SOCIAL PRESENCE ON PURCHASE BEHAVIOUR : SCALE DEVELOPMENT AND VALIDATION

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Abstract

Social presence is the sense of being with others in a social networking platform. Purchase behaviour is the decision processes and acts of people involved in purchasing, repurchasing and using products. The purpose of this paper is to develop a scale to measure social presence influence on purchase behaviour. The scale developed has shown a strong internal consistency, reliability, and has remained consistent across different sample. The main contribution of the study is validating a divergent scale measuring social presence influence on purchase behaviour through Exploratory Factor Analysis.

Keywords: *Social Presence, Purchase behaviour, Social media, Exploratory Factor Analysis*

INTRODUCTION

Social Presence Theory was developed by social psychologists John Short, Ederyn Williams, and Bruce Christie, in 1976 through the book *The Social Psychology of Telecommunications*, where they defined Social Presence Theory as the ability communication media have to transmit social cues. The theory arose from noticing the differences in apparent physical proximity inherent in using various communications media."Social presence presumes the outcome of an interaction to be determined by the capacity of the selected medium to support the type of communication required"

Today all brands of products have a presence on virtual networks. Social media platforms are the places where users can interact with each other and share their views and experiences. The major benefits of social media presence simply called as Social presence is that it provides accessibility to the goods and services around the globe. It is the venue of experience sharing regarding products usage, its review and reference.

Social media users educate each other, which has created a new source of information. Most of the social media marketing activities are successful and the study aims at measuring the social presence impact towards these marketing efforts and its influence on their purchase behaviour.

The study is unique because a measurement scale to investigate the influence of social presence on purchase behaviour is developed. Previous studies were based on only social media marketing strategies, social presence on online learning environment and its functionalities were measured. Where this study fills the gap by providing a scale to measure most important 4 variables of social presence and 4 variables of purchase behaviour. In total of 8 variables were identified and selected based on its repeated uses in previous studies.

MEASURES AND METHODS

An enormous relevant review of literature and exploration of scales related to the study such as social presence, online purchase, social media presence, social existence, online presence, media use, media interaction, e-presence, social commerce and questionnaires (Eastman et. al (1999), The Social Presence and Privacy Questionnaire (SSPQ) Tu (2002) Khan et. al (2019). Subsequently, as there is a lack of proper instrument to measure the social presence, it was decided to take statements from various authors and an initial pool of 21 statements reflecting different aspects of social presence.

Next, the face and content validity of these items has been evaluated with the help of experts. Redundant items were eliminated and thus 18 items were maintained. Taking into expert's response certain items were modified. Each item was scaled in five points from strongly agree to strongly disagree.

119 samples from university students who actively participate in online shopping and socially present were selected for the study. Students selected were pursuing under graduation and post-graduation in Aided and self-financing courses in various Arts and Science colleges under Mahatma Gandhi University Kerala. The sample respondents belong to Kottayam, Pathanamthitta and Idukki districts of Kerala state and they were selected purely on convenience of the researcher.

To identify the commonalities of the 18 statements exploratory factor analysis (EFA) was performed using SPSS version 23.0 to explore the number of factors that are present. All the statistical criteria in the study were satisfied. This study identified the Kaiser–Meyer–Olkin (KMO) value for the statements was .833> .70 (Table1) which sows the availability of an

adequate number of items for factors. The value of Bartlett's Test of Sphericity [$\chi 2 = 11611.76$; $p < 0.001$] was significant.

Table 1 . KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.833
Bartlett's Test of Sphericity	Approx. Chi-Square	1602.682
	df	153
	Sig.	.000

Table 2.3.4 presents the detail of factor loading, communalities, eigenvalues, scree plot and varimax rotation explained by the sub-constructs of social presence. An overall value of factor loading for each item over 0.50 was significant to verify the meaningfulness of the item in the questionnaire Hair et al. (2010).

Principal components analysis Table 2 was used to identify and compute composite scores for the factors underlying the social presence. The factor analysis shows that 18 factors that explain 75 % of the variance in the data. After rotation Eigenvalue and scree plot Table 3also indicates the proportion of variance contribution extracted by each factor through factor analysis, where items with an eigenvalue lower than 1.0 were removed from the factor list. The factors that have an eigenvalue more than 1 are factor 1(7.411), factor 2, (2.547), factor 3(2.164), factor 4(1.413) respectively.

Table 4 shows the factor loading result of all 18 items of social presence. Based on the Eigenvalue and extraction method four factors were produced from the rotation

Table 2. Communalities

	Extraction
1.Effective and powerful communication platform of Social media created a purchase intention in my mind	.634
2. I seek friend's opinion on social media before making a purchase decision	.830
3. The information in social media regarding sellers follow up and response towards the questions and complaints by the buyers positively affects the product image.	.732
4. Information from social media page of a product positively affect my purchase decision	.757
5. The presence of a product in social media important in creating purchase intention	.729
6. Social media platforms are simple to use, understandable and flexible	.738
7. I always use information from social media to compare products	.804
8. Social media discussions helps to make a purchase decision	.805
9. I made my purchase after watching some sort of review in social media	.818
10. I share my satisfaction or dissatisfaction in social media to inform others about my experience	.717
11. Contents, comments or shares related to the product in social media cause a change in	.708

my perception	
12. Information in social media helps me to find new products – I hadn't found on my own or heard before	.750
13. My attitude towards using social media created positive purchase decision	.775
14. Shares, comments, likes, posts on social media influences my purchase	.766
15. I use social media information regarding the product before a purchase	.819
16. Advertisements in social media positively influences my purchase decision	.753
17. I will consider the security certificate of an online shopping website before purchase	.753
18. I consider the opinion and experience of online community /friends /members during online shopping.	.646

Extraction Method: Principal Component Analysis.

Table 3. 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	7.411	41.172	41.172	7.411	41.172	41.172	3.827	21.262	21.262
2	2.547	14.151	55.323	2.547	14.151	55.323	3.665	20.363	41.626
3	2.164	12.020	67.344	2.164	12.020	67.344	3.050	16.942	58.568
4	1.413	7.852	**75.196**	**1.413**	7.852	75.196	2.993	16.628	75.196
5	.689	3.830	79.026						
6	.592	3.290	82.316						
7	.531	2.952	85.267						
8	.453	2.516	87.784						
9	.384	2.134	89.918						

Truncated SPSS output for the total variance explained for extracted factors.

Subsequently, scree plot 5 also helps to determine the number of factors to be extracted in the final solution. It is the line plot of the eigenvalues of factors or principal components in analysis and the point that begins to level of shows the number of factors extracted.

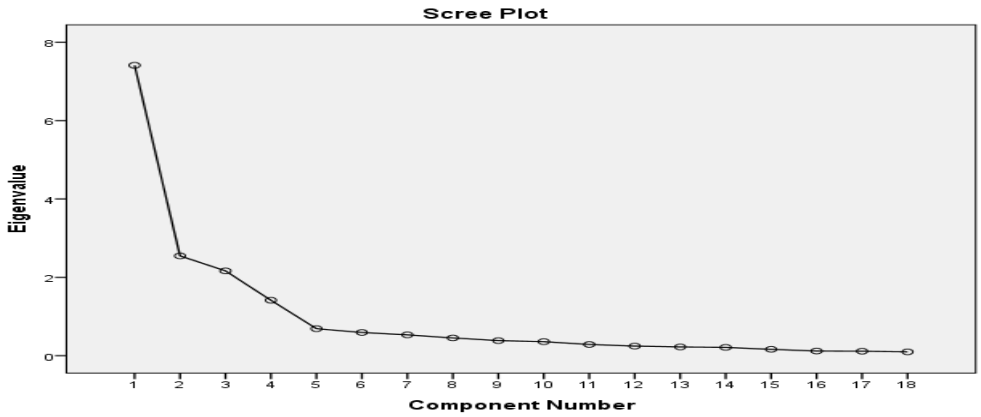

Table 4. Rotated Component Matrix[a]				
	Component			
	1	2	3	4
Effective and powerful communication platform of Social media created a purchase intention in my mind		.668		
I seek friend's opinion on social media before making a purchase decision				.820
The information in social media regarding sellers follow up and response towards the questions and complaints by the buyers positively affects the product image.	.793			
Information from social media page of a product positively affect my purchase decision	.826			
The presence of a product in social media important in creating purchase intention		.789		
Social media platforms are simple to use, understandable and flexible			.825	
I always use information from social media to compare products	.862			
Social media discussions help to make a purchase decision			.871	
I made my purchase after watching some sort of review in social media				.853
I share my satisfaction or dissatisfaction in social media to inform others about my experience				.791
Contents, comments or shares related to the product in social media cause a change in my perception		.819		
Information in social media helps me to find new products – I hadn't found on my own or heard before	.801			
My attitude towards using social media created a positive purchase decision		.863		
Shares, comments, likes, posts on social media influences my purchase			.864	
I use social media information regarding the product before a purchase		.876		
Advertisements in social media positively influence my purchase decision			.791	
I will consider the security certificate of an online shopping website before purchase	.764			
I consider the opinion and experience of online community /friends /members during online shopping.				.701
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.				
a. Rotation converged in 6 iterations.				

The final step of EFA is to name the factors. The factors extracted from EFA are named as follows factor 1 as information trust with 5 statements, factor 2 as social media usage with 5 statements, factor 3 as social media interaction with 4 statements, and 4th factor as social media reference and relation.

CONCLUSION

This study is leading to a social presence questionnaire on purchase behaviour. Exploratory Factor analysis isolates 5 factors. In this pilot study 119 samples were selected, the sample size for factor analysis was far from an appropriate sample size of close to 300 (Tabanchnick & Fidell 2001) hence further studies are planned with larger sample. This scale can be further used to study the impact of these 8 variables and their influence or impact on various dimensions of consumer based brand equity, purchase experience, satisfaction and so on.

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