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# A STUDY ON FACTORS FAVOURING ONLINE SHOPPING

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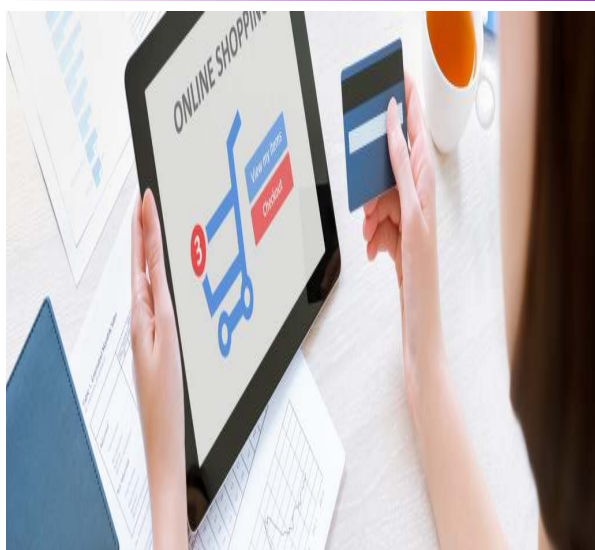
## ABSTRACT

The net's second generation features fierce competition for customer attention and to succeed, firms must employ strategies with solid marketing principles. E-marketers begin with research to determine what is important to customers and proceed by delivering more value than competitors. The research process starts with creating customer awareness towards a product, continues at all customer touch points indicating the web site expectation and e-mail from a firm and completes with the actual product usage and post purchase customer service.

The growing use of internet provides a developing prospect for online shopping. The prospect level depends upon the online shoppers expectations towards online shopping. Therefore, E-marketers should know the factors affecting online shopper's behavior and the relationship between these factors and the type of online buying, so that they can further develop their marketing strategies to convert potential customer into active ones, while retaining the existing online customer.

**KEYWORDS** : *Online shopping, e-shopping, Internet shopping.*

## 1.INTRODUCTION :

The understanding of consumer behavior in a virtual environment is limited, since electronic shopping is only just beginning to penetrate more markets. As activity in the electronic retailing market grows, it is important to develop an understanding of the factors that affect consumer behavior in the virtual market place. This will enable online retailers to develop more effective and focused strategies for optimizing the visibility of their product offerings and to encourage consumers to make purchase decision.

In the internet era consumers buying behavior and life styles are fastly changing and the concepts of "value for money" and "value for time" are fast catching on retailing. Large segment of young population, rapidly expanding middle class, rising income levels, growing literacy, increasing number of working women, nuclear family structure etc., compel the consumers to seek 'convenience' in shopping. Further, lack of adequate leisure time pressurizes shoppers to give

importance to speed and efficiency of transactions.

Hence, this chapter deals with assessing the level of importance given by online shoppers to the factors influencing them to do online shopping. The statistical tools employed for this purpose include:

- Percentage Analysis
- Descriptive Statistics
- Factor analysis
- Analysis of Variance (ANOVA) and t-test

## STATEMENT OF THE PROBLEM

Online shopping is new and it is at infancy stage and there are no hard and fast rules to live by. Consumers are slow in showing interest in online shopping. However, the future for internet shopping looks bright and promising.

This is especially true in the context of consumers in Tier-II cities , where internet shopping is still new and consumers are less familiar and often more skeptical towards it.

## In this scenario, the following questions arise:
- Do they assign the same degree of importance to various factors favouring online shopping?

## OBJECTIVE OF THE STUDY
1)To gauge the level of importance given by online shoppers to various factors favouring online shopping.

## METHODOLOGY

In due consideration of the above mentioned objectives, the following methodology has been adopted for conducting the present study. The study is predominantly empirical in nature as it explores relationships among several variables.

## AREA OF STUDY

The current study explores the online buying behavior of sample respondents selected from among the internet users in Coimbatore city.

## DATA SOURCE

The study is both descriptive and analytical in nature and hence both primary and secondary data have been used for the study.

## i) PRIMARY DATA

The study was undertaken with a well-structured questionnaire, duly filled by the respondents with varying demographical background. Questionnaire starts with the respondent's demographic background and covers internet usage pattern, online shopping data.

## ii) SAMPLING DESIGN AND TECHNIQUE
## Sample Design

Coimbatore city has been purposively chosen for the study. Conducting a survey for internet shoppers presents a unique problem. Since there is no central registry of all internet shopping site

visitors and online shoppers, getting the sample frame is neither practical nor feasible, financially. Therefore the researchers had to go for non-random sampling.

• Sample Size

226 respondents had made online purchases and hence the analysis is confined to those respondents.

iii) SECONDARY DATA

The sources of secondary data include data from books, research papers, reports, journals, unpublished research works on online consumer behavior and websites.

DATA PROCESSING AND FRAME WORK OF ANALYSIS
• The primary data collected have been processed and analyzed using Percentage analysis and Descriptive statistics

REVIEW OF LITERATURE

Dr.Gagandeep Nagra and Dr.R Gopal (2013) The present research paper has used Qualitative and Quantitative research methods to study the impact of Demographic factors of consumers on on-line shopping parameters like satisfaction with on-line shopping, future purchase intention, frequency of on-line shopping, numbers of items purchased, and overall spend on on-line shopping. The data was collected through Questionnaires. The results of study reveal that on-line shopping in India is significantly affected by various Demographic factors like age, gender, marital status, family size and income. The results of the study could be further used by the researchers and practitioners for conducting future studies in the similar area

Ixsuk Kim (2001) examined how perceived risk explains the nature and scope of internet shopping. The purpose of his study was to investigate the nature and scope of consumer's perceived risk in internet purchasing. He also examined the risk reduction strategies that may help marketers deal with the perceived risk involved in purchasing from the internet.The main findings of his research clearly showed that consumers perceive more purchasing risk when they are buying in the internet than when buying similar products in stores.

Kart Schimmal's (2000) purpose of the study was to profile online consumers and to identify their concerns and perceived benefits of e-commerce. He indicates that there are no aggregate significant differences between men and women regarding the perception of the benefits and concerns of e-commerce

Rajasee Rege (2007), in her research project aims at gauging the levels of importance of various usability vs. security factors affecting online shopping. She also aims at contrasting the security-related awareness of consumers while performing transactions online with the usability factors that influence the shopping behavior of the consumers. She analyzed the following factors pertaining to usability and security which affects online shopping.

She conducted the study with a total of 30 participants falling in the age group of 20-28 years of age. The participants were expected to be familiar with the internet and must have at least purchased once through online shopping.

She concludes that the benefits of using online shopping for purchasing (e.g. convenience, decreased transaction costs, speedy purchasing, free shipping, pleasing website appearance and relevant and quality information content) significantly outweigh potential security and privacy related

concerns of most online shoppers. It can also be inferred that most shoppers do not worry much about security in transactions while making cheaper product purchases online, as compared to expensive online purchases.

Shefali Kumar (2000), in his study predicted the consumer behavior regarding online shopping. This study also indentified individual demographic characteristics and other variables that distinguish those who have low intention to utilize internet shopping.

## IMPORTANCE OF FACTORS FAVOURING ONLINE SHOPPING
## PERCENTAGE ANALYSIS

To gauge the level of importance given by online shoppers to various factors favouring online shopping, their opinion on the factors was sought on a 5 point scale viz., very important – 5, important – 4, neutral – 3, less important – 2 and not at all important – 1 and in total 18 factors have been considered. On the basis of this data, table 1 has been prepared.

## TABLE 1
## IMPORTANCE OF FACTORS FAVOURING ONLINE SHOPPING

| Factors favouring online shopping | | VI | I | N | LI | NI | TOTAL |
|---|---|---|---|---|---|---|---|
| Privacy protection | No. | 183 | 27 | 11 | 3 | 2 | 226 |
| | % | 81 | 11.9 | 4.9 | 1.3 | 0.9 | 100 |
| Secured payment process | No. | 134 | 67 | 15 | 4 | 6 | 226 |
| | % | 59.3 | 29.6 | 6.6 | 1.8 | 2.7 | 100 |
| Time saving | No. | 106 | 83 | 29 | 4 | 4 | 226 |
| | % | 46.9 | 36.7 | 12.8 | 1.8 | 1.8 | 100 |
| Ease of use | No. | 86 | 95 | 32 | 10 | 3 | 226 |
| | % | 38.1 | 42 | 14.2 | 4.4 | 1.3 | 100 |
| Convenience | No. | 89 | 88 | 37 | 8 | 4 | 226 |
| | % | 39.4 | 38.9 | 16.4 | 3.5 | 1.8 | 100 |
| Previous experience | No. | 69 | 94 | 45 | 10 | 8 | 226 |
| | % | 30.5 | 41.6 | 19.9 | 4.4 | 3.5 | 100 |
| Economy | No. | 107 | 82 | 28 | 5 | 4 | 226 |
| | % | 47.3 | 36.3 | 12.4 | 2.2 | 1.8 | 100 |
| Facility for personal internet access | No. | 101 | 72 | 32 | 11 | 10 | 226 |
| | % | 44.7 | 31.9 | 14.2 | 4.9 | 4.4 | 100 |
| Download time | No. | 89 | 90 | 25 | 13 | 9 | 226 |
| | % | 39.4 | 39.8 | 11.1 | 5.8 | 4 | 100 |
| Company reputation | No. | 87 | 74 | 43 | 11 | 11 | 226 |
| | % | 38.5 | 32.7 | 19 | 4.9 | 4.9 | 100 |
| See and touch before buy | No. | 77 | 71 | 47 | 17 | 14 | 226 |
| | % | 34.1 | 31.4 | 20.8 | 7.5 | 6.2 | 100 |
| Product variety | No. | 96 | 82 | 29 | 13 | 6 | 226 |
| | % | 42.5 | 36.3 | 12.8 | 5.8 | 2.7 | 100 |
| Benefits /discounts | No. | 74 | 91 | 42 | 13 | 6 | 226 |
| | % | 32.7 | 40.3 | 18.6 | 5.8 | 2.7 | 100 |
| Delivery time and fee | No. | 98 | 79 | 30 | 11 | 8 | 226 |
| | % | 43.4 | 35 | 13.3 | 4.9 | 3.5 | 100 |
| Return policy | No. | 101 | 69 | 35 | 11 | 10 | 226 |
| | % | 44.7 | 30.5 | 15.5 | 4.9 | 4.4 | 100 |
| customer service | No. | 121 | 65 | 19 | 14 | 7 | 226 |
| | % | 53.5 | 28.8 | 8.4 | 6.2 | 3.1 | 100 |
| Clear product colour/features | No. | 102 | 66 | 29 | 16 | 13 | 226 |
| | % | 45.1 | 29.2 | 12.8 | 7.1 | 5.8 | 100 |
| Loyalty points | No. | 61 | 73 | 52 | 29 | 11 | 226 |
| | % | 27 | 32.3 | 23 | 12.8 | 4.9 | 100 |

Note: VI - Very Important, I- Important, N- Neutral, LI- Less Important, NI- Not at all Important

Table 1 shows that the online shoppers considered almost all the items as important or very important. Privacy protection (81%) followed by secured payment process (59.3%) and customer services (53.5%) were considered to be the most important factors.

## FACTOR ANALYSIS

The Factor Analysis procedure has been used for identifying the underlying factors influencing online shoppers towards online purchase favorably. The same 18 factors which were rated by the respondents on the basis of importance were taken up for this analysis. These factors are given below:

| | |
|---|---|
| Privacy protection | Benefits/discounts |
| Secure Payment process | Delivery time and fee |
| Time saving | Return policy |
| Ease of use | Customer service |
| Convenience | Clear product colour/features |
| Previous experience | Loyalty points |
| Economy | Company reputation |
| Facility for personal internet access | See and touch before buy |
| Download time | Product variety |

The general purpose of factor analysis is to find a method of summarizing the information contained in a number of original variables into a smaller set of new composite dimensions (Factors) with minimum loss of information. Thus the Factor Analysis tries to identify and define the underlying dimensions in the original variables.

The responses collected on the set of 18 factors which measure the level of importance with respect to internet shopping were used to find the underlying factors in it. Correlation matrix for these factors was analyzed initially for possible inclusion in Factor Analysis.

### TABLE 2    KMO AND BARTLETT'S TEST

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .890 |
|---|---|---|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 1575.622 |
| | Df | 153 |
| | Sig. | ** |

** - Significant at 1% level (P<0.01)

Bartlett's test of sphericity is used to test whether the correlations between all the variables is 0. The test value (1575.622) and the significance level (P<.01) are given in Table 2. As the value of test statistic and the associated significance level is so small, it appears that the correlation matrix is not an identity matrix, i.e., there exists correlations between the variables. Kaiser Meyer Olkin (KMO) measure of sampling adequacy is based on the correlations and partial correlations of the variables. If the test value, or KMO measure is closer to 1, then it is good to use factor analysis. Since the value of test statistic is 0.890 the factor analysis for the selected variables is found to be appropriate to the data.

## TABLE 3   TOTAL VARIANCE EXPLAINED

| Component | Initial Eigen values | | | Extraction Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 6.661 | 37.004 | 37.004 | 6.661 | 37.004 | 37.004 |
| 2 | 1.593 | 8.85 | 45.855 | 1.593 | 8.85 | 45.855 |
| 3 | 1.302 | 7.232 | 53.086 | 1.302 | 7.232 | 53.086 |
| 4 | 0.968 | 5.378 | 58.465 | | | |
| 5 | 0.932 | 5.178 | 63.643 | | | |
| 6 | 0.843 | 4.683 | 68.326 | | | |
| 7 | 0.769 | 4.274 | 72.6 | | | |
| 8 | 0.64 | 3.554 | 76.153 | | | |
| 9 | 0.605 | 3.363 | 79.516 | | | |
| 10 | 0.559 | 3.105 | 82.621 | | | |
| 11 | 0.5 | 2.778 | 85.399 | | | |
| 12 | 0.474 | 2.634 | 88.033 | | | |
| 13 | 0.467 | 2.597 | 90.629 | | | |
| 14 | 0.461 | 2.56 | 93.189 | | | |
| 15 | 0.392 | 2.178 | 95.367 | | | |
| 16 | 0.308 | 1.71 | 97.076 | | | |
| 17 | 0.301 | 1.672 | 98.748 | | | |
| 18 | 0.225 | 1.252 | 100 | | | |

The extent of variance explained by each factor out of total variance is given as percentage in the third column of table 3. It is seen that factor 1 accounts for 37% of variance, Factor 2 about 9% of variance and Factor 3 about 7% of variance. The number of factors to be extracted were decided based on the Eigen value being 1 or above for each component. Hence the model could identify only 3 factors for the given data.

Table 3  gives the Component Matrix or Factor Matrix where PCA extracted 3 factors. These are all coefficients used to express a standardized variable in terms of the factors. These coefficients are called factor loadings, since they indicate how much weight is assigned to each factor. Factors with large coefficients (in absolute value) for a variable are closely related to that variable. For example, "Delivery time and fee" is the factor (factor no 13) with largest loading (0.721).

## TABLE 4 COMPONENT MATRIXES

| Factors favouring online shopping | Component | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| Delivery time and fee | 0.721 | -0.102 | -0.361 |
| Clear product colour/features | 0.705 | -0.186 | -0.055 |
| customer service | 0.7 | -0.096 | -0.355 |
| Download time | 0.688 | -0.1 | -0.171 |
| Facility for personal internet access | 0.688 | -0.143 | 0.032 |
| Secure payment process | 0.678 | 0.362 | -0.379 |
| Company reputation | 0.668 | -0.032 | 0.245 |

| | | | |
|---|---|---|---|
| Return policy | 0.648 | -0.162 | 0.022 |
| Convenience | 0.628 | 0.331 | 0.278 |
| Product variety | 0.614 | -0.107 | -0.056 |
| Ease of use | 0.58 | 0.505 | 0.088 |
| Benefits/discounts | 0.565 | -0.114 | 0.292 |
| Privacy protection | 0.51 | 0.476 | -0.282 |
| Previous experience | 0.488 | -0.265 | 0.351 |
| Economy | 0.479 | -0.334 | -0.1 |
| See and touch before buy | 0.514 | -0.539 | -0.011 |
| Time saving | 0.479 | 0.51 | 0.191 |
| Loyalty points | 0.485 | 0.058 | 0.62 |

Extraction Method: Principal Component Analysis. 3 components extracted.

To have a meaningful understanding of the factors the initial factor matrix (Table titled Component Matrix, which measures the extent of correlations between each item and the factor) obtained in the extraction phase was subjected to Varimax Rotation. The Rotated Factor Matrix (Table titled Rotated Component Matrix) using Varimax rotation is given in Table 4 where each factor identifies itself with a few set of variables. The variables which identify with each of the factors were sorted in the decreasing order and are highlighted against each column and row of the table.

### TABLE 5 ROTATED COMPONENT MATRIX

| | Component | | |
|---|---|---|---|
| Factors favouring online shopping | 1 | 2 | 3 |
| Delivery time and fee | **0.727** | 0.362 | 0.019 |
| customer service | **0.707** | 0.355 | 0.015 |
| See and touch before buy | **0.677** | -0.186 | 0.251 |
| Clear product colour/features | **0.638** | 0.215 | 0.286 |
| Download time | **0.625** | 0.304 | 0.172 |
| Economy | **0.574** | -0.013 | 0.147 |
| Facility for personal internet access | **0.566** | 0.222 | 0.354 |
| Return policy | **0.551** | 0.188 | 0.326 |
| Product variety | **0.528** | 0.234 | 0.24 |
| Secure payment process | 0.447 | **0.731** | -0.036 |
| Privacy protection | 0.222 | **0.718** | -0.033 |
| Ease of use | 0.107 | **0.693** | 0.326 |
| Time saving | -0.011 | **0.623** | 0.371 |
| Convenience | 0.16 | **0.53** | 0.524 |
| Loyalty points | 0.069 | 0.153 | **0.772** |
| Previous experience | 0.358 | -0.053 | **0.548** |
| Company reputation | 0.404 | 0.256 | **0.527** |
| Benefits/discounts | 0.355 | 0.125 | **0.525** |

Normally, from the factor results arrived above, factor score coefficients can be calculated for all

the eighteen factors (since each factor is a linear combination of all variables) which are then used to calculate the factor scores for each individual. Since PCA was used in extraction of initial factors, all methods will result in estimating same factor score coefficients. However, for the study, original values of the factors were retained for further analysis and factor scores were thus obtained by adding the values (ratings given by the respondents) of the respective factor for that particular factor group, for each respondent.

Thus the 18 factors in the data were reduced to 3 factor model and each factor may identify with the corresponding set of factors as presented in Table 5. Factor number one is labeled as 'Navigation and Product features' as it covers all the factors relating to navigation and product. The second factor called 'Privacy and convenience' includes the aspects of secured payment, privacy, ease of use, time saving and convenience. The third factor is termed as 'Evaluation factor' since it encompasses the loyalty points, previous experience, company reputation and benefits/discounts.

### TABLE 6 FACTOR GROUPS

| Factors favouring online shopping | Factors | Factor names |
|---|---|---|
| Delivery time and fee | | |
| customer service | | |
| See and touch before buy | | |
| Clear product colour/features | | |
| Download time | Factor 1 | Navigation and product features |
| Economy | | |
| Facility for personal internet access | | |
| Return policy | | |
| Product variety | | |
| Secure payment process | | |
| Privacy protection | | |
| Ease of use | Factor 2 | Privacy and convenience |
| Time saving | | |
| Convenience | | |
| Loyalty points | | |
| Previous experience | Factor 3 | Evaluation factor |
| Company reputation | | |
| Benefits/discounts | | |

### CONCLUSION

To gauge the level of importance given by online shoppers to various factors favouring online purchase, mean and standard deviation has been calculated by considering response towards 18 factors favouring online purchases. Further, factor analysis has been carried out for data reduction using a number of evaluative procedures.

The percentage analysis has disclosed that out of 18 factors influencing online shoppers to purchase online, almost all the items were considered to be important or very important. Privacy protection (81%) followed by secured payment process (59.3%) and customer services (53.5%) were considered to be the most important factors among them.

•The descriptive statistics reveals that 'Privacy protection' with mean value 4.7080 is considered to be the most important factor by online shoppers followed by secured payment process with mean value 4.4115. 'Loyalty points' with a mean value of 3.6372 is considered to be the least important factor

•Results of factor analysis

Factor analysis has been employed for data reduction in respect of opinion given by online shoppers towards importance given to eighteen factors while shopping online. It has been used to summarize eighteen factors into three principal component factors through varimax rotation. Each factor has therefore been regrouped under three headings and this three factor solution has described the data best. Thus eighteen factors have been summarized and classified under three headings namely 'Navigation and Product features', 'Privacy and Convenience' and  Evaluation factor'.

The results of the study can be utilized by practitioners in relooking or revamping their strategies for online shopping.

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