Electronic Payment System: Effects of Transaction Procedures on Consumers' Perceived Security

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ABSTRACT - It is commonly believed that easy and user friendly transaction procedure improves use of electronic payment but the question arises whether it enhances the perceived security or not. However, there are so many stages which are accountable for gaining trust of customers by enhancing perceived security. So the present study also believed that if there is transparency in the procedure then there will be chances of enhanced perceived security of customers. To prove this, a survey was conducted and the results are presenting in the form of this research paper.

INTRODUCTION

One can define Electronic commerce or e-commerce as a wide range of various online business activities for different products and services [1]. Generally it is related with buying and selling over the Internet [7].

Various e-payment systems have recently been emerged on the web. Many new online shopping-lover users are adding day by day and so daily complaints of online frauds are also increasing rapidly. Though different measures and mechanisms for solving security issues of these EPS have already been introducedbut still many more are remaining[3][10][11]. Hence, there is an urgent need to minimize the risks associated with these transactions[9][13]. However, when one compares traditional payment methods with e-payment techniques he/she foundsseveral favourable features, including adequacy, privacy, efficiency, and suitability[2][5][6][12]. Moreover, many of the users are generally not aware of technical details of electronic payment system and they generally judge the level of security by their own experience with the interfaces they interact with. Thus it is important to maintain the trust of users, enhance the customers' perception of security via improvement in user interface [4][8].

Research Methodology

For This study a survey of different people from different parts of India was conducted. The purpose of this survey was to determine whether the transaction procedures influence the customers' perceived securityor not. The ten survey questions were categorized in two distinct headings i.e., Transaction procedures and perceived security.

Data Collection

Data are obtained through two types of investigations, namely,

- Primary data
- Secondary data

Total 234 responses were recorded from different users with the use of different modes like internet, personal interaction, telephonic interviews etc. Among them 23 questionnaires responses included inappropriate and inadequate responses. Therefore, finally 211 responses were analysed for the present study.

Nevertheless, in the present studied we also used secondary data. Secondary data used was published data but in some cases unpublished data was also reviewed. Reports released by RBI and TRAI were used to compare the results obtained during present study.

Hypothesis

The aim of this studywas to prove the following hypothesis:

Transaction Procedures are positively associated with consumers' perceived security in EPS.

Observations and Results

During the present study ten survey questions in the questionnaire were found relevant to factor analysis. In order to determine the primary structure, firstly the correlation matrix was examined to found its suitability for factor analysis. The KMO (Kaiser–Meyer–Olkin) values for each of the ten survey items exceeded 0.30. In addition, the value of the test statistic for sphericity on the basis of a Chi-squared transformation of the determinant of the correlation matrix was large, and the associated significance level was extremely small (0.000). Thus it was

concluded that the data were approximately multivariate normal data.

Data Analysis

On discussing the Transaction Procedure, It has been observed that only 11% people strongly agreed in the
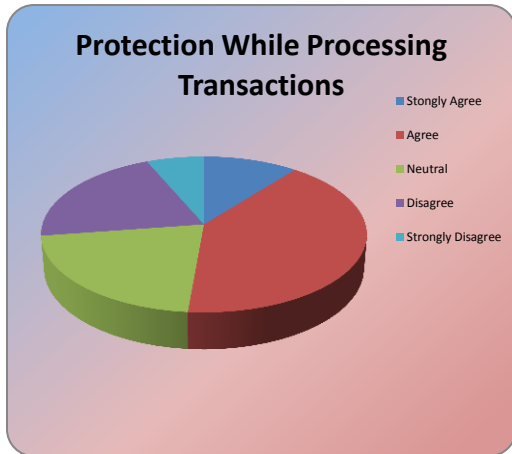
Chart I: Transaction Protection in EPS and Respondents

Almost similar results were obtained in terms of perceived security in EPS by the user where result has shown that among all the respondents 49% perceived EPS as a secure system whereas 29% did not agree. (Chart II)

HYPOTHESIS TESTING

The hypothesis that was suggested at the beginning of study was:

H_0:
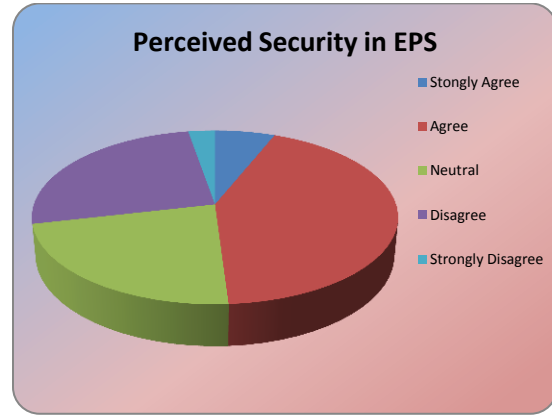*Transaction Procedures are positively associated with consumers' perceived security in EPS.*

H_1:
Transaction Procedures are not positively associated with consumers' perceived security in EPS.

To prove this, current research has taken two variables: Transaction Procedure which includes six basic questions as explained earlier and Perceived security which includes four questions. After conducting t-test, current research has got a value of

t= -0.02969

Computed value of t	**-0.02969**
Tabulated value of t at 5% level of significance for 20 degree of freedom	**2.09**

security of information provided to the user while transaction is done but 41% agreed for the same. Whereas, 27% respondents disagreed or strongly disagreed on these issues. Nevertheless, 21% people stayed neutral on these questions. (Chart I)

Chart II: Perceived Security in EPS and Respondents

While comparing the computed value of t with the tabulated value of t, it has been observed that tabulated value of t>calculated value of t. So that now H_0 is accepted. So the current research concluded that Transaction Procedure is positively associated with consumers' perceived security in Electronic Payment System.

CONCLUSION

The role of E-commerce in retail marketing is growing very impressively as the number of new online users is increasing day by day, so the online fraudcomplaints are also increasing. These criminal activities are imposing negative effects on the customers' perceived security. Now it's a high time to overcome these issues so that customers' faith will remain intact. Although there are different reasons for online fraud but one of them is unsecured transaction procedure. During the present study it has been concluded that transaction procedure are positively related with the consumers' perceived security. As the transaction procedures become easy to use and more secure then the perceived security will definitely be enhanced and so the company will gain consumers' trust too. For enhancing the trust of the clients the transaction procedures should be simple, easy to use, attractive and secured. For improving security of the system, dual verification should be there one through the OTP and the other one may be any biometric recognition like face or thumb recognition.

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