Relations between Consumer Impulsiveness and Webrooming Behaviour

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Abstract

Webrooming behaviour, when the consumer combines different retail channels for product examination online and then purchases in store, is becoming a trend, but has not received enough researchers' attention. Meanwhile, consumer impulsiveness has been shown to exert a key influence on online purchasing decisions. Consequently, the aim of this research is to explain the relations between consumer impulsiveness and webrooming behaviour. Utilising survey data from 411 respondents, the CB-SEM approach was employed. Findings reveal impulsiveness dimension self-indulgency as an independent construct, and the first empirical examination of the effect of impulsiveness and self-indulgency on webrooming behaviour, consumer attitude and intention.

Keywords: *webrooming, consumer impulsiveness*

1. Introduction

Due to increased complexity of competition and demand for holistic consumer experience, retail has been organised in different places and environments, enabling consumers to access the retail channels any time from various devices and locations. In multichannel retailing, consumers go on very diverse, complex, and individual journeys as they decide what to buy – often entirely or partially out of sight of the retailer (Hall et al., 2017). Webrooming refers to the most popular multichannel consumer behaviour when consumers first visit an online store to collect information before purchasing the product in a physical store (Flavian et al., 2016; Aw, 2019). According to the Shopify report (2021), 59% of the respondents stated that they practiced webrooming while shopping to get a better deal. Even during the COVID-19 pandemic webrooming remains trending (Sayyida et al., 2021). Although webrooming has become a common practice, only a few empirical studies have managed to shed light on the phenomenon (Kleinlercher et al., 2020), meanwhile a review of webrooming behaviour literature shows a gap in the research on consumer characteristics (Fernandez et al., 2018). According to Arora & Sahney (2018), there is a need to investigate consumer characteristics to augment the understanding of intentional webrooming behaviour. One of the consumer characteristics that has been shown to exert a key influence on online purchasing decisions is consumer impulsiveness (Casado-Aranda et al., 2022): most explained by lack of planning, consideration, and emotional response (Verplanken & Herabadi, 2001). Consumer impulsiveness accounts for a substantial volume of the products sold every year across a broad range of different categories (Xu & Matthews, 2016). Although consumer impulsiveness has been analysed for a several years, investigation of impulsiveness' role in the relevant contextual environment is still lacking (Wells et al., 2011). Although examinations of consumer characteristics in the case of webrooming behaviour are very sparse, individual researchers raise the issue of the role of impulsiveness on webrooming behaviour. Webrooming provides several opportunities to encourage unplanned purchases throughout the consumer's journey. Under these conditions, some consumers may be more susceptible to impulsive buying (Olsen et al., 2016). These assumptions are supported by the revealed relationship between a faster shopping process in webrooming and impulsiveness (Torrico et al., 2016).

Assessing the lack of impulsiveness research in the webrooming behaviour context requires a clear theoretical basis which also might support the disclosure of their relations. It is endorsed by Kim et al. (2018) pointing out the necessity of gaining valuable insights by developing a model that grasps more psychological mechanisms behind the consumers' behaviour in webrooming. The Theory of Planned Behaviour (TPB) used by researchers to predict consumer behaviour is considered a proper tool to study multichannel consumer behaviour (Rejón-Guardia & Luna-Nevarez, 2017), since the constructs of the model reveal wholistic approach and help to understand why consumers search in one channel before buying in the other, and why they tend to change retail channels (Arora & Sahney, 2018). Though TPB focuses on aspects of controlled behaviour, this does not limit the use of TPB to investigate unconscious or premeditated behaviour (Ajzen & Dasgupta, 2015). Up to date, TPB application for the examination of the role of consumer characteristics is very rare and limited to a single–channel environment (Yang, 2012). To improve the suitability and performance of the TPB for a given behaviour, the versatility of the model allows the integration of additional constructs (Ajzen, 2015). In the context of this paper, the expansion of TPB framework is argued. This is primarily related to the integration of consumer impulsiveness into the webrooming behaviour research. The aim of this paper is to explain the relations between consumer impulsiveness and webrooming behaviour.

Consumer behaviour varies across different products (Kushwaha & Shankar, 2013); therefore, product category as a contextual factor is also supported in this study. So far webrooming behaviour studies are mostly limited to clothing (Aw, 2019) and electronics industry (Arora & Sahney, 2018), which according to Nelson's (1974) classification are assigned to products with search attributes. To expand the research conducted till now and to reveal the insights on consumer behaviour, it is recommended to analyse the webrooming conduct across different product attributes and categories, since motivational differences in consumers decision-making process exist (Aw, 2019). Given the current situation, this study focusses on cosmetics (Kleinlercher et al., 2020) and "do it yourself" categories (Kleinlercher et al., 2020), assigned to products with experience attributes (Nelson's, 1974).

The study indicates several theoretical and managerial implications. First, by integrating theoretical approaches of TPB, a research framework of consumer impulsiveness in webrooming behaviour has been developed. Besides expanding the TPB, it also significantly complements the field of webrooming behaviour. Second, this study suggests effective marketing strategies that multichannel retailing developers can utilise. Such knowledge is important for retailers to understand how consumer impulsiveness can influence the webrooming behaviour and how to retain their consumers across the decision-making process stages.

2. Conceptual background

2.1. Webrooming behaviour and Theory of Planned Behaviour

Considering the findings of the analysis and identified research priorities, the research framework of this paper is built on TBP which can adequately predict and explain behaviours in specific contexts (Ajzen, 1991). TPB is broadly applied in the context of webrooming and reveals the relationship between consumer attitude, intention, and behaviour (Arora & Sahney, 2018). Webrooming behaviour is the main dependent variable of the framework with the webrooming intention as the direct antecedent. According to TPB, intention is a function of three components: attitude, subjective norm (SN), and perceived behavioural control (PBC).

According to Luo et al. (2014), if a consumer believes that buying in one channel after searching for information in another is acceptable for others, then they will develop a stronger intention for this behaviour. Pookulangara & Natesan (2010) confirm the positive impact of the subjective norm (SN) on channel-migration intention. This justifies the relevance of the SN construct in the context of our investigation, and provides the base for the hypothesis:

H1 – subjective norm positively affects the webrooming intention.

In the context of webrooming, PBC is interpreted as consumer's ability and confidence to use multiple trade channels in the decision-making process (Arora & Sahney, 2018). As consumer has a choice of different retailing channels, the effect of PBC on the intention to change channels during the decision-making process will increase (Goersch, 2002). The negative relationship between PBC and channel-migration intention in the study of Pookulangara & Natesan (2011) is explained by the fact that consumers who have higher PBC over their abilities to migrate from online to store are less likely to switch channels than when they experience lower PBC over channel-migration. Meanwhile Arora & Sahney (2018) found that PBC had a positive effect on consumer webrooming intention. Based on recent study, it is proposed that:

H2 – perceived behavioural control positively affects the webrooming intention.

The effect on consumer attitude on intention in the context of webrooming behaviour has been proved in several studies (Arora & Sahney, 2018; Rejón-Guardia & Luna-Nevarez, 2017). Consumer switching between retailing channels is a consequence of convenient and beneficial choice at a particular stage of decision-making process, so a favourable attitude may support the consumers' intention to change the channel (Pookulangara & Natesan, 2010). Rejón-Guardia & Luna-Nevarez, (2017) reveal that a stronger positive attitude towards online purchasing will have a greater influence on consumers' intention to purchase on the store's website. Based on the findings of previous studies, we argue that:

H3 – attitude towards webrooming behaviour positively affects the webrooming intention.

Although consumers demonstrate a clear position by choosing the online or in-store retailing channel, they are willing to change it if expectations are not met (Reid & Ross, 2015). Considering the findings of Arora & Sahney (2018) that consumer's webrooming intention positively affects the webrooming behaviour, we assert that:

H4 – webrooming intention positively affects the webrooming behaviour.

2.2. Webrooming behaviour and impulsiveness

Scientific literature research emphasises that consumer impulsiveness is one of the main determinants of unplanned shopping behaviour (Sharma et al., 2014). According to Ajzen & Dasgupta (2015), unplanned actions may be related to consumer attitudes, subjective norms, perceived behavioural control, and intentions. Therefore, current research suggests that TPB can also be applied for consumer impulsiveness (Churchill et al., 2008). Despite the few studies, the research of consumer impulsiveness and empirical verification of their role in webrooming behaviour is very limited. Due to these reasons, hypothesis argumentation is extended by the different research results of consumer impulsiveness in a single-channel environment. Lee (2007) revealed that impulse buying tendency had a positive effect on consumer attitudes towards purchasing online. The links between consumer impulsiveness and attitudes towards buying organic food were also confirmed by Larson (2018). Based on the empirical reasoning of the relationship between consumer impulsiveness and attitudes, the authors of this study raise the following hypothesis:

H5 – consumer impulsiveness positively affects the attitude towards webrooming behaviour.

Chopdar & Sivakumar (2019) reveal a significant positive effect of impulsiveness on intention to buy smart devices. Meanwhile Chen & Wang (2018) state that when consumers face promotion situations, the impulsive buying intention is affected by impulsivity traits, which further increase the impulse buying intentions. Furthermore, strong impulsiveness results in stronger impulse buying intention than low impulsiveness. Summarising previous research results, this study hypothesises that:

H6 – consumer impulsiveness positively affects the webrooming intention.

Several studies report a positive effect of impulse buying tendency on impulsive buying (Sharma et al., 2014). According to LaRose (2001), bigger assortment, the absence of time and space constraints, and advanced marketing techniques based on consumer personalisation result in stronger consumer impulsiveness online compared with a store. Meanwhile, sensory experiences and atmosphere act as drivers of impulsive buying in stores (Gupta, 2011). In line with the

presented research arguments, authors of this study argue that consumer impulsiveness is associated with webrooming behaviour:

H7 – consumer impulsiveness positively affects the webrooming behaviour.

A series of hypotheses based on TPB framework will help to understand the effect of the impulsiveness on consumer attitude, intention and webrooming behaviour and will contribute to the limited field of webrooming behaviour research.
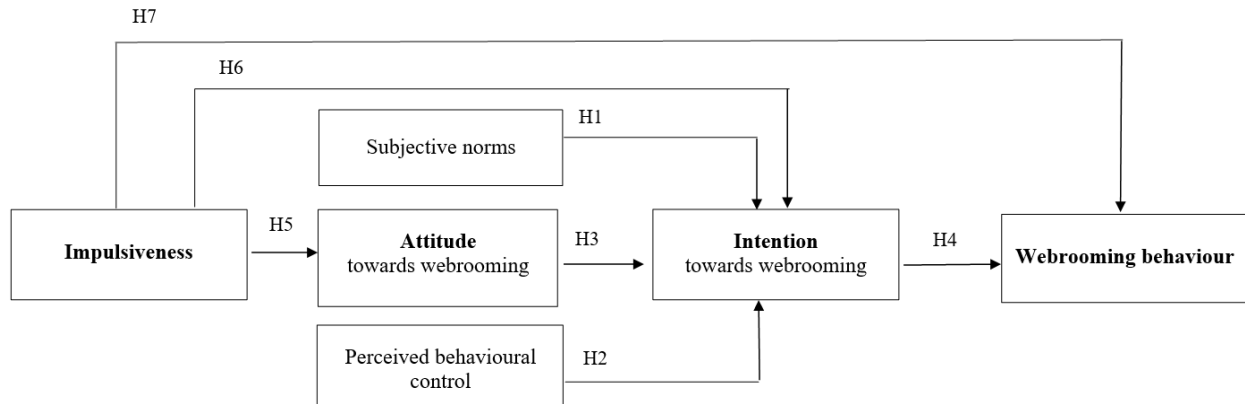
Figure 1. Conceptual model

3. Research design and methodology

3.1. Sample and data collection

Considering the distinctive webrooming behaviour sequence, purposive sampling along with snowball sampling techniques were employed to collect the data through an online survey link via social networks, online forums, and word of mouth. A total of 1054 questionnaires were circulated, out of which 411 responses were found suitable for this study. Considering that the demographic profile of respondents can influence the retail channel choice (Kushwaha & Shankar 2013), demographic details about the respondents' gender, age, and education were collected in the questionnaire. Females comprised 64% (254 respondents) of webrooming consumers' sample, males – 22% (89 respondents), meanwhile 14% (68 respondents) preferred not to be identified. The average age of respondents was 39 years and most of participants (59%) had a bachelor's degree.

3.2 Measurement development

Questionnaire started with screening questions that helped filter out the respondents who during the last six months invoked webrooming. It appeared that 20.6% of respondents from all circulated questionnaires did not use several channels during purchase process. Only those who used both channels could proceed to the next question related to the last experience associated with certain webrooming behaviour. Among the respondents, 82.7% confirmed that they searched online and purchased in store.

The remaining part of the questionnaire aimed to identify the sources of webrooming behaviour, linking them with the consumer impulsiveness, and the main constructs of TPB. Consequently, the questionnaire was designed by adapting the previously developed scales from different studies of consumer behaviour and TPB. The questionnaire comprised the following scales: impulsiveness – 12 items (Sharma et al., 2014); TPB constructs: social norms – 3 items, attitude – 3 items, perceived behavioural control – 4 items, intention – 3 items, and webrooming

behaviour – 3 items (Arora & Sahney, 2018). Items were rated on a 7 – point Likert scale (ranging from 1 = strongly disagree to 7 = strongly agree).

3.3. Measurement model

The model was tested using structural equation modelling (SEM), which is increasingly used as a method of choice for concept and theory development in social sciences, particularly in marketing (Hair et al., 2014). From a number of SEM packages available to researchers, authors of this paper decided to choose CB-SEM with AMOS 21, due assessed interactive effects, its relative ease of use and close ties with the SPSS package. Twenty-eight manifest items were used to measure 6 endogenous latent constructs. "Subjective norm" had Cronbach's Alpha values below 0.6. It was eliminated and hypothesis H1 related to the effect of subject norm on intention was not tested. The exploratory factor analysis (EFA) method was used to analyse the structure of research framework constructs. Maximum likelihood estimation technique with the selected Varimax rotation was employed to answer the questions – how many manifest items represented the research model constructs and to which of these constructs they belonged. All items' loadings were greater than the recommended value of 0.3 (Mooi et al., 2018). EFA validated the adequate characteristics of the measurement models as well was revealed an important finding – impulsiveness subdimension self-indulgency was detached as independent construct. According to Sharma et al. (2014) impulsiveness has 3 lower order constructs: imprudence, lack of self-control, and self-indulgence. With the latter distinguishing itself as an independent construct, in further analysis we will examine it as a separate consumer characteristic. Therefore, we raise additional hypotheses *H8, H9* and *H10* asserting that *self-indulgence positively affects consumer attitude, intention and webrooming behaviour*. The obtained results are provided in Table 1.

Table 1. The characteristics of the measurement models

Factor	Outer loadings	Mean	SD	Cronbach's Alpha	CR	AVE
Impulsiveness (7 items)	0.51 - 0.68	3.98	1.64	0.76	0.82	0.40
Self-indulgency (4 items)	0.54 - 0.85	3.08	1.56	0.83	0.82	0.72
Perceived behavioural control (4 items)	0.80 - 0.88	5.96	1.04	0.93	0.91	0.84
Attitude towards webrooming behaviour (3 items)	0.79 - 0.85	6.22	0.86	0.92	0.87	0.83
Webrooming intention (3 items)	0.79 - 0.94	4.92	1.49	0.90	0.90	0.86
Webrooming behaviour (3 items)	0.66 - 0.85	5.48	1.34	0.87	0.81	0.76

Based on the measurement model, adequate loadings of the indicators were obtained, which are statistically significant at $p <= 0.01$. The average variance extracted (AVE) of all constructs exceeded the threshold value of 0.5, except "impulsiveness". In case AVE is less than 0.5 but composite reliability (CR) is higher than 0.6, the convergent validity of the construct is still adequate (Fornell & Larcker, 1981). Meanwhile all the remaining constructs were close to 0.7, which can be regarded as satisfactory (Hair et al., 2014). Discriminant validity was measured through the comparison of the square root of AVE and the correlation among constructs, square root of AVE was found to be greater than the corresponding inter-construct correlations (Mooi et al., 2018). The measurement passed the tests of construct validity and reliability.

Prior to the structural analysis of the research model, we performed a confirmatory factor analysis (CFA). According to Hair et al. (2014), CFA stage of CB-SEM allows all latent constructs to covary mutually and thereby permits quantitative assessment of both convergent and discriminant validity for each construct. While accessing CFA for all research model's constructs, we found all items' loadings to be above 0.3 with statistically significant corresponding t-values

(t>5.6), thus indicating convergent validity. The goodness-of-fit statistics reveal that the research model provides a good fit with the data (χ2/df=1.873 TLI=0.907, CFI=0.914, RMSEA=0.046).

3.4. Hypothesis testing results

The results of CB-SEM analysis are presented in Table 2. Supporting results were found for H2, examining the relationship between PBC and webrooming intention (β=0.182, t=4.90, p=0.001). Consumers trust their ability to use different channels (β=0.848, t=22.53, p=0.001), they can evaluate offers (β=0,907, t=25.41, p=0.001) and appreciate the ease of the process (β=0.864, t=23.30, p=0.001). Moreover, H3 stating that attitude positively affects webrooming intention was also supported (β=0.103, t=2.30, p=0.021). Consumers recognised it was wise (β=0.918, t=24.68, p=0.001) and useful (β=0.912, t=24.49, p=0.001) to search for information online and buy in stores. Statistical support for H4 revealed a positive effect on intention on webrooming behaviour (β=0.347, t=8.14, p=0.001).

Table 2. Structural model results

Hypothesised paths	Path coefficient β, p value	Support for hypotheses
H2: Perceived behavioural control → Intention	0.182, p<0.001	**Supported**
H3: Attitude → Intention	0.103, p=0.021	**Supported**
H4: Intention → Webrooming behaviour	0.347, p<0.001	**Supported**
H5: Consumer impulsiveness → Attitude	-0.192, p<0.001	Not supported
H8: Consumer self-indulgence → Attitude	0.119, p=0.018	**Supported**
H6: Consumer impulsiveness → Intention	-0.054, p=0.210	Not supported
H9: Consumer self-indulgence → Intention	-0.075, p=0.078	Not supported
H7: Consumer impulsiveness → Webrooming behaviour	0.132, p=0.005	**Supported**
H10: Consumer self-indulgence → Webrooming behaviour	0.041, p=0.366	Not supported

H5 examined positive impact of consumer impulsiveness on attitude towards webrooming behaviour. Due to the revealed significant negative relationship (β=-0.192, t=-3.67, p=0.001), H5 was refused. Analysis of the data leads to support H8 (β=0.119, t=2.38, p=0.018), and demonstrates that consumer self-indulgency positively effects attention. Impulsiveness and self-indulgency relationships with intention were not statistically significant, we rejected H6 (β=-0.054, t=-1.25, p=0.212) and H9 (β=-0.075, t=-1.76, p=0.078). Support for H7 revealed a positive and significant impact of consumer impulsiveness on webrooming behaviour (β=0.132, t=2.78, p=0.005). Finally, the data was not supportive for H10, revealed a statistically insignificant relationship between self-indulgency and webrooming behaviour (β=0.041, t=0.90, p=0.36).

5. Findings of the study and discussion

In this study, we tested the application of a revised TPB model by integrating consumer impulsiveness into the webrooming behaviour domain. Relatively little efforts in prior research have been devoted to webrooming behaviour (Aw, 2019), and even less attention has been paid to consumer characteristics in the webrooming context (Arora & Sahney, 2018; Fernandez et al., 2018). Consequently, this study tested the effect of consumer impulsiveness and self-indulgency on consumer's attitude, intention, and webrooming behaviour.

As expected, consumer attitude and perceived behavioural control had a positive effect on intention, and intention had a significant positive effect on webrooming behaviour. The findings also confirmed the results of previous studies (Arora & Sahney, 2018; 2018; Rejón-Guardia & Luna-Nevarez, 2017). Due to the low Cronbach's Alpha value, hypothesis related to SN was not

tested. This is also supported by the findings of Arora & Sahney (2018) that the SN impact on consumer's webrooming intention was not significant; hence, the hypothesis was rejected.

One of the most novel findings of this study was related to consumer impulsiveness. The assessed results of EFA and CFA analyses confirmed two independent constructs: impulsiveness and self-indulgency. SEM analyses revealed that all of them had a significant effect on attitude towards webrooming behaviour. Interestingly, consumer impulsiveness had a negative impact on attitude; thus, the greater is the impulsiveness, the lower is the degree to which people engage in webrooming behaviour, and vice versa. However, attitude towards webrooming was positively affected by consumer self-indulgency. Comparing to the results of other studies, in case of impulsiveness (Lee, 2007; Larson, 2018), we received reverse direction path results that might be explained by different contexts and complexity of webrooming behaviour. Impulsiveness had a significant positive effect on webrooming behaviour, and this coincided with the results of earlier consumer impulsiveness studies in a single-channel context (LaRose, 2001; Gupta, 2011).

6. Implications, limitations, and future directions for research

Whereas past studies of webrooming research have assumed that it is based on rational background – intentional information and bargains search (Fernandez et al., 2018), our findings present strong evidence that consumer impulsiveness and self-indulgency are also associated with webrooming behaviour. The present study makes several contributions to multichannel behaviour research, both conceptually and empirically. By integrating theoretical approaches of TPB, a research framework of consumer characteristics in webrooming behaviour has been developed. As far as authors are aware, this study is the first to consider the interplay between consumer impulsiveness, self-indulgency and webrooming behaviour within the TPB framework. Besides expanding the TPB, the study also significantly complements the field of webrooming behaviour.

The results of the empirical research are likely to provide valuable insights for multichannel retailing developers in supporting concentration on consumer characteristics and in determining marketing resource allocation between online and in-store channels more efficiently. Positive attitude towards webrooming can be stimulated by encouraging their self-indulgency. Consumers with strong self-indulgence tendency are more likely to show interest in identifying items for rewarding (Xu & Matthews, 2016). Retailers have the opportunity to reduce the behaviour inherent to webrooming channel switching and pay more attention to stimulating consumer impulsiveness to encourage retention. This might be achieved through store's sales promotions, shopping enjoyment, and store's sales associates as there is a significant and positive relationship between them and consumer impulsiveness (Barrakat, 2019).

This study is limited to cosmetics and "do it yourself" products; therefore, the results may not be generalised to other sectors. Future research could test the proposed model in terms of different product categories and showrooming context to disclose the interplay between consumer impulsiveness, self-indulgency, and showrooming behaviour. As growing mobile device penetration and in-store usage are expected to strongly affect and enhance multichannel behaviour (Kim et al., 2018; Aw, 2019), the scope of further studies might also include the examination of the role of consumer impulsiveness and self-indulgency on webrooming behaviour while using mobile devices in stores.

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