Impact
of
Social Media Advertisements
and
Electronic Word of Mouth
on
Purchase Intention

Project Report
(Group 1)

MBA633A – Marketing Research

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1. Introduction

Due to the affordable pricing of internet data and smartphones, internet penetration has increased significantly over the last few years in India. Currently, there are approximately 700 million internet users in India; out of these, around 376 million are active on various popular social media platforms. These figures are projected to grow up to 876 million (for internet users) and 447million (for social media users), respectively [1].

This shift in terms of reachability in the online space has enabled organizations to consider social media platforms as a vital instrument to promote their products and services through various activities (directly and indirectly). This is evident from the fact that digital advertisement grew at the rate of 15.3% in 2020 to reach 157820 million [2].

Social media platforms have also empowered the ordinary consumers (or popular critics/influencers) to share their experience (or opinion) through the means of video logs (vlogs), blogs, online groups/communities, or by simply a review on e-commerce websites (or a review website). Many such critics/influencers/online communities are very popular among social media and internet users and, thus, can influence potential buyer's intentions to purchase [3].

Considering the above discussion, this study tries to explore the impact of social media marketing and EWM (electronic word of mouth) on the purchase intentions of Indian people.

2. Literature Review

The foremost challenge before marketing professionals is to promote their product and services effectively, and they adopt various methods (direct advertisements, word of mouth promotion, customer relationship management, brand management, etc.) [4] for the same. Significant improvement in internet penetration and rapidly rising numbers of social media users present them an opportunity to reach a larger and wider customer base, and they must utilize this opportunity.

Compared to other forms of advertisements, social media advertisements (SMA) are more interactive and informative. Thus, they are more effective for firms to achieve their marketing goals (creating awareness, shaping attitude and perception, motivation to purchase etc.) [5] [6].

Word of mouth (WM) promotion, a form of marketing activity, refers to the person-to-person communication regarding their experience of product and services. With the advent of technology, WM communication has taken an entirely different form. People across the globe are constantly interacting with each other through various social media platforms, and this form of communication has been termed electronic word of mouth (EWM) [7].

EWM is defined as "any positive or negative statement made by potential, actual, or former customer about a product or company which is made available to a multitude of the people and institutes via the internet" [8]. EWM communication is an effective way to obtain feedback regarding the quality of products or services, and it also helps in alleviating the uncertainty regarding purchase decisions, thereby could significantly influence consumer's purchase behavior [7] [9]. Moreover, it has been proposed that enterprises should not limit themselves to mere advertising activities. In addition to the advertisement, they should focus on the development of interactive community too [10].

Trailing discussion led us to form our research hypothesis:

H1: SMA has a significant influence on Purchase intentions.
H2: EWM has a significant influence on Purchase intentions.
H3: Effect of SMA on purchase intention is mediated by EWM

3. Methodology

To achieve the objective of this study, a self-administrative questionnaire was shared with the students of the premier institute of India who were active on various social media platforms. Respondents of the survey include the students and their friends and relatives who were also active on multiple social media platforms. The constructs (SMA, EWM, and PI) of the survey were measured by adopting scale items from literature (see appendix) [11,12,13,14,15] [16] [6]. Measurement was done using a seven-point Likert scale, where one (1) refers to strongly disagree and seven (7) refers to strongly agree. Interval scale allows implementation of various statistical techniques used for marketing research (apart from mean, std. deviation, Correlation, etc.) applicable on nominal and ordinal scale data.

Initially, a pilot survey was carried out with 30 respondents; the majority of respondents did not find any issues in understanding and were okay with the length of the survey; Cronbach's alpha value was higher than the 0.70 for all the factors.

Final data analysis involves "descriptive statistics", "test for normality", "reliability and validity test", "test for model fitness", and "mediation analysis," using SPSS 21. Finally, path analysis was carried out on SPSS 21 using a Mediation analysis tool, which is available as a freeware plugin namely "Process v3.5.3" [17].

4. Results and Analysis

Respondents Profile:

The survey was administered through a google form and was shared with over 150 people, out of which only 86 responded to the survey and 83 were found to be the valid ones. Among the participants, 81.9 % were male, and 18.1 were female. The majority of respondents were from the age group of 21-25 (43.4 %) and 31-35 (20.5 %), followed by the respondent from the age group of 16-20 (15.7 %) and 26-30 (13.3 %), the respondent from the age group of 36-above forms the smallest group (7.2%).

All the respondents were educated [44.6% graduate, 34.9% Postgraduate and 15.7% were in school (10th and above), and 4.8% had a doctoral or higher level of education]. They were enrolled in a premier engineering institute of India or working with well-known firms and were active on multiple social media platforms (Twitter, Facebook, Instagram, etc.).

Refer to Table I for details.

Table I: Demographic Characteristics of Respondents

Characteristics	**Frequency**	**Percentage**	**Cumulative Percentage**
Age			
15 and below	0	0	0
16-20	13	15.66	15.66
21-25	36	43.38	59.04
26-30	11	13.25	72.29
31-35	17	20.48	92.77
36 and above	6	7.22	100
Gender			
Male	68	81.92	81.92
Female	15	18.08	100
Others	0		
Monthly Spending on Shopping (in Rs.)			
0-9999	68	81.92	81.92
10000-24999	12	14.46	96.38
2500-49999	1	1.20	97.58
50,000 and above	2	2.41	100
Education Level			
10^{th}	6	7.23	7.23
12^{th}	7	8.43	15.66
Bachelor (Graduate)	37	44.58	60.24
Masters (Post Graduate)	29	34.94	95.18
Ph.D. and above	4	4.82	100

Descriptive statistics

For all the scale items, mean and standard deviation values were calculated (see Table II). All the items for EWM have mean value greater than 5 (standard deviation = 0.12); i.e., respondents valued the usefulness of EWM positively. For SMA and PI mean (4.71 and 4.32 respectively) and standard deviation (0.49 and 0.09 respectively) indicates that respondents valued them slightly positively. From descriptive statistics it seems that SMA and EWM are likely to create positive influence on purchase intentions.

Construct Reliability and Validity

Cronbach's alpha which indicates the internal consistency of constructs have value greater than 0.7 for all the constructs (see Table II).

Also, the composite reliability (CR) for all the construct is higher than the 0.7; average variance extracted (AVE) for all the constructs is higher than the 0.5, and all the items have standardized factor loading value higher than 0.5 (see Table II).

Table II: Descriptive Statistics, Reliability & Validity

Construct		Mean		Std. Dev.		Cronbach's Alpha		CR	AVE	Factor Loading
	SMA1	5.37		1.26		0.81				0.52
	SMA2	4.32		1.63		0.80				0.74
	SMA3	4.12		1.64		0.81				0.88
SMA	**SMA4**	4.24	**4.71**	1.51	**0.49**	0.81	**0.83**	**0.88**	**0.53**	0.76
	SMA5	5.32		1.22		0.83				0.71
	SMA6	4.75		1.53		0.82				0.81
	SMA7	4.50		1.62		0.80				0.57
	SMA8	5.06		1.46		0.80				0.58
	EWM1	5.67		1.35		0.55				0.85
EWM	**EWM2**	5.43	**5.56**	1.48	**0.12**	0.63	**0.72**	**0.84**	**0.64**	0.81
	EWM3	5.59		1.06		0.71				0.75
	PI1	4.34		1.59		0.87				0.84
PI	**PI2**	4.41	**4.32**	1.76	**0.09**	0.85	**0.88**	**0.92**	**0.75**	0.86
	PI3	4.34		1.48		0.85				0.88
	PI4	4.19		1.75		0.85				0.87

Correlation values between different factors was lesser than the square root of AVE for each factor, this indicates discriminant validity (Table III).

Table III: Discriminant validity

Construct	SMA	EWM	PI
SMA	***0.728***		
EWM	.308	***0.800***	
PI	.706	0.361	***0.866***

Note: diagonal elements are the square-root of AVE; non-diagonal values estimate correlation between constructs

Model Fitness Test

Fit Indices to evaluate model fitness were obtain using SPSS AMOS 21 (see Table IV); fit-statistics and cut-off values for these indices shows that model suitably fits the data.

Table IV: Model Fitness

Fit Indices	Fit Statistics	Cut-Off
CMIN/df *	1.52	1.0-3.0
RMSEA	0.079	< 0.08
CFI	0.917	> 0.9

***** $\varkappa^2$ = 132.378, df = 87, *p*-Value = 0.001

Multivariate Normality

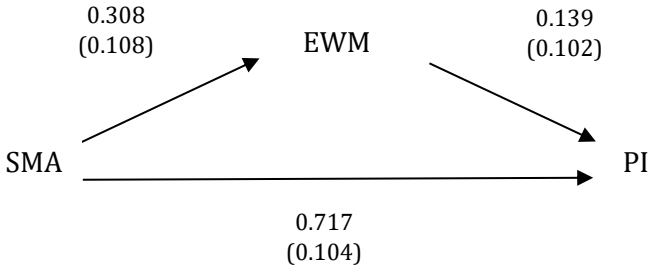
Multivariate normality was tested using SPSS AMOS 21; results ensured no violation of multivariate normality (Critical Ratio = 0.299; **Kurtosis** = 0.359).

Mediation Analysis

Results obtained through mediation analysis are presented in Table V and Table VI. Among the different relationship tested in the analysis, we observed significant positive relationship between SMA & EWM, and SMA & PI. Relationship between EWM and PI was positive, though insignificant.

Table V

Path	**Estimate**	**Standardized Estimate**	**Standard Error**	***t*-statistics**	***p*-value**
SMA → EWM	0.316	0.308	0.108	2.916	0.005**
EWM → PI	0.190	0.139	0.102	1.869	0.065
SMA → PI	1.002	0.717	0.104	9.5954	0.000***



To understand the relation between the two variables which affects the purchase intention, an analysis to observe the standardized direct, indirect, and total effect was done (see Table VI).

This analysis indicates that EWM has a very little (non-significant) effect on the purchase intention, hence mediation effect of EWM on purchase intention due to social media marketing activities is ruled out. Analysis also indicates that Social media advertisement activity positively influences the purchase intentions.

Table VI

	Direct Effect	**Indirect Effect**	**Total Effect**
SMA → EWM	0.308	-	0.308
EWM→ PI	0.139	-	0.139
SMA → PI	0.717	0.043	0.760

5. Limitations

Various limitations of this study can be highlighted as:

1. Small sample size.
2. Data was collected mainly through the students, their friend, and their relatives only.
3. This Research incorporates closed ended questions only; stimulus-based questionnaire or experiment could provide better outcomes.
4. This research work was generalized; research work focused on particular product/service type, or commercial enterprise, and respondents is likely to be more insightful.
5. Effects of sub-factors (interactivity, informativeness etc. for SMA; trustworthiness for EWM; willingness to follow for PI) has not been observed independently in this research.

6. Conclusion

Through this study, we investigated the influence of SMA and EWM on the PI of consumers, where EWM was mediating variable.

The outcome of this research confirms Hypothesis I, i.e., SMA has a significant influence on purchase intentions.

Though SMA has a significant influence on EWM; however, no significant influence of EWM has been observed on the purchase intentions. Also, EWM no mediating effect on purchase intention. Therefore, Hypothesis II & III has been rejected.

As the outcome of this study is contrary to our understanding based on the available literature, we feel that a more elaborate analysis is required to arrive at any conclusive result; to do so, we need to remove some of the limitations (1-4) highlighted in the previous section.

7. Team members and their contribution

Name	**Contribution (**in project work**)**	**Contribution** (on scale of 10)
Rahul Verma (19214266)	Introduction Literature Review Survey Data Collection Methodology Results and Analysis Construct Reliability and Validity Conclusion	10
Saroj Anjesh (170634)	Introduction Literature Review Survey Data Collection Results and Analysis Construct Reliability and Validity Conclusion	9.25
Vivek Verma (170810)	Introduction Literature Review Survey Data Collection Conclusion	8

Appendix

Measurement Items:

Social Media Advertisements		
Social media advertisements and product promotion activities are good source of up-to-date product information.	**SMA1**	[11]
Social media advertisements and product promotion activities provides complete product information.	**SMA2**	
I feel that social media advertisements and product promotion activities are Trustworthy.	**SMA3**	[12][13]
I feel that social media advertisements and product promotion activities are believable.	**SMA4**	
Social media advertisements and product promotion activities is effective in gathering customers' feedback.	**SMA5**	[14]
Social media advertisements and product promotion activities makes me feel like it wants to listen to its customers.	**SMA6**	
Social media advertisements and product promotion activities are important to me.	**SMA7**	[15]
Social media advertisements and product promotion activities are useful to me.	**SMA8**	
Electronic Word of Mouth		
To make sure I buy the right product, I often read other consumers' social media product reviews.	**EWM1**	[16]
I frequently gather information from consumers' social media product reviews before I buy a certain product.	**EWM2**	
When I buy a product, consumers' social media product reviews make me confident in purchasing the product.	**EWM3**	
Purchase Intention		
I desire to buy products that are promoted on social media.	**PI1**	[6]
I am likely to buy products that are promoted on social media.	**PI2**	
I plan to purchase products that are promoted on social media.	**PI3**	
I buy products that are promoted on social media.	**PI4**	

References:

1. Internet users in India: https://www.statista.com/statistics/255146/number-of-internet-users-in-india/
2. Digital advertising in India 2021: Dentsu Aegis Network (DAN) report. (http://www.e4media.net/mailer2018/dentsu-e4m-DigitalAdvertisingReport2021.pdf)
3. Influencers gain traction: Mint, 16 November, 2020. (https://www.livemint.com/industry/media/brands-deepen-influencer-engagement-as-consumers-spend-more-time-online-11605436755088.html)
4. Alalwan, A. A., Rana, N. P., Dwivedi, Y. K., & Algharabat, R. (2017). Social media in marketing: A review and analysis of the existing literature. Telematics and Informatics, 34(7), 1177-1190.
5. Mangold, W. G., & Faulds, D. J. (2009). Social media: The new hybrid element of the promotion mix. Business horizons, 52(4), 357-365.
6. Duffett, R. G. (2015). Facebook advertising's influence on intention-to-purchase and purchase amongst Millennials. Internet Research, 25(4), 498–526.
7. Chatterjee, P. (2001), "Online reviews: do consumers use them?", Advances in Consumer Research, 28 (1), 129-33.
8. Hennig-Thurau, T., Gwinner, K.P., Walsh, G. and Gremler, D.D. (2004), "Electronic word-of-mouth via consumer-opinion platforms: what motivates consumers to articulate themselves on the internet?", Journal of Interactive Marketing, 18 (1), 38-52.
9. Chevalier, J.A. and Mayzlin, D. (2006), "The effect of word of mouth on sales: online book reviews", Journal of Marketing Research, 43 (3), 345-54.
10. Rowley, J. (2001), "Remodelling marketing communications in an internet environment", Internet Research, 11 (3), 203-12.
11. Logan, K., Bright, L. F., & Gangadharbatla, H. (2012). Facebook versus television: Advertising value perceptions among females. Journal of Research in Interactive Marketing, 6(3), 164–179.
12. Sinkovics, R. R., Pezderka, N., & Haghirian, P. (2012). Determinants of consumer perceptions toward mobile advertising—a comparison between Japan and Austria. Journal of Interactive Marketing, 26(1), 21-32.
13. Van-Tien Dao, W., Nhat Hanh Le, A., Ming-Sung Cheng, J., & Chao Chen, D. (2014). Social media advertising value: The case of transitional economies in Southeast Asia. International Journal of Advertising, 33(2), 271-294.
14. Jiang, Z., Chan, J., Tan, B. C., & Chua, W. S. (2010). Effects of interactivity on website involvement and purchase intention. Journal of the Association for Information Systems, 11(1), 34.
15. Zeng, F., Huang, L., & Dou, W. (2009). Social factors in user perceptions and responses to advertising in online social networking communities. Journal of Interactive Advertising, 10(1), 1–13.
16. Bambauer-Sachse, S., & Mangold, S. (2011). Brand equity dilution through negative online word-of-mouth communication. Journal of retailing and consumer services, 18(1), 38-45.
17. The PROCESS macro for SPSS, SAS, and R. (https://www.processmacro.org/index.html)