sales room, they are likely to have more technical knowledge than the salesperson serving them, and, once inside the store, it may be difficult to change their minds. However, as Arora and Sahney (2018) posit, these omni-shoppers believe that physical shops and sales staff provide better services during and after purchase. This is especially relevant for "touch and feel" products such as apparel articles, where sensory stimulation also plays an important role

(Cho and Workman, 2011). The importance of factors related to sales advice or the need to touch has been remarked upon in explanations of webrooming (Kleinlercher *et al.*, 2020; Santos and Martins, 2019).

Our research also shows that webrooming consumers place making the right buying decision before any other motivation, such as saving time or effort in searching for information that will allow them to make a confident purchase decision (Flavián *et al.*, 2016). This result is in line with Flavián *et al.* (2020), who found that fashion webroomers believe it more important to focus on maximising the return on the purchase, i.e., acquiring the right garment, than minimising the inputs in the purchasing process (time, effort, money saving, and so on). Similarly, Kleinlercher *et al.* (2020) observed a negative effect of the importance of convenience or time savings in webrooming.

Showroomers appeared to have a less ingrained attitude than webroomers with respect to the product to be acquired. Carrying out exploratory information seeking did not influence the development of showrooming behaviour. This insight supports studies such as Viejo-Fernández *et al.*'s (2018), who concluded that showrooming customers' shopping journeys were less planned than those of webroomers. Surprisingly, exploratory acquisition did not have a significant influence on showrooming, either. Since these customers end the purchase online as they look for a lower price for the product, they might perceive their behaviours to be less impulsive (Flavián *et al.*, 2020).

5.2 Managerial implications

Our study has implications for apparel retailers. Since webrooming and showrooming behaviours seem to be influenced by consumers' perceived usefulness and the perceived ease-of-use, one recommendation would be that those who provide mixed business models either in their initial phase (i.e., the so-called multi-channel strategy), or in their intermediate phase (i.e., the cross-channel strategy), move towards full channel integration. These companies need to

adopt a proactive stance when it comes to incentivising omni-channel consumer behaviour, and to provide a "phygital" experience. The Customer Engagement Survey by EnVista (2020) showed that the ability to move through the physical and virtual touchpoints at all stages of the consumer journey was a critical factor for shoppers when choosing which retailer to buy from. This will be particularly important in the context of accelerated digital adoption and COVID-19. In fact, brands that already had mixed business models in place, such as Estée Lauder, Lâncome, Walmart, and Inditex, were able to emerge in a stronger position in the most critical months of the coronavirus pandemic.

The survey conducted by JRNI (2019) amongst consumers in different retail sectors (including clothing), revealed that webrooming and showrooming were becoming common practice. Of those questioned, 74% of shoppers declared themselves to be webroomers, and 57% showroomers. Our research suggests that webroomers and showroomers behave differently, and so we recommend that apparel retailers should adapt their marketing strategies accordingly.

Webroomers use online channels to obtain information about a product and its main characteristics, making comparisons and analysing the valuations of other consumers, although they prefer to buy in the physical store where they can expand their knowledge about the product in question. In this environment, cognitive stimulation seems to be the key. Therefore, the quality of the information provided by retailers on their websites about the portfolio of products they sell or about the services they offer is important. This would include details concerning the price and main characteristics of the products (sizes, colours, materials, and so on), as well as available services such as personalised advice, recommendations, and expert opinion.

Any element that triggers sensory stimulation inside and outside the physical store must also be considered when achieving webroomer engagement, since it may lead to an exploratory

or spontaneous purchase. In this way, apparel retailers must allow the omni-shopper to inspect physically the product and use their senses, interact with other people, and receive personalised advice. The inclusion of ICT in-store, such as augmented reality, interactive mirrors, virtual fitting-rooms, or i-beacons, can also improve the shopping experience of webroomers (Alexander and Kent, 2020). In addition, and in the aftermath of the COVID-19 pandemic, other technologies that increase consumer safety could also promote differentiation based on the customer's in-store experience.

Although the results for the showrooming sample were not conclusive, one recommendation for apparel retailers would be that they should not try to turn the showroomer into a webroomer. So, instead of fighting e-commerce, it would be advisable for companies to take the initiative and use their sales forces to encourage showroomers to use ICT in-store. When customers arrive at the physical store to look for information, they should be directed towards the products where the retailer is well positioned in terms of price, so that the garments can be acquired there and then or on other platforms where the firm is present. The customer could even be allowed the opportunity to make the online purchase in the physical store itself. Alternatively, the possible advantages of buying the product in the establishment, or combining the company's offline and online channels, could be presented to the purchaser.

A review of the OCR literature provides evidence that showroomers present an opportunity for retailers. It is important for them to realise that these omni-shoppers are characterised by their digital know-how (although they may also visit physical stores). They should therefore adopt strategies such as that implemented by Burberry, where the "phygital" experience has become a reality. The company's sales rooms are showrooms where catwalks are set up to display the most innovative or outstanding garments, and where products are exhibited by tablets on which the showroomers have access to the most important information,

such as price, size, availability of colours, and the quantities of merchandise that are available offline and online. Customers can then make their purchases on the same stand.

5.3 Limitations and future research

The present study has a number of limitations. For example, it is cross-sectional, and so highlights a specific moment in time; using the intention of behaviour as a dependent variable without studying effective behaviour may also be considered a constraint.

It would be interesting to analyse omni-channel behaviours other than webrooming and showrooming, such as BOPIS, BOPUS, "Click and Collect", BOSS, and "Pickup Today". A more detailed analysis of the showrooming phenomenon is also needed, since the results of the influence of exploratory behaviour were not conclusive. Future research could be also orientated towards exploring the effect of other drivers of omni-channel behaviour, such as the extent to which the purchase/product is regarded as hedonic or utilitarian. Another way the present study could be developed would be to investigate other retail sectors such as sports equipment, beauty products, and the luxury market, which have experienced a boom in online commerce.

Figure I
Research Model

Figure II
Measurement Model: Webrooming

| Normed χ^2 = 3.11 | BBNFI = 0.90 | BBNNFI = 0.91 |
| CFI = 0.93 | IFI = 0.93 | RMSEA = 0.07 |
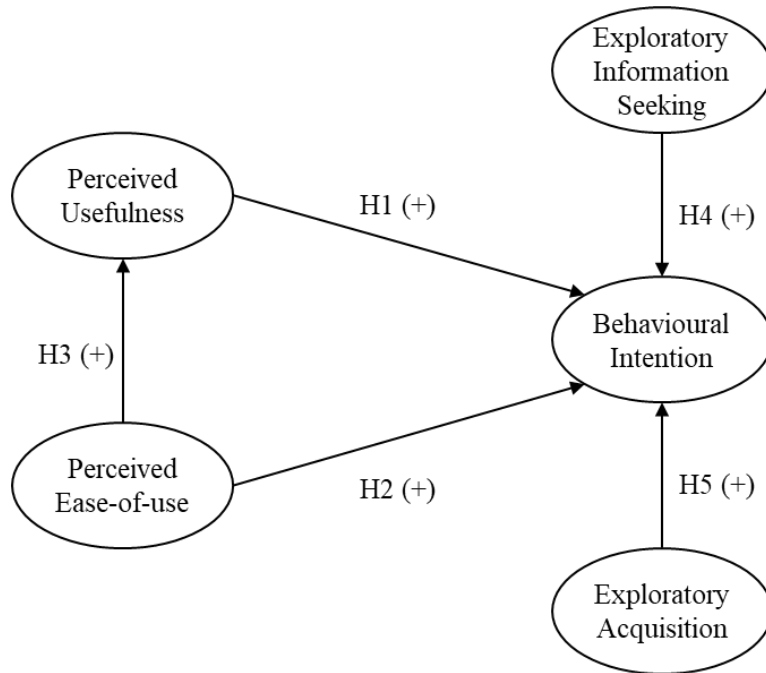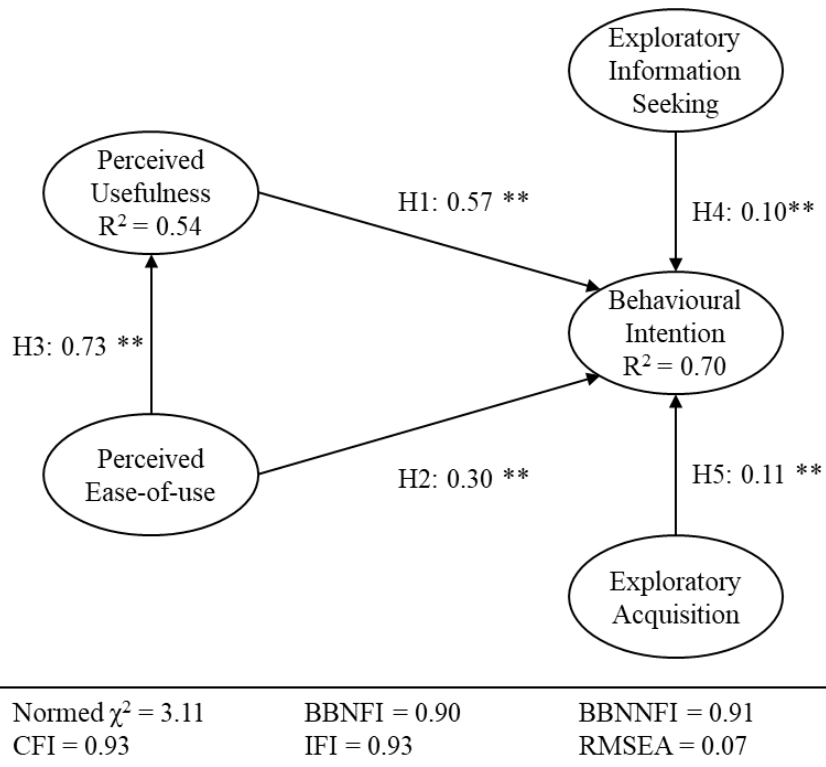
Figure III
Measurement Model: Showrooming
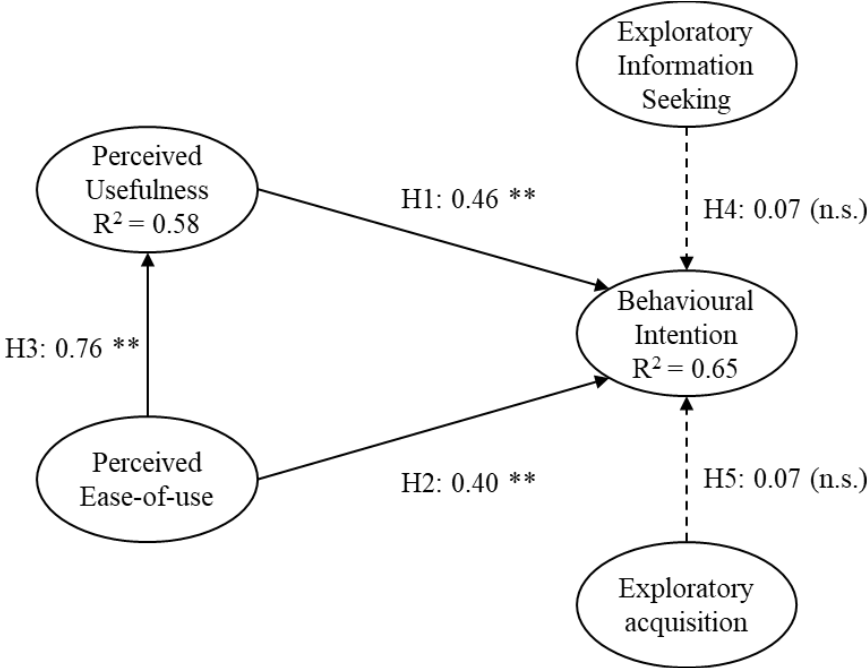
Normed χ^2 = 3.02	BBNFI = 0.89	BBNNFI = 0.90
CFI = 0.92	IFI = 0.92	RMSEA = 0.07

Table I
Descriptive Statistics of Sample Populations

	Webrooming sample (%)	Showrooming sample (%)
Gender		
Male	42.2	49.9
Female	57.8	50.1
Age		
15–24 years	47.0	44.9
25–44 years	30.1	34.0
45–64 years	20.3	17.4
64 or more years	2.6	3.6
Education level		
Less than primary	2.6	3.1
Primary	12.8	8.8
Secondary	42.6	41.6
University	42.0	46.5

Table II
Measurement Model (Confirmatory Factor Analysis): Webrooming vs. Showrooming

	Factor	Variable	Mean	Stand. Dev.	Stand. Coef.	R^2	Cronbach's alpha	Composite Reliability	AVE	Goodness of fit indices
Webrooming	BI	BI1	6.63	2.78	0.94	0.84	0.97	0.98	0.93	
		BI2	6.64	2.74	0.98	0.95				
		BI3	6.69	2.85	0.97	0.94				
	PU	PU1	7.05	2.40	0.91	0.82	0.96	0.96	0.85	Normed χ^2 = 2.69
		PU2	7.10	2.42	0.94	0.88				BBNFI = 0.96
		PU3	7.06	2.46	0.94	0.89				BBNNFI = 0.96
		PU4	7.10	2.39	0.90	0.81				CFI = 0.97
	PEOU	PEOU1	7.21	2.54	0.88	0.77	0.92	0.91	0.73	IFI = 0.97
		PEOU2	6.87	2.57	0.89	0.79				RMSEA = 0.06
		PEOU3	6.12	2.62	0.81	0.65				
		PEOU4	6.34	2.63	0.83	0.69				
	EIS	EIS1	6.73	2.37	0.76	0.58	0.79	0.80	0.67	
		EIS2	7.21	2.13	0.87	0.75				
	EA	EA1	5.21	2.97	0.95	0.91	0.78	0.81	0.69	
		EA2	6.15	2.53	0.69	0.47				
Showrooming	BI	BI1	5.34	3.01	0.96	0.92	0.97	0.97	0.92	
		BI2	5.50	2.99	0.97	0.95				
		BI3	5.47	3.13	0.95	0.91				
	PU	PU1	6.35	2.68	0.90	0.81	0.96	0.96	0.86	Normed χ^2 = 2.30
		PU2	6.47	2.64	0.93	0.87				BBNFI = 0.96
		PU3	6.37	2.69	0.95	0.90				BBNNFI = 0.97
		PU4	6.44	2.69	0.92	0.84				CFI = 0.98
	PEOU	PEOU1	6.05	2.81	0.88	0.77	0.90	0.90	0.69	IFI = 0.98
		PEOU2	6.06	2.76	0.85	0.72				RMSEA = 0.06
		PEOU3	5.27	2.78	0.78	0.60				
		PEOU4	5.45	2.84	0.82	0.67				
	EIS	EIS1	6.51	2.36	0.86	0.74	0.81	0.81	0.68	
		EIS2	6.91	2.28	0.79	0.62				
	EA	EA1	5.14	2.95	0.87	0.75	0.82	0.83	0.71	
		EA2	5.69	2.74	0.81	0.65				

Notes: BI = Behavioural Intention; PU = Perceived Usefulness; PEOU = Perceived Ease-Of-Use; EIS = Exploratory Information Seeking; EA = Exploratory Acquisition.

Table III
Discriminant validity: Webrooming vs. Showrooming

	Factor	BI	PU	PEOU	EIS	EA
Webrooming	BI	**0.93**[a]				
	PU	0.65	**0.85**[a]			
	PEOU	0.56	0.54	**0.73**[a]		
	EIS	0.12	0.10	0.09	**0.67**[a]	
	EA	0.10	0.05	0.09	0.00	**0.69**[a]
Showrooming	BI	**0.92**[a]				
	PU	0.59	**0.86**[a]			
	PEOU	0.59	0.59	**0.69**[a]		
	EIS	0.11	0.08	0.12	**0.68**[a]	
	EA	0.14	0.10	0.20	0.00	**0.71**[a]

a = AVE coefficient for the construct. Off diagonal elements are the squared correlations among constructs.

Notes: BI = Behavioural Intention; PU = Perceived Usefulness; PEOU = Perceived Ease-Of-Use; EIS = Exploratory Information Seeking; EA = Exploratory Acquisition.

Table IV
Measurement Model: Webrooming vs. Showrooming

	Standardised coefficients	
	Webrooming	Showrooming
H_1: Perceived Usefulness → Behavioural Intention	0.57**	0.46**
H_2: Perceived Ease-of-use → Behavioural Intention	0.30**	0.40**
H_3: Exploratory Information Seeking → Behavioural Intention	0.10**	0.07 (n.s.)
H_4: Exploratory Acquisition → Behavioural Intention	0.11**	0.07 (n.s.)
H_5: Perceived Ease-of-use → Perceived Usefulness	0.73**	0.76**
	R^2 Coefficient	
	Webrooming	Showrooming
Behavioural Intention	0.70	0.65
Perceived Usefulness	0.54	0.58

** p-value < 0.05 / n.s. = non-significant

APPENDIX. Measurement Scales

WEBROOMING BEHAVIOUR (DEFINITION)

Visit an online store to check a product, but then buy it in a physical store

SHOWROOMING BEHAVIOUR (DEFINITION)

Visit a physical store to check a product, but then buy it in an online store

BEHAVIOURAL INTENTIONS (Davis, 1989; Davis et al., 1989; Venkatesh et al., 2003)

BI1 – I intend to use webrooming/showrooming in my future purchases of clothing and shoes

BI2 – I will probably use webrooming/showrooming in my future purchases of clothing and shoes

BI3 – I have decided to use webrooming/showrooming in my future purchases of clothing and shoes

PERCEIVED USEFULNESS (Venkatesh *et al.*, 2003)

PU1 – Using webrooming/showrooming is very useful in my purchases of clothing and shoes

PU2 – Using webrooming/showrooming enables me to make purchases of clothing and shoes more efficiently

PU3 – Using webrooming/showrooming increases my efficiency in the process of purchasing clothing and shoes

PU4 – Using webrooming/showrooming improves my performance in the process of purchasing clothing and shoes

PERCEIVED EASE-OF-USE (Venkatesh et al., 2003)

PEOU1 – Using webrooming/showrooming is simple for me

PEOU1 – Using webrooming/showrooming is an activity in which I consider myself skilful

PEOU1 – Using webrooming/showrooming does not take me much time

PEOU1 – Using webrooming/showrooming is little effort for me

EXPLORATORY INFORMATION SEEKING (Christodoulides and Michaelidou, 2010)

EIS1 – I search for a great deal of information before I buy

EIS2 – I compare prices in different vendors before I buy

EXPLORATORY ACQUISITION (Christodoulides and Michaelidou, 2010)

EA1 – I go shopping without needing to buy something

EA2 – I buy things I had not planned to purchase

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