Online Reviews and Ratings on Mid-segment Mobile Phones: A Perception Study

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Abstract--- Purpose- This study aims to understand the influence of reviews and ratings on purchase decision of mid-segment mobile phones based on the demographic profile.

Design/ Methodology/ Approach- Primary data was collected from 200 respondents with the help of a structured questionnaire. Multistage regression using SPSS version 20.0 was adopted to analyze and interpret the results of the collected data.

Findings- It was found that demographical characteristics have an influence on purchase decision based on the reviews and ratings they read on mid-segment mobile phones. Income range has a significant effect on the decision making. Also, our study has suggested that the age group and gender have no impact on reviews.

Practical Implications- This study is important to know how consumers perceive reviews and ratings. Moreover, it is useful for marketers to understand and study the current demand for the product based on the demographic profile and it will help to elevate the demand to the most desired state.

Originality/ Value- This paper focusses to fill the gap of demographical influence on purchase decision by reviews and ratings on mid-segment mobiles phones.

Keywords--- Reviews and Ratings, Consumer Perception, Demographical Influence, Purchase Decision, Mid-segment Mobile Phones.

I. INTRODUCTION

In India, the online retails and online shopping is growing rapidly. More and more customers in India buy a variety of product from the online retail application or website. The online ratings of the many products affect the purchase decision of online customers to large extent (Banerjee et al., 2017). It was varying from normal goods to luxury goods. Consumers are the king. Customers are more concern towards rating and review when they are going shopping for anything like books, movies clothing and electronics (Rosario et al., 2016). In fact, nearly all consumers consult customer reviews, and everyone says reviews are essential when making a purchase decision. But reviews are not only beneficial for consumers regarding for their products but also it is good for business. Rating and reviews are more important for marketing also it has a very high influence (Salehan & Kim, 2016). Traditional marketing is expensive and not much effective than e-marketing. Earlier it was limited to personal communication. But today, the internet plays a vital role and it allows words to reach to each nook and corner of the world quickly

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and make the people think about it. This effect the business of traditional advertising and has made online reviews robust factors to influence the decision of customer purchase decision (Floid et al., 2014). The few ways which will benefit the business as well as customers by the reviews and ratings are, one is establishing trust in the company's product and they can also interact on the website directly with another customer.

Online reviews give consumers a voice and a platform to those customers who cannot go to the store to check the product as they have no time (Kandampully et al., 2015). This result shifted shopping from the physical store to online. Not only for customers but buyers also benefitted by reviews and ratings as well. Reviews help to understand the market trends for the sellers so that they can introduce the new products or alter the existing one according to the consumer desire (Shirdastian & Laroche, 2017). It is helpful for the market research for a product category as well. It is also important for customer service. Lastly, it provides information to the customer while doing the online shopping. And can dramatically increase the sales.

Since there are other factors like age, income also affects the way consumer perceive reviews and ratings. In this study the effect of demographic variables such as age or income on reviews and ratings are analyzed and how it affects consumers purchase decisions. The rating and reviews have taken marketing to the next level (Singh et al., 2017). Since the digital era has reached its culmination consumers are able to share their experiences and opinions with their online peers in a way that is extremely beneficial and worth it. Online reviews and ratings are the voice of the customers. It enhances the confidence of the potential customers to try the new product and reviews are better for the visibility of the products (Filieri et al., 2018). The online rating has become a key aspect of choosing a product from both online as well as from offline stores (Boo & Busser, 2018). It is the easy medium for advertising and also for word of mouth (WOM). These reviews and ratings play a significant role in manipulating the purchase decision of potential customers (Maslowska et al., 2017). A study on this topic consumer perception towards online rating gives an insight of how the perception of others on a product affect the decision process of new consumers.

Success or failure of a product is determined by the quality of review one read from an online portal. Biased and fake reviews can deteriorate the entire brand image or the store image. And, some specific website run for only reviews for all the products might also influence the consumer behaviour rather than online stores. But credibility is the main issue consumer face when they choose a product (Hu et al., 2017). While popular products establish their credibility in long run niche products suffer to find a place in the growing market. The only strategy they can be put forward to increase the market share is raising the volume of positive reviews or ratings. When the negativity increases in a review of a product or service even the trusted users tend to change their decision while going for it. It shows reviews have become a vital part of any business now a day. In this study, we will find out how consumers change their attitude or perception towards branded product based on online reviews and ratings (Gensler et al., 2015). A detailed study in this area is necessary now since the electronic era has been reigning the humankind from the last decade.

II. LITERATURE REVIEW

Lee et al. (2007), found that when negativity increases in online reviews, there is a chance that high-involvement consumers tend to follow the perspective of those people. Depending on the quality of the negative online consumer

reviews; And in contrast, low-involvement consumers also follow those negative reviews but regardless of the quality of reviews. However, a low-quality review will influence the customers to approach towards products under both low involvement as well as high involvement conditions. Mo (2015) and Fan (2015), suggested that consumers will be influenced positively by different kinds of reviews that is positive reviews, picture reviews, additional reviews etc. So, to increase the sales sellers can encourage consumers to post positive reviews, picture reviews by offering points, cash and coupons. Cui et al. (2012), found out that the whenever the number of reviews increases it significantly affect the sales of a new product that too in the early stage of selling and it keep on decreases when time passes. Moreover, the effect of a negative review is more than that of positive reviews on a product (Lee, 2014; Shin, 2014). So, while making marketing strategies marketers must consider the impact of various kinds of online reviews. A study on the impact of online consumer reviews on sales suggests that online reviews can influence more for the less popular game and the people also with greater internet experience (Zhu, 2010; Zhang, 2010). As product and consumer characteristics affect the online reviews the marketing strategies by the firms should be modified accordingly. Hu et al. (2006), studied the average ratings given by customers may not unveil the real quality of the product and it might be spurious recommendations. But average review may narrow down the opinions so that the quality of the product can be unveiled that too if all the customers have reviewed on the same product. Gao and Narayan (2010), studied that customers might post reviews on products which is barely available or less successful in the market. Also, they post reviews on products which have already got a high number of reviews so far. And the study also concluded that making the previously received reviews as least important will help the company to get more reviews especially if the product is less known. Study on self-selection and information role of online product reviews by early buying of products may lead to biased reviews Li (2008) and Hitt (2008). It could be either positive or negative. Influence of distinctive preference of early customers on long-term customers are made by changing the marketing strategies like pricing designing advertising etc and it will also help to produce positive results. Sun (2012), suggested that the variance of product rating matter for a niche product and how it would show high variance on reviews. High average ratings imply high product quality (Liu & Park, 2015). Whenever the variance of reviews increases, the demand for the product would also increase, only if the average rating is low for those products. A higher average rating with higher variance will sweep away the customers thus, it reduces the demand. In the case of books, relative sales may be high only if the standard deviation is higher.

Kyo et al. (2014), studied that online reviews can be manipulated easily so it affects the reputation of the products. It adjusts the reputation iteratively based on the customer reviews. Clustering and classification solve the false reputation problem caused by the online review. The higher decision quality can be obtained by only through multi-standard scale rather than single standard scale. They are functional as well as perception aspects. Single-standard rating scale performs better than a multi-standard scale for long ideas, and more favourable attitudes will be originated eventually by multicriteria scale towards the website. Mudambi & Schuff (2010), suggested how to make online reviews helpful by analyzed the amazon reviews across six different kinds of products shows that extremity, review depth, and product type affect the perceived helpfulness of the review. Reviews with high ratings are not very helpful than a review with moderate ratings for experienced goods. But for search goods depth review has higher positive effects than experienced goods. Review depth has a positive impact on both kinds of products in

term of helpfulness, but the type of product determines the helpfulness by moderating the effect (Filieri, 2015). Bae & Lee (2011), studied the product type and consumers perception of online consumer reviews by finding two things. They are a review is more influential for an experienced product by customers than for a search product when reviews are from consumer developed websites and the credibility of the review is more for an experienced product if the review is from the online community.

Utz and Bozz (2011), found that for judging a trustworthiness of a store consumer review plays an important role irrespective of the store reputation and assurance seals. Reviews are the powerful predictor of trustworthiness. The people who trust store more are easily influenced by other consumer's reviews and on another side, the tendency to be influenced by assurance seals is higher for those people as well. Store reputation has not remarkable effect. Foroughi et al. (2013), developed a model for impulse purchase decision among Iranian shoppers. To explain the complex processes of impulse purchasing testing and development of a theoretically grounded model are used. To understand the consumer perception regarding impulse buying a survey was conducted with the help of a questionnaire. With the help of Structural equation modelling, a conceptual framework was evaluated. And the result revealed that situational and personal related variables have a positive effect on impulse buying through shopping. Hu et al. (2008), suggested that the consumer not only consider reviews while making a decision but also, they consider the status of reviewers and their exposure. The consumers' response towards these reviews and ratings are more favourable if they read reviews and rating from aforesaid people. He also found out that impact of reviews on sales dwindle once the products are out for consumption over a time period. Koh et al. (2013), found that ratings, sentiments and sales are interconnected. Ratings would be impacted on sales through sentiments but not alone. But sales are affected directly by sentiment even in the absence of ratings. The study also suggested that the reviews, most recent and most helpful have a huge influence on the sales of the products. Zhang et al. (2014), suggested that the quality of reviews determine the decision- making process of the consumer. Quality is characterised by the information about the product and the persuasion of the reviewer. The study also found that purchase decision is driven by the credibility as well as the number of reviews available on the internet on that particular product. Jimenez & Mendoza. (2013), analysed the purchase decision of both experience as well as search goods under the influence of online reviews. For search goods detailed information about the products in reviews considered as more credible. On another hand for experienced good, the credibility is determined through the agreeableness of the reviewer in the review. Lin et al. (2011), found that quality and quantity of the reviews have an influence on purchase intention. When both the factors increase the intention of the consumer to buy the products also increases. Dou et al. (2012), studied that the impact of the actual reviewer and regular internet user's review on consumer purchase decision. Consumers believe that people who are regular internet users give credible reviews than the product makers. Moreover, people consider the reviews from the visible users as an original source of the message.

Demography such as Income and age also affect the online ratings and reviews to a large extent. In India, the majority of the population are from middle class so they are price conscious. The reviews and ratings affect their purchase decision as they have budget constraints. The demand for mid-segment smartphones has taken a huge leap in India for the last few years. This study aims to find out how reviews and ratings affect Indian customer's purchase decision as online shopping in India is growing.

Research Objectives

- To understand how consumers, perceive reviews and ratings.
- To understand consumers' purchase decision of mid-segment mobile phones.
- To check the impact of demography on reviews & ratings and purchase decision.

Hypotheses Formulation

Consumer not only consider reviews while making a decision but also, they consider the status of reviewers and their exposure. The consumers' response towards these reviews and ratings are more favourable if read from aforesaid people Hu et al. (2008). The consumers always have a vast choice of getting reviews on the midsegment mobile from internet. That choices lead to let them decide from whom they should heed the reviews before making a purchase decision. Along with that demographic characteristics of consumers also play an important role in perceiving reviews before making a purchase decision. The following hypothesis was designed to look into the demographic characteristics that affect the purchase decision of consumers on mid-segment mobile by reviews and ratings.

H_1: Demography has a significant impact on online reviews and ratings.

India is one among the country which has the highest number of smartphone users. The purchase rate of mid-segment mobiles have a significant leap in recent years because of better choices and specifications par with the high-end mobiles. So consumers who belong to different demographic characteristics may choose their preferred mobile based on the reviews and ratings available on the internet.

H_2: Online reviews and ratings have a significant impact on the purchase decision.

Since the internet plays an important role, the dependency on reviews and ratings are increased day by day. The people who are sceptic on their decision on purchasing a mobile depends on the reviews and ratings on the internet along with suggestions from friends and family.
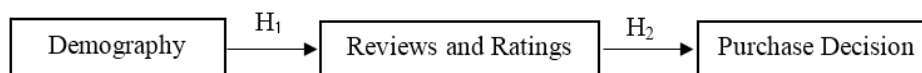

Figure 1: Hypothesized Model

III. RESEARCH METHODOLOGY

The primary aim of our study is to find out how demographic characteristics impact the perception on online ratings, reviews and influence on purchase decision on mid-segment mobile phones. People perceive the reviews and ratings and impact on purchase decision while they prefer to buy the products. This study analyses the impact of the reviews and ratings on mid-segment mobile phones that influence consumers. The experimental method is used for this study. Rather than analysing the reviews available from the e-commerce and other consumer-driven websites primary data collection has been done. After making a questionnaire about whether they change their purchase decision if they read reviews on the same mobile phone in offline or online. Our survey was conducted offline as well as online to get maximum response. An inherent problem in measuring the influence of reviews on product

demand is that products receiving positive reviews tend to be of high quality and vice-versa. Because quality is often unobserved by researchers, it is difficult to determine whether the review or the quality is responsible for the high demand. Therefore, positive correlations between reviews and product sales might be spurious. Along with the quality, the demographic profile also plays an inevitable role in perceiving reviews.

This study focused on the influence of reviews and ratings on demographic characteristics.

Our main aim is to analyse people of different age, gender and salary to analyse their attitude and perception changes once they are exposed to the reviews. The questions were asked to state how people perceive reviews and ratings and how it impacts on purchase decision of their preferred mobile even though if they have desired to buy it. The survey was conducted of 200 people through online as well as offline. The questionnaire was sent to 300 respondents selected randomly from all over India and 200 valid responses were received which is contribute to 66.66% of response rate. Questions were also asked regarding the recommendations from friends and family to understand the purchase decision better. Multi-stage regression analysis method was used with the help of SPSS version 20.0 for analysing the data. The impact of demographic characteristics on reviews and ratings being the first stage and influence of reviews and ratings on purchase decision was the second stage of regression.

IV. DATA ANALYSIS

In this research, primary data of 200 samples were collected with the help of a structured questionnaire. The data was analysed with the help of SPSS version 20.0. The multi-stage regression analysis was performed to run the data.

Table 1: Descriptive Statistics

		N	Minimum	Maximum	Mean	Std. Deviation
QD1	Gender	200	1.00	2.00	1.6450	.47971
QD2	Age Group	200	1.00	5.00	2.4750	.85618
QD3	Monthly Income (in Rs)	200	1.00	5.00	4.0500	.64776
QRR4	According to me the quality of the mobile depends on	200	1.00	5.00	3.7200	.83371
QRR5	I check online ratings for my preferred mobile before purchase?	200	1.00	5.00	3.8400	.74645
QRR6	I will go with my purchase decision even if the reviews are negative	200	2.00	5.00	4.1500	.55592
QRR7	If the reviews are mixed with both positive and negative opinions	200	1.00	5.00	4.1900	.65271
QRR8	Quality of the mobile is defined through online reviews and ratings	200	2.00	5.00	4.3000	.59309
QRR9	My purchase decision is influenced by	200	1.00	5.00	4.0450	.66723
QRR10	For me reviews and ratings are important before making purchase decision.	200	2.00	5.00	4.1050	.57936
QPD1	I purchase mobile based on	200	1.00	5.00	3.7700	.93889
QPD2	Online ratings help me to make decisions before purchase?	200	2.00	5.00	4.1900	.53416
QPD3	Reviews and ratings affect my purchase decision	200	2.00	5.00	4.1450	.57062
QPD4	I recommend the mobile to my friends or family based on the reviews I read	200	1.00	5.00	3.8600	.69485
Valid N (listwise)		200				

In table 1, the sample size shown was of 200 data. There are three constructs formed, viz., D represents the

Demography RR represents Reviews & Ratings and PD represents Purchase Decision. In questionnaire D the maximum number of questions is 2. In this questionnaire, RR and PD have the maximum number of items being 5. D has the maximum mean being 4.0500 which stated the population mean.

And standard deviation is 0.85618 which stated that amount of variation a set of data values. A low standard deviation indicates that the data are close to the mean and a high standard deviation indicates that the data are spread out over a wider range of values.

In questionnaire RR the maximum mean and standard deviation are 4.3000 and 0.8337 respectively. PD has the maximum number of mean and standard deviation are 4.1900 and 0.93889 respectively.

Table 2: Reliability Statistics

Cronbach's Alpha	N of Items
.871	17

Internal consistency can be measured by Cronbach's Alpha value. A coefficient value higher than 0.70 interprets the consistency of the data. In this study, out of 17 questions, responses to 14 questions contributed to this research. The coefficient value .871 says the internal consistency of the data is reasonably high.

Table 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.871
Bartlett's Test of Sphericity	Approx. Chi-Square	1643.392
	df	136
	Sig.	.000

These two tests signify how reliable the data is. Kaiser-Meyer-Olkin Measure of Sampling Adequacy measures for completeness of the data (Trujillo et al., 2006). This statistic measures the proportion of sample variance that has a common variance. If it lies between 0.8 and 1, implies sampling is adequate.

In this study, the Kaiser-Meyer-Olkin measure of sampling adequacy is 0.871 which reveals that adequacy of the sample is achieved.

Bartlett's Test of Sphericity signifies the validity and suitability of responses for the study (Tobias et al., 1969). Table 3 shows the number as 0.00 suggesting that the values are significant with a high chi-square value of 1643.392 and degrees of freedom being 136. So, our sample is suitable for the analysis.

Table 4: 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	.844[a]	.713	.701	.26801	.713	59.303	8	191	.000
a. Predictors: (Constant), QRR10, QRR4, QRR7, QRR9, QRR5, QRR8, QRR6, QRR3									

In above table 4, the value of R^2 = 0.713 which defines the strong positive linear relationship. This illuminates that the input, online reviews and ratings contribute 71.3% of the output which is purchase decision.

Table 5: Regression Analysis (Stage 1)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.261	.173		24.648	.000
	QD1	.006	.070	.006	.087	.931
	QD2	.057	.042	.100	1.360	.175
	QD3	-.187	.048	-.289	-3.933	.000
a. Dependent Variable: Ratings Reviews						

Table 5 shows the relationship between demography and Reviews and ratings. In this Regression analysis, QD1 has higher P value because QD1 depends upon gender and number of the male respondent is higher than female respondent. Except for QD3, all other questions have P value of more than 0.05. So, it reveals that income is significant for the reviews and rating.

Table 6: Regression Analysis (Stage 2)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.162	.192		.843	.400
	QRR3	.064	.035	.112	1.858	.065
	QRR4	.114	.033	.194	3.492	.001
	QRR5	.138	.035	.210	3.964	.000
	QRR6	.120	.045	.136	2.646	.009
	QRR7	.120	.041	.160	2.938	.004
	QRR8	.108	.042	.131	2.555	.011
	QRR9	.109	.034	.148	3.227	.001
	QRR10	.177	.037	.210	4.809	.000
a. Dependent Variable: Purchase decision						

In table 6, the relation between Reviews & Ratings and purchase decision was established. The significance level is 95%, so the P value must be less than 0.05. QRR3 was on review from family and peers and it did not affect the online reviews & ratings which suggest offline reviews is insignificant for the study. Except for QRR3, all other factors have P value less than 0.05 which implies they are significant to this study.

V. DISCUSSION

This study was to understand how consumers perceived the online reviews and ratings of mid-price segment mobiles. Online reviews and ratings are a major source of information about the product. The ratings can be between 1 to 5 stars, but user reviews can be negative, positive and neutral about the mobiles. Reviews are the perception of the users who used or currently using the product.

Today consumers read these reviews and see the ratings of the mobile on online platform before making any decision to purchase. Price is one of the major concerns while purchasing any mobile phone. Since there are so many mobiles in the mid-segment price range and younger people often consider the recent trend in the market and peer group and friends affect their purchase decision. While older people purchase their mobile based on the usage and their requirements. Older people often take a suggestion from family, but younger people rely more on online reviews and ratings. The negative reviews have more impact on their purchase decision than positive reviews. Income is also a major factor that significantly influences the purchase decision of consumers. People with higher income are able to purchase high price segment of mobile but even they prefer to purchase mid-price segment

mobile as it also offers the similar specification. People with average salary have to spend a good portion of their income before buying and they tend to read reviews about mobile.

Demography is an important factor to consider while marketers try to sell the products. Age, gender, salary are the major concerns that affect decision making along with that it greatly influences the purchase decision as well. People of different age perceive reviews differently. Younger people tend to be more depending on parents or peer group. On another side, most of the time elder people make a decision based on the past experience in purchase or reviews and ratings from reliable sources.

Likewise, another determinant which substantially decides the purchase decision is salary. Most people who go with the decision of purchasing mid segment mobile would be salary constrained. The only dependency they have before decision making is reviews and ratings. So even a single source they believe it is trustworthy can entirely change their decision. It may even lead to switch the brand itself for them. Along with that gender differences are also a considerable fact in perceiving reviews. In an internet-based survey, it is found that men are more into internet usage than women. When it comes to online reviews men would be checking online reviews before making a purchase decision and are more prone to be influenced by it. So, the demography is a major factor to be considered while analysing the effects of reviews and ratings.

In this study, the multi-stage hypothesis was used to analyse the data. In the first hypothesis, the relation between demographic variable and rating and review was analysed. The other hypothesis was considered to analyse the influence of the reviews and ratings on the purchase decision. Our study found that income was the only factor in demography that affects the ratings and reviews so demography leads to make an impact on purchase decision based on the online reviews and ratings. Even though consumers consider recommendations from friends and family before making purchase decision it does not have a substantial role in the final decision if consumers decide to go with online reviews and ratings.

VI. LIMITATIONS OF THE STUDY

This research only focused considering demographic profiles such that age, gender and salary Moreover, since time is the major constraint only 200 responses were collected for this study and the people who have access to the online reviews and ratings. This study does not consider offline reviews and ratings and only focussed on the online mode. Further research can also be done considering other segments and product variety.

VII. CONCLUSION

E-commerce is a fastest growing market in India. India has a large number of growing internet users. Many people now days prefer to purchase online as it is efficient and time saving for them. Considering reviews and ratings have become a common practice among all consumers before making a purchase decision especially for experienced goods since internet marketing has erupted. As this kind of marketing is inexpensive and easily reachable to any consumers the rate of checking online reviews have also increased tremendously. The demography plays a major role in perceiving reviews. Even though consumers give preference to the specifications of mobiles while making a purchase decision they are still prone to change their decision if they are exposed to the online

reviews and ratings.

In this study, it has shown that the income of consumers significantly influences the purchase decision. They rely on online reviews and ratings before making a decision. Other factors considered were gender and age group. But this study suggested that these factors not at all impact on the purchase decision even if the reviews and ratings are positive or negative in the demographic profile. Many people consider recommendations from friends and family before proceeding the purchase. Still, they are directed by the online reviews and ratings when it comes to a final purchase decision.

Future research can be done by considering more demographic characteristics like educational qualifications, social class and region which also may impact the consumer purchase decision.

ACKNOWLEDGEMENT

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