Customer Engagement in Online Retailing: A Regression Analysis

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Abstract: Customers are gradually moving towards shopping online albeit with several challenges yet to be addressed by online retailers. Shopping in an online environment provides access to a plethora of information about products and services, customer reviews, variety of products, and all this at the cost of spending less time compared to visiting physical retail stores. The question is as to how successful is the engagement strategy of online retailers and how this impacts future purchase intentions and subsequent loyalty intentions. A study was undertaken to examine and analyse these aspects. 416 online shoppers who were well acquainted with the online retailer were surveyed at Chennai to elicit their perception levels and behavioural intentions. Regression analysis was performed on the primary data and the insights thereof are presented.

Index Terms - **Retailing, Online, Customer, Engagement**

I. Background

The fetish for shopping online is growing by the day as people scramble to manage work and home. Table 1 depicts the average number of online transactions (per person per year) across the world.

Table 1
Online Transactions Per Person Per Year

World Region	Online Transactions Percentage
North America	19
Western Europe	18.4
Eastern Europe and Russia	11.9
Asia	22.1
Latin America	9.2
Africa and Middle East	11
Australia and New Zealand	16.1

Source: KPMG (2017)

It can be observed from Table 1 that the maximum percentage for average number of online transactions (per person per year) was observed in Asia followed by North America and Western Europe.

II. Need for the Study

Visits to physical retail outlets has become a nightmare with traffic and parking problems. Hence shopping online seems to be a better option. However, marketers and customers have found that several challenges still exist in online retailing environment. Amongst all problems, the problem of online customer engagement is paramount. Engaging customers online is more difficult than in physical stores. This research was undertaken to analyse consumer perceptions of online engagement aspects and their loyalty intentions.

III. Review of Literature

III.1 Consumer Behaviour in Online Shopping: Yolanda et al. (2017) tested the influence of cultural factors on consumer behaviour in online shopping. This study identified that cultural factors, social factors, personal factors; and psychology factors have

significant influence on online consumer behaviour. It was found that referral group, family role and status of social factors, life cycle position, economic condition, lifestyle, and self-concept of personal factors affect shopping behaviour significantly. Moreover, motivation, perception, study, trust and behaviour of the consumers also changes their behaviour. Culture, subculture, and social class too alter behaviour of consumers. It was concluded that consumers shop online since it is based on the development of modern culture. Modern culture is concerned with the attitude towards spending, purchasing luxury goods, and eagerness to purchase through online as stylish comfort and behaviour.

Kinker and Shukla (2016) analysed consumer behaviour towards online shopping of electronic goods. This study emphasised that online shopping consumer behaviour is different than physical market where the customers have direct access to products. This study stressed that consumer behaviour is highly based on buying preferences which is affected by buying habits and fondness of the consumers. It is also governed by psychological and social drivers that influence buying decision process. Findings revealed that time saving, convenience, accessibility, product price, product quality, shop anywhere and anytime are the important factors in influencing customer attitude towards purchase of electronic goods. Promised quality, cash on delivery, promotions, discounts, offers, and replacement guarantees are the main factors affecting customer attitude toward electronic product purchase online. It was concluded that consumer based factors and technology oriented factors affect the buying behaviour of online shoppers.

Maheshkumar and Sobha (2016) investigated consumers' attitude towards online shopping. This study revealed that customers have certain attitude towards online shopping, which includes (i) shopping on internet saves time, (ii) shop round the clock, (iii) online shopping is risky, (iv) it takes long time to delivery, and (v) variety of goods. Website accuracy, security, money transfer problems, and purchasing decisions based on home delivery also forms consumer attitude. Results of the study revealed that attitude of the consumers are mainly positive towards online purchasing. Findings also indicated that the perceived marketing mix, as well as perceived reputation factors could influence consumers' attitude towards adopting online shopping. It was concluded that online buyers expect fast delivery, low price, high quality, replacement of defective articles, and secured transactions in online shopping.

Bashir et al. (2015) examined the influence of online shopping trends on consumer buying behaviour. This study recognised that time; convenience, privacy, trust, and product collection are the determining factors in online shopping behaviour. Results of the study revealed that trust is the most influencing factor in consumer buying behaviour in online shopping among younger generation. Trust plays significant role in inducing the younger generation to shop online. Internet browsing experience, and trust on online sales directs them to purchase goods online. Findings also revealed that customers are reluctant to furnish their personal data while buying goods online; hence cash on delivery assist them to purchase. It was concluded that time, convenience, privacy, trust, and product collection have significant effect in online shopping behaviour of consumers.

Ganapathi (2015) assessed the factors influencing online shopping behaviour of consumers. This study revealed many consumers shop online to buy products, collect product information and often collect information by learning and comparison. Online shopping plays tremendous role in the overall connection among the online sellers and consumers. Results of the study revealed that convenience, security, website attributes and design, time saving, and high information furnished are the main factors influencing online shopping behaviour of consumers. Findings also revealed that online shopping is easier due to the websites being designed to be easy, effortless and expedient. It was concluded that adequate inventory, tracking system, speed delivery, replacement of defective goods, and avoidance of fraudulent dispatch will increase consumer behaviour in online shopping.

III.2 Identification: Jing et al. (2017) investigated the values of virtual brand community engagement of Facebook brand page. This study revealed different motives which probably encouraged virtual brand community engagement in the social network brand page. In order to market more goods, customer identification is the major motive of online sellers in social networking sites. Proper identification and focus of customer interest on a product can yield extraordinary results in sales. Results revealed that functional benefit, hedonic benefit, economic benefit, and social benefit are the antecedents of passive and active participation of customer engagement. Both passive and active participation can lead to outcomes like attitudinal loyalty, behavioural loyalty, and satisfaction. It was concluded that virtual brand community engagement ensures significant outcome for the consumers.

III.3 Enthusiasm: Lim et al. (2015) aimed to check the factors affecting online shopping behaviour through the mediating role of purchase intention. This study revealed that enthusiasm and convenience in online shopping plays an emerging role among the customers. The occurrence of online shopping has raised the attention of online vendors to focus on this phenomenon. This study highlighted that perceived usefulness, subjective norms, and online shopping behaviour has mediating effect on the purchase intention. Findings of the study revealed that perceived usefulness and subjective norm constructively influence online buying intention of customers. In addition to that the subjective norms immaterially influence shopping behaviour in a negative way. It was also found that perceived usefulness also has insignificant effect on online shopping behaviour of customers. It was concluded that customer engagement in shopping is influenced by various factors.

III.4 Attention: Murali (2017) examined the attractive, discouraging and expectation factors in online shopping. This study considered that customer engagement online is concerned with customer attention, reliability, brand image and reputation of the

online retailer. Results revealed that trust on the website, warranty, consumer preference, post-sales service, positive online atmosphere, website attractiveness, excitement, long-term continuity, and flexibility have direct effect on customer engagement. Furthermore, if the customer engagement is more, the customer experience with the brand is found to be at a satisfactory level. It was found the rural customers preferred to buy certain products online occasionally but urban customers prefer to buy more online. Findings of the study revealed that customers preferred to buy and continuously engage with the online seller who offers positive online atmosphere. It was concluded that online shopping is found to be attractive and meets customer expectations.

III.5 Absorption: Sachdeva and Goal (2017) attempted to check the factors influencing customer engagement in retail stores and online shopping portal. This study revealed that engagement is concerned with involvement and participation. This study also emphasised that buying decisions and loyalty of consumer is highly influenced by both rational and emotional factors. Results of the study revealed that store decoration, visual appearance, and service standards play a vital role in attracting customers to retail stores. Similarly, website quality, appearance, fast delivery, reliability, and reputation are influencing factors of customer engagement in online shopping. Findings also indicated that customer absorption factors increased sizeably in online shopping portals. It was concluded that customers belonging to the youngster segment preferred to buy online rather than at physical retail outlets.

III.6 Interaction: Farook and Aberysekara (2016) examined the influence of social media marketing on customer engagement. This study revealed that social media facilitate active communication between online sellers and customers and prompt interaction among the customers. Results of the study indicated that social media ensures trust on information, concern for privacy, perception of reliability, security in social media, and use of social media. Put together, these factors make customer engagement a form of involvement, satisfaction, commitment, and trust on online shopping. It was concluded that social media has positive and significant impact on customer engagement in online shopping.

III.7 E-Loyalty: Rajayogan amd Muthumani (2017) attempted to measure the factors influencing online buying behaviour of consumers. This study identified that motive drivers for online purchase, control of internet, and frequency of online purchase. This study revealed that online shopping is enormously getting attention in the field of e-business. Due to its extraordinary growth, many retail outlets commenced their online operation to market their products and services. This study revealed that online shopping enhances the shopping experience of the consumers and leads to higher e-loyalty. Results indicated that gender has significant influence on frequency of online purchasing and control on internet. Results also showed that age, and occupation has no significant relationship with frequency of online purchase. Findings of the study concluded that frequency of online shopping is relatively low which leads to lower level of e-loyalty.

Ramar and Muthukumaran (2016) investigated consumer behaviour towards online shopping. This study revealed that online shopping fosters best costs, plenty of items and completely hassle-free shopping with product knowledge for customers. Results showed that time, discount, easy shopping, payment options, security, customer service, detailed product information, comparison, and cost effective delivery influence customer to shop online. Moreover, search engine, e-commerce, e-mail, social media, websites, data analytics, online advertisements, promotion, sponsorship, and events have effect on online shopping. In addition to that attractive prices and offers, reliability of information, variety of products, and popularity of the portal also have influence on online shopping of customers. Put together, online shopping habit of customers brings more customers and increased e-loyalty. It was concluded that affirmative consumer behaviour in online shopping establishes more e-loyalty.

Beranek et al. (2015) examined the factors influencing customer repeated purchase behaviour in the e-commerce context. Forecasting customer buying behaviour in e-commerce is a herculean task. This study identified that switching barriers, customer satisfaction, intention for repeat purchase, and structural assurance have significant influence in customer repeated purchase behaviour. Results indicated that customer satisfaction is the most effective factor. Satisfied customers show more e-loyalty in online shopping and refer others to make purchase online. It was also found that customer perception of website has a strong influence on customer repeat buying behaviour. Uninterrupted service can increase customer satisfaction and loyalty. It was concluded that switching barriers, intention to repurchase, and structural assurance has positive impact on customer repeated buying behaviour.

Khan and Chavan (2015) examined the factors influencing online consumers behaviour while purchasing electronic goods in online mode. It also attempted to check motivational factors influencing online shopping behaviour of electronic goods. This study considered aspects like security, reliable transactions, website design, customer service, and e-service quality in online consumer behaviour. It was also found that online retailers are taking more effort to make it easier and secure to do shopping. Results also revealed that consumer e-loyalty is higher when the customers show positive behaviour in online shopping. Domain specific innovation has positive influence on online shopping behaviour of consumers. Findings showed that factors such as security, reliable transactions, website design, customer service, and e-service quality have positive and direct influence on consumer behaviour in online shopping.

IV. Methodology

Structured questionnaire was administered to survey 416 online consumers based at Chennai city in southern India. Purpose sampling ensured that only those consumers who made frequent online purchases and were familiar with the online retailer were selected for the survey.

V. Analysis and Results

The Dependent variable was E-tailer Loyalty (Y) and the Independent variables were Identification (X_1), Enthusiasm (X_2), Attention (X_3), Absorption (X_4), and Interaction (X_5). Tables 2 and 3 summarise the model and variance respectively.

Table 2
Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.595[a]	0.354	0.346	1.80875

a. Predictors: (Constant), Interaction, Attention, Absorption, Identification, Enthusiasm.

Table 3
Variance

Model		Sum of Squares	df	Mean Square	F	p
1	Regression	793.444	5	158.689	44.992	0.000[b***]
	Residual	1446.095	410	3.527		
	Total	2239.538	415			

a. Dependent Variable: E-tailer Loyalty
b. Predictors: (Constant), Interaction, Trust, Attention, Absorption, Identification, Enthusiasm
*** significant at p<0.001

Model reveals that R value was 0.595 and R Square value was 0.354. F value was 44.992 and p value was significant at 0.1%.

The multiple correlation coefficient being 0.595 measures the degree of relationship between the actual values and the predicted values of E-tailer Loyalty. Because the predicted values are obtained as a linear combination of Identification (X_1), Enthusiasm (X_2), Attention (X_3), Absorption (X_4), and Interaction (X_5), the coefficient value of 0.595 indicates that the relationship between E-tailer Loyalty and the five independent variables is quite strong and positive.

The Coefficient of Determination R-square measures the goodness-of-fit of the estimated Sample Regression Plane (SRP) in terms of the proportion of the variation in the dependent variables explained by the fitted sample regression equation. Thus, the value of **R square is 0.354** simply means that about 35.4**%** of the variation in E-tailer loyalty is explained by the estimated SRP that uses Identification (X_1), Enthusiasm (X_2), Attention (X_3), Absorption (X_4), and Interaction (X_5) as the independent variables and R square value is significant at 0.1% level.

The multiple regression values for the variables are summarised in Table 4.

Table 4
Variables in the Multiple Regression Analysis

Variables	Unstandardised co-efficient B	Std. Error of B	Standardised co-efficient Beta	t value	p value
Constant	10.692	0.321	-	33.298	0.000***
X_1	0.246	0.050	0.390	4.956	0.000***
X_2	0.299	0.070	0.377	4.253	0.000***
X_3	0.504	0.101	0.398	4.991	0.000***
X_4	0.146	0.072	0.156	2.039	0.042*
X_5	0.058	0.101	0.042	0.577	0.046*

* Denotes significant at 5% level; *** Denotes significant at 0.1% level

The multiple regression equation is

$$Y = 10.692 + 0.246X_1 + 0.299X_2 + 0.504X_3 + 0.146X_4 + 0.058X_5$$

The coefficient of X_1 is 0.246 represents the partial effect of Identification on E-tailer Loyalty, holding the other variables as constant. The estimated positive sign implies that such effect is positive and that E-tailer Loyalty would increase by 0.246 for every unit increase in Identification and this coefficient value is significant at 0.1% level.

The coefficient of X_2 is 0.299 represents the partial effect of Enthusiasm on E-tailer Loyalty, holding the other variables as constant. The estimated positive sign implies that such effect is positive and that E-tailer Loyalty would increase by 0.299 for every unit increase in Enthusiasm and this coefficient value is significant at 0.1% level.

The coefficient of X_3 is 0.504 represents the partial effect of Attention on E-tailer Loyalty, holding the other variables as constant. The estimated positive sign implies that such effect is positive and that E-tailer Loyalty would increase by 0.504 for every unit increase in Attention and this coefficient value is significant at 0.1% level.

The coefficient of X_4 is 0.146 represents the partial effect of Absorption on E-tailer Loyalty, holding the other variables as constant. The estimated positive sign implies that such effect is positive and that E-tailer Loyalty would increase by 0.146 for every unit increase in Absorption and this coefficient value is significant at 5% level.

The coefficient of X_5 is 0.058 represents the partial effect of Interaction on E-tailer Loyalty, holding the other variables as constant. The estimated positive sign implies that such effect is positive and that E-tailer Loyalty would increase by 0.058 for every unit increase in Interaction and this coefficient value is significant at 5% level.

VI. Conclusion

Based on standardised coefficient of multiple regression analysis, Attention (0.504) is the most important factors to extract E-tailer Loyalty, followed by Enthusiasm (0.299), Identification (0.246), Absorption (0.146), and Interaction (0.058). Attention was observed to be the most significant in online retailing. Retailers need to evolve websites that attracts the attention of online shoppers in the least span of time. Issues concerning security and privacy need to be addressed and trust must be built else online shoppers would be wary of purchasing products sold on websites. An integrated marketing approach needs to be followed and omni channels must be available. Information available in the website needs to be exhaustive and must be updated on a regular basis. Change in visuals will dispel monotony.

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