CHAPTER-2

REVIEW OF LITERATURE
CHAPTER II
REVIEW OF LITERATURE

2.1 INTRODUCTION

The researcher has also made an attempt to review some of the previous studies conducted by leading industry organizations and other researchers to identify the gaps in EC and to relate them with the present study.

2.2.1 Klynveld Peat Marwick Goerdeler International (KPMG), a Swiss Cooperative has conducted the India's first research study\(^1\) (1998) on the use of EC by major companies in India.

In the era of economic liberalization and increased competition, Indian industry is attempting to harness technology to succeed in achieving its business objectives. In doing so, it has focused on balancing the benefits provided by new technologies with the associated risks. In this study KPMG has contacted 110 companies to understand their perceptions, status, and triggers for use of EC. Results of the survey in the Asia-Pacific region are presented below:

1. It was found that nearly half the organizations surveyed gave importance to EC as part of their business strategy. Only 4 per cent said that it was of no importance to their business strategy.

2. Improved productivity, improved product quality, & improved customer service are the major benefits realized. These benefits got more than 50 per cent weightage in the ratings given by respondents while shortening supply chain and reduced costs got about 45 per cent weightage. Only 57 per cent of organizations using EC reported any significant benefit from it.

\(^1\)KPMG, "India Electronic Commerce Survey report", 1998 (http://www.indi-today.com/itoday/06031999/kpmg.html)
3. Respondents believed the principal benefits of EC to be improved customer service and improved productivity. These two benefits were given much higher weightage by respondents while the other benefits like shortened supply chain and reduced cost were given a similar lower weightage.

4. Although companies were keen to use EC to improve customer service and productivity, they believed they were being held back by the lack of proper legal support for electronic transactions and their trading partners' inability to set-up and manage the required technical infrastructure.

5. Respondents cited security as another major barrier to EC. However, security appears to be an overhyped concern as observed in KPMG's survey of the European market. It was found that companies that take a pragmatic view are more successful in exploiting EC, and companies that had made sales via the internet were less likely to see security as a problem.

6. Senior level support and budget allocation were given due weightage as actions taken for integration of EC technologies with existing processes. Committing manpower and integration with operational activities got a lower weightage.

7. E-mail, www Access, and a www Website were the most widespread technologies currently implemented. Electronic Data Interchange (EDI) and Extranet were the most favored for initial implementation within 2 years while IVR, Extranet, Smart Cards, and Debit/Credit Cards were slated for initial implementation in 5 years.

8. While the executive committee took the initiative in funding (65 per cent of organizations) and championing (33 per cent of organizations),
the IT department championed (53 per cent organizations), developed (64 per cent organizations) and maintained (68 per cent organizations) EC initiatives.

9. Respondents rated Network Access Controls (95 per cent weightage), through the system tests & audits (90% weightage), and Centralized Network Management (88 per cent weightage) as the preferred features to implement security.

10. Less than half the respondents were able to provide details of the volume of transactions done electronically, while nearly half of these said that they had zero electronic transactions. It was found that the total annual value of transactions done electronically by respondents was about Rs. 123 million.

11. Most of the organizations surveyed were favorable to their trading partners in terms of considering their concerns, having explicit role based agreements, quality of communications, long associations, and levels of trust. While most organizations work closely with their business partners, many of these do not trade with them electronically. Hence, it is evident that there is a large, unutilized potential for Business-To-Business implementation of EC in India.

2.2.2 NASSCOM-McKinsey study\(^2\) on Internet / EC in India, (2000), conducted in 68 cities and towns of India, indicates that more than one million people want internet connections, but could not get them due to lack of infrastructure. Key findings of the study are presented below:

1. There is a pending demand for more than 1 million internet connections.

2. There will be about 1.6 million internet subscribers (or 5 million users) by March 2001.

3. As of 31 March, 2000 there is a PC base of 4.3 million PCs. Out of these, there were more than 3 million machines which had Pentium chips and above (i.e., machines which could be effectively used for internet).

4. More than 81 percent of stand alone PCs sold during financial year 1999-2000 were driven by the need to access the internet.

5. It is estimated that by March 2001, more than 80 private ISPs would be fully operational. Further, at least 12 private international gateways for internet are expected.

6. More than 86 percent of top 100 corporate respondents endorsed EC and the internet as an integral part of their corporate strategy framework for the next year.

7. 91 percent of India’s corporate web sites are located overseas and not in India.

8. A majority of the respondents expect the real growth of the internet in India to take place through the cable TV than PCs. India has 37 million cable TV connection, but only 4.3 million PCs.

9. Internet access continues to be most widespread amongst the 18-24 year age group. However, all age groups have seen vast increases in access over the last year.

10. Males continue to outnumber females in accessing the internet at 77 percent compared to 23 percent.

11. The profile of internet users in India is dominated by the professional/corporate segment, which accounts for around 43 percent of internet usage. Inching close behind is the student community represented by school and college goers. This segment contributes close to 38 percent of internet surfers.
12. Among the total number of internet users around 20 percent of them will own credit cards and around 14 percent own mobile phones.

13. EC transactions accounted for revenues to the tune of Rs. 450 crore during 1999-2000. While Rs. 400 crore was achieved through B2B transactions, around Rs. 50 crore was contributed by B2C transactions.

14. The outlook for the years to come is more exciting. The study predicts that the transactions will be close to Rs. 15,000 crore (13,200 from B2B and the rest from B2C).

15. The survey also identified the potential for EC in terms of both B2B and B2C and their potential growth.

Tonita Perea Y Monsuwe, et al. (2004)\(^3\) have examined the factors that drive consumers to shop online in US and Europe and proposed a framework to increase researchers' understanding of consumers' attitudes toward online shopping and their intention to shop on the internet. Their framework uses the Technology Acceptance Model (TAM) as a basis, extended by exogenous factors and applied it to the online shopping context.

The researchers have proposed a framework based on their study on consumer adoption of new self-service technologies and internet shopping systems. The research suggested that the consumers' attitude toward internet shopping first depends on the direct effects of relevant online shopping features. Online shopping features can be either consumers' perceptions of functional and utilitarian dimensions, like "ease of use" and "usefulness", or their perceptions of emotional and hedonic dimensions like "enjoyment". By incorporating these exogenous factors next to the basic determinants of consumers' attitude and intention to use a technology, the framework is applicable in the online shopping context. Together, these effects and

---

influences on consumers' attitude toward on-line shopping provide a framework for understanding consumers' intentions to shop on the internet.

After identifying the factors that affect consumers' attitude and intention to shop on-line, they studied the differences, similarities, advantages and disadvantages of internet shopping compared to shopping in brick-and-mortar stores, so-called traditional or real world shopping. They have concluded that, today's consumers are multi-channel shoppers, and some occasions prefer traditional off-line shopping to shopping on the internet. This has given a lead to understand that the consumers in any country have a choice to make between on-line and off-line shopping. This study is much more relevant for a country like India, which is progressing well in terms of economic, technological progress in the couple of years.

C. Patrick Fleenor, et. al. (2002) have examined the condition of and prospects for e-business in three quickly changing economies of Eastern Europe: the Czech Republic, Hungary, and Poland. E-business in Eastern Europe is poised for explosive growth. The three countries studied share some common features. They are positioned between developing countries and advanced economies. They struggle in many ways with the legacy and remnants of socialist cultures in politics, economic policies, and business practices.

They began their study with a brief overview of global e-business, and a widely accepted model for gauging a country's "e-readiness." Then probed how well the three countries are positioned to support e-business. In particular, they focused on communications infrastructure, PC penetration and connectivity; and political/legal considerations. The three countries they have studied have many similarities, but understanding their differences in adopting e-business should help determine their position in the "new

4 Patrick Fleenor, Peter Raven, Tan Chee Ming and Caludia Zeibe, "EC in Eastern Europe: Potential and Risk" (http://www.seattleuniv.edu)
economy" and, hopefully, how other countries may proceed in establishing their positions in the information age. At the end they described the prospects of B2C EC in these countries.

This study is also relevant for the current research, as India is in the similar situation with respect to the problems faced by the three east European countries. From this study it is possible to understand the importance of considering the socio-economic aspects of the people for any study.

Muthitachaoren, et. al. (2002) have conducted a comparative investigation of B2C internet shopping in the U.S. and Thailand. A unique feature of the study is the examination of internet shopping in relation to conventional in-store shopping. Data was collected from both countries and statistical analyses were conducted to find differences among consumer preferences and behaviors toward internet stores. The results demonstrate that American subjects have a higher acceptance of internet stores than those who live in Thailand, proving that internet commerce has not yet penetrated global markets. Based on the study, suggestions were offered on how to conduct electronic business in other parts of the world.

This study employed the survey method as its underlying methodology. The survey questionnaire includes two sections. The first section consisted of seventeen questions, representing ABP, ADP, and the behavior variable. The second section was designed to gather demographic information about the respondents. Two versions of the questionnaire, English and Thai, were used in the U.S. and Thailand respectively. The original version was in English. After translation, the Thai version was reviewed to ensure similar meaning across the two language versions.

The sample for the study contains respondents from two countries, the U.S. and Thailand. American students, who were not U.S. citizens, were eliminated from the study. From a total of 179 subjects, eighty-nine are Americans and ninety are Thai. The American group has 50 males (56.18%) and 39 females (44.82%), while the Thai group has 26 males (28.89%) and 64 females (71.11%). Since this study additionally endeavors to test the effect of having the credit card on consumer preference. This study found that the majority of American sample (87.64%) had at least one major credit card, while the majority of Thai subject did not (72.22%). This demonstrates a potential influence of credit card possession on consumer preference for using the internet store. In order to evaluate consumer's preferences in the U.S. and Thailand toward internet stores, they have tested for differences in consumer's behaviors to use internet stores. ANOVA test results showed that comparatively Americans prefer the internet stores more than their Thai counterparts. However for both countries, overall, conventional shopping is preferred over internet shopping, although less so in the U.S. This study has helped the researcher to understand that the people from developing countries are not so comfortable with internet shopping, when compared to developed country like US.

Li and Zhang\(^6\) have studied existing literature on consumer on-line shopping attitudes and behavior based on an analytical literature review. A total of 35 empirical studies were analyzed in this study. Of these, 29 of them used survey method. Other research methods such as lab experiments and free simulation experiments are occasionally employed. The 35 studies address some aspect of on-line shopping attitudes and behavior. After examining the 35 empirical research works, they have identified a total of ten interrelated

factors for which the empirical evidences showed significant relationships. These ten factors are external environment, demographics, personal characteristics, vendor/service/product characteristics, attitude towards on-line shopping, intention to shop on-line, on-line shopping decision making, on-line purchasing, and consumer satisfaction.

Five (external environment, demographics, personal characteristics, vendor/service/product characteristics, and website quality) are found to be ordinarily independent and five (attitude toward on-line shopping, intention to shop on-line, decision making, on-line purchasing, and consumer satisfaction) are ordinarily dependent variables in the empirical literature. The ten factors and the diverse measures used by different studies indicate that on-line shopping is a multidimensional and multidisciplinary phenomenon. This study has given impetus to help the researcher to understand the taxonomy of on-line consumer shopping attitudes and behavior.

Vanitha, et. al, (1999) have found in their study the reasons for purchasing on the World Wide Web, particularly relevant in the context of predictions made regarding electronic shopping in the future. In this study, they focused on some of the antecedents to electronic exchange in the on-line context. In particular, what are some of the factors influencing on-line purchasing behavior? What is the role of privacy and security concerns in influencing actual purchase behavior? How do vendor and customer characteristics influence consumers' propensity to engage in transactions on the internet? The study has implications for both theory and practice. The findings extend our knowledge of factors influencing marketing exchange from the traditional setting to the internet context. In addition, the findings regarding factors enhancing the propensity to shop on-line have implications for internet retailers seeking to enlarge their on-line customer base. They

have investigated the role of consumer characteristics by examining the consumers’ shopping orientations as an antecedent to the likelihood of electronic exchange.

Finally, perceived risk has been identified as a key antecedent to relationship commitment in past studies. This research suggests that consumers may not be willing to give out information on the internet since they may be afraid that their private information may be sold to someone else and this may prevent them from engaging in EC.

Georgiades et al. (2004) have studied the impact of users’ demographic characteristics on attitudes towards purchasing over the internet. In this study, a sample of 316 internet users was used to analyze attitudes toward buying on-line. To determine gender and occupational grouping influences on the attitudes toward on-line purchase behavior, the factors identified in the literature were used to construct a questionnaire. The questionnaire was pre-tested with 34 consumers, and several minor changes in the wording of ten questions were made. The questionnaire was subsequently placed on a web site and its electronic format was also pre-tested with nine consumers. In total, forty-two internet service providers were contacted and asked to link our web site to their main page in return for the study’s findings.

In this study a two stage analytical approach was used. First, the ten items measuring purchase behavior and intention to buy on-line drawn from the relevant literature were subjected to a factor analysis. The results suggested a four-factor solution with items loading highly on their hypothesized is security concerns, perceived competitiveness, impersonality issues and convenience.

The main findings of the study is that there were no differences found between males and females in all three occupational groupings with regards to

---

security and convenience. In particular respondents' attitudes toward security were found to be in agreement in that "they did not feel confident with the provision of information concerning their personal and financial details and that technology backing the internet is reliable". This suggests that companies can standardize their communications strategies aiming at alleviating the fears of internet users with regards to security concerns. The findings, however, indicated that all consumers liked the convenience of the internet, therefore, companies can capitalize on the strong attitudes that on-line users hold about its convenient nature.

As far as the perceived competitiveness of the internet is concerned, male academics appeared to be having stronger attitudes than that of male students. Similarly, the attitudes of females toward the perceived competitiveness of the internet found to be different among female academics and female others. Limitation of this study its' inability to draw a random sample of internet users is a well-known problem facing researchers using on-line methodologies.

Cherie et. al, (2004) have identified in their research how consumers chose the setting they wish for a given consumption purpose. Investigating under what circumstances and what conditions different consumers will accept EC should provide a new dimension to the literature. They have identified five key elements in the consumer purchase decision-making process: subjective norms, attitude, perceived behavioral control (PBC), ease of use and price.

---

The primary purpose of this study was to explore the structure for consumers' BI to use available retail formats (store, catalog, or internet) for product purchases. Using the TPB and TAM to guide the research, several attributes were identified as likely predictors of consumer intentions to use a particular retail format to make a product purchase.

This research study has two main objectives: (1) to identify the structure for consumer intentions to make product purchases through three retail alternatives and (2) to examine the tradeoffs consumers are willing to make when deciding where to purchase. To accomplish the research objectives, the researchers used a questionnaire (conjoint rankings) and a scenario. They have collected the data from a sample of 290 mall shoppers in the Chicago suburb. It was found from the analysis that, for a lower cost, lower risk item like a CD, retail format may outweigh price because of the convenience factor in the purchase.

Most consumers want the CD immediately and may be willing to pay a higher price in order to have the CD in-hand quickly. Alternatively, with a high cost purchase, consumers would probably shop around for the best price and then make the purchase. For these types of products, it may be worth it to do price comparison shopping and then wait for the product. This study concludes by saying that fears that the internet will take over the retail arena seem thus overblown and exaggerated. However, there seems to be an identifiable segment of customers that has preference for the internet as a retail shopping alternative.

A study conducted by Aditya (2003) stressed the importance of culture in a global strategy and explains the role of culture in a global internet

---

strategy. He has proposed a conceptual framework for global internet strategy by incorporating culture, content, community and commerce. The framework proposed in this study, can be helpful for corporate to frame their EC strategy specific to a nation.

Levill et. al, (2003) in their study addressed the issue on how to combine on-line and offline services in the most complementary way for different product classes. In a series of surveys conducted for experiment it was determined those consumers’ preferences for both on-line and offline services differ for different products.

These differences were accounted for by a model that measured the importance of different attributes for different products and assigns different values to these attributes depending on whether they are better served on-line or offline. In another experiment conducted for this study, it was a controlled test of a particular marketing strategy for capitalizing on the complementarily on-line and offline services; alliances between on-line and offline brands. Confirming the operation of both assimilation and complementarily effects, it was found that the images of both the brand could be improved with such alliances.

A multi-part survey was administered to a sample of 40 undergraduate marketing students at a large Midwestern university as part of experiment. First, products were chosen to be appropriate to this group and to represent a range of on-line and offline shopping experiences: airline tickets, books, CDs, clothing, computer software, electronic products, health and grooming products, and sporting goods.

In the second experiment 54 undergraduate marketing students were randomly assigned to the alliance condition or the control condition. In alliance condition, brands within a category were presented in pairs, where each pair was described as a hypothetical alliance between an on-line brand and an offline brand. The key findings of this study are that different products have different needs for adding an on-line or offline presence. However, continued consumer exposure to on-line shopping may reduce concern for on-line purchasing and change the current picture. Continuous surveying of the perceived advantages and disadvantages of on-line shopping feature should be a priority for EC marketers.

Broekhuizen, et. al. (2000) in their study tried to understand how consumers evaluate channels for their purchasing. Specifically, it develops a conceptual model that addresses consumer value perceptions of using the internet versus the traditional (physical) channel. Previous research showed that perceptions of price, product quality, service quality and risk strongly influence perceived value and purchase intentions in the offline and on-line channel. Perceptions of on-line and offline buyers can be analyzed to see how value is constructed in both channels. This model enables comparisons between on-line and offline shoppers' perceptions. As such, it is possible to determine the factors that encourage or prevent consumers to engage in on-line shopping. In the first place this model is developed to compare the construction of perceived value among channels. By testing for invariance between the perceptions of on-line and offline buyers through a two-group analysis, researchers will be able to identify the relative importance of the predictors of perceived value among channels.

This study extends this view and asks both on-line and offline shoppers to rate both channels in terms of (expected) performance. Because 'what is delivered' plays a pivotal part in channel choice, we also incorporate organizations' offerings in terms of merchandise quality, service quality, price

---

and reputation. By adopting this approach, researchers and practitioners can gain valuable insights into the motivations to adopt a certain channel for shopping.

Alok et. al, (2002) in the study, developed an economic model of consumer shopping decision in order to understand different factors affecting a consumer's decision to either shop on-line or in-store. To be able to compare consumers who shop on-line with those who shop in a brick-and-mortar store, this model focuses on shopping for products that are available in both channels through different retailers. Primary objective this study is to explore the behavior of different types of consumers in on-line and traditional retail channels. In addition, they explored the three strategies that retailers can pursue to segment consumers and to devise different strategies to attract different segments.

They explored these issues by modeling consumers as either risk-neutral or risk-averse and studying how these two types of consumer trade-off among factors such as prices, product range offered, ease of product evaluation, and product acquisition time. Consumer risk perception and risk profile have long been shown to heavily influence a consumer's decision to modify, postpone, or avoid a purchase decision. Risk neutral consumers are more likely than risk-averse consumers to consummate a purchase transaction when faced with buying a product (or service) with uncertain outcomes or possible loss. In the on-line environment, studies found evidence that perceived risk associated with on-line shopping, arising from concerns for system security and difficulty in evaluating products on-line, is an important factor when consumers consider whether to purchase on-line or in a brick-and-mortar store.

However, on-line shopping lacks "look-and feel" hence evaluation of product attributes can be difficult. Further, in an on-line environment, the acquisition of a purchased product is not immediate-products have to be

---

13 Alok Gupta, Chiuau Bo and Walter Zhiping. "Risk Profile and Consumer Shopping Behavior in Electronic and Traditional Channels" (http://esam.umn.edu)
delivered from the on-line retailer to the consumer, un-timeliness of which can be a source of customer dissatisfaction. Since consumers who buy on-line tend to be those who are time starved and on-line shopping tends to be goal-oriented or utilitarian, i.e., “task-oriented, efficient, rational, and deliberate”.

They assumed that each product is offered in two retail channels: the traditional or physical channel, denoted by T, and the electronic channel through the internet, denoted by E. Buyers make their decisions to purchase based on the net utility derived from buying a product. The net utility is the utility from consuming a product less the costs of efforts of product search and evaluation, dollar equivalent of delivery time, and the price paid to obtain the product. The researchers assumed that all consumers derive the same utility, denoted by V, from consuming one unit of the product, whether it is purchased from channel E or channel T. They focused only on the economic factors affecting a consumer’s decision to purchase a product and do not take non-economic factors, such as personal interest, satisfaction, habits, culture, social class, motivation, attitude and beliefs, into consideration.

An examination of these substitution effects highlights the importance of quick delivery for on-line shopping, especially when the product in question requires long lead-time, as is the case with customized or rare items. For commodity items, the substitution effects suggest that a higher premium can be charged by providing a wide range of choices and comparison mechanisms so consumers incur lower search and evaluation costs. Limitation of the study was the model developed from the consumer preference and transaction based theory, it is subject to limitation inherent to such theories because a utility model can not possibly include all potential factors influencing consumers’ preferences and their choices.
Though there are many studies on EC carried out by the researchers in other countries, there is no evidence of a study on India. However, there are few descriptive studies conducted with reference to India by agencies like NASSCOM-McKinsey, IDC, etc. Hence, the present study on "A Managerial Approach to the Problems and Prospects of EC in India".