

**STUDY OF RELATIONSHIP BETWEEN THE AVAILABILITY OF  
PRODUCT INFORMATION AND THE DECISION MAKING PATTERN IN  
ONLINE SHOPPING IN SRI LANKA.**

**BY**

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## DECLARATION

I certify that this Thesis does not incorporate without acknowledgement any material previously submitted for the Degree or Diploma in any University, and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text

Date:

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The undersigned, have supervised the dissertation entitled “STUDY OF RELATIONSHIP BETWEEN THE AVAILABILITY OF PRODUCT INFORMATION AND THE DECISION MAKING PATTERN IN ONLINE SHOPPING IN SRI LANKA” presented by Prasad Bagya Udawatte, a candidate for the degree of Masters in Information Systems Management, and hereby certify that, in my opinion, it is worthy of submission for examination.

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Mr. Rushan Abegunewardene  
Supervisor

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# **STUDY OF RELATIONSHIP BETWEEN THE AVAILABILITY OF PRODUCT INFORMATION AND THE DECISION MAKING PATTERN IN ONLINE SHOPPING IN SRI LANKA.**

## **Abstract**

The objective of this research is to investigate how consumers may use product information on their online decision making. The rapid development of Information and Communication Technology along with the globalization forced the firms to become online business seekers. Online businesses have been opening up in each and every corner around the world. All the business activities, logistics, processing, selling and even payments are being completed online. Research has identified the recent development in online shopping in today's businesses and that consumers search products online and purchase offline. An effective website should provide product information which the consumer looks for, to give total consumer satisfaction. This research was conducted in online shopping companies in Sri Lanka. Majority of Sri Lankan company's websites provide product information but the quality and the information provided to the consumer to take a decision is insufficient. Further, Sri Lankan online shopping sites (virtual market) have not been designed for the consumers to feel that they are in actual shopping environments.

Online shopping is facilitating the growth of the business and it is an advantage to the organization to directly sell their products to consumer without having an interpreter. Therefore this will provide an exciting shopping experience for the consumer. But through the research it has shown that business organizations have not understood the consumer decision making facts and the importance in providing sufficient product information for consumer satisfaction, in online shopping.

In this research, researcher examines whether consumers use product information when shopping on the Internet. The results suggest that product information can facilitate consumer acceptance of electronic commerce.

To-date consumers in Sri Lanka have trusted the process of face to face interaction more than online interaction. In developing relationship the most concerned difficulty the electronic world is facing, is the lack of trust. For online trust development, study of consumer behavior is a must. In the present context, websites have become more unpredictable and limited in range of products sold.

They should provide systems or level of checking consumer satisfaction. Without monitoring this it will not be possible to decide the success and failure rate in online shopping. Online shopping site should understand the value of their online consumers. These companies who host the web sites and the web site designers should be more concerned and capture the attitude of online consumers. This research was done using analysis of consumer preferences based on data collected from 105 consumers who did online shopping. Results indicate that the three most important attributes of consumers for online satisfaction are privacy (Website & Technology Factor), merchandise (Product factor), and convenience (Shopping factor). These are followed by trust, delivery and guarantee, usability, product information, product customization, product comparison, product quality, and security.

The growing use of the internet in Sri Lanka provides a developing prospect for online shopping. If the companies who hosted online shopping sites knew the factors affecting online Sri Lankan consumers' behavior, and the relationships between these factors and the type of online consumers, then they would be able to further develop their marketing strategies to convert potential consumers into active ones, while retaining existing online consumers. It also investigates how different types of online consumers perceive websites differently. This research found that design of websites and their reliability/fulfillment, and customer service and security/privacy influence consumer's perception of online purchasing.

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# **1. Introduction**

## **1.1 Background of the Study**

The researcher is a keen online consumer and has spent a significant number of years buying products online. While this has made his buying process more efficient than offline purchasing, it has also created some concerns within him. These concerns relate to online security, product information, design of the websites and accessibility. This has inspired him to do further reading and research in this area. One of the key things that he intends to study is the availability of product information and how it affects decision making of the consumer. According to the researcher's experience the availability of product information is insufficient on Sri Lankan online shopping sites compared to the foreign online sites.

As a developing country, Sri Lanka's e-commerce is in the developing stage. According to the Computer Literacy Survey of Sri Lanka report (2009) Sri Lanka has a fast development in Information and Communication Technology and it has greatly contributed in enhancing human living standards. The report also clarifies that this is because of the advanced capability of the technology facilitates with extremely efficient collaboration and access to correct, consistent and effective information, which is fundamental to manage the quality in total.

Online shopping becomes an economical and successful factor in online business, so development of ICT in 21<sup>st</sup> century has become a key factor for the country to survive in modern world. Therefore development authorities in a country should monitor and provide proper direction to the investors in ICT.

Though the business of consumer using online was started more than decade ago in the world, many foreign companies who have hosted shopping sites have improved their websites in the recent past and presently have an idea about consumer behavior in online. Further some sites are built to give a daily update about consumers' feedback.

Butler and Peppard (1998), however, explained the failure of IBM's sponsored web shopping malls by the naïve assumption of the true nature of online consumer behavior. A critical understanding of consumer behavior in the virtual environment, as in the physical world, cannot be accomplished if the factors affecting the purchase decision are ignored or misunderstood. For instance, online consumers' concerns about lack of opportunity to examine products prior to purchase are regarded as the specific factor affecting the online buying decision. Therefore, several researchers proposed that consumers' shopping behavior in online shops may be fundamentally different from that in the traditional environment (Alba et al., 1997; Winner et al., 1997). More frequent online buyers are expected to use online shopping more often as it enhances their trust in the respective website than a less frequent online buyer. It is clear, electronic markets have some unique economic characteristics. If E-marketers intend to ignore the fundamental truths about consumer behavior due to this point, most of the promises of E-marketing in the business to consumer context will not be fulfilled, (Nunes, 2001).

Internet is changing the way consumers purchase goods and services. Many companies have started using the Internet to cut marketing costs, thereby reducing the price of their products and services in order to stay ahead in highly competitive markets. Companies also use the Internet to communicate and advertise, to sell the product. Many consumers use the Internet not only to purchase the product online, but also to compare prices, product information, product features and after sale service facilities.

During 2001, 497.7 million Internet users worldwide generated US\$615.3 billion in revenue from E-commerce transactions (IDC, 2002). In addition to the tremendous potential of the E-commerce market, the Internet provides a unique opportunity for companies to more efficiently reach existing and potential customers.

With reference to Alden et al. (2006) and Holt et al. (2004), globalization has continued to initiate the rapid growth of international trade, global corporations, and non-local consumption alternatives. The advances of the internet and e-commerce have diminished the global trade boundaries. E-commerce and e-shopping has created ample opportunities for businesses to reach and to meet the needs of the global consumers promptly and directly, and in turn, businesses now focus specifically on cross-national and cross-

cultural internet marketing. With the development of information and communication technology in

Sri Lanka after the end of the civil war it has shown a rapid growth on accessing internet and e-mail in rural and urban areas. According to Gerald and Valerie, even with growth of e-commerce and the rapidly increasing number of consumers who use interactive media such as the World Wide Web [WWW] for pre-purchase information search and online shopping, very little is known about how consumers make purchase decisions in such settings. A unique characteristic of online shopping environments is that they allow vendors to create retail interfaces with highly interactive features. One desirable form of interactivity from a consumer perspective is the implementation of sophisticated tools to assist shoppers in their purchase decisions by customizing the electronic shopping environment to their individual preferences. The availability of such tools, which we refer to as interactive decision aids for consumers, may lead to a transformation of the way in which shoppers search for 'product information' and 'make purchase decisions'(2000).

Online shopping is the process where consumers directly buy goods or services from a seller in real-time over the Internet.

In the contemporary world '*online shopping*' has become a key concept in many individuals' routine in their everyday lives. Through newspaper and television advertisements the researcher has noted that online shopping has become a feature among the present day Sri Lankan consumers and business enterprises too. According to Schneider and Perry (2000), online shopping is 'the process consumers go through to purchase products, goods or services over the internet'. One of the most prominent elements in inter-national and intra-national trade is Online Shopping. So parallel to the novel developments that have been taking place in the Sri Lankan goods and services industry, the business enterprises also have been introducing online shopping to get their businesses facilitated.

Online shopping is one of the most important tools to the sellers. When the consumer looks into a product to purchase it online, the particular website should be able to cope up with the needs of the consumer. Therefore several criteria that has to be decided on

designing an online shopping website are the interface, easy access, user friendliness, product comparison, quick search of the product which he/she looks and the ‘product information’. This will be a main characteristic for the consumer before he/she purchases a product online. So the researcher is interested in conducting a survey on up to what extent the Sri Lankan shopping sites provide the necessary product information to the consumers to make their decisions.

In this study the researcher is interested in finding the relationship between two variables. The first is the ‘availability of product information’ and the second is the ‘decision making’. The researcher has noted that the Sri Lankan websites that are there to facilitate the online shopping do not contain the much needed ‘product information’ which is vital for the ‘decision making’. So the researcher has noted that the Sri Lankan online shopping websites do not provide the probable consumers with all the necessary product information that facilitate the decision making. So in this research the researcher wishes to examine ‘how the decision making is affected by the availability or lack of the availability of product information’.

## **1.2. Statement of the problem**

According to the researcher’s experience the availability of product information on Sri Lankan online shopping sites is insufficient compared to the foreign online sites. This may have a negative impact on the consumers who buy online through Sri Lankan online shopping sites.

Further reading has indicated that previous research on the Sri Lankan web sphere has found that there is a problem with the quality of information provided for users. A research on ‘Effective Website to Provide Total Customer Satisfaction’ states that “Product and service information are also not enough to give total customer satisfaction” Wickramasinghe C.N and Thanthiriwatta D.N(2005).

The above two factors collectively inspired the researcher to undertake a proper research study on this area.

It appears that product information is crucial for purchasing decisions to the consumer when buying online. However, there is no prior research that ascertains if Sri Lankan

Websites provide sufficient product information for consumers to make a proper decision. Therefore, the researcher decided to narrow down the research area around availability of product information and how that affects decision making.

Therefore, the final problem to be further researched through this exercise is: 'If the available product information is insufficient, and whether it will affect the decision making'

### **1.3. Objectives**

The objectives of the study can be summarized as follows.

1. To identify the prevalence of online shopping among Sri Lankan businesses in 2010.

In this objective the researcher intends to do a background study about online shopping in Sri Lanka as to which businesses host online shopping sites and their growth, which products are advertised online, who are the consumers that decide to engage in online shopping, the design of the Sri Lankan online shopping sites and the strengths and weaknesses of those sites.

2. To identify 'the incidence of the availability of product information' in the websites hosted by numerous Sri Lankan business firms.

In trying to identify this, the researcher intends to conduct a detailed study of the availability of the product information such as the product features, brand / model details, product condition, product compatibility, manufacturer / publisher, product image, return policies, delivery and shipping information, price, user reviews and ratings, similar products with competitive prices, material used and product performance.

3. To find out the factors that effect on 'decision making' by the Sri Lankan consumers who shop online through the websites hosted by the Sri Lankan business firms.

This is to identify how the decision making takes place. In this the researcher intends to pay attention to the consumer's need to buy a product, consumer's web access patterns, the level of product information sought out by the customer, the level of importance of product information for decision making, comparing product features and prices and reading user reviews. This will also determine if consumers decide not to buy certain products online due to the insufficient product information.

4. To develop guidelines in providing how the product information should be included in an official website to promote purchasing in Sri Lankan business in 2010

After going through the research, the researcher is intends to construct a model that provides a guideline on how sufficient product information can be provided so that web consumers are able to make correct purchasing decisions.

#### **1.4. Hypothesis**

It was understood that most of the Sri Lankan business firms that host websites have not included all the details that would help the consumers to make the purchase decision. Therefore, one of the objectives in hosting a website by advertising their own products, i.e., getting the amount of sales increased would be drastically effected. Further, it would greatly affect the company's profile in a competitive market environment as the consumers do not get the exact details of the products advertised.

Therefore, the 'hypothesis' is that 'the available product information is insufficient and do not fulfill the requirements of the consumer in the decision making in online shopping in Sri Lanka'. The following hypothetical statements can be made in relation to the contemporary context of online shopping in Sri Lanka.

1. The available online product information is insufficient for online shopping
2. Available product information dose not fulfill the requirement of the online consumer
3. Lack of online information reduces the online consumer purchasing.

## **1.5. Research questions**

In this study the researcher wishes to answer many research questions that are vital in understanding the variables that are under scrutiny. The research questions related to the study are as follows;

- [a] What are the available online shopping websites, their growth and what type of products and services do they offer to consumers?
- [b] Which product information is presented by the online shopping websites for the Sri Lankan consumers?
- [c] What type of product information is expected by the prospective online consumers in Sri Lanka?
- [d] Is there a relationship between the availability of product information and the consumer decision making pattern?
- [e] Is available product information sufficient to make a purchasing decision?
- [f] What is the reaction of the business firms that host the websites for online shopping against the lack of product information?

## **1.6. Methodology**

This particular research is a combination of both qualitative and quantitative data, but the researcher wishes to rely more on qualitative data. Most of the companies that host online shopping sites are included in [www.srilanka.travel.com](http://www.srilanka.travel.com). Out of the twelve [12] shopping sites listed on this website, only eight [08] companies have responded to the researcher, and they are included in this study.

The data will be collected in relation to the research questions and the objectives. The data collection techniques will be the collection of official documents, journal articles and reviews retrieved from the web, interviews and questionnaires. First, the details were collected from the companies that provide online shopping facilities in Sri Lanka. Then the official websites of the private firms were analyzed to find out the types of products they have advertised and the product information they have included to get the preliminary idea. Then the Sales Managers of five [05] leading firms will be interviewed according to the interview schedule prepared by the researcher with in the principal guidelines given by the supervisor. To know how the websites are designed, the researcher interviewed the web designers of those websites. This is done to find out the significance or priority given to product information by the particular company.

The official statistics were collected through the official documents of the concerned companies to understand the number of consumers, the number of online consumers, the frequently asked questions in decision making, and the type of product information that prospective consumers seek.

Finally two hundred [200] questionnaires were distributed among the prospective online consumers to investigate the ways that they adhere to online shopping. For this a semi-structured questionnaire was prepared under the guidance of the supervisor. In this questionnaire the questions were mainly based to identify the priority the online consumers give to product information in their decision making.

## **1.7 Format of the study**

The format of the final thesis compiled and structured is in the following manner. The chapters would be termed as follows.

### Chapter 1 – Introduction

The first chapter of this dissertation introduces the nature of this research in detail. It discusses the reasons to why the particular topic is selected by the researcher. The practical nature of the topic is also highlighted and it presents the importance of the study. The terms will be defined in relation to the Sri Lankan context. The research questions that led to the particular study too have been introduced and the objectives of the study are included.

### Chapter 2 - Literature Review

The second chapter deals with the relevant literature that has been reviewed to find out more information about the focus of the research. This is mainly done to find out the nature of online shopping in Sri Lanka. Further the literature will be reviewed to investigate the nature of the availability of the product information and how that affects the consumers' decision making in online shopping. Finally, the effect of the lack of the availability of the product information too will be reviewed.

### Chapter 3 - Research Methodology

The third chapter mainly discusses the research methodology. The population, the sample, data collection techniques and the preparation of data collection instruments will be described. Each research question and each objective of the study too will be presented. Data classification and data analysis also will be mentioned in detail. The practical considerations due to certain constraints are also stated as methodological limitations.

## Chapter 4 – Results

The fourth chapter presents the data collected through official documents, interviews and questionnaires. First the major areas investigated under the interview questions are dealt with. Then the answers given to the questionnaire are presented analytically. Finally the information received through official documents is also summarized.

## Chapter 5 - Discussion

The fifth chapter introduces the data collected through the questionnaires, interviews and the official documents. Both primary and secondary data play an important role in this research and those would be both qualitative and quantitative in nature. The data will be presented using various forms and the findings are entirely based on the data obtained through questionnaires, interviews and the official documents.

## Chapter 6 - Conclusion

The final chapter presents the recommendations and the suggestions of the researcher in relation to the findings based on the literature review and the data collected through different data collection methods. The researcher wishes to develop a framework with the necessary guidelines that provides the most sought after product information by the consumer about different products as a model for an official website.

## Bibliography and appendices

All the text books read, the journal articles, the magazine articles, newspaper articles referred and the websites retrieved will be included.

The interview schedule and the questionnaire used to gather data are given at the end of the body of the final text.

## **2. Literature review**

### **2.1 Introduction**

After the topic was formulated the researcher commenced preparing a list of all the available sources that could provide the study the necessary background. The limited journal articles written on the online shopping in Sri Lanka were the initial step in compiling the database of sources. The bibliography cited at the end of these articles provided the researcher to seek many other sources. The Library of the University of Colombo, Information Communication Technology Agency and the internet were the main sources that facilitated the researcher.

The internet tendered vast areas of general background of the online shopping, the comparative understanding of online shopping in the global context and various other studies done on online shopping practices in the world. All these sources were well documented in a methodical manner so that the researcher could utilize these by referring to those at various stages of the research.

After completing the preliminary listing of all the sources the researcher identified, the literature survey was done in relation to the research questions and the research objectives. To find answers to the research questions and the objectives was the main focus behind the literature review. The relevant questions for literature search and the research are as follows.

- [a] What are the available online shopping websites, there growth and what type of products and services do they offer to consumers?
  
- [b] Which product information is presented by the online shopping websites for the Sri Lankan consumers?
  
- [c] What type of product information is expected by the prospective online consumers in Sri Lanka?

[d] Is a relationship between the availability of product information and the consumer decision making pattern?

[e] Is available product information sufficient to make a purchasing decision?

[f] What is the reaction of the business firms that host the websites for online shopping against the lack of product information?

## **2.2 Internet and Email Usage in Sri Lanka**

Computer Literacy of Sri Lanka (2004), it is understood that in Sri Lanka, each year the computer literacy rate increases in a considerable manner, and shows more people have access to the World Wide Web for various reasons. As the sophisticated science and technology flows into the country, the economy is the sphere that is affected first and foremost. As in many other communities, even in Sri Lanka it is the economic sector that uses the technology the most.

According to the present context the Telecom Regulatory Commission records that the availability of the internet access and the number of people who use internet are increasing each year, Figure -2.1 and 2.1, Dept of census and statistic (2009). At the same time it is evident that the businesses are also showing a tendency to implement e-commerce web sites as a part of their business strategy. But as we look at the number of people who have developed an access to the internet and the websites hosted by the private sector companies, a series of questions arise as follows. This thesis is centered on these problems in detail.

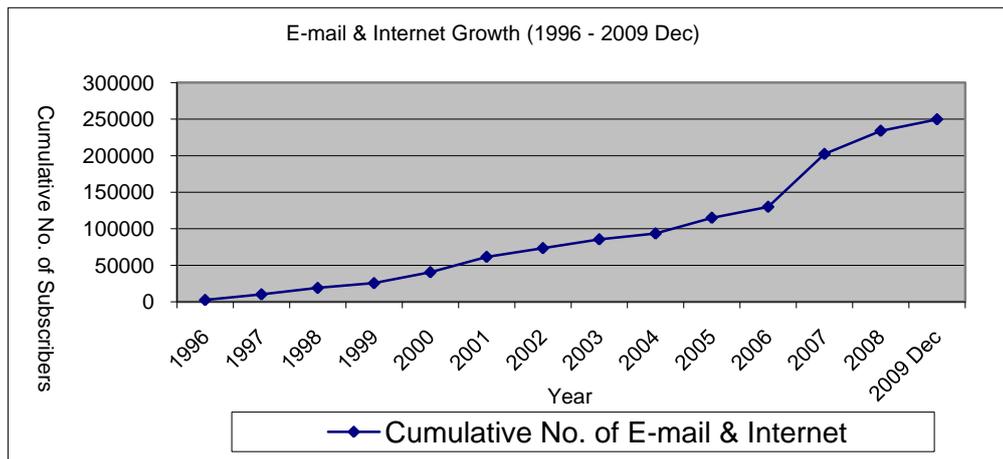


Figure -2.1: E-mail and Internet Growth in Sri Lanka from 1996 to 2009 December  
 Source: Dept of census and statistic (2009)

**Percentage that used Internet and e-mail in Sri Lanka in end of year 2009,  
 Age between 6 -69**

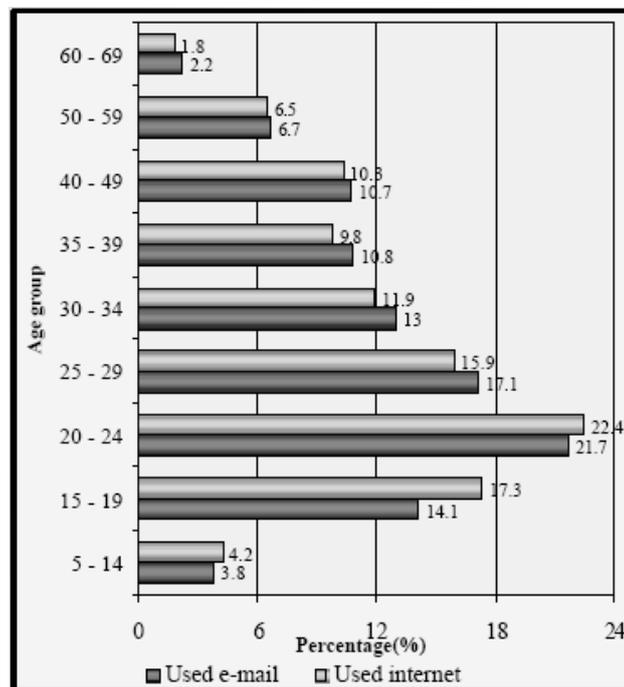


Figure- 2.2 Internet and E-mail Usage is Age group in Sri Lanka  
 Source: Dept of census and statistic (2009)

a) What percentage of urban or rural public has an access to the facilities provided by the internet?

Certainly the urban public has more access to internet than the rural public. But the Sri Lankan government and the private sector are expanding their ICT facilities into different parts of the country. As a part of the government's development of infra-structure facilities, the rural community is also getting an opportunity to access the internet and ability to utilize the e-commerce facilities to a considerable strength.

**Internet and e-mail using household population (Percentage) 5 – 69 years aged by sector and province -2009**

Sector and Province	Used in last 12 months (%)	
	Internet	e-mail
<b>Sri Lanka</b>	<b>13.1</b>	<b>12.0</b>
<b>Sector</b>		
Urban	23.9	22.9
Rural	11.1	9.9
Estate	9.2	8.1
<b>Province</b>		
Western	19.2	18.5
Central	13.2	12.3
Southern	10.6	8.5
Eastern	11.4	10.5
North Western	6.3	5.0
North Central	10.4	7.9
Uva	9.4	7.2
Sabaragamuwa	8.1	7.1

Figure- 2.3 Internet and e-mail using household population

Source: Dept of census and statistic Sri Lanka (2009)

b) What percentage of consumers with internet facilities actually use e-commerce website for their purchases?

It is a notable factor in traditional society as it is open to the introduction of the novel facilities that the people are reluctant to use those but to remain loyal to the traditional means and methods that are available. This is not an exception to the economic sector as well. The trend of usage may be higher in the urban sector while usual and less in the

rural sector. So the introduction itself would not create the utility of the facility but the tendency to use it is the crucial factor. Out of the total number of consumers the majority still does not use the e-commerce in their day-to-day commercial transactions.

c) Is the consumer really concerned about the availability of product information?

This is another importance that should be investigated in this study. The nature of the Sri Lankan consumer should be identified first. Some may go for different products due to different factors such as price, the prestige of the brand, the country of origin, popular belief and the family history of usage. In the casual field observations, the researcher has not seen the instances where the consumers are interested in the ingredients of the products mentioned online especially when they buy various food items. But a scientific accumulation of data is going to be done through the questionnaire meant to the online consumers.

d) Do e-commerce websites provide sufficient amount of information to support a consumer to make a purchase decision?

The most important element in designing a website is the inclusion of all the product information so that it would facilitate the consumer in making the decision in purchase decision making process. Especially as the market economies have grown so competitive, each company is introducing novel series of products with more facilities for a competitive price. So it is this knowledge or the information the consumer uses in deciding the item which he is going to buy. But most of the Sri Lankan e-commerce websites have not been able to provide sufficient information for the consumer and the effect of it would be analyzed through the views of the online consumers.

e) How do consumers make use of the available product information in making purchase decisions?

One of the most important aims of the study is to find out how the consumers use the available product information in making purchase decisions. First the available product information should be studied. Then the researcher has to find out what is lacking and what could be added to improve the website. After that the researcher has to find out whether the unavailability of product information has affected the decision making process and if the unavailable information were available what type of difference decision making process could have occurred.

## **2.3 Online Shopping: an introduction**

Online shopping is the where consumers directly purchases products or services through internet in real-time.

With the rapid development of electronic commerce and its increasing number of consumers who use interactive media such as the World Wide Web to purchase a product or a service, search for product information in on online shopping. According to Gerald and Valerie (2000) very little is known about how consumers make purchase decisions in such an environment. A unique characteristic of online shopping environments is that they allow vendors to create retail interfaces with highly interactive features. One desirable form of interactivity from a consumer perspective is the implementation of sophisticated tools to assist shoppers in their purchase decisions by customizing the electronic shopping environment to their individual preferences.

Motivations of consumers to engage in online shopping include both attractiveness and satisfaction. Whereas some Internet shoppers can be described as “problem solvers”, others can be termed seeking for “fun, fantasy, arousal, sensory stimulation, and enjoyment”, Hirschman and Holbrook (1982). The problem solvers merely shop online in order to acquire a specific product or service, in which case shopping is considered to be “an errand” or “work”, Babin et al (1994). Their main concern is to purchase products in an efficient and timely manner to achieve their goals with a minimum of irritation. In contrast, the second category sees online shopping as “enjoyment” and seeks for the potential entertainment resulting from the fun and play arising from the Internet shopping experience. They appreciate the online shopping experience for its own sake, apart from any other consequence like, for example, an online purchase that may result, Holbrook (1994).

### **2.3.1 Usefulness**

“Usefulness” is defined as the individual’s perception that using the new technology will enhance or improve her/his performance, Davis (1989, 1993). The new technology will attract and retain online shoppers and will give online shoppers a better shopping experience. Then, “usefulness” refers to consumers’ perception that using the Internet as a

shopping medium enhances the outcome of their shopping experience. These perceptions influence consumers' attitude toward online shopping and their intention to shop on the Internet. Technology Acceptance Model posits a weak direct link between "usefulness" and attitude, and a strong direct link between "usefulness" and intention, Davis et al (1989). This was explained as consumers intend to use a technology because it was useful, even though they did not have a positive affect toward using. Apart from this, "usefulness" is also linked with "ease of use" to determine consumers' attitude toward online shopping.

### **2.3.2 Ease of use**

"Ease of use" is defined as the individual's perception that using the new technology will be free of effort, Davis (1989, 1993). Whereas "usefulness" referred to consumers' perceptions regarding the outcome of the online shopping experience, "ease of use" refers to their perceptions regarding the process leading to the final online shopping outcome. In a simplified manner, it can be stated that "usefulness" is how effective shopping on the Internet is in helping consumers to accomplish their task, and "ease of use" is how easy the Internet as a shopping medium is to use.

### **2.3.3 Enjoyment**

Next to the evidence for the critical role of extrinsic motivation for technology use, there is a significant body of theoretical and empirical evidence regarding the importance of the role of intrinsic motivation, Davis et al., (1992). Intrinsic motivation for Internet shopping is captured by the "enjoyment". Intrinsic value or "enjoyment" derives from the appreciation of an experience for its own sake, apart from any other consequence that may result, Holbrook (1994).

The Global Nielsen Consumer Report on February 2008 asserts that consumers across the globe are increasingly swapping crowded stores for one-click convenience, as online shopping becomes a safe and popular option. According to a recent global survey conducted by The Nielsen Company, over eighty five [85] percent of the world's online population has used the internet to make a purchase, up to forty [40] percent from two years ago, and more than half of internet users are regular online shoppers, making online purchases at least once a month. The Nielsen survey, the largest survey of its kind on the topic of internet shopping habits, was conducted from October to November 2007 and

polled 26,312 internet users in 48 markets from Europe, Asia Pacific, North America and the Middle East.

When The Nielsen Company conducted its first survey into online shopping habits two years ago, only ten [10] percent of the world's online population 627 million had made a purchase over the internet. Within two years, this number has surged by approximately forty [40] percent to a staggering 875 million.

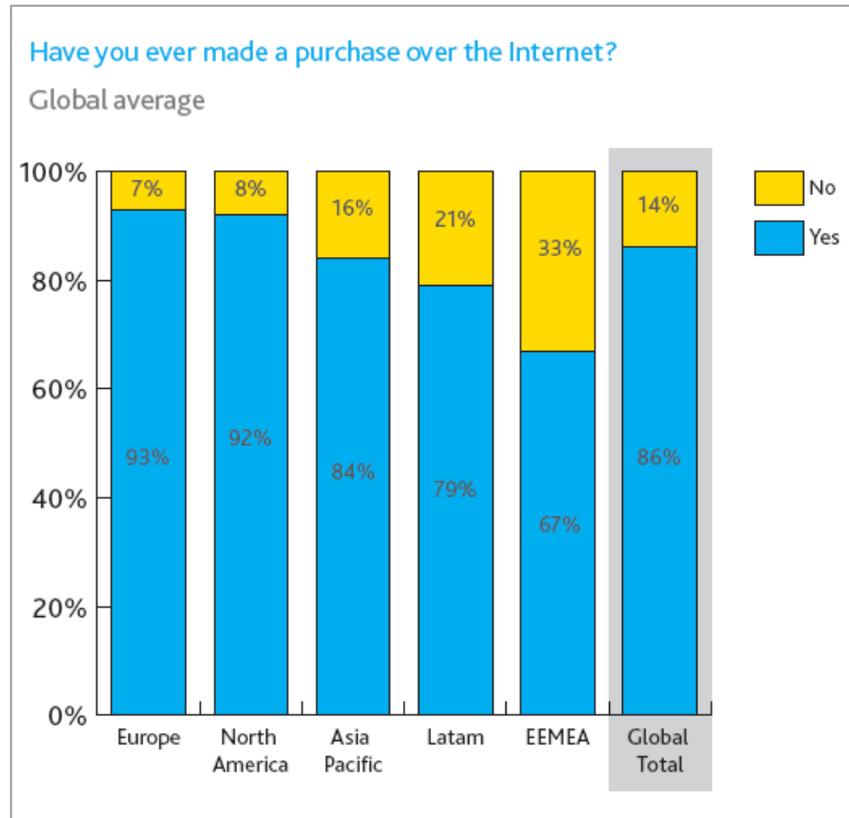


Figure 2.4 – Global averages of internet usage

Source: Trends in Online Shopping a global Nielsen consumer report February 2008.

The never ceasing popularity of online shopping is a truly global phenomenon. Online shoppers can be found scattered across the globe, but the world's most avid internet shoppers hail from South Korea – ninety nine [99] percent of internet users in South Korea have shopped online. German, United Kingdom (UK) and Japanese consumers come in a close second.

At the other end of the area, the world's slowest adopters come from Egypt, where sixty seven [67] percent of the online population have never made a purchase over the internet, followed by Pakistan [sixty - 60%] and the Philippines [fifty five - 55%]. The world's most frequent online shoppers also come from South Korea, where seventy nine [79] percent of internet users have made a purchase online in the last month. UK shoppers chase them once again, followed by the online shoppers of Switzerland.

The world's most infrequent online shoppers hail from the Philippines, where fifty nine [59] percent of online shoppers have not made a purchase in the last 3 months, followed closely by Pakistan [fifty six - 56%], Argentina and Egypt [fifty five - 55%].

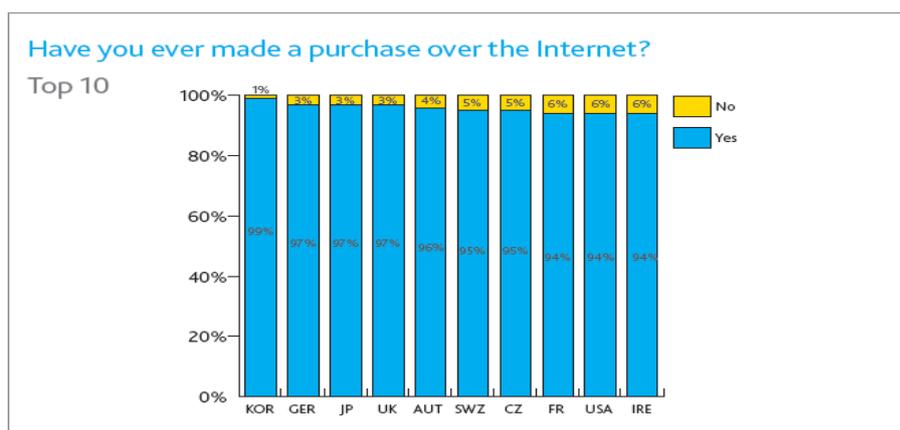


Figure 2.5 – Purchasing percentage over the internet

Source: Trends in Online Shopping a global Nielsen consumer report February 2008

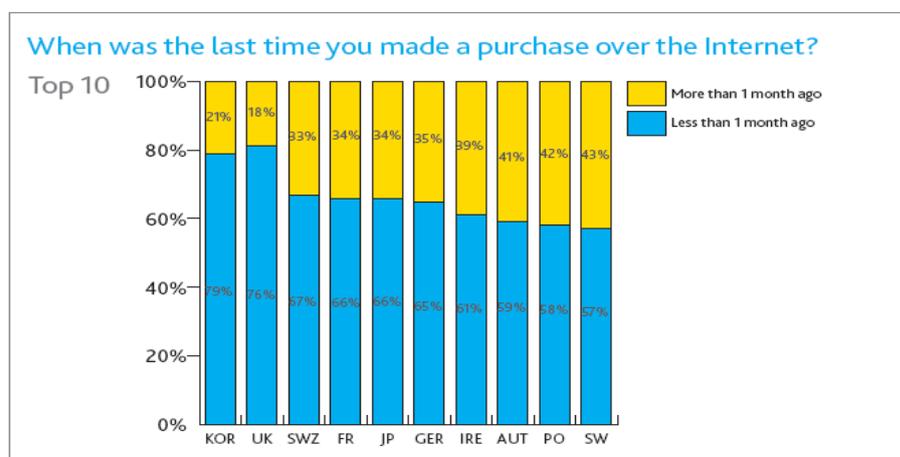


Figure 2.6 – The time gap of internet purchase [Countrywise]

Source: Trends in Online Shopping a global Nielsen consumer report February 2008

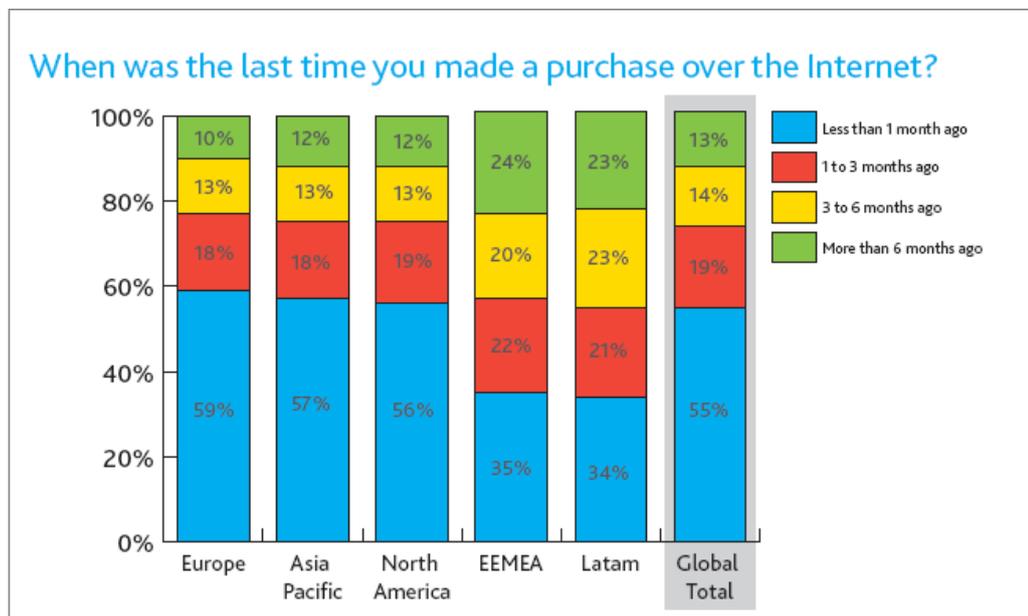


Figure 2.7 - The time gap of internet purchase [Continentalwise]

Source: Trends in Online Shopping a global Nielsen consumer report February 2008

Internet consumers continued to be a well-read lot, thanks to the early adoption of online commerce by large booksellers, but the diversification of the online shopping environment has resulted in significant growth in other categories. Books are still the most popular purchases online, followed by Clothing/Accessories/Shoes, Videos / DVDs / Games, Airline Tickets and Electronic Equipment. Other significant growth categories were cosmetics / nutrition supplies and groceries, which jumped nine [9] and eight [8] percentage points respectively.

The number of internet consumers buying books over the internet has increased seven [7] percent in the past two years, but the fashions are on the advance – the Clothing / Accessories / Shoes category has experienced the highest increase by far in the two-year period – from twenty [20] percent to thirty six [36] percent. Style-savvy South Koreans are the most avid online fashion shoppers by a long shot – a whopping seventy [70] percent of respondents had bought clothing, accessories or shoes online in the last three months, followed by China, Portugal and France.

The online shopping revolution has had a marked effect on shopping for air travel. Internet shopper interest in buying airline tickets/reservations online rose three percentage [03] points in the past two years – today one in four online shoppers globally said they

had purchased airline tickets on the ‘Net in the past three months. More than seventy [70] percent of Indians and more than sixty [60] percent of Irish and UAE Internet users said they bought airline tickets/reservations on the internet in the last three months, making travel the fourth most popular shopping category on the web.

‘Travel is a category extremely suited to the internet due to the latter’s ability to provide efficient access to an extremely wide range of comparable information. Whilst certain areas of the travel industry were initially slow to utilize the benefits of the internet, it is now one of the undoubted success stories of online, playing an integral part in the arrangements and experience of today’s traveller’ said Jonathan Carson, President, International, Nielsen Online.

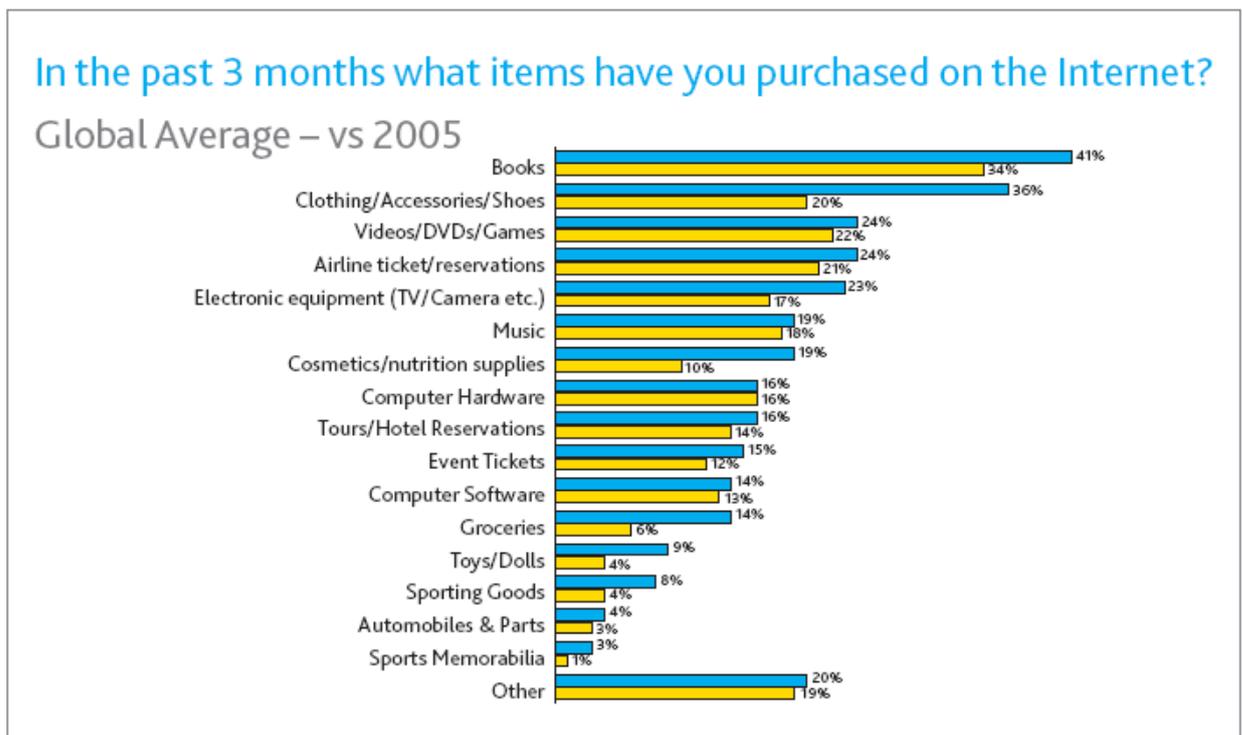


Figure 2.8 – Summary of all items purchased on the internet

Source: Trends in Online Shopping a global Nielsen consumer report February 2008

In the past 3 months what items have you purchased on the Internet?  
Clothing/Accessories/Shoes

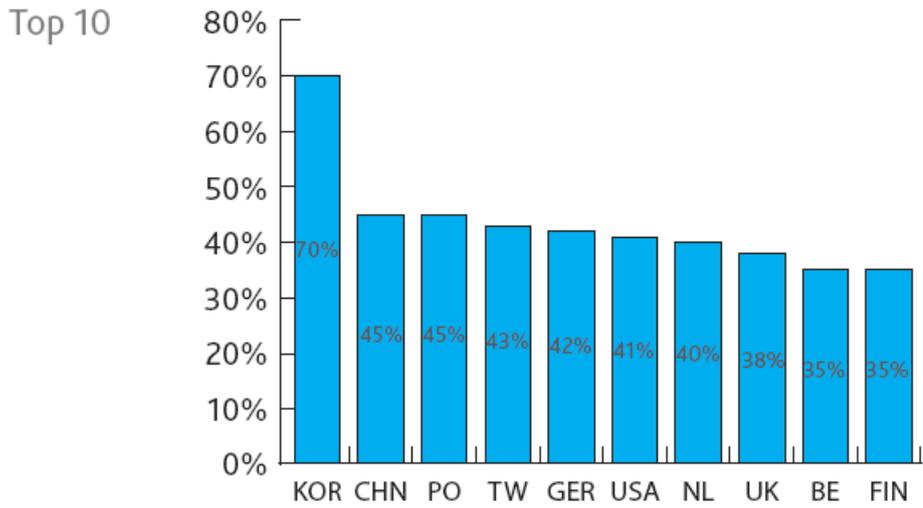


Figure 2.9 – Items purchased online [Countrywise]

Source: Trends in Online Shopping a global Nielsen consumer report February 2008

In the past 3 months what items have you purchased on the Internet?  
Clothing/Accessories/Shoes

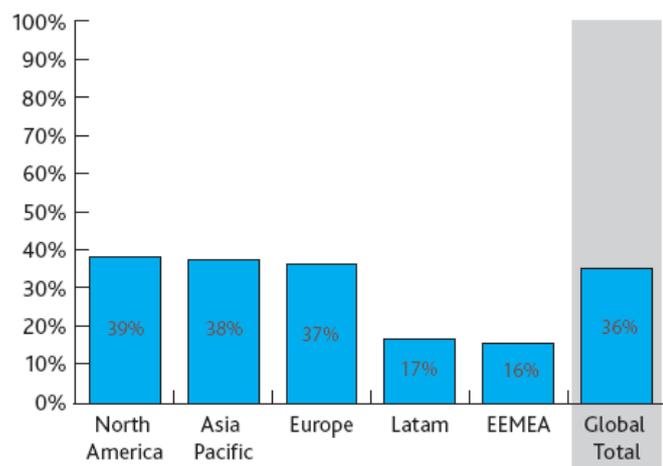


Figure 2.10 - Items purchased online [Continentalwise]

Source: Trends in Online Shopping a global Nielsen consumer report February 2008

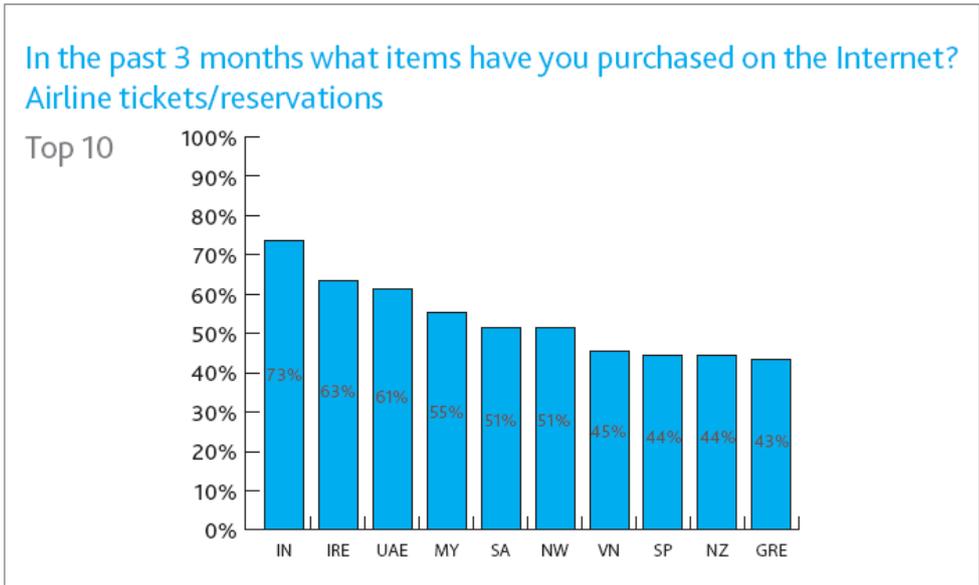


Figure 2.11 - Items purchased online [Countrywise]

Source: Trends in Online Shopping a global Nielsen consumer report February 2008

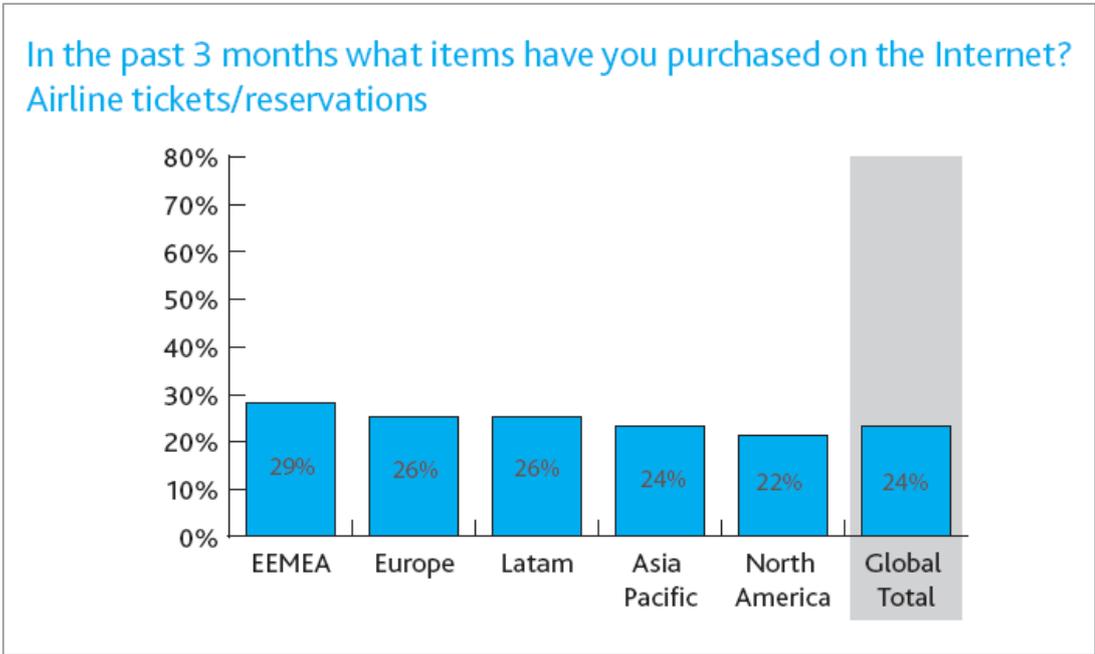


Figure 2.12 - Items purchased online [Continentalwise]

Source: Trends in Online Shopping a global Nielsen consumer report February 2008

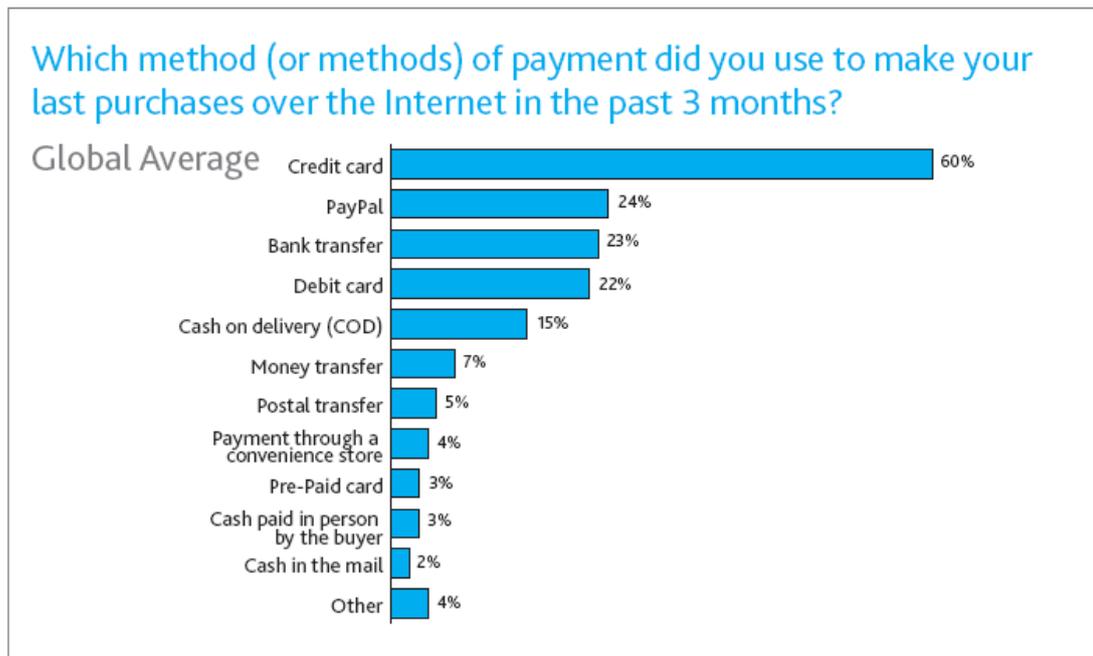


Figure 2.13 – Method of payment in online shopping

Source: Trends in Online Shopping a global Nielsen consumer report February 2008

Credit cards are by far the most common method of payment for online purchases – sixty [60] percent of global online consumers used their credit card for a recent online purchase, while one in four online consumers chose PayPal. Of those paying with a credit card, more than half (53%) used Visa. ‘Shopping on the internet with the ease of a credit card is especially appealing to consumers in emerging markets who simply cannot find or buy items they want in their retail trade. The internet has opened up a whole new world of shopping for these consumers’ said Carson. While Latin American (LatAm) and Asian online shoppers are also more likely to use credit cards than any other form of payment, debit cards are most popular among UK (59%) and US (40%) online shoppers.

Consumers tend to stick to what they know when it comes to online shopping, according to Nielsen. Sixty [60] percent of online shoppers say they buy mostly from the same site, proving that online shoppers are uniquely loyal. ‘This shows the importance of capturing the tens of millions of new online shoppers as they make their first purchases on the internet. If shopping sites can capture them early, and create a positive shopping experience, they will likely capture their loyalty and their money,’ mentions the Nielson Report.



Figure 2.14 – Decision of online shopping site

Source: Trends in Online Shopping a global Nielsen consumer report February 2008

In selecting sites on which to shop, one-third of online shoppers used a search engine or just surfed around to find the best online store. One in four relied on personal recommendations. ‘Recommendations from fellow consumers – whether they are people they know or fellow online shoppers – play an enormous role in the decision-making process. The explosion in Consumer Generated Media [CGM] over the last year means that this reliance on word of mouth, over other forms of referral, looks set to increase,’ comments Carson.

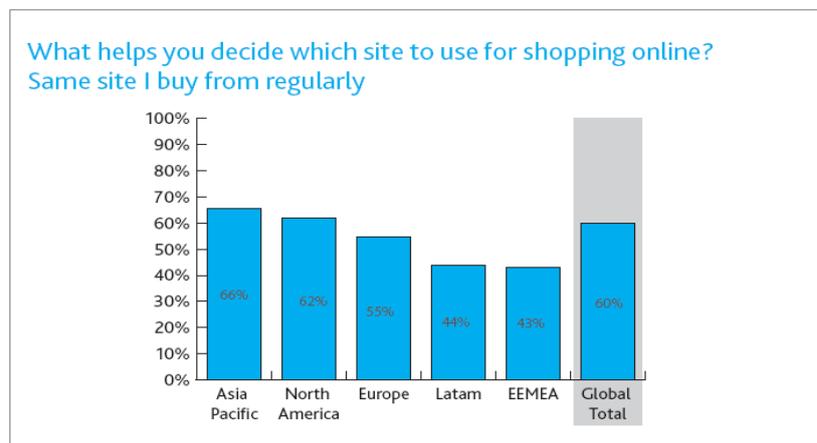


Figure 2.15 – Regularity of online buying

Source: Trends in Online Shopping a global Nielsen consumer report February 2008

Bellman et al (1999) claims that the survey they conducted asked members of the Wharton Virtual Test Market sample whether they had ever bought anything online. Roughly 4,368 (42.9%) said they have never bought anything online (p.32). They analyzed the factors that predicted actual purchases using logistic regression (p.8). They had the advantage of the large sample size by splitting the WVTM randomly into two separate halves to produce separate calibration and holdout samples. The calibration sample used a stepwise procedure to add candidate variables to the logistic regression equation. The final regression for the calibration sample was then used to predict whether members of the holdout sample would or would not buy anything online. This process was repeated, using the original holdout sample to calibrate the regression, then cross-validating this regression equation in the original calibration sample. For a highly significant sixty six (66%) of members of the WVTM, the resulting equation correctly predicted whether or not they bought online. The following Figure shows the variables that were significant in both runs of this double cross-validation procedure, arranged in decreasing order of importance.

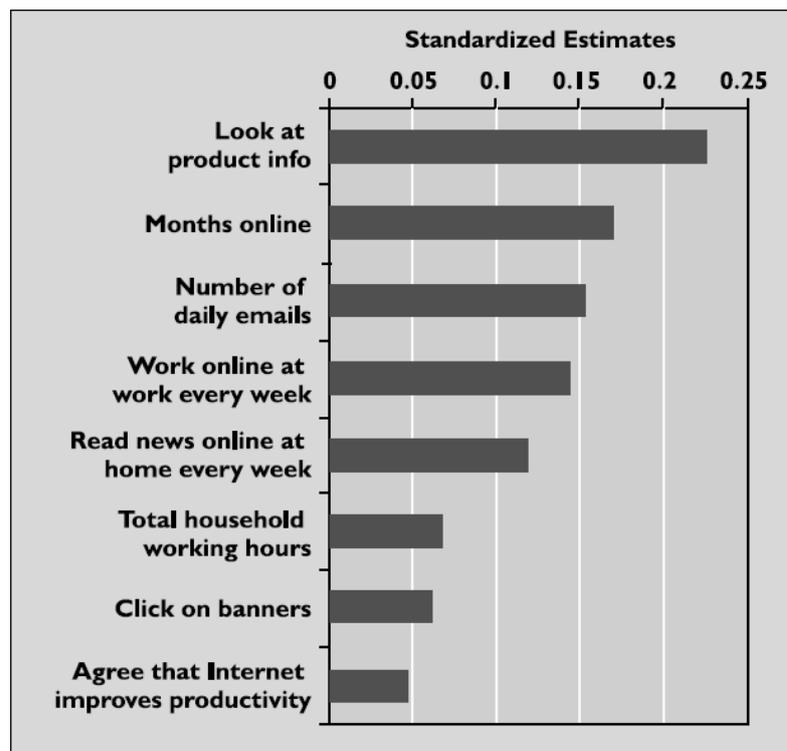


Figure 2.16 – Factors that affect online buying

Source: Predictors of Online Buying Behavior December 1999

## 2.4 Online Shopping in Sri Lanka

There has been a rapid growth in the telecommunications sector as a result of the policies adopted by the successive Sri Lankan governments especially after 1978. It has influenced the development of the telecommunications infrastructure and country's economy. There are more than 800,000 fixed access subscribers with a teledensity of four, the waiting list has reduced considerably and there is a significant development in network rollout and quality of service during the past few years. The mobile sector has also shown a rapid expansion during the last few years. The operators are covering more and more rural areas and as a result subscribers in rural areas are also getting more connections.

The growth of the telecommunications sector has given the foundation for developing the e-commerce industry in Sri Lanka. Within this improvement, e-commerce has received the attention of consumers, business persons, journalists, private and government organizations during the last few years. It is a new trend in the development policy agenda of Sri Lanka. With the development of technology and internet applications the e-commerce operations are becoming very fast, cheap and simple.

*Electronic shopping malls and trade:* The first Sri Lankan electronic shopping mall (Akasakade), launched by the Ceylinco Group, commenced its operations in 1997. There are about 200 companies associated with this mall. The Golden Key credit card company acted as the financial partner for the mall. This shopping mall is well known to the e-business community in Sri Lanka.

According to the research on "Initiatives for E-Commerce Capacity-Building of SMEs in Sri Lanka" conducted by SLBDC for the Asian Foundation in June 2002, there are some major barriers for the development of e-commerce. They are:

- Inadequate infrastructure facilities (low teledensity)
- Legal infrastructure
- National communication backbone
- Cost of Internet access
- Usage of computers
- Lack of human resources.

Many company websites provide background of the company and what kind businesses they are into. It provides information that the company offers to consumer, potential consumers, financial information to investors, potential investors and ethical behavioral information for the society at large. Therefore a company who does not have a website means it will be a drawback in today's business world. According to a research carried out regarding the online presence in South African countries it was found that 77% of the firms have never used web sites to do their business Lane M.S., Vyer V. D., Delpachithra S. and Horward S. (2004) indicating that there is lack of usage of internet in doing business among the developing countries.

<b>Category</b>	<b>Sri Lankan Companies</b>	<b>Fortune 500</b>
News Update	48%	89%
Job Opportunities	22%	88%
Financial Information	33%	95%
Describe Products	89%	97%
Key Word Search	26%	59%
Internal Links	48%	59%
External Links	11%	48%
Privacy	0%	53%

Table- 2.1: Results of Informational components

Source: Effective Website to Provide Total Customer Satisfaction: An Empirical Study on the public Quoted Companies in Sri Lanka

Informational content consists of the information regarding the product or service description. This includes mainly the features and attributes of the products and services the company offer. Links can be developed under this category of content to connect other divisions of the same firm and some external organizations where the customer might need the services of, such as customs department, banks etc. The firm can post job opportunities in their web site. It is popular to incorporate key word search within the site so that the consumer has the ability to search by the word without reading the whole site which saves ample amount of time and cost. When the percentages are compared between the Sri Lankan companies and the Fortune 500 companies, it can be seen that there is only

an 8 percentage point difference in the category of Describe Product as per Table-2.1, but Sri Lankan websites does not include alternative product details, related product details, related technical tips etc. Therefore these websites do not give information that a customer would get if he steps in to a physical shop. Furthermore Sri Lankan websites do not provide necessary privacy arrangements; this discourages customers to provide their important personal information over a public website.

## **2.5 The features of an online shopping website**

Mullaney (2000) has claimed that the value of the internet-based transactions has been growing quickly and is estimated to grow 20-fold over the next five years, reaching \$11 trillion by 2010. Further Kranhold (2000) shows that in 1999, United States' businesses spent about \$4.3 billion on internet ads and are likely to spend around \$28 billion in 2005. This trend shows that the internet is fast becoming a new way to market products to consumers. Donthu and Garcia (1999) mentioned that consumers are rapidly adapting to internet shopping. Montgomery (2000) opines that even baby boomers' and seniors' online shopping grew by 18.4% in 1999, making them the internet's fastest-growing demographic groups. The US consumers most often use the internet to purchase items such as books, computers and peripherals, travel, and clothes (Information Access, 1999).

Despite financial turbulence and increasing competitive pressure, Internet shopping sites or malls may gradually become substitutes for conventional retailing channels, mail- or phone-order stores, catalogs, and sales forces. However, as the importance of, and competition among Internet shopping sites increases, the quality of the sites will become important for survival and success. As Internet shopping gradually moves from a novelty to a routine way of shopping, the quality of Internet sites will play an important role in differentiating sites. High quality sites will be able to attract more browsers and shoppers than competing low quality sites because quality builds sustainable competitive assets.

In Internet shopping sites as web retail sites customers can browse, evaluate, order, and purchase a product or service. In short, internet shopping sites are online versions of physical retail stores where all transactions and their relevant activities take place in online cyberspaces. Sites can be classified into six retail models as Clark (1997) mentions. They are:

- a) manufacturer sites in which manufacturers directly sell their products to customers online, skipping wholesalers and retailers (e.g., Sony.com, Compaq.com, and Hoover.com);
  - b) off-line, brick and mortar retailer sites in which physical stores make their retail products available on the web (e.g., BestBuy.com, Walmart.com, and OfficeDepot.com);
  - c) catalog hybrid sites that put their printed catalogs on the web (e.g., Fingerhut.com, ColumbiaHouse.com, and Christianbook.com);
  - d) pure dot-com retail sites that buy products from manufacturers at wholesale and sell them online at retail without owning physical and public stores (e.g., Amazon.com, Buy.com, and eToys.com);
  - e) mall sites that develop a location on the web and make money by charging retailers fees (e.g., Shopping.Yahoo.com, BizRate.com, and MySimon.com);
- and
- f) brokerage sites that unite buyers and sellers on the web and charge a portion of the transaction for the service (e.g., eBay.com, Ameritrade.com, and PriceLine.com)

Literature on the quality of traditional retail stores confirms that the consumers use store quality as a vital extrinsic cue about the quality of the stores' products e.g., Dodds, Monroe, and Grewal (1991). Similarly, high quality internet sites will attract more attention, contacts, and visits from consumers by implying that their products are of high quality. In addition, when consumers are satisfied with a high quality Internet site, they stimulate active and positive word-of-mouth communications for the site. Consumers also hear more favorable and positive comments about high quality sites through media and site evaluating agencies. Hanson (2000) asserts that;

“A well-designed site has a number of beneficial impacts. It can build trust and confidence in the company; reinforce an image of competence, functionality, and usefulness; alert the visitor to the company's range of products and services; and point out local dealers, upcoming special events, and reasons to come back again” (p. 44).

However, little research has attempted to develop a psychometrically sound instrument to measure the perceived quality of an internet shopping site. The lack of a measure has been a barrier to tracking and improving site quality and investigating the relationships

between site quality and related variables. Previous measures of site quality have several limitations and they are presented as follows.

First, many of them are designed primarily to measure site efficiency rather than site quality. They are not consumer based measures of quality. Examples of such measures include server logs (Trochim 1996), consumed time per page or visit (Dreze and Zufryden 1997), sales transactions (Schubert and Selz 1997), and web traffic (Lohse and Spiller 1998). Such site-centric measures may be inaccurate because a significant amount of off server activity through local or proxy caches is never recorded (Strauss and Frost 1999). More seriously, they fail to capture consumers' cognitive and attitudinal evaluations of the sites, which are more meaningful indicators of Internet shopping behavior.

Second, the measures do not show the structure of the dimensions of site quality. For example, Ho (1997) listed web sites' multiple quality features without investigating the relationships among them.

Third, the measures are mainly developed as performance metrics for general web sites rather than Internet shopping sites, Hoffman and Novak (1996). As a result, they may not be necessarily relevant to online shopping behavior because they neglect shopping-related attributes such as ordering, pricing, financial security, and payment methods.

Fourth, the measures' psychometric properties have not been reported fully. For example, whether or not the retained measures make unidimensional constructs has not been checked, Alpar (1999). The researchers have identified the two dimensions in online shopping as vendor related factors and quality related factors.

#### Vendor-Related Factors

- Competitive value: the competitive pricing in comparison to conventional retail stores or competing Internet shopping sites,
- Clarity of ordering: the clarity of the ordering process supported by unambiguous pricing and fast delivery,
- Corporate and brand equity: the name value of the site owner and the products or services on the site,

- Product uniqueness: the uniqueness of the products or services on the site, such that visitors have difficulty finding the products elsewhere, and
- Product quality assurance: the consumer's self-assurance of product quality obtained during the interaction with the site and not necessarily associated with direct product purchase or consumption experience.

#### Quality-related Factors

- Ease of use: the ease of use and ability to search for information,
- Aesthetic design: the creativity of a site with excellent multimedia and color graphics,
- Processing speed: the promptness of online processing and interactive responsiveness to a consumer's requests, and
- Security: the security of personal and financial information.

#### **2.5.1 Sri Lankan online shopping sites**

From the first objective the researcher has identified that the Sri Lankan web sites that facilitate online shopping (Sri Lanka) are not properly organized compared to the foreign online shopping web sites. The comparison was made against the foreign web sites initially because the first impression of an online shopping site is to attract the consumer and try to keep him/her perusing on the web site. So the design has to be of high caliber. But during the preliminary literary survey the researcher noted that the information provided to the consumers are insufficient and unimpressive. The consumer's satisfaction with the available product information and how it will have an effect on consumer's decision making. So looking at Sri Lankan online shopping websites, which were listed on tourist bureau in Sri Lanka, has not satisfied the consumer expectations. Consumers have made complains on websites, that it takes long time to download the site, it's very difficult to find the product which the consumer may look for, and the information that is provided is insufficient or virtually not present at all. Image of the product, 3D view, zoom in zoom out on product, product descriptions, compatibility, warranty and service and the delivery terms were not properly included on site where consumers can access easily.

The study has identified that the recent trend in the online business in today's business world is to search online and purchase offline. Hence website is the one that the consumer looks and relies on the most. The intense competition and the development of internet technology are forcing firms to develop websites effectively by giving special attention to the relevance and attractiveness of the content facilitating to lock-in customer. Sri Lankan companies have to keep on par with this trend. It was revealed that the Legal background and the domestic IT infrastructure in Sri Lanka are satisfactorily up to the standard. Some sectors such as SMEs (SME survey Sri Lanka) have made use of the available infrastructure and the legal background in order to promote their products and services internationally. Majority of the Sri Lankan company websites also are informational but the way through which the content provided by them is questionable. So far the Sri Lankan companies have not understood the importance of the website as the main information provider. Lack of attention has been given to the consumer registration facilities, and search facilities within the website, financial information and links. Product and service information are also not enough to provide the customer with a high degree of satisfaction. Since the companies have already spent the initial investment, it is a matter of identifying the information needed by the consumers and then encompassing these in to the web content.

Information and Communication Technology Act No: 27 of 2003, was passed by the Parliament of the Sri Lanka, ruling and formulating a guidance policy in ICT technology related to online business. The Act provides for the following;

1. To provide for the setting up of a national policy on information and communication technology.
2. Preparation of an Action plan for ICT development.
3. Appointment of a task force to improve the ICT standard.
4. Appointment if an ICT agency to implement national policy.
5. To deal with the matters connected to any related issue.

As per the requirements given in the Act, the task force is enabled to perform several functions at the best interest of the development of the ICT in Sri Lanka. Furthermore, there is the Information and Communication Technology Agency of Sri Lanka to assist and monitor the activities in development of ICT. The Council for Information Technology [CINTEC], which was established under the Science and Technology, Act

No: 11 of 1994 have been converted to ICTA from the ICT Act. The respective authorities in Sri Lanka have done their job by setting up rules and policies required for online business.

The Economist Intelligence Unit is the information arm of the Economist Group, publisher of The Economist Magazine. E-readiness rankings provide an established benchmark for countries to compare and assess their e-business environments, Economist Intelligence Unit (2003). E-readiness evaluates the conduciveness of the market in a particular country to engage in internet based business activities. The evaluation is concerned about 60 largest countries in terms of internet usage. It is an honour that Sri Lanka has been able to enter in to these 60 largest countries. “the e-readiness framework provides a mechanism to help business and government executives fuse business and technology decisions to create focused, resilient and responsive organizations” ,The Economist and IBM (2003).The ranking are awarded based on a score calculated taking in to considerations various quantitative and qualitative factors. These criteria are organized into six distinct categories namely, connectivity and technology infrastructure (25% weight), business environment (20% weight), consumer and business adoption (20% weight), legal and policy environment (15% weight), social and cultural infrastructure (15% weight) and supporting e-services (weight 55%). Sri Lanka has scored 4.1 (out of 10) making its position as 44th among the 60 countries in year 2003. The world’s first global ICT ranking, the Digital Access Index [DAI] measures the overall ability of citizens to access and use ICT. This measure has taken eight variables (divided into five main groups) into consideration when calculating the index. Availability of infrastructure, affordability of access, educational level, quality of ICT services and internet usage are the five groups. ITU (2003) DAI rankings hence have identified the countries into one of four digital access categories: High, Upper, Medium and Low. Sri Lanka has fallen into the medium access category out performing even India. Apparently Sri Lanka has reached a higher standard when compared to other countries in the region and some of the Asian countries. These evidences show that if Sri Lankan companies are lagging behind in online business, it is not due to poor infrastructure.

Asia Foundation has shown that 83% of Small and Medium size Enterprises (SMEs) use internet for business work, especially the e-mail. 35% have their own websites while 61%

used the services of web hosting companies. 3% used freelance designer for the hosting of the site. From usage point of view 97% used the web site to promote the company to potential customers while 3% used it for collecting visitor information for market intelligence. Hence the SME sector in Sri Lanka is emerging in online business.

### **2.5.2 Foreign online shopping sites**

The key factors affecting are the user interface quality, product and service information quality, security perception and site awareness were found to have significant effects on consumer's site commitment. Furthermore, the researcher investigated whether information satisfaction and relational benefit play a significant mediating role on consumers' purchasing behavior. In an online shopping context, the information feature of a shopping site was validated to be an important factor determining consumers' site loyalty and decision making in terms of whether or not they will shop at the online store. This emphasizes the importance of product information quality and user interface design in the online shopping site development. Other attributes of an online store were also found to influence a consumer's perceived relational benefits from online shopping. Service information quality was found to be the most important factor among them.

Web sites are essentially store houses of information, which is provided in such a way that it helps the consumers and thus, affects their view of its effectiveness. The key characteristics of a business to consumer [B2C] web site could be categorized along the lines of its content and design, E. Huizingh, (2000). Content refers to the information, and features or services offered in the web site, while design is the way by which the contents are presented to consumers. The contents of a B2C web site play an important role in influencing the purchase decision process of a consumer. They should allow the consumers to locate and select the merchandise that best satisfies their needs. Thus, the usefulness of a B2C web site not only depends on the information content, but also on the tools provided for navigating through and evaluating the use of the information. B2C web sites differ in the sheer amount of information provided about their merchandise. Before purchasing a product, consumers look for information on it: brands, variety, price and quality. But, different consumers have different information needs. B2C web sites can offer information through hyperlinks, so that the consumers can drill-down to further

detailed product information as needed. For instance, Amazon ([www.amazon.com](http://www.amazon.com)) offers hyperlinks to book reviews and product testimonials.

A major difference between traditional retailing and online selling lies in the extent of interaction that a customer can have with the business. In order to compete effectively with retailers, online businesses have to offer electronic interactivity in the form of email and frequently asked questions (FAQs). Consumers usually have a number of questions on the shipping, service, payment and product return policies.

Many web sites have a section on FAQs that provide answers to common consumer concerns. Studies have shown that online stores with a FAQ section get more consumers visiting them than those without it. Despite this, many B2C web sites do not seem to offer FAQ section or interactive email features. One of the frequently cited concerns about online shopping is the security of monetary transactions, despite various technical advancements in Internet security, like cryptography, digital signatures and certificates, and authentication. R. Anderson, S. Benuidenhoudt (1996), consumers are still concerned. In a recent survey, almost 70% of the consumers expressed their fears about Internet security. It has been found that perceived web security has a positive influence on the intention to purchase online, W.D. Salisbury, R.A. Pearson, A.W. Harrison (1998). Many B2C web sites offer alternative payment modes, like telephonic transactions or checks. In order to allay the consumer concerns, many web sites also offer individual accounts with a logon-id and password. B2C web sites use a number of mechanisms to gather information about their visitors. Explicit modes of gathering, such as registration forms, web surveys, and implicit means, like the use of cookie files, are commonly used. Information about consumers provides crucial inputs to marketing, advertising, and product related decisions made by merchandisers. But, a growing number of Internet users have expressed their concerns over potential misuse of personal information. A number of independent companies ([www.truste.com](http://www.truste.com)) have also emerged to verify, audit, and certify the privacy policies of various web sites.

The design of a B2C web site plays an important role in attracting, sustaining and retaining the interest of a consumer at a site. The design of the web site is as important as its contents. Literature discussing the design principles of a B2C web site highlights three

important issues: ease of navigation of the web site, time taken for navigation and page download, and use of multimedia to improve its visual appeal.

B2C web sites often use animation, video, music, and other multimedia effects to capture customer attention. Multimedia combines static and dynamic images, sounds, and text and capture the consumer's attention more decisively than any of these elements alone, reaching audiences on multiple cognitive levels and resulting in higher retention. Though graphic images have become an essential part of most B2C web sites, a recent study by C. Ranganathana, and Shobha Ganapathy (2002), revealed that text material attracts the attention of web page visitors before graphics. Though multimedia increases the aesthetic element of a web page and increases the visual appeal, a fine balance must be made between multimedia elements and download times. In order to avoid delays, several web sites offer multiple versions: the option to choose text-only versions, low-bandwidth, and high-speed connection driven pages.

## **2.6 The research on decision making and the availability of product information**

Bellman et al (1999) further assert that looking for product information on the internet is the most important predictor of online buying behavior. More interesting, perhaps, are the results for the other predictors of online buying. They show that a typical online buyer has a 'wired' lifestyle. Such people have been on the internet for years, not just a few months. They receive a large number of email messages every day, they work on the internet in their offices every week, and they agree that the internet and other developments in communication technology have improved their productivity at work. Just as they use the internet for most of their other activities (such as reading the news at home), these people naturally turn to the internet to search for product information and in many cases to buy products and services.

Another influence on a person's decision to shop online is the amount of discretionary time the prospective online shopper has. As the total number of hours worked by members of a household increases, the less time there is to search for and buy products and services in the traditional way like visiting the shops and going through the products and deciding and finally bringing the item in. More important, this effect is even stronger

if one's spouse also works. Dual-income households seek new ways to find information and buy things that are faster and more convenient. In the past, they may have used catalogues but now they take advantage of e-commerce sites on the WWW.

Bellman et al (1999) questioned the members of the Wharton Virtual Test Market who bought things online how many online transactions they had made during the past six [06] months and the value of their most recent online transactions. The median number of transactions completed during that time was two in the USA and Asia. But in Europe, the median was only one transaction during the preceding six months. The median amount spent on the last transaction was \$30 in the US, Asia, and Europe—or about the same as the average purchase from Amazon.com ; \$35, but much less than other more conservative estimates of the average online transaction amount. For example, BizRate.com, which collects consumers' ratings of online businesses ([www.bizrate.com](http://www.bizrate.com)), estimated in late 1997 that the average online purchase for first-time shoppers was \$109.

Girish Punj, Adam Rapp, (2007), in answering 'How do electronic decision aids influence consumer decisions?' observed that the nature of the task is different in a web-based environment because not all product attributes may be converted into 'digital' attributes. Haubl and Trifts (2000) too agree that 'if search costs are lowered for 'digital' attributes to a greater extent than for 'non-digital' attributes it is more likely that consumers will use those attributes to a great extent in their alternative screening strategies'. Thus, alternative screening strategies that are based on the sorting/filtering of 'digital' attribute information are more likely to be observed in web-based decision environments. Consumers are likely to increase their use of 'digital' attribute information since that type of information is likely to dominate in a web-based information environment.

According to Girish Punj, Adam Rapp, (2007) there is a rapid growth of e-commerce, and consumer purchase decisions are increasingly being made in computer-mediated environments. Online or Web-based stores offer consumers immense choice and great convenience. Yet, finding products that meet consumer needs is not an easy task in these online stores. This is because most Web-based store environments are characterized by the availability of many alternatives, multiple decision criteria and a dynamic "flow" of information (e.g., real-time updates) that can overwhelm consumers. Therefore, most

Web-based decision environments now make an electronic decision aid available to facilitate information processing. Consumer decisions that are made using electronic decision aids are based on a complex interaction of consumer, electronic decision aid, and information environment factors. As online shopping environments continue to evolve technologically, there is a need to understand how these various elements come together in influencing consumer decision-making. Some researchers have suggested that in spite of the changed information environment and the availability of electronic decision aids, the consumer decision process remains more or less the same in a Web environment. Other researchers claim that the capability of the electronic decision aid to iteratively screen alternatives based on desired attribute levels, (Alba et al. 1997) and to match attribute preferences with available alternatives fundamentally alters the decision strategies that are employed.

Redmond (2002) has shown that electronic decision aids can improve the quality of the decision made by a consumer and reduce the effort placed into making the decision; however, there are four [04] areas of concern that must be realized when evaluating the adequacy of an electronic decision aid.

- a) Information is often incomplete due to ineffective search routines. The information that is produced is sometimes irrelevant or duplicated.
- b) Electronic decision aids cannot model actual human behavior. Electronic decision aids follow rules or guidelines, whereas consumers will sometimes act irrationally or change goals in the middle of a shopping excursion.
- c) Consumers will simplify the importance of attributes and tend to weight quantifiable attributes heavier than non quantifiable ones. (i.e., price vs. style)
- d) Products will be viewed as standardized. Differentiation and brand loyalty may be sacrificed at the expense of product information being standardized.

There is a debate, Benbasat and Todd (1996), on whether the consumers use electronic decision aids to make better and more accurate decisions or to simply conserve time and effort – the effort versus quality. Yet, the evidence on this issue is mixed. Some researchers have found that electronic decision aids are mainly used to conserve user effort instead of supplement it. In other words, users simply ‘shift’ effort from themselves on to the electronic decision aid. Haubl and Trifts (2000) in their research have shown

that electronic decision aids may have favorable effects on the both the quality and efficiency of purchase decisions while expending considerably less effort.

Decision effort and quality must be viewed jointly when considering specific decision strategies. Decision makers may actually expend more effort when using an electronic decision aid. The use of an aid may increase cognitive capacity helping remove cognitive limitations. Consistent with the theory of bounded rationality, as limitations are removed, increased effort will lead to better decisions. Also, according to Chu (2000) an aid may cause a user to switch strategies in turn helping them to arrive at a higher quality decision.

According to Maes (1999) one of the greatest limitations of comparison shopping is the issue of trust. Credibility and competence issues too are attached to this. The online consumers have little or no information about the reputations of the e-tailers. The policies such as returns/refunds, shipping/handling, additional support and many other elements or aspects related to online shopping, are not clear sometimes. A user also has no way of knowing if a product is in stock and when it will arrive. This leaves price comparison shopping as a primary avenue to select goods. Another way to circumvent this issue is that many consumers will rely on the retailer's brand name as a proxy for credibility in non-contractual aspects of the purchase such as shipping reliability. Brynjolfsson and Smith (2001) identify that heavily branded retailers have been found to hold price advantages over generic retailers in direct price comparisons.

Along with trust, competence issues may constitute a problem for the user, Maes (1994) concludes. Many aids require vast amounts of data and information to be entered by the user. Much of this information that needs to be entered is very user and product specific. This leads to separate issues.

1. The user may not gain an understanding of how the aid works based on simply entering information and may feel that they are losing control in the decision process.
2. Once the information is entered, the search is often times set or fixed. Future searches will require additional or different information to be entered.

Research conducted by Widing and Talarzyk (1993) indicate that electronic decision aids suitable for a particular environment may be ineffective in other environments. Electronic decision aids that can filter/sort through a large number of alternatives while using minimum cut-off levels on an attribute are best suited for use in a web-based environment. Further they explain that improper or incomplete calibration could also lead to the elimination of preferred alternatives. But as a counter-measure, consumers may adopt 'safe' calibration strategies by setting wider or lower attribute cut-off levels, thereby diminishing the effectiveness of the electronic decision aid. Also, the electronic decision aid might perform poorly if there were few alternatives, potentially requiring frequent re-calibration to avoid recommending a 'null' consideration set.

Search attributes is another important aspect in electronic decision making. In general, search costs are lower in an online market versus an offline market. Degeratu et al (2000) has divided the search attributes into four primary categories.

- ❖ Brand Name
- ❖ Price
- ❖ Non-Sensory
- ❖ Sensory

Search costs should be lower for the first three categories, in that they can be acquired through an electronic decision aid and then sorted with minimal effort. However, Degeratu et al (2000) found that it is expected that sensory attributes will have a higher cost associated with them in an online market. In offline markets a consumer can actually touch or smell a product with much greater ease than in an online market.

Cognitive cost is another key factor in understanding decision behavior. Electronic decision aids can influence the selection of a particular strategy through their influence on the 'cognitive cost' of using that strategy. Electronic decision aids reduce the cognitive cost of employing various strategies for the user. Hence more accurate/normative strategies can potentially be encouraged through the availability of electronic decision aids. However, research indicates that the consumer's focus on effort reduction is so paramount that a more accurate/normative strategy will not be used unless it matches a less accurate strategy in terms of the cognitive cost required to implement it. Thus, an

electronic decision aid can counter the consumer's natural tendency toward a particular strategy but to a rather limited degree.

Many software firms and entertainment companies provide product samples in the form of package demonstrations and movie-clippings. Provision of such content can greatly enhance the consumer experience. The information given in a B2C web site should be just sufficient for the consumers to make a decision, and care should be taken to avoid giving too much, as this is likely to result in information overload, K.L. Keller, R. Staelin (1987).

A consumer buying process could be viewed a sequence of several stages, of which, information search and information evaluation are two important preparatory steps, F. Brassington, S. Pettitt (1997), J.F. Engel, R.D. Blackwell, P.W. Miniard(1990). Lower costs of information search are a fundamental benefit of electronic marketplace Y. Bakos(1991). Therefore, B2C sites which offer navigational tools that would ease the search process are likely to be more effective, J. Alba, J. Lynch, B. Weitz, C. Janiszewski(1997).

The next stage in the consumer decision process involves evaluation of alternatives before making a final purchase decision. Web retailers differ in the extent to which they facilitate the comparison of alternatives. Internet shopping has the potential to provide superior decision aids for making comparisons compared to traditional retail shopping. Research studies have also shown that decision aids have a favorable effect on the quality of online purchase decisions, G Haubl, V. Trifts(2000). Many web sites like Excite and MySimon ([www.mysimon.com](http://www.mysimon.com)) offer decision aids for making product-price comparisons. Through Dell's web site ([www.dell.com](http://www.dell.com)), a consumer can custom-build a computer and make price comparisons for various computer configurations. There are also web sites like Priceline ([www.priceline.com](http://www.priceline.com)) that offer decision aids, like a calendar, that are useful in the decision making process.

One of the important characteristics of a B2C web site that makes a customer comfortable is the ease with which it could be navigated, S. Deck (1997). Difficulties in navigating a B2C web site have been cited as a barrier for online purchasing. Poorly designed navigation also has a negative impact on online sales, S. Bellman, G.H. Lohse, E.J.

Johnson (1999). Hence, consistent navigation links to each page of the web site, useful navigation buttons, and an index to the web site have been suggested as important issues when designing a B2C web site.

Referring to C Ranganathana (2002), Convenience and time savings are often observed by consumers as important reasons for shopping online. B2C sites must be designed in such a way that consumers spend less time in finding information they are looking for. Delays in searching or in loading a web page might turn the consumers away to other sites that have faster download and display times. The download time is dependent on the size of the page, the extent of multimedia content in it, presence of applets or other programs, and technical parameters like the networking infrastructure, bandwidth connection between nodes, and infrastructure, etc. It is essential to strike a balance between these parameters in order to keep the download and display times at an acceptable level. Waiting times of 30 s or more are considered unacceptable, B. Shneiderman (1998). Effective B2C web sites should serve as a major source of information; provide complete information on the products and services; allow for quick access to information through tools like search engines; and provide decision aids to help in evaluating the alternatives. Apart from product-price data, consumers also look for information on the organization that they are dealing with and some contact information. Therefore, it is essential that B2C web sites offer electronic means of interactivity to consumers. Further, B2C web sites should incorporate appropriate security measures and adopt privacy practices in order to develop consumer trust. In addition, B2C web sites should be easy to navigate, consume less time in searching, and have an aesthetic appeal.

Marketers use numerous tools to elicit the desired responses from their target markets. These tools constitute a marketing mix. Marketing mix is the set of marketing tools that the firm uses to pursue its marketing objectives in the target market. McCarthy classified these tools into four broad groups that he called the four Ps of marketing: product, price, place, and promotion. Marketing-mix decisions must be made to influence the trade channels as well as the final consumers. Typically, the firm can change its price, sales-force size, and advertising expenditures in the short run. However, it can develop new products and modify its distribution channels only in the long run. Thus, the firm typically makes fewer period to period marketing mix changes in the short run than the

number of marketing mix decision variables might suggest. Robert Lauterborn suggested that the sellers' four Ps correspond to the customers' four Cs.

<b><u>Four Ps</u></b>	<b><u>Four Cs</u></b>
Product	Customer solution
Price	Customer cost
Place	Convenience
Promotion	Communication

Winning companies are those that meet customer needs economically and conveniently and with effective communication and consumer decision

### **2.6.1 The Stages of the Buying Decision Process**

In addition to examining buying roles and behavior, smart companies research the buying decision process involved in their product category. They ask consumers when they first became acquainted with the product category and brands, what their brand beliefs are, how involved they are with the product, how they make their brand choices, and how satisfied they are after purchase.

#### **Stage 1: Problem Recognition**

The buying process starts when the buyer recognizes a problem or need. This need can be triggered by internal stimuli (such as feeling hunger or thirst) or external stimuli (such as seeing an ad) that then becomes a drive. By gathering information from a number of consumers, marketers can identify the most frequent stimuli that spark interest in a product category. They can then develop marketing strategies that trigger consumer interest and lead to the second stage in the buying process.

#### **Stage 2: Information Search**

An aroused consumer who recognizes a problem will be inclined to search for more information. We can distinguish between two levels of arousal. At the milder search state of heightened attention, a person simply becomes more receptive to information about a product. At the active information search level, a person surfs the Internet, talks with friends, and visits stores to learn more about the product. Consumer information sources include personal sources (family, friends, neighbors, acquaintances), commercial sources (advertising, Web sites, salespersons, dealers, packaging, displays), public sources (mass

media, consumer-rating organizations), and experiential sources (handling, examining, using the product). The consumer usually receives the most information from commercial (marketer-dominated) sources, although the most influential information comes from personal sources.

#### Stage 3: Evaluation of Alternatives

Once the consumer has conducted an information search, how does he or she process competitive brand information and make a final judgment? There are several evaluation processes; the most current models view the process as being cognitively oriented meaning that consumers form judgments largely on a conscious and rational basis.

#### Stage 4: Purchase Decision

In the evaluation stage, the consumer forms preferences among the brands in the choice set and may also form an intention to buy the most preferred brand. However, two factors can intervene between the purchase intention and the purchase decision. The first factor is the attitudes of others. The extent to which another person's attitude reduces one's preferred alternative depends on two things:

1. The intensity of the other person's negative attitude toward the consumer's preferred alternative, and
2. The consumer's motivation to comply with the other person's wishes.

Consumers often use electronic decision aids to customize their shopping environments, thus making online shopping more convenient. However, Degeratu (2000) points out that these customized searches may reduce the availability of price information relative to non-price information. An important consequence of this is that a consumer may shift from a price search strategy to an attribute-based search strategy. Even with this price information and the conscience switch to an electronic decision aid that will compare price information, recent research by Degeratu (2000) has shown that online consumers may not be as price sensitive as the general population. This may be due to the fact that consumers are willing to pay a higher price online for a branded e-tailer product rather than buy a product at a lower price from a generic e-tailer.

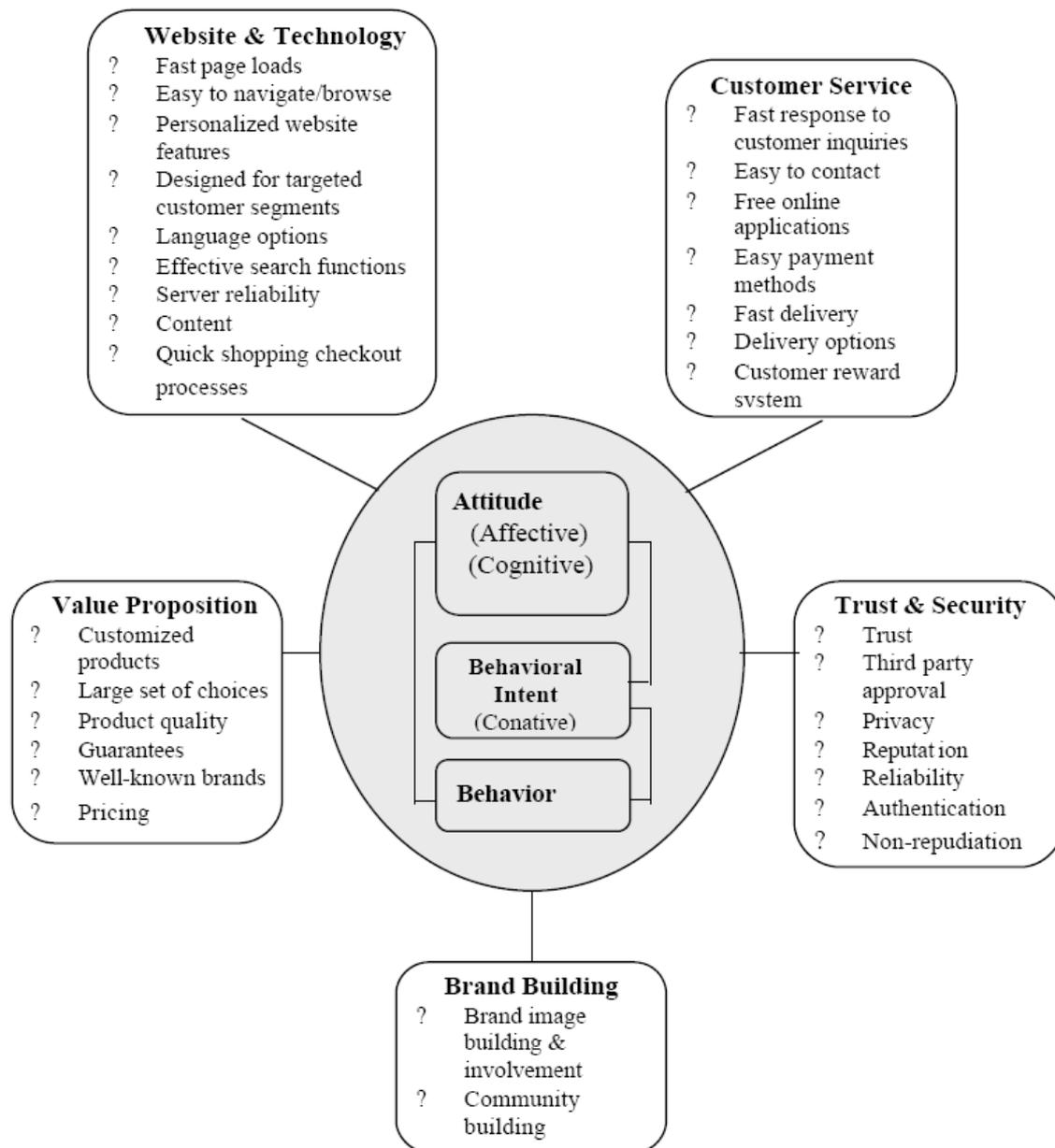


Figure 2.17 – A Conceptual framework of decision making in a web environment  
 Source: Journal of Economic and Social Research 3(1) 2001

The electronic decision aids are expected to help the consumers to improve their performance in decision-making situations. They can either help the individual work harder, thereby achieving a better execution of a chosen strategy or they can work smarter towards a decision strategy. Past research by Benbasat (1999) has shown that these consumers will typically adapt their strategy selection to the capabilities of the electronic decision aid in a way that maintains a low level of effort expenditure.

A social network is a graph of relationships and interactions within a group of individuals, which often plays a fundamental role as a medium for the spread of information, ideas, and influence among its members (Kempe, D., Kleinberg, J. and Tardos, 2003). A Web-based social network provides various methods such as a chat room and a discussion forum for participants who can interact, exchange opinions, and compare experiences with others. In the context of e-commerce, social networks emerge since many websites help a consumer's final purchase decision by sharing reviews written by previous consumers and evaluated by potential consumers. Many online shoppers tend to wait for early adopters' opinions before making a purchase decision to reduce the risk of buying a new product (Lee, M. K. O., Cheung, C. M. K. Cheung, Sia, C. L. and Lim, K. H., 2006).

Bearden, W.O., Calcich, S.E., Netemeyer, R., and Teel, J.E, (1986) observed the existence of two kinds of social influence in the adoption of a new product: normative social influence (or subjective norms) and informational social influence.

Normative social influence creates social pressure for people to adopt a product or a service because people not adopting a product may be treated as "old fashioned" regardless of the individual's preference toward the product. Informational social influence is a learning process through which people observe the experience of early adopters in their social network and decide whether to buy the new product. Thus, informational social influence can have a moderating role between customers' attitudes toward a product and their intention to buy it, by enhancing consumers' confidence in their preferences and beliefs toward the product (Lee, M. K. O., Cheung, C. M. K. Cheung, Sia, C. L. and Lim, K. H., 2006).

An approach to measuring the social influence between consumers of an E-commerce website provides multiple benefits.

- ✓ First, online shoppers are provided a number of high quality and personalized reviews of a product from trusted sources to convince them to buy.
- ✓ Second, a company producing a product may get customers' direct and detailed responses and be in a better position to predict market trends.

- ✓ Third, an E-commerce website can identify opinion leaders with high influence and maximize the effectiveness of marketing based on a social network surrounding opinion leaders.

Rashid, A. M., Karypis, G, and Riedl, J.( 2005) Network based marketing and viral marketing has proven to be more cost-effective than traditional direct marketing, which treats the customer as an independent decision maker and ignores the effect of the surrounding network. The premise of viral marketing is that targeting a few influential consumers initially can trigger a cascade of influence through a social network in which friends will voluntarily share their experiences or recommend the product to other friends. Thus, a company can avoid marketing directly to a consumer who is largely influenced by friends, and is not very likely to buy a product unless recommended by friends. Therefore, constructing a social network using interactions between consumers and finding the important nodes, i.e., influential customers in the constructed social network has been a key issue for marketers as well as sociologists for some time. Some online communities such as Epinions.com encourage users to provide trust data, where users explicitly express their trust of other participants, leading to the construction of personalized webs of trust. Many E-commerce websites such as Amazon.com allow a consumer to buy a product as a gift for friends and to recommend it to friends. Consumers write product reviews and also express how useful the reviews written by other consumers are. However, in general, most social networks are formed and maintained through informal, qualitative and unobserved interaction and thus it is difficult to find a social network in E-commerce websites.

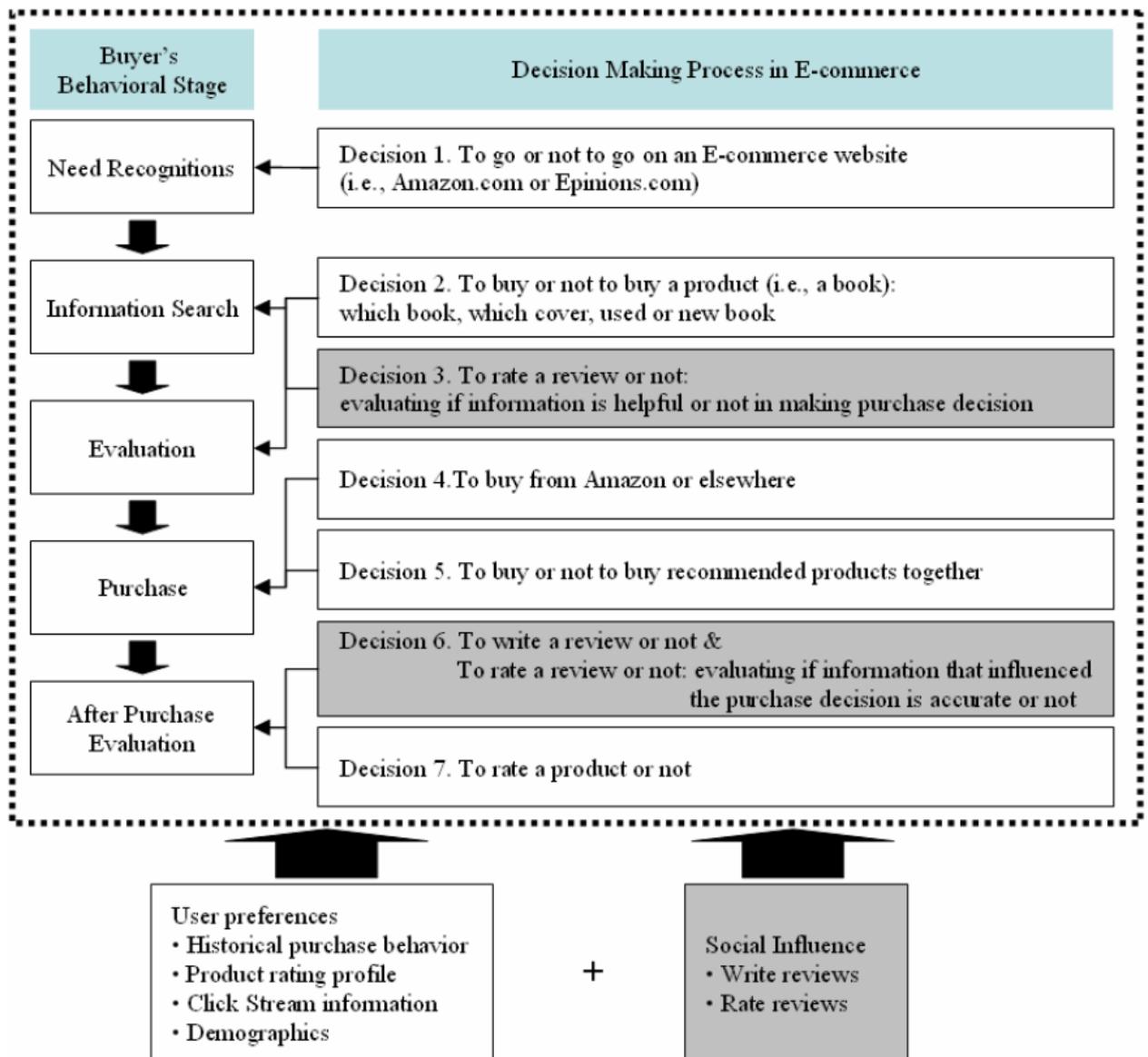


Figure 2.18 – A Decision making process in e-commerce  
 Source: Impact of Social Influence in E-Commerce Decision Making 2007

According to them a customer's decision making process in e-commerce has been examined in a way as to how the social influence affects each decision making step. They also have examined how data about the social influence can be captured by e-commerce platforms and how the data can be used to exercise influence on the customer's decision. Based on the ideas of them an e-commerce decision making process consists of the following behavioral stages of the consumer.

- ❖ Need recognition,
- ❖ Information search,
- ❖ Evaluation,
- ❖ Purchase
- and
- ❖ After purchase evaluation

During this process the consumer has to make one or more decisions, as shown in Figure 2.18. For instance, consider a Consumer, who wants to buy a book about ‘Social Networks’ in an online shopping site.

**Decision 1:** Consumer recognizes a need to buy a book about ‘Social Networks’. Consumer has to decide if she will go to Amazon.com where she shops often, or try another online store such as Barnes and Nobles. Sometimes, she also decides if it is worthwhile to visit a web-based community site such as Epinions.com in advance to search for information about a product.

**Decisions 2 and 3:** Upon deciding to visit Amazon.com, Consumer searches for a book about ‘Social networks’. Consumer reads editorial reviews, sample pages, customers’ reviews about a few books and compares them based on her preference (not too thick, soft cover, and for a beginner), price, Consumer reviews and reviews’ ratings, as evaluated by other Consumer. At this point, she has to determine which book to buy and decide if she would like to rate some reviews that were helpful in making a purchase decision.

**Decision 4:** After selecting the book to buy, she has to decide if she should buy the book at Amazon.com or some other store, which might potentially offer better shipping options or lower prices.

**Decision 5:** When she decides to place an order at Amazon.com, she is recommended a set of books, which were frequently purchased together. She decides whether to buy the recommended books or not.

**Decision 6:** After reading the book which she bought, the consumer considers writing a review to share her opinion and to help other consumer decision making. She also decides to rate some reviews that influenced her purchase decision of the product based on the reviews' accuracy or honesty.

**Decision 7:** She also decides whether or not she should rate the book. She knows that she can receive more personalized recommendations from Amazon.com when she rates products she has purchased most often.

YoungAe Kim and Jaideep Srivastava (2007), At some decision steps, current web-based decision support systems support consumer decision making based on user preference, which is calculated from historical purchase behavior, click stream information, rating of purchase products, or demographics. In addition, e-commerce companies have recently attempted to collect data about social influence by encouraging a customer to write and rate reviews (a decision step 3 and 6), because consumers are far more likely to believe information and opinions from trusted acquaintances and are convinced to buy by them.

The key to turning consumers (potential consumer) to consumer through 'social influence' in e-commerce depends on capturing accurate data about social influence from consumers who like web-based social communities (See Figure 2.15). First, e-commerce websites can ask a current consumer to recommend a product to their friends who might be interested in the product ('Tell a friend' at Amazon.com), and then capture data about connections between a consumer and friends. Second, e-commerce websites can offer a community where consumers discuss products that are available on their websites and share experiences. For example, Amazon.com provides consumers with their 'Consumer Review Discussion Board' where they post a review and comment on others' reviews and also express which reviewers they ignored (i.e., distrust) and which reviewers they have added to a friend list (i.e., trust). Amazon.com also encourages consumers to invite friends to this interesting board.

Consumers who have some common interests (i.e., preferences) and trust others' opinions could have social interaction in a community which is constructed around a product even though they do not know the others personally. Therefore, e-commerce companies like

Amazon.com could capture data about connections between a consumer and trusted members in a product community. E-commerce companies also could achieve the data about trust from a web-based social network like Epinions.com if users in Epinions.com allow them to use the information, because web based social networks have a 'web of trust' which is constructed by users' expressed trust data and is less sparse than that of e-commerce.

Thirdly, most e-commerce websites encourage consumer to write reviews and to rate reviews written by other consumers. The company can then gather data about the connection between a review writer and a review rater. In order to capture these data about connections and the relationship in a community, e-commerce companies have to change their websites from a place which just sells a product to a place which offers a community as well as a product. The communities are formed by consumers who purchase the same product and share experiences or opinions around the product. E-commerce websites just offer a space for communities and functions to facilitate interactions among consumers.

Based on the data about social interaction in e-commerce and then can discuss which decision steps are influenced by social network factors and how to use this information to exercise influence on the decision made by the consumers.

'Need recognition', means to go or not to go for an e-commerce website is almost important like social preferences. A company could anticipate a customer's latent purchase needs based on a social community or group to which a customer belongs (e.g., virtual community, companies, education) and the relationship with which a customer associates. Then, a company stimulates latent purchase needs by sending a recommendation email which encourages a consumer to visit its website. For example, e-commerce websites could send Jane a direct e-mail to recommend the book, 'Small World' with Kate's review, because Kate, who is trusted by Jane, bought the book, rates it highly and also wrote a good review. Jane read Kate's review about the book 'Social Network' and will tend to buy due to the trust established.

In 'information search and evaluation' there are two important aspects. The first being to buy or not to buy a product and the second is being to rate a review or not. In this

decision step, the consumer needs more help than at any other decision step, because the customer wants to reduce the list of products to compare. The customer also wants to reduce the risk of buying a new product and effectively make a satisfactory decision. A company could reduce the search space which has a small set of products to be compared in detail by recommending a few products based on opinion leaders' ratings in a product category (i.e., the best rated) or friends or trusted members' ratings.

E-commerce websites can also assist in the consumer's final decision of selecting one product by offering previous customers' opinions (i.e., reviews) which are rated as 'high quality'. Most e-commerce websites encourage customers to write a review and rate reviews written by others; therefore, they can identify influential customers called 'opinion leaders' based on how many reviews the customers wrote and how much credit the customers receive. For example, when a consumer tries to search for a book about 'Social Network' using a keyword 'social network', e-commerce websites could sort relevant books according to the average rating calculated by high quality reviews (e.g. 50% of the people found the review helpful).

Among the sorted products, e-commerce could recommend opinion leaders' choices with their reviews and their ratings. If e-commerce websites could provide the ratings of reviews which are rated after customers buy the product (i.e., Decision step 6), the ratings will be more helpful in deciding to buy the product or not because they can show how accurate and honest the reviews are. Showing previous customers' ratings and comments about reviews will also motivate a consumer to participate in rating reviews and writing a comment as an evaluator of reviews.

The fourth stage of the decision is the 'purchase' thinking whether to buy at Amazon.com or elsewhere. A company has to convince a consumer to buy the selected product on its website by letting the customer know that the company offers a better price, shipping conditions or after services than other online shopping malls. In order to do this, the company allows a previous consumer to rate a product supplier such as Amazon.com or a third-party provider located in Amazon.com about price, shipping date, service quality, rewards (e.g., to get credit), recommend or not recommend, and so on. Some social network websites such as Epinions.com also allow a customer to evaluate e-commerce websites. E-commerce websites can offer a consumer the reviews of its website which

previous customers wrote to build trust in the e-commerce website or the product provider. For example, e-commerce websites show how many previous customers recommend buying a selected product at Amazon.com with reasons such as free shipping.

The fifth stage is to decide whether to buy or not to buy the recommended products together. E-commerce websites can offer additional recommendation features based on data about general customer behavior. For instance, they offer a recommendation product purchased by the customers who bought the same items or offer similar products or correlated products based on the product that was already purchased by the customer. In order to encourage social influence, e-commerce websites can make an additional recommendation based on data about a customer's social community members' behavior, instead of about general customers. E-commerce websites can also recommend products which were purchased together by a customer's trusted members with their reviews and average ratings.

The stage 'after purchase evaluation' has two stages the sixth stage, that means to write a review or not and the seventh stage, that is to rate a product or not. An e-commerce company could encourage a customer to write a review or rate a product by recommending a relevant community about the product and informing them about what has happened in the community. People tend to participate in discussions when they experience opposite opinions (even wrong or different opinions) and get feedback on their opinions from others. Thus, E-commerce websites inform a customer through e-mail about feedback on his or her review or friends' opinions.

So in summary the e-commerce websites have much more potential to increase sales by supporting consumers' whole decision making based on social influence data captured from e-commerce interaction as well as consumers' transaction information.

### **3. Research Methodology**

#### **3.1 Introduction**

After the literature survey was completed the researcher began the most important aspect of the research, the research methodology. The first was to decide the research strategy, the research design, deciding the sample of population, the selection of research methods- data collection techniques and finally the preparation of those data collection tools.

#### **3.2 Research strategy**

The research strategies selected were both qualitative and quantitative research strategies. Even though a questionnaire is used a quantitative data collection tool, it was too aiming at getting the ideas, opinions and the explanations of the online consumers. The interviews were mainly qualitative in nature.

#### **3.3 Research design**

This particular research is a combination of both qualitative and quantitative data, but the researcher wishes to rely more on qualitative data. For practical reasons such as time constraints, the study is limited to five leading websites hosted by five different companies in Colombo. It can be considered 'five [05] comparative case studies'. So as a research design it has qualities of a survey and an ethnographic study.

#### **3.4 Population and sample**

The population for the questionnaire is all Sri Lankan individuals who engage in online shopping, but the sample is only a mere 200 due to time constraints and were selected from top 10 companies according LMD August 2009. The population for interviews is the Managers who are in charge of sales in those Sri Lankan companies that offer online Shopping and those web designers who have designed Sri Lankan online shopping sites, but the sample was limited to eight [08] Sales Managers and two [02] Web designers.

### **3.5 Research methods**

The data were collected in relation to the research questions and the objectives of the research. The data collection techniques would be the collection of official documents/statistics, articles and reviews retrieved through online, interviews and questionnaires. First, the details were collected from the companies who provide online purchasing facilities / online shopping in Sri Lanka. Then the official websites of those private firms were analyzed to find out the type of products they advertise, and the product information they have included to get a preliminary idea.

The Sales Managers of six [06] leading firms were interviewed according to the interview schedule prepared by the researcher on the principal guidelines given by the supervisor. To know how the websites are designed the researcher wishes to interview the web designers of the websites being studied. This is done to find out the significance or priority given to the product information by the particular company.

The official statistics were collected through the official documents of the concerned companies to understand the number of consumers, the number of online consumers, the frequently asked questions in decision making process, and the type of product information that the customers seek. Two hundred [200] questionnaires were distributed to the Internet and E-mail users who engage in online shopping to investigate the process. For this a semi-structured questionnaire will be prepared under the guidance of the supervisor. In this questionnaire the questions will be mainly based to identify the priority the online consumers give to product information in their decision making process.

### **3.6 Preparation of data collection tools**

#### **3.6.1 Questionnaire**

The main data collection technique is to use semi-structured questionnaire to distribute among the Internet and E-mail users. From the structured questioner the researcher able to collect data and analyze how many the consumers depend on the available product information before making a decision on buying it.

From the first and second question the researcher can analyze the age group and the salary range of the consumers who engage in online shopping. The third question will provide the researcher the educational level of the consumers. The fourth question will give the result of whether consumers have done online shopping or not, and if they have done online shopping whether it is through the Sri Lankan web sites or foreign web sites. Therefore, this will provide the answer whether they have involved in online shopping. The fifth question will give the information on what the Sri Lankan web sites are that consumers may use.

The question six provides what kind of products consumers look for and the question seven will provide what kind of features, services and advantages consumers look for and why they engage in online shopping rather than visiting the stores physically.

The question eight will address the finding on what kind of information the consumers may look into. The ninth question will give whether the consumers really use the available product information, and the tenth question will provide up to what extent they use product information. The Eleventh question will provide how important the product information to consumers before they purchase the product. The Twelfth question will provide how sufficient or insufficient the available product information is on Sri Lankan online shopping sites and whether the consumers have stopped shopping online through Sri Lankan websites due to the unavailability of the product information. The final question will address their idea to use online shopping through Sri Lankan sites or if not what the reason are.

### **3.6.2 Interview Schedule**

The interviews will address the research questions three and four and objective two. The questionnaire will address the fifth research question and the data will provide results to the objective three. Structured questions were designed to collect data in interviews. The structured questions increase reliability and genuinity of the data collected. These questions will be presented during the interviews for the managers who are responsible for their online sites that promote online shopping.

The first question aims at finding out the sales percentage of each online site being studied. The second question deals with what kind of information provided by those websites at the moment. The third question addresses what kind of products are available on these sites that promote online shopping. The fifth question is the most important question that the researcher is looking answers for. Because if consumers do any shopping through these sites and if they are not satisfied with the existing product information or sites, etc. this question will provide answers for it. The seventh question proves whether there is any growth in online shopping on those sites.

### **3.7 Objectives**

In collecting data the researcher was interested in accumulating data according to the research questions, research objectives and the hypothesis developed. How the data was collected in relation to the objectives is described below.

#### **Objective 1**

To identify the prevalence of online shopping among Sri Lankan businesses in 2010.

#### **Justification**

Identifying the prevalence of online shopping in Sri Lankan business industry and e-commerce growth in Sri Lanka would give the researcher an idea to carry out this project. In this research it aims to find out the top Sri Lankan web sites the consumers use, what kind of product information they provide to the consumers and how they have designed their web sites to get maximum consumer attraction.

This will provide the researcher background details about the online shopping in Sri Lanka such as which companies, which products, who the consumers are, the structure of the sites, and the strengths and weaknesses of those sites.

## Methods used

For this study the researcher visited and involving in the purchasing process on web sites that are hosted by the Sri Lankan companies. How they have designed their web sites, the range of user friendliness, the information those provide, the accuracy of the site, how much updated information is conveyed, the response rate, and the growth of sales due to their sites will be looked into.

In this method the researcher learned about the e-commerce and online shopping system in Sri Lanka. In reviewing literature books, magazines, web article, and online blogs were used. The foreign online shopping sites that are popular around the world and Sri Lanka were also visited. Therefore, after going through foreign web sites, an idea was received on how current the product information is, what type product information is provided and whether they provide information regarding the product to their online consumers.

From this research it was intended to find out the status of e-commerce in Sri Lanka, and how they use e-commerce in their business, what the organizations that provide online shopping are, and the growth of their sales through online sites. For this news articles, research that had been done on online shopping in Sri Lanka were read.

The researcher decided to restrict the search to the web sites mentioned below due the time and the accessibility.

**Note:** The companies that host online shopping websites that provided information for this research have been coded as AA, AB etc. for purposes of anonymity.

### Foreign online sites compared to Sri Lanka sites.

Sri Lankan Web sites	Foreign Sits
AB (Book and Magazines)	FB (Book and Magazines)
AA (Apparels)	FM (Apparels)
AC (Computers)	FP (Computers)
AE (Electronics)	FY (Electronics)
AF (Foods)	FE (Foods)

Table 3.1 – The Compared websites; local and foreign

## **Implementation**

Questionnaires will be distributed through emails, printed document through personal contacts, enabling people who receive through emails to reply to me back by pressing the “submit by e-mail”. Others will hand over the completed questionnaires to me in person.

## **Objective 2**

To identify ‘the incidence of the availability of product information’ in the websites hosted by numerous Sri Lankan business firms in 2010.

## **Justification**

In this researcher conduct a detailed study of the availability of the product information - Product features, brand / model details, product condition, product compatibility, manufacturer / publisher, product image, return policies, delivery and shipping information, price, user reviews and ratings, similar products with competitive prices, material used, product performance.

## **Method (Interview with the Managers of the companies)**

These interviews<sup>1</sup> were conducted with five companies which engage in online shopping.

<b>Companies</b>	<b>Category</b>	<b>Number of Interviews</b>
AB	Book and Magazines	2
AA	Apparels	2
AC	Computer Items	2
AE	Electronic Items	1
AG	Gift Items	1
AF	Food Items	1

Table 3.2 - The interviews conducted on companies

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<sup>1</sup> See the questions asked during interviews and their reports, Appendix 6.1

### **Objective 3**

To find out the facts that effect on ‘decision making’ by the Sri Lankan consumers who shop online through the websites hosted by the Sri Lankan business firms.

### **Justification**

This is to identify how the decision making process takes place. – the need to buy a product, to go on online shopping, visiting related online shopping websites, looking into the product (s), referring to the available product information, comparing product features and prices, reading user reviews, and purchasing.

### **Method**

Distributed two hundred [200] structured<sup>2</sup> questionnaires to the respondents in the sample who were at college, and their friends. There were one hundred and forty [140] responses.

## **3.8 Data collection**

The collection of data began after the literature review was done. The researcher himself conducted the interviews and distributed the questionnaires. Questionnaire too used to get some preliminary feedback from those who engage in online shopping.

### **3.8.1 Interviews**

The researcher interviewed selected six [06] companies which fell in to sample of the research. The items that are under consideration in those web sites were Books and Magazines, Computers and Accessories, Electronics, Apparels and Cosmetics, Gift items, Grocery items and foods. All the interviews were conducted on appointments taken prior and using the questionnaires comprised of structured questions.

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<sup>2</sup> Structured questioners appendix 6.2

Even though there are so many web sites available for online shopping in the internet the researcher has selected only Six [06] web sites to get the feedback by sending the questionnaire to collect data about online shopping sites in Sri Lanka.

<b>Foreign Web sites examined</b>	<b>Category</b>	<b>Response</b>
FB	Book and Magazines	Yes
FM	Apparels	Yes
FP	Computers	Yes
FY	Electronics	Yes
FE	Foods	Yes

Table 3.3 – Foreign websites examined

<b>Sri Lankan Web sites examined</b>	<b>Category</b>	<b>Response</b>
AB	Book and Magazines	Yes
AA	Apparels	Yes
AC	Computer Items	Yes
AE	Electronic Items	Yes
AG	Gift Items	Yes
AF	Food items	Yes

Table 3.4 – Sri Lankan websites examined

From the selected Six [06] companies, the researcher has interviewed those who were responsible for designing and maintaining company's online shopping site (Web designer), the Managers of e-commerce and the managers who sell online.

All the interviews were conducted through appointments, and were face to face interviews. The researcher was employing structured questions, and asked questions related to availability of product information on their sites. The questions in the interview schedule aimed at getting more details on the use, and how much product information is provided to the consumer.

The researcher planned to have at least two [02] interviews with the Six [06] selected Managers of the said companies. So in implementation of the interview schedule and after gathering the data through interviews, the researcher looked into the issue of sellers not considering the data related to the availability of product information. Further the researcher looked into what kind of difficulty sellers may face in relation to consumer expectations when the necessary product information is unavailable.

The first question provides the researcher the growth of sales in the particular online site, and the figures can be compared to the retail sales. The second question will provide the current real-time information, and this facilitated the researcher to evaluate the third objective and what the consumers expect and what the seller offers. The third question provides what kind of products the site offers and is there any development in categorizing the products in relation to the features.

Forth question responded what the common/regular product that consumers have purchased and what type of information that has been provided to the consumers in relation to that product. The fifth question provides what kind of comments was made about the companies' online shopping sites in relation to the unavailability of product information. This will address the third objective and how it affects the consumer's decision making process.

Sixth question provides the comments of what the consumers have made regarding the online shopping site they have used. The attraction will encourage the consumer to do online shopping by going through the product features. Seventh and eight questions provide the growth of online shopping and how much percentage they gain compared to previous years. The ninth question provides the researcher whether the investment on the online shopping site was recovered through sales.

### **3.8.2 Questionnaires**

The questionnaire was given to the individuals selected for the sample which comprised of students, and employees of different industries.

The above sectors were selected through random selection of internet users provided by different sources because according to the researcher's hypothesis they were to be aware of online shopping. The time period which the data was collected for was three months. One hundred and eighty [180] questioners were send through emails and another twenty [20] were printed and distributed as hard copies. The respondents were informed to send the completed questionnaires through email, and printed copies were to be collected manually.

### **3.9 Data analysis**

The questionnaires were analyzed based on the answers given by the respondents. The statistical package SPSS was used to analyze data. The respective answers on research questions, objectives and the hypothesis were analyzed accordingly. The data received through the interviews were mainly qualitative in nature and each question was analyzed based on different answers received.

### **3.10 Data presentation**

The data collected in interviews and questionnaire was presented in tabular, statistical and graphical forms. According to the nature of the question and the answers received the data was presented.

## 4. Results

### 4.1 Interviews

To find out the amount which each business firm earned from their online shopping site, the researcher had e-mailed a questionnaire to foreign firms who offered online shopping, and the same questionnaire was used to conduct interviews with the e-commerce Managers, of Sri Lankan firms which engage in online shopping. The results are presented in tabular and graphical forms as follows.

1. The turnover the companies received from online shopping in 2009,

Company	Category	Amount in SL Rs. in ,000 ,000	
AB	Books and Magazines	0.65	Sri Lankan Sites
AA	Apparels	8.5	
AC	Computers Items	N/A	
AE	Electronic Items	2.5	
AF	Food Items	1.6	
AG	Gift Items	12	
AM	Gift Items	4.5	
AL	Gift Items	N/A	
FB	Book and Magazines	600	Foreign Sites
FM	Apparels	890	
FP	Computers Items	560	
FY	Electronic Items	1,100	
FE	Food Items	230	

Table 4.1 – A comparison between the turnover in the websites hosted by the Sri Lankan and foreign business Firms in 2009.

- US \$ 113.50 on the date when it calculated. Date:12/07/2010
- UK £ 183.10 on the date when it calculated. Date:12/07/2010
  
- FM £4,860,731.84 per year
- FB \$ 5,286,343.61 per year
- FP \$ 4,933,920.70 per year
- FY \$ 9,691,629.95 per year
- FE \$ 2,026,431.72 per year

In analyzing the data given in the above table, it is understood that the foreign firms have a remarkable difference in turnover. There are various reasons the researcher identified during the preliminary survey and interviews. There was comparably a low consumer base to Sri Lankan firms whereas the foreign firms enjoyed an international customer base. There were less online shoppers in Sri Lanka but the foreign firms had regular online shoppers who had faith in e-commerce. This was understood in the interview sessions during which many Sri Lankan consumers expressed their fear for the transactions done online through credit cards. But the articles related to online shopping revealed that the foreign customers had faith in the different facilities they received through online shopping. Many Sri Lankan customers still prefer traditional shopping methods. But the company goodwill of the foreign sites had given an added advantage to those foreign sites.

**Note** those results were displayed on tables using “1” and “0” to formulate the charts, while at the interview the questions had to be answered with “Yes” and “No” answers. Therefore, “1” represented “yes” and “0” represented “No.”

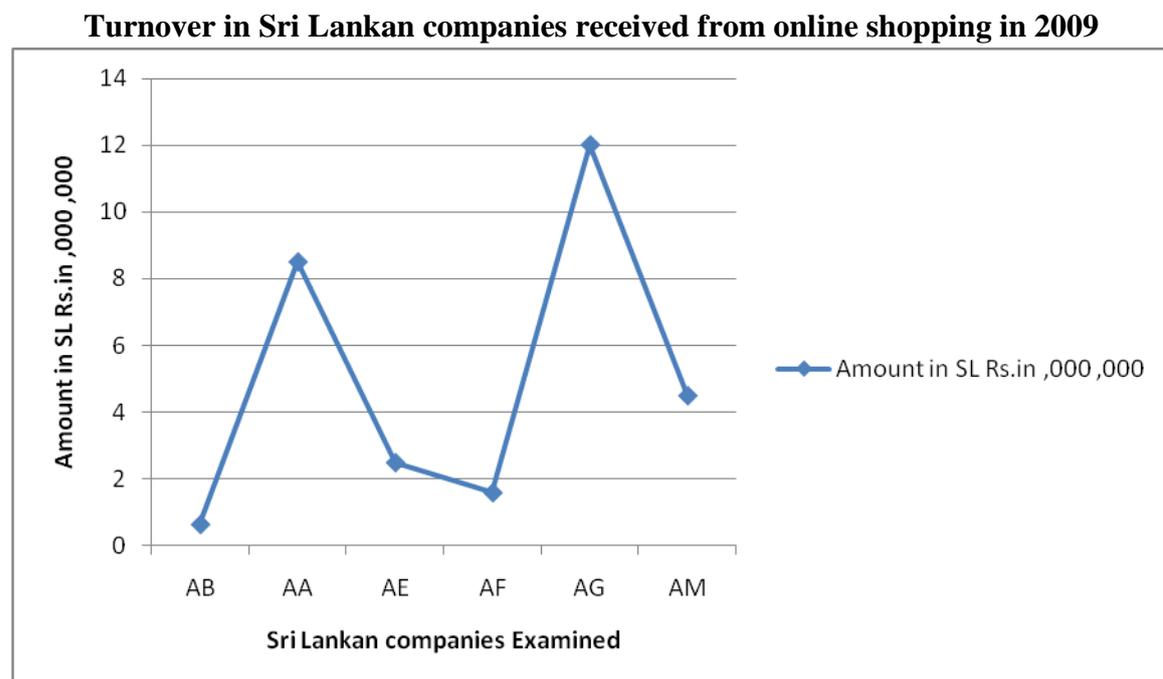


Figure 4.1 – Turnover in Sri Lankan companies received from online shopping in 2009.

## Turnover in Foreign companies received from online shopping in 2009

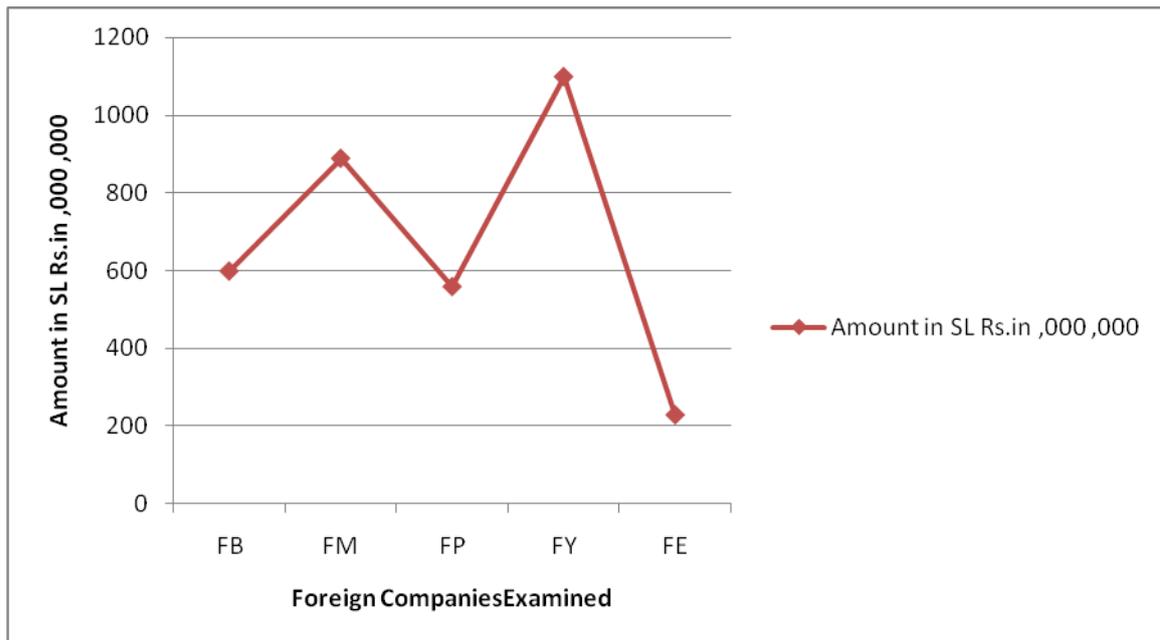


Figure 4.2 – Turnover in Foreign companies received from online shopping in 2009.

2. Services, offers and information of the products provided by online site to the consumers.

First, the researcher visited the foreign and Sri Lankan online shopping sites to get a preliminary understanding of the special offers, services provided and the information given. Based on the available data on those sites the following table was designed. The questions were asked regarding the same from the Sri Lankan e-commerce Managers of those firms and the customers who engaged in online shopping. The data from the foreign firms was obtained through e-mails.

	Sri Lankan Sites							Foreign Sites					
	AB (Book and Magazines)	AA (Apparels)	AC (Computers )	AE (Electronics)	AG (Gifts)	AF (Foods)	Total	FB (Book and Magazines)	FM (Apparels)	FP (Computers)	FY (Electronics)	FE (Foods)	Total
Special Offers	0	1	1	1	1	0	4	1	1	1	1	1	5
Promotions	0	0	0	0	0	0	0	1	1	1	1	0	4
Special discount	0	0	0	1	1	0	2	1	1	1	1	1	5
Free Delivery	0	0	0	0	0	0	0	0	1	0	1	1	3
Product Information	0	1	1	1	1	0	4	1	1	1	1	1	5
Ingredients	0	0	0	0	0	0	0	0	0	0	0	1	1
Manufacture/ Pub Date	0	0	0	0	1	0	1	1	0	1	0	1	3
Expire Date	0	0	0	0	0	0	0	0	0	0	0	1	1
Product Image	1	1	1	1	1	1	6	1	1	1	1	1	5
Features	0	0	1	0	0	0	0	1	1	1	1	0	4
Return Policy	1	1	1	1	1	1	6	1	1	1	1	1	5
Product Comparison	0	0	0	0	0	0	0	1	1	1	1	0	4
Securer Payment	1	1	0	1	1	1	5	1	1	1	1	1	5
3D view of Product	0	0	0	0	0	0	0	1	1	1	1	0	4

Table 4.2 - A comparison of information provided by the Sri Lankan and Foreign Sites in 2010

	Sri Lankan Firms	Foreign Firms
Special Offers	67%	100%
Promotions	0%	80%
Special Discount	34%	100%
Free Delivery	0%	60%
Product Information	67%	100%
Ingredients	0%	20%
Manufacture/ Publishes Date	17%	60%
Expire Date	0%	20%
Product Image	100%	100%
Features	17%	80%
Return Policy	100%	100%
Product Comparison	0%	80%
Secure Payment system	84%	100%
3D view of the Product / image	0%	80%

Table 4.3 –The information percentage provided by Sri Lankan and Foreign Site in 2010

After going through the services provided, the offers given and the information available on the websites hosted by the Sri Lankan and foreign online shopping firms, the researcher noted the following. The hundred percent [100%] of e-commerce Managers of the foreign firms acknowledged that they gave special offers, special discounts, product information, product image, a return policy and a secure payment method to the online customers. But the hundred percent [100%] of e-commerce Managers of the Sri Lankan firms accepted that they only made available the product image and the return policy to the online consumers.

In the foreign online sites the promotions, features, product comparison and the 3D view of the product were given less prominence than the above and the e-commerce managers claimed that those were only eighty percent [80%]. The Sri Lankan e-commerce Managers accepted that the opinion they provided was secure payment system in that level. According to the e-commerce Managers of the foreign sites they had agreed to provide free delivery of the goods/items and the manufacture/publication date nearly sixty percent [60%] of the time. The e-commerce Managers of the Sri Lankan firms accepted that they had provided services like special offers and product information around sixty percent [60%] of the time.

The ingredients of the food items and the expiry date were also given less prominence [20%] in foreign sites. Even in Sri Lankan sites also, the special discounts, manufacture date/publication date and the product features were provided. Another notable feature in the Sri Lankan websites was that there were many elements that were not given any prominence at all; promotions, free delivery, ingredients, expiry date, product comparison and 3D view of the product. Yet in the foreign sites, they had not ignored any element.

The foreign sites offered better information to the consumers to facilitate the decision making while the Sri Lankan firms offered barely minimum information to the prospective online consumers. Even the Sri Lankans who resided in foreign countries did online shopping, but they preferred to do it through the websites hosted by foreign companies, because those websites provided the information the consumers looked for such as special images and 3D view. Many consumers complained that the product image

was not clear, and they were unable to see the image the way they see physically. Therefore, they were not sure with product and the quality of the product. Many consumers wanted to do product comparison, but none of the shopping sites hosted by Sri Lankan business firms had offered such opportunity.

**The summary of the information provided by the e-commerce managers on their sites in 2010**

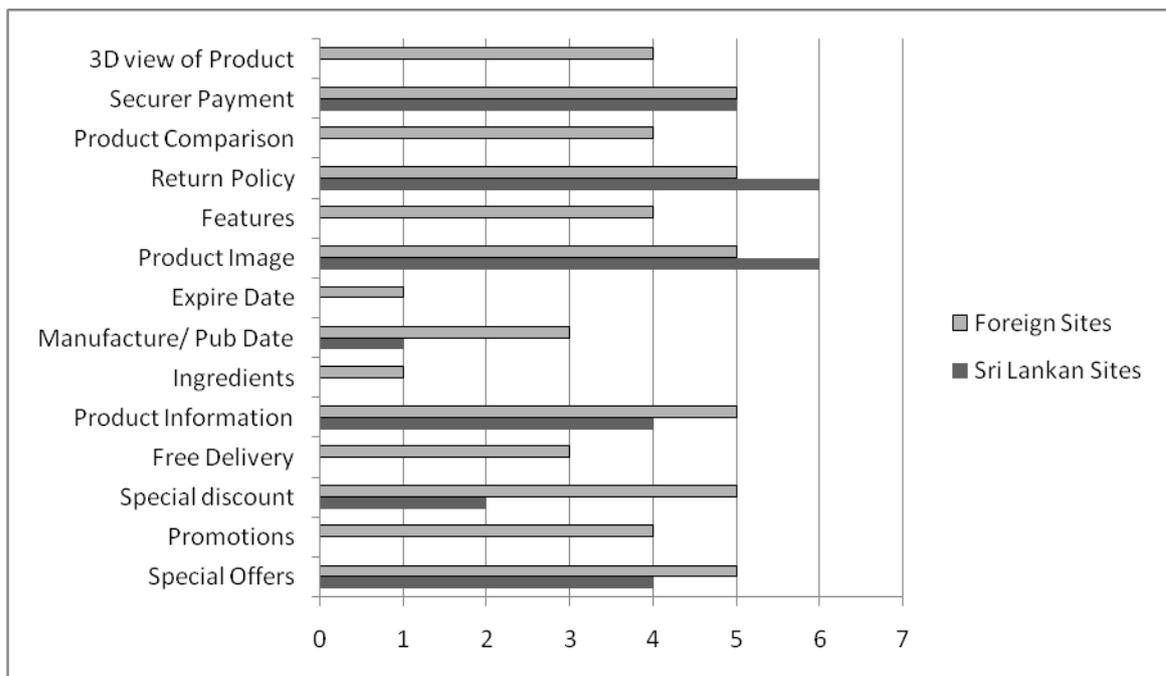


Figure 4.3- A comparison of information provided by the Sri Lankan and Foreign Sites in 2010

### 3. Product available on online websites

Product	Sri Lanka Sites						Foreign Sites				
	AB (Book and Magazines)	AA (Apparels)	AC (Computers)	AE (Electronics)	AG (Gifts)	AF (foods)	FB (Book and Magazines)	FM (Apparels)	FP (Computers)	FY (Electronics)	FE (foods)
Books	1	0	0	0	1	0	1	1	0	1	0
Magazines	1	1	0	0	1	0	1	1	1	1	0
Apparels	0	1	0	1	1	0	0	1	1	1	0
Cosmetics	0	1	0	1	1	0	0	1	0	0	0
Computers	0	0	1	1	1	0	1	0	1	1	0
Electronic Items	0	0	0	0	1	0	0	1	1	1	0
Grocery Food	0	0	0	0	1	1	0	0	0	0	1
Fast Food	0	0	0	0	1	0	0	1	0	0	1
Mobile Phones	0	1	1	1	1	0	0	1	1	1	0
House Hold Items	0	1	0	1	1	0	0	1	0	1	0
<b>Total</b>	<b>2</b>	<b>5</b>	<b>2</b>	<b>5</b>	<b>10</b>	<b>1</b>	<b>3</b>	<b>8</b>	<b>5</b>	<b>7</b>	<b>2</b>

Table 4.4- The available products in Sri Lankan and Foreign Sites in 2010

‘AG’ is the Sri Lankan online shopping site which offered many products like books, magazines, apparels, cosmetics, computers, electronic items, grocery foods, fast foods, mobile phones and house hold items. The next two shopping sites that had more products were ‘AA’ and ‘AE’. ‘AB’ and ‘AC’ were limited to their own products such as books, magazines and computers and mobile phones. ‘AF’ had only grocery foods displayed.

On the foreign sites ‘FM’ recorded the highest number of products available. They did not have computers and grocery foods. The second highest was the website ‘FY’. They did not advertise cosmetics, grocery foods and fast foods. ‘FP.com’ offered magazines, apparels, computers, electronic items, mobile phones and household items. ‘FB’ advertised books, magazines and computers and the ‘FE’ offered only grocery food and fast food.

The Sri Lankan online shopping site ‘AG’ offered numerous products in a wider range. When the two sites that deal with same product range of apparels were compared, ‘FM’ showed that it had more variety added than the ‘AA’. Rather than sticking to their own product like the Sri Lankan online shopping sites, the foreign sites offered more opportunities to the consumer through the introduction of many items and had tried to give consumers added facilities than the Sri Lankan sites. During the interviews the Sri Lankan e-commerce Managers admitted that they were not interested in retaining the consumers, though they were interested more in selling more products. But the foreign sites were more interested in retaining consumers with them by offering more options loyalty schemes and special memberships with discounts. Hence, the popularity of the website had increased with increasing visits.. Thereby, the popularity rate of the firm depended on the popularity of the website.

#### Available Products Category Sri Lankan Sites

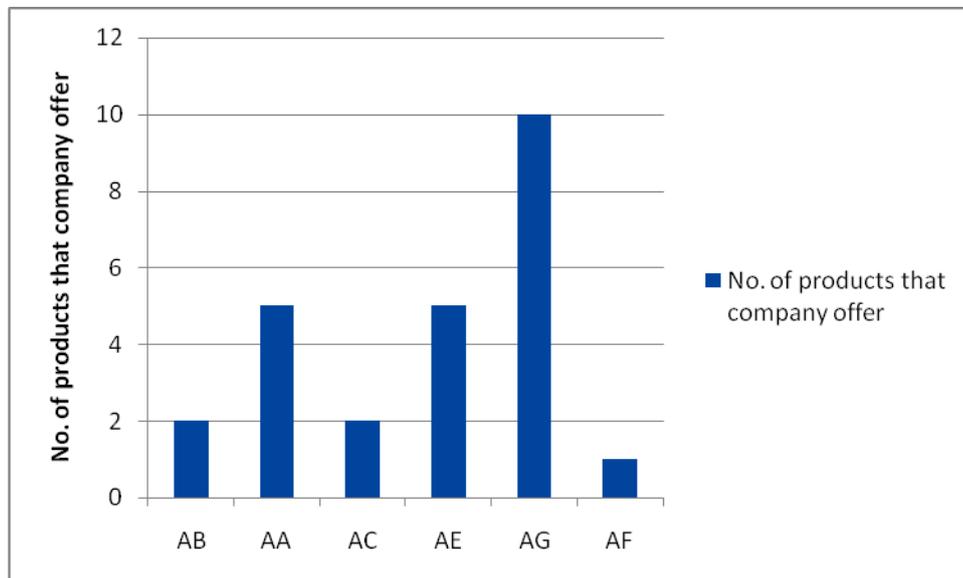


Figure 4.4- Product categories available on Sri Lankan Sites in 2010

### Available Products Category Foreign Sites

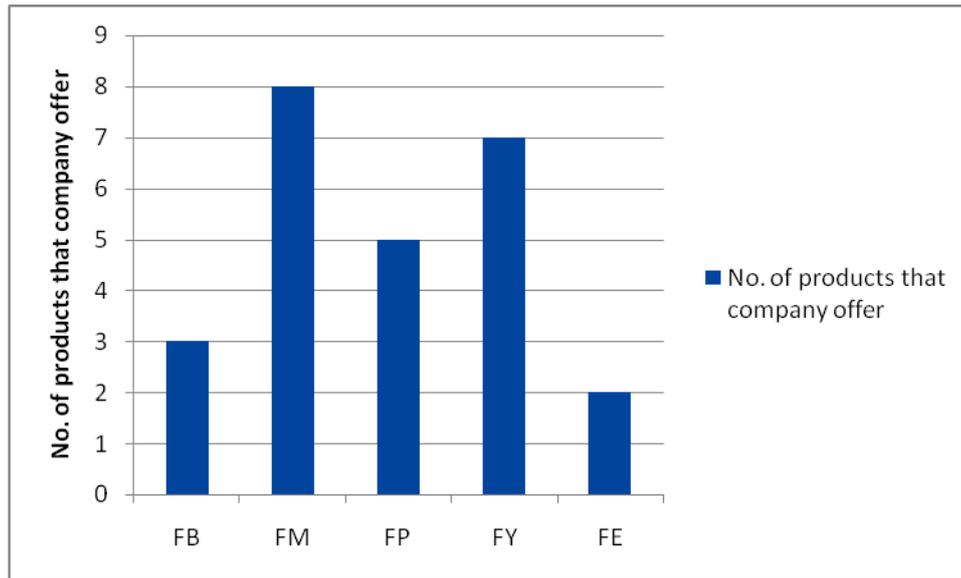


Figure 4.5- Product categories available on Foreign Sites in 2010.

#### 4. Complains regarding the unavailability of product information

The Sri Lankan and foreign e-commerce managers were interviewed and questioned regarding the complaints made against their online shopping sites. The three foreign firms; 'FB', 'FM' and 'FP' did not inform any complaint made against their sites. It was not considered accurate as they had not given an answer to the relevant questions asked. 'FY.com' and 'FE' had had one complaint each as per their e-commerce Managers. The complaints respectively were 'not enough product information' and 'product image is not clear'.

Among the Sri Lankan online shopping sites 'AA' and 'AF' had the highest number of complaints [71%]. 'AB', 'AE' and 'AG' record 57% of complaints. 'AC' was the firm that had the lowest percentage of complaints; 43%. In relation to all the Sri Lankan online shopping sites there was one common complaint; 'product image is not clear'. The next two notable complaints were 'not enough product information' and the 'insufficiency of the customer care information'. Sixty seven [67] percent had complained that the site was

slow. Another thirty four [34] percent had complained that the deliver method was not specified and ‘delivered item was different to the given information on site. The least percentage of complain was on the payment information [17%].

	Sri Lanka Sites						Foreign Sites				
	AB (Book and Magazines)	AA (Apparels)	AC (Computers)	AE (Electronics)	AG (Gifts)	AF (Foods)	FB (Book and Magazines)	FM (Apparels)	FP (Computers)	FY (Electronics)	FE (Foods)
Not Enough product information	1	1	0	1	1	1	0	0	0	1	0
Product Image is Not Clear	1	1	1	1	1	1	0	0	0	0	1
Delivery information not Specify	1	1	0	0	0	0	0	0	0	0	0
Site is slow	0	0	1	1	1	1	0	0	0	0	0
Payment Information	1	0	0	0	0	0	0	0	0	0	0
Customer care information is insufficient	0	1	1	1	1	1	0	0	0	0	0
Delivered item is not specific to the give information on site	0	1	0	0	0	1	0	0	0	0	0
<b>Total</b>	<b>4</b>	<b>5</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>

Table 4.5 – Comparing the complains on the unavailability of product information in Sri Lankan and Foreign Sites in 2010

Complain regarding site	Sri Lankan Sites	Foreign Sites
Not Enough Product Information	84%	20%
Image of the Product Not Clear	100%	20%
Delivery Information Not specify	34%	0%
Site is Slow	67%	0%
Issues with Payment	17%	0%
Customer care info is insufficient	84%	0%
Delivered item is not specific to the given info on site	34%	0%

Table 4.6- Overall comparison between the percentages the complains on the unavailability of product information in Sri Lankan and Foreign Sites in 2010

**A comparison between the percentages the complains on the unavailability of product information in Sri Lankan and Foreign Sites**

<b>Shopping Site</b>	<b>Percentage on complain</b>
AB.com	57%
AA.lk	71%
AC.lk	43%
AE.com	57%
AG.info	57%
AF.com	71%
FB.com	0%
FM.com	0%
FP.com	0%
FY.com	14%
FE.com	14%

Table 4.7- A comparison between the percentages the complains on the unavailability of product information in Sri Lankan and Foreign Sites in 2010

**Comparison, Complain on Unavailability on product information Sri Lankan and Foreign Sites**

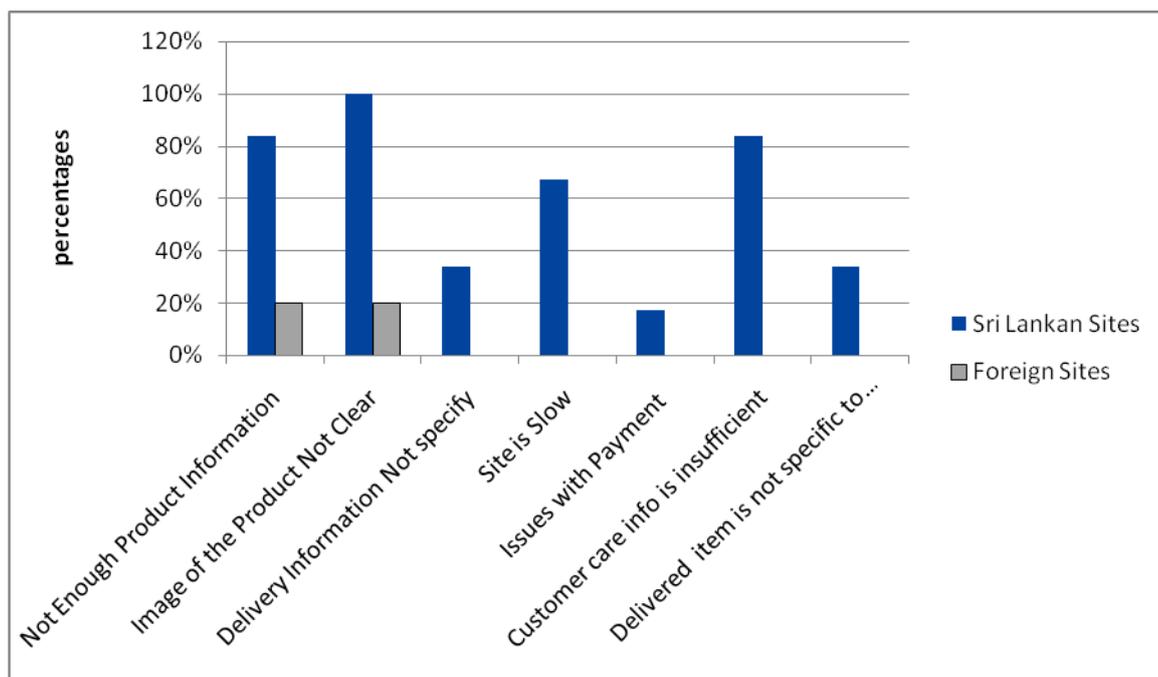


Figure 4.6 - Complain against the Sri Lankan and Foreign online shopping Sites in 2010

5. Suggestions that the consumers made to improve the site

	Sri Lanka Sites						Foreign Sites				
	AB (Book and Magazines)	AA (Apparels)	AC (Computers)	AE (Electronics)	AG (Gifts)	AF (Foods)	FB (Books and Magazines)	FM (Apparels)	FP (Computers)	FY (Electronics)	FE (Foods)
Need Detailed product information	1	1	0	1	1	1	0	0	0	0	0
Need Clear Image	1	1	1	1	1	1	0	0	0	0	0
Delivery information	1	1	0	0	0	0	0	0	0	0	0
Make the Site Fast	0	1	1	1	1	1	0	1	0	0	0
Payment Information	0	0	1	0	0	0	0	0	0	0	0
Provide online Chat	0	1	0	0	1	0	0	0	0	0	0
3D Images	0	1	0	1	1	0	0	0	0	0	0
Product Customization	0	0	0	0	1	0	0	1	1	1	0
<b>Total</b>	<b>3</b>	<b>6</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>

Table 4.8 – Suggestions the consumers made to improve Sri Lankan and Foreign sites

Suggestions regarding site	Sri Lankan Sites	Foreign Sites
Need Detailed Product information	84%	0%
Need Clear image	100%	0%
Delivery Information	34%	0%
Make Site fast	84%	20%
Payment information	17%	0%
Provide online Chat	34%	0%
3D Image on Product	50%	0%
Product Customization feature	17%	60%

Table 4.9- Overall comparison between the percentages the suggestions the consumers made to improve in Sri Lankan and Foreign Sites.

**Comparison between the percentages the suggestions the consumers made to improve in Sri Lankan and Foreign Sites.**

Shopping Site	Category	Percentage on complain
AB	Book and Magazines	37.5%
AA	Apparels	75%
AC	Computers	37.5%
AE	Electronics	50%
AG	Gifts	75%
AF	Foods	37.5%
FB	Book and Magazines	0%
FM	Apparels	25%
FP	Computers	12.5%
FY	Electronics	12.5%
FE	Foods	0%

Table 4.10- Comparison between the percentages the suggestions the consumers made to improve in Sri Lankan and Foreign Sites in 2010.

**Comparison between the percentages the suggestions the consumers made to improve in Sri Lankan and Foreign Sites.**

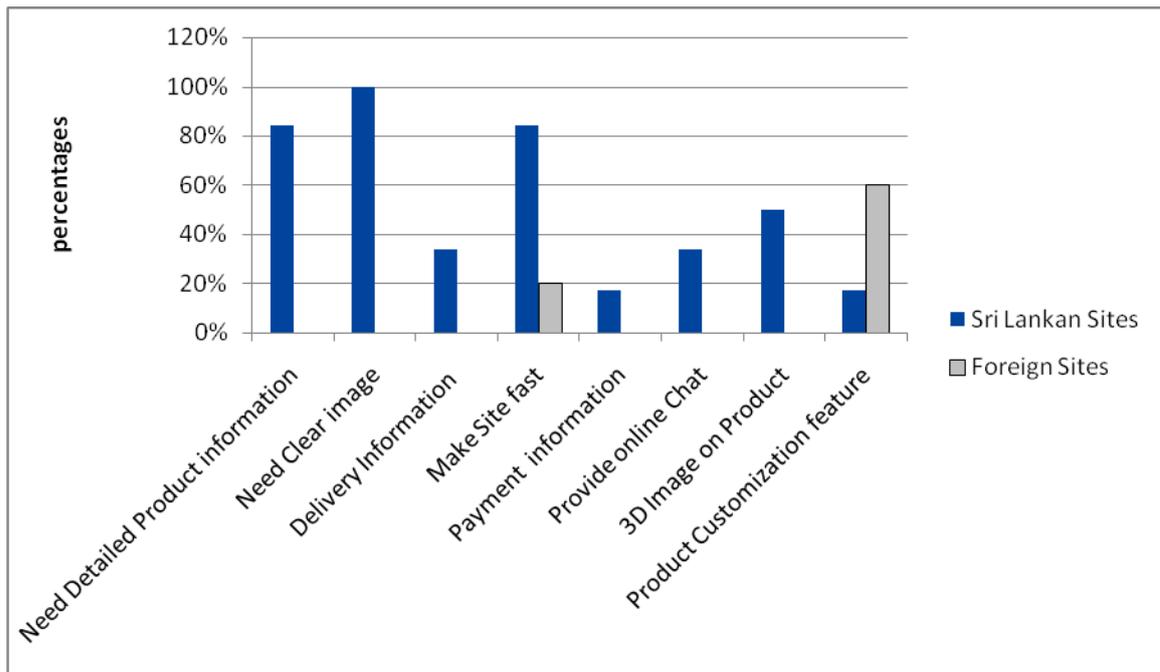


Figure 4.7- Comparison between the percentages the suggestions the consumers made to improve in Sri Lankan and Foreign Sites in 2010.

When analyzing the suggestions made by the consumers for the Sri Lankan online shopping sites the most recurrent one was the need for a 'clear image'. In decision making, clarity is the important element. The researcher has noted that the Sri Lankan sites had displayed their product items in small sizes with low resolution and there was no facility to enlarge and view the product. The next two most prominent suggestions were the 'need of detailed product information' and to 'make the site faster' [84%]. The 'need for detailed product information' means that the customer should have more product information. For example, if it's a book, the summary and a detailed or brief abstract of the book, and if it's an electronic item, product description, compatibility, features and advantages should be included. 'Make the site faster' means the time taken to download the images. If the access time is too long then it does not convince the consumer in a competitive business world.

The need for the '3D image' was another complaint [50%]. The consumer could rotate the product image and view from different angles and it had provided more consumer satisfaction. Further it helped the decision making to a great extent. The next important complains were the lack of 'delivery information' and the need to 'provide online chat' [34%]. Delivery information is important because the consumer has to know how the item is delivered to the consumer and whether the consumer has to pay extra delivery charges and taxes. The least prominent suggestions were 'payment information' and the need to provide 'product customization' [17%]. By the need for payment information the consumers suggested that how secure is the site to have a secure site and it should accept credit card transactions online using an approved verification system, for an example PayPal. By the need for product customization the consumers have suggested that there should be more options to go for better configurations.

In analyzing the nature of all the Sri Lankan online shopping sites the researcher has understood that there were many suggestions made against each site. 'AA' and 'AG' had the highest number of suggestions [75%] to improve their online shopping sites. Other than 'payment information' and 'product customization' the 'AA' site was looked at in a critical perspective by the consumers who used it. 'Payment information' and 'delivery information' were the areas that the site hosted by 'AG' should be improved on, according to the online shoppers. The 'AE' [50%] has also been given certain suggestions to improve as an online shopping site. The areas were 'the need to have detailed product

information’, ‘need clear image’, ‘make the website faster’ and ‘the 3D image’. AB, AC and AF were in the next category [37.5%] in needing an improvement to its site. Both AB and AF need to improve on ‘product information’. AC and AF sites need to be made faster. All these three sites, according to the consumers, need to provide clear image. AB should try to improve its delivery information.

6. Percentage of sales growth in online shopping site during last 5 years

	Sri Lanka Sites						Foreign Sits				
	AB (Books and Magazines)	AA (Apparels)	AC (Computers)	AE (Electronics)	AG (Gifts)	AF (Foods)	FB (Books and Magazines)	FM (Apparels)	FP (Computers)	FY (Electronics)	FE (Foods)
<b>Percentage of Growth</b>	5%	5%	0%	3%	10%	4%	40%	60%	40%	40%	20%

Table 4.11 – Online Shopping Growth in Sri Lankan and Foreign sites in 2010

According to the responses given by the e-commerce Managers of the Sri Lankan firms that host online shopping sites, there has been an improvement of the sales growth during last five years. But considerably it was in a very low note compared to the foreign online shopping sites. This shows that there is a better scope for foreign online shopping sites in this regard compared to the Sri Lankan sites. With the researcher’s results it is shown that the online shopping websites which were hosted by Sri Lankan business firms were not having a considerable growth. When the e-commerce managers were interviewed they revealed that online shopping did not add much interest to their business. But they were also trying to promote their business through online. Therefore, they have used their web site mainly for advertising. It shows that annual growth in Sri Lankan online shopping websites was less than 10%. But studying the foreign websites hosted by foreign companies has revealed that they have more than 25% growth on their online shopping sites.

## Comparison, Shopping Growth Sri Lankan and Foreign sites

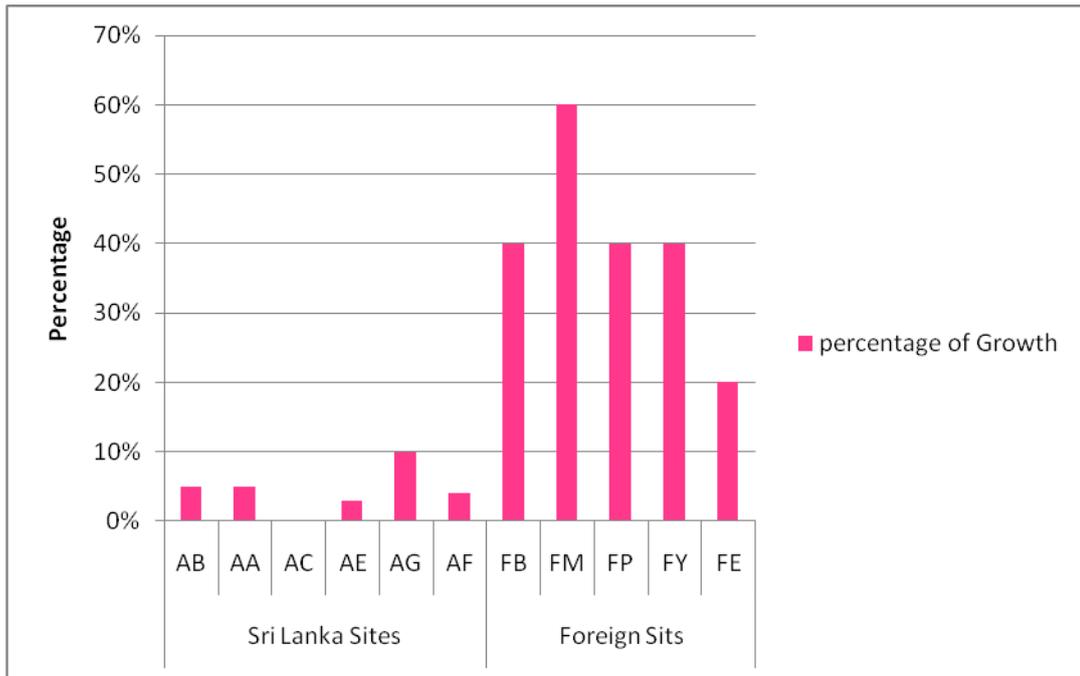


Figure 4.8 - Comparison, Shopping Growth Sri Lankan and Foreign sites in 2010

### 4.2 Questionnaire

Two hundred [200] questionnaires were distributed among the online consumers to investigate the processes who engage in online shopping. For this a semi-structured questionnaire was prepared under the guidance of the supervisor. In this semi-structured questionnaire the questions were mainly based on to identify the priorities the online consumers give to product information in their decision making. Even though it was intended to have all the questionnaires back only 140 online shoppers have responded.

#### 1. Age Group of the sample and the response.

Age group	Number of response
15-25	20
26-35	75
36-45	40
Above 45	05

Table 4.12 – Age Group of the sample

### Age Group, Sample for research

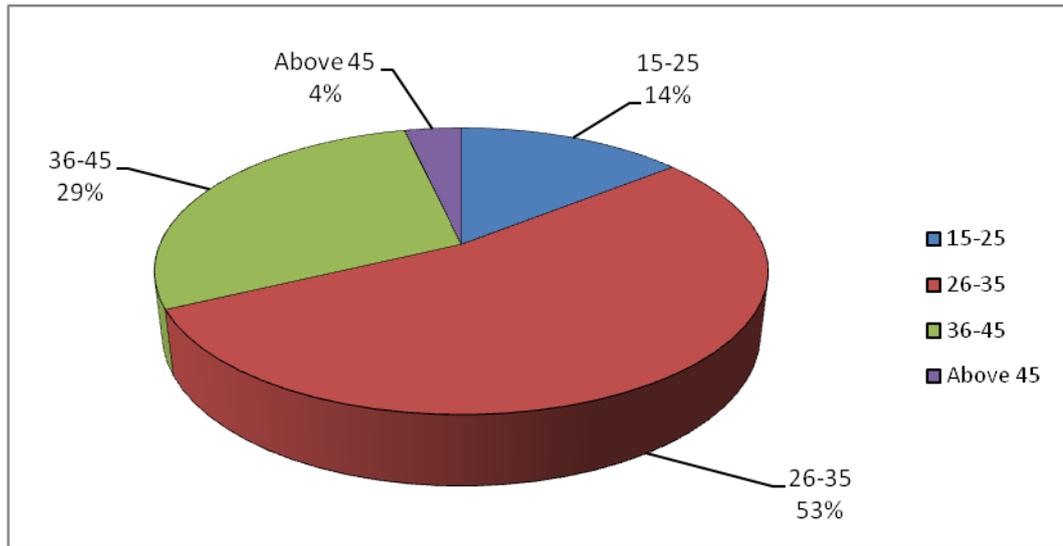


Figure 4.9 – Age Group, Sample of research

When looking at the age group of the sample in this research it was noted that the young adults and the middle-aged category comprised the sample. It was decided to select the undergraduates, graduates and the Managers who are in the Marketing sector because the young adults and middle-aged are the individuals who get influenced by the technological development and they are the ones who are interested in seeking and buying new products available in the market. To access quickly they use online shopping sites for product information that helps the decision making.

#### 2. Monthly income of the respondents

Monthly income in SLR	Number of response
<25,000	35
26,000-45,000	83
46,000-75,000	14
above 76,000	08

Table 4.13- – Income which obtain from Consumers, Sample of research

### Income, Sample of research

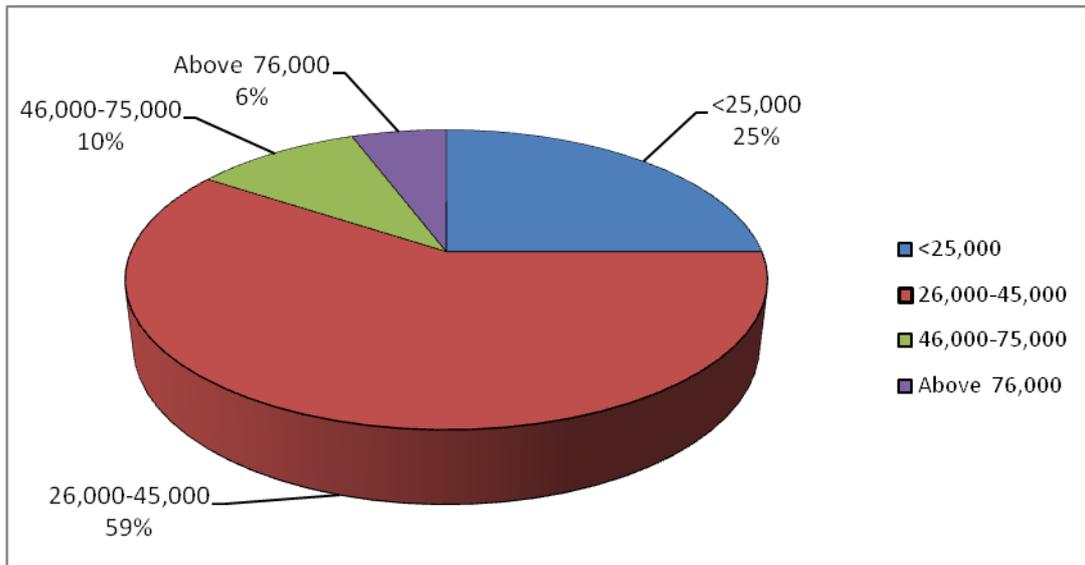


Figure 4.10 – Income which obtain from Consumers, Sample of research

The monthly income of the respondents was questioned to find out whether there is a relationship between the income category and online shopping practices. In question number 4 this is verified.

### 3. Educational level of the respondents

Education level	Number of response
Secondary Education	20
Under Graduate	15
Graduate	93
Masters	08
PhD	04

Table 4.14 – Education Level which obtain from questioner, Sample of Research

### Education Level, Sample of Research

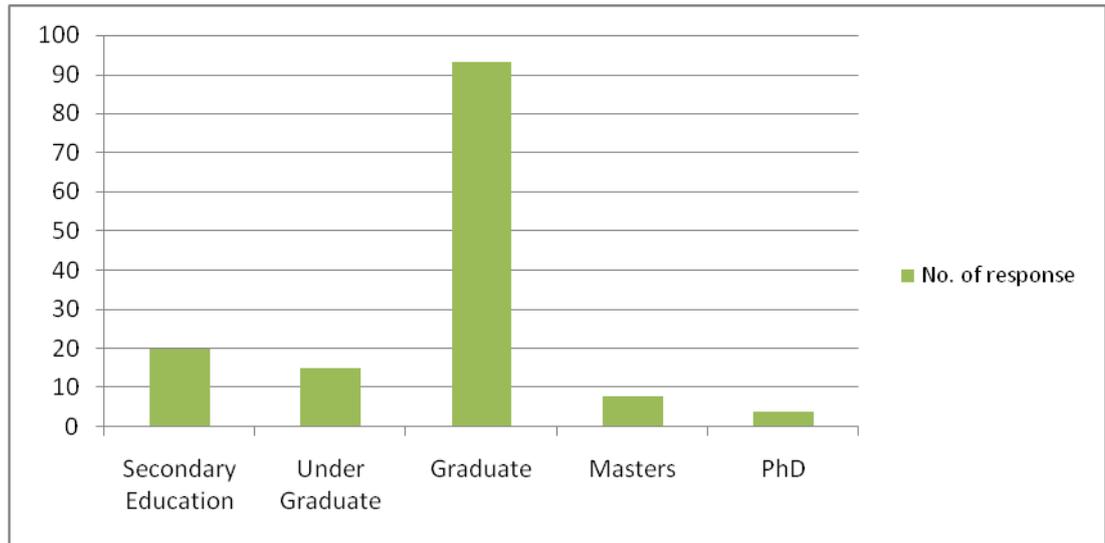


Figure 4.11 - Education Level which obtain from questioner, Sample of Research

The question no. 3 intended to find out whether there was a relationship between the level of education of the respondents and the nature of online shopping.

#### 4. Consumers who have engaged in online shopping during last 5 years

Use of sites	Number of response
Yes, through foreign web sites	83 [59%]
Yes, through Sri Lankan web sites	00
Yes, through both	22 [16%]
No.	35 [25%]

Table 4.15 – Consumers who engaged in online Shopping in 2010. From the Questioner

### Consumers engaged in online Shopping in Sri Lanka in 2010

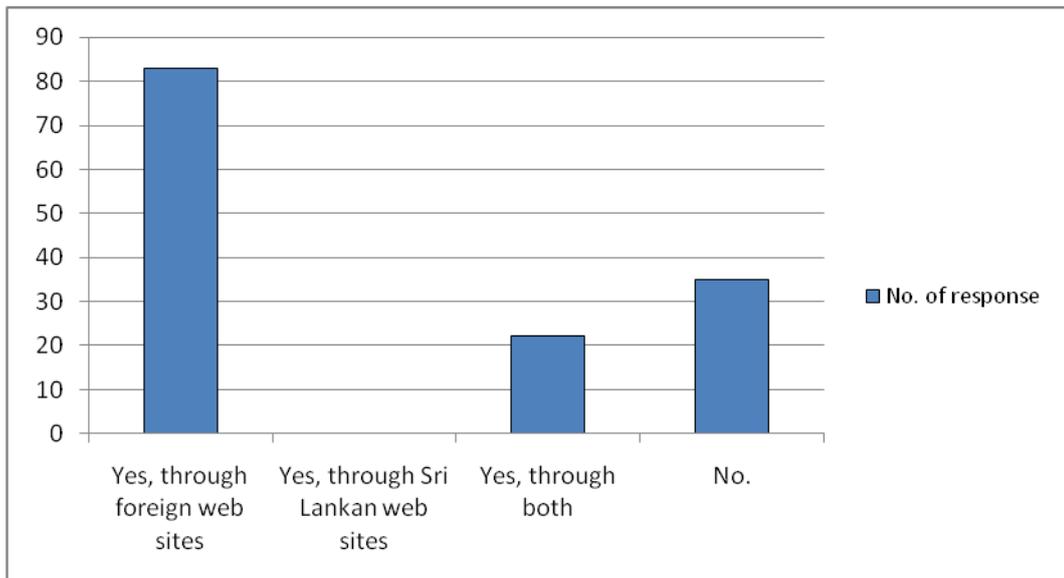


Figure 4.12 - Consumers who engaged in online Shopping in Sri Lanka in 2010

Even though the responded sample comprised of 140, only 105 have claimed that they have engaged in online shopping. In answering the question whether they engaged in online shopping during last five years the respondents have given the following answers. A majority [59%] claimed that they have accessed foreign sites. Another 22 respondents [16%] have mentioned that they have done on line shopping through both Sri Lankan and foreign sites. Another considerable part of the sample [25%] has said that they have not engaged in online shopping through any of those sites. There are some Sri Lankan expatriates within the 22 respondents who have admitted that they have engaged in online shopping through both sites. But no respondent has mentioned that he or she has used a Sri Lankan site in online shopping. They may be included among the 22 respondents category.

5. Type of products that have purchased online

Type of product	Number of response	Percentage
Clothing	87	83%
Books and Magazines	83	79%
Food Items	15	15%
Computer Items	22	21%
Other Electronic Items	34	33%
Gift Items	90	86%

Table 4.16- Products that has purchased online in 2010

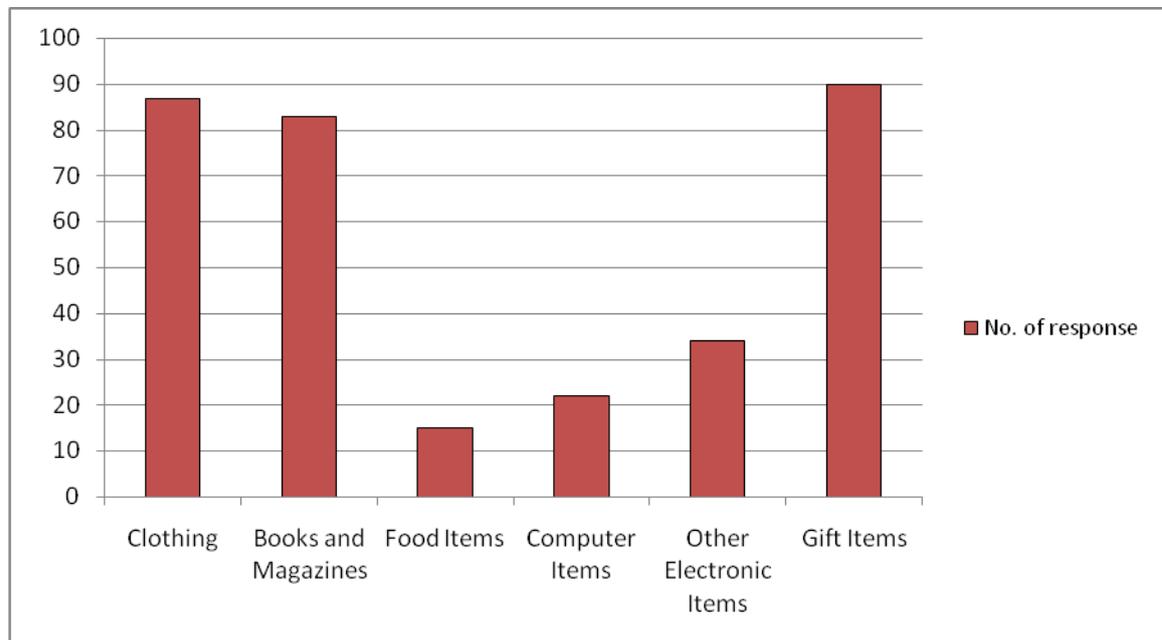


Figure 4.13- Products that has purchased online in 2010

Gift items have been the most preferred online item purchased according to the responses provided by the sample. It took a high percentage like 86%. The next most preferred item was the clothing, amounting 83%. Books and magazines [79%] became the next choice

and electronic items record a percentage of 33%, while computer items were shopped by 21%. The lowest has been the food items [15%]. According to the structure of the question there were multiple options the respondent could provide.

6. Information the consumers look in an online shopping site when purchasing a product

<b>Information Consumer looks</b>	<b>Number of response</b>	<b>percentage</b>
Product features	96	92%
Brand	60	57%
Product Information	105	100%
Manufacturer	54	51%
Product image	105	100%
Product condition	53	51%
Product compatibility	53	51%
Publisher	90	86%
Price	105	100%
Warranty period	53	51%
Return policies	105	100%
Delivery information	98	94%

Table 4.17 – Information the consumers look in an online shopping site.

In finding the information the consumers look in an online shopping site, following were revealed. All the respondents were equally interested in ‘product information’, ‘product image’, ‘price’ and ‘return policies’ [100%] and they were the most sought information. This is realistic because the online consumers expect the exact product information and the product image in making their decisions. Return policies is one of the most important information. If the consumer is not happy with the product he or she has purchased, there should be a way to return or exchange. Therefore, that is also one of the priorities of the online shopper. Damages, defects, the exact model or the brand can be dealt if the product is physically present. But in online environment this cannot be averted.

‘Delivery information’ [94%] was extremely important and that shows the consumers were interested in the mode of delivery of the good that they purchase. Another considerable category has shown the importance of product features [92%]. By this it means that especially in computer and electronic items the consumer looks into the product features. For example, a DVD player that has USB compatibility. Those who have purchased books or interested in purchasing books have mentioned that they were interested in the publisher [86%]. This is also natural because in exams of higher studies, the consumer has to stick to a specific publisher and an edition that is recommended. Brand is a favoured information [57%] for many online consumers who were interested in the best and the prestigious brands in the market.

‘Product condition’, ‘warranty period’, ‘Product compatibility’ and Manufacturer had equal percentage recorded [51%]. By product condition they have considered whether it is a used or brand new item and in the warranty period, the time duration one year or two years. ‘Product compatibility’ might have been preferred only by the consumers who went for computer items. For example, there are certain computer mother boards that are compatible with certain RAMs and Processors. Otherwise they do not function proper. Manufacturer has also been a notable information in purchasing a brand since in the competitive market condition, the consumers prefer to possess items produced by reputed manufacturers.

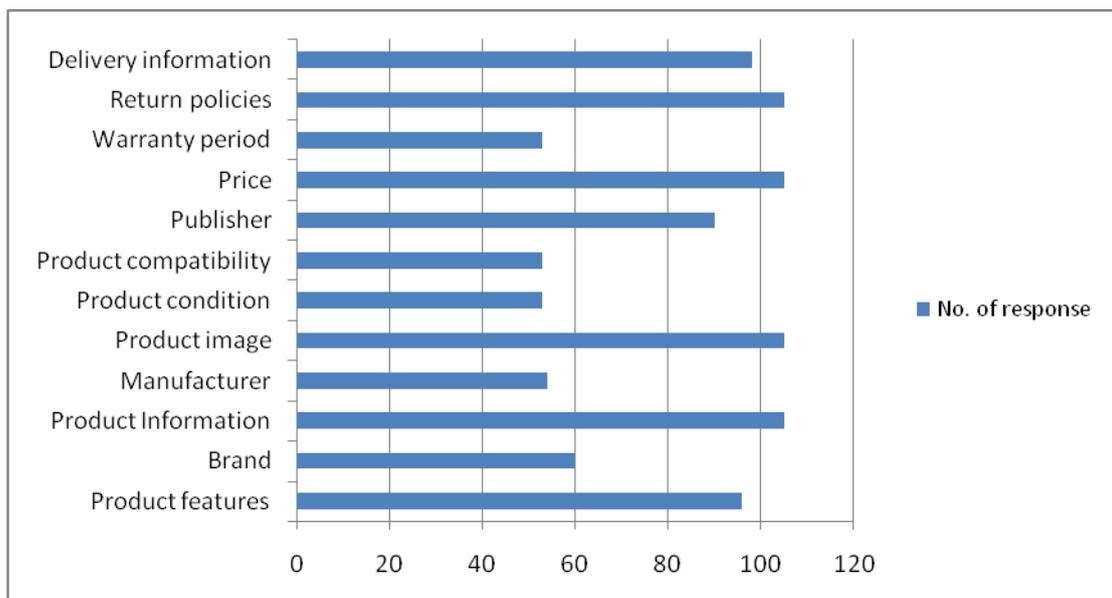


Figure 4.14- Information that Sri Lankan consumers look in an online shopping sites.

7. Number of consumers who use of the available product information before purchasing a product online

	<b>Number of response</b>
Yes	105
No	000

Table 4.18 - consumers who use the available product information before purchasing a product online,

Out of the sample all 105 respondents who had done online shopping admitted that they used the available product information before purchasing a product online. It is imperative that users should use the available product information whether they are sufficient or insufficient to make a purchase decision.

8. The importance of product information in making purchase decision

<b>Level of Importance</b>	<b>Number of response</b>
Very important	105
Important	000
Slightly important	000
Unimportant	000

Table 4.19- The importance of product information on consumer decision making.

It is not surprising that all those who have used the online shopping sites have felt and experienced the value of product information. Therefore, all the respondents unanimously agreed that the product information is vital in making a purchase decision.

9. Consumer opinion on the 'availability of product information' in Sri Lankan online shopping sites

<b>Level of Opinion</b>	<b>Number of response</b>	<b>Percentage</b>
Sufficient	03	3%
Fairly Sufficient	11	11%
Average	34	32%
Insufficient	57	55%
Highly insufficient	00	0%

Table 4.20 – Consumer's opinion on the availability of product information in 2010

When questions the opinion of the availability of product information in Sri Lankan online shopping sites, 57 [55%] admitted that the availability of the product information was insufficient. The researcher too noted this aspect when going through the Sri Lankan online shopping sites hosted by the Sri Lankan firms. A considerable number has admitted that the available product information is average [32%] mainly due to two reasons. First they may be happy with the available product information. Second, they may not have the experience in visiting the foreign sites to have a comparative knowledge. Another 11 (11%) has replied that the available product information was fairly sufficient and only 03 (3%) have said sufficient.

There are certain presumptions the researcher can arrive with this question. The first is Sri Lankan online sites have to improve a lot to provide the consumers with detailed product information. Second, the Sri Lankan online shoppers are not familiar with better informed foreign sites. The Sri Lankan online consumers are satisfied with the basic information that is available.

**Consumers Opinion on the availability of product information**

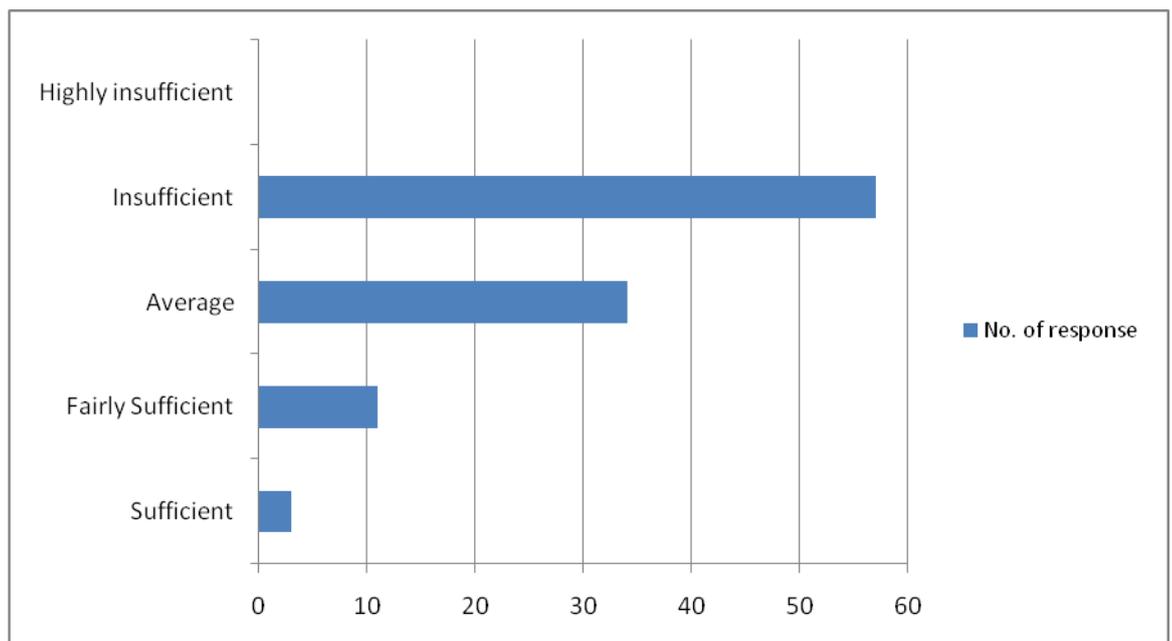


Figure 4.15 - Consumers Opinion on the availability of product information in 2010

10. The relationship between consumer decision making and available product information

	No. of response	Percentage
Yes	83	83%
No	17	17%

Table 4.21 – Consumers who have stopped online shopping due to unavailability of product information in 2010

Many consumers 83 [83%] have stopped purchasing online due to the unavailability or lack of product information. This has become a serious issue for the firms who intend to increase their consumer base. In the contemporary world each and every business firm tries to increase their business. But in the Sri Lankan business firms have shown negligence in upgrading their shopping sites to win more consumers.

**Consumers who have stopped using Sri Lankan online shopping sites due to Unavailability of product information**

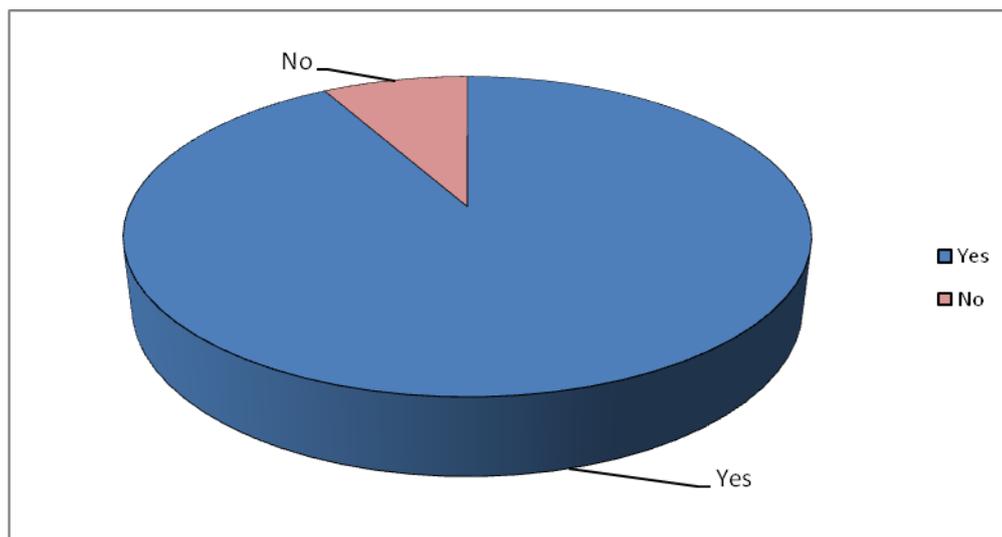


Figure 4.16 - Consumers who have stopped in Sri Lankan online shopping sites due to unavailability of product information in 2010

11. Number of consumers that intend to purchase online through Sri Lankan websites in future

	<b>Number of response</b>	<b>Percentage</b>
Yes	57	57%
No	43	43%

Table 4.22 - Consumers that intend to purchase online through Sri Lankan websites in 2010

A considerable no. of responses in the sample, 57 [57%], has still commented that they wanted to purchase through Sri Lankan sites even in future. This again may be due to various reasons. The first may be the convenience and the time it offers to the consumer. The second may be the technology sophistication creeping into the lives of the general public via the ICT development.

12. No. of consumers who are unwilling to do online shopping using Sri Lankan web sites

	No. of response
Unavailability of product information	0
Available product information is insufficient	0
Looking Product is unavailable online in Sri Lanka	0

Table 4.23 - Consumers who are unwilling to do online shopping using Sri Lankan web sites in 2010

Even though may admitted that the available product information was insufficient and stopped online shopping due to the unavailability of product information, no respondent has mentioned that he or she is unwilling to do online shopping using Sri Lankan web sites. This is a very good sign for the Sri Lankan firms, who host online sites because still the general public has the desire to use technology in their purchases.

## **5. Discussion**

### **5.1 Introduction**

By going through the online shopping web sites in Sri Lanka, the researcher has realized that the companies in Sri Lanka are interested in doing business through websites. At the same time online shopping web sites which were hosted by the Sri Lankan companies were studied for the research. In order to verify the development of ICT in Sri Lanka, the researcher has done a comparison with foreign online shopping sites. Referring articles, and research done on other related e-commerce topics has given the researcher a basic nature of e-commerce behavior in Sri Lanka. But no research has been done so far to check the growth of online sales in Sri Lanka, and to understand up to what extent use of the available product information affect the consumer decision making process.

From the pre analysis which was carried out, the researcher has realized that foreign countries are interested in carrying out businesses through online rather than having physical stores. So their online purchasing usage is quite higher than businesses in Sri Lanka.

According to the findings of many researches it is experienced that the availability of product information is insufficient in Sri Lankan Online shopping sites compared to foreign sites. This will have a negative impact on consumers buying online from Sri Lankan web sites.

In the preliminary literary survey the researcher has identified that ‘if the product information is not completely available to the consumers that will affect the decision making in their purchasing’. It is understood that in Sri Lanka each year the computer literacy rate increases in a considerable manner. More people are having access to the WWW for various reasons. As the sophisticated science and technology flows into the country, the economic sphere is the first and foremost area to improve. As in many other countries and even in Sri Lanka, it is the economic sector that uses technology to the highest advantage.

## **5.2 Research questions**

- [a] What are the available online shopping websites, their growth and what type of products and services do they offer to consumers?
- [b] Which product information is presented by the online shopping websites for the Sri Lankan consumers?
- [c] What type of product information is expected by the prospective online consumers in Sri Lanka?
- [d] Is there a relationship between the availability of product information and the consumer decision making pattern?
- [e] Is available product information sufficient to make a purchasing decision?
- [f] What is the reaction of the business firms that host the websites for online shopping against the lack of product information?

## **5.3 Research objectives**

### **5.3.1 Objective 1**

- To identify the prevalence of online shopping among Sri Lankan businesses in 2010.

In this objective the researcher intended to get a background study about the online shopping in Sri Lanka – which companies, which products, who the consumers are, the structure of the sites, the strengths and weaknesses of those sites. The objective of this research was to investigate consumers make decisions on their online shopping and the importance of availability of product information on the web sites which were hosted by Sri Lankan business organization. For the research and to find out information on online shopping web sites in Sri Lanka the researcher has spoken to the companies that are involved with online shopping. In this the researcher had selected the web sites which were recommended by the Sri Lanka Tourism Promotion Bureau.

According to the Sri Lanka Tourism Promotion Bureau Keellssupper, Vijitha Yapa and Odel have started selling their products online in order to stay ahead of competition. Popular online shopping websites which were listed:

- [www.flora2000.com](http://www.flora2000.com),
- [www.garments.lk](http://www.garments.lk),
- [www.gift2lanka.com](http://www.gift2lanka.com),
- [www.ibuy.lk](http://www.ibuy.lk),
- [www.lanka.info](http://www.lanka.info),
- [www.lankaeshop.com/shop](http://www.lankaeshop.com/shop),
- [www.lankafood.com](http://www.lankafood.com),
- [www.lankanest.com](http://www.lankanest.com),
- [www.odel.lk](http://www.odel.lk),
- [www.sigirilanka.com](http://www.sigirilanka.com).

But most popular Sri Lankan online shopping sites according to “srienews.blogspot” like “[www.buyabans.lk](http://www.buyabans.lk), [www.singersl.lk](http://www.singersl.lk), [www.sarasavi.lk](http://www.sarasavi.lk)” were not listed on their site.

After identifying those sites the researcher had made appointments with those companies to discuss the Sri Lanka online shopping development, growth and consumers awareness of their sites. So in the preliminary survey the researcher has found out the consumers interest on online shopping. Number of users who got registered with online shopping site has grown compared to previous years. But number of transactions is much small on all the shopping sites, but a few companies had a growth on their online sales. This is because still Sri Lankan consumers who live in Sri Lanka are afraid of using credit card online, but Sri Lankans who are staying in Foreign countries, do shop through Sri Lankan web sites. From the investigation the researcher found those people do online shopping because they can send gift to the relatives in Sri Lanka, and books that they are unable to buy in their countries, etc. Consumers in Sri Lanka use Sri Lankan online shopping sites to get the product information before they go to retail shops, for fun and to get online shopping experience.

Sri Lankan Internet user has a moderate level of Internet shopping usage while more people pay bills through Internet and access Internet banking application. With this the current level of ecommerce readiness of country can be said as in a higher medium level compared to the world averages and display better performance than other countries in region and similar economic indicators. Income and education is positively related to Internet shopping while age group 20-40 dominated in purchasing goods and services over the Internet. People who pay more household bills displayed significantly high usage of Internet shopping. However the spending on Internet and frequency of online purchases were in very low levels and less availability of buying options coupled with low trust on e-commerce sites created such a behavior. Current Internet users display very healthy reactions to e-commerce and less shadows of traditional trading mechanisms also acts -positive. Development of infrastructure creating high awareness and opportunities will improve the Internet usage and the e-commerce involvement of people in Sri Lanka.

When faced with a product selection, consumers are suggested to perform an internal search (e.g., relying on their prior knowledge of brands) and if necessary, an external search. The latter may comprise activities such as gathering more information about brands and seeking recommendations from relevant others. Thus, different consumers may use different decision-making strategies to make a consumption decision (Olshavsky, 1985; Payne et al., 1993). Furthermore, consumers shopping online may modify or change the way they search for information to take advantage of certain unique characteristics of the Internet (Peterson and Merino, 2003). For instance, the presence of new information sources such as recommender systems, intelligent-agent-based systems, and less easily accessible sources offline (e.g., opinions of a large group of consumers on a specific product) may modify the way, in which consumers perform their external information search. In this research, we investigate the effect of different decision-making processes on consumers' shopping behaviors (e.g., decision time, pages visited, etc.) while performing an online goal-directed activity, namely, the selection of a product.

When applied to the Internet, the effect of various decision-making processes on consumers' shopping behavior leads to interesting questions. For instance, do consumers who consult and follow an online product recommendation have a less complex shopping

behavior than consumers who do not consult or who do consult but do not follow a recommendation? Answers to such questions have important managerial and theoretical implications. First, they would help marketers maximize the effectiveness and usability of their websites. For instance, if it were known that after they consult an online product recommendation, consumers usually revisit product detail pages, hyperlinks from the product recommendation page to these pages would facilitate consumers' navigation and consequently, their decision-making process. Second, Peterson and Merino (2003) and Cowles, Kiecker, and Little (2002) argue that the internet represents a sufficiently different retail environment where concepts such as consumer information search behavior should be revisited. Thus, by investigating the effect of consumers' decision-making process on their online shopping behavior, this paper contributes to better understand how consumers search for information and make their decisions online.

### **5.3.2 Objective 2**

- To identify the incidence of the availability of product information in the websites hosted by numerous Sri Lankan business firms in 2010.

In this the researcher conducted a detailed study on the availability of the product information - Product features, Brand / Model details, Product condition, Product compatibility, Manufacturer / publisher, Product image, Return policies, Delivery and shipping information, price, user reviews and ratings, similar products with competitive prices, material used, product performance.

The researcher tried to investigate into the availability of product information on Sri Lankan web sites. This was conducted by the interviews and questionnaires among the web sites' owners and the consumers who do online shopping.

According to the figure 4.3, information provided by Sri Lankan web site got rate 3, foreign site got rate 5, 0/0- not enough at all, 0/1- not enough, 0/2- reliable, 0/3-Average, 0/4- Satisfied, 0/5-Very Satisfied

So in Sri Lanka the rate of Sri Lankan web site in "Average" that's meant the information provided by the site not going to satisfy the consumers. Looking in to the foreign sites the information provided to the consumer is very high. Because of the information to

consumers on online shopping site is very important as the decision to ‘buy or not buy’ depends on it.

### 5.3.3 Objective 3

- To find out the factors that effect on ‘*decision making*’ of the Sri Lankan consumers who make online shopping through the websites host by Sri Lankan business firms.

This is to identify how the decision making takes place. – the need to buy a product, to go on online shopping, visiting related online shopping websites, look into the product (s), referring to the available product information, comparing product features and prices, reading user reviews, purchasing.

E-commerce is in the intermediate stages of adoption in Sri Lanka but this is not uncommon in the developing world. Indeed, few countries in the developing world are better placed than Sri Lanka for building a sound electronic commerce infrastructure. Sri Lanka possesses many of the key attributes necessary for the country to play a part, however small at first, in the global e-commerce revolution. While it is true that Sri Lanka is still in a process of industrialization and some would argue that this process should be given priority, the country cannot afford to ignore the emergence of the post-industrial, networked global economy. Even as the country continues to industrialize, it must look at opportunities beyond the horizon of industrialization.

There are many challenges to be faced before electronic commerce will have any significant impact on the Sri Lankan economy. Telecommunications infrastructure is mainly limited to the major business centers like Colombo and Kandy. It is still relatively expensive to access the Internet, bandwidth speeds are limited and the demand for ICT human capital is well above current supply. As a result, it is not surprising that the majority of businesses do not have an Internet presence and internet usage is low in the general population. On the other hand, Sri Lanka is better positioned than many other developing countries to meet the challenges it faces. The country has undergone decades of trade liberalization and has an open economy.

Electronic decision aids exist in both traditional and Web-based decision environments. They may be classified as being human (e.g., a super sales associate), physical (e.g., Consumer Reports, Zagat's restaurant guides, Mobil travel guide's) or electronic (e.g., Jango). Electronic decision aids are often closely related to the environments in which they are used because they are frequently 'designed' for those environments. Thus, an electronic decision aid may be viewed as being an integral part of the environment. As a point of clarification, there are several different types of electronic decision aids. The individual types typically fall under one of two primary categories, individual agents or collaborative filtering agents.

Individual agents simply use the attributes and specifications entered by the user as the search criteria. Collaborative agents use this information to search other consumers' evaluations of similar products and generate a list of alternatives (Ariely 2002). Based on this, agents can be defined as performing two primary tasks. Electronic decision aids 1) collect information from the user and 2) they use that information to create a smaller consideration set of objects for the user to view based on the inputted preferences.

Notification agents will notify a user when a product that matches their profile becomes available. A notification agent will not only notify the user, but it will also encourage the user to come to the store and purchase that product. Profiles are developed by the information entered by the user and by reviewing the price the consumer is willing to pay for the product (Maes, 1999).

Negotiation agents can negotiate much of the purchasing phase of the buying process. If a user has certain criteria for a buying a product (i.e., price) and a seller is willing to adjust the terms of the product, a negotiation agent can be a very useful tool. Ideally the user's agent and vendor's agent will adjust offers and specifications incrementally until common ground is achieved (Maes, 1999).

Autonomous agents, according to, (Maes 1994) are currently being developed from the artificial intelligence field where users and electronic decision aids act complementary to one another. The user and aid initiate communication, monitor events, and perform

selected tasks. Similarities have been made that this agent is a ‘personal assistant’ that both takes direction and acts independently of the user.

Maxims are aids that assist users with sorting and maintaining email; however, these have begun to appear as shopping aids for consumers. Maxims are based on memory-based reasoning. The aid ‘remembers’ previous decisions and actions that were taken in similar situations and tries to mimic the behavior. It then measures confidence in each prediction and gains competence with repeated use, (Maes 1994).

Multi-agent collaborators act in a similar manner. These aids will ‘ask’ or search other agents when the aid in use does not have enough confidence in its level of prediction accuracy. The aid will make a prediction based on returned suggestions and will also increase competence with the level of accuracy of predictions, (Maes 1994). These multi-agent collaborators are being used primarily in work-groups and with email, but can easily make a transition to web-based shopping electronic decision aids.

Two separate models have been identified as the primary agents that a consumer may experience. They are the user-centered model and the vendor-based model. User-centered models have not shown much success due to the amount of personal information that must be input and the fact that consumers do not believe the information provided by a price comparison site is worth paying for. Based on this, many electronic decision aids have made a switch to a vendor based model where the vendor provides the support for the aid, (Menczer 2002). Many retailers employ this electronic decision aid and will configure their electronic decision aids so they pull alternative selections from their respective electronic store and make it difficult for comparison shopping with stores in the same channel, (Ariely 2000).

Electronic decision aid functionalities are other concerns in considering the use of online shopping. These have been identified as capabilities, (Ariely, 1999 and Johnson 1999), Knowledge Sharing, (Glower, 1997), Roles in Buying Behavior, (Ariely, 1999 and Maes 1999) Calibration Issues, (Ariely, 2000) and Coverage / Evaluation and Authority, (Rowley, 2000).

Electronic decision aids are capable of screening a large number of alternatives using information on the consumer's utility function, such as attribute importance weights and threshold attribute levels. Thus, an electronic decision aid can help screen alternatives to rapidly identify the most attractive alternatives. But it may also "over-screen" alternatives, requiring consumers to be adept in its use. The effectiveness of the electronic decision aid is directly related to the information provided to it by the consumer. In other words, an electronic decision aid has a "cost" attached to its use. The cost of initially calibrating an electronic decision aid may be viewed as being excessive if too many consumer inputs are required and/or when consumer preferences are poorly formed. However, the cost of re-calibrating the electronic decision aid can be expected to decline as the consumer acquires greater familiarity with its continued use, (Johnson 1999). The consumer may also be concerned about the privacy of the information needed to calibrate the aid, (Ariely 1999).

One of the key assets of the electronic decision aid is knowledge sharing. Knowledge sharing involves incorporating the knowledge of expert decision makers into an electronic decision aid and applying the aid to lower levels such as the consumer. This knowledge sharing permits relatively unknowledgeable individuals with little experience with a product to make expert quality or level decisions, (Glover, 1997).

In general, electronic decision aids have been shown to be useful in needs identification, product brokering, merchant brokering, and negotiation. These four roles have also been referred to as an electronic decision aid acting as a tutor, clerk, advisor, and banker (Ariely, 1999). Electronic decision aids can assist consumers in keeping track of their needs (after identified) and notifying them when products become available. The product selected is identified by the user specifications. Once a list of products is generated, the aid will direct the user to available sites to purchase or view the product. Lastly, some aids can actually negotiate purchase details based on buyer and seller preferences and rules, (Maes 1999).

Calibration typically refers to the level or cutoff that an electronic decision aid will use in returning product alternatives. Consumers will face time costs if the aid returns too many products, but alternatively will face limitation costs if only a few selected alternatives are

generated, (Ariely, 2000). An interesting issue a consumer must face in an on-line shopping environment is whether or not the aid they are currently using is multifaceted, in that it is capable of searching for several products in several categories, across several stores.

Electronic decision aids have a range of coverage that includes the number of websites, product categories, and geographical areas searched. The better the coverage of the aid, the larger the number of product options provided to the user. Ideally, electronic decision aids will be enabled to check the credibility or reliability of an e-tailer. A sense of “trust” needs to be established with an e-tailer with respect to shipping, confidentiality, and accurate product descriptions, which some electronic decision aids, can assist in verifying, (Rowley, 2000).

How electronic decision aids influence consumer decisions is another way to look at the online shopping. The nature of the task is different in a web-based environment because not all product attributes may be converted into “digital” attributes. If search costs are lowered for “digital” attributes to a greater extent than for “non-digital” attributes it is more likely that consumers will use those attributes to a great extent in their alternative screening strategies, (Haubl 2000). Thus, alternative screening strategies that are based on the sorting/filtering of “digital” attribute information are more likely to be observed in web-based decision environments. Consumers are likely to increase their use of “digital” attribute information since that type of information is likely to dominate in a web-based information environment.

Research has shown that electronic decision aids can improve the quality of the decision made by a consumer and reduce the effort placed into making the decision; however, there are four areas of concern that must be realized when evaluating the adequacy of an electronic decision aid.

- a. Information is often incomplete due to ineffective search routines. The information that is produced is sometimes irrelevant or duplicated.

- b. Electronic decision aids cannot model actual human behavior. Electronic decision aids follow rules or guidelines, whereas consumers will sometimes act irrationally or change goals in the middle of a shopping excursion.
- c. Consumers will simplify the importance of attributes and tend to weight quantifiable attributes heavier than non-quantifiable ones. (i.e., price vs. style)
- d. Products will be viewed as standardized. Differentiation and brand loyalty may be sacrificed at the expense of product information being standardized (Redmond 2002).

There is a debate on whether consumers use electronic decision aids to make better and more accurate decisions or to simply conserve time and effort. Again, the evidence on this issue is mixed. Some researchers have found that electronic decision aids are mainly used to conserve user effort instead of supplement it, (Benbasat 1996). In other words, users simply “shift” effort from themselves on to the electronic decision aid. Previous research has shown that electronic decision aids may have favorable effects on the both the quality and efficiency of purchase decisions while expending considerably less effort, (Haubl 2000). Decision effort and quality must be viewed jointly when considering specific decision strategies. Decision makers may actually expend more effort when using an electronic decision aid. The use of an aid may increase cognitive capacity helping remove cognitive limitations. Consistent with the theory of bounded rationality, as limitations are removed, increased effort will lead to better decisions. Also, an aid may cause a user to switch strategies in turn helping them to arrive at a higher quality decision (Chu 2000).

One of the greatest limitations of comparison shopping is the issue of trust. Consumers have little to no information about the reputations of e-tailers. Policies such as returns/refunds, shipping/handling, additional support and so on, are hazy at best. A user also has no way of knowing if a product is in stock and when it will arrive. This leaves price comparison shopping as a primary avenue to select goods, (Maes 1999). Another way to circumvent this issue is that many consumers will rely on the retailer’s brand name as a proxy for credibility in non-contractual aspects of the purchase such as shipping reliability. Heavily branded retailers have been found to hold price advantages over generic retailers in direct price comparisons, (Brynjolfsson 2001).

Along with trust, competence issues may constitute a problem for the user. Many aids require vast amounts of data and information to be entered by the user. Much of this information that needs to be entered is very user and product specific. This leads to separate issues. First, the user may not gain an understanding of how the aid works based on simply entering information and may feel that they are losing control in the decision process. Second, once the information is entered, the search is often times set or fixed. Future searches will require additional or different information to be entered, (Maes 1994).

Research indicates that electronic decision aids suitable for a particular environment may be ineffective in other environments, (Widing and Talarzyk 1993). Electronic decision aids that can filter/sort through a large number of alternatives while using minimum cut-off levels on an attribute are best suited for use in a Web-based environment. Improper or incomplete calibration could also lead to the elimination of preferred alternatives, (Widing and Talarzyk 1993). As a counter-measure, consumers may adopt “safe” calibration strategies by setting wider or lower attribute cut-off levels, thereby diminishing the effectiveness of the electronic decision aid. Also, the electronic decision aid might perform poorly if there were few alternatives, potentially requiring frequent recalibration to avoid recommending a “null” consideration set.

In general, search costs are lower in an online market versus an offline (brick and mortar) market. In previous research, attributes have been broken into four primary categories.

- (1) Brand Name
- (2) Price
- (3) Non-Sensory
- (4) Sensory

Search costs should be lower for the first three categories, in that they can be acquired through an electronic decision aid and then sorted with minimal effort. However, it is expected that sensory attributes will have a higher cost associated with them in an online market. In offline markets a consumer can actually touch or smell a product with much greater ease than in an online market, (Degeratu 2000).

Cognitive cost is a key factor in understanding decision behavior. Electronic decision aids can influence the selection of a particular strategy through their influence on the 'cognitive cost' of using that strategy. Electronic decision aids reduce the cognitive cost of employing various strategies for the user. Hence more accurate/normative strategies can potentially be encouraged through the availability of electronic decision aids. However, research indicates that the consumer's focus on effort reduction is so paramount that a more accurate/normative strategy will not be used unless it matches a less accurate strategy in terms of the cognitive cost required to implement it. Thus, an electronic decision aid can counter the consumer's natural tendency toward a particular strategy but to a rather limited degree.

Consumers often use electronic decision aids to customize their shopping environments, thus making online shopping more convenient. However, these customized searches may reduce the availability of price information relative to non-price information, (Degeratu 2000). An important consequence of this is that a consumer may shift from a price search strategy to an attribute-based search strategy. Even with this price information and the conscience switch to an electronic decision aid that will compare price information, recent research has shown that online consumers may not be as price sensitive as the general population, (Degeratu 2000). This may be due to the fact that consumers are willing to pay a higher price online for a branded e-tailer product rather than buy a product at a lower price from a generic e-tailer. Overall, electronic decision aids are expected to help consumers improve their performance in decision- making situations. They can either help the individual work harder, thereby achieving a better execution of a chosen strategy or they can work smarter towards a decision strategy.

#### **5.3.4 Objective 4**

- To develop guidelines in providing how the product information should be included in an official website to promote purchasing in Sri Lankan business in 2010

Based on the research and results, the researcher has developed a conceptual framework to guide online shopping websites in terms of providing adequate product information as given below.

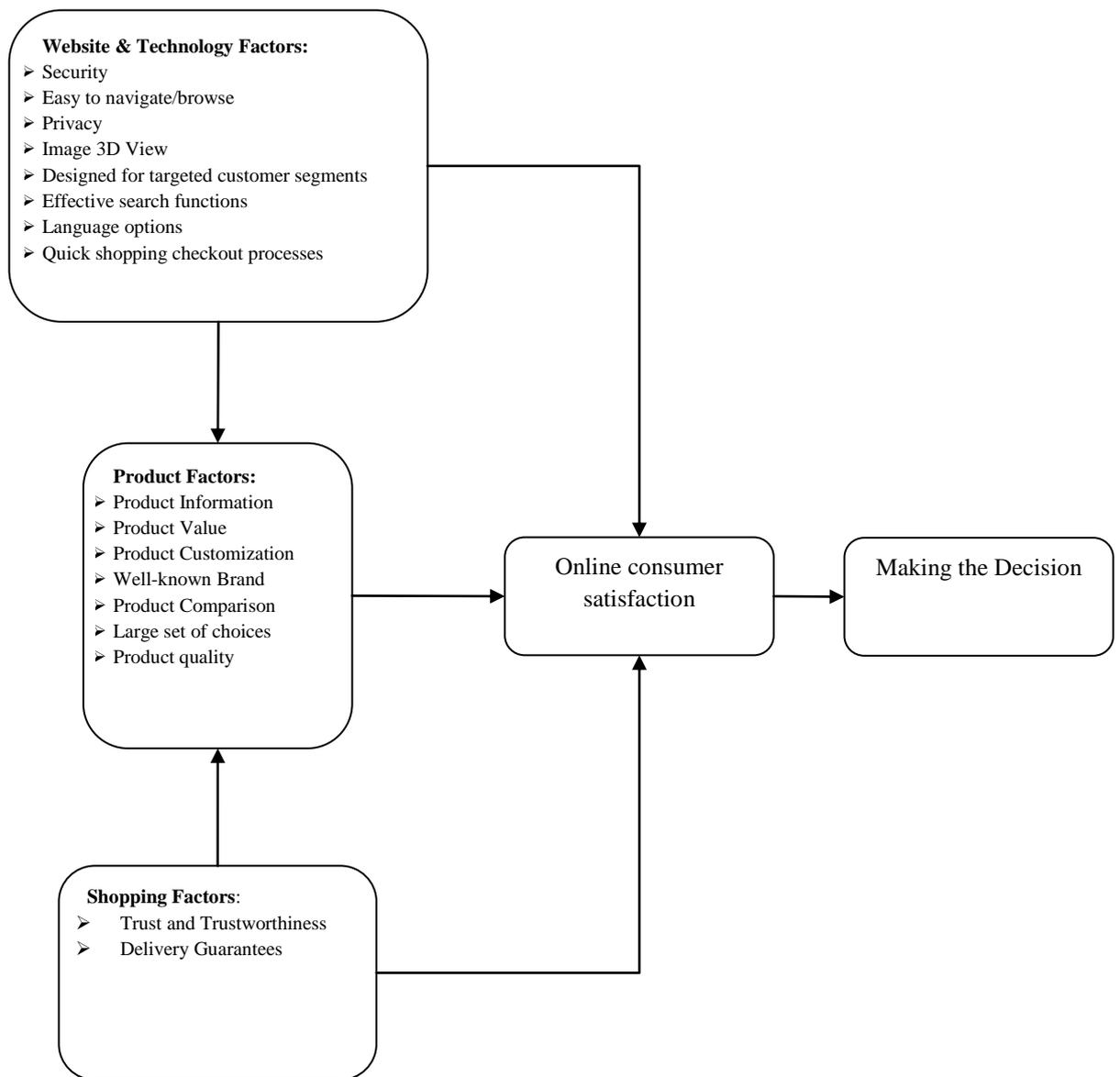


Figure 5.1- A conceptual framework to guide online shopping websites on providing adequate product information.

The above represented model has been elaborated in the below sections.

#### 5.3.4.1 Website and Technology Factors

A unique factor in e-loyalty is the critical role of the first impression created by a website as well as its ease of use, (Smith, 2000), easy navigation, fast page loads, server reliability, quick shopping and checkout processes, and a personalized interface. Szymanski and Hise (2000) figured out that convenience and site design are among the

major factors that determine customer satisfaction, which in turn influence the consumer decision.

A website has to be designed for a targeted customer segment, which means that the content of the site has to match the preferences of its targeted customer group. Global e-marketers should consider offering language-changing options since a website can be accessed from all over the world. In addition, it is advisable to change the content of a site to suit local conditions. This concept is successfully implemented by Amazon and Stepstone, which is a European online career portal. Local adaptation should be based on a complete understanding of a consumer group's culture. For example, people of different countries perceive colors differently or people with a different reading direction (such as Tamil, Arabic or Chinese) do not look at the same spots on the screen as people in Western countries do. An e-business has to be aware of the fact that a lot of consumer are suffering from time constraints. If a web page takes too much time to load, it may keep potential consumer away. Furthermore, navigating through a website has to be easy, which implies that browsers should be able to find the items they are looking for in an adequate amount of time. According to Forsythe, Ring, Grose, Bederson, Hollan, Perlin, and Meyer (1996), 58% of users make two or more navigational errors while searching for information. Web users make fewer mistakes if the hierarchical structure of the site is broader rather than deeper (Bernard, 2001). Ideally, information should be organized in three hierarchical levels from the initial homepage. Norman and Chin (1998) have recommended that complex websites adopt a concave structure that is broad at the top and the bottom levels and narrow in the intermediate levels. This has been shown to substantially increase ease of navigation.

Buyers of different products often follow different buying patterns. For example, an e-business has to know whether most of its buyers come to the website with or without any intent to buy. If customers visit a site without any intent to buy, placing good offers on the first page is important. On the other hand, for an e-business whose customers visit the site with the intent to buy, establishing a website with an effective search function is important.

In addition to web design issues, factors such as server reliability and fast response times represent key technical issues that have a major influence on e-loyalty. A server crash

while browsing a website or even worse, while placing an order, will have an adverse impact on the decision to visit the site again.

Order fulfillment and rapid delivery systems are as critical to e-loyalty development as the other factors. A thoughtful logistics system that guarantees a fast delivery after the checkout process contributes to customer satisfaction, which in turn contributes to loyal behavior. In addition to the speed of delivery, the logistics system should allow different ways of delivering products. Some customers prefer to get the product delivered by parcel services, like FedEx and UPS. Others might want to pick up a product in a physical store in order to have somebody to talk to. Customer service is another crucial area for e-marketers (Helmsley, 2000). A marketer should not just offer online assistance. In many cases, it is more convenient for customers to call a company or chat online. A customer who buys something on the Internet has one major disadvantage compared to a customer in real space. Internet customers cannot touch, smell, or experience the good before they buy it. This makes a shopper insecure about buying a product. In order to minimize this insecurity, an e-business should offer brands that are well-known, good product quality, and, of course, guarantees.

#### **5.3.4.2 Product Factors**

Product customization, product comparison and interactivity are three unique features which enhance value that contributes to shopping in online buyer behavior. A recent Modem Media and Greenfield survey showed that a majority of web shoppers prefer websites that offer customized products and information. This clearly indicates the importance of mass customization in creating e-loyalty. Customization is the result of the interactive involvement of the customer in the design of his/her ideal product. The computer manufacturer, Dell, has successfully implemented the approach of “build your own computer” through the use of “Choiceboards” (Slywotzky, 2000). The high involvement in the product design on the part of the buyer inherently creates a stronger affective relationship with the brand that subsequently leads to brand loyalty. The accumulated customer knowledge base over several transactions allows the e-marketer to sharpen the customized offerings and prevent competitive inroads. The combination of customer involvement in product design and a well-known brand with associated product quality and guarantees increases the probability that product performance meets customer expectations.

Traditional brands with high brand loyalty have enjoyed a certain degree of immunity from price-based competition and brand switching (Dowling & Uncles, 1997). In e-markets, however, this immunity is substantially diminished due to how easy price comparing among shopping agents is and due to the fact that competition is just one click away. So being in a competitive price range is more important for e-businesses in developing and maintaining customer loyalty, (Reichheld & Scheffer, 2000).

#### **5.3.4.3 Shopping Factors**

Trust, particularly the unique dimensions of transactional security and privacy, play a critical role in generating customer loyalty to an e-business. A recent study by Ratnasingham (1998) has shown that fear of online credit card fraud has been one of the major reasons customers have not done more extensive online buying. Moreover, privacy concerns have led to a public relations failure for some major e-businesses resulting in substantial brand image. Several unique tools and techniques are available to e-businesses to enhance customer trust in their website. This includes third party approvals, encryption, authentication, and non-repudiation strategies. Encryption assures data security in transmission, authentication guarantees the identity of the participants involved in the electronic contract, and non-repudiation means maintaining an authentic transcript of the specific terms and conditions of the contract agreed to by both parties. Passwords are most commonly used in authentication processes. Verisign.com and Authentidate.com are the leading providers of authentication technology.

Trust, which is closely related to security, is a very important factor in the online buying process behavior process. In general, you cannot feel, smell, or touch the product. You cannot look into the salesperson's eyes. Therefore, these ways of developing trust are excluded on the Internet. Brand trust usually contributes to a reduction of uncertainty. In addition, trust is a component of the attitudinal component of loyalty. So it is obvious that loyalty in general and brand trust in particular can help to overcome some of the Internet's disadvantages, e.g. to overcome perceptions that the Internet is an unsafe, fraudulent, and unreliable marketplace, (Dowling & Uncles, 1997).

#### **5.3.4.4 Consumer Satisfaction**

The above three areas of website design, product information and shopping attitude ultimately result in positive or negative consumer satisfaction as depicted in the Figure 5.2. Consumer satisfaction is the focus of the investigation in research. It can be defined as the extent to which consumers perceptions of the online shopping experience confirm their expectations. Most consumers form expectations of the product, vendor, service, and quality of the website that they patronize before engaging in online shopping activities. These expectations influence their attitudes and intentions to shop at a certain Internet store, and consequently their decision-making processes and purchasing behavior. If expectations are met, customers achieve a high degree of satisfaction, which influences their online shopping attitudes, intentions, decisions, and purchasing activity positively.

#### **5.3.4.5 Online Shopping Decision Making**

Eventually, the level of satisfaction will determine the way the final decision on purchasing or otherwise is taken. Online shopping decision making includes information seeking, comparison of alternatives, and choice making. The results bearing on this factor directly influence consumers' purchasing behavior. In addition, there appears to be an impact on users' satisfaction. Though it is important, there are only five studies that include it. According to Haubl and Trifts (2000), potential consumers appear to use a two stage process in reaching purchase decisions. Initially, consumers typically screen a large set of products in order to identify a subset of promising alternatives that appears to meet their needs. They then evaluate the subset in greater depth, performing relative comparisons across products based on some desirable attributes and make a purchase decision. Using a controlled experiment, these authors discover that the "interactive tools designed to assist consumers in the initial screening of available alternatives and to facilitate in-depth comparisons among selected alternatives in an online shopping environment may have strong favorable effects on both the quality and the efficiency of purchase decisions.

According to Lee and Park (2001) examination of the relationship between online purchasing behavior, perceived ease of use, perceived usefulness, perceived risk of the product/service, and perceived risk in the context of the transaction, the measures used are total amount spent and frequency in last 6 months.

Online purchasing is observed by the researcher to be associated with the factors of personal characteristics, vendor/service/product characteristics, website quality, attitudes toward online shopping, intention to shop online, and decision making.

#### **5.4 Hypothesis**

1. The available online product information is insufficient for online shopping
2. Available product information dose not full fill the requirement of the online consumer
3. Lack of online information reduces the purchasing on online consumer.

The importance of customer satisfaction has increased significantly in the past decades Homburg & Stock (2001). The present satisfaction research focuses on the confirmation/disconfirmation paradigm Giering (2000), Krafft (2002). In this context Homburg & Stock characterize the confirmation/disconfirmation paradigm as a reference framework of customer satisfaction research. Although there are other theories explaining customer satisfaction, for example, the equity theory and the attribution theory.

In the confirmation/disconfirmation paradigm customer satisfaction respectively dissatisfaction are seen basically as a result of a cognitive individual target/actual comparison Homburg and Giering (1998). In this article customer satisfaction therefore is defined:

‘As the result of an individual target / actual comparison. Customers compare their expectations with the perceived and evaluated performance (here: the online shop, the delivery service and the product itself) of the chosen provider’.

On the basis of this definition and the chosen object of investigation, the following three part satisfactions are identified:

- a. Online shopping satisfaction,
- b. Delivery satisfaction and
- c. Product satisfaction.

Furthermore it is assumed, that these part satisfactions are composed in a linear-additive way to an overall satisfaction.

Altogether the following hypotheses H1-H3 are proposed:

H1: The more satisfied the customers are with the online shop (online shopping satisfaction), the higher is the overall satisfaction.

H2: The more satisfied the customers are with the delivery service (delivery service satisfaction), the higher is the overall satisfaction.

H3: The more satisfied the customers are with the product (product satisfaction), the higher is the overall satisfaction.

Customer Satisfaction in e-commerce has been dealt by many people. Alpar (2001) sees User Satisfaction with a Web site [USW] as a special kind of attitude. Based on a global review of literature and additional student's interviews, the ease of use, the entertainment value, the information content and the interactivity of the website are identified and composed as remarkable antecedents of user satisfaction. The antecedent's model of Alpar is an empirical tested model which can be used to explain the user satisfaction with regard to a website. One of the first antecedent models of customer satisfaction in e-commerce was presented by Szymanski and Hise (2000). They identify the shopping convenience, the product offerings and the product information, the site design and the financial security as the central antecedents of customer satisfaction in e-commerce.

Based on the result of Szymanski and Hise another model is composed by Ahlert et al. (2002). Altogether the authors present a modified model. In detail, the assurance and the security, the customer orientation and the multy channel possibility are the main antecedents of customer satisfaction in e-commerce. Cho and Park (2001) combine central findings of the user information satisfaction research with findings of the

satisfaction research and developed the Electronic Commerce User-Consumer Satisfaction Index [ECUSI]. Altogether Cho and Park identify ten antecedents of user and customer satisfaction. In detail the product information, the consumer service, the purchase result and the delivery, the site design, the purchasing process, the product merchandising, the delivery time and charge, the payment methods, the ease of use and additional information are mentioned. Kim and Eom (2002) also investigated customer satisfaction in e-commerce. The convenient and dependable shopping, the reliability of the retailer and the additional information are mentioned antecedents.

Wolfenbarger and Gilly (2003) focus on the perceived quality of the online shop. Altogether they identify four central antecedents: the fulfillment and reliability of the provider, the website design, and the customer services the security and Privacy of the online shop. The results of Wolfenbarger and Gilly (2003) show, that the correct and accurate delivery of the product has an important influence on customer satisfaction in e-commerce. Furthermore the authors underline the great importance of a good website design. Contrary to expectations the perceived transaction security has no remarkable influence on the perceived quality of the online shop. The customer service plays no significant role, too. A possible explanation for this might be that satisfied customers have no need to engage the customer service very often. In consideration of the research results the website design, the online offered information's, the order possibilities and the perceived transaction security are identified as possible antecedents of customer satisfaction in e-commerce.

Especially the website design emerged as an important criterion in the determination of customer satisfaction. The corresponding hypothesis H4 is:

H4: The more satisfied the customers are with the website design of the online shop (design satisfaction), the higher is the online shopping satisfaction.

The online offered information is identified as remarkable antecedents of customer satisfaction, too. Personal consulting can be substituted and the buying decisions of the customers are considerably easier. Therefore the hypothesis H5 is proposed:

H5: The more satisfied the customers are with the online offered information's (information satisfaction), the higher is the online shopping satisfaction.

For many customers the ordering process still is a central barrier. Only online providers who can offer a good and smoothly ordering process will win new users and satisfy their customers. The corresponding hypothesis H6 is:

H6: The more satisfied the customers are with the online order possibilities (order satisfaction), the higher is the online shopping satisfaction.

In agreement with the previous research results it can be assumed, that the perceived transaction security has no or at least only a small impact on customer satisfaction in e-commerce. Nevertheless the perceived transaction security should be part in the composed model. Thereby the impact of the perceived transaction security on the customer satisfaction in online book trade could be verified. The corresponding hypothesis for the model is H7:

H7: The greater the perceived transaction security, the greater is also the online shopping satisfaction.

The reliability and fulfillment of the provider are named as other antecedents of customer satisfaction in e-commerce (Wolfenbarger and Gilly 2003). The ordering process and the delivery of the product temporarily come apart in e-commerce. Because of this the reliability cannot be seen as an antecedent of the online shopping satisfaction. As an own antecedent the reliability and fulfillment are considered by the delivery satisfaction. In this study the convenience and the ease of use are considered by the design satisfaction and the order satisfaction. The convenience of the online shop is also considered by the delivery satisfaction.

With the study at hand it is intended to identify main antecedents of customer satisfaction and to analyze the influence of these antecedents. The influence of the assembled antecedents of customer satisfaction is more complex than expected. The website design can be seen as main antecedents of customer satisfaction in e-commerce. The website design has a positive impact on online shopping satisfaction and a positive impact on the

other antecedents like information satisfaction, order satisfaction, delivery satisfaction and perceived transaction security, as well. Therefore the design of online shops should be considered in future models of customer satisfaction in e-commerce. Compared to this the perceived transaction security has no significant impact on online satisfaction in e-commerce. The perceived transaction security can probably be seen as a must-be standard.

The fulfillment of a must-be standard does not increase customer satisfaction, it only avoids customer dissatisfaction. In the context of the Kano model has to be mentioned that the coherence between the perceived transaction security and the only shopping satisfaction is probably non-linear. The product satisfaction has no significant impact on overall satisfaction. This may be due to the fact that customers in online bookshops differentiate between the performance of the online bookshop and the delivered product. In this context it has to be annotated that the product satisfaction was measured with only one item. Further items should additionally be used. In future research it has to be tested whether the customers in other branches do differentiate between the performance of the online shop and the delivered product or not, as well. The multi-item scales which are used for the study at hand are based on approved measuring instruments.

As shown by the results, the item scales of the online shopping satisfaction and the overall satisfaction should be improved. Further items should additionally be developed.

There are interesting modifications on the effects side of the causal model, too. The reason between overall satisfaction and loyalty is more complex than expected. It is insufficient to satisfy the customers. In addition the online providers have to take further steps to increase the intention to repurchase and the intention to additional purchase.

At the time when customers show the intention to repurchase and the intention to additionally purchase, they will show the intention to look at recommendations. In this context an alternative loyalty concept is necessary. A limitation is that the data was collected only at a specific date. You could improve future surveys by using several points of time to collect the data. For example the online shopping satisfaction could be measured in an online survey after the online shopping process is finished. The delivery satisfaction could be measured after the product is delivered by the logistics provider. A

good alternative to an online survey in this case is a postcard in the accepted lot. The product satisfaction and the overall satisfaction could be measured afterwards. Effective possibilities are telephone interviews or as already known online surveys. With each of the presented possibility you can focus on specific aspects of customer satisfaction in online shopping.

### **5.5 Limitations of the Study**

As this is could be one of the studies and research conducted on Sri Lankans' online shopping, it has set the groundwork for further research. Firstly, in this research, random sampling techniques are not applied to the whole island; the ability of the collected data to generalize the entire population is reduced because only online buyers in Colombo were sampled. A random sample covering the whole of Sri Lanka should be employed to examine whether the results from this study are replicated. Secondly, the sample size was relatively small. A larger sample should be used to carry out any future research in this field.

## **6. Conclusion**

From the first objective the researcher has identified the nature of online shopping in Sri Lanka. It has provided the researcher that the number of companies willing to come online to sell their product. By the interviews researcher had, organizations already having their web site that allows everyone to get to know them, and the strength of their organizations have been identified.

In this research availability of product information was not sufficient according to the consumers. But online shopping sites say they provide sufficient information to all consumers who purchase online. And some Sri Lankan online shopping sites do not facilitate some payment methods due to the cost of payment gateway. But the sites which enable purchasing are secure with payment systems. And some companies are re-developing the web site to make the consumer attractive.

Decision making on consumer online purchasing depends on several criteria. It does not only depend on the product information. Consumers visit web sites to get product information before they purchase products. Therefore sometimes their decision may change after seeing the product and they might have more interest on product features of other similar products and might choose.

Although social influence has an impact on E-commerce decision making, few studies have been done on social influence in an Ecommerce decision support system. This is because until recently data about social interaction had not been adequately captured. Currently, however, the E-commerce customer base is at a turning point from a transaction-based society to a relationship-based society. As web-based social networks have become more popular, consumers who may not have complete information about a product or service often make use of previous customers' opinions. It has become apparent that the customer decision process is influenced by information from trusted people, not from product manufacturers or recommendation systems. The social influence from high quality reviews written by previous consumers can have a direct, positive effect

on potential consumers' decision making, and this effect can propagate through a social network. E-commerce companies are well positioned to take advantage of the social influence between consumers as a decision support tool by allowing a consumer to evaluate the appropriateness of recommendations and reviews. Ecommerce companies can ultimately increase sales with less marketing cost. Thus, we believe that social influence becomes a natural supplement that can be advantageously used by corporations in the E-commerce decision making process.

The conceptual analyses highlighted the differences in the overall importance of aesthetics given variations in consumer, product, and shopping task characteristics. We also discussed two sub dimensions of website aesthetics classical and expressive and suggested that Web-store designers should take them both into account given various contingencies. Aesthetics does come with a cost, which may not be universally justified. Thus, to aid e-retailers negotiate the benefits and costs of designing aesthetic sites, so suggesting that e-retailers adopt a focused approach to this aspect of the web store. Depending on the type of merchandise they sell and the type of customers they target, some, but not all, stores require heavy investment in aesthetic design. Some stores will have to invest in the more innovative aspect of aesthetic design (i.e., expressive aesthetics), while other stores' investment should be geared towards more conservative aesthetics (i.e., classical).

Realizing when and how to emphasis aesthetic design should result in attracting new customers and in higher retention rates of repeat customers, in improving consumer attitudes and increasing potential purchases, as well as in reducing churn rate. The framework suggests that e-retailers should tailor their Web-store design according to combinations of consumer and product characteristics. This can be done, for example, by customizing shopping sites that would offer similar products for different consumer groups (i.e., younger and older consumers). Such customization would help e-retailers better fit their Web sites to the various contingencies of the shopping context, this potential growth of Web stores for the same retailer might seem as a case of spreading resources instead of consolidation. This approach, however, entails better segmentation schemes that not only increase the matching between consumers shopping needs and e-

retailer offerings, but also serves as a means for better pricing schemes for different consumer groups.

In line with many E-marketing researches concerning the factors which cause consumer satisfaction in online purchasing experiences, this paper found that website security/privacy, and their design, their reliability/fulfillment and customer service are the four dominant factors which influence consumer perceptions of their online purchasing experiences. Sri Lankan online buyers had different perceptions of these four factors. Website reliability/fulfillment had the highest rating score, followed by website customer service. Website design ranked third, and the lowest was the website security/privacy. Each of the four types of online Sri Lankan buyers has a different perception of specific website elements and website factors. Regular online buyers were much more satisfied with website variables and website factors than the other online buyers.

On the other hand, trial online buyers had the poorest perception of online shopping. This research indicates that the least satisfying aspect to buying online is still website security/privacy, which rated the lowest factor. This result is consistent with the findings from the annual reports. The report highlighted security issues as the main reason for people choosing not to purchase online, yet the industry has done little to address these concerns over recent years. Consumers concerns about online financial security and privacy are closely associated with their perception of how good the technologies for secure payment mechanisms and with the reputation of the vendor. Hence, it is important for E-retailers to adopt advanced encryption technology, and post assurances of their online security on their website, in order to inform online consumers of their security measures.

Many Sri Lankan online purchasers are less satisfied with the website design. The ambience associated with the website, and how it functions, plays an important role in whether online consumers are satisfied or dissatisfied with their online shopping experiences. Moreover, website efficiency and usability can facilitate the buying process and establish consumer confidence in the site. On the other hand, online Sri Lankan buyers are not satisfied with website reliability/fulfillment and customer service. In order to consolidate this strength, E-retailers should choose more well-known products or

brands to market online. Branded products and services are usually perceived by consumers as possessing better qualities. At present, advanced technologies such as 3D technology can provide some functions (such as online interactive fitting rooms), to help consumers make better-informed choices.

In the web market, efficient customer services should include a well staffed, responsive service organization, a simple return process and ease of order tracking. Moreover, offering guarantees and warranties is an effective way of improving online customer service. The research findings indicated that each of the four website factors identified has a crucial influence on all online buyers' perceptions of online purchasing. One of the findings also indicated that different types of online purchasers (i.e., trial, occasional, frequent and regular online buyers) have different evaluations of website design and website reliability/fulfillment. They have a similar evaluation of website security/privacy and website customer service. This implies that the security/privacy issue; with the lowest score; is an important issue occupying the mind of most online buyers. Moreover, the significant discrepancy in how online purchasers perceived website design and website reliability will account for the difference in online purchase frequencies. It is a challenge for E-marketers to convert low frequency online consumers into regular consumers through successful website design and by addressing concerns about reliable performance.

Trust, particularly the unique dimensions of transactional security and privacy (Hoffmann et al., 1999), play a critical role in generating customer loyalty to an e-business. A recent study by Ratnasingham (1998) has shown that fear of online credit card fraud has been one of the major reasons customers have not done more extensive online buying. Moreover, privacy concerns have led to a public relations fiasco for some major e-businesses resulting in substantial brand image erosion (Advertising Age, 2000).

Several unique tools and techniques are available to e-businesses to enhance customer trust in their website. This includes third party approvals, encryption, authentication, and non-repudiation strategies. Encryption assures data security in transmission, authentication guarantees the identity of the participants involved in the electronic contract, and refuses to accept the responsibility means maintaining an genuine record of

the specific terms and conditions of the contract agreed to, by both parties. Passwords are the most commonly used in authentication processes.

Verisign.com and Authentidate.com are the leading providers of authentication technology and in Sri Lanka “Lankasign” <http://www.icta.lk/en/policy-leadership-and-institutional-development/584-lankasign-certificate-authority-launched.html> to provide this. Trust, which is closely related to security, is a very important factor in the online buying process behavior process. In general, you cannot feel, smell, or touch the product. You cannot look into the salesperson’s eyes. Therefore, these ways of developing trust are excluded on the Internet. Brand trust usually contributes to a reduction of uncertainty. In addition, trust is a component of the attitudinal component of loyalty. So it is obvious that loyalty in general to overcome some of the Internet’s disadvantages, e.g. to overcome perceptions that the Internet is an unsafe, dishonest, and unreliable marketplace. In fact, these perceptions are still stopping some potential customers from doing business on the web. A “third party approval” is a tool to generate trust. Companies like TRUSTe.com assure customers that merchants participating in their program meet specific standards of consumer privacy and transactional security.

A unique factor in e-loyalty is the critical role of the first impression created by a website as well as its ease of use (Smith, 2000)- easy navigation, fast page loads, server reliability, quick shopping and checkout processes, and a personalized interface. Szymanski and Hise (2000) figured out that convenience and site design are among the major factors that determine customer satisfaction, which in turn influence the decision to come back again to same site. A website has to be designed for a targeted customer segment, which means that the content of the site has to match the preferences of its targeted customer group. Global e-marketers should consider offering language-changing options (Internationalisation-i18n) since a website can be accessed from all over the world.

This concept is successfully implemented by Amazon and Stepstone, which is a European online career portal. Local adaptation should be based on a complete understanding of a customer group's culture. For example, people of different countries perceive colors differently or people with a different reading direction (such as Arabic or Chinese) do not look at the same spots on the screen as people in Western countries do.

An e-business has to be aware of the fact that a lot of customers are suffering from time constraints. If a web page takes too much time to load, it may keep potential customers away. Furthermore, navigating through a website has to be easy, which implies that browsers should be able to find the items they are looking for in an adequate amount of time. According to Forsythe, Ring, Grose, Bederson, Hollan, Perlin, and Meyer (1996), 58% of users make two or more navigational errors while searching for information. Web users make fewer mistakes if the hierarchical structure of the site is broader rather than deeper (Bernard, 2001).

Ideally, information should be organized in three hierarchical levels from the initial homepage. Norman and Chin (1998) have recommended that complex websites adopt a concave structure that is broad at the top and the bottom levels and narrow in the intermediate levels. This has been shown to substantially increase ease of navigation. Buyers of different products often follow different buying patterns. For example, an e-business has to know whether most of its buyers come to the website with or without any intent to buy. If customers visit a site without any intent to buy, placing good offers on the first page is important.

On the other hand, for an e-business whose customers visit the site with the intent to buy, establishing a website with an effective search function is important. In addition to web design issues, factors such as server reliability and fast response times represent key technical issues that have a major influence on e-loyalty. A server crash while browsing a website or even worse, while placing an order, will have an adverse impact on the decision to visit the site again.

Order fulfillment and rapid delivery systems are as critical to e-loyalty development as the other factors. A thoughtful logistics system that guarantees a fast delivery after the checkout process contributes to customer satisfaction, which in turn contributes to loyal behavior. In addition to the speed of delivery, the logistics system should allow different ways of delivering products. Some customers prefer to get the product delivered by parcel services, like FedEx and UPS. Others might want to pick up a product in a physical store in order to have somebody to talk to. Customer service is another crucial area for e-marketers (Helmsley, 2000).

Sometimes website designers cannot avoid a certain degree of complexity in the architecture of a website. Therefore, it is necessary to have a thoughtful customer service system. Links to Frequently Asked Questions (FAQs) and links to online representatives are useful in order to assist customers in the selection or buying process. A marketer should not just offer online assistance. In many cases, it is more convenient for customers to call a company. Therefore, the use of a phone number (Hotline) or Online Chat for consumers should be considered. A customer who buys something on the Internet has one major disadvantage compared to a customer in real space. Internet customers cannot touch, smell, or experience the good before they buy it. This makes a shopper insecure about buying a product. In order to minimize this insecurity, an e-business should offer brands that are well-known, good product quality, and, of course, guarantees.

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## Appendices

### Appendix 1

**An investigation into the relationship between the availability of product information and the decision making process on online shopping in Sri Lanka.**

#### **Survey on Online shopping in Sri Lanka – University of Colombo**

1. What is the turnover the companies received from online shopping in 2009?
2. What kind of services, offers and information about the product are provided by your site to customers?

Special offers	
Promotions	
Special discount on over purchases	
Free delivery	
Product information	
Ingredients	
Manufacture date	
Expiry date	
Image of the product	
Compatibility and features	
Product return policy	
Payment methods and Security	
Product comparison	
Others	

3. What kinds of products are available in your site?

Apparel	
Books and Magazines	
Computers	
Cosmetics	
Electronics	
Flowers	
Fast food	
Others	

4. What are the most common selling items?

5. Are there any complains and comments from the customers regarding the site?

Not enough information	
No image to Display	
No details about the delivery terms	
Slow web site	
Payment issues	
No online customer care	
Product not yet delivered	
Wrong item was delivered	
Others	

6. Any suggestions / reviews / ratings that customers have made to improve your site?

Conveniences	
Time saving	
Easy access	
More details	
Secure payment	
Discounts	
Special offers	
Others	

7. Is there any growth in online shopping considering the previous year records?

Yes	
No	

8. If Yes, What is the percentage?

%

9. Have your company recovered the investment on online shopping site?

Yes	
No	

## Appendix 2

6.2 Structured Questioner's that has distributed for customers who use online shopping

Serial no:	
Company name:	
Date:	

### **The relationship between the availability of product information and the decision making process on online shopping in Sri Lanka.**

#### **Survey on Online shopping in Sri Lanka – University of Colombo**

Please be good enough to fill this survey to provide me with the relevant information to conduct a survey on online shopping in Sri Lanka.

#### PART A

1. Your age Group

15-25	
26-35	
36-45	
Above 45	

2. Your monthly income?

<25,000	
26,000-45,000	
46,000-75,000	
above 76,000	

3. Your Educational level

Secondary Education	
Under Graduate	
Graduate	
Masters	
PhD	

4. Have you engaged in online shopping during last 5 years? (Please choose only one)

Yes, through foreign web sites	
Yes, through Sri Lankan web sites	
Yes, through both	
No	

**\*Note:** If your answer “yes” to the Q.4 is the 2<sup>nd</sup> and 3<sup>rd</sup> option, continue with Q.5, if the answer is 4<sup>th</sup> option, please proceed to Q.14

### PART B

5. What are the Sri Lankan online shopping web sites you have used?  
(You can enter more than one)
6. What type of products have you purchased online?

Clothing	
Books and Magazines	
Food Items	
Computer Items	
Other Electronic Items	
Gift Items	
Other	

7. What are the advantages you get doing online shopping? (you may select more than one)

Availability of Product Categorization	
Availability of in-details of product information	
Ability to compare features of products	
Availability of information on newly arrived Products & Promotions	
Other	

8. What kind of information do you look for in an online shopping site when purchasing a product? (you may select more than one)

Product features	
Brand	
Manufacturer	
Product image	
Product condition	
Product compatibility	
Publisher	
Price	
Warranty period	
Return policies	
Delivery information	
Others	

9. Do you make use of the available product information before purchasing a product online?

Yes	
No	

\*If your answer in “No”

I already know the product Information	
I don't know how to get in-detail product information	
I decide only by looking at the Image	
Other	

10. How far do you use product information when purchasing online?

All information available	
Certain information available	
Only the information I look for	

11. How important is this product information in making your purchase decision?

Very important	
Important	
Slightly important	
Not important	

12. What is your opinion on the “availability of product information” in Sri Lankan online shopping sites?

Sufficient	
Fairly Sufficient	
Average	
Insufficient	
Highly insufficient	

13. Has the unavailability / lack of product information affected your decision making process in purchasing online?

Yes	
No	

14. Do you intend to purchase products online through Sri Lankan websites in the future?

Yes	
No	

15. If the answer to Q.14 is “No” please state your reasons?

Unavailability of product information	
Available product information is insufficient	
Looking product is not available online in Sri Lanka	