Sentiment Analysis of Customer Satisfaction Towards Repurchase Intension and the Word-Of-Mouth Advertising in Online Shopping Behavior Using Regression Analysis and Statistical Computing Techniques

Anchal Singh[1], **Dr. Vijay Kumar[2]**

Abstract: This study aims to find the effect of Customer Satisfaction on the Repurchase Intensionand the Word-of-Mouth Advertising in Online Shopping Behavior. The exploratory research design is used for the exploration of new facts, new knowledge, and new information on onlineshopping trends. The descriptive research design is used to test the hypothesis. A total of 339respondents are selected for the study of Customer Satisfaction Towards Repurchase Intension and the Word-of-Mouth Advertising in Online Shopping Behavior. The significance level is set at 5% in this study. The correlation and regression analysis are used for the cause-and- effect relationship between independent and dependent variables. The line and pie chart are also used for the pictorial presentation of the data. The SPSS 23.0 version software is used for the data analysis. The findings concluded that there is significant effect of Customer Satisfaction on the Repurchase Intension and the Word-of-Mouth Advertising in Online Shopping Behavior.

Keywords: Customers Satisfaction; Word-of- Mouth Advertising; Online Shopping Behavior

1. Introduction

In the sphere of consumer purchasing behavior, digital marketing has advanced at a blistering pace, outpacing the competition. When it comes to shopping for goods and services,consumers are becoming more educated about the use of digital marketing. Customer satisfaction is critical to the success of any organization since customers are the most important stakeholders in every business, regardless of whetherthe organization is in the service or the manufacturing industries. The purpose of this study is toinvestigate the impact of Customer Satisfaction on the repurchase intension and the word of mouth in shopping online. The customer's satisfaction is determined by a variety of factors, including product quality, product packaging, product price, product distribution, product promotion, after-salesservice of the products, warranty and guarantee of the products, replacement policy, behaviorof the sales executive or customer care executive, delivery of the products, self-respect associated with owning the product, social recognition, and so on. When a firm provides excellent service to its customers, the customers' pleasure and loyalty to the company increase.

In the digital age, internet shopping has seen a great

increase in popularity because it allows customers to buy for items and services from the comfort of their own homes during a tough period such as the COVID pandemic.

2. Literature Review

The previous literatures are reviewed in the context of the current study and previous authors found the significant results as consumer Customer variables such as generational age,degree of internet usage, whether or not consumers prefer to have a large number of options, and whether or not they enjoy shopping all influence the correlations between consumer perceptions and online purchases. (Punj, 2011) Because potential online buyers consider transaction security and the fulfilment process to be far more important issues than product prices or general company information, there is a significant relationship between consumers' purchase decisions and internet security of online marketing activities. This leadsto consumers being more cautious in order to avoid being defrauded. (Gabriel & Kolapo, 2015) Another important element when it came to online shopping was the convenience factor,as people preferred to shop from the comfort of their own homes rather than going out and browsing around stores. (Dost et al., 2015) The influence of the digital channels not aiding inthe shift of view of consumer towards acquiringa product, but in the future, the digital channels influence the customer purchase opinion as there is a consideration for digital channels among customers are visible. (Mahalaxmi & P.

[1]Research Scholar, Maharishi University of Information Technology, Sitapur Road, P.O.Maharishi Vidya Mandir, Lucknow-226013(U.P.)
[2]Assistant Professor of Management, Maharishi University of Information Technology,Sitapur Road, P.O. Maharishi Vidya Mandir, Lucknow-226013(U.P.)

Ranjith, 2016) After discovering that television advertising is more dependable than online advertising, the researchers cameto the conclusion that internet advertising contributes the most to consumer behaviour and that internet advertising is a significant element in forecasting consumer behaviour.(Dr Priya Kalyana sundaram, 2017) As buying habits change, marketers must gain a better understanding of young people in order to develop appropriate marketing strategies to retain current customers while also capturing potential customers. Only in this way can markets transition from a traditional customer-oriented marketing approach to a Technological Customer-Oriented Marketing approach in the near future. (Sivasankaran, 2017) The majorityof customers are pleased with the things they have purchased through the digital channel. A corporation may accomplish a great deal more with Digital Marketing if they understand andmeet the wants of their customers. (Deekshith & Kinslin, 2016) Consumers in tier-III cities doshop online, according to the findings of the survey, which corroborate an earlier analysis by eBay's India Census (2014), and convenience factors influence consumers' decisions to shop online positively. (Sonwaney & Chincholkar, 2019) The S-commerce idea was introduced, and its fundamental parts were outlined. They also provided a clear perspective on the consumer's online impulse buying behaviour and recognised the fundamental contrasts between impulse buying activity, unplanned buying behaviour, and planned (rational) buying behaviour. Furthermore, they discussed the primary aspects of impulse purchasing. (Abdelsalam et al., 2020)

3. Research Gap

Based on the literature review, the research gaps are identified as, there was little work carriedout on the effect of customer satisfaction on the repurchase intension and the word-of-mouth advertising in Online Shopping Behavior, hence this was the main research gap of the said study. Most of the previous studied focused the customer satisfaction as a dependent variablebut in this study, the customer satisfaction is treated as independent variable predicting two dependent variables as repurchase intension and the word- of-mouth advertising.

4. Objectives

● To find the effect of consumer satisfaction on the repurchase intension in online shopping

● To find the effect of consumer satisfaction on the word-of-mouth advertising in online shopping

5. Hypotheses

● H01: There is no effect of consumer satisfaction on the repurchase intension in online shopping

● H11: There is an effect of consumer satisfaction on the repurchase intension in online shopping

● H02: There is no effect of consumer satisfaction on the word-of-mouth advertisingin onlineshopping

● H12: There is an effect of consumer satisfaction on the word-of-mouth advertisingin onlineshopping

6. Data

Primary and secondary data are collected for the said study. The primary data are collected from 339 respondents through the structured questionnaire. The two main scales are used in the questionnaire. The nominal scale is used for the gender and age questions and 5 points Likert scales are used for the various items of customer's satisfaction, repurchase intension, and word of mouth advertising in online shopping behavior.

7. Methodology

The methodology of this research is discussed under the research process and research design. The Research Process involved the observation, literature review, formulation of the Questionnaire, theory formulation, formulation of hypotheses, data collection, data analysis, and conclusion of the objectives. The resign design involved the type of research, unit of analysis, the time horizon of the study, development of the questionnaire, content validity, pilot study, reliability of measurement instruments, the population of the study sample of the study, data collection, data editing, coding, and data analysis using the various parametric andnon-parametric test. The exploratory research design is used for the exploration of new facts,new information, new knowledge which has helped in the formulation of a hypothesis and descriptive cross-sectional research design is used to test the hypothesis in a selected period.

The content validity is checked by showing the questionnaire to the expert. The reliability is checked using Cronbach's Alpha. The non-probability snowball sampling techniques are usedin this survey. In this study, correlation and regression are used because there is a cause-and-effect relationship among the three constructs that is repurchase intension, word of mouth, and customer satisfaction in online shopping behaviour. The line and pir chart are used for thepictorial presentation of the results and findings. The data analysis is performed using statistical software SPSS 23.0 version.

Results

After creating the variables in variable view and entering the data in data view in the SPSS software, the data are analyzed using two main statistical tools that are correlation and regression. In correlation and regression analysis, the effect of the independent variable (x) is checked on the dependent variable (y). In this study, the digital marketing e-quality serviceis an independent variable whereas customer trust and customer satisfaction are treated as dependent variables. In another case, customer satisfaction is taken as the independent variableand repurchase intension and word-of mouth advertising are considered as the dependent variables. Both the independent and dependent variables are measured on 5 points Likert scalestating as 1 strongly disagree and 5 strongly agree. The SPSS 23.0 version outputs are as follows:
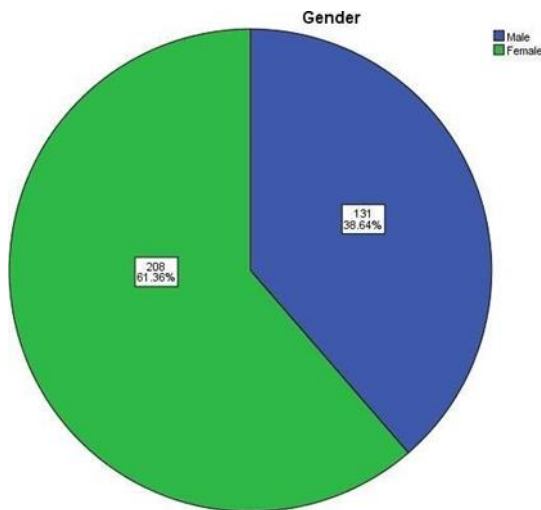
Demographic Profile

Fig. 1: Gender

Source: SPSS 23.0

output

From bar chart 1, it is clear that 61.36% of respondents are female whereas 38.64% of respondents are male customers in online shopping, therefore it can be concluded that most ofthe respondents are female and hence said that female customers are more attracted towards online shopping.
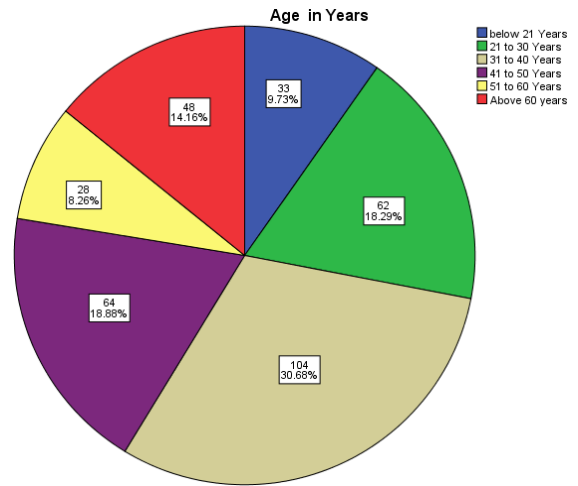

Fig. 2: Age

Source: SPSS 23.0 output

Correlation & Regression Analysis Using Computing Techniques

In correlation and regression analysis, the effect of the independent variable (x) is checked onthe dependent variable (y). The enter method is used in the correlation and regression analysis.

Case I:

Regression Model, Y (Repurchase Intension) = a+ b X (Customer Satisfaction) Table 1: Correlations between Purchase Intension and Customer Satisfaction

		Repurchase Intension	Customer Satisfaction
Pearson Correlation	Repurchase Intension	1.000	.615
	Customer Satisfaction	.615	1.000
Sig. (1-tailed)	Repurchase Intension	.	.000
	Customer Satisfaction	.000	.
N	Repurchase Intension	339	339
	Customer Satisfaction	339	339

Source: SPSS 23.0 output

From bar chart 2, it is clear that that 9.73% of

respondents belong below 21 years of age, 18.29% belong to the 21 to 30 years of age group, 30.68% belong to 31 to 40 years, 18.88%

belong to 41 to 50 years, 8.26% belong to 51 to 60 years, and 14.16% belong to above 60 years of age, therefore it can be concluded that most of the respondents are 31 to 40 years of age group. The age group between 31 to 40 years is more technology savvy and comfortable to handle the features of smartphones and can easily do online shopping

From the correlations table 1, it is clear that the Pearson correlation coefficient is 0.615 between Repurchase Intension and Customer Satisfaction, hence it can be said that there is a positive moderate coloration between both the variables. The sig. value is 0.000, hence the relationship is significant between Repurchase Intension and Customer Satisfaction.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.615 a	.378	.376	.85870	.378	204.572	1	337	.000

a. Predictors: (Constant), Customer Satisfaction

Source: SPSS 23.0 output

Table 3: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	150.844	1	150.844	204.572	.000b
	Residual	248.492	337	.737		
	Total	399.337	338			

a. Dependent Variable: Repurchase Intension

b. Predictors: (Constant), Customer Satisfaction

Source: SPSS 23.0 output

Table 4: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.318	.151		8.751	.000	1.022	1.614
	Customer Satisfaction	.624	.044	.615	14.303	.000	.538	.710

a. Dependent Variable: Repurchase Intension

Source: SPSS 23.0 output

From the model summary table 2, the R^2 was 0.378 means it explained 37.8 % of the variance that means good enough to select the model. From the ANOVA table 3, F=204.572 & Sig Value p value=0.000 less than 0.05 hence the model was highly significant. From the coefficient table 4, Customer Satisfaction (Sigvalue 0.000) was less than 0.05 was significant at a 5% significance level or a 95% confidence interval. Therefore, the regression equation would be in this case is Y (Repurchase Intension) =1.1318+(0.615) (Customer Satisfaction) and it can be concluded that if there is an increase of one unit in the parameters of Customer Satisfaction then there is an increase of 0.615 unit in the Repurchase Intension provided other variables are constant. The mean plots also confirmed these results. (See Figure 3)
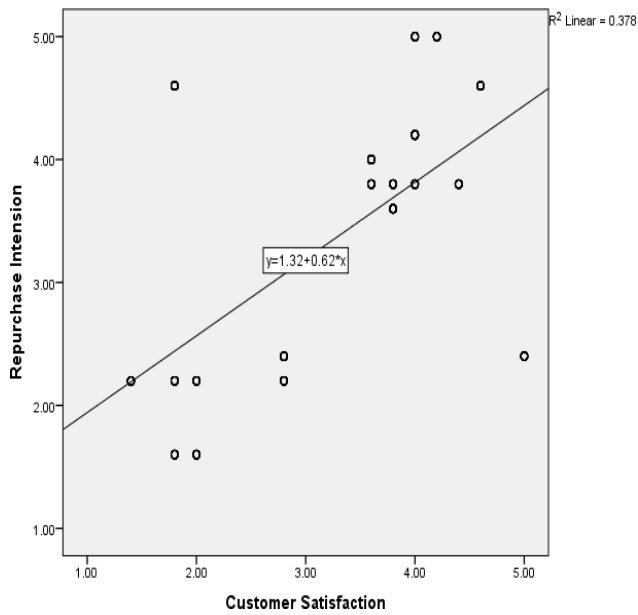
Fig. 3: Regression Line between Repurchase Intension and Customer Satisfaction

Source: SPSS 23.0 output

Case II:

Regression Model, Y (Word of Mouth Advertising) = a+ b X (Customer Satisfaction)

Table 5: Correlations

		Word of Mouth Advertising	Customer Satisfaction
Pearson Correlation	Word of Mouth Advertising	1.000	.631
	Customer Satisfaction	.631	1.000
Sig. (1-tailed)	Word of Mouth Advertising	.	.000
	Customer Satisfaction	.000	.
N	Word of Mouth Advertising	339	339
	Customer Satisfaction	339	339

Source: SPSS 23.0 output

From the correlations table 5, it is clear that the Pearson correlation coefficient is 0.631 between word-of- mouth advertising and customer satisfaction, hence it can be said that there is a positive moderate coloration between both the variables. The sig. value is 0.000, hence the relationship is significant between word-of-mouth advertising and customer Satisfaction.

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.631ᵃ	.398	.397	.79485	.398	223.176	1	337	.000

a. Predictors: (Constant), Customer Satisfaction

Source: SPSS 23.0 output

Table 7: ANOVAᵃ

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	141.000	1	141.000	223.176	.000ᵇ
	Residual	212.913	337	.632		
	Total	353.912	338			

a. Dependent Variable: Word of Mouth Advertising

b. Predictors: (Constant), Customer Satisfaction

Source: SPSS 23.0 output

Table 8: Coefficientsᵃ

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound

1	(Constant)	1.291	.139		9.260	.000	1.017	1.565
	Customer Satisfaction	.604	.040	.631	14.939	.000	.524	.683
a. Dependent Variable: Word of Mouth Advertising								

Source: SPSS 23.0 output

From the model summary table 6, the R^2 was 0.398 means it explained 39.8 % of the variance that means good enough to select the model. From the ANOVA table 7, F=223.176 & Sig Value p value=0.000 less than 0.05 hence the model was highly significant. From the coefficient table 8, Customer Satisfaction (Sig value 0.000) was less than 0.05 was significant at a 5% significance level or a 95% confidence interval. Therefore, the regression equation would be in this case is Y (Word of Mouth Advertising) =1.291+(0.631) (Customer Satisfaction) and it can be concluded that if there is an increase of one unit in the parameters of customer satisfaction then there is an increase of 0.631 unit in the word-of-mouth advertising provided other variables are constant. The regression line is shown in figure 4,
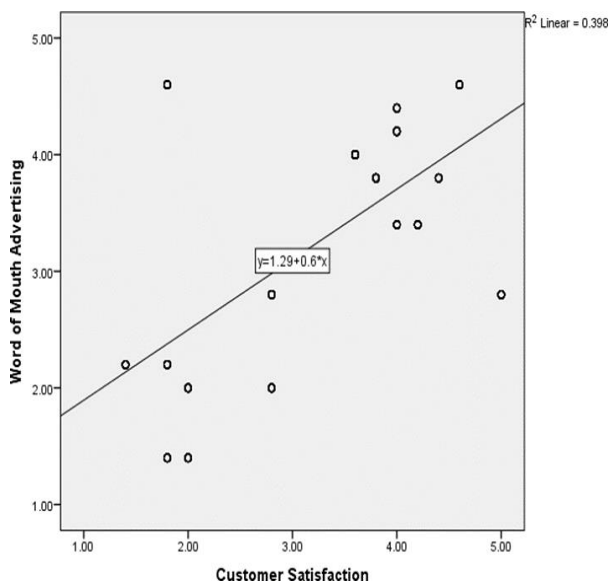

Fig. 4: Regression Line between Customer Satisfaction and Word of Mouth Advertising

Source: SPSS 23.0 output

8. Conclusion

Based on the two-regression model analysis in this study, it can be concluded that there is a significant effect of customer satisfaction on the repurchase intension as well as the word-of-mouth advertising in Online Shopping Behavior, hence the customer satisfaction, repurchase intension and the word-of-mouth advertising are interrelated. If more maximum customers are satisfied in online shopping, then they are intended to repurchase the goods and services, hence there is a significant impact on the word of mouth adverting which ultimately results in the wealth and profit maximization for the organization.

References

[1] Abdelsalam, S., Salim, N., Alias, R. A., & Husain, O. (2020). Understanding Online Impulse Buying Behavior in Social Commerce: A Systematic Literature Review. *IEEE Access*, 8, 89041–89058. https://doi.org/10.1109/ACCESS.2020.2993671

[2] Deekshith, D., & Kinslin, D. (2016). A study on digital marketing and its impact. *Journal of Chemical and Pharmaceutical Sciences*, 9(4), 2059–2062.

[3] Dost, B., Illyas, M., & Rehman, C. A. (2015). Online Shopping Trends and Its Effects on Consumer Buying Behavior: A Case Study of Young Generation of Pakistan. *NG-Journal of Social Development*, 417(3868), 1–22.

[4] Dr Priya Kalyanasundaram. (2017). A Study on Effect of Internet Advertising on Consumer Behaviour with special reference to Coimbatore. *International Journal of Marketing and Technology*, 7(6), 62–69.

[5] Gabriel, J., & Kolapo, S. (2015). Online Marketing and Consumer Purchase Behaviour: a Study of Nigerian Firms. *British Journal of Marketing Studies*, 3(7), 1–14.

[6] Mahalaxmi, K. R., & P. Ranjith. (2016). A Study on Impact of Digital Marketing in Customer Purchase Decision in Trichy.

[7] *International Journal for Innovative Research in Science & Technology*, 2(10), 332–338.

[8] Punj, G. (2011). Effect of Consumer Beliefs on Online Purchase Behavior: The Influence of Demographic Characteristics and Consumption Values. *Journal of Interactive Marketing*, 25(3), 134–144. https://doi.org/10.1016/j.intmar.2011.04.004

[9] Sivasankaran, S. (2017). Digital Marketing and Its Impact on Buying Behaviour of Youth (Special Reference to Kanyakumari District). *International Journal of Research in Management & Business Studies*, 4(3), 35–39.

[10] Sonwaney, V., & Chincholkar, S. (2019).

Identifying the factors impacting online consumer buying behavior. *International Journal of Scientific and Technology Research*, *8*(8), 445–456.

[11] S.K.A and S. R. Dogiwal. Reducing the Packets Loss Using New MAC Protocol. *IJRITCC* 2013, *1*, 747-751.

[12] S.K.A.. Secure Algorithm for File Sharing Using Clustering Technique of K-Means Clustering. *IJRITCC* 2016, *4*, 35-39.

[13] Satish Kumar Alaria, Prakash Dangi and Pratiksha Mishra. Design and Comparison of LEACH and Improved Centralized LEACH in Wireless Sensor Network. *IJRITCC* 2021, *9*, 34-39.

[14] Najneen Qureshi, Manish Kumar Mukhija and Satish Kumar, "RAFI: Parallel Dynamic Test-suite Reduction for Software", New Frontiers in Communication and Intelligent Systems, SCRS, India, 2021, pp. 165-176. https://doi.org/10.52458/978-81-95502-00-4-20.

[15] Satish Kumar Alaria and Abha Jadaun. "Design and Performance Assessment of Light Weight Data Security System for Secure Data Transmission in IoT", Journal of Network Security, 2021, Vol-9, Issue-1, PP: 29-41.

[16] Pratiksha Mishra Satish Kumar Alaria. "Design & Performance Assessment of Energy Efficient Routing Protocol Using Improved LEACH", International Journal of Wireless Network Security, 2021, Vol-7, Issue-1, PP: 17-33.

[17] Ashish Raj, Vijay Kumar, S. K. A. V. S. Design Simulation and Assessment of Prediction of Mortality in Intensive Care Unit Using Intelligent Algorithms. *MSEA* 2022, *71*, 355-367.

[18] Dogiwal, Sanwta Ram, Y. S. Shishodia, Abhay Upadhyaya, Hanuman Ram, and Satish Kumar Alaria. "Image Preprocessing Methods in Image Recognition." *International Journal of Computers and Distributed Systems* 1, no. 3 (2012): 96-99.

[19] Vyas, S., Mukhija, M.K., Alaria, S.K. (2023). An Efficient Approach for Plant Leaf Species Identification Based on SVM and SMO and Performance Improvement. In: Kulkarni, A.J., Mirjalili, S., Udgata, S.K. (eds) Intelligent Systems and Applications. Lecture Notes in Electrical Engineering, vol 959. Springer, Singapore. https://doi.org/10.1007/978-981-19-6581-4_1