

Nayak, Smitha et al.

Article

Antecedents to purchase intention in virtual market space in India: an empirical investigation

Cogent Business & Management

Provided in Cooperation with:

Taylor & Francis Group

Suggested Citation: Nayak, Smitha et al. (2022) : Antecedents to purchase intention in virtual market space in India: an empirical investigation, Cogent Business & Management, ISSN 2331-1975, Taylor & Francis, Abingdon, Vol. 9, Iss. 1, pp. 1-15,
<https://doi.org/10.1080/23311975.2021.2003502>

This Version is available at:

<https://hdl.handle.net/10419/286779>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>

Antecedents to purchase intention in virtual market space in India: an empirical investigation

Smitha Nayak, Mendon Suhan, Raveendranath Nayak, Cristi Spulbar, Ramona Birau & Sangam Mahesh Gull

To cite this article: Smitha Nayak, Mendon Suhan, Raveendranath Nayak, Cristi Spulbar, Ramona Birau & Sangam Mahesh Gull (2022) Antecedents to purchase intention in virtual market space in India: an empirical investigation, Cogent Business & Management, 9:1, 2003502, DOI: [10.1080/23311975.2021.2003502](https://doi.org/10.1080/23311975.2021.2003502)

To link to this article: <https://doi.org/10.1080/23311975.2021.2003502>



© 2021 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license.



Published online: 21 Dec 2021.



[Submit your article to this journal](#)



Article views: 3095



[View related articles](#)



[View Crossmark data](#)



Citing articles: 3 [View citing articles](#)



Received: 13 August 2021
Accepted: 01 November 2021

*Corresponding author: Ramona Birau, University of Craiova, Doctoral School of Economic Sciences, Craiova, Romania
Email: ramona.f.birau@gmail.com

Reviewing editor:
Gordon Liu, The Open University,
Milton Keynes, United Kingdom

Additional information is available at
the end of the article

MARKETING | RESEARCH ARTICLE

Antecedents to purchase intention in virtual market space in India: an empirical investigation

Smitha Nayak¹, Mendon Suhan², Raveendranath Nayak², Cristi Spulbar⁴, Ramona Birau^{5*} and Sangam Mahesh Gull²

Abstract: This research attempts to integrate the Virtual Try-On technology, an application of image integrative technology, and the technology acceptance framework to examine the influence of interactivity and customer involvement on the online shopping experience. It attempts to empirically test the conceptual model to establish how the virtual trial of apparel attributes influences conative responses towards an apparel retail website. The antecedents of the conative response (purchase intention) have been empirically validated for a sample size of 410 internet users in India specifically of the millennial cluster. Result reveals the importance of confidence in apparel fit, utilitarian value, and hedonic value in strengthening the purchase intention of an online shopper. Body esteem is also a significant antecedent to purchase intention, while customers shop online. This research endeavor affirms the role of a virtual trial in strengthening the purchase intention in the virtual market space. The outcomes of this study add to the body of knowledge about the efficacy of Image Integrative Technology.

Subjects: Psychological Science; Economics; Environmental Economics

Keywords: body esteem; virtual try-on; utilitarian value; purchase intention; confidence in apparel fit; hedonic value; consumer behavior; retail sector; online shopping

ABOUT THE AUTHOR

This research team encompasses collaborators from India and Romania who are academicians in the domain of Management and Finance. We have collaborated on several research initiatives in the past and have published research papers in high-impact journals indexed in Scopus and Web of Sciences. This research examines if and how utilizing a virtual 3D model to try on garments affects cognitive, emotional, and conative responses to a retail Web site, focusing on one type of IIT, the “virtual try-on” (VTO).

PUBLIC INTEREST STATEMENT

The absence of direct experiential information in the online digital market space limits the sales of apparel electronically. Technological advances have been designed to bridge this gap and facilitate virtual trials that will have a significant influence on consumers’ conative responses. Virtual experiences are enabled by Image Interaction Technologies (IIT) which provides an opportunity to the consumer to try the apparel “virtually”. This research endeavor attempts to empirically test the conceptual model to establish how the Virtual Try-On, which is one of the applications of IIT, of apparel attributes influences conative responses towards an apparel retail website. The antecedents of the conative response (purchase intention) have been empirically validated for a sample size of 410 internet users in India specifically of the millennial cluster. The outcomes of this study add to the body of knowledge about the efficacy of Image Integrative Technology and would significantly benefit apparel e-tailers.

1. Introduction

The e-commerce industry in India has grown exponentially. According to a report published by the Associated Chambers of Commerce of India (ASSOCHAM) titled *Resurgent India*, there have been more than 100 million consumers who purchased online in 2019, and the e-retail business is predicted to grow at 65 percent in 2020. In terms of volume, the sale of physical goods via digital channels in India would amount to 25.076 US dollars in 2018 and 58.301 billion US dollars by 2022. Globalization has offered online consumers a global market space to shop from and the consumers are also influenced by the fashion trends from all over the world, which implies that the number of factors affecting their purchase decision increases. Technology has driven the internet to enable consumers to connect with people all over the world, obtain information from different sources. For the fashion industry, the virtual territory has become the most prominent domain, because over the years the number of people getting involved with the internet is increasing. This has forced fashion retailers to shift from traditional marketing techniques to currently popular virtual tools, like blogs, social networking, and virtual reality.

Although online fashion retailers are large in number, and online shopping has penetrated the market to a large extent, this growth has failed to reflect in the apparel sector. Customers are exposed to a high level of perceived risk in online purchases as compared to conventional modalities, according to previous studies in this subject (Panjaitan et al., 2019; Mukherjee & Nath, 2003; Wang et al., 2003). One of the primary antecedents to the high level of perceived risk is the inability of the customer to get a direct experience on an online platform, more specifically, the inability of the client to try the apparel before purchasing. This lack of direct customer experience has a substantial impact on customer enjoyment which is an integral component of customers' online shopping experience (De Angeli et al., 2006; Huang & Liao, 2015; Jaiswal & Singh, 2020).

Technological innovation has attempted to bridge this gap and enhance the virtual experience of online shoppers in the absence of demonstrative evidence. Image Interactive Technologies (IIT) has been designed to bring the customer closer to the e-tailers and enable customers to enhance their level of enjoyment while shopping online that has a direct significant impact on the perceived risk they are exposed to (Barnes, 2016; Flavián et al., 2019). 2D and 3D product representations and mix and match image interactivity are some of the novel technological advancements that have been implemented by marketers (Huang & Liao, 2015; Li et al., 2001, 2002, 2003) and have been explored by researchers (Fiore & Jin, 2003). The latest technological innovation that attempts to take the online shopper closer to a tangible experience is the "Virtual Try-On" (VTO) (Kamani et al., 2014; Qerem, 2017). VTO provides the customer with an opportunity to customize a 3D virtual model that aids as a platform to virtually try the attire and enables the customer to come closer to reality. Researchers have explored the non-personalized VTO on consumers' conative responses (Aurélien et al., 2012; Delafrooz et al., 2011; Fiore et al., 2005; Kim & Forsythe, 2007).

The focus of relationship marketing is on how marketers can construct interactive, productive sustainable relationships with their customers (Nwakanma et al., 2007). Prior research has emphasized that marketers should not only strengthen customers' intention to adopt interactive technology but they must also focus on encouraging customers to constantly use interactive technology (Chiou & Shen, 2012). Three dimensions of sustainable relationship behavior that have been examined in research are relational behavior, relationship investment, and repatronage investment. All three dimensions can be used to predict a customer's intention to continuously use information technology. VTO adds value to a customer's experience and offers experiential benefit in addition to the functional benefit offered which shopping in virtual market spaces.

A review of the literature reveals a void of research in the domain of technology acceptance exploring consumer response towards personalized VTO. The research question posed here is:

1.1. Does a personalized virtual trial of apparel enhance the experiential value of an online shopper thereby firmly establishing the conative response of a customer?

This research endeavor attempts to integrate two dimensions of innovation acceptance with specific reference to fashion e-tailing. This initiative attempts to explore the influence of VTO on consumers' cognitive and conative responses of consumers with specific reference to fashion e-tailers. The applicability of IIT to enhance customer experience is explored.

This paper is structured as follows: the first section discusses the formulation of the proposed model based on an exhaustive review of the literature. The effect of antecedents of perceived risk reduction of an online consumer namely, self-congruity, confidence in apparel fit, body esteem, and internet shopping trust, on the conative response of a consumer is explored. Next, the methodology employed to collect data is discussed. The concluding section of the paper provides a discussion on research findings, research limitations, conclusions, and directions for future research.

2. Review of literature

IIT comprises all technological innovations that enable a consumer to have a more realistic experience while shopping online. This technology allows the consumer to modify features of the product, view the merchandise from multiple angles, and in certain cases, simulate the operation of the product yielding rich information to the customer utilizing visual cues. In the context of shopping apparel online, the virtual experience is holistic, implying that the experience must facilitate product evaluation (Kim & Forsythe, 2009), influence brand attitude (Li et al., 2002), enhance consumer's response towards the retailer (Ayanso & Yoogalingam, 2009) and strengthen the purchase intention of the customer (Sirgy & Samli, 1985). The cognitive, conative, and affective responses of consumers need to be explored in the backdrop of the Technology Acceptance Model. Empirical evidence suggests that acceptance of technology is an integral antecedent to an individual's adopt information technology. Exploring the factors that shaped these intentions would allow an organization to promote acceptance and thus enhance use (Venkatesh & Davis, 2000). In the context of VTO, which is an application of IIT, online apparel retailers require to explore the factors that shape a consumer's perceived risk reduction with VTO which in turn strengthens a consumer's attitude and purchase intention. These cognitive and affective responses have a significant influence on the conative response. Consumer's attitude and perception towards the virtual try-on is a result of perceived risk, usefulness, and entertainment. VTO affects the usage and evaluation of the website. It has more influence on the hedonic value rather than the utilitarian value. Studies done by researchers show that virtual try-on provides a two-fold benefit to consumers in two. First, they create telepresence i.e. a sense of being present in an environment, as there is a high level of interactivity with the website. Secondly, it is developed through image interactivity which means that there will be more and better provision of information to the customers, as the interaction also allows them to manipulate the product according to their requirements. Greater accessibility to information helps decrease the uncertainty and perceived risks of consumers.

Consumer adoption, purchase intention, purchase, and attitude are all initiated by their risk perceptions. "Perceived risk refers to the personal expectation of loss that might arise from the purchase of goods or services" (Levy et al., 2008). In an online ecosystem, consumers are restricted from obtaining only visual information which paves the way to uncertainty, leading to higher perceived risk. Online websites are subject to greater perceived risk as there is an inability to try on the products especially apparel products (Khakimdjanova & Park, 2005). Therefore, perceived risk and its reduction depend on the product-related information available. In this context, researchers have established that IIT applications would play an instrumental role in the reduction of perceived risk exposure to consumers while shopping apparel online (Jones et al., 2006; Kim &

Forsythe, 2007, 2008). Thus it is proposed to test this finding on the VTO application of IIT. Hence it is proposed that VTO significantly influences perceived risk on online shopping thereby strengthening the purchase intention of consumers. Against the backdrop of the Theory of Technology Acceptance, this research intends to explore the precursors to purchase intention in the domain of the Virtual Try-on sphere of e-commerce. This research initiative intends to explore the influence of the following antecedents, namely, body esteem, hedonic value, model self-congruity, desire to stay online, utilitarian value, and confidence in the apparel fit on a consumer purchase intention while shopping on an apparel website that offers virtual try-on services.

2.1. Confidence in apparel fit

When the model on the website is perceived as self-congruent by the consumers, they become more confident in their choice of product or brand. Studies have discovered that self-congruency has a positive influence on confidence related to apparel fit E.-Y. Kim and Kim (2004). 3D virtual try-on models are beneficial as they offer apparel fit-related information. This plays a significant role in enhancing the confidence of the consumers in apparel fit. Through this technology, consumers can create their self-representing model, as per their requirements and measurements, and examine the product. Works of literature have suggested that confidence in apparel fit enhances the consumers' utilitarian value addition to the overall shopping experience. The confidence in the apparel fit enables them to perceive lower risk about the fit of the apparel when they utilize the 3D Virtual model that matches their self-concept (Lim et al., 2008). Hence it is proposed that:

H1: Higher levels of confidence in the fit of apparel in the personalized VTO will lead to a stronger purchase intention.

2.2. Body esteem

Body Esteem is defined as "self-valuation of one's body or appearance"(McFerran et al., 2010). Many pieces of research (Mendelson et al., 2001; Sirgy et al., 1991; Smeesters & Mandel, 2006), opine that a consumer evaluates their bodily appearance as compared to others and this influences their intentions or responses as well as the perception about their own body (Fiore & Jin, 2003) Researchers have argued that one's evaluation of their own body impacts the level of involvement of a consumer in the purchase with the apparel and ultimately the confidence in the fit as well as their purchase intention. When a consumer perceives the model on the website as self-congruent, they believe that the product is tried on a representative of their own body Constantinides (2004). If the self-concept belief and the perception about the product are positive, then the consumers are more likely to have a positive purchase intention, since both the concepts are motivating them. Consumers with a higher degree of self are more satisfied with their clothes selection and purchase, indicating that they are more confident in the fit and the purchase(Jamal & Goode, 2001).Hence, it is proposed that:

H2: Body esteem positively influences purchase intention.

2.3. Hedonic and utilitarian value

According to Babin et al. (1994), the appraisal of a shopping experience can be divided into two categories: utilitarian and hedonic value. Hedonic value is tied to satisfaction through the virtual shopping experience, whereas utilitarian value is dependent on the goal attained, which is the conative reaction buy intention While shopping is pleasurable, entertaining, and exciting, it has hedonic value. According to research, IIT, specifically VTO, will have a favorable impact on consumer perceptions. (Calver & Page, 2013; Chen et al., 2019; Lee et al., 2006). Hence this research proposes that

H3: Hedonic value positively influences purchase intentions.

H4: Utilitarian value significantly influences purchase intentions.

2.4. Self-congruity

Model self-congruity is one of the least studied constructs in the VTO literature. People desire to interact with brands that are comparable to their self-image, according to the self-image congruence theory, which results in positive customer attitudes. This self-image congruence will retard the perceived risk of consumers thereby facilitating purchase (Fiore & Jin, 2003). The model on the website must be perceived as self-congruent, they must believe that it is the “real me” (Fiore et al., 2005). Therefore, the websites must have realism, if they wish to influence consumers’ intentions. Furthermore, when a customer is exposed to individualized content online, they interpret stimuli differently, resulting in increased brand recall, a more favorable attitude, and increased consumer decision confidence (Aur lie et al., 2012). This research proposes that:

H5: Higher model self-congruity on a personalized VTO platform will lead to a stronger purchase intention.

2.5. Online shopping experience

Research proves that an online store environment that is an online atmosphere will have an influence on the shopper’s attitude, satisfaction, and approach/avoid behavior towards the online retailer. (Kim & Forsythe, 2007). A pleasing environment will lead to consumer pleasure and arousal, ultimately leading to an approach

attitude towards the online retailer. Another research showed a positive linkage between website quality and shopper’s behavioral intentions to return to the site (Li et al., 2002). Consumers are bound to stay online with the website if the website has an interesting and pleasing environment. Hence, it is proposed that:

H6: More the desire to stay online with the website will positively influence purchase intentions.

3. Research methodology

The research philosophy of positivism rationalizes the quantitative approach adopted in this research endeavor. This study primarily emphasizes understanding the risk perception of consumers on e-tailing websites offering virtual try-on in its process and its influence on the purchase intention of customers. The purpose of a structured questionnaire is to collect data from respondents and test hypotheses. The research tool was created using scales found in the relevant literature. The scales were adapted from previous research. Model self-congruity, apparel fit, body esteem (Merle et al., 2012); Purchase Intention (Song & Zinkhan, 2008); hedonic value and utilitarian value scales are adopted from Aur lie et al. (2012). All items in the questionnaire were measured with a five-point Likert scale, 5 being rated as “strongly agree” and 1 as “strongly disagree”.

The proposed conceptual model is tested with an experimental design. 410 students from Manipal Academy of Higher Education specializing in technology, management, health science, and hospitality management. The sample size is calculated based on the number of items on the rating scale which is multiplied by 10 (J. F. Hair et al., 2017). Participation in this exercise was voluntary. The research group chooses college students as, online apparel shopping is undertaken highest by people in the age group of 18–32 years (Statista Consumer Survey, 2018). A purposive sampling technique was employed to identify the samples. All participants had online apparel shopping experiences in the past, which was an inclusion criterion. Subjects

Table 1. Descriptive statistics of the respondents characteristics (N = 410)

Characteristics		Sample
Gender	Male	42
	Female	168
Age	18–22	96
	23–27	87
	28–32	27
Domain of Specialization	Technology	63
	Management	109
	Health Sciences	22
	Hospitality Management	16

Source: Authors own

were exposed to the concept of VTO with the help of a video titled “Virtual fitting Room for e-commerce” downloaded from YouTube. Subjects were also advised to visit an apparel website that offers the VTO application, and they were informed that they would be reviewing the website. Participants were given thirty minutes to explore the website and make purchases, after which they were mailed a pre-tested questionnaire to record their responses. Data is analyzed using SMART-PLS 3.0 software. [Table 1](#) summarizes the characteristics of the respondents. The Reflective-Reflective technique was used to analyze the data since all 22 items in the questionnaire are reflective indicators.

4. Data analysis

A two-phased approach is adopted to construct measurement and data analysis. Firstly, construct validity and reliability are established. Secondly, the relationship between constructs is established to test the hypothesis proposed.

To ensure that the relevant items utilized for the constructions agree, a convergent reliability test was performed. The factor loadings, composite reliability, indicator reliability, and average variance extracted were used as indicators to evaluate the convergent validity, as indicated by J. F. Hair et al. (2013). From [Table 1](#), it can be inferred that for the construct Apparel Fit (AP) which has 4 items AP1, AP2, AP3, AP4 has outer loading values of 0.831, 0.861, 0.871, 0.814 respectively, these values are above the threshold limit of 0.70 (Henseler et al., 2012). Similarly, for all the other items of respective constructs ([Table 2](#)) the outer loading values are more than the threshold value of 0.70. The composite reliability values of each construct exceed the threshold of 0.80 (Daskalakis & Mantas, 2008), thus establishing the composite reliability on the constructs. Also, the average variance extracted values of each construct are in the range of 0.709–0.860 which exceeds the threshold value of 0.50 (Wixom & Watson, 2001). Hence, it is proved that convergent reliability is established. To ensure that the measurements don't reflect other constructs, a discriminant validity test was performed. This is evidenced by the low correlations between the measures of interest and the measures of other constructs. (Cheung & Lee, 2010). Discriminant validity can be tested by comparing the squared correlation between the constructs and the variance extract, as recommended by Fornell and Larcker (1981). Thus discriminant validity is upheld.

4.1. Hypothesis testing

In the second phase, the analysis of structural models and hypotheses were assessed. The results indicate that the influence of Apparel fit ($\beta = 0.193$, $p < 0.011$), Hedonic value ($\beta = 0.310$, $p < 0.011$), and Utilitarian value ($\beta = 0.215$, $p < 0.049$) on purchase intention are positive and significant because of the t- values being higher than 1.96 and also the values are within the limits as

Table 2. Reliability and convergent validity: validations of the measurements

Constructs	Item	Factor Loading	Indicator Reliability	Construct Reliability	Construct Validity
Apparel fit (AP)					
AP1—The apparel will fit right	AP1—	0.831	0.691	0.90	0.71
AP2-The apparel will look good on me	AP2	0.814	0.663		
AP3-The apparel will match my style	AP3	0.861	0.741		
AP4-These clothes will make the right impression	AP4	0.871	0.758		
Body Esteem (BE)					
BE1-I feel satisfied with the way my body looks right now	BE1	0.872	0.761	0.93	0.81
BE2-I feel good about myself	BE2	0.921	0.848		
BE3-I am pleased with my appearance right now	BE3	0.914	0.836		
Hedonic Value(HV)					
HV1-During the navigation process, I feel the excitement of the hunt	HV1	0.851	0.724	0.88	0.70
HV2-Compared to other things I could have done, the time spent shopping online at this website was truly enjoyable	HV2	0.836	0.700		
HV3-I enjoyed this online shopping trip for its own sake, not just for the apparel items I could purchase	HV3	0.839	0.704		
Model Self Congruency (MSC)					

(Continued)

Table2. (Continued)

Constructs	Item	Factor Loading	Indicator Reliability	Construct Reliability	Construct Validity
Apparel fit (AP)					
MSC1-The model I used to try on clothes is consistent with how I see myself	MSC1-	0.919	0.845	0.91	0.79
MSC2-The model I used to try on clothes reflects who I am	MSC2	0.892	0.795		
MSC3-The model I used to try on clothes is a mirror image of me	MSC3-	0.857	0.734		
Purchase Intentions (PI)					
PI 1 -If it were possible, I could imagine buying apparel from this website	PI 1	0.942	0.887	0.94	0.86
PI 2 -The next time I buy apparel, I will take this website into consideration	PI 2	0.931	0.867		
PI 3 -If it is possible to buy products on it, I would be very interested in buying apparel on this website	PI 3	0.910	0.827		
Stay on the website (SOW)					
SO 1-I would like to stay at this online store as long as possible	SO 1	0.808	0.653	0.90	0.75
SO 2-I enjoyed spending time at this online store	SO 2	0.906	0.821		
SO 3-I would probably spend more time shopping on this retailer's Web site than I planned	SO 3	0.894	0.800		
Utilitarian Value(UV)					

(Continued)

Constructs	Item	Factor Loading	Indicator Reliability	Construct Reliability	Construct Validity
Apparel fit (AP)					
UV1- If I want to buy apparel on the Web, I could accomplish just what I might need on this Web site	UV1	0.860	0.739	0.90	0.76
UV 2-Shopping on this website would make my life easier	UV 2	0.894	0.800		
UV 3-If I wanted to buy apparel on the Web, the information and services on this website would be what I would look for	UV 3	0.875	0.765		

Source: Author's own

Table 3. Validation of Measurements: Discriminant Validity

	AP	BE	HV_	MSC	PI	SO	UV
AP	0.845						
BE	0.512	0.903					
HV	0.528	0.438	0.842				
MSC	0.444	0.395	0.506	0.890			
PI	0.609	0.453	0.692	0.474	0.928		
SOW	0.551	0.391	0.747	0.375	0.632	0.871	
UV	0.644	0.409	0.690	0.492	0.677	0.703	0.876

Source: Author's own.

Note: N = 410. Values that have been highlighted in bold are the square root of the average variance extracted. Apparel fit (AP), BE (Body esteem), HV (Hedonic Value), MSC (Model Self Congruency), PI (Purchase Intention), SOW (Stay on Website), Utilitarian Value(UV)

compared with the Bias Corrected range as mentioned in Table 3. The results pointed out that the model fit of explaining 59.7% of the purchase intention, and root mean square error of approximation(RMSEA) = 0.69. The lower is RMSEA value, the better is the fit. However, the RMSEA value of 0.69 is within the commonly accepted range of 0.5–0.8 (Hu & Bentler, 1999). Nonparametric bootstrapping was applied (J.F. Hair et al., 2013) with 5,000 replications to test the structural model and the direct effects of the specified model (Table 4, Figure 1).

5. Discussions

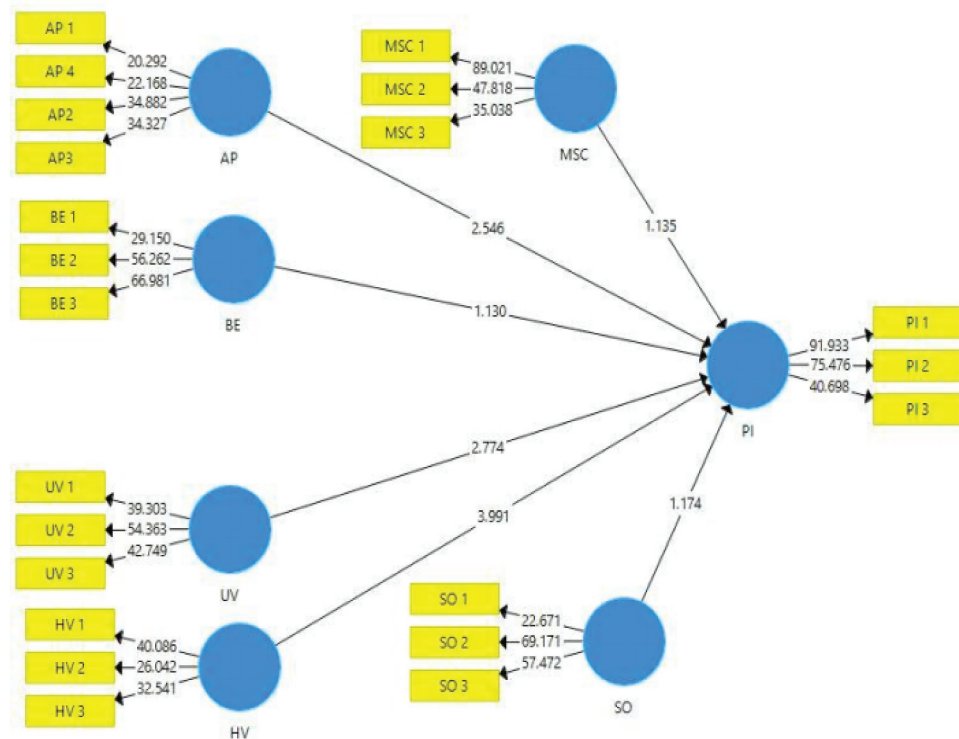
This study adds to our understanding of the impact of conative cognitive and affective consumer responses to an apparel website with a VTO application. The results of this empirical research provide support on the significance of utilitarian value and hedonic value as strong predictors of

Table 4. Hypothesis testing

Relation	Path	t-value	p-value	Bias Corrected
AP -> PI	0.193	2.546	0.011	(0.041,0.335)*
BE -> PI	0.069	1.130	0.259	(-0.058,0.184)
HV -> PI	0.310	3.991	0.000	(0.164,0.463)*
UV -> PI	0.215	2.774	0.0049	(0.066,0.369)*
MSC -> PI	0.064	1.135	0.256	(-0.041,0.184)
SOW -> PI	0.092	1.174	0.241	(-0.065,0.243)

Source: Author's own, *Hypothesis supported

Figure 1. Structural model of antecedents of virtual try-on.



purchase intention in online market spaces with Virtual Try-on on apparel. It also contributes significantly to the literature on the IIT sphere and provides insights into the influence of VTO on an e-commerce website. The proposed research is based on the Theory of Planned Behavior and assesses the impact of antecedents of purchase intention among customers in the domain of e-commerce and VTO, which is a vacuum in prior literature. There were no significant gender differences observed in adoption on Virtual Try-on. This finding is contradictory to previous research findings where the adoption of technology in online shopping is reported to be different in females.

Results demonstrate the prominent drivers of the dependent variable Purchase Intentions (PI) are Utilitarian value (UV) and Hedonic value (HV). These relations are supported by prior research studies (Calver & Page, 2013; Chen et al., 2019; Merle et al., 2012). The results reveal that consumers have a strong association with an apparel website if the perceived hedonic

value and utilitarian values they derive are above the expectations. Utilitarian and hedonic values both have been investigated and found significant in the previous literature studies (Childers et al., 2001). Results also reveal that the confidence in Apparel Fit (AP) is also the significant independent variable that explains the Purchase Intentions (Dependent variable), i.e. apparel fit has a direct and significant relationship with the purchase intentions. Previous research (Merle et al., 2012) recommended that there is a direct connection between Apparel Fit and Body Esteem, which leads to consumers' perceived utilitarian value, but in the current study, it was found that Apparel Fit Confidence has a direct impact on purchase intentions. The researchers wanted to see how VTO affected customer response (dependent variable = purchase intention) by using body-related factors like body esteem and model self-congruity in this study. Results prove that, in the Indian context, these body-related constructs do not have a significant influence on consumer response in the VTO domain. The research findings contest the propositions of McFerran et al. (2010), Sirgy et al. (1991), and Smeesters and Mandel (2006). This research endeavor concludes that body esteem and model self-congruity do not explain consumer response.

6. Managerial implications and conclusions

A comprehensive approach that considers understanding cognitive, conative, and affective consumer response could help us better understand how this VTO technology influences online shoppers' purchasing intention. In addition, this study uses a different analytical strategy to investigate this research subject by employing the PLS approach to validate the research model. This study demonstrates the viability of using sophisticated PLS approaches to examine online behavior, notably in the field of VTO adoption and impact in online fashion retailing.

In the e-commerce market space, fashion apparel has the biggest issue with online returns (Seewald et al., 2019). Return of apparel bought online is almost twice as high for fashion apparel bought online, resulting in increased inventory carrying costs for e-tailer. It is a challenge for shoppers to abandon the trial of apparel before purchase which makes it even more pertinent for e-tailers to adopt technology to bridge this gap. Adoption of personalized VTO by e-tailers will enable customers to enhance utilitarian value derived from the website. Because of its value addition, VTO technology plays a prominent role in customers' online purchasing decision-making processes, and the risk connected with it is reduced in this study. Online apparel retailers must take full advantage of new technology like the one examined in this study to help customers make better purchasing decisions.

Furthermore, online fashion retailers should work on building consumer trust in VTO technology, as trust is a critical factor in increasing purchase intention. VTO technology deployment tactics tailored to a specific age group may be considered by online retailers who appeal to a specific audience.

E-tailers must be cautious while investing in the IIT (Image Interactive Technologies). The results of the paper reveal that the antecedents Apparel Fit (AP), Utilitarian Value (UV), and Hedonic value (HV) are the prominent factors that will have the highest impact on the consumers when any consumer is going through an apparel website. This study mainly focuses on Personalized Virtual Try-On facilities and how it influences consumers' purchase intentions.

The paradigm changes taking in the information technology sector have given birth to many applications that could be adopted by e-commerce websites. As these applications drain the company financially, managers must take their decisions judiciously.

In the context of the antecedents explored in this manuscript, Inference from the Apparel fit (AP) construct indicates the main drivers. Item AP3-“The apparel will match my style”, ‘AP4-“these clothes will make the right impression” have a significant factor loading. Hence, with this, we can conclude that if VTO is good enough to persuade consumers with these aspects of matching with

the style and make the right impression then the VTO application will help the companies to trigger the consumers by enhancing their purchase intentions.

The main driver of the Utilitarian value construct was item indicator “UV 2- Shopping on this website would make my life easier. This implies that if VTO delivers place utility to the consumer, it significantly influences consumers” conative response. The convenience offered to the consumer due to the VTO application can contribute enormously to the top lines and bottom lines of an e-tailer.

Hedonic value also proved to be significant in the research carried out. Hedonic value implies the fun factor or the enjoyment that the consumers derive from the specific website. Hence e-commerce websites should emphasize active consumer engagement. A customer-centric website will add greater perceived value to customers.

In conclusion, the major drivers of VTO in the e-commerce sphere are confidence in the clothes fit, hedonic value, and utilitarian value. E-tailers must realize and grasp the significance of these aspects, as well as devise recommendations for enhancing their e-commerce website.

7. Limitation and directions for future research

Further research can be undertaken to explore the influence of other dimensions like the brand image of the e-commerce website, post-purchase delivery processes, and customer query handling technique and return policy. These constructs would have to assess among apparel websites that offer VTO applications. Qualitative research undertaken might reveal significant insights into the antecedents considered in this study.

Inherent within the study are a few limitations that may inhibit the generalizability of the findings. The sample size of this research endeavor might caution generalizability. Second, while assessing the customer experience, the volume of apparel is not taken into consideration. This could be related to the strength of the purchase intention. Further generalizability could be explored in broader samples size. We also acknowledge the inherent limitation of the sample being skewed in terms of gender. More effective representation would strengthen generalizability. Additionally, future research, can also consider product categories and assess the influence of the brand on purchase intention.

Funding

The authors received no direct funding for this research.

Author details

Smitha Nayak¹
E-mail: smithanayak.v@manipal.edu
Mendon Suhan²
E-mail: suhan.mendon@manipal.edu
Raveendranath Nayak²
E-mail: ravi.nayak.v@manipal.edu
Cristi Spulbar⁴
E-mail: cristi_spulbar@yahoo.com
Ramona Birau⁵
E-mail: ramona.f.birau@gmail.com
ORCID ID: <http://orcid.org/0000-0003-1638-4291>
Sangam Mahesh Gull²
E-mail: gullsangam95@gmail.com

¹ Manipal Institute of Management, Manipal Academy of Higher Education, Manipal, India.

² Manipal Institute of Management, Mahe (Deemed to Be University), Manipal, India.

⁴ Faculty of Economics and Business Administration, University of Craiova, Craiova, Romania.

⁵ C-tin Brancusi University of Targu Jiu, Faculty of Education Science, Law and Public Administration, Romania.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Citation information

Cite this article as: Antecedents to purchase intention in virtual market space in India: an empirical investigation, Smitha Nayak, Mendon Suhan, Raveendranath Nayak, Cristi Spulbar, Ramona Birau & Sangam Mahesh Gull, *Cogent Business & Management* (2022), 9: 2003502.

References

- Aurélié, B., Noyes, D., & Philippe, C. (2012). Problem solving methods as Lessons Learned System instrumentation into a PLM tool. *IFAC Proceedings Volumes*, 45(6), 1141–1146. <https://doi.org/10.3182/20120523-3-RO-2023.00277>
- Ayanso, A., & Yoogalingam, R. (2009). Profiling retail web site functionalities and conversion rates: A cluster analysis. *International Journal of Electronic Commerce*, 14(1), 79–114. <https://doi.org/10.2753/JEC1086-4415140103>
- Babin, B. J., Darden, W. R., & Griffin, M. (1994). Work and/or fun: Measuring hedonic and utilitarian shopping value. *Journal of Consumer Research*, 20(4), 644–656. <https://doi.org/10.1086/209376>

- Barnes, S. (2016). Understanding virtual reality in marketing: Nature, implications and potential. *Implications and Potential*, 11(3), 1–50.
- Calver, S. J., & Page, S. J. (2013). Enlightened hedonism: Exploring the relationship of service value, visitor knowledge, and interest, to visitor enjoyment at heritage attractions. *Tourism Management*, 39, 23–36. <https://doi.org/10.1016/j.tourman.2013.03.008>
- Chen, C.-D., Ku, E. C., & Yeh, C. C. (2019). Increasing rates of impulsive online shopping on tourism websites. *Internet Research*, 29(4), 29(4), 900–920. <https://doi.org/10.1108/INTR-03-2017-0102>
- Cheung, C. M., & Lee, M. K. (2010). A theoretical model of intentional social action in online social networks. *Decision Support Systems*, 49(1), 24–30. <https://doi.org/10.1016/j.dss.2009.12.006>
- Childers, T. L., Carr, C. L., Peck, J., & Carson, S. (2001). Hedonic and utilitarian motivations for online retail shopping behavior. *Journal of Retailing*, 77(4), 511–535. [https://doi.org/10.1016/S0022-4359\(01\)00056-2](https://doi.org/10.1016/S0022-4359(01)00056-2)
- Chiou, J. S., & Shen, C. C. (2012). The antecedents of online financial service adoption: The impact of physical banking services on Internet banking acceptance. *Behaviour & Information Technology*, 31(9), 859–871. <https://doi.org/10.1080/0144929X.2010.549509>
- Constantinides, E. (2004). Influencing the online consumer's behavior: The Web experience. *Internet Research*, 14(2), 111–126. <https://doi.org/10.1108/10662240410530835>
- Daskalakis, S., & Mantas, J. (2008). Evaluating the impact of a service-oriented framework for healthcare interoperability. *Studies in Health Technology and Informatics*, 136, 285.
- De Angeli, A., Sutcliffe, A., & Hartmann, J. (2006). *Interaction, usability and aesthetics: What influences users' preferences? In Proceedings of the 6th Conference on Designing Interactive Systems* (271–280). ACM.
- Delafrooz, N., Paim, L. H., & Khatibi, A. (2011). Understanding consumer's internet purchase intention in Malaysia. *African Journal of Business Management*, 5(7), 2837–2846.
- Fiore, A. M., & Jin, H. J. (2003). Influence of image interactivity on approach responses towards an online retailer. *Internet Research*, 13(1), 38–49. <https://doi.org/10.1108/10662240310458369>
- Fiore, A. M., Kim, J., & Lee, H. H. (2005). Effect of image interactivity technology on consumer responses toward the online retailer. *Journal of Interactive Marketing*, 19(3), 38–53. <https://doi.org/10.1002/dir.20042>
- Flavián, C., Ibáñez-Sánchez, S., & Orús, C. (2019). The impact of virtual, augmented and mixed reality technologies on the customer experience. *Journal of Business Research*, 100 (C), 547–560. Elsevier. <https://doi.org/10.1016/j.jbusres.2018.10.050>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.1177/002224378101800104>
- Hair, J. F., Hult, T. M., Ringle, C. M., & Sarstedt, M. (2017). *A Primer on Partial Least Square Structural Equation Modelling* (2nd Ed., 24). Sage Publications.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long Range Planning*, 46(1/2), 1–12. <https://doi.org/10.1016/j.lrp.2013.01.001>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2012). Using partial least squares path modeling in advertising research: Basic concepts and recent issues. In *Handbook of research on international advertising*. Edward Elgar Publishing.
- 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. <https://doi.org/10.1080/10705519909540118>
- Huang, T. L., & Liao, S. (2015). A model of acceptance of augmented-reality interactive technology: The moderating role of cognitive innovativeness. *Electronic Commerce Research*, 15(2), 269–295. <https://doi.org/10.1007/s10660-014-9163-2>
- Jaiswal, S., & Singh, A. (2020). Influence of the Determinants of Online Customer Experience on Online Customer Satisfaction. *Paradigm*, 24(1), 41–55. <https://doi.org/10.1177/0971890720914121>
- Jamal, A., & Goode, M. M. (2001). Consumers and brands: A study of the impact of self-image congruence on brand preference and satisfaction. *Marketing Intelligence & Planning*, 19(7), 482–492. <https://doi.org/10.1108/02634500110408286>
- Jones, M. A., Reynolds, K. E., & Arnold, M. J. (2006). Hedonic and utilitarian shopping value: Investigating differential effects on retail outcomes. *Journal of Business Research*, 59(9), 974–981. <https://doi.org/10.1016/j.jbusres.2006.03.006>
- Kamani, S., Vasa, N., & Srivastava, K. (2014). Virtual Trial Room Using Augmented Reality. *International Journal of Advanced Computer Technology*, 3(6), 98–102.
- Khakimjanova, L., & Park, J. (2005). The online visual merchandising practice of apparel e-merchants. *Journal of Retailing and Consumer Services*, 12(5), 307–318. <https://doi.org/10.1016/j.jretconser.2004.10.005>
- Kim, E.-Y., & Kim, Y.-K. (2004). Predicting Online Purchase Intentions for Clothing Products. *European Journal of Marketing*, 38(7), 883–897. <https://doi.org/10.1108/03090560410539302>
- Kim, J., & Forsythe, S. (2007). Hedonic usage of product virtualization technologies in online apparel shopping. *International Journal of Retail & Distribution Management*, 35(6), 502–551. <https://doi.org/10.1108/09590550710750368>
- Kim, J., & Forsythe, S. (2008). Adoption of virtual try-on technology for online apparel shopping. *Journal of Interactive Marketing*, 22(2), 45–59. <https://doi.org/10.1002/dir.20113>
- Kim, J., & Forsythe, S. (2009). Adoption of sensory enabling technology for online apparel shopping. *European Journal of Marketing*, 43(9/10), 1101–1120. <https://doi.org/10.1108/03090560910976384>
- Lee, H. H., Fiore, A. M., & Kim, J. (2006). The role of the technology acceptance model in explaining effects of image interactivity technology on consumer responses. *International Journal of Retail & Distribution Management*, 34(8), 621–644. <https://doi.org/10.1108/09590550610675949>
- Levy, M., Weitz, B. A., Grewal, D., & Madore, M. (2008). *Retailing management*. McGraw-Hill Irwin.
- Li, H., Daugherty, T., & Biocca, F. (2001). Characteristics of virtual experience in electronic commerce: A protocol analysis. *Journal of Interactive Marketing*, 15(3), 13–30. <https://doi.org/10.1002/dir.1013>
- Li, H., Daugherty, T., & Biocca, F. (2002). Impact of 3-D advertising on product knowledge, brand attitude, and purchase intention: The mediating role of

- presence. *Journal of Advertising*, 31(3), 43–57. <https://doi.org/10.1080/00913367.2002.10673675>
- Li, H., Daugherty, T., & Biocca, F. (2003). The role of virtual experience in consumer learning. *Journal of Consumer Psychology*, 13(4), 395–407. https://doi.org/10.1207/S15327663JCP1304_07
- Lim, K. S., Lim, J. S., & Heinrichs, J. H. (2008). Testing an integrated model of e-shopping web site usage. *Journal of Internet Commerce*, 7(3), 291–312. <https://doi.org/10.1080/15332860802250336>
- Lynch, P. D., Kent, R. J., & Srinivasan, S. S. (2001). The global internet shopper: Evidence from shopping tasks in twelve countries. *Journal of Advertising Research*, 41(3), 15–23. <https://doi.org/10.2501/JAR-41-3-15-23>
- McFerran, B., Dahl, D. W., Fitzsimons, G. J., & Morales, A. C. (2010). I'll Have What She's Having: Effects of Social Influence and Body Type on the Food Choices of Others. *Journal of Consumer Research*, 36(6), 915–929. <https://doi.org/10.1086/644611>
- Mendelson, B. K., Mendelson, M. J., & White, D. R. (2001). Body-esteem scale for adolescents and adults. *Journal of Personality Assessment*, 76(1), 90–106. https://doi.org/10.1207/S15327752JPA7601_6
- Merle, A., Senecal, S., & Anik, S.-O. (2012). Whether and How Virtual Try-On Influences Consumer Responses to an Apparel Web Site. *International Journal of Electronic Commerce*, 16(3), 41–64. <https://doi.org/10.2753/JEC1086-4415160302>
- Mukherjee, A., & Nath, P. (2003). A model of trust in online relationship banking. *International Journal of Bank Marketing*, 21(1), 5–15. <https://doi.org/10.1108/02652320310457767>
- Nwakanma, H., Jackson, A. S., & Burkhalter, J. N. (2007). Relationship Marketing: An important tool for success in the marketplace. *Journal of Business & Economics Research*, 5, 2. <https://doi.org/10.19030/jber.v5i2.2522>
- Panjaitan, M., Napitupulu, J., Maslan, J., & Normi, S. (2019). Examining generation X experiences on using e-commerce: Integrating the technology acceptance model and perceived risks. *Journal of Physics: Conference Series*, 1361 (1), 012029. IOP Publishing
- Qerem, A. A. (2017). Virtual Dressing Room Implementation Using Body Image –Clothe Mapping. *International Journal of Engineering and Computer Science*, 5, 2. <https://ijecs.in/index.php/ijecs/article/view/449>
- Seewald, A. K., Wernbacher, T., Pfeiffer, A., Denk, N., Platzer, M., Berger, M., & Winter, T. (2019). Towards Minimizing e-Commerce Returns for Clothing. *ICAART*, 2, 801–808.
- Sirgy, M. J., Johar, J. S., Samli, A. C., & Claiborne, C. B. (1991). Self-congruity versus functional congruity: Predictors of consumer behavior. *Journal of the Academy of Marketing Science*, 19(4), 363–375. <https://doi.org/10.1007/BF02726512>
- Sirgy, M. J., & Samli, A. C. (1985). A path analytic model of store loyalty involving self-concept, store image, geographic loyalty, and socioeconomic status. *JAMS*, 13, 265–291. S., Kotsiopoulos, A., & Knoll, D. S. (1990). Short, average-height, tall, and big men: Body-cathexis, clothing and retail satisfaction, and clothing behavior. *Perceptual and Motor Skills*, 70(1), 83–96. <https://doi.org/10.1007/BF02729950Shim>
- Smeesters, D., & Mandel, N. (2006). Positive and negative media image effects on the self. *Journal of Consumer Research*, 32(4), 576–582. <https://doi.org/10.1086/500489>
- song, J. H., & Zinkhan, G. M. (2008). Determinants of perceived website interactivity. *Journal of Marketing*, 72(2), 99–113. <https://doi.org/10.1509/jmkg.72.2.99>
- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46 (2), 186–204. <https://doi.org/10.1287/mnsc.46.2.186.11926>
- Wang, Y. S., Wang, Y. M., Lin, H. H., & Tang, T. I. (2003). Determinants of user acceptance of Internet banking: An empirical study. *International Journal of Service Industry Management*, 14(5), 501–519. <https://doi.org/10.1108/09564230310500192>
- Web site: <https://www.statista.com/outlook/244/119/fashion/India>
- Wixom, B. H., & Watson, H. J. (2001). An empirical investigation of the factors affecting data warehousing success. *MIS Quarterly*, 25(1), 17–41. <https://doi.org/10.2307/3250957>



© 2021 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license.



You are free to:

Share — copy and redistribute the material in any medium or format.

Adapt — remix, transform, and build upon the material for any purpose, even commercially.

The licensor cannot revoke these freedoms as long as you follow the license terms.

Under the following terms:

Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made.

You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

No additional restrictions

You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.

***Cogent Business & Management* (ISSN: 2331-1975) is published by Cogent OA, part of Taylor & Francis Group.**

Publishing with Cogent OA ensures:

- Immediate, universal access to your article on publication
- High visibility and discoverability via the Cogent OA website as well as Taylor & Francis Online
- Download and citation statistics for your article
- Rapid online publication
- Input from, and dialog with, expert editors and editorial boards
- Retention of full copyright of your article
- Guaranteed legacy preservation of your article
- Discounts and waivers for authors in developing regions

Submit your manuscript to a Cogent OA journal at www.CogentOA.com

