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Influence of perceived risk, product perception and service quality on purchase intentions in online environment

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Abstract

In era of digitalization, online shopping has been on rising trend because of quick delivery and convenience offered to the customers. We can buy anything just by a single click anywhere, anytime. Even this Covid pandemic has created a necessity of online buying due to safety concerns. This has created a need to understand how the consumers perceive online purchasing. Either consumers are just surfing online shopping websites, or actually they are going to purchase? The purpose of this research paper is to use correlation and linear regression to investigate the effect of product perception, service quality and perceived risk on purchase intentions in online environment. Structured Questionnaire was used to collect data from respondents via online and offline mode. It was found that all three constructs have statistically significant effect on purchase intentions in online environment.

Keywords: Online purchase intentions, product perception, service quality, perceived risk.

Introduction

With the advent of the new millennium, there has been a rapid rise in the technology in almost every fields of life. Similar, is the case with information technology and rise in the use of electronic devices we have become dependent on technology. One of the trends which arose up swiftly in the last few years is the online shopping. Now, people like to sit back at their cozy place and scan through numerous different products according to their needs. Any particular need is just a click away thus making people feel more comfort and ease with online shopping. Online shopping has become so much effective as it has also started catering our daily needs such as edible items and others daily useful products be it the products used in washrooms, bedrooms, study etc. .and that too in a very short time.

Online shopping has become popular among all age groups and has witnessed an exponential rise in its use. Shopaholics do not like to take the burden of getting ready and going to the market, travelling to the shop and looking for the products and asking the specifications from the shop owner. They now take a smart move and look for product specifications then, search and compare products before making the final decision and payment. These online portals give sufficient and convenient opportunities to their buyer. Moreover, the products are being shipped at our home itself without any extra charges in most of the cases. Physical stores have limited stocks and they only keep the things which in trend or bestselling items. While the online shopping shows ample quantity of products and products of all kinds. Adding on

Amidst the rise of the pandemic which the world has been witnessing from quite some time, the online shopping has proven to be an easy platform for the buyers. Along with other comforts it also keeps healthy and safe. In addition, online shopping service can be availed even from our cell phones. There are no time restrictions. One can scroll through anytime during the 24 hours of the day whereas stores are opened only during the day time. Moreover, from time to time various kinds of offers are there in online shopping on various products. In the case of physical shopping, the floor assistants provoke in buying more and we return back home with additional items instead of buying just one product. In case, if your product is not available according to your requirement or color then these floor assistants convince in buying similar product with different specifications to increase the sale of store. On the other hand, in the case of online shopping, it removes all such pressure from the customer leading to easy shopping.

However, not all consumers are participating in online transactions as part of the internet boom. As more and more businesses continue to establish an online presence, they are finding that some consumers are still reluctant to shift in that same direction, for various consumers there are still concerns with security and passing personal data over the internet. There is a lag between the number of consumers who visit a

site and the number of actual purchases being made. Despite millions of people who use internet every day and visit various shopping sites, the number of consumers who do not abandon their shopping carts but actually complete a purchase averages to only about three percent. This leaves a large portion of the internet population as non-participants in online transactions as compared to those who complete transactions online and make purchases. Instead, these non-participants may abandon the purchase completely or fulfill the transaction in an offline setting. As such, it is important for online businesses or offline businesses interested in venturing into the online market to understand their consumers' perceptions, online and offline, and what factors influence their shopping decisions. With better understanding of what factors play into consumer decision making in making transactions online or offline, retailers and businesses can be better gear themselves to serving their customers in either of the shopping venues. Thus, in this paper we have tried to find the influence of product perception, perceived risk and service quality on online purchase intentions.

Review of literature

Product Perception

Dillon and Reif (2004) defined product perception as product understanding in terms of price, variety and product quality. Jarvenpaa and Todd (1997) defined product perception in terms of product value consisted of variety, price and product quality. According to customers viewpoint, price is the most critical issue in forming purchase intentions in online environment. According to consumer's viewpoint, Parasuraman, Zeithaml and Berry (1985) concluded that quality consists of superiority or overall excellence of the products.

Aaker (1991) supported perceived product quality as the judgment about the overall excellence or superiority of the products. Monroe and Krishnan (1985) defined product quality perception as particular product's ability to satisfy the consumers compared to alternative products. Parasuraman, Zeithaml and Berry (1988) supported consumers evaluated product perception in terms of outstanding value and performance.

It is concluded from literature that perceived product quality motivates consumers to buy (Aaker, 1991), price means the cost paid by the customers, and variety provides the customers more substitutes to select the products and hence motivate the customers.

Service Quality

The concept of service quality means that whether the quality meets or exceeds the consumer's expectation. Therefore, the consumer's perception of service quality is the perceived gap after comparing the consumer's expectations of service and the actual feeling of the service (PZB, 1985). While the consumer's expectation of service quality is often affected by the influence of four sources: past experience, word-of-mouth communication, personal needs and external communication, service quality is a subjective attitudinal response showing the consumer's overall superiority assessment of the service itself.

PZB considered service quality as a long-term overall judgment on service and can be evaluated from the attitudinal viewpoint. Service quality results from comparing the consumer's expectations of service and the actually perceived service performance. In 1998 they further stated that the service quality is the excellence level generated from the interaction between the service provider and the customer in the service delivery process; they also emphasized service quality should be defined from the customer side, rather than from the vendor side.

A conceptual model was proposed on service quality (PZB, 1985) and 10 determinants of service quality were put forward; they were reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding/knowing and tangibles and a measuring scale containing 5 constructs (SERVQUAL) was developed (PZB, 1988) and later corrected (PZB, 1994). A direct measurement of consumers' service quality called SERVPERF was proposed by Cronin and Taylor (1992) and was shown to have better predictive ability, convergent validity, and discriminant validity than SERVQUAL.

For online shopping, e-service quality was measured by different researchers. Parvenpaa and Todd (1996-97) proposed responsiveness, reliability, tangibility, empathy, and assurance as the factors that affect consumers' attitude. Parasuraman, Zeithaml, and Malhotra (2005) suggested efficiency, system availability, fulfillment, and privacy as the major factors to be considered. Collier and Bienstock (2006) recommend a scale containing the formative indicators instead of the reflexive indicators.

Perceived Risk

Perceived risk was first proposed in the early 1960s by Bauer (1960) in terms of uncertainty and unfavorable consequences associated with consumers' expectation. According to Mitchell (1992), perceived risk has been found to be a key determinant in consumer behavior and a primary factor influencing the conversion of browsers to buyers. Perceived risk is defined as the potential for loss in pursuing a desired

outcome while engaged in online shopping or we can say it is a combination of uncertainty with the possibility of serious of outcomes (Ko *et al.*, 2010). Stone and Gronhaug (1993) defined perceived risk as when an individual experiences a subjective explanation of loss. Masoud, Y., E.(2013), revealed that increase in financial risk, product risk, delivery risk and information security risk, result in decreasing online purchase intentions. Further, it was interpreted that perceived time risk and social risk have no significant impact on online purchase intentions. Hong, Z. and Yi, L. (2012) in their study recommended that financial risk was dominant during the consumer online buying decision phase. Even after purchasing the product through online mode, service, psychological and private risk were dominant.

Objectives of the study

1. To investigate the effect of product perception on purchase intentions in online environment.
2. To investigate the effect of the perceived risk on purchase intentions in online environment.
3. To investigate the effect of the service quality perception on purchase intentions in online environment.

Conceptual Model

The given below model was adopted from the previous work (Lee, Huang and Chen, 2009) to examine the effect of product perception, perceived risk and online purchase intentions on online purchase intentions of Indian consumers particularly from Shimla, Chandigarh and Mohali. It was first proposed by Jarvenpaa and Todd (1996-97).



Figure 1

Hypothesis:

H1: There is effect of Product perception on purchase intention in online environment.

H2: There is effect of Service quality on purchase intention in online environment.

H3: There is effect of Perceived Risk on purchase intention in online environment.

Research methodology

To study the significant relationship of consumers perception (related with product, service quality and perceived risk) on online purchase intention, a study was conducted among the online shoppers in selected cities of India, namely Chandigarh, Mohali and Panchkula.

A structured questionnaire was designed specifically for this study. To design this questionnaire, focused group discussion was conducted among the online shoppers which consist of academicians, students, industrialists, etc. They were asked to give their views/perception related with product perception, service quality and perceived risk associated with online shopping. With the help of literature available, various dimensions of product perception, service quality and perceived risk were identified.

All items were assessed on five-point Likert-type scale (1 – “Strongly Disagree” and 5 – “Strongly Agree”). Questionnaire was divided into two main parts. The first part consisted of items related to demographic profile of respondents. Second part of the questionnaire consisted of other items based on review of literature studied. For the validity part, questionnaire was given to experts to check the content validity. In the

beginning there were eighty items on the scale, out of which eight items were removed while doing the content analysis. Then, remaining seventy-two items were included in final questionnaire.

Reliability of the questionnaire was established by calculating the value of Cronbach alpha (following table) by circulating the questionnaire among fifty experts. It came out to be .731, offering good reliability to questionnaire.

Sampling and data collection

Sample was collected randomly from the respondents who consist of academicians, students, industrialists, people employed in IT and banking sector who shop online. In total 500 questionnaires were circulated among the target audience via online and offline mode. A Google form was attached on social networking sites (Facebook and WhatsApp groups) and respondents were asked to devote their valuable time for this study. A total of 156 responses were received online. Out of all questionnaires received back via offline mode, only 171 were found suitable to be included in the study. Thus, a total of 427 responses were included in this study. The sampling procedure used for this study was convenient sampling. Data collection was completed on 15th December 2020.

Table 1: Demographic profile of respondents

| Variable | | Frequency | Percentage |
|-------------------------|---------------------|------------|-------------|
| Gender | Male | 181 | 42.4 |
| | Female | 246 | 57.6 |
| Age | 18-30 years | 367 | 85.9 |
| | 30-45 years | 60 | 14.1 |
| Education | Secondary | 1 | .2 |
| | Higher secondary | 2 | .5 |
| | graduate | 137 | 32.1 |
| | Postgraduate | 257 | 60.2 |
| | others | 27 | 6.3 |
| Income per month | Less than 5000 | 80 | 18.7 |
| | 5000-10000 | 43 | 10.1 |
| | 10000-25000 | 108 | 25.3 |
| | 25000-50000 | 145 | 34.0 |
| | Above 50000 | 51 | 11.9 |

Results and discussions

In this study, we developed four hypotheses to investigate the effect of consumer's perception on purchase intention in online environment. In order to test them, SPSS – Pearson correlation and linear regression was used to establish the relationship between independent variable and dependent variable.

Hypothesis 1:

H1: There is effect of product perception on purchase intention in online environment.

Table 2: Correlation between product perception and purchase intentions

| | | Purchase intentions | Product perception |
|---------------------|---------------------|---------------------|--------------------|
| Purchase Intentions | Pearson Correlation | 1 | .780** |
| | Sig. (2 -tailed) | | .000 |
| | N | 427 | 427 |
| Product perception | Pearson Correlation | .780** | 1 |
| | Sig. (2 -tailed) | .000 | |
| | N | 427 | 427 |

It can be seen that correlation coefficient (r) comes out to be .780 for the sample size of 427 respondents. The significant value is less than .001 indicates a statistically significant relationship between product perception and purchase intentions.

Table 3 : Regression Model Summary

| R | R Square | Adjusted R ² | ANOVA (F) | Sig. |
|------|----------|-------------------------|-----------|------|
| .780 | .608 | .607 | 32.486 | .000 |

Dependent Variable: Online Purchase Intentions

From the analysis of the results, it is clear that R² for online purchase intentions as dependent variable was .608 and adjusted R² was .607 which indicated that the approximately 60.7 % of the variation of the purchase intentions (dependent variable) could be explained by product perception (independent variable) alone, (product perception can account for the 60.7 % of the variation in purchase intentions).The significant F ratio (F=32.486, p< .05) indicated that the variation explained by the results of regression model could hardly have occurred by chance.

In short, the regression model overall predicts online purchase intentions significantly well.

Hence, our alternate hypothesis, there is effect of product perception on purchase intention in online environment, was accepted.

Hypothesis 2:

There is effect of Service quality on purchase intentions in online environment.

Table 4: Correlation between service quality and purchase intentions

| | | Purchase intentions | Service quality |
|---------------------|---------------------|---------------------|-----------------|
| Purchase Intentions | Pearson Correlation | 1 | .726** |
| | Sig. (2 -tailed) | | .000 |
| | N | 427 | 427 |
| Service quality | Pearson Correlation | .726** | 1 |
| | Sig. (2 -tailed) | .000 | |
| | N | 427 | 427 |

It can be seen that correlation coefficient (r) comes out to be .726 for the sample size of 427 respondents. The significant value is less than .001 indicates a statistically significant relationship between service quality and purchase intentions.

Table 5: Regression Model Summary

| R | R Square | Adjusted R ² | ANOVA (F) | Sig. |
|------|----------|-------------------------|-----------|------|
| .726 | .527 | .526 | 145.270 | .000 |

Dependent Variable: Online Purchase Intentions

From the analysis of the results, it is clear that R² for online purchase intentions as dependent variable was .527 and adjusted R² was .526 which indicated that the approximately 52.6 % of the variation of the purchase intentions (dependent variable) could be explained by service quality (independent variable) alone, (service quality can account for the 52.6 % of the variation in purchase intentions).The significant F ratio (F= 145.270, p< .05) indicated that the variation explained by the results of regression model could hardly have occurred by chance.

In short, the regression model overall predicts online purchase intentions significantly well.

Hence, our alternate hypothesis, there is effect of service quality on purchase intention in online environment, was accepted.

Hypothesis 3:

There is effect of perceived risk on purchase intentions in online environment.

Table 6: Correlation between Perceived Risk and purchase intentions

| | | Purchase intentions | Perceived Risk |
|---------------------|---------------------|---------------------|----------------|
| Purchase Intentions | Pearson Correlation | 1 | .746** |
| | Sig. (2 -tailed) | | .000 |
| | N | 427 | 427 |
| Perceived Risk | Pearson Correlation | .746** | 1 |
| | Sig. (2 -tailed) | .000 | |
| | N | 427 | 427 |

It can be seen that correlation coefficient (r) comes out to be .746 for the sample size of 427 respondents. The significant value is less than .001 indicates a statistically significant relationship between perceived risk and online purchase intentions.

Table 7: Regression Model Summary

| R | R Square | Adjusted R ² | ANOVA (F) | Sig. |
|------|----------|-------------------------|-----------|------|
| .746 | .556 | .555 | 203.13 | .000 |

Dependent Variable: Online Purchase Intentions

From the analysis of the results, it is clear that R² for online purchase intentions as dependent variable was .556 and adjusted R² was .555 which indicated that the approximately 55.6 % of the variation of the purchase intentions (dependent variable) could be explained by perceived risk (independent variable) alone, (perceived risk can account for the 55.6 % of the variation in purchase intentions).The significant F ratio (F= 203.13, p< .05) indicated that the variation explained by the results of regression model could hardly have occurred by chance.

In short, the regression model overall predicts online purchase intentions significantly well.

Hence, our alternate hypothesis, there is effect of perceived risk on purchase intention in online environment, was accepted.

Conclusion

It was concluded from the results of correlation and regression, that there is statistically significant relationship between all the stated hypotheses. Among all the three constructs, product perception was the strongest in shaping up online purchase intentions, perceived risk was the 2nd important construct and service quality was on 3rd rank in making purchase intentions in online environment.

Thus, in order to compel consumers to shop online, e-retailers should focus on providing convenient and secure environment, adequate pricing and discounts, customized service, convenient return and replacement policy so that customers online purchase intentions be build up.

Limitations of the study

This study clearly did not include all variables relate to purchase intentions. Thus, other variables can be examined in future researches. This study didn't examine any moderators and mediators that can affect consumer's perception on online purchase intentions. The results can't be generalized because of small sample size. Thus, study does not take in to account any impact of demographic factors of respondents.

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