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I thank and pray for the blessings of Almighty.

JAMES PAUL

CHAPTER–I

INTRODUCTION AND DESIGN OF THE STUDY

INTRODUCTION
An increasingly significant number of people around the world are accessing the internet. The number of internet users has grown significantly over the last few years, from virtually nothing to an estimated 605 million worldwide users (NUA, 2003). This rapid growth in the number of internet users had promoted a belief in many business circles that the Web represents a huge marketing opportunity (Hoffman, 2000). However, there is much evidence to suggest that initial forecasts of the value in business to consumer sales were overly optimistic (Biswas and Krishnan, 2002, Ranganathan and Ganapathy, 2002). Smith and Sivakumar, 2002 contend that while e-tailers have gone to great lengths to establish brand recognition, they still have many questions regarding how to successfully induce purchase behaviour and build customer loyalty. Many researchers assert that this apparent lack of translation from predictions to reality may

be as a consequence of our (i.e. both academic researchers and practitioners) limited understanding of consumer purchase behaviour (Shim, et al., 2001).

Theoretical Context of e-shopping behaviour

In order to gain a greater understanding of e-tailing, researchers have approached e-shopping patronage from varied perspectives. Consumer attitudes remain an important predicator of consumer behaviour and, unsurprisingly, e-consumer attitudes to e-shopping are beginning to attract significant attention from researchers. Childers et al., (2001) argue that e-consumer shopping motives include both utilitarian and hedonic dimensions. They conclude that hedonic aspects of the new media will particularly immersive and play an equal (to utilitarian) role in motivating e-shoppers. Work carried out by Garbarimo and Strabilevitz (2002) and Doherty and Ellis-Chadwick (2003) extend these strands of research and examine how men and women differ in their perceptions to the risks associated with e-shopping and


the effect on purchase intentions. Keen et al., (2002)\textsuperscript{10} investigate the structure for consumer preferences to make product purchases, and how they arrive at determining the importance of attributes in the decision making process. Other researchers have also attempted to understand e-shopping behaviour by drawing on the technology acceptance model (TAM) from the information systems literature. Moon and Kim, 2001\textsuperscript{11}, Shih, 2004\textsuperscript{12}. These researchers conclude that individual attitudes toward e-shopping are strongly and positively correlated with user acceptance. Consumer satisfaction has also received attention, with Szymanski and Hise (2000)\textsuperscript{13} and Jayawardhena and Foley (2000)\textsuperscript{14} identifying that convenience, site design, and financial security are the dominant factors in consumer assessment of e-satisfaction.

FACTORS INVOLVED IN ONLINE DECISION MAKING

1. Need Recognition

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The stimulus that prompts need recognition may come from a number of sources - traditional or online. Although firms employ a variety of online marketing communications, no sizeable firm has abandoned its traditional communication in favour of an exclusive web presence and it is widely recognized that web site traffic is largely dependent on offline communications. Online advertising differs from other media in that its audience may actively seek information, e.g. by visiting a web site, whereas traditional media play to a passive audience. Banner advertisements, though, fit better with traditional media characteristics.

2. E-information Search

E-marketing has benefited from computerized processes to integrate consumer information from marketing databases concerning their characteristics, preferences and records of transactions. Businesses can advertise on websites, by e-mail and bulletin boards to speedily and efficiently target consumers and employees and to provide added value between the supplier and those who were supplied.

It is not only business that profit by way of gaining valuable information about customers. The communication structures provided by internet have also given customers a new role (Wright and Jayawardhena, 2001). Due to their connectivity and

interactivity customers can become more empowered as they surf the web for the best prices or value for money and the latest consumer innovations or special offers.

3. E-purchases

A number of previous studies (Burke, 1998) contend that convenience is the principal reason behind consumers making internet purchases. However, convenience is now giving way to price as the most important reason. Consumers with a balanced orientation, i.e., those concerned with most aspects of traditional purchases Williams et al., 1978 have imposed these requirements for their web use. Brand motivation is an important factor that is in line with findings of earlier studies in the financial services sector (Devlin et al., 1995).

4. E-valuation

Earlier, e-shoppers were largely bargain hunters, expecting the lowest prices as a reward for their risk taking. Amazon and other early e-businesses used the lure of cheaper prices to attract the shoppers online. Things have now moved on and,

according to the Goldfish e-Tail Price Index, online prices rose by 4 percent in the year up to February 2002, (Goldfish.com, 2002)\textsuperscript{19}.

5. E-post Purchase Evaluation

The emergence of internet virtual communities is evidence that meet the e-consumers share the need for post purchase re-assurance with their traditional counterparts. Technology speeds diffusion and so ideas about new products and services spread faster around the globe amongst web users. These communities provide a forum for online shoppers to share experiences and recommend solutions to hitches-often without reference to the brand owner.

NEED FOR THE STUDY

Wasteful time spent in shopping for everyday articles is, many shoppers, up to now, have found a necessity. That has been one of the reasons why making shopping a more pleasurable experience has received so much attention in recent years. Retailing is simply about giving the customer what he/she wants. Merchandising, advertising and promotion influence the customer to reach the decision and choice. The pleasure of most shoppers is to have the purchase there and then. Part of the pleasure of a new purchase is to take it home, or use it, dwelling on the possession of a new asset. One of the places where the impact of new information technology can be clearly seen is in the growth of retail spending through the internet.

According to Markham (1998)\textsuperscript{20} the obvious four items of inconvenience are:

1. getting to the shop either by public transport or car and parking in the latter case;
2. knowing whether the shop has the type of product you are seeking;
3. the time taken to process the items selected for purchase; and
4. The burden of getting the items to your car and transporting it to home.

Information technology can be of great help to get rid of the inconveniences. Electronic retailing will remove much of the pedestrian traffic, mean fewer shops, allow shoppers to shop from home and generally reduce the location value of the retail premises which may be represented only by an internet page source which is always

open throughout the year, 24 hours per day, seven days per week, the web is well suited to be the point of customer contact for a wide range of self-service applications (e.g. overnight shipping, technical, home banking and travel tickets reservations). It means that the electronic customer can “shop” at their leisure at anywhere, at anytime, and always have the same level of service. The capability of websites provides information and service direct to customer efficiently, automating transactions/servicing (Hughes, 2001)\textsuperscript{21} shoppers who desire to make a purchase, will find a number of relevant data if they spend time searching for information online. In other words, the customer can know whether the shop has the type of product he/she seeking is easily available. Due to the lack of direct contact between the marketers and consumers, it is highly essential to examine the consumer behaviour in e-shopping in a detailed manner in order to formulate suitable marketing strategy. Hence the present study has made an attempt to cover the above grounds.

**STATEMENT OF THE PROBLEM**

In the case of e-shopping, there is no direct personal meet of the marketers, customers and consumers. Hence, the marketers have to be careful in the determination of the customers’ expectations and perception on various aspects related to the products and services in online marketing. They should be aware of the factors

leading to their attitude towards online marketing. At the same time, the marketers should know their strengths and weakness in the online marketing. If not, there will be a lot of service failure. Kotler (2000) indicates the key barriers to online shopping are: ‘limited consumer exposure and buying’; ‘skewed user demographics and psychographics’; ‘security’; ‘privacy’; consumer backlash and ethical concerns over the use of cookies. Nowadays, the management of service failure in online marketing has received increasing attention. Furthermore, despite the phenomenal growth in electronic commerce in general and online marketing in particular, research has yet to examine the role of service recovery management. The online marketing is subjected with some issues like credit card security, privacy, on–time delivery and ease of navigation. The ability of the consumers to exit out of the marketer is very easy and also frequent in online marketing. Hence, it is very difficult to retain the existing consumers. The service quality of the marketers is an important as ever in this realm. Indeed, the technological changes in the world lead us to ever changing environment in the e-shopping. Hence, the marketers have to be vigilant about these changes and act in accordance with the e-shopping behaviour among the consumers.

**REVIEW OF PREVIOUS STUDIES**

There are so many studies related to e-commerce, adoption of e-shopping behaviour, determinants of e-shopping, interest shopping service quality, hurdles in e-
shopping and e-loyalty towards e-tailers. The study has reviewed many studies related to the above aspects. The reviews are summarized below.

1. Service Quality in e-shopping

Ozmen and Morash (1994)\(^\text{22}\) revealed that delivering quality in services has been shown to be an important strategy for marketers who are trying to differentiate their service offering by establishing customer value and satisfying customer needs.

Slywotzley and Morison (2001)\(^\text{23}\) recognized the issue of service quality as strategically important with managers of companies with a web presence, as more and more customers are taking the plunge and engaging with companies over the interest.

Katz (2001)\(^\text{24}\) identified that as the internet retailers gain more experience, they realize that customers are concerned with the process of how the service is delivered, along with the outcome of the service.

Holloway and Betty (2003)\(^\text{25}\) revealed the importance of online retailing in promoting the customer loyalty and retention. They also found the interaction of the consumer and the website.


Yoo and Donthu (2001)\textsuperscript{26} identified that e-service quality provides an adequate framework for measuring website interactivity but have failed to look at the broad picture that e-service quality is more than just how a customer interacts with a website. E-service quality relates to customer perception of the outcome of the service along with recovery perceptions if a problem should occur.

Smith (2003)\textsuperscript{27} pointed out that the main concern for consumers in website interactivity is the delivery of the desired product or service. Consumers place an important emphasis on the outcome of the service, and if an e-retailer fails to deliver the product or service in the manner desired, then provision evaluations of website interactivity will mean very little in the evaluation of e-service quality.

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Dabholkar et al., (2000)\textsuperscript{28} showed that the majority of the customers surveyed were dissatisfied with recovery attempts in web marketing. This dissatisfaction affected intention to repertoire a company’s website. Recovery measures are extremely important with online service quality because consumers are just one click away from switching to another e-retailer.

2. Customers’ Satisfaction in e-shopping

Zeithaml, et al., (2002)\textsuperscript{29} stated that customer expectations are not well formed in e-service quality. This adds further support to the argument that perceptions and reasoned action should be the basis for measuring e-service quality.

Mentzer, Flint and Hult (2001)\textsuperscript{30} model for logistics service quality is a good reference for conceptualizing e-service quality because, similar to logistics customer, online customer require information quality and ease of ordering the process, along with order condition and accuracy in the outcome of online transactions.


Bienstock et al., (1997)\textsuperscript{31} have shown that when a service provider and service customer are physically separated, it has a significant impact in the criteria used to evaluate the service quality. The ability to handle question, concerns, and frustrations from that customer is essential to the customer perception on e-service quality.

Mohr and Bitner (1995)\textsuperscript{32} demonstrated that service recovery has a direct relationship with factors such as trust; repurchase intention, commitment and word of mouth, that play a crucial role in success for e-retailers.

Wolfinberger and Gilly (2002)\textsuperscript{33} have shown that privacy plays a crucial part in the evaluation of an online service. The construct of privacy refers to companies not sharing information with third parties unless the customer gives permission. It includes the security of sensitive information between the customer and company. In addition, this

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includes providing visual symbols so customers will able to know a secure connection is being achieved.

Waite and Harrison (2002)\textsuperscript{34} showed how information accuracy played a crucial part in the evaluation of airline website quality. In addition, information accuracy has been shown to affect the perceived quality of financial, retail and sporting web sites.

Fram and Grandy (1995)\textsuperscript{35} identified that the ease of use is considered as one of the most important factors to customer on the internet. This concept has been characterized as the customer ability to use as few “clicks” as possible. It also includes the issue of navigation, effective search engines, the ability to easily change or cancel an order, and the ability to inform customer of missing information.

Barwise et al., (2002)\textsuperscript{36} mentioned that they do not believe that the internet changes the fundamentals of marketing. Existing literature in offline service recovery is still highly relevant to online services, and they see no need to discard validated and empirically supported research.

\begin{itemize}
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Collier and Carol (2006) found that the customer in web marketing evaluate process of placing an order by evaluating the design, information accuracy, privacy, functionality and ease of use of web site. The process quality, in term, positively affects their perceptions of the outcome quality of transaction. The quality of the transactions’ outcome subsequently affects satisfaction evaluations. In the event of a problem, how the e-retailer handled the service recovery had a positive impact on satisfaction.

3. Marketing strategies in e-tailing

Varadarajan and Yadav (2002) systematically described how strategic marketing variables are altered when electronic markets are considered. Some strategic tenets will occur in both physical and electronic markets. However, some characteristics of electric market places imply that the strategic landscape will evolve.


Sawhney and Zahim, (2002)\textsuperscript{39} describe an approach for managing the relationship that an organization has with multiple stakeholders, including customers, employees, channel partners, and suppliers. Specifically, organizations now have an opportunity to use information technology and information systems to make closer connections with their relational partners.

Balasubramanian et al., (2002)\textsuperscript{40} explored the implications of mobile commerce. They describe how wireless technologies have been with us for many years. As in all areas of information technologies, the underlying technology of m-commerce is in constant flux. To bring a semblance of order to this area of inquiry, they identify a number of key characteristics associated with m-commerce, including the fact that at least one of the communicating parties has to be on the move.

Zeithaml et al., (2002)\textsuperscript{41} focused on key differences between service quality (SQ) and electronic service quality (e-sq). They identified that the traditional service quality may not be as important in the case of e-sq. The additional dimensions such as navigation, flexibility, efficiency, site aesthetics and security are required to add with the


traditional service quality to implement the electronic service quality. The electronic service quality appears to involve more cognitive processing than emotional evaluation.

Stewart and Pavlou (2002)\textsuperscript{42} analyze how interactive media require the development of new measures of communication effectiveness. Interactive media are characterized as multi-way, immediate and contingent. (The response of one actor follows directly from the response of another actor). They included the perceived ease of use, perceived security, perceived privacy, speed of interaction and perceived playfulness to analyze the interactive media.

Reibstein (2002)\textsuperscript{43} speculated that the factors that initially draw a buyer to a website might not necessarily be the ones that motivate those same buyers to return. The findings indicate that repeat buying is more likely for specific product categories like small ticketed items such as music or books. It also indicates that customer service support is the key variable that explains whether a buyer intends to remain loyal to an economic shopping site.

4. Success factors in e-shopping


Narayandas et al., (2002)\textsuperscript{44} identified several reasons for success of internet marketing. These are low prices, expedited delivery, and long term relationship with customer, truly transactional approach, and quick service with relatively little expense and customer satisfaction.

Brynjolfsson and Smith (1999)\textsuperscript{45} found lower prices being charged in online than in traditional outlets. They also found much wider price dispersions being offered for the same product than in traditional retailing. They speculated that this might be the result of greater differences in non-price attributes and services; hence, price plays a less important role in the consumer choice process.

Alba and Hutchwison, (1997)\textsuperscript{46} believed that price sensitivity would be lower in online than in traditional outlets when the non-price attributes or quality attributes are of greater importance and when there is more product differentiation among the choices. When the products are relatively comparable, then price, of course, will play a greater role.


Ariely and Carmon (2000) contended that a crucial part of the purchasing experience occurs at the end of the purchase process, when critical factors influence one’s likelihood of returning to the same site. This argument would contend that the fulfillment aspects of the purchase process might play a greater role than the level of information provided or the amount of choice that is available to the customer.

Reibstein (2002) identified the important attraction for online marketing among the customers as ease of ordering, product selection, product information, product prices, navigation, on time delivery, product representation, customer service, privacy policies and shipping and handling. The factors affecting likelihood to buy again from the merchant are customer support, on-time delivery product representation, posted privacy policy, ease of ordering, product information, website navigation, product selection and price.


Simms David (2002) identified five unique elements fundamental to determining satisfaction in an online experience, including navigability, content, aesthetics, customer service and the buying experience. Apart from that the determinants of e-satisfaction are convenience, site design and financial security.

Research Gap

Even though, the previous studies related to the various aspects in online marketing especially the consumers and marketers’ perception on various aspects related to online marketing, all these works are related to the foreign environment, there is no exclusive study on e-shopping behaviour among the Indian consumers. Hence the present study has made an attempt to fill up the research gap with the help of proposed research model.

Proposed Research Model

The proposed research model is given in Figure 1.1.

FIGURE 1.1

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OBJECTIVES OF THE STUDY

Based on the proposed research model, the objectives of the study are given below

1. to exhibit the profile of the customers and their e-shopping behavior;
2. to examine the various determinants of e-shopping;
3. to analyze the service quality of e-shopping;
4. to find out the important hurdles in e-shopping;
5. to identify the discriminant factors among the elders and youngsters in e-shopping;
6. to determine the impact of service quality of e-shopping on consumer’s satisfaction;
7. to analyze the loyalty behaviour in e-shopping and
8. To examine the direct and indirect impact of service quality on consumers’ satisfaction in e-shopping.

RESEARCH METHODOLOGY

Research Methodology is the way of systematically solving the research problem. It is a science of studying how research is conducted scientifically. The advanced Learners’ Dictionary of current English lays down the meaning of research as “a careful investigation or inquiry especially through search for new facts in any branch of knowledge”\(^{50}\). Redman and Moray defined research as “looking for new facts in any branch of knowledge”\(^{51}\). In the present study, research methodology covers the research design, locale of research, sample and sampling, operation alienation and measurement variables, method of data collection, framework of analysis and limitations.

The Research Design of the Study

The most important problem after defining the research problem is preparing the design of the project report, which is popularly known as the ‘research design’. A

research design helps to decide upon issues like what, when, where, how much, by what means, etc. with regard to an enquiry or a research study.

Selltiz et al., (1962)\textsuperscript{52} defined, “A research design is the arrangement of conditions for collections and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. In fact, the research design is the conceptual structures with which research is conducted; it constitutes the blue print for the collection, measurement and analysis of data”.

In the present study, the descriptive research design has been administered. Since this research describes the characteristics of the customers and e-shopping, various attributes in e-shopping and consumers’ satisfaction, it is concerned with descriptive in nature. Mean while, this study analyzes the e-shopping behaviour and its determinants, e-services quality, e-loyalty and the linkage between the above said concepts seems to be diagnostic in nature. Hence the present study is descriptive and diagnostic in nature.

**SAMPLING FRAMEWORK OF THE STUDY**

The online marketers have been identified by the popular web service provider namely Airtel, Vodafone, Aircel and BSNL. In total, 193 marketers were identified. All 193 marketers have been included as the sampled marketers for the study. From each

\textsuperscript{52} Clavioe Selltiz and others, (1962), Research Methods in Social Sciences, p.50.
marketer, 10 customers’ I.D. has been selected. Since the responded marketers were only 117 marketers, the sample consumers came to 1170. Hence the included sample size came to 1170 consumers. Out of 1170 consumers, only 538 consumers responded to the questionnaire at a reusable level. Hence, the final sample size included for the present study came to 538 consumers.

Source of Data

Since the present study is completely based on the primary data, questionnaire had been used to collect the data. The questionnaire was meant to the consumers in online marketing. The questionnaire was divided into five important parts. The first part covers the profile of the customers whereas the second part includes the e-shopping behaviour among the customers. The third part includes the determinants in the e-shopping behaviour. The fourth part of the questionnaire consists of the service quality and consumers attitude towards e-shopping. The final part covers the e-loyalty behaviour among them. A pre-test was conducted among 50 consumers. Based on the response of pre-test, certain modifications, additions and deletions had been carried out.

Operationalization and Measurement of variables

Since the personality of the customers and marketers is the important factor influencing the e-shopping behaviour and electronic commerce adoption in the
business, it is included as one of the profile variables. As the personality of the respondents is purely subjective in nature, there are some operationalized concepts generated. The concepts and the way in which these variables have been measured are presented below.

The personality of the customers has been measured by their media exposure, sociability, innovation, scientific orientation and computer orientation. The measurements of the variables are shown below

i) Media Exposure

The media exposure indicates the level of awareness and usage of various media for their marketing purposes. It has been measured by number of media known, frequency of usage, general utility of the media, marketing utility of the media and belief on the media. The above said variables are rated at a five point scale to measure the level of media exposure among the customers.

ii) Sociability

The sociability represents the social interaction of the customers. Since the sociability is a prerequisite for the usage of web marketing, it is also included in the
present study. The sociability among the customers has been measured by social membership, social interaction, attitude towards society and social obligation.

iii) Innovativeness

The innovativeness indicates the level of awareness, understanding and the acceptance of innovation among the customers. The levels of innovativeness among the customers have been measured by the customers’ awareness, knowledge, attitude and expectation from innovation.

iv) Scientific Orientation

The scientific orientation is the level of application of scientific principles in the consumption among the customers. It has been measured by awareness, knowledge, attitude and utility of scientific principles in the maximization of utility among the customers.

v) Computer Literacy

It reveals the knowledge, ownership, usage and updating of computer skills among the customers. It indicates the level of computer application in their day to day life among the customers. It has been measured by the computer knowledge, ownership and frequency of usage and application of computer in marketing among the customers.
vi) Personality of the customers

The personality of the customer is the summative view on the inner qualities of a customer. In the present study, it includes the level of media exposure, sociability, innovation, scientific orientation and computer literacy. It is measured by the lead of the variables in the above said components of personality traits.

FRAME WORK OF ANALYSIS

For analyzing the data collected during the investigation, the following statistical tools were used based upon the nature of data and relevance of the information required.

1. **T-Test**

Several hypotheses in marketing are related to any parameters from two different populations. In order to find out the difference between two means related to any parameters, the ‘t’ test has been applied. There is one condition on the nature of data. That is the data related to any parameter should be in interval scale. The t-statistics can be calculated by

\[
t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{(n_1-1)s_1^2 + (n_2-1)s_2^2}{n_1 + n_2 - 2} \times \frac{1}{n_1} + \frac{1}{n_2}}} \times \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}
\]

With the degrees of freedom of \((n_1+n_2-2)\).

Whereas
\[ t = \text{t-value} \]
\[ \bar{x}_1 = \text{mean of the first sample} \]
\[ \bar{x}_2 = \text{mean of the second sample} \]
\[ \sigma^2_{x_1} = \text{variance in the first sample} \]
\[ \sigma^2_{x_2} = \text{variance in the second sample} \]
\[ n_1 = \text{number of samples in first group} \]
\[ n_2 = \text{number of samples in second group} \]

In the present study, the test has been used to find out the significant difference among the youngsters and elders regarding their perception on various aspects in e-shopping.

2. **Analysis of Variance (ANOVA)**

Analysis of variance is used for examining the differences in the mean values of the dependent variable associated with the effect of the controlled independent variables, after taking into account the influence of the uncontrolled independent variables. Essentially, ANOVA is used as a test of means of two or more populations. One way analysis of variance involves only one categorical variables or a single factor. ANOVA is applied when the categorical variable is in interval scale.

\[
F_{\text{ratio}} = \frac{\text{Variance between groups}}{\text{Variance within groups}}
\]

is calculated and compared with the respective table value of \( F \left[ \frac{(k-1)/(n-k+1)}{\text{degree of freedom}} \right] \) whereas \( k \) – number of groups and \( n \) – number of samples.
In the present study, the one way analysis of variance have been used to examine the association between the profile of consumers and their perception on various aspects in e-shopping.

3. **Multiple Regression Analysis**

Multiple regression analysis is used when there is one dependent variable and more independent variables. Here these independent and dependent variables are in interval scale. The impact of independent variables on the dependent variable is measured with the help of multiple regressions. The fitted regression model in the present study is

\[ Y = a + b_1x_1 + b_2x_2 + \ldots \ldots + b_nx_n + e \]

Whereas

- \( Y \) - Dependent variable
- \( x_1 \ldots x_n \) - Independent variables
- \( b_1 \ldots b_n \) - regression co-efficient of independent variables
- \( a \) - intercept and
- \( e \) - error term
The multiple regression analysis is applied to find out the impact of service quality in e-shopping on the consumers’ satisfaction and impact of determinants of e-shopping behaviour on the overall e-shopping behaviour.

4. Exploratory Factor Analysis

Exploratory Factor analysis is a general name denoting a class of procedures primarily used for data reduction and summarization. In marketing research, there may be a large number of variables, most of which are correlated and which must be reduced to manageable level. Relationship among sets of many interrelated variables are examined and represented in terms of a few underlying factors.

If the variables concluded in factor analysis are standardized, the factor model may be represented as

\[ X_i = A_{i1}F_1 + A_{i2}F_2 + A_{i3}F_3 + \ldots + A_{im}F_m + V_iU_i \]

Whereas

- \( X_i \) = \( i^{th} \) standardized variable
- \( A_{ij} \) = Standardized multiple regression co-efficient of variable on common factor \( j \)
- \( F \) = Common factor
- \( V_i \) = Standardized regression co-efficient of variable \( i \) on unique factor \( i \)
- \( U_i \) = The unique factor for variable \( i \)
m = Number of common factors.

The unique factors are uncorrelated with each other and with the common factor. The common factors themselves can be expressed as linear combination of the observed variables.

\[ F_i = W_{i1}X_1 + W_{i2}X_2 + \ldots + W_{ik}X_k \]

Whereas

\[ F_i = \text{Estimate of } i^{th} \text{ factor} \]

\[ W_{i} = \text{Weight of factor score sufficient} \]

\[ K = \text{Number of variables.} \]

The key statistics associated with factor analysis are as follows:

i) Communality

It is amount of variance a variable shares with all the other variables being considered. This is also the proportion of variance explained by the common factors.

ii) Eigen value

It represents the total variance explained by each factor.

iii) Factor Loading

Factor loadings are simple correlations between the variables and the factors.

iv) Kaiser-Meyer-Ohlin (KMO) measure of sampling adequacy
The KMO measure of sampling adequacy is an index used to examine the appropriateness of factor analysis. High values (between 0.5 to 1.0) indicate factor analysis is appropriate. Values below 0.5 imply that factor analysis may not be appropriate.

v) Factor Scores

Factor scores are composite scores estimated for each respondent on the desired factors.

vi) Percent of variance

This is the percentage of total variance attitude of each factor.

vii) Reliability co-efficient

It explains the reliability of the variables in each factor. It is also called as Cronbach alpha.

In the present study, the factor analysis has been applied to narrate variables related to many aspects in e-shopping behaviour.

5. Discriminant Analysis

The discriminant analysis is used to identify the importance of discriminate variables in the discriminate functions. It is applied when the dependent variable is in
nominal scale and the independent variables are in interval scale. The discriminate analysis model involves linear combinations of the following form

\[ Z = b_0 + b_1X_1 + b_2X_2 + \ldots + b_nX_n \]

Whereas

\[ Z = \text{Discriminate Score} \]
\[ b_1, \ldots, b_n = \text{Discriminate co-efficients or weights} \]
\[ X_1, \ldots, X_n = \text{Predictors or independent variables} \]

The Wilks Lambda was calculated as a multi-variant group difference over discriminating variables. The higher Wilks Lambda indicates lower discriminate power of the variables.

The relative contribution of discriminant variable in the total discriminant score is computed by

\[ I_j = k_j (\bar{X}_{ji1} - \bar{X}_{ji2}) \]

Whereas

\[ I_j = \text{the important value of the } j^{th} \text{ variable} \]
\[ K_j = \text{unstandardised canonical discriminant co-efficient of the variable } j' \]
\[ \bar{X}_{ji} = \text{mean of the } j^{th} \text{ variable for the } k^{th} \text{ group}. \]

The relative importance of a variable \( R_j \) is given by

\[ R_j = \frac{I_j}{\sum_{j=1}^{a} I_j} \]
The two group discriminate analysis has been applied to identify the important discriminate factors among the youngsters and elders regarding various aspects related to e-shopping behaviour.

6. Confirmatory Factor Analysis

It was conducted to confirm the pre-specified dimensions (factors) obtained in the foregoing exploratory factor analysis. In the present study, the CFA had been applied to test the reliability and variables in each construct developed.

CHAPTER FRAME WORK

For a neat and clear presentation of the research report, it is designed into seven important chapters.

The First Chapter exhibits the introduction, need for study, statement of problem, related reviews, research gap, research model, objectives, methodology, limitations and chapterization.

The Second Chapter explains the definition, origin, measurements of variables in each and every concept developed for the study.
The Third Chapter discusses the background of the consumers, their e-shopping behaviours and the linkage between their profile and e-shopping behaviour.

The Fourth Chapter shows the various determinants of e-shopping behaviour, its impact on e-shopping behaviour and discriminant determinants among the youngsters and elders.

The Fifth Chapter includes the consumers’ perception on the service quality in e-shopping, its linkage with consumers’ satisfaction, and customer’s expectation from their e-shopping.

The Sixth Chapter covers the e-loyalty behaviour among the consumers and its determinants, the direct and indirect impact of e-tail store image on e-loyalty and the direct and indirect impact of e-service quality on e-loyalty.

The Seventh Chapter summarizes the findings of the study, conclusions, managerial implications and directions for future study.

CHAPTER–II

CONCEPTUAL FRAMEWORK OF THE STUDY

The present study has used many concepts to measure the customers’ and marketers’ perspective on e-shopping. The present chapter covers the conceptual framework of the various concepts used in the present study.

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