



**HAL**  
open science

## **Measurement of factors influencing online shopper buying decisions: A scale development and validation**

Semila Fernandes, V.G. Venkatesh, Rajesh Panda, Yangyan Shi

### ► **To cite this version:**

Semila Fernandes, V.G. Venkatesh, Rajesh Panda, Yangyan Shi. Measurement of factors influencing online shopper buying decisions: A scale development and validation. *Journal of retailing and consumer services*, 2021, 59, pp.102394. <10.1016/j.jretconser.2020.102394>. <hal-04455597>

**HAL Id: hal-04455597**

**<https://normandie-univ.hal.science/hal-04455597v1>**

Submitted on 22 Jul 2024

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire HAL, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons CC BY-NC 4.0 - Attribution - Non-commercial use - International License

## Title Page

Semila Fernandes  
Symbiosis Institute of Business Management,  
Symbiosis International, Bengaluru Campus,  
#95/1, 95/2, Electronics City, Phase-1, Hosur Road,  
Bengaluru, 560-100, Karnataka, India  
semila123@gmail.com

V G Venkatesh\*  
E M Normandie Business School, METIS lab,  
30 Rue de Richelieu, 76087 Le Havre,  
France.  
vgv1976@gmail.com

*(Corresponding author)*

Rajesh Panda  
Symbiosis Institute of Business Management,  
Symbiosis International (University), Bengaluru Campus,  
#95/1, 95/2, Electronics City, Phase-1, Hosur Road,  
Bengaluru, 560-100, Karnataka, India.  
director@sibm.edu.in

Yangyan Shi  
Macquarie University,  
Sydney, Australia.  
ys102@hotmail.com

## Measurement of factors influencing online shopper buying decisions: A scale development and validation

### Abstract

The paper attempts to develop an 'Online Susceptibility Scale' (OSS) by focusing on the factors that affect shopper buying decisions in an online environment as they are not adequately addressed in the literature. The proposed scale supports the understanding of the impact of online information which leads to consumer decisions. The study involves qualitative and quantitative studies to develop the scale. Eleven items are identified for the scale development which were borrowed from literature and modified through focus group discussions. Exploratory Factor Analysis (EFA) results in three factor groups: *Evidential online influence* (five items), *Confirmational online influence* (three items), and *Experiential online influence* (three items). Confirmatory Factor Analysis (CFA) has validated the factor structure. Results indicate that the three factors explaining online information sources have a significant impact during buyer purchase decision-making. The study relates 'Online Susceptibility Scale' (OSS) to online retailers for exploring the online shopping influences, thereby managing their campaigns accordingly. Managerial, theoretical and social implications of this new scale are discussed.

**Keywords** – *online shopping influences, online susceptibility scale, scale development, e-commerce, buying behaviour.*

## Measurement of factors influencing online shopper buying decisions: A scale development and validation

### 1. Introduction

The sources of information the consumer searches in the online environment which result a purchase decision or of interest in the internet based electronic commerce. This shopping style is growing swiftly with the proliferation of electronic retailers, online marketplaces, and the increased reach of internet. With increasing online shopping, retailers need to understand how shopper decisions are influenced online (Pookulangara, & Koesler, 2011). Many studies have addressed shoppers' purchase behavior through conventional approaches using the reference group influence scale that supports validating consumers' product or brand choice. Few studies deliberate on what sources of online information a consumer searches for while making in a purchase decision. This might be an alternative route leading the shopper towards product or brand choice in an online environment.

The concept of consumer behaviour indicates that a consumer conforms to the social norms or the group's behaviour as a part of a social decision-making process (Xihao & Yang, 2007; Wood & Hayes, 2012). Such norms provide consumers with social cues which are vital influences in shaping their behavior (Xihao & Yang, 2007). These influences are through a 'Reference Group' (RG) that supports adopting a certain lifestyle, attitude, and value formation in turn influencing an individual's self-concept (Bearden & Etzel, 1982). **These actions of consumers are a result of their self-verification and self-enhancement which are the two basic motivations that shape their product and brand choice (Stuppy et al., 2020). It appears that marketers have realized that the influence of social RG impacts on consumer decision-making (Wood & Hayes, 2012). Family, social class, cultures, and subculture contribute towards such social influences (Wood & Hayes, 2012).** These influences are also key to the choice of brand as consumers tend to conform to group behaviour (Asch, 1953; Kelman, 1961; Xihao & Yang, 2007). The individual would expect himself to be associated with the referents of a group (Kelman, 1961). The application of the concept of RG under behavioural sciences specifies that an individual is expected to be a part of a group, or aspires to be or not to be a member of the group (Xihao & Yang, 2007) and the consumer may assume the perspectives of the group and behave accordingly (Wood & Hayes., 2012).

Attitude and behaviour changes of an individual have also been recognized as being by the influence of reference groups (RG) (Mehta et al., 2001), which facilitate the process of decision-making and validate a consumers' product or brand choice (Xihao & Yang, 2007). Such groups which influence consumer decision-making are categorized into three forms: informational reference groups (IRG), utilitarian reference groups (URG), and value-expressive reference groups (VERG) (Park & Lessig, 1977). IRG is based on a belief of enhancing one's own knowledge (Kelman, 1961); URG is built on a premise that an individual complies with the expectations of others who are mediators of rewards or punishment (Asch, 1953) and VERG provides a purpose to enhance ones' self-concept (Kelman, 1961). Understanding susceptibility towards RG influence becomes important as it provides the consumers with social cues which ultimately lead towards social power (Burnkrant & Cousineau, 1975). These three forms of influence together form the susceptibility scale (SUSCEP Scale) (Bearden et al., 1989,1990). Traditionally, purchase of products/ service decisions has been influenced by these RGs (IRG, URG and VERG) and this behaviour for purchase of goods and services has been studied (Park & Lessig, 1977; Mehta et al., 2001; Wood & Hayes, 2012; Fernandes & Londhe, 2015). In this traditional/offline context, participants interact with their friends, experts, colleagues, family for respect and peer approval which act as stimuli reinforcing the rationalizations, techniques and definitions of their purchase behavior (Hinduja & Ingram, 2009; Septianto et al., 2020). However, in recent years, traditional RGs have been coupled with internet mediated groups which have become an integral part of consumers' identification and socialization experiences as the online groups' socio-demographically provide an inclusive source of identification comparable to traditional formations (Lehdonvirta & Räsänen, 2011).

The concept of social influences and interpersonal influence can be extended in the online shopping behaviour using Technology acceptance model (TAM) theory. Studies have highlighted the application of the TAM framework amongst the emerging consumers who embrace various mediums of online shopping as a virtual equivalent to shopping. With the increasing use of e-commerce, consumers are being influenced by online sources of information. They are influenced by online sources of information (Lackermair et al., 2013) in addition to traditional influences like friends, relatives, and others (Park & Kim, 2008; Yazdanifard et al., 2011). Sources of online information also influence product and consumer characteristics leading to purchase decision-making (Zhu & Zhang, 2010). Marketers have realized the effectiveness of word of mouth (WOM) being an influencing factor in fostering consumer choice and purchase decisions (Jung & Seock, 2017). Due to the importance of WOM in increasing sales, marketers are taking advantage of the

internet by building an online consumer opinion platform, thereby extending the traditional WOM to the online environment in terms of product and service reviews, known as electronic WOM (e-WOM) (Pookulangara, 2011; Yazdanifard et al., 2011). Susceptibility to interpersonal influence in online shopping contexts occurs through e-WOM and online reviews (Septianto & Chiew, 2018; Sharma & Klein, 2020). People tend to judge the merit of these reviews and recommendations of online information, and hence these online shopping influences are the vital source of consumer information (Willemsen et.al., 2011).

Extant literature widely discuss how consumers are susceptible to online sources of information and hence the requirement to understand these influences impact on consumer behaviour (Fiore & Kim, 2007; Park et al., 2007; Willemsen et al., 2011). It is also suggested that the sources of information have supported consumers and sellers in validating their product and brand decisions (Aghekyan-Simonian, 2011). Thus, it is evident that online sources of information and experience of shoppers in the online environment influence shoppers' buying behaviour. In addition, reference groups have been thoroughly studied for traditional behaviour in purchase of goods and services (Mehta et al., 2001; Xihao & Yang, 2007; Fernandes & Londhe, 2015). In addition to those traditional groups, online reviews have been indicated as important sources of information (Fiore & Kim, 2007; Park et al., 2007; Lackermair et al., 2013; Racherla et al., 2012; Zhu & Zhang, 2010; Willemsen et al., 2011). An opportunity for research has been found in understanding the social influence across the online and digital touchpoints as this tactic includes a pervasive desire amongst individuals to comply with the social norm which enables online marketers in soliciting online reviews and recommendations (Argo & Dahl, 2020). E-retail market economics have suggested the effective influence of social influences: peer group influences, social norms etc. (Kumar et al., 2016). Hence, there is a requirement to understand the online reviews' impact on consumer behaviour which has not been adequately addressed in terms of influences on shoppers. Thus, it becomes imperative to validate all these variables and attributes in one measurement scale. Against this background, this research tries to address the basic research objectives indicated below:

- With increasing online shopping, how are shoppers influenced online?
- How does the influence of online information impact consumers' decisions? and
- To propose an Online Susceptibility Scale (OSS) by considering the factors affecting shopper buying decisions in an online environment.

The research makes some significant contributions. First, this is the pioneering study to reflect upon online information sources that a consumer is susceptible to during this purchase decision. This would help the product managers to launch and design their online promotions accordingly. Second, while studying the influences on buying behaviour, the research proposes Online Susceptibility Scale (OSS) as an original contribution to the consumer research domain. To our best knowledge, no such scale is available to explore the online shopping environment, making that a unique contribution of the study.

The remainder of this paper is structured as follows: Section 2 analyses the review of literature. Section 3 elaborates on the research methodology, data collection and scale development procedures. Section 4 explains the relevant discussions. Section 5 discusses the contributions and the implications of the study. Section 6 provides the conclusion, limitations and future scope for research.

## **2. Theoretical background and literature review**

The study is grounded on basic theoretical tenets of Reference Group theory (RG) and the Technology Acceptance Model (TAM). The Reference Group theory (RG) is at the core of sociology where people's behaviours and their attitudes are decisively moulded by the groups they participate in. Although individuals need not in reality participate in these groups for them to influence their attitude and behaviour, the focus is more on the specification and conditions of membership groups as points of reference (Wood & Hayes., 2012; Shareef et al., 2019) Further, individuals compare themselves to others as points of reference for their individual attitudes and behaviours. These member groups influence individuals and are capable of enunciating group values and norms (Hammerl et al., 2016).

The purpose of the study is to extend the concept of social influences in the online shopping behaviour using Technology acceptance model (TAM) theory. Studies have also argued that the TAM theory is a function of a subjective Norm, perceived usefulness of a user, and flow experiences and attitudes of an individual. Subjective norm is primarily captured by analysing the social influences on an individual. The social influence on the TAM behaviour has been acknowledged as requiring further articulation and has shown significant influence on technology acceptance decision-making (Lee et al., 2006). Studies posit that social factors have positively impacted an individual's use of information technology (Lucas et al., 2000; Venkatesh & David, 2000). The membership groups and the social influences in the online environment include online communities,

discussion forums, blogs, and online reviews, which help strengthen the online social interactions and these are considered as social influences influencing user participation (Hsu & Lin, 2008; Hsu et al., 2013). These acts of sharing are the newer forms of socialization in the technology sphere (Racherla et al., 2012; Hsu et al., 2013). Studies have indicated that social norms directly and significantly affect the intentions and attitudes of a user which suggests that, by applying TAM theory, these can be used to improve online shopping experiences (Hsu et al., 2013). It supports individual adoption behaviour and their voluntary use of technology. The critical mass of users in the online environment act as social influencers, influencing behaviour in technology usage (Rauniar et al., 2014). Research has also posited that TAM has undergone revision and now includes social influence which helps predict usage behaviour of technology by end users (Venkatesh & Davis, 2000).

The online recommendations are the information sources for buyers which could take various forms: friends, family, consumer reports, and mass media. The internet provides a user with an impersonal source of information by offering the typology of a computer-mediated environment which aids consumers in electronic decision-making (Senecal & Nantel, 2004). In the online shopping environments, the information sources can be categorized into personal sources (friends and family) which provide personalized information; personal sources (a renowned expert) which provide non-personalized information (Reinstein et al., 2005); impersonal sources that (recommender system) provide personalized information; and impersonal sources (consumer reports and websites) that provide non-personalized information. These forms of social influence are also called electronic word of mouth (eWOM); a new area in consumer research which mainly emerges from information technologies like the Internet/ world-wide web. Websites are also recommendation review sources/platforms which involve manufacturers' websites and third-party websites like comparison shopping, or merchant assessment websites like consumer reports websites (Senecal & Nantel, 2004; Kim et al., 2007; Tata et al., 2020;). These review sources are considered as unbiased and are judged to be reliable by shoppers in assessing the review quality and hence have a higher influence on their purchase decision (Tata et al., 2020).

### *Online Shopping Information*

Researchers have conceptualized and proposed that online consumer information supports consumer decision-making and makes important observations. Online consumer information is open-ended trying to encapsulate reviewers' general assessments (positive or negative) of the product (Reinstein & Snyder, 2005; Lee et al., 2011; Willemsen et.al., 2011; Septianto & Soegianto,

2017). These sources are a popular and important feature that affects consumers' information processing (Fiore & Kim, 2007). Reviewing such online content would not only lead an individual into purchasing a product but translates into integrative shopping experiences (Fiore & Kim, 2007; Duarte et al., 2018). Unlike traditional retail outlets, online shoppers cannot touch and smell products, so their purchase judgements are based on the information that is available on the website and the available product reviews (Kim et al., 2007). Therefore, online sellers encourage shoppers to evaluate their product experiences online which also works as e-word-of-mouth communication (Park et al. 2007).

Additionally, the product aspects are being reviewed and commented on by large numbers of consumers and, these opinions act as an influencer in the overall opinion of the product (Pookulangara, & Koesler, 2011; Yu et al., 2011). This is possible due to the rapid expansion of e-commerce platforms, online market-places which have facilitated consumer search for information online before buying either online or offline (Park et al., 2007; Park & Kim, 2008). **However, consumers do look for the advantage of lower prices and want to find the best price for the products they buy and may often purchase on the internet after having seen the product in a store /offline (Schneider & Zielke, 2020). Extant literature has also posited that search costs of products and services in the online context are much lower when compared to the offline context (Lin et al., 2020).** Thus, it helps both consumers in their information processing and marketers in product development, marketing, and customer relationship management (Yu et al., 2011). Further, extant literature noted that internet forums like online marketplaces, e-commerce platforms, and review websites are influential sources of consumer information especially for consumers who search for online information before making a purchase decision (Bickart & Schindler, 2001). Also, the curated (guidance) approach is increasingly favoured by the consumer (Sebald & Jacob, 2018). Accessing online discussions, blogs, and reviews are traditionally used by consumers rather than marketer-generated sources (information available on market-places and websites) for gaining knowledge, sharing personal product experiences and opinions (Pookulangara et al., 2011). Such sources of information are becoming popular and largely impacting consumer behaviour (Lackermair et. al. 2013). Such online forums also offer various advantages including having better source credibility and being more relevant to consumers.

Literature further suggests that online information available to users influences consumers' perception of the quality of the product and that increases product awareness among the consumers (Duan et al., 2008). **The research also mentioned that consumers compare online and offline**

information before making their actual purchases. Customers search for information in the offline environment and then purchase online; this behaviour is called showrooming (Schneider & Zielke, 2020). Online user information not only influences but also increases product sales (Duan et al., 2008). Thus, it is apparent that such online sources of information are critical in shaping the consumers' perception of product quality and creating product sales. Studies on online sources of information have been conducted and adapted under various settings. These settings include online user information on movies' box office performance (Duan et al., 2008), online hotel industry (Vermeulen & Seegers, 2009), consumer reviews/information on sales of books (Chevalier & Mayzlin, 2006). Some of the settings where online information was adopted are discussed next. In a study on online hotel industry, it was reported that online hotel reviews increased the chances of consumers' consideration to the choice of the hotel (Vermeulen & Seegers, 2009). The study also indicated that positive and negative reviews, hotel familiarity, and reviewer expertise (Reinstein & Snyder, 2005) were some of the factors being considered by consumers and such exposure to online reviews (positive/negative) increased the awareness of the hotel (Vermeulen & Seegers, 2009; Lee et al., 2011; Racherla et al., 2012).

Similarly, investigations of consumer online reviews on sales of books suggested that incremental negative reviews are instrumental in decreasing sales in comparison to incremental positive reviews which result in increase in sales (Chevalier & Mayzlin, 2006; Lee et al., 2011). Researchers have stated that traditional WOM and e-WOM have been different. Unlike WOM, e-WOM is measurable as comments or reviews on the product have been written on the websites of the company or seller. Thus, marketers can apply marketing strategies for e-WOM more strategically than to traditional WOM and can overcome the limitations of traditional WOM (Kim et al., 2007; Park & Kim, 2008).

#### *Online shopping influences*

There have been many studies which have shown a relationship between consumer online reviews and sources of online information influencing customers' product purchases (Godes & Mayzlin, 2004; Chevalier & Mayzlin, 2006; Li & Hitt, 2008; Racherla et al., 2012; Lackermair et al., 2013). Online consumer shopping behaviour is persuaded more by the posts by opinion leaders, online reviews, friends and peers, chatbots and virtual employees thus creating a blend of both social and technology tools (Wang et al, 2011; Chaouli et al., 2016; Grewal & Roggeveen, 2020). Experience has helped consumers in shopping online. Studies have identified 'prior online purchase experience'

as a determinant of online shopping intention (Zhu & Zhang, 2010). It was found that the number of online reviews affects the buying decision of a novice consumer as the number of reviews indicates the popularity of the product (Racherla et al., 2012). As noted by Park and Kim (2008), the three factors that influence consumer information processing are consumers' expertise, number of online reviews, and online review valence (positive or negative). Evidence was found on the effects of negative reviews on consumers where there was stronger effect of negative rather than positive reviews (Ba & Pavlou, 2002; Pavlou & Dimoka, 2006). These results were consistent with extant literature where negative information was more often given precedence over positive reviews when evaluating products and objects although, in certain cases, a mixed set of reviews would elicit a purchase response (Tata et al., 2020). However, negative reviews occupying a smaller section of the total reviews were generally considered to be helpful by consumers (Park & Kim, 2008). Studies indicated that research should focus on the effects of perception of online reviews on the product involvement as consumers rely on reviews for high involvement expensive products (Park & Kim, 2008). Thus, product category (high-tech, low tech) and product type (tangible, intangible) may have an impact on information processing of online consumer comments.

From the marketer's point of view, a trust in and reputation of the firm in the online market can be built through product reviews and ratings which are popular support tools supporting buying decisions in the online space (Lackermair et al., 2013; Kumar et al., 2016). researchers argued that trust in the online environment promotes price premiums and can also act as a mediator in trust formation (Ba & Pavlou, 2002; Pavlou & Dimoka, 2006). When the consumers trust a retailer, their patronage of the retailer increases and this reduces their price search behaviour as they begin if the retailer has lowest prices (Lin et al., 2020). Consumers' perceived trust, perceived value and susceptibility to interpersonal influence shows a positive relationship with consumers' intention towards group buying behaviour (Sharma & Klein, 2020). Reviews and ratings are also important sources of information for consumers. Studies show that increasing postings/consumer online reviews are positively correlated with consumer purchase intentions (Park et al., 2007; Duan et al., 2008). As discussed above on the relevance of consumer online reviews and other sources of information being beneficial to consumers, this information has also been favourable to the marketers. Past research has found that consumer purchase intentions have been primarily guided by the effects of online consumer information which has helped online sellers to better manage their online consumer platform (Park et al., 2007). The evidence of marketers paying attention to reviews and other sources of information is seen in the literature. It was observed that the number of online

reviews would enhance a product’s popularity and would give an indication of the number of people who have bought the product (Racherla et al., 2012). The study indicated that the quality of online reviews has a positive impact on the purchase intention. Further, this purchase intention would increase as the number of reviews increased. Finally, the study concluded that the consumer purchase intentions would also depend on the involvement of consumers as being low involvement or high involvement (Park et al., 2007).

### 3. Research methodology

#### *Scale Development*

To develop the measurement scale, the paper follows the established procedures (Churchill, 1979; Rossiter, 2002): a qualitative study followed by a purification study (a consumer survey) and data validation. Figure 1 shows the research scheme adopted for the scale development. To execute this, online reference groups have been studied for purchase behaviour of goods and services.

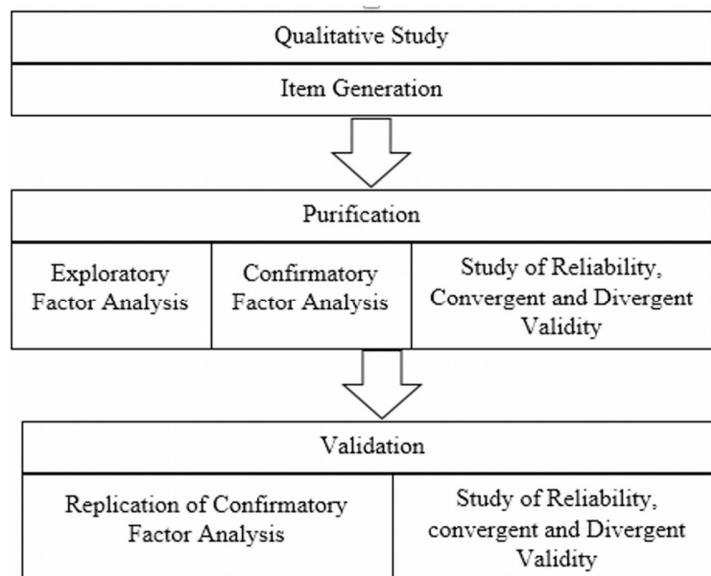


Figure 1 Scale development steps (Source: Authors)

#### *Qualitative study*

The qualitative inquiry involved extant literature and focus group discussions (*FGD*) for the generation of items that would be relevant in the scale development for understanding online

shopping influences. Focus groups play a critical pre-design role and are effectively employed in refining the initial stages of the item generation phase. The development of a scale requires the exploration of the sometimes-contested territories of the stereotypes which help stimulate discussion of attitude among the shoppers (Sweeney & Soutar, 2001; Nassar-McMillan et al., 2010). When the focus of the research is on scale development, the focus group discussions serve as an invaluable process which support gathering data to inform the further steps of the scale-development procedure (Nassar-McMillan et al., 2010).

The items identified through extant literature are reflected in the statements below: In the online shopping environment, it is not only about online reviews that provide information to users, but the number of reviews also matter to the shopper. The number of reviews affects the consumer decision and reflects the product popularity (Park & Kim, 2008; Park et al., 2007). Additionally, both the positive and negative reviews are compared in the online market place (Pavlou & Dimoka, 2006; Park & Kim, 2008; Vermeulen & Seegers, 2009; Lee et al., 2011; Lackermair et al. 2013; Bae & Lee, 2011). In the process of comparing, a few bad reviews may lead to a negative perception for the purchase of the product (Ba & Pavlou, 2002; Pavlou & Dimoka, 2006; Chevalier & Mayzlin, 2006; Park et al., 2007; Lackermair et al. 2013; Also, consumers certainly look for very good reviews before buying a product online/offline (Pavlou & Dimoka, 2006; Park et al., 2007; Park & Kim, 2008; Lackermair et al. 2013). However, in most instances, most of the surveyed participants compared positive and negative reviews and most of the time they would contribute to positive reviews (Lee et al., 2011; Lackermair et al., 2013). Customers' experience has helped them in their shopping experience (Zhu & Zhang, 2010). In addition to the quantity (number) and type of reviews, literature showed that perceived risk and anxiety are crucial factors in the e-retail environment and therefore shoppers pay attention to the quality of a review (Kim et al., 2007; Bae & Lee, 2011). It is argued that less-involved consumers would be affected by the quantity of online reviews while more-involved consumers would be affected by both review quality and review quantity (Park & Kim, 2008). Therefore, the quantity and quality of reviews are important as they provide cues to buying that product. Studies have reported that the quality of reviews reduces the uncertainty of product quality thereby enhancing decision-making (Park et al., 2007; Park & Kim, 2008; Bae & Lee, 2011). Product rating by the customers in the online marketplace is also a popular tool which supports buying decision-making (Lackermair et al. 2013).

The relevant influences in the online environment as prompted by the studies above are:

1. Purchasing Intention increases as the number of reviews increases;
2. A few bad reviews may lead to a negative perception for the purchase of the product;
3. I rely on online reviews for expensive and high involvement products only;
4. I usually compare positive and negative online reviews before buying;
5. I trust the reviews as buying decisions based on reviews has helped me in the past;
6. I do participate in writing reviews once I have made a purchase;
7. The quality of the reviews reduces the uncertainty of product quality and helps me in making my decisions;
8. I certainly look for online blogs/ social networking sites to find more information on the product category / brands;
9. I use online reviews for gaining product information for less popular products than popular products; and
10. Ratings for the product are important in buying the product / service.

#### *Face Validity*

Face validity assessment of the initial set of an item pool were conducted by expert panel judging where experts from academia and industry aided in validating the items for further analysis. Face validity is a widely accepted methodology for item generation and item editing where experts in the relevant field of experience judge the appropriateness of each item before it goes through the phase of content validity (Churchill, 1979; Hardesty & Bearden, 2004). Focused group discussions were conducted to check content validity and to gain more insights.

#### *Focus Group Discussions (FGDs)*

Three FGDs with total of 45 shoppers provided insights into understanding the online sources of information which influence shoppers in their online buying decisions. They were selected by the convenient random sampling by visiting shopping malls, residential apartments, and educational institutions (Ulin et al., 2005), with due permission from the authorities of these locations. The discussions were carried out at three different times to understand the nuances of their online buying behaviour. Fifteen shoppers participated in a specific FGD session. Each respondent group had a good mix of male and female, from a range of blue-collar and white-collar occupations, students, homemakers and retired professionals who were aged between 22 and 60 years. The members of the group pondered on a series of questions on the factors influencing the online shopping environment. They were further asked why these items were important to them to

strengthen the understanding of the underlying *online shopping influences*. This exploratory phase produced items which were generic, identical to the extant literature. However, three specific items emerged as important aspects which were retained for further process of the evaluation. These three variables (items) that were identified in the process of *generation of items* and were added to the list:

1. I certainly look for very good reviews before buying the product online;
2. Information on the product in the company website or at the marketplace is useful in decision-making; and
3. The user experience on the website helps me in arriving a decision based on reviews.

An important consideration in scale development papers is the adequacy by which a certain domain of content is identified. The content validity in the scale is strengthened by conducting focus group meetings which help in the identification and generation of items. Thus, the review of literature and focus group discussions provide insights into the items which highlighted the usefulness of online sources of information for consumers' buying decision process. In the next step, a self-administered questionnaire with these 13 items on a 5-point scale was administered.

#### *Purification Study*

Purification study is a widespread approach in empirical research which examines the dimensionality of the items and has two phases: exploratory factor analysis along with initial coefficient alpha; and confirmatory factor analysis (Churchill, 1979). This study evaluates the robustness of the items by eliminating items from a multi-item scale to improve the measurement properties of the newly developed scale which is intended to measure 'online susceptibility' (Sweeney & Soutar, 2001; Wieland et al., 2017). A consumer survey was conducted to understand the factor structure that underlies the online shopping influences and to strengthen the item pool further. To assess the factor structure underlying this list, data was collected through a questionnaire of consumers in India who use online information before making a purchase decision.

#### *Phase 1- Exploratory Factor Analysis*

For the first phase of analysis, we collected data from 400 consumers in India using a convenience sampling method, a **non-probability sampling technique to which the investigators had geographical proximity, convenient access, availability at a certain time and consumers who were willing to participate in the study** (Etikan et al., 2016). The size of the sample is determined by the nature of data robustness and a size of 400 samples was found appropriate for data having no cross-loadings,

strong factor loadings of  $\geq 0.50$ , (Tabachnick & Fidell, 2013) and high reliability of  $\geq 0.70$  (Tabachnick & Fidell, 2013; Kyriazos, 2018). Convenience samples were identified through shopping malls, residential apartments and educational institutions who were asked the qualifying question “Have you used online sources of information like websites, online reviews, online ratings, blogs when buying products?” This ensured that the participants had used online sources of information before they purchased products online or offline. Respondents rated the 13 items on a 5-point Likert scale ranging from 5=Strongly Agree, 4= Agree, 3= Neutral, 2= Disagree, and 1=Strongly Disagree. The Likert scale signifies the responses on various levels of disagreement and agreement which is widely used (Gangwar et al., 2015), and is the best design, especially in online and self-administered surveys (Hair et al. 2008). This 5-point scale has been most often applied as it has a shorter average completion time and if respondents are unsure of the items, they may opt for a midpoint (neutral option) explaining the satisfying behaviour (Chyung et al., 2017). In a study conducted by Adelson and McCoach (2010), a good model fit with significantly higher reliability for a 5-point Likert scale was obtained.

Out of 400 questionnaires that were received in our study, 26 were dropped due to inconsistency of information. The final analysis was based on the responses of 374 respondents. The majority of the respondents, 62 percent, were male and 39 percent were women. The marital status reported by the sample was 65 percent married; 45 percent of the sample were in the age group  $< 30$  and 42 percent were between the ages of 30 and 50: 38 percent of the respondents had graduate and 52 percent had post-graduate degrees. The occupational breakdown of the sample was 67 percent private/self-employed, 21 percent homemaker and 12 percent student. The sample was represented by the following income categories 25,000/- to 50,000/- (30%), 50,000/- to 1,00,000/- (33%) and  $>1,00,000/-$  (14%). Table 1 summarizes the demographic data.

Table 1 Demographic details

Sl. No		Description	No. of Respondents	%
1	Gender	Male	230	61.5
		Female	144	28.5
2	Marital Status	Married	242	64.7
		Un-Married	132	35.3
3	Age(Years)	$<30$	167	44.7
		30-50	156	41.7

		>50	51	13.6
4	Monthly Income	0	14	3.7
	(In Indian Rupees.)	<25,000	74	19.8
		25,000 – 50,000	111	29.7
		50,000 – 1,00,000	124	33.2
		>1,00,000	51	13.6
5	Occupation	Private / Self Employed	252	67.4
		Home maker	78	20.9
		Student	44	11.8
6	Education	12 <sup>th</sup> and below	39	10.4
		Graduate	142	38
		Postgraduate & above	193	51.6
7	Place of Stay	Village	10	2.7
		Town	73	19.5
		City	291	77.8

The data received from the respondents on the 13 items were tested for reliability and were subjected to exploratory factor analysis (EFA) with principal axis factoring and varimax rotation, and eigen value was adopted to determine the number of factors (Hair et al., 1998). Two items, *I rely on online reviews for expensive and high involvement products only (Item 3)* and *I use online reviews for gaining product information for less popular products as compared to popular products (Item 9)* were dropped from the analysis as their factor loadings were less than 0.5. The EFA analysis using the 11 items resulted in identifying a three factor solution. Based on the results of principal component analysis, the items were examined which led to naming them as *Evidential online influence*, *Confirmational online influence*, and *Experiential online influence*. The items that formed factor 1: *purchasing Intention increases as the number of reviews increases (Item 1)*; *even few bad reviews may lead to negative perception for the purchase of the product (Item 2)*; *I certainly look for very good reviews before buying the product online (Item 11)*; *I usually compare positive and negative online reviews before buying (Item 4)*; and *ratings for the product is important in buying the product / service (Item 10)*. As these items explained the evidence that is looked for by the users in the online environment, we chose to name it *Evidential online influence*. The items that formed factor 2 comprised *I certainly look for online blogs/ social networking sites to find more information on the product category / brands (Item 8)*; *Information on the product in the company website or at the market-place is useful in decision-making (Item 12)*; and *Quality of the reviews reduces the uncertainty of product quality; and helps me in making my decisions (Item 7)*. These items provide confirmation of the evidence that was identified was justifiable and hence we chose to name the factor *Confirmational online influence*. The third factor contained items: *I trust the*

*reviews as buying decisions based on reviews has helped me in the past (Item 5); The user experience on the website helps me in making a decision based on reviews (Item 13); and I do participate in writing reviews once I have made a purchase (Item 6).* These items offered consumers the opportunity to use their past online experiences in making their purchase decision and hence the authors chose to name the factor *Experiential online influences*.

#### *Phase 2 – Confirmatory Factor Analysis (CFA)*

The findings above were confirmed through a Confirmatory Factor Analysis (CFA) using the same 11 items with AMOS which is a popular statistical package used in CFA research (Graham et al., 2003) that helps evaluate the congeneric measurement properties. **AMOS was used in the current study as the structured coefficients can be easily obtained through AMOS and the step-by-step process through the conduct of CFA makes it user-friendly (Shek & Yu, 2014).** The results revealed all factor loadings as having the value 0.50 and above (Hair et al., 2008). The CFA output on the factor loadings and reliability is shown in Table 2. The scale reliability was estimated through Cronbach's alpha coefficients. The coefficients of the scale dimensions were 0.853, 0.781 and 0.717 (Table 2) for *evidential online influence*, *confirmational online influence*, and *experiential online influence* respectively, which met the minimum level of 0.70 (Nunnally, 1978; Fornell & Laker, 1981; Nunnally & Bernstein, 1994; Hair et. al., 2008) which confirmed the scale dimensions' reliability. The scale has convergent validity based on the significant confirmatory factor loadings which are greater than 0.7 (see Table 3). The convergent validity of the scales was assessed using the guideline proposed by Hair, Ringle, and Sarstedt, 2011. Hair et al. (2008) in their book *Multivariate Data Analysis*, has explained the convergent validity model which authors have used for the analysis. The discriminant validity condition was also met (see Table 4). **Off-diagonal elements in Table 4 are the correlations among constructs. The discriminant validity of the scales was assessed using the guideline proposed by Fornell and Larcker (1981). Published research in the domains of marketing (Hair et al., 2012a), strategic management (Hair et al., 2012b) and management information systems (Ringle et al., 2012) has recommended the use of Fornell and Larcker criteria. This method has been internally consistent and conforms to linking data to abstract variables based on the rules of correspondence (Fornell & Larcker, 1981). The procedure also tries on a specific sample and does not allow judgement on the constructs at the population level. It has been frequently adopted by researchers in the reputable outlets such as *Journal of Business Research*, *Journal of Marketing*, *Journal of Marketing Research* and *Journal of the Academy of Marketing Science* (Shiu et al., 2011). As per the recommendation the square root of the AVE from the construct should be more than the correlation shared between the**

construct and other constructs in the model. Our findings support those guidelines for discriminant validity.

A measurement model involving the 11 items established during the *generation of items* stage provides a satisfactory fit with the data. The model fit indices reach the thresholds that are recommended by past literature studies (Browne & Cudeck, 1993; Byrne 2010, 2013) (see Table 5). This has led us to finalize and propose the Online Susceptibility Scale (OSS), summarized in Table 6.

Table 2 Confirmatory Factor Analysis (CFA)

Sl. No.	Attributes	Mean score	Standard Deviation (SD)	Factor Loadings	Reliability (Cronbach alpha)
<b>Factor 1:</b> <i>Evidential Online Influence</i>					<b>0.853</b>
1	Purchasing Intention increases as the number of reviews increases.	3.805	1.2392	0.817	
2	Even a few bad reviews may lead to negative perception for the purchase of the product.	3.123	1.1012	0.677	
3	I certainly look for very good reviews before buying the product online.	3.460	1.1449	0.734	
4	I usually compare positive and negative online reviews before buying.	3.545	1.1838	0.786	
5	Ratings for the product are important in buying the product / service.	3.291	1.1707	0.655	
<b>Factor 2:</b> <i>Confirmational Online Influence</i>					<b>0.781</b>

6	I certainly look for online blogs/ social networking sites to find more information on the product category / brands.	2.473	1.0423	0.775
7	Information on the product in the company website or at the marketplace is useful in decision-making.	2.332	1.1307	0.725
8	Quality of the reviews reduces the uncertainty of product quality and helps me in making my decisions.	2.604	1.1595	0.719
<b>Factor 3:</b>				<b>0.717</b>
<b><i>Experiential Online Influence</i></b>				
9	I trust the reviews as buying decisions based on reviews that has helped me in the past.	2.465	1.0239	0.721
10	The user experience on the website helps me in making a decision based on reviews.	2.580	1.1214	0.699
11	I do participate in writing reviews once I have made a purchase.	2.594	1.0614	0.713

Table 3 Validity Estimates: Convergent Validity (Purification Stage)

Constructs	Cronbach's alpha (Construct Reliability CR))	Average Variance Explained (AVE)	Reliability	Convergent Validity
EOI	0.853	0.542	Yes	Yes
COI	0.781	0.548	Yes	Yes
EPOI	0.717	0.506	Yes	Yes

Note: The criteria for convergent validity are: the CR should be more than 0.70, the AVE should be more than 0.50. and the CR should be more than AVE (Hair et al., 2011).

Table 4 Validity Estimates: Discriminant Validity (Purification Stage)

Construct	AVE	EOI	COI	EPOI
-----------	-----	-----	-----	------

EOI	0.542	<b>0.736</b>		
COI	0.548	0.240	<b>0.740</b>	
EPOI	0.506	0.144	0.219	<b>0.711</b>

Note: Diagonal elements (in bold) are the square root of the average variance explained (AVE).

Table 5 Model Fit indices (Purification Stage)

Indices	Recommended Value	Literature	Model Fit Indices
GFI	≥0.90	Byrne (2010, 2013)	0.976
CFI	≥0.93	Hair et. al. (2008, 2012); Byrne (2010, 2013).	0.992
CMIN/df	<3	Hair et. al. (2008); Byrne (2010)	1.245
AGFI	≥0.80	Byrne (2010, 2013)	0.961
RMSEA	≤0.08	Browne & Cudeck (1993); Byrne (2010; 2013)	0.026
NFI	≥ 0.90	Hair et. al. (2008, 2012); Hu & Bentler (1999)	0.962
NNFI (TLI)	≥0.90	Hu & Bentler, (1999)	0.989
SRMR	<0.08	Hu & Bentler, (1999)	0.0381

Note: GFI, CFI, CMIN/df, AGFI, RMSEA, NFI, NNFI, SRMR are as per recommended value)

Table 6 Proposed Online Susceptibility Scale (OSS)

Sl. No	Attributes	Sources*
<b>Factor 1:</b> <b><i>Evidential Online Influence</i></b>		
1	Purchasing Intention increases as the number of reviews increases.	Park et al. (2007)
2	Even a few bad reviews may lead to negative perception for the purchase of the product.	Ba & Pavlou (2002)
3	I certainly look for very good reviews before buying the product online.	Pavlou & Dimoka (2006)
4	I usually compare positive and negative online reviews before buying.	Pavlou & Dimoka (2006)
5	Ratings for the product are important in buying the product / service.	Lackermair et al. (2013)

<b>Factor 2:</b> <i>Confirmational Online Influence</i>		
6	I certainly look for online blogs/ social networking sites to find more information on the product category / brands.	Exploratory Study*
7	Information on the product in the company website or at the market place is useful in decision making.	Exploratory Study*
8	Quality of the reviews reduces the uncertainty of product quality and helps me in making my decisions.	Park et al. (2007)
<b>Factor 3:</b> <i>Experiential Online Influence</i>		
9	I trust the reviews as buying decisions based on reviews have helped me in the past.	Zhu & Zhang (2010); Kumar et al. (2016)
10	The user experience on the website helps me in making a decision based on reviews.	Exploratory Study*
11	I do participate in writing reviews once I make a purchase.	Lackermair et al. (2013)

(\*The attributes have been suitably modified as per the exploratory study and FGD -They were considered based on the discussion with the subject matter experts and respondents)

#### *Data Validation*

We validated the confirmatory factor analysis with another data set of 276 respondents adopting the same procedure. Of the 276 responses, 262 were retained for the analysis and the remaining were eliminated due to data inconsistency. The factor loadings for purification and validation stages are presented in Table 7. The scale reliability was estimated through Cronbach's alpha coefficients. The coefficients of the scale dimensions were 0.871, 0.882 and 0.727 (see Table 8) for *Evidential online influence*, *Confirmational online influence*, and *Experiential online influence* respectively, which met the minimum level of 0.70 which confirmed the scale dimensions' reliability. The scale depicted good convergent validity based on the significant confirmatory factor loadings which are greater than 0.7 (see Table 8). The discriminant validity condition was also met (see Table 9). The results of CFA validated that the data fit well into the three-factor structure. The model fit indices like CFI (0.978), GFI (0.954), CMIN (1.684), AGFI (0.925) and RMSEA (0.051), **NFI, NNFI, SRMR** are as per the recommended value (see Table 10) and hence the model has achieved being a good model fit (Byrne, 2010, 2013)

Table 7 Factor Loadings for Purification and Validation Stages.

	Purification	Validation
EV1 ← EOI	0.817	0.897
EV2 ← EOI	0.677	0.721
EV3 ← EOI	0.734	0.748
EV4 ← EOI	0.786	0.766
EV5 ← EOI	0.655	0.659
C1 ← COI	0.775	0.936
C2 ← COI	0.725	0.701
C3 ← COI	0.719	0.909
EP1 ← EPOI	0.721	0.555
EP2 ← EPOI	0.699	0.845
EP3 ← EPOI	0.713	0.641

Table 8 Validity Estimates: Convergent Validity (Validation Stage)

Constructs	Cronbach's alpha (Construct Reliability CR)	Average Variance Explained (AVE)	Reliability	<b>Convergent Validity</b>
EOI	0.871	0.580	Yes	Yes
COI	0.882	0.731	Yes	Yes
EPOI	0.727	0.525	Yes	Yes

Table 9 Validity Estimates: Discriminant Validity (Validation Stage)

<b>Construct</b>	AVE	EOI	COI	EPOI
EOI	0.580	<b>0.762</b>		

COI	0.731	0.113	<b>0.855</b>
EPOI	0.525	0.220	0.139
			<b>0.691</b>

Table 10 Model Fit indices (Validation Stage)

Indices	Recommended Value	Model Fit Indices
GFI	$\geq 0.90$	0.954
CFI	$\geq 0.93$	0.978
CMIN/df	$< 3$	1.684
AGFI	$\geq 0.80$	0.925
RMSEA	$\leq 0.08$	0.051
NFI	$\geq 0.90$	0.949
NNFI (TLI)	$\geq 0.90$	0.971
SRMR	$< 0.08$	.0503

(Note: GFI, CFI, CMIN/df, AGFI, RMSEA, NFI, NNFI, SRMR are as per recommended value)

#### 4. Discussion

This research provides a thorough understanding of the salient determinants impacting the online shopping environment by integrating the reference group theory and technology acceptance model (TAM) theory. As indicated by extant literature, social influences in the online environment include online communities, discussion forums, blogs, and online reviews which helps strengthen the online social interactions: these are considered as social influences influencing consumer participation (Hsu & Lin., 2008; Racherla et al., 2012; Yang, 2012; Hsu et al., 2013).

Online reviews have been indicated as an important source of information (Park et al., 2007; Fiore & Kim, 2007; Zhu & Zhang, 2010; Racherla et al., 2012; Lackermair et al., 2013; Willemsen et al., 2011). Hence, there is a need to understand the susceptibility of consumers' online shopper behaviour to online reviews. This has not been adequately addressed in terms of shopper influences. Therefore, it becomes imperative to validate all the dimensions identified through extant literature together in one measurement scale. Therefore, the main objective of the research study was to

explore the underlying dimensions of online shopping influences using this to propose a scale: online susceptibility scale. To explore that objective, the research followed a systematic and scientific scale development procedure using 11 items identified through literature and focus group discussions. The study proposes an Online Susceptibility Scale (OSS) comprising three factors: *Evidential Online Influence* with 5 items, *Confirmational Online Influence* with 3 items and *Experiential Online Influence* with 3 items.

Based on the empirical and theoretical work in marketing, decision-making and judgement, consumers use a certain process to search for product information, with the size and quality of the consideration combined with the quality of purchase decision-making in an online environment (Haubl & Trifts, 2000; Yang, 2012) The literature indicates that the first indicator for any customer in the decision-making process is the user rating of the product indicated as stars. Also, research argues there is a gap between the user product ratings and the user product reviews (Lackermair et al., 2013). The current paper tried to identify these gaps by identifying online shopping influences that focus the consumer decision-making process in an online shopping space.

When customers shop online, they look for *Evidence* in the online environment to validate their purchase behaviour. They gather information from the number of reviews and the quality of user-generated product reviews that are presented in the online shopping portal which would strengthen their purchase intention (Haubl & Trifts, 2000; Kim et al., 2007; Li & Hitt, 2008; Pan et al., 2011). They also gain insights based on the good reviews included for the product and bad reviews would lead to negative perception of purchase of the product. Customers would also check and compare evidence based on the type of online reviews (positive/ negative) ( Sen & Lerman, 2007; Lee et al., 2008; Mudambi & Schuff, 2010; Racherla et al., 2012). It was also observed in the study that customers would rely on the ratings for the product which would ultimately provide evidence for information processing (Lee et al., 2008; Forman et al., 2008). Although these studies have enhanced our knowledge with respect to the perceived usefulness of product ratings, consumers look for additional decision tools which contribute more to their overall product evaluation (Lu et al., 2009; Siersdorfer et al., 2010).

However, *Evidential online influence* in isolation is not good enough for making the decision. The online evidence, when coupled with confirming this would provide more source credibility to the overall online purchase behaviour. Customers would confirm the information gathered pertaining to the products or brands by authenticating the information through online blogs, social networking sites (Yang, 2012; Lackermair et al., 2013) company websites (Chevalier & Mayzlin,

2006), or at the market-places which would support decision-making (Tata et al., 2020). The customers would also confirm the evidence gathered by looking at the quality of the reviews which would support the reduction of the uncertainty relating to the product quality.

In addition to the Evidential Online Influence and the Confirmational Online Influence, customers are also influenced by their past experiences which would gain trust for the available product reviews. Similarly, the user experience on the website helps customers in evaluating the online reviews (Yang, 2012; Racherla et al., 2012). The focus of online shoppers is to minimize cognitive efforts while shopping then improving accuracy in their purchase decisions (Kim et al., 2007). Thus, the online reviews, ratings, blogs, social networking sites, company websites act as decision aids in an online shopping context (Racherla et al., 2012; Lackermair et al., 2013). Additionally, customers share their experiences (*Experiential Online Influence*) by their own contributions in writing reviews after their purchase (Yang, 2012). **Consumers also self-verify the information about products, brands and services in this competitive marketplace to conform with their self-views (Stuppy et al., 2020).** In the definition of Web 2.0 by O'Reilly, user generated ratings and review quality improves when the contributions of the users increase which would depend on consumers' willingness to contribute (O'Reilly, 2007). The key facets of sharing experiences include providing real-time feedback by communicating with other individuals about the past experiences or gaining real-time feedback about the purchase which the user is yet to make. This enhances the overall user experience by providing higher degrees of interactivity (Ariely, 2000). In summary, online shoppers gain evidence from several sources, they also confirm these from various media and use experience to make a conscious online shopping decision.

## **5. Contributions**

The research has made significant contributions to the theory and practice.

### *Theoretical Contributions*

The research adds a new dimension to purchase decision literature. First, it has extended the conventional reference group influence concept to online shopping influences by developing and validating an 11 item **Online Susceptibility Scale (OSS)**. **To our best knowledge**, extant literature has not suggested an individual scale to capture the online shopping influences. Hence this research provides a comprehensive OSS scale by introducing the three constructs: *Evidential online influences*, *Confirmational online influences*, and *Experiential online influences*.

Second, with the increasing use of e-commerce and the proliferation of the use of internet, consumers are using all forms of information channels and their past experiences to make the best shopping decision. This customer journey where past experiences have impacted perceptions and the current experiences impacting past ones has mirrored the experiential online influence (Grewal & Roggeveen, 2020). These collective journeys are being influenced by the social theory and hence factoring in social influences in customers shopping journey becomes very critical (Thomas et al., 2020). Thus, the research provides a unique contribution to the development of an online susceptibility scale which helps in understanding consumers' online shopping influences. The study also reiterates that the online shopping influences impact consumer decision-making thereby helping in understanding how shoppers are influenced online.

Third, the new proposed scale would help consumers' in the decision-making process which entails gathering information from online reviews, discussion forums, ratings; searching for authentic information of the product from websites, blogs to confirm their choice; while validating the product and brand decision (Racherla et al., 2012; Hsu et al., 2013). The tests of reliability, exploratory factor analysis, and confirmatory factor analysis indicated that the scale developed has a sound and reliable measurement model (Hair et al., 2012a, Byrne, 2013). The validation of the model confirmed the factor structure. Overall, the study provided comprehensive theoretical understanding of online shopping influences using the OSS which provides a base for future empirical studies.

### *Managerial Implications*

The study on emerging research area that is, online shopping influence, has key implications on a firm's marketing strategies. First, as literature has indicated, online discussions, blogs, reading reviews have been dominantly used as online sources of information by consumers for gaining knowledge, sharing personal product experiences, and opinions (Sanjukta et al., 2011; Racherla et al., 2012 ;Hsu et al., 2013). This helps both consumers in their information processing and firms in product development, marketing and customer relationship management. Second, it recommends that online marketing stakeholders like e-commerce portals and online marketplaces should consider the 'Online Susceptibility Scale' (OSS) to gain insights into the online shopping influences -and there-by manage their campaigns accordingly (Racherla et al., 2012; Lackermair et al., 2013). The results of the study specified that consumers evaluate their product and brand purchase decision

based on the various forms of online sources of information: number of online reviews, and type of online reviews (positive or negative). Third, the findings also suggest that consumers check company related information on websites, blogs, and even product ratings to confirm their product searches (Stuppy et al., 2020). The results also specified that consumers use their experience of shopping online and contribute in writing positive or negative reviews/providing feedback following their purchase (Zhu & Zhang, 2010). Fourth, the study invites marketers to develop their marketing strategies after identifying the way consumers search for online influences to strengthen their purchase intention. As a result, marketing firms may consider this proposed instrument to provide smooth and enhanced online experience to consumers by either designing new product experiences or modifying the existing ones.

## **6. Conclusion**

With the emergence of technology, online shopping has become convenient for consumers with respect to access to information and product recommendation, search and evaluation of information thereby leading to an actual purchase. Online shopping has thus become a part of consumers lifestyle. The concept of online shopping influences analysed in the paper is timely and provides the consumers with a broader and a wider network-based society which traditionally has been group-based. The online social shopping has helped consumers strengthen their social connections by sharing online shopping experiences, collecting shopping ideas from individuals they trust, exchanging opinions on various products, amongst other help. The development of that online susceptibility scale would help consumers in searching for online information before indulging in a transaction and sharing their experiences in the online forum after using the product. Through the development of this scale, consumers would have a better online shopping experience as online marketers and merchants would plan to add better functions or launch social shopping networks for customers so that they can rate and review the product portfolio in their online shops. The Evidential online influences, Confirmational online influences and the Experiential online Influences would stimulate consumers' purchase intention, leading to an actual purchase from the website. The results of the study would make consumers recognize the influences of online shopping as a significant factor which affects their intention towards an online shopping transaction. The resultant theoretical contribution, managerial implications, and social implications are beneficial for researchers, academicians to consider this OSS scale as a pioneering work on the domain of online shopping influences;

marketers to manage their campaigns in the online shopping environment; and understand the social influences impacting consumers online shopping behaviour<sup>1</sup>.

### *Limitation and Future Scope*

Although the scale provides evidence about shoppers' online susceptibility, continual observance is necessary given the fast-paced Internet development. A methodological limitation in this scale development study is that it adopts a cross-sectional approach and future scholars can check the appropriateness of the scale on a longitudinal study by observing certain groups of consumers over a period. The scale has been validated only for a specific region, and consumer class; therefore, further testing is recommended to generalize the output attained. Scholars may explore across different cultures, consumer segments, and product types (search versus experience products; utilitarian, hedonic or value expressive products) to check for heterogeneity and homogeneity among varied online retail formats, mobile media, or social media platforms. Future researchers may investigate the role of OSS in conjunction with understanding the role of interpersonal influence on online group buying behaviour (Sharma & Klein, 2020). Future studies to assess the impact of online shopping influences across different socio-demographic variables based on gender, age, income, and education can also be explored. Additionally, as the current study is on developing a scale for online susceptibility, future research may consider the impact of the OSS influences on consumer decisions to abort or postpone purchases.

## **References**

- Adelson, J. L., & McCoach, D. B. (2010). Measuring the mathematical attitudes of elementary students: The effects of a 4-point or 5-point Likert-type scale. *Educational and Psychological measurement, 70*(5), 796-807.
- Aghekyan-Simonian, M., Forsythe, S., Kwon, W. S., & Chattaraman, V. (2012). The role of product brand image and online store image on perceived risks and online purchase intentions for apparel. *Journal of Retailing and Consumer Services, 19*(3), 325-331.
- Argo, J. J., & Dahl, D. W. (2020). Social influence in the retail context: A contemporary review of the literature. *Journal of Retailing, 96*(1), 25-39.
- Ariely, D. (2000). Controlling the information flow: Effects on consumers' decision-making and preferences.
-

- Journal of Consumer Research*, 27(2), 233-248.
- Asch, S.E. (1953). Effects of group pressure upon the modification and distortion of judgements, in D. Cartwright and A. Zander (Eds), *Group Dynamics*. New York, Evenston.
- Ba, S., & Pavlou, P. A. (2002). Evidence of the effect of trust building technology in electronic markets: Price premiums and buyer behavior. *MIS Quarterly*, 243-268.
- Bae, S., & Lee, T. (2011). Gender differences in consumers' perception of online consumer reviews. *Electronic Commerce Research*, 11(2), 201-214.
- Bearden, W. O., & Etzel, M. J. (1982). Reference group influence on product and brand purchase decisions. *Journal of Consumer Research*, 9(2), 183-194. Retrieved from <http://ezproxy.scu.edu.au/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=4661665&site=ehost-live>.
- Bearden, W. O., Netemeyer, R. G. & Teel, J. E. (1989). Measurement of consumer susceptibility to interpersonal influence. *Journal of Consumer Research*, 15,473-481.
- Bearden, W. O., Netemeyer, R. G., Teel, J. E. (1990). Further validation of the consumer susceptibility to interpersonal influence scale. *Advances in Consumer Research*, 17, 770-776.
- Bickart, B., & Schindler, R. M. (2001). Internet forums as influential sources of consumer information. *Journal of Interactive Marketing*, 15(3), 31-40.
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. *Sage Focus Editions*, 154, 136-136.
- Burnkrant, R., & Cousineau, A. (1975). Social influence in buyer behavior. *Journal of Consumer Research*. 2(3), 206-215.
- Byrne, B. M.(2010). Structural equation modeling with AMOS: Basic concepts, applications and programming. *European Journal of Work and Organizational Psychology*, 11, 243-246
- Byrne, B. M. (2013). Structural equation modeling with LISREL, PRELIS, and SIMPLIS: Basic concepts, applications, and programming. *Psychology Press*. NJ, US.
- Chaouali, W., Yahia, I. B., & Souiden, N. (2016). The interplay of counter-conformity motivation, social influence, and trust in customers' intention to adopt Internet banking services: The case of an emerging country. *Journal of Retailing and Consumer Services*, 28, 209-218.
- Chevalier, J. A., & Mayzlin, D. (2006). The effect of word of mouth on sales: Online book reviews. *Journal of Marketing Research*, 43(3), 345-354.
- Churchill Jr, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, 64-73.
- Chyung, S. Y., Roberts, K., Swanson, I., & Hankinson, A. (2017). Evidence-based survey design: The use of a midpoint on the Likert scale. *Performance Improvement*, 56(10), 15-23.

- Duan, W., Gu, B., & Whinston, A. B. (2008). Do online reviews matter? An empirical investigation of panel data. *Decision Support Systems*, 45(4), 1007-1016.
- Duarte, P., e Silva, S. C., & Ferreira, M. B. (2018). How convenient is it? Delivering online shopping convenience to enhance customer satisfaction and encourage e-WOM. *Journal of Retailing and Consumer Services*, 44, 161-169.
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1-4.
- Fernandes, S., & Londhe, B. R. (2015). Influence of social reference group on buying behavior: A comparative study of working and non-working women in bangalore: A pilot study analysis. *Indian Journal of Science and Technology*, 8(6), 95-124
- Fiore, A. M., & Kim, J. (2007). An integrative framework capturing experiential and utilitarian shopping experience. *International Journal of Retail & Distribution Management*, 35(6), 421-442.
- Forman, C., Ghose, A., & Wiesenfeld, B. (2008). Examining the relationship between reviews and sales: The role of reviewer identity disclosure in electronic markets. *Information Systems Research*, 19(3), 291-313.
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 382-388.
- Gangwar, H., Date, H., & Ramaswamy, R. (2015). Understanding determinants of cloud computing adoption using an integrated TAM-TOE model. *Journal of Enterprise Information Management*. 28(1), 107-130.
- Godes, D., & Mayzlin, D. (2004). Using online conversations to study word-of-mouth communication. *Marketing Science*, 23(4), 545-560.
- Graham, J. M., Guthrie, A. C., & Thompson, B. (2003). Consequences of not interpreting structure coefficients in published CFA research: A reminder. *Structural Equation Modeling*, 10(1), 142-153.
- Grewal, D., & Roggeveen, A. L. (2020). Understanding retail experiences and customer journey management. *Journal of Retailing*, 96(1), 3-8.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate data analysis*. Upper Saddle River, NJ: Prentice Hall.
- Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. & Tatham, R.L. (2008), *Multivariate Data Analysis*, (6th ed.): New Delhi, Pearson Education,.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139-152.
- Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012a). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science*, 40(3), 414-433.

- Hair, J. F., Sarstedt, M., Pieper, T. M., & Ringle, C. M. (2012b). The use of partial least squares structural equation modeling in strategic management research: A review of past practices and recommendations for future applications. *Long Range Planning*, 45(5–6), 320–340.
- Hammerl, M., Dorner, F., Foscht, T. and Brandstätter, M. (2016). Attribution of symbolic brand meaning: the interplay of consumers, brands and reference groups. *Journal of Consumer Marketing*, 33(1), 32-40.
- Hardesty, D. M., & Bearden, W. O. (2004). The use of expert judges in scale development: Implications for improving face validity of measures of unobservable constructs. *Journal of Business Research*, 57(2), 98-107.
- Häubl, G., & Trifts, V. (2000). Consumer decision-making in online shopping environments: The effects of interactive decision aids. *Marketing Science*, 19(1), 4-21.
- Hinduja, S., & Ingram, J. R. (2009). Social learning theory and music piracy: The differential role of online and offline peer influences. *Criminal Justice Studies*, 22(4), 405-420.
- Hsu, C. L., & Lin, J. C. C. (2008). Acceptance of blog usage: The roles of technology acceptance, social influence and knowledge sharing motivation. *Information & Management*, 45(1), 65-74.
- Hsu, C. L., Lin, J. C. C., & Chiang, H. S. (2013). The effects of blogger recommendations on customers' online shopping intentions. *Internet Research*. 23(1), 63-88
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55.
- Jung, N. Y., & Seock, Y. K. (2017). Effect of service recovery on customers' perceived justice, satisfaction, and word-of-mouth intentions on online shopping websites. *Journal of Retailing and Consumer Services*, 37, 23-30.
- Kelman, H.C. (1961). Processes of opinion change. *Public Opinions Quarterly*, 25, 57-78.
- Kim, J., Fiore, A. M., & Lee, H. H. (2007). Influences of online store perception, shopping enjoyment, and shopping involvement on consumer patronage behavior towards an online retailer. *Journal of Retailing and Consumer Services*, 14(2), 95-107.
- Kumar, A., Sikdar, P., & Alam, M. M. (2016). E-retail adoption in emerging markets: Applicability of an integrated trust and technology acceptance model. *International Journal of E-Business Research*, 12(3), 44-67.
- Kyriazos, T. A. (2018). Applied psychometrics: Sample size and sample power considerations in factor analysis (EFA, CFA) and SEM in general. *Psychology*, 9(08), 2207.

- Lackermair, G., Kailer, D., & Kanmaz, K. (2013). Importance of online product reviews from a consumer's perspective. *Advances in Economics and Business*, 1(1), 1-5.
- Lee, J., Park, D. H., & Han, I. (2008). The effect of negative online consumer reviews on product attitude: An information processing view. *Electronic Commerce Research and Applications*, 7(3), 341-352.
- Lee, M. K., Shi, N., Cheung, C. M., Lim, K. H., & Sia, C. L. (2011). Consumer's decision to shop online: The moderating role of positive informational social influence. *Information & Management*, 48(6), 185-191.
- Lee, Y., Lee, J., & Lee, Z. (2006). Social influence on technology acceptance behavior: Self-identity theory perspective. *ACM SIGMIS Database: the DATABASE for Advances in Information Systems*, 37(2-3), 60-75.
- Lehdonvirta, V., & Räsänen, P. (2011). How do young people identify with online and offline peer groups? A comparison between UK, Spain and Japan. *Journal of Youth Studies*, 14(1), 91-108.
- Li, X., & Hitt, L. M. (2008). Self-selection and information role of online product reviews. *Information Systems Research*, 19(4), 456-474.
- Lin, H. H., Tseng, T. H., Yeh, C. H., Liao, Y. W., & Wang, Y. S. (2020). What drives customers' post-purchase price search intention in the context of online price matching guarantees. *Journal of Retailing and Consumer Services*, 54, 102015.
- Lu, Y., Zhai, C., & Sundaresan, N. (2009, April). Rated aspect summarization of short comments. In *Proceedings of the 18th International Conference on World Wide Web* (pp. 131-140). ACM.
- Lucas, R. E., & Fujita, F. (2000). Factors influencing the relation between extraversion and pleasant affect. *Journal of personality and social psychology*, 79(6), 1039-1056.
- Mehta, S. C., Lalwani, A. K., & Ping, L. (2001). Reference group influence and perceived risk in services among working women in Singapore: A replication and extension. *Journal of International Consumer Marketing*, 14(1), 43-65.
- Mudambi, S. M., & Schuff, D. (2010). What makes a helpful review? A study of customer reviews on Amazon. com. *MIS Quarterly*, 34(1), 185-200.
- Nassar-McMillan, S. C., Wyer, M., Oliver-Hoyo, M., & Ryder-Burge, A. (2010). Using focus groups in preliminary instrument development: Expected and unexpected lessons learned. *The Qualitative Report*, 15(6), 1629-1642.
- Nunnally, J.C. (1978). *Psychometric theory*, (2nd ed.), New York, NY: McGraw-Hill.
- Nunnally, J.C. and Bernstein, I.H. (1994), *Psychometric theory*, (3rd ed.), New York, NY: McGraw-Hill.
- O'Reilly, T. (2007). What is Web 2.0? Design patterns and business models for the next generation of software. *Communications & Strategies*, 1(1), 17-37
- Pan, B., Zhang, L., & Smith, K. (2011). A mixed-method study of user behavior and usability on an online travel agency. *Information Technology & Tourism*, 13(4), 353-364.

- Park, C. W., & Lessig, V. P. (1977). Students and housewives: Differences in susceptibility to reference group influence. *Journal of Consumer Research*, 4(2), 102-110.
- Park, D. H., Lee, J., & Han, I. (2007). The effect of on-line consumer reviews on consumer purchasing intention: The moderating role of involvement. *International Journal of Electronic Commerce*, 11(4), 125-148.
- Park, D. H., & Kim, S. (2008). The effects of consumer knowledge on message processing of electronic word-of-mouth via online consumer reviews. *Electronic Commerce Research and Applications*, 7(4), 399-410.
- Pavlou, P. A., & Dimoka, A. (2006). The nature and role of feedback text comments in online marketplaces: Implications for trust building, price premiums, and seller differentiation. *Information Systems Research*, 17(4), 392-414.
- Pookulangara, S. (2011). Consumers use of consumer-generated-media while shopping: a conceptual outlook using technology acceptance model<sup>3</sup> and hofstede's<sup>TM</sup> cultural dimensions. *International Journal of Electronic Commerce Studies*, 2(1), 57-66.
- Pookulangara, S., & Koesler, K. (2011). Cultural influence on consumers' usage of social networks and its impact on online purchase intentions. *Journal of Retailing and Consumer Services*, 18(4), 348-354.
- Racherla, P., Mandviwalla, M., & Connolly, D. J. (2012). Factors affecting consumers' trust in online product reviews. *Journal of Consumer Behaviour*, 11(2), 94-104.
- Reinstein, D. A., & Snyder, C. M. (2005). The influence of expert reviews on consumer demand for experience goods: A case study of movie critics. *The Journal of Industrial Economics*, 53(1), 27-51.
- Ringle, C. M., Sarstedt, M., & Straub, D. W. (2012). A critical look at the use of PLS-SEM in MIS Quarterly. *MIS Quarterly*, 36(1), iii-xiv.
- Rossiter, J. R. (2002). The C-OAR-SE procedure for scale development in marketing. *International Journal of Research in Marketing*, 19(4), 305-335.
- Schneider, P. J., & Zielke, S. (2020). Searching offline and buying online: An analysis of showrooming forms and segments. *Journal of Retailing and Consumer Services*, 52, 101919.
- Sebald, A. K., & Jacob, F. (2018). Help welcome or not: Understanding consumer shopping motivation in curated fashion retailing. *Journal of Retailing and Consumer Services*, 40, 188-203.
- Sen, S., & Lerman, D. (2007). Why are you telling me this? An examination into negative consumer reviews on the web. *Journal of Interactive Marketing*, 21(4), 76-94.
- Senecal, S., & Nantel, J. (2004). The influence of online product recommendations on consumers' online choices. *Journal of retailing*, 80(2), 159-169.

- Septianto, F., Tjiptono, F., & Kusumasondjaja, S. (2020). Anger punishes, compassion forgives: How discrete emotions mitigate double standards in consumer ethical judgment. *Journal of Retailing and Consumer Services*, 53, 101979.
- Septianto, F., & Chiew, T. M. (2018). The effects of different, discrete positive emotions on electronic word-of-mouth. *Journal of Retailing and Consumer Services*, 44, 1-10.
- Septianto, F., & Soegianto, B. (2017). Being moral and doing good to others. *Marketing Intelligence & Planning*, 35(2), 180-191.
- Shareef, M. A., Mukerji, B., Dwivedi, Y. K., Rana, N. P., & Islam, R. (2019). Social media marketing: Comparative effect of advertisement sources. *Journal of Retailing and Consumer Services*, 46, 58-69.
- Sharma, V. M., & Klein, A. (2020). Consumer perceived value, involvement, trust, susceptibility to interpersonal influence, and intention to participate in online group buying. *Journal of Retailing and Consumer Services*, 52, 101946.
- Shek, D. T., & Yu, L. (2014). Confirmatory factor analysis using AMOS: A demonstration. *International Journal on Disability and Human Development*, 13(2), 191-204.
- Shiu, E., Pervan, S. J., Bove, L. L., & Beatty, S. E. (2011). Reflections on discriminant validity: Reexamining the Bove et al.(2009) findings. *Journal of Business Research*, 64(5), 497-500.
- Siersdorfer, S., Chelaru, S., Nejdil, W., & San Pedro, J. (2010, April). How useful are your comments? Analyzing and predicting youtube comments and comment ratings. In *Proceedings of the 19th International Conference on World Wide Web* (pp. 891-900). ACM.
- Stuppy, A., Mead, N. L., & Van Osselaer, S. M. (2020). I am, therefore I buy: Low self-esteem and the pursuit of self-verifying consumption. *Journal of Consumer Research*, 46(5), 956-973.
- Sweeney, J. C., & Soutar, G. N. (2001). Consumer perceived value: The development of a multiple item scale. *Journal of Retailing*, 77(2), 203-220.
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics: International Edition*, Pearson, US.
- Tata, S. V., Prashar, S., & Gupta, S. (2020). An examination of the role of review valence and review source in varying consumption contexts on purchase decision. *Journal of Retailing and Consumer Services*, 52.
- Thomas, T. C., Epp, A. M. & Price, L. L. (2020). Journey-ing together: Aligning retailer and service provider roles with collective consumer practices. *Journal of Retailing*, 96(1), 9-24.
- Ulin, P. R., Robinson, E. T., Tolley, E. E., & McNeil, E. T. (2005). Collecting qualitative data: The science and the art. *Qualitative Methods in Public Health*, 71-113.
-

- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186-204.
- Vermeulen, I. E., & Seegers, D. (2009). Tried and tested: The impact of online hotel reviews on consumer consideration. *Tourism Management*, 30(1), 123-127.
- Wieland, A., Durach, C. F., Kembro, J., & Treiblmaier, H. (2017). Statistical and judgmental criteria for scale purification. *Supply Chain Management: An International Journal*, 22(4), 321-328.
- Willemsen, L. M., Neijens, P. C., Bronner, F., & De Ridder, J. A. (2011). "Highly recommended!" The content characteristics and perceived usefulness of online consumer reviews. *Journal of Computer-Mediated Communication*, 17(1), 19-38.
- Xihao, H., & Yang, J. (2007). Social influence on consumers' purchasing behavior and related marketing strategy--a cross-nation comparative study. *International Journal of Mobile Communications*, 5(3), 319-338.
- Wang, Y. J., Minor, M. S., & Wei, J. (2011). Aesthetics and the online shopping environment: Understanding consumer responses. *Journal of Retailing*, 87(1), 46-58.
- Wood, W., & Hayes, T. (2012). Social Influence on consumer decisions: Motives, modes, and consequences. *Journal of Consumer Psychology*, 22(3), 324-328.
- Yang, K. (2012). Consumer technology traits in determining mobile shopping adoption: An application of the extended theory of planned behavior. *Journal of Retailing and Consumer Services*, 19(5), 484-491.
- Yazdanifard, R., Simon, K. D., Ming, C. W., & Seyedi, A. P. (2011). The impact of online consumer reviews on sales in B2C e-commerce. In *2nd International Conference on Measurement and Control Engineering (ICMCE 2011)* 1-7. ASME Press.
- Yu, J., Zha, Z. J., Wang, M., & Chua, T. S. (2011, June). Aspect ranking: Identifying important product aspects from online consumer reviews. In *Proceedings of the 49th Annual Meeting of the Association for Computational Linguistics: Human Language Technologies-Volume 1* (pp. 1496-1505). Association for Computational Linguistics.
- Zhu, F., & Zhang, X. (2010). Impact of online consumer reviews on sales: The moderating role of product and consumer characteristics. *Journal of Marketing*, 74(2), 133-148.