

Online Reviews: Determining the Perceived Quality of Information

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Abstract— The technology scape has undergone tremendous changes in the last couple of decades. With increased changes in technology a lot of changes have occurred in the way consumers behave. One major change area is in the way consumers gather information about the products to make purchase decisions. Online reviews have become the major source of information and have taken over many traditional sources that existed earlier. The quality of information obtained from any source plays a major role in the consumer decision making. In this study the factors that influence the consumer perception of information quality of online reviews are identified. For this purpose a conceptual model was developed by reviewing literature in the following areas, online reviews, electronic word of mouth, and information quality. The model was tested using a pan India survey. The sample size included 155 online consumer review readers in their product purchase to identify the impact of various factors on perceived quality of information. The data was analyzed using ordered logistic regression. This study identified that factors such as Perceived Informativeness, Perceived Persuasiveness, Source Credibility, and Attitude towards Online Reviews have significant positive impact on the consumer's perception of quality of information obtained from online reviews.

Index Terms— Online Reviews, Online Consumer Reviews, Electronic Word of Mouth, Quality of Information, Perceived Informativeness, Perceived Persuasiveness, Source Credibility, Attitude towards Online Reviews.

I. INTRODUCTION

With the rapid changes in the information technology scape, the way consumers gather information about various products has also changed. Today plenty of opportunities are available online for the consumers to gain information about any product they are willing to buy including online forums, online user reviews, online expert reviews, company websites, social media, blogs and much more[1]. A study by Chen et.al suggests that depending on the information susceptibility level of the individual consumer the way they look at different sources of online information varies. Individuals with high susceptibility to information consider information from online review sources more useful than individuals with low information susceptibility[2].

Many studies show that online reviews have become the new source of information used by most consumers in their purchase decisions today[3][4]. Consumers no longer depend only on company advertisements and their reference groups that provide either exaggerated or limited information[5]. Online user reviews are considered equivalent to Word of Mouth (WOM) communication in traditional marketing and are also called as E-Word of Mouth (EWOM) or Online Word of Mouth. This online word of mouth (EWOM) provides much detailed information about the product including its features, performance, issues and recommendations of the users. Often consumers do not follow the expert reviews and look for user reviews that provide view of people who experienced the products in their day to day life[6].

The paper is structured as follows. The research gap identified with the help of literature review followed by conceptual model and hypotheses development. Later it focuses on the methodology of this study, the analysis and finally the implications are discussed.

II. LITERATURE REVIEW

A. Online Consumer Reviews

Online Consumer Reviews (OCR's) also called as User Generated Content (UGC's) are the information posted by the consumers of a brand or product in various online forums. OCR's are a form of E-WOM and have a significant impact on the consumer purchase intention[4]. Now-a-days companies are using online consumer reviews as a part of their marketing campaigns. Online consumer reviews have significant differential impact on the product sales depending on the product and consumer characteristics[7].

Another study about online reviews by Mudambi and Schuff tries to identify what makes an online customer review helpful for other users. According to them review depth has a significant positive effect in making online customer reviews helpful for others[8].

B. Perceived Quality of Information

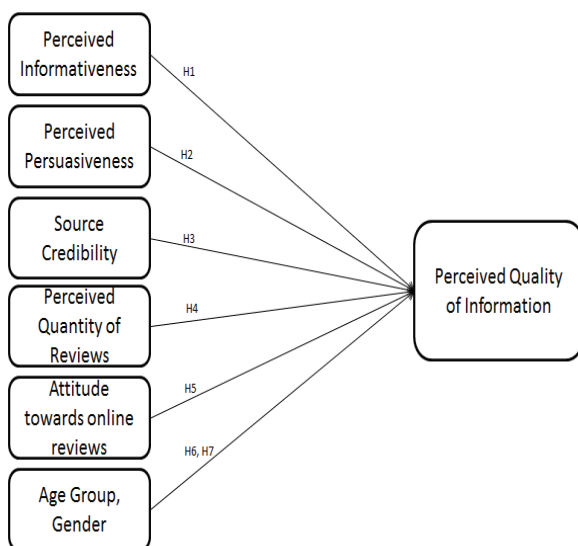
In making effective decisions with available information quality and quantity of information play an important role. Also when consumers search for information for their decision making the cost for the search is also an impacting factor[9]. The advantage of online consumer reviews is that they reduce this search cost and provide variety of information for the consumers to aid them in their decision making. Yet, how much the information from online reviews is perceived to be of good quality by the user is an important factor. According to Keller and Staelin [9] if there is information overload, that is abundant quantity of information or very high quality of information then it tends to decrease the decision effectiveness of the consumer. But if the information quality is below average then again it limits the effectiveness of the decision. Hence, information of good quality of optimal quality is required for users to make effective decisions.

The literature study clearly shows that quality of information is an important factor in consumer decision making. But what are the factors that influence the quality of information of online consumer reviews has not been studied so far.

III. CONCEPTUAL MODEL AND HYPOTHESES DEVELOPMENT

Based on an extensive review of the literature, this study proposes the following conceptual model to help understand the factors that influence the perception of quality of information from online reviews. These factors include perceived informativeness, perceived persuasiveness, source credibility, perceived quantity of reviews, attitude towards online reviews and other control factors such as age and gender.

FIGURE I: CONCEPTUAL MODEL



A. Perceived Informativeness

The major reason why consumers prefer online reviews is the information available from the review. The information must be relevant for the user and help him in his decision making[8]. Perceived Informativeness refers to how much information online reviews provide to the consumer to assist them in their purchase decision and help them avoid uncertainty[10]. The more informative the reviews are then there is a greater probability that the consumer will perceive the quality of information of online reviews to be high.

H1.1: Higher the informativeness of online reviews as perceived by the user, higher is the perceived quality of information.

B. Perceived Persuasiveness

The consumer decision making based on online reviews is highly influenced by the strength of Persuasiveness of the reviews. Perceived Persuasiveness refers to the strength of persuasiveness of the online reviews as perceived by the user[10]. The reviews will contain not only objective information about the product but also subjective and emotional information of the reviewer. Often they are the recommendations of the reviewer to the reader regarding the product. Also if the consumers are having knowledge about the persuasiveness levels of online reviews i.e. if they know that the reviews can be manipulative then they tend to be less affected by the reviews[11]. This is because consumers tend to think that if the reviews are highly manipulative (rather than persuasive) then the information quality from such reviews will be of low quality. If the recommendations are more convincing (persuasive) the consumer's perception of the information quality of online reviews tends to be higher.

H1.2: Higher the persuasiveness of online reviews perceived by the user, higher is the perceived quality of information.

C. Source Credibility

One important factor to be studied about online reviews is Source Credibility. It refers to trustworthiness of the information source and the expertise of the source to post reviews online. Source Credibility deals with more about the person who post the review rather than the content in it[10]. If the review is from a credible source, it will reduce the perceived risk and uncertainty for the consumer in his decision making by providing reliable information to them. A study by Bambauer-Sachse and Mangold[11] identify that if the consumers gain the product knowledge from a highly credible source, then the negative reviews from other sources do not have significant impact on their decision making. Considering this importance of Source Credibility lot of online portals have registered users who can post credible reviews about the products. Thus the hypothesis:

H1.3: Higher the credibility of the source of reviews, higher is the perceived quality of information of online reviews.

D. Perceived Quantity of Reviews

Another construct that can create bias in the consumer's decision making based on online reviews is this quantity of reviews. This refers to the number or volumes of reviews posted against a particular brand or product. This, similar to Source Credibility is not about the content of the reviews, but about the volume of the reviews. One distinct feature of online word of mouth which makes it more attractive to users is the availability of large volume of reviews unlike word of mouth which is limited to the known network of the user. The large number of reviews also suggests that many users have purchased the brand or product in the past[10]. Hence, the hypothesis,

H1.4: Higher the quantity of reviews as perceived by the user, higher is the perceived quality of information.

E. Attitude towards Online Reviews

Attitude of the consumer towards online reviews is a major factor that affects how each consumer look at online reviews. Attitude affects the behavioural intention of the consumers[12]. If consumers have a positive attitude towards online reviews; that is if they trust online reviews and include them in their decision making then their response will be different. Likewise if consumers have a negative attitude, then they are more likely to be aversive of online reviews or less believing the information from online reviews. Thus the impact of attitude towards online reviews in this study is hypothesized as follows

H1.5: Higher the positive attitude of user towards online reviews, higher is the perceived quality of information.

F. Age and Gender

Online Reviews are relatively new sources of information that help the consumers in their purchase decision which came into existence with development in the digital technologies. Hence digital natives will be more tech-oriented and referring to online reviews more than other age groups. Digital Natives refer to people who are either born and grew up during the digital era or people who adapt to digital technologies immediately. Depending on the age group, the consumer's perception towards online reviews and its quality of information might differ.

H1.6: Younger the age group of the consumer, higher is the perception of information quality.

Similarly, the way men and women access and process information can differ significantly. Hence the hypothesis

H1.7: Perception of information quality is significantly affected by the gender.

IV. METHODOLOGY

A. Questionnaire Development and Measures

A questionnaire was developed and an online survey was conducted to understand the factors influencing the perceived quality of information of online reviews. The questions measured various aspects of online reviews such as perceived informativeness, perceived persuasiveness, source credibility, perceived quantity of reviews, attitude towards online reviews and perceived quality of information of online reviews. Few questions were adapted from the existing information quality literature due to no previous research done to the best of our knowledge for online review information quality. The standard scales adopted from literature and the reasons for the same are explained below. The perceived informativeness, perceived persuasiveness, source credibility and perceived quantity of reviews measures were adopted from a scale developed by Zhang et.al[10]. The items were measured using 7 point Likert scale ranging from "Very Strongly Disagree" to "Very Strongly Agree". These scales measure the dimensions of the above constructs. The scale measuring Attitude towards Online reviews is adopted from the study by Hao et.al[13]. The scale measuring perceived information quality of online reviews is adopted from a study by Nicolaou et.al[14] for electronic data exchanges..

B. Data Description

For the purpose of this study data was collected from a sample of 155 people, across various age groups and location across India. The following table describe the sample collected for this study.

TABLE I: DESCRIPTION OF SAMPLE

Age Category	Female	Male
Less than 18	0	0
18-24	46	42
25-34	18	41
35-44	2	4
45-54	2	0
55 & above	0	0
Grand Total	68	87

The data was collected during the months of February and March 2016. The sample was collected from 35 cities across the country including Tier I, Tier II and Tier III cities. The following table describes the sample collected across the cities

TABLE II: SAMPLE DESCRIPTION (ACROSS CITIES)

Type of the City	No of Respondents
Tier I	79
Tier II	64
Tier III	12

C. Empirical Model

The following model was used to test the hypothesis

$$PQI = \beta_1 + \beta_2 PI + \beta_3 PP + \beta_4 SC + \beta_5 PQR + \beta_6 Atti + \beta_7 Age + \beta_8 Gender + U(1)$$

Where,

PQI = Perceived Quality of Information (Online Reviews)

PI = Perceived Informativeness

PP = Perceived Persuasiveness

SC = Source Credibility

PQR = Perceived Quantity of Online Reviews

Atti = Attitude towards Online Reviews

Age = Age Group of Respondents

Gender = Gender

U = Error term

The model was estimated using **ordered logistic regression**. This was preferred as the Perceived Quality of Information was measure on a 5 point Likert scale ranging from “Strongly Disagree” to “Strongly Agree” measured from 1 to 5 respectively. The ordered logistic regression was performed using Stata Software. The results of ordered logistic regression are given in Table 2.

V. RESULTS, DISCUSSION AND FUTURE RESEARCH

In accordance with the hypothesis, factors like Perceived Informativeness have a significant positive impact on the Perceived Quality of Information (Online Reviews). This implies that higher the Informativeness of Online Reviews as perceived by the customer higher will be the Perception of Quality of Information of Online Reviews. Similarly Perceived Persuasiveness and Source Credibility also have a significant impact on the Perceived Quality of Information of Online Reviews. Also Perceived Quantity of Reviews does not have significant impact on the Y Variable. This suggests that the importance is given to the informativeness of the reviews; its persuasion and users pay attention to the source but not the number of reviews.

Attitude also has a significant positive impact on the Perceived Quality of Information of Online Reviews. That is if the user has more positive attitude towards online reviews, then his perception of quality of information from online reviews is higher.

TABLE III: RESULTS OF THE REGRESSION MODEL

Independent Variables	Results of the Regression model		
	OR	Coefficient	P- Value
Perceived Informativeness	1.215	2.38*	0.017
Perceived Persuasiveness	1.190	2.47*	0.013
Source Credibility	1.158	2.60**	0.009
Perceived Quantity of Reviews	0.996	-0.05	0.963
Attitude towards Online Reviews	1.119	1.94*	0.052
Age group	0.906	-0.39	0.694
Gender	0.843	-0.51	0.608

a. Note: *, ** imply significance at the 5% and 1% level respectively

Age group and Gender do not have any significance on the consumer's perception about quality of online review information. The perception of quality of online review information is same across different age groups and is not high only for younger age groups. Also it is the same across men and women. Literature suggests that if the number of reviews against a particular brand or product is high, then it will affect the consumer's behavioural intention towards the brand or product[10]. However, in our study it is found that the number of reviews (Perceived Quantity of Reviews) does not have any significant impact on the perception of quality of information obtained from online reviews. Hence we can conclude that even though quantity of reviews affects the behaviour of the consumers, it does not affect their perception about the quality of information obtained from the reviews. In this study the focus is purely on identifying the factors affecting the Perceived Quality of Information (Online Reviews). Further research can be done to identify how the Perceived Quality of Information (Online Reviews) will affect the consumer behaviour. Research can also be done to identify how the perception of quality and its impact varies between high vs. low involvement product purchases. In this study the personality traits of the individual are not considered, but it can also become a major influencing factor in the perception of quality of information obtained from online reviews. Another interesting area of study is to identify the impact in different levels of the consumer purchase process; i.e. during information search what is the role of online review's information quality; its role in formation of the consideration set by the consumer and finally how it affects the purchase decision of the consumer. Individual studies can be done in each of these topics to understand the role of online reviews and the impact of its perceived information quality on the consumer. Thus, we will be able to understand how the consumer purchase behaviour has been influenced by the wide range of information available to consumers via online reviews.

VI. LIMITATIONS

The study focuses on the factors which impact the Perceived Quality of Information obtained from Online Reviews by the users but it did not specifically find out what are the factors that impact consumer's behavioural intention. Further study could focus on the factors influencing behavioural intention of consumer. Also how the impact varies across different product categories can be studied.

VII. CONCLUSION

The study indicates that the perception of information quality of the online reviews can be enhanced by displaying the right reviews to the consumers. The reviews that are more informative, persuasive and written by a credible source can greatly enhance the quality perception among the user. This is important because only if the consumers believe that they are getting high quality information, they will consider the information for their decision making. On the other hand the number of reviews i.e. the quantity of reviews does not have significant impact on the quality perception. This implies that rather than having volumes of reviews lacking the important factors, limited number of reviews covering all the important factors will make consumers perceive the quality of information to be better.

Since age group and gender of the respondent have no significant impact, we can understand that the perception about quality of information does not vary between different age groups or gender. Hence online review portals need not customize their offerings for these differences. Rather they must focus on improvising the quality by altering the other significant factors.

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