

Factors Affecting Impulse Buying on Online Shopping amongst Youth: A Structural Equation Modeling Approach

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Abstract - This article aims to identify the constructs that impacts impulse buying on online shopping amongst youth. The research was conducted based on the response received from 301 responses from the youth population. The main significant components consist of scarcity, serendipity, e-commerce, social shopping, value shopping and relaxation shopping. Factors were identified from literature survey and exploratory factor analysis was utilized for grouping the variables under different components. The findings contributed that the six latent variables are significant contributors to the affective impulse buying tendency. This was validated using structural equation modeling approach utilizing AMOS 22.0. This research helps to understand the rising trend of e-commerce in the developing country's prospective. It also develops a foundation for future research and significant insights to perceive the impulse buying on online shopping amongst youth.

Keywords - Impulse Buying, Online shopping, E-commerce, Exploratory factor analysis, Structural Equation Modeling.

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INTRODUCTION

E-commerce (electronic commerce) is that the shopping for and commercialism of products and services, or the transmission of funds or information, over associate degree network, primarily the net. E-commerce is additionally referred to as electronic commerce or net commerce. These services provided on-line over the net network dealing of cash, funds, and information also are thought-about as E-commerce. These E-commerce sites have right now covered both Business to Business sectors of operating and along with that also by covering Business to consumer sectors of production. Online Shopping is one of the fastest growing and rapidly increasing sector within the country, as there is no time involved in case of purchasing of goods and services by the consumers at any point of time. E-commerce provides the consumers to shop for these goods and services at their ease i.e. the E-commerce shopping is available 24*7. These online sites which are providing E-commerce facilities are at a boom in the economy as with the help of the E-commerce we can do any kind of activity by sitting at residence with just one click. This paper is primarily based on primary

source of data collection and 301 respondents' reviews are collected and exploratory factor analysis is been used for measuring the performance.

LITERATURE REVIEW

This section performs a short survey of different ML and deep learning (DL) based BT diagnosis models available in the literature. In (Sharif M, 2020), feature extraction was applied where brain system interface which undergoes classification using support vector machine (SVM) and Linear Discriminant Analysis (LDA). In recent times, CNN is one of the popular mechanisms with respect to feature extraction under various studies like clinical images, video examination, and natural language processing (NLP). The key objective of CNN is to forecast the chief patterns and data from training images. For example, VGG Net, Google Net, and Alex Net are some of the effectual structures applied in image classification which is also employed for BT prediction. (Gehrt, 1992) searching orientations talk to the overall predisposition of customers toward the act of searching. This predisposition could also be manifested in variable patterns of knowledge search,

various analysis, and products choice. The orientations area unit operationalized by a spread of perspective, interest, and opinion statements associated with the subject of searching.(Beatty and Ferrell 1998) found the urge to shop for impetuously to be a stronger live of impulsivity than actual impulsive behavior, on condition that the work of their structural model improved once exploitation the urgeto shop for impetuously instead of the particular purchase behavior because the variable.

(Adelaar, 2003) observed that United Nations agency examined the impact of presentation mode (text, image and video) on emotional estate. So whereas the previous studies support the validity of S-O-R model in on-line outlets, they concentrate on the net store style because the major input of emotion. Moreover, these studies think about the emotion to be enjoyment and a few think about it as a general construct and don't decompose it into its parts. During this analysis, we tend to investigate the validity of S-O-R in on-line outlets from a special and vital perspective. We tend to concentrate on each the merchandise kind and presentation mode as stimuli of feelingstate.

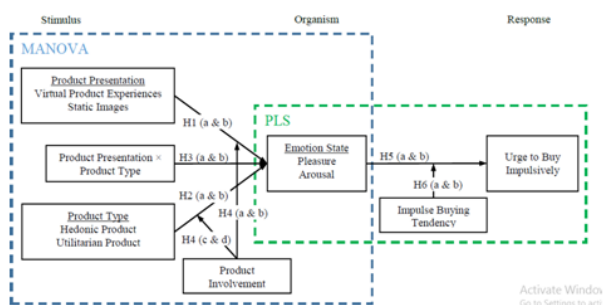


Figure 1. The Variables on which the emotional state of consumer depends

This Fig.1 is showing that emotional state of consumer is depending upon the product presentation, product type (i.e. hedonic and utilitarian) and product involvement. All these things encourage the consumer to follow the impulse buying tendency and consumer urge to buy impulsively.(Erkip 2005) reportable that buyers visit looking websites to pay their spare time by browsing the website. Consequently, customers visiting the web site with hedonistic motives might occupy the web site for extended periods, which can increase the likelihood of an acquisition while not previous intention to shop for. During this sense, future activities square measure vital to extend the likelihood of the consumers' browsing. Browsing may be a crucial construct for customers' store selection and time spent on the web site. (Spears 2006) observed that online store style may be a advanced task involving multiple webpage components. Specific style components are

investigated victimization straightforward analysis models, however this doesn't offer an entire image of the triggers of impulse shopping for style components might influence every stage of the decision-making method, reducing the self-control of shoppers or enhancing the likelihood of impulse shopping for advertisement stimuli will evoke impulse shopping for. They impart that associate degree impulse has not been glad, and will cause the buyer to expertise regret over a lost chance, i.e., pre-purchase regret.

(Silvera, 2008) attempted to think about this study is to look at predictor of impulse shopping for. though moderate level of impulse shopping for are often pleasant and gratifying, recent theoretical work suggests the chronic, high frequency impulse shopping for incorporates a compulsive part and might a operate as a sort of break loose negative effective states, depression, low shallowness.

(Parboteeah, 2009) assessed the results reveals that the standard of web site conjointly influences the impulse shopping for behavior of the buyer. The visual charm of the web site that have an effect on the degree to that a user enjoys browsing website however that don't directly support a specific looking goals. Interaction with a web site ends up in each psychological feature and affectional reaction.

(Sharma, 2010) discussed once client makes impulse shopping for, they create associate degree causeless, unthinking associate degreeed immediate purchase and infrequently feel an urge to shop for the merchandise. Variety of reasons will influence impulse shopping for like low worth, marginal want of item, emotions, low psychological feature management or spontaneous behavior. Such purchases might happen mostly while not considering the money consequences.

(Ozen and Engizek, 2014) advocates that individuals do impulse shopping for by the influence of hedonistic motivation. Hedonistic worth drives on-line impulse shopping for tendencies. Hedonistic looking motivation affects on-line impulse shopping for in an exceedingly positive approach. Individuals generally look as a result of looking helps them to forget their issues and have a decent time.

(Liao, 2016) attempt to address this study indicates that on-line retailers have to be compelled to take special care once promoting utilitarian merchandise. For utilitarian merchandise, giving a prime quality net style interface associate degreeed taking steps to boost consumers' product involvement square measure vital for eliciting positive emotions and

ultimately causing an impulse shopping for call. What is more this study proposes 2 factors: presentation mode and products kind that have an effect on consumers' emotional states and result in impulse shopping for choices. (Lai and Jinlu, 2017) aforementioned that increasing quality of on-line impulse buying victimization digital platforms like mobile apps, it's raised very important interests concerning the customer behavior. They gathered that info by victimization semi-structured interviews and self-completion on-line type. Throughout this analysis age, gender and country origin taken in to thought. (Akram, 2018) study the results ensure that situational factors completely influence the net impulse shopping for. Four dimensions of looking worth (social looking, relaxation looking, journey looking and plan shopping) completely moderate the link between fluke and on-line impulse shopping for. These factors have the potential to inspire the shoppers to initiate the hedonistic looking perspective to urge to shop for impetuously.

THE PROPOSED METHOD

To analyze the different factor affecting the e-impulsive buying behavior. The main aim of this study is that to compare different factors which affect the consumer decision at the time of online purchasing.

RESEARCH METHODOLOGY

Data was collected through secondary sources like literature review and various other reports. Primary data was collected by preparation of structured questionnaire. The questionnaire was checked by qualified Professors in the academic field before the survey began. The questionnaire utilized a five point likert scale for measuring the constructs. The scale which measured each constructs were developed based on prior studies done as much as possible. Each sub-factor was having at least three indicators. Initially for testing the questionnaire pilot survey was conducted with a sample size of 50. Thereafter, as per the needs, requirement and suggestions given by the respondents as well as professors modification was done for collecting the final data. The target crowd were clients or customers who use online platform i.e. e-commerce sites for their shopping in India and stratified random sampling technique approach was adopted as it permits population harmony from the sub-population (Hair, 2010). The questionnaires were sent to 734 respondents but only 301 respondents returned usable questionnaires which was valid for analysis. Structural Equation Modelling (SEM) was constructed and confirmatory factor

analysis (CFA) was utilized for exploring the critical factors which had significant contribution in CCA. The analysis of data was done in different stages, validity and reliability test, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). EFA was done to check the total variance explained, to identify and group the variables using rotated component matrix table. Thereafter, CFA was implemented for testing and approving the applied models underlying. SPSS 20.0 was utilized for reliability test and EFA on data collected. AMOS version 22.0 was utilized for CFA on collected information for measuring model outcomes as CFA decides whether a validity test on an estimated model be replicated (Hair, 2010; Byrne, 2010).

RELIABILITY AND VALIDITY

There are two critical estimates, validity and reliability that decide the trait and helpfulness of the information gathered. Validity is about correctness and whether the instrument estimates what it is proposed to measure. Reliability is about precision; it is utilized to check the consistency and soundness of the questionnaire. Cronbach's alpha coefficient was used as an instrument to measure the reliability (Hair, 2010), the values of all indicators or dimensional scales should be above the recommended value of 0.70. Utilization of 5 point likert scale was done in preparing the structured questionnaire. For analyzing the information collected, SPSS 20.0 and Amos 22.0 was used. The reliability test was performed for each constructs based on Cronbach's alpha value SS1, SS2, SS3 0.841

The Table.1 displays the Cronbach's alpha (α) for all latent variables. The first context is TP and the latent variables along with the indicators and Cronbach's alpha values are: scarcity (ST) has ST1, ST2, ST3, ST4 is 0.829, serendipity (SR) has SR1, SR2, SR3, SR4 is 0.846, e-commerce (EC) has EC1, EC2, EC3, EC4 is 0.721, social shopping (SS) has SS1, SS2, SS3 is 0.841, value shopping (VS) has VS1, VS2, VS3, VS4 is 0.861, Relaxation Shopping has RS1, RS2, RS3, RS4 is 0.864. The composite reliability for the variables was found to be 0.866. Output shows, all the cronbach's alpha values are above 0.7 for all the latent variables' items and composite reliability values are also above the threshold level (0.7).

Exploratory Factor Analysis (EFA)

For measuring the accuracy validity test is being done. The exploratory factor analysis (EFA) was performed at the initial stage in order to group the variables having similar properties and each variable can be grouped under different factors during this process. SPSS 20.0 was utilized for EFA. Principal component analysis (PCA) was performed in order to identify meaningful bias and for expressing same qualities. In the next stage, Confirmatory factor analysis (CFA) will be performed by which constructs identified from literature survey can be tested and how well the variables represents the constructs. Structural equation modeling (SEM) was used for testing the model fit of the proposed research model (Byrne, 2010).

Bartlett Sphericity Test (KMO)

Bartlett Sphericity Test can be used to determine whether the information or data are suitable for factor analysis (Tobias and Carlson, 1969). The table 2 displays the KMO value is 0.839 which is above the threshold level of 0.6 and also is accepted value for further analysis and the significance value is 0.000 which is less than 0.05 i.e. the probability value level that is also at an acceptable level.

Communalities

The Communalities Table.2 shows the Initial communalities before rotation. It can be interpreted from Table.2 that all the initial communalities are above 40, which is the threshold level and hence is good. These initial communalities represent the relation between the variables and all other variables (i.e., the squared multiple correlations between the item and all other items) before rotation.

Total Variance Explained

Table.3 displays the total variance explained. The extraction method used was principal component analysis (PCA). Only the eigen values which have values >1 are extracted as it explains maximum variance. The percentage of total variance explained by component 1 (13.075%), component 2 (12.727%), component 3

(12.664%), component 4 (12.296%), component 5 (10.240%) and component 6 (9.053). The cumulative percentage of total variance explained by all six components is 70.236%.

Table 1. Communalities

	Initial	Extraction
ST1	1	0.685
ST2	1	0.631
ST3	1	0.67
ST4	1	0.703
SR1	1	0.677
SR2	1	0.721
SR3	1	0.774
SR4	1	0.58
EC1	1	0.717
EC2	1	0.749
EC3	1	0.515
SS1	1	0.785
SS2	1	0.822
SS3	1	0.702
VS1	1	0.718
VS2	1	0.792
VS3	1	0.8
VS4	1	0.542
RS1	1	0.715
RS2	1	0.749
RS3	1	0.697
RS4	1	0.709

Extraction Method: Principal Component Analysis.

Table 2. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.490	29.498	29.498	6.490	29.498	29.498	2.876	13.075	13.075
2	2.900	13.183	42.681	2.900	13.183	42.681	2.800	12.727	25.802
3	1.852	8.417	51.098	1.852	8.417	51.098	2.786	12.664	38.466
4	1.541	7.004	58.101	1.541	7.004	58.101	2.705	12.296	50.762
5	1.520	6.908	65.010	1.520	6.908	65.010	2.292	10.420	61.182
6	1.150	5.226	70.236	1.150	5.226	70.236	1.992	9.053	70.236

Extraction Method: Principal Component Analysis.

Rotated Component Matrix

This Rotated Component Matrix is important for interpreting the results of the analysis. Rotation helps in grouping the items and each groups contains more than one item which helps in simplifying the structure. This is a condition called simple structure. Hence, this is the aim for goal of

rotation. In this research we have achieved this aim. This helps to identify the cross loadings on more than one group and then it can be corrected by removing those items which are cross loaded. In this research the loadings having less than |.40| are suppressed because loadings more than |.40| are typically considered high. So, in the end we achieve a simple structure.

Table 3. Rotated Component Matrix

	Components					
	1	2	3	4	5	6
S						
S						
S						
S						
S						
S						
S						
E						

E						
E						
S					.82	
S					.89	
S					.77	
V						
V						
V						
V						
R						
R						
R						
R						
Extraction Method: Principal Component Analysis.						
Rotation Method: Varimax with Kaiser Normalization.						
a. Rotation converged in 6 iterations.						

There are 22 total variables which are grouped under 6 different components. Table 4 displays the rotated

component matrix. The rotation method used was varimax rotation. RS1, RS2, RS3, RS4 are grouped under component 1, SR1, SR2, SR3, SR4 are grouped under component 2, VS1, VS2, VS3, VS4 are grouped under component 3, ST1, ST2, ST3, ST4 are grouped under component 4, SS1, SS2, SS3 are grouped under component 5, and EC1, EC2, EC3 are grouped under component 6.

Structural Equation Modeling

In order to test the hypothesis SEM was used. AMOS 22.0 was utilized for this research because of its powerful graphic representations and user friendly interfaces. This section represents the outputs of hypothesis testing. The results of significant paths of the model are shown here. Figure.2 represents the final model along with the six latent variables along with their indicators and one dependent variable.

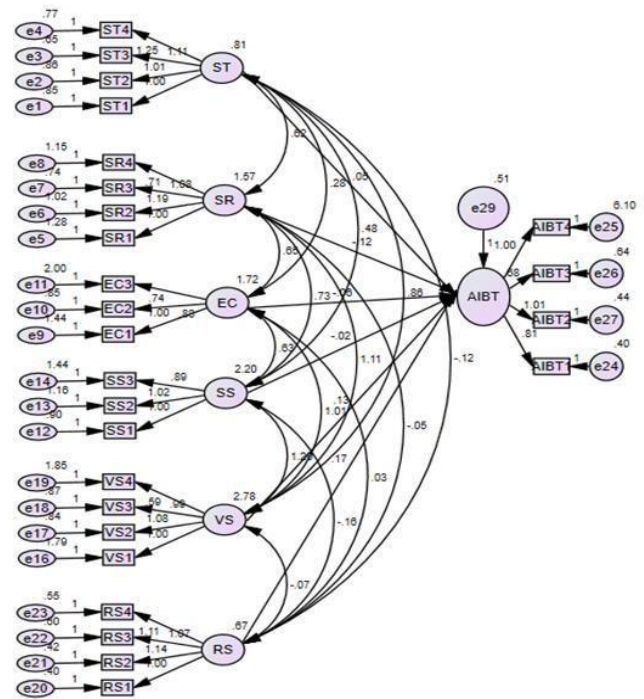


Figure 2. Final measurement model for Technological Perspective

Note: AIBT: Affective Impulse Buying Tendency; ST: Scarcity; SR: Serendipity; EC: E-commerce, SS: social shopping; VS: value shopping; RS: Relaxation Shopping.

There are six latent variables: Scarcity (ST); Serendipity (SR); E-commerce (EC), Social Shopping (SS); Value Shopping (VS); Relaxation Shopping (RS). Each latent variables are having indicators. For ST there are four indicators: ST1, ST2, ST3, ST4, SR has four indicators: SR1, SR2,

SR3, SR4, EC has three indicators: EC1, EC2, EC3, SS has three indicators SS1, SS2, SS3, and RS has four indicators RS1, RS2, RS3, RS4. There is one dependent variable called Affective Impulse Buying Tendency (AIBT) which has four indicators.

Structural model Goodness of Fit

The above model (Figure 1) shows the latent variables along with their indicators which contributed significantly towards the dependent variable which also had four indicators.

The estimations of absolute fit indices are: CMIN/Df (1.576), CMIN represents the chi-square value and Df represents the degree of freedom. Goodness of fit index (GFI) is 0.901, normed fit index (NFI) is 0.880, root mean square error approximation (RMSEA) is 0.044, relative fit index (RFI) is 0.859 and incremental fit index (IFI) is 0.952 are having values in the range (0 - 1.0), which is in the threshold level and is accepted. The comparative fit index (CFI) is 0.952 which is more than 0.90 that is the threshold level. The final output is shown in Table.5. The six latent variables has a direct effect on AIBT, which is the dependent variable. All the six latent variables contribute towards achievement of the model fit.

Table 4. The final results of impact of variables on dependent factor

	P-level	CMIN/DF	RMSEA	CFI	NFI	IFI	GFI	AGFI
Model	0.000	1.576	0.044	0.952	0.880	0.952	0.901	0.875
Recommended standard	<0.05	<3.0	<0.08	0-1.0	0.1.0	0-1.0	0.1.0	>0.80

DISCUSSION

The primary aim for conducting this research was to decide whether the components or factors identified from the literature survey are impacting the AIBT. From the results, it is very clear that the six latent variables identified are validated by SEM approach.

The first construction comprised of latent variables like ST, SR, EC, SS, VS, and further analysis of them had three or more indicators. The Cronbach’s alpha and composite reliability values were above 0.7 which is the recommended level. There were total 22 indicators which helped in measuring the impact of the latent variables in the AIBT in this research. The KMO value was 0.839 which is also above the recommended level of 0.6, which allows the data for factor analysis. The total variance explained was 70.236% and in the rotated component matrix the variables were grouped under six components. The values which were below 0.4 were suppressed in the rotated component matrix

table and only the values more than 0.4 were displayed as output. Then the SEM was performed in AMOS 22.0, CMIN/Df was 1.576 and all the fit indices were within the acceptance level.

CONCLUSION

The gathered information was studied through SEM at two phases. In the measurement level, the validity and reliability were used to confirm the estimations utilized in this examination. Also, in structural level, the connections between the components and firms' aim to adopt cloud in healthcare sectors divisions were studied, to investigate factors that were decidedly connected with CCA in healthcare centers in India; along these lines, the proposed hypothesis was evaluated in this stage. The final research model initially comprised of six hypothesis. Each of the latent variables had statements which has been used in the research and tested all the four models in AMOS 22.0 and finally the significant contributors were retained in all the four models in the study. The latent variables which contributed significantly in the tested model are ST1, ST2, ST3, ST4, SR1, SR2, SR3, SR4, EC1, EC2, EC3, SS1, SS2, SS3, RS1, RS2, RS3, and RS4. During EFA variables like AS1, AS2, IPMV1, IPMV2, IPMV3, OIB1, OIB2, OIB3 was removed because of cross loadings and lesser value of Cronbach’s alpha. Hence, it can be concluded that these identified latent variables are the critical components which affects the impulse buying behavior of the customers.

CONTRIBUTION TO RESEARCH AND PRACTICE

In this paper we have discussed about the E-commerce and have also taken reviews from around 301 individuals, as to what are their requirements or their short comings and to understand their responses we have made a Google form to capture all the responses from the individuals and study the responses by using factor analysis, and stated that e-commerce plays a most important role in life of every individual mostly from the age of 18 to 40 years.

Thus from the analysis it clear from the fact that there is an rising trend of E-commerce in the Indian economy as not only online purchases of goods there are other services which can be used from these online shopping. Thus it is purely a growing sector of the economy.

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