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INFORMATION TECHNOLOGY

MASTER THESIS

EVALUATION OF E-COMMERCE SERVICE QUALITY USING THE
ANALYTIC HIERARCHY PROCESS

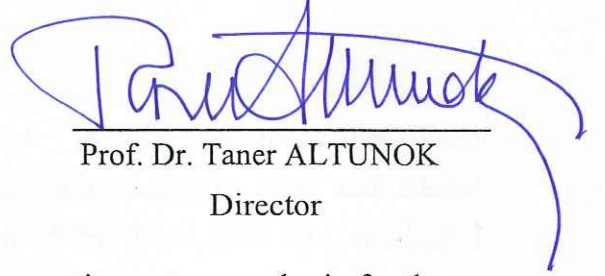
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Using the Analytic Hierarchy Process

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ABSTRACT

Evaluation of E-Commerce Service Quality Using the Analytic Hierarchy Process

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JULY 2013

Recent developments in the fields of Internet and Information Technology have led to renewed interest extraordinary in electronic commerce in societies. Electronic commerce is supporting of customers, supplying of services and commodities, portion of business information, manages business transactions and maintaining of bond between suppliers, customers and vendors by devices of telecommunication networks. In the new global business companies and institutions providing merchandise and services, synchronously with evolution of the world in field of electronic commerce are in effect to change the logical and physical structure of their organization in this area. On the other hand, our world is changing day by day, demand of people are changing and increasing synchronously with it, and need to a reference, and resource of accurate information is a request of each society. One of the most developments in recent decades is in field of computer science especially in web designing.

Web designing has many criteria and if designer does not sufficient attention to them, it

is possible causes to a negative and inverse result. Today Internet is an inseparable part of our life and we doing majority of our works with it. Therefore, satisfying confidence of customers is a vital goal for producers and vendors. The majority customers searching their needs in famous engine searches because they do not like to spend them time. Hence, to have a strong website be update with new techniques and new developments is inevitable.

In this paper, we discussed about the Electronic Commerce, designing of commercial websites and required techniques for this work. Analytic Hierarchy Process is a flexible, powerful and simple way to make decisions and can be used between the options in situations where opposite criteria makes it difficult to choose. It also solves all of the complexities by using focus on problems gradually.

In fact it turns a multidimensional problem into a one-dimensional problem and they will became to understandable. In addition, this property can be used to combine and unify scattered opinions by regarding their importance. In this thesis, we do survey about E-Commerce and website designing and we analyzed the websites of six international shoes company by Expert Choice.

Keywords: Electronic Commerce, Website Design, Search Engine Optimization, Analytic Hierarchy Process, Customer, Vendor

ÖZ

Elektronik Ticaret Hizmet Kalitesi De erlendirmesi Analitik Hiyerar i Süreci Kullanarak

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M.Sc., Bilgi Teknolojileri Bölümü

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Bu tezde, E-Ticaret ve web sitesi tasarımı hakkında bir anket yaptık ve altı tane uluslararası ayakkabı firmasının web sitelerini Expert Choice program ile analiz ettik

Anahtar Kelimeler: Web tasarım, Mü teri, Satıcı, Analitik Hiyerar i Süreci, Arama Motoru Optimizasyonu

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FOREWORD

Our world is changing day by day, demand of people are changing and increasing synchronously with it, and need to a reference, and resource of accurate information is a request of each society. One of the most developments in recent decades is in field of computer science especially in web designing. Web designing has many criteria and if designer does not sufficient attention to them, it is possible causes to a negative and inverse result.

Today Internet is an inseparable part of our life and we doing majority of our works with it. Therefore, satisfying confidence of customers is a vital goal for producers and vendors. The majority customers searching their needs in famous engine searches because they do not like to spend them time. Hence, to have a strong website be update with new techniques and new developments is inevitable. In this paper, we discussed about the E-Commerce, designing of commercial websites and required techniques for this work.

In chapter one we focused on fundamental concepts of E-Commerce. We explained these subtitles, generally: Definition of E-Commerce, History of E-Commerce, Types of E-Commerce, Advantages and disadvantages of E-Commerce, Impacts of E-Commerce, Limitations of E-Commerce, Relationship between E-Commerce & Information Technology, The role of websites in progresses of E-Commerce, Comparison of traditional commerce and E-Commerce and position and importance of decision making in E-Commerce. In chapter, two we explained about the websites, its importance and main criteria that have major role in designing website.

There are many classifies of website designing and many different methods to characterize these clusters. Academics determined a number of frameworks for classifying website designing but each one want to illustrate it form a unique perspective the main different classifies of website designing are:

Appearance, Website Usability, Search Engine Optimization, Customer Service, Information, Warranty & Return Policy and each of the these sections has subsets for themselves. In end of this chapter, there is a glimpse on Analytic Hierarchy Process.

Finally, in third chapter, we compared six big international shoes factories together and with Expert Choice program analyzed these factories and our information in this search gathered by experts of website designing.

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INTRODUCTION

In recent years, there has been an increasing interest in technologies and economic especially in E-Commerce area. E-Commerce is an essential part of any transaction framework. Similarly, courses of E-Commerce are mandatory sections of any economic and business education. E-Commerce acts as an intermediary between the user of merchandise and vendor in virtual environment. The purpose of E-Commerce is to provide a safe environment that user can select goods and services with more efficient.

Today progressing in information technology and other fields of sciences have led to change the world around us. Hence, they led out to the complexity of the issues, the variety and multiplicity of options and decision criteria. On the other hand, lead to better and faster decisions with fewer risks. One of the techniques based on pair wise comparisons established and has proven its effectiveness in multi criteria decision-making is Analytical Hierarchy Process that briefly is known AHP. This method is presented in the late seventies by Professor Thomas L. Saaty.

AHP is decision-making method based on two important factors: knowledge and experience. A unique feature of this method is that it can classify main factors and subplots. In this way, large problems can be broken down into logical sub-structures. That it is easier to decision making and decision maker is able to find optimal solutions through solve of small problems. AHP is a flexible, powerful and simple way to make decisions and can be used between the options in situations where opposite criteria makes it difficult to choose. It also solves all of the complexities by using focus on problems gradually. In fact it turns a multidimensional problem into a one-dimensional problem and they will became to understandable. In addition, this property can be used to combine and unify scattered opinions by regarding their importance.

CHAPTER 1

ELECTRONIC COMMERCE

It is necessary to be familiar with the concept of E-commerce and its sort, that firstly we have review in types of business generally. These definitions presented for the business word in the most of dictionaries usually. The exchange or buying and selling of goods in large amount that involves transformation from one point to another point. Social exchanges: the exchange of ideas and opinions and desires and demands. In glimpse, business is exchange of goods and services in order to earn income. When you purchase goods from the store, in business partner and become involved in its process.

Electronic commerce, commonly known as a E-commerce, refers to a expression of each kind of trading or commercial transaction, or any type of industry where buying and selling and provide services via electronic systems such as the Internet or other telecommunications networks, such as Amazon.com, eBay.com. In other term, a sort of transaction or dealing model that enables company or person to guide business through web sites and other electronic links. It includes operations like payment, sharing business information, transaction processing ...and customer support. It's a segment of a larger business model that use computers, mobiles, automated teller machines (ATM), credit cards and many other things that allows to factories and companies to connect their internal and external processes with more effectively and efficiently, and work more closely with customers, employees and suppliers that leading to improvements in overall business performance. Finally, a more comprehensive definition is: Electronic commerce is the expression used to define the information systems that conduct and support business processes, most often using web technologies.

1.1 History of E-Commerce

E-commerce in its initial form of commercial transactions, began during the cold war years when the industrial countries to build missile defense systems in late 1970s about 40 years ago. In the late 1970s when electronic data interchange (EDI), electronic Funds transfer (EFT), credit cards and electronic bank transfer invented business partners could transfer orders, invoices and many other business transactions and to this today continues to grow with modern tactics, telecommunications networks especially Internet but, the history of modern E-commerce has brief life. It began in the mid 1990s and easy, safety, and many advantages of E-commerce has improved rapidly since 1990s.

1.2 The Classifications of E-Commerce

There are many various classifies of E-commerce and many different methods to characterize these clusters. Academics determined a number of frameworks for classifying E-commerce but each one want to illustrate it from a unique perspective. The main different classifies of E-commerce are business-to-business (B2B), business-to-consumer (B2C), consumer-to-consumer (C2C), consumer-to-business (C2B) and mobile commerce (M-commerce).

1.2.1. B2B: Business-to-business is a type of commerce transactions that exists between businesses or a transaction that occurs between a company and other company to transfer of services and products. A possible explanation for this might be that business-to-business includes online wholesaling in which businesses sell materials, products and services to other businesses on the web sites.

1.2.2. B2C: Business-to-consumer refers to transactions between a business and its end consumer and so it create electronic storefronts that offer information, goods and services between business and consumers in a retailing transaction or it is an Internet and electronic commerce model that indicates a financial transaction or online sale between a business and consumer.

1.2.3. C2B: Consumer-to-business or C2B is the transfer of services, goods or information from persons to business or it is a business model where end

users create products and services that are used by businesses and institutions.

1.2.4. C2C: Consumer-to-consumer electronic commerce also known as C2C is an electronic Internet facilitated medium, which involves transactions among users, and it is a business model which two consumers deal business with each other directly.

1.2.5. M-Commerce: The term of mobile commerce was invented in 1997 to aim “the buying and selling of products, information and services” via wireless handheld devices such as cellular phones, laptops and personal digital assistants. Mobile commerce allows to users access to Internet and shopping in it without needing to find a place to plug in. Mobile commerce transactions continue to improve and the phrase includes the purchase and sale of a big range of services, online banking, bill payment, information delivery and so on.

1.3 Advantages and Disadvantages of E-Commerce

The invention of new telecommunication networks and modern online devices has resulted in a new business. E-commerce has in fact become one the most popular activities on the web. E-commerce created many benefits to companies and users but, it also resulted many disadvantages and problems.

1.3.1 Advantages

1. **Buying 24/7:** We can sell any time, night or day, 365 days a year. Even while we are resting, our users can visit our web site, search our goods, services, and determine their orders.
2. **Decrease Transaction Costs:** If we buy from online store, we spend low operational cost, we have better quality of service, and we can cut the many unnecessary costs. For example, if our goods or services downloadable, we will have transport costs completely cancel.
3. **Conduct a Business Easily:** In E-commerce, we do not need to physical company setups or there are not any crowds to deal with. We can buy

from our house comfortable, users can easily choose goods from various procedures without moving around physically.

4. **Comparison in Prices:** Everyone can easily compare fees among the various web sites. We can usually earn discounts on fees when compared with normal shop fees.

1.3.2 Disadvantages

1. **Security:** Security pursues to be a main problem in electronic commerce. Everyone good or bad, can easily open a web site, therefore there are many bad sites, which their aim is user's money.
2. **Guarantee:** There is no guarantee for product quality. Our orders might get damaged in the post or things may look different online to what you actually receive for example, slightly different colors and feel of clothes or the freshness of vegetables and fruits.
3. **Social Relationships:** Electronic commerce allows to users that buying and selling goods and services without geographic limitations but in this method we have not any contacts and relationships with other persons and loss our social contacts.

1.4 Impacts of E-Commerce

E-commerce is a new method business that mixes all of the prior business methods and transaction styles. E-commerce and E-business have impact on many districts of business for instance, economics, marketing, computer science, finance and accounting, production and operation management, management information system, human source management, business law and ethics. The following are some of the factors describe:

1.4.1. Marketing: The raise of information technologies and computer networks has many effects in business especially in field of marketing. Everyone can make markets work with more efficient and they can improve their career with information management within a group. In this case they can decrease cost of operations and catch new markets and new opportunities for selling and transactions.

1.4.2. Economics: In industry world, managers must encourage and conduct employees to devise plans to take advantages of new economic opportunities. Electronic commerce is creating new opportunities to the global economic for example in global travel and tourism industry.

Transforming from traditional business method to electronic commerce method is hard and there were many different factors for companies to adapt them with electronic commerce factors. For this work, they must use Internet and many other online networks, because for growth and use from new economic opportunities in each industry it is necessary to be match with new technologies.

1.4.3. Finance and Accounting: Two decades of progress in information technology and development of its applications in the field of economic and social to form a new chapter of relations between people, institutions, companies and governments and new concepts are emerging on literature of economic and trade. Internet as a global network, as well as prerequisite of e-commerce, for reason flexibility, attractive, ease for use, low cost access and ubiquity is changing the traditional business and E-commerce had a significant impact on finance and accounting that include saving time, disinflation, increase productivity, reduce the demand for money(reduce the cost of publishing) and etc.

1.4.4. Production and Operations Management: The outcomes of manager's work, by on time product quality productions and with the least cost is determined. For this purpose, first requirement is correct information. E-commerce is the best way to have the most accurate and correct information for managers because, consumers transmit their demands to managers directly.

1.5. Limitations of E-Commerce

There are some barriers for e-commerce setup, which include:

- Lack of knowledge and necessary information of use of E-commerce and Internet network.
- Protection of consumer rights in E-commerce
- Lack of legal infrastructures in E-commerce such documents that are not acceptable and electronic signatures
- Low security of electronic funds transfer in some countries
- Lower speed and limitations on the use of Internet

- Lack of information intermediary institutions and manufacturing companies of the benefits of Internet business
- The security and confidentiality of information exchanged.

1.6 E-Commerce and Information Technology

Information technology has changed the manner of acts of people, organizations and governments and so economic, social affairs and even the mentality of people has changed. Education, health, industry, manufacturing, trade, banking and even of all entertainments services have effected and changes with technology.

Information technology creates new jobs, new industries, change lifestyle and has brought new creativity in all of the dimensions of our life. Understanding of the people together, adapted cultures and decrease of incompatibility are examples of these consequences. From scientific perspective, information technology, genetic engineering with aerospace knowledge is one of the leading branches of knowledge and constructor of civilization of human in the future. Advances in information technology have expanded to the point that some experts with phenomena such as “inventing steam engine” have equated.

E-commerce is one of the important branches of information technology that has been emerged as the results of development of information technology.

1.7 The Importance of Websites in E-Commerce

Web sites are effective in acts of business of corporations. Websites are gateways to business brands, productions and services of manufacturers. A company that does not care about its websites ultimately will be bankruptcy in business. The websites that are not updated are like an old and faded showcase in a traditional business. Therefore, companies should have a strong background and exact planning in Internet searches. For many users, the sites of search (search engine) are the entry point to the Internet. For many changes in the world around us, each organization or agency should coordinate itself with the changes and enhance its work efficiency. Internet especially

web sites can be suitable means to achieve this goal. For instance, web can use up to extend markets, by facilitating the presentation and repartition of existing products in to new business centers. The web can also be a workmanship that facilitates product development, as companies who their existing customers well create exciting, new or alternative offering for them.

1.8 Features of E-Commerce Compared with Traditional Business

Advanced technologies are creating new opportunities and challenges for organizations. Changes in technologies lead to changes in laws commercial of firms and transformations of social and organizational in systems. Information technology as an element pioneer in new technologies can effect in three parameter of rapid, accuracy and cost of acts. Information technology can give several advantages: it is cheaper, faster and trustable. E-Commerce is changing way of business and convert traditional markets to newer forms of markets. E-Commerce has caused big changes in competitive conditions. For example, entrance of new competitors, globalization competitions and competition in standards and it has been new opportunities for business in various fields. Thus, E-commerce compared with traditional business can define as follow: presence at market in the form of “everywhere, everyone, all the time.”

1.9 Decision Making in E-Commerce

Evaluating and making a decision is knowledge. One of the major problems that we have had to solve has been how to evaluate a decision bases on its benefits, cost, opportunities and risks. We deal with each of these four merits separately and then combine them for the overall decision. We can use the Analytic Hierarchy process (AHP) for solve the problems.

CHAPTER 2

ELECTRONIC COMMERCE and WEBSITES

2.1 Websites Keys to E-Commerce

Today market, marketing and sales has been influenced the development of communication technologies by computers. Because extend of Internet and Electronic Commerce in the world traditional market has lost its shape and has new features. Even many vendors do not see the buyers of their products but their products are sold and its funds have received. This page of transactions shows that there are new systems in business world. The systems spread rapidly and their share increase by the day in the markets. In these systems, physical stores have replaced by electronic stores. Therefore, not need for place(s) in the expensive and busy areas for sale and receive purchase orders.

Today, it can take place in a small environment with low cost but with high performance. In fact, any company that wants to increase its share in global markets, it is absolutely necessary to use the system and its related technology. Today, as a subset of a unit business you can assign to your corner of the World Wide Web.

In this environment, you can connect with consumers, understand their need and sell the products to them. Anyone from any corner of the world can buy from you by this method. Use of this dealing systems require to especial environment, which named “web”. Your website is the environment of World Wide Web that is assigned to your company and has specific address, which named web address. In the last decade, the

Internet has been growing in the worldwide with fast speeds and now the majority of people especially teenagers up to date with these technologies. Form numerous individuals and companies around the world, which use the Internet certainly some, are in search of your products and services. In fact, with having a website, company is ready to make use of many available opportunities and it will be access able from any location and any time. Only by one click, anyone can have access to your company any time.

Website is an effective tool to marketing. Showing of products through an e-store is an excellent way to increase sales. In this method, you have an e-store with permanent showcases, easily access able, lower costs than a physical store, also more people have access to it, and it placed in an environment that allows you to take advantage of opportunities.

Your website is a start point to convince of visitors to need them for your products. You are excited them to purchase then you are inviting them to contact your site. Websites help you to connect with customers. There are many companies and persons that are interested to your products and services, but they are not ready to buy now or they are needed to more information to choose and purchase. You should connect with them and provide needed information. Finally, website is a great way to facilitate this process.

2.2. The Importance of Website in E-Commerce

All people are aware of the importance of website in business. These five factors are primary reasons importance of the website.

2.2.1. Credibility and Confidence: A website can have a strong impact on the confidence of visitors that are associated with company and us. A professional design, appropriate text with good writing, useful information about products and services and accurate contact information can increase the confidence of customers to company and show to people that you are knowledgeable and up to date. If you

can design a quality website with useful information people will be impressed.

2.2.2. Access from any Location and any Time: With a website, you can be familiar with opinions of people easily. If there is problem, eliminate it and get new orders of customers. In other words, with a click anyone can access to company in 24 hours a day, 7 days a week.

2.2.3. Website Is Powerful tool Sales: Website is an effect tool to marketing. Showing of products through an e-store is an excellent way to increase sales.

2.2.4. Increase the Value of Advertising: Add the website address in advertisement, business card and sign of company is a good way to attract customers to the company. Having website address helps to people that each time hear about company or see advertisement of company and react to message of company. Visiting of company website is easier than writing or going to store or calling. Because there are not any limitations and pressures for visitors and people get the information easily.

2.2.5. Attract More Customers In each business, a primary source for finding new customers is introduce and advertise to other people via previous customers. Having a website allows to people introduce company website to other persons easily. Website addresses are easier to remember than a phone number. In addition to presenting different ways to call makes it possible to make a call directly.

2.3 Business Website Designing

The design of commercial websites is a big challenge for companies. The most of manufacturers oriented towards the customers strongly. Designing of E-Commerce website is much more serious than having an interesting site to visit. The appearance of website is an important factor, but there are many another factors. It seems that many website designers focus on the appearance of the site more than efficiency. In designing

of commercial websites is needed to some basic information about the business, psychology and computer sciences.

For creating more sales through the website should focus on following points.

2.3.1. Content: Content that is includes keywords, targeted and written according rules. It will be increase rank of website in search engines. In addition, visitors will be interested to buy from website. Wrong written way will cause to reduce of customers and no keywords will lower the rank of website in search engines. Written style is the first influencing way to visitor that has visited your website for first time. Therefore, adequate attention to content of the website will caused to higher sales.

2.3.2. Loading: Pages that appear to slow, very large or very small pages and difficulty of navigate in the site each alone is enough to make visitors tired and frustrated. Visitors should never be waiting to appear of pages and should never up and down to read of favorite pages. He/she should never have problem to search in websites about purchasing.

Websites with arranged, structured and quick pages are more successful in sell usually. Loading speed of a page is very important. It causes to lose your potential visitors.

2.3.3. Less Use of Graphics: Graphical elements seem charming and attractive but it is not effective for sales usually. If you use too much may, make a contrary conclusion and speed of website will be low. In addition, it deflect visitor's mind from sell and advertising that are main objectives of website. In designing of websites should be less uses from graphical elements and size of graphical elements should be reduce as much as possible. The most of graphical images can be minimize without any problem in quality of images. We must be careful for not to overload any page with more than three images.

2.3.4. Logo: Maybe it does not much important at first glance but inherently, it is very important. Your logo represents your website. Website is meaningless without logo. Because, logo of the website will be as representative of your company in everywhere and always when he/she see your logo in another website recalls your website. Logo should have a specific meaning associated with subject of website also should have a specific size.

2.3.5. Domain: A good domain is the best way to advertise. Many people think that a domain with low letter is very good, but it is not true. In fact, a website that its address remains in mind is a great advantage and supremacy for company. Website domain must be coordinated with the text.

2.3.6. Browser Compatibility: You should test your site in the latest version of Internet Explorer as well as Safari and Firefox.

2.3.7. Logical Navigation: Limit your menu items into at most ten.

2.3.8. Consistent Layout: Layout of your site is extremely important for usability.

2.4. Classification Criteria for Website

There are many various classifies of website characters that exists between businesses or a transaction that occurs between a company and people to transfer of services and products. The E-Commerce websites of different companies may have different goals. However, in most cases the indexes reflecting a website's quality can usually be divided into some very important aspects as follows:

Appearance, Website Usability, Search Engine Optimization, Warranty and Return Policy, Customer Service and Information

2.4.1 Appearance

Visual effect of a web page and degree of amity embodied by color way, column and some other aspects:

Color Way, Column, Quality photography, Style of Site, Font Compatibility.

- **Color Way**
When evaluating this factor, we consider color setting and coordinating degree of match.
- **Style of Site**
About characteristics on webpage handling.
- **Quality Photography**
High quality product images are especially important for online retailers.
- **Column**
When evaluating this factor, we consider whether set type is compact and harmonious
- **Font Compatibility**
About whether the fonts are reasonable and the degree they adapt to different browsers.

2.4.2. Website Usability

An important component of a successful website is its degree of usability. Some key usability elements include:

Minimal Scroll, Fast-loading pages, Consistent layout, Prominent & logical navigation, Descriptive link text, Screen resolution, Simplicity, Cross-platform/ Browser compatibility, Security.

- **Descriptive Link Text**

Usability-testing shows that long link text makes it much easier for visitors to find their way around a site. Search engines favor long, descriptive link text, too. Back links are important to give users a sense of direction and to keep them from feeling lost.

2.4.3 Search Engine Optimization

Mainly about some parameters related with Internet, browser, etc, when users access Internet. The relevant factors describing the website basic technique are:

- **Browser Compatibility**

Display condition of different resolutions or different browsers.

- **URL**

When evaluating this factor, we consider the relationship between URL and band, business and the impression on URL

- **Code**

When evaluating this factor, we just consider the factors as concision of program code and error frequency

- **Mirror Site/ Affiliate Site**

When evaluating this factor, we consider the condition of mirror site or affiliate site set by website

2.4.4 Customer Service

A good website is very important factor to attract customers. However, providing all options be requires to regular contacts with clients and their demands. This section is mainly about service items and measures, which are set for a website. The important options are:

Membership Application, Help/ Navigation, Order Form, Payment, Customer Testimonials, links/ resources, Shopping Cart (Advanced E-Commerce), Buy New Tons

(Simple E-Commerce), Collections (Women, Men, Kids,...), Request Info/ Service/ Quote Form, Awards & Recognition, Upcoming Events, Members Only/ Password/ Protected Area, Features & Benefits and Catalog.

- **Payment**

Payment is the principle component of business and without paying any transaction, operation is not complete. In payment stage, buyer pays the money of bought productions to vendors. After payment, the product being purchased will be delivered to buyers. With the development of electronic commerce requires to electronic payment methods with high and considerable security is felt strongly.

- **Help/ Navigation**

Help information set by website in order to make convenience for user is visiting, including website navigation, key words search and help explanation

- **Catalog**

A catalog is a magazine-style publication that features photographs, illustrations, and extensive information about a company's products. The global catalog retail sector generates revenues of several hundred billion dollars each year. (Global Marketing, 2013: 451)

2.4.5 Information

When we are thinking to setting up a website and we must consider all aspects. One of these sectors is communication with customers. Website should not be confused the users. It must be responsive to customer inquiries and can be provided other useful information. The most important of these features are:

About us/ who we are?, Contact us information, Info pages, News, Employment Info, Database, Case Studies, E-Newsletter Info and sign up, Photo gallery, Employee direction, Articles/ Forms/ DOCs, FAQs, Follow (Facebook, Twitter, Youtube), Porfolio of work/ projects, Video file/ Demos, Info, etc.

1. **Contact Us:** Web addresses and URL must be present on all pages. Readers want to be associated with site administrators and they want to be aware of the quality or quantity of goods and services or to comment on its contents. Therefore, put the company name, addresses and telephone number at the bottom of every page of the site is necessary. Otherwise, if a user prints a page of site or copy he/she cannot find the site again. We must create a special “Contact Us” page include our detail in the “About Us” page and also at the bottom of each page. Information to include: business name, physical. address, mailing address, telephone, fax, email, emergency number and website address.
2. **Use of Blogs and Social Networks:** One of the most important tactics for attracting audiences is presence on social networks such as Facebook and Twitter. With regular updates about products and services in addition to attracting larger audiences, they are more interested to search in the site.
3. **Send E-Newsletter:** We know that electronic newsletter is a very power tool in marketing but people due to receive many emails to be avoided for sign up in newsletter. Despite these problems, still newsletter is a good way to inform about new products, services, awards etc. We can set up our aims in two different ways:
 - E-mail subscribes on a regular basis
 - Publish it on our websiteor both. Include information about our business, industry or anything that may be interest to customer(s).

2.4.6 Warranty and Return Policy

Warranty is an assurance by one party to the other party that specific facts or conditions are true or will happen. It’s a statement made by the seller or manufacturer of a product saying that it will perform in the way specified. Products can have problems either upon purchase or after a certain amount of time.

1. **Guarantee** Offer a money back guarantee. The longer the guarantee the more effective it will be. It could be 30 days, 60 days, 1 year or lifetime.

2. **Transportation** A company should utilize transportation systems when moving products through domestic and global channels. The major transportations are rail, water, truck and air. Each of these methods has its advantages and disadvantages.

2.5. A Glimpse in to Analytic Hierarchy Process

Today's world is becoming more and more competitive daily. Having a "High-Quality" website is a necessary move to stay competitive in this fast-paced world. Therefore, quality proves to be an essential factor in website development. It thus becomes clear that there is an increasing need to evaluate the quality of E-Commerce website. [15-16-17]

Many methods and techniques have been suggested over the years to evaluate websites. But among them Analytic Hierarchy Process (AHP) [3] is very famous and has been used to weight the indexes [23-25-55]. However, Saaty's AHP is too old and has some shortcomings, which can be summarized as follows [26]:

- The AHP method is mainly used in nearly crisp decision applications
- The AHP method creates and deals with a very unbalanced scale of judgment
- The AHP method does not take into account the uncertainty associated with the mapping of human judgment to a number
- The ranking of AHP method is rather imprecise
- The subjective judgment, selection and preference of decision-makers have great influence on the AHP results

Since its introduction, AHP has become one of the most widely used tools for multi-criteria decision-making. The procedures of the AHP involve six essential steps [27-28].

- Define the unstructured problem and state clearly the objectives and outcomes

- Decompose the complex problem into a hierarchical structure with decision elements (criteria, detailed criteria and alternatives)
- Employ pair-wise comparisons among decision elements and form comparison matrices
- Use the eigenevalue method to estimate the relative weights of the decision elements
- Check the consistency property of matrices to ensure that the judgments of decision makers are consistent
- Aggregate the relative weights of decision elements to obtain an overall rating for the alternatives

According to Saaty's definition, AHP is a tool for communication and interpretation of information and a multi-criteria measuring theory using descriptive, quantitative and qualitative criteria and deriving scale values from comparisons and scores.[18]

The method became known as a method used for decision-making in multi-factorial decision-making problems. It is a scientific approach that incorporates both qualitative and quantitative criteria and that ensures fast, effective and efficient selection from among multiple alternatives. [19]

AHP allows accurate and logical implementation of data, experience, insights and intuitions by demonstrating the relationship between purpose, goals (criteria), sub-goals and alternatives – by modelling hierarchically- of a complex problem for the decision-maker.[20]

AHP is used on a decision hierarchy, as a pre-defined comparison scale. It is based on one-to-one comparisons in terms of both the factors affecting the decision and the significance values of these decision-making points. As a result of these comparisons, the differences in importance transform into percentage distributions on decision points.[15,18]

Popular Concept of AHP

- Designed to solve multi criteria decision problems
- Method under conditions of certainty where we know all of the information but we need to trade off many factors
- We are comparing several alternatives on the basis of the same set of attributes

Application Areas

- Strategic planning
- Resource allocation
- Source selection, Program selection
- Business policy

Characteristics of AHP

- Be simple in construct
- Be adaptable the both groups and individuals
- Be natural to our intuition and general thinking
- Encourage compromise and consensus building
- Not require inordinate specialization to master and communicate

Steps of AHP

- Structure a problem with a model that shows the problem's key elements and their relationships.
- Elicit judgments that reflect knowledge, feelings or emotions
- Represent those judgments with meaningful numbers.
- Use these numbers to calculate the priorities of the elements of the hierarchy
- Synthesize these result to determine an overall outcome
- Analyze to sensitivity to changes in judgments

Comparison Scale for the Importance of Criteria Using AHP

Verbal Judgment	Numerical Rating
Extremely preferred	9
Very strongly to extremely	8
Very strongly preferred	7
Strongly to very strongly	6
Strongly preferred	5
Moderately to strongly	4
Moderately preferred	3
Equally to moderately	2
Equally preferred	1

Table 1 Definition of Values on AHP

Advantages of AHP

- Unity
- Hierarchy structure
- Complexity
- Interdependency
- Measurement
- Consistency
- Synthesis
- Tradeoff
- Judgment and consensus

Principles of AHP

- Reciprocal condition
- Homogeneity
- Dependency
- Expectation

Problems of AHP

- The lack of standard for measuring the qualitative criteria
- Lack of univalent for conversion criteria together

Consistency

The consistency ratio must be calculated in order to assess whether the decision-maker has behaved consistently when benchmarking the criteria. In this calculation, random index numbers based on n number of criteria are used. If the value found as a result of the calculations is below 0.10 (10%), it is concluded that the comparison matrix is consistent. Otherwise, the decision matrix should be re-established. In order to detect whether there is any deviation from the ideal situation in the matrix created, it is necessary to calculate the consistency index and the consistency ratio. (Palaz and Kovanci, 2008:55)

Consistency index formula = $(\lambda_{\max} - n) / (n - 1)$

Consistency ratio formula = Consistency index / random walk index

N	1	2	3	4	5	6	7	8
RI	0.00	0.00	0.58	0.90	1.12	1.24	1.32	1.41

Table 2 Definition of Values of Consistency Index

AHP Software

- Computations
- Sensitivity analysis
- Graphs & tables

General Graph of AHP

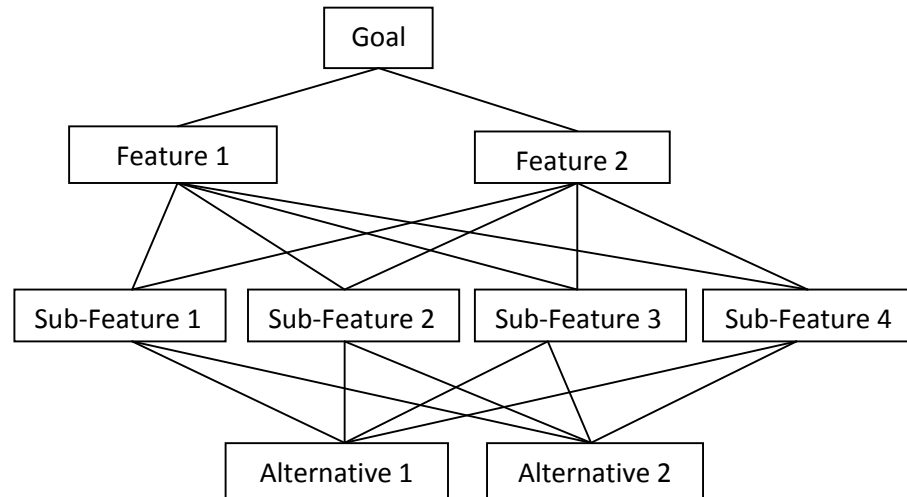


Figure 1 The Best Choice of Alternative

		Perfect	Good	Medium	Weak
1	Coordinating with all search engines				
2	Warranty service system				
3	Loading speed				
4	Purchase order and payment system				
5	Site style design and color way				
6	Easier access to the information needed				
7	Providing survey form from customers				
8	Useful and adequate resources and contents to consumers				
9	Create motivation and interest in customer to research in site				
10	Free postal system to deliver the merchandise				
11	Providing easy communication system for users				
12	Electronic service via email or social networks				

Table 3 Sample of questionnaire used by experts

CHAPTER 3

ANALYSIS OF THE FEATURES OF BUSINESS WEBSITES

3.1 Methodology

These days, as for daily spread of communication and internet around the world, there is millions of websites in all countries worldwide which every day millions of people have visited these web sites. Because of this, there are new opportunities. For example, a recent survey showed around 70% of the UK's population now has access to an internet connection that is a big business opportunity. On the one hand, if the companies would more people, more customers coming in to check on their business then they need a business website. Any company, which has a business, will definitely need a business website, these days because more and more people go online on a daily basis than those who do not. Their website will be the best tool for promoting their business. These websites will essentially become an online shop-window, accessible to customers all over the world, which means the better it looks and more and up-to-date it is, the better impression it will make on consumers. On the other hand, those company which don't have their own business website and rely mostly on the television and radio ads will not attract a lot of customers compared those who have their own professional-looking websites.

The business website should have engaging content enough to get a few people surfing the worldwide web randomly into the website. A site's engaging content is what attracts people. The companies have to reflect on the site what they are all about, what their businesses are all about. In addition, when people are all in the website, the companies will likely get more clients than they have had when they released ads on television, radio and print. Meanwhile, to make maximum use of these opportunities, there are many criteria that companies, businessmen and business women have to consider in their E-commerce websites for attracting people and win more customers. The most important of these criteria are divided in six parts.

First "appearance & style of site", this feature of the E-commerce websites has the most effect on the consumer for attracting to the business websites, text in these websites must have good color, also text have to be readable easily. The graphics have to be meaningful and if we upload a photo in these sites, it is necessary the photo must have quality photography and have to be fresh, unique or original.

Second "website usability", this feature is related to the ten options which rise the usability of the business websites to high level that can be listed as following : minimal scroll, fast loading pages, consistent layout, screen resolution, prominent and logical navigation, descriptive link text, simplicity, cross-platform/ browser, compatibility, and security.

Third "search engine optimization", there is a need to respect the special rules on the website for optimize the search engine. The most necessary of them are: page title with your top keywords, strong keywords-rich headlines, keyword rich content, keyword rich alt tags on images, keyword rich URLs for text links, clean CSS/HTML code, and headings tags in HTML to let search engines. Fourth

“warranty and return policy”, this feature is one the important options that most costumer consider it. To draw attention customers and satisfy them, we need to sort out and settled down the following items: guarantee and application of products, return form, transportation and return back service.

Fifth “customer service”, customers choose a site that will give them better service and more quality, for this a business website have to provide these services: membership application, order form, payment form, costumer testimonial, links/ resources, shopping cart (the advanced E-commerce), bay new tons (simple E-commerce), collections (women, men, kids, etc), request info/ service / quote form, awards and recognition, upcoming events, member only/ password/ protected area, features and benefits and catalog. Sixth “Information”, costumers for rely on the business websites require some information that we have to provide in these sites, for example we have to add these options: about us, contact us, information page, employment information, and etc. All in all, this six-part which are described briefly, in following of the paper will be explained with more detail.

3.2 Foreword

This paper considers six websites of six international shoes companies, for analyzing. After survey these websites by few experts in related field, I submitted these data to the Expert Choice application and in following the results which obtained from this application, will described and analyzed, but before start to describe and analyze, It is better to get accustom with the application.

3.4. Investigating and Describe the Attributes

As mentioned before, in this paper few experts with regard to the evaluation criteria website (appearance & style of site, website usability, search engine optimization, warranty and return policy, customer service and Information) scoring to the six

international companies. The result of the six companies (Action, Bata, DC, Relaxo, Toms and Vans) which analyzed by the expert choice application, shown in figure number one.

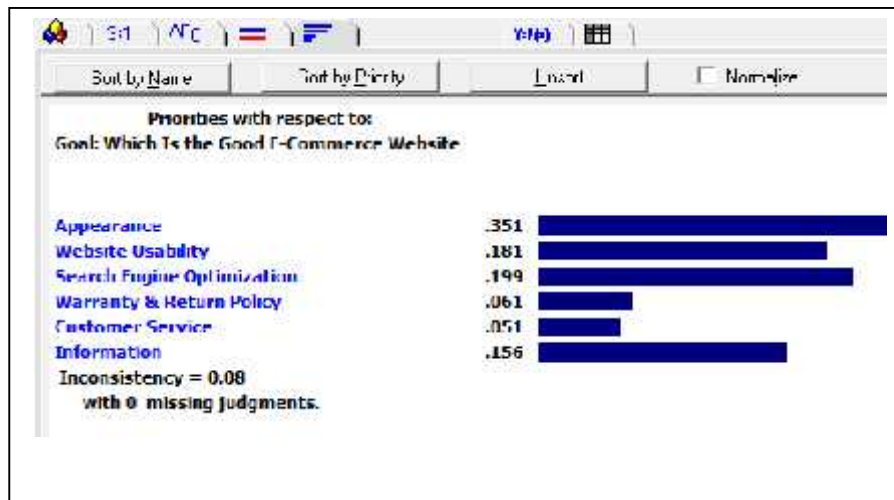


Figure 2 The result of Analysis with Expert Choice

Vans Company has the highest rank with score of .234 out of .1000. This means that Vans is the most successful company among other companies in attracting consumers through its website. Vans win this success because Vans has done the design principles better than other companies have. Action, DC and Toms are approximately in the same level. Finally, Bata and Relaxo have the lowest score in the analysis; this has shown these companies are not successful to attract customers through their websites. If these companies wish to earn more money and win more customers, they have to make changes in their E-Commerce websites and have to follow the design principles and by this way they will be able to improve their rating through their business websites.

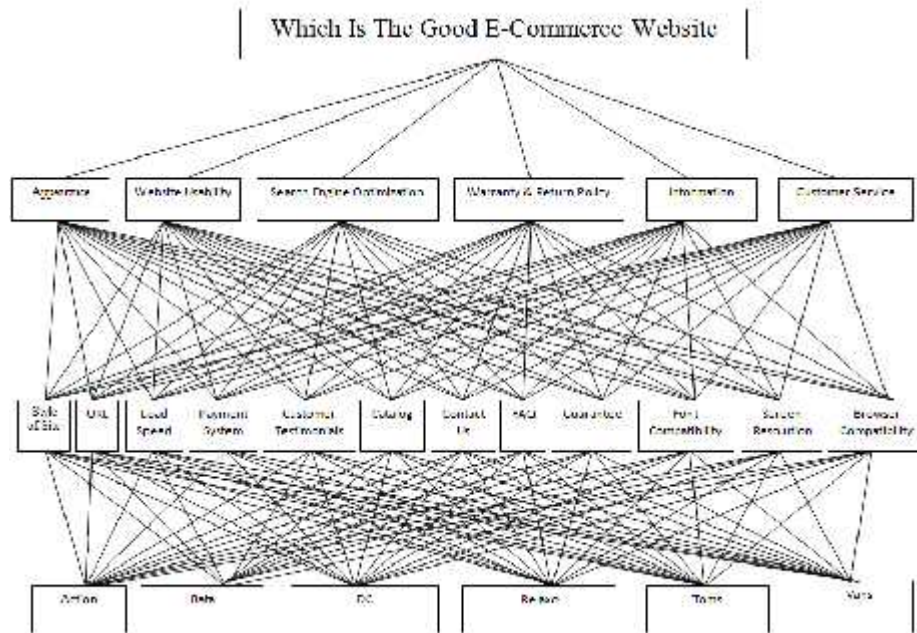


Figure 3 Tree Diagram of E-Commerce Website

3.5 Appearance and Style

Before start analyze the result of appearance and style, it is useful to get more accustomed with the importance of appearance and style .A business website is a content delivery device above all else. This is why accessibility and usability are important concerns.

Without these attributes, a business website, any website, will not fulfill its purpose. It may as well be kept on a local computer. Web accessibility and usability are all about utility. Elements placed where people look for them in a universally understood way. Using Contact, for example, instead of Holla! Little common-sense things, actually.

Utility can be boring. It can be the anti-style. In addition, sometimes this works, while other times it falls short. Not addressing style is chancy. Take a look at the world of automobiles. Some vehicles speak only of utility.

Sometimes this utility can catch on as popular style. Look at the Jeep, for example. It is all about utility over style, yet it is a vehicle many people love — for its style. It tugged at the heartstrings of US Servicemen originally.

3.5.1. Analysis

The overall results were analyzed in the previous section. In this section the results of specialized attribute, "appearance & style" to be analyzed. As shown in figure number 2, with regard to the appearance, Action has the highest rate with score of .465 out of 1000 among other companies has the most popular appearance and style. Action Company has used moving images, songs and unique photos in its website. When a visitor load this web will be curious to spend more time in the website. The success factor of Action to get the highest score in this part is happy and attractive appearance

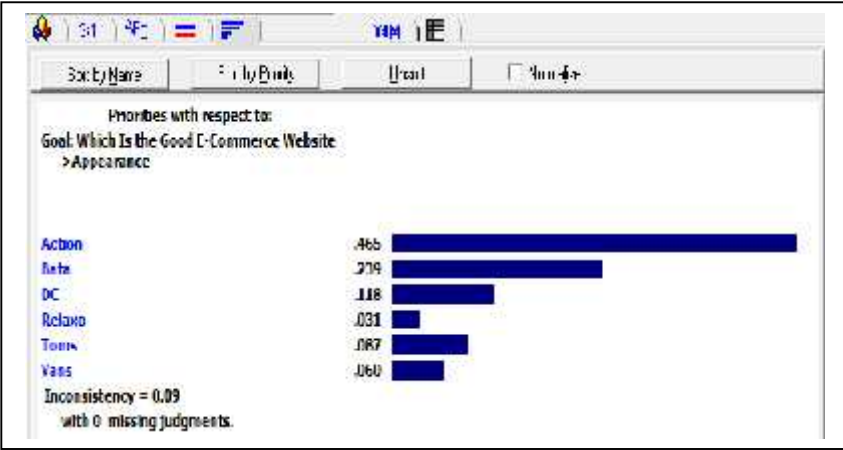


Figure 4 The Result of Analysis from view of Appearance

Bata has the next highest rate, although Bata used good appearance in its website but it is not attractive as much as Action's website is. Vans, DC and Tome are approximately in the same level. Finally, Relaxo has the lowest score in the analysis; this means these companies are not success to attract customers through its website. Relaxo has used simple style and appearance in its website. The simplicity of this website is because it does not use any unique photos, moving images and songs.

3.6. Website Usability

On the Web, usability is a necessary condition for survival. If a website is difficult to use, people **leave**. If the homepage fails to clearly state what a company offers and what users can do on the site, people **leave**. If users get lost on a website, they leave. If a website's information is hard to read or does not answer users' key questions, they leave.

For software and physical products, the improvements are typically smaller — but still substantial — when you emphasize usability in the design process. For internal design projects, think of doubling usability as cutting training budgets in half and doubling the number of transactions employees perform per hour. For external designs, think of doubling sales, doubling the number of registered users or customer leads, or doubling whatever other desired goal motivated your design project.

3.6.1. Analysis

In this section the results of specialized attribute, "Website Usability" to be analyzed. As shown in figure number 3, in view of Website Usability, Dc's rate exceeded from other companies and has the highest rate with score of .458 out of 1000. This success has shown Dc's website has better Website usability than other companies.

Toms with score of .213 has the next highest rate, albeit Toms used good web usability in its website but it is not active to answer costumers' questions as much as Dc's website is. Respectively Relaxo and Vans are next rank. Finally, Action and Beta have same score and the lowest score in the analysis; this means these companies are not success to attract customers through their websites' usability.

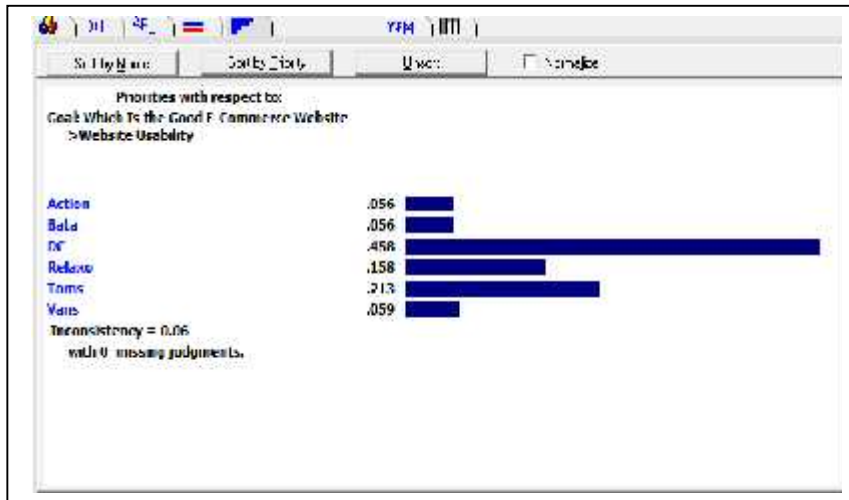


Figure 5 The Result of Analysis from View of Website Usability

3.7. Search Engine Optimization

In the world of website marketing, search engines are an essential key to success. They are the most important way to bring traffic to websites. Understanding how search engines work and what they require is an important first step to harnessing their marketing power.

There are proven methods to search engine marketing involving website design, content adaptation, and keyword strategy. The primary goal of these methods is to bring traffic to your site. The secondary goal is for that traffic to be targeted to your product.

In the Internet marketing game, exposure is essential. However, marketing efficiency requires effective exposure to the right prospects.

3.7.1. Concepts

A subset of search engine marketing that seeks to improve the number and quality of visitors to a web site from "natural" ("organic" or "algorithmic") search results.

3.7.1.1. Page Rank (PR)

A link analyze is algorithm that assigns a numerical weighting to each element of a hyperlinked set of documents, such as the World Wide Web, with the purpose of "measuring" its relative importance within the set. The algorithm maybe applied to any collection of entities with reciprocal quotations and references.

3.7.1.2. Web Directory

A web directory is a directory on the World Wide Web. It specializes in linking to other websites and categorizing those links. Web directories often all of website owners to directly submit their site for inclusion, and have editors review submissions for fitness. The most common methods of SEO include on-page optimization or utilizing keywords and meta tags and link strategies.

3.7.2. Analysis

Now Vans has the highest rank with score of .403 out of .1000. As we can see, Vans is the most successful company among other companies in attracting consumers through its website. Vans win more consumers in this view, because Vans has used by using good methods of Search engine optimization.

Bata and Tome are approximately in the same level. In addition, the next high rate belongs to Action with score of .056. Finally, Relaxo has the lowest score of .34 in the analysis. This has shown this company is not success to attract customers through their website in view of Search engine optimization. If these companies wish to earn more

money and win more customer have to make changes in their Search engine optimization methods and have to follow the newest SEO principles and by this way they will be able to improve their rating .

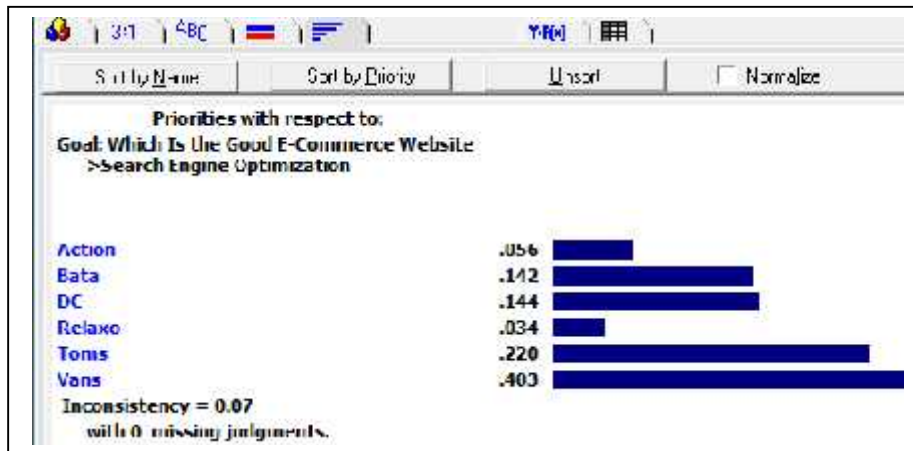


Figure 6 The Result of Analysis from View of SEO

3.8. Warranty and Return policy

In contract law, a **warranty** has various meanings but generally means a guarantee or promise which provides assurance by one party to the other party that specific facts or conditions are true or will happen. This factual guarantee may be enforced regardless of materiality which allows for a legal remedy if that promise is not true or followed. Although warranties are used in many contractual circumstances, they are a common feature in consumer law for automobiles or real estate purchases. Warranties may also state that a particular fact is true at one point in time or that the fact will be continue into the future (a "promissory" or continuing warranty).

Return policy means there is an opportunity for consumer who does not like the product to return that product to source seller website. Meanwhile there are special conditions and limited time for return a product. Each company or business website has different conditions and different limited time depending on the kind of the products.

3.8.1. Analysis

In this, section the results of specialized attribute, "Warranty & Return Policy" to be analyzed. As shown in the figure number 5, in term of Warranty & Return Policy, the rate of Toms by only one point exceeded from Vans, which has rate of .320, and Toms has the highest rate with score of .321 out of 1000. According to the analysis, Toms provides the most appealing warranty and return policy of its products for costumer through its business website. Dc with score of .181 has the next highest rate, although DC used good guarantee and return policy in its website but it is not active as much as Toms and Vans are. Finally Beta, Action and Relaxo approximately have same score and the lowest scores in the analysis, because these companies are not provide reasonable warranty and return policy for their products to attract customers.

A good business website provides unique privileges for warranty services and warranty of its products.

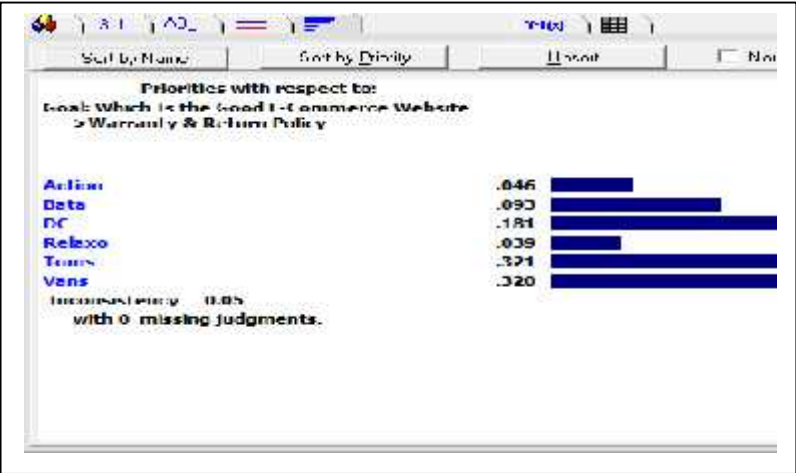


Figure 7 The Result of Analysis from View of Warranty and Return Policy

3.9. Customer Service

Customer service is the provision of service to customers before, during and after a purchase. According to Turban et al. (2002), "Customer service is a series of activities designed to enhance the level of customer satisfaction – that is, the feeling that a product or service has met the customer expectation."

The importance of customer service may vary by product or service, industry and customer. The perception of success of such interactions will be dependent on employees "who can adjust themselves to the personality of the guest," according to Micah Solomon. From the point of view of an overall sales process engineering effort, customer service plays an important role in an organization's ability to generate income and revenue. From that perspective, customer service should be included as part of an overall approach to systematic improvement. A customer service experience can change the entire perception a customer has of the organization.

3.9.1. Analysis

As shown in the figure number 6, between six companies in this analysis in view of customer service, Vans has the best customer service in its business website with rate of .543. It is necessary to make user happy because There's an old saying in business: A happy customer will tell one or two people; an unhappy one will tell to ten person.

Therefore, it pays to keep your customers happy-especially when doing business online and Vans have been successful in this way. The next top rate belongs to DC with score of .163 that approximately is one third.

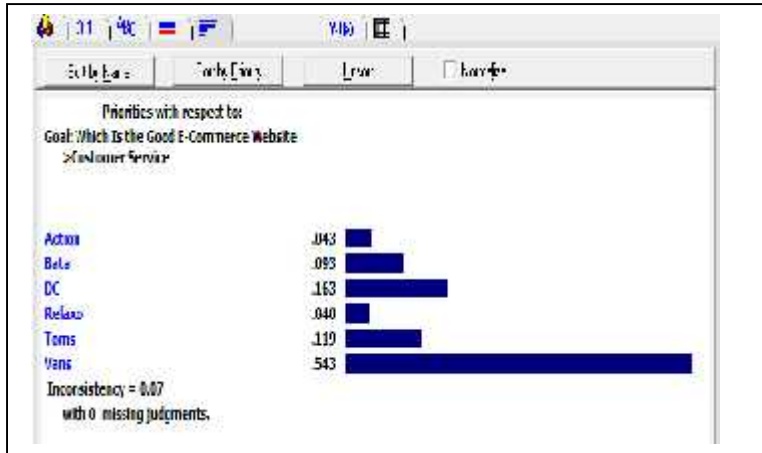


Figure 8 The Result of Analysis in View of the Customer Service

the rate of Vans. Toms has weak customer service with score of .119. The weakest rates, which are under 100, belong to these companies (respectively) Beta, Action and Relaxo.

3.10. Information

We cannot stress enough that most crucial business detail is contact information—which is why it has its own section. Mills exclaims, "How many times do you visit a website and think 'how hard is to contact this company?' Have a number, email, address and a contact form easily accessible and visible," he says. It makes a difference because there is nothing more frustrating than being unable to get in touch with a needed business or service.

When you put an email address or a phone number on the site, do not upload this information as part of an image — the number or address should be able to be clicked on or copied right from the site in order to place the call or send an email conveniently and quickly. Most smart phones these days have the ability to do "click to call" on the web, so make the process as easy as possible for users.

3.10.1. Analysis

The last part of analysis is about “Information”. As figure number 7 presented, Vans again got the highest score of .437 among other companies and for this good ranking deeply indebted to its proper information in its website. Toms with score of .231 has the next highest rate and in compare with Vans is one second of the rate of Vans. The third place belongs to Relaxo and the rest companies have rates under 100. Companies with low ranking have to improve their crucial business information as described in the previous section.

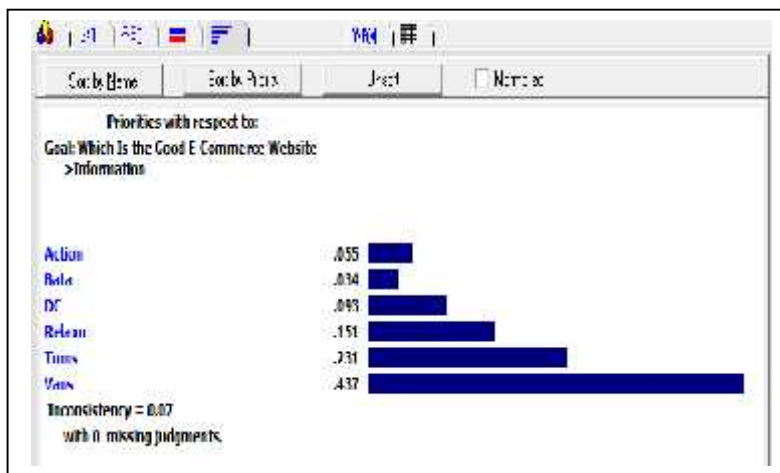


Figure 9 The Result of Analysis in View of the Information

CONCLUSION

When there is a decision, assessment methods are also activated, starting an important process. The problem is defined and needs are identified at the early stages of the decision processes, then possible assessment results are computed so as to arrive at the final decision that will support the whole and provide a roadmap. This study uses statistical methods and the AHP technique in the decision-making phases.

In the chapter one (E-Commerce), the topics were discussed such as, the history, concept, impact, limitation, classifications of E-Commerce and other important issues in e-commerce. The second chapter investigated the importance of the website in E-Commerce, also we survey various aspects of a good business website that one the most important of them is SEO. In last chapter, I investigated and analyzed the websites of six international shoes company by using Expert Choice application and compare them together. However, according to the analysis, we can conclude that E-Commerce websites can be very beneficial for the Business.

It allows your doors to stay open 24/7 so you never have to turn away a customer. Finally, E-Commerce service quality is steadily becoming a valued tool, especially in the business and in my opinion; we can make further progress in this area by provide better E-Commerce service quality.

Automate the sales process to keep customers in the loop

Use auto responders to thank your customers for their order, welcome them to your opt-in e-mail list, and send them order confirmations and other transactional emails like

"your item has shipped" notices. Customers have come to expect these courtesies, but not everyone online bothers. You can even add an element of surprise to these customer-service e-mails by including a coupon for money off their next purchase or some extra information they will find relevant to the product they have just bought.

You may also want to ask if everything is all right with your customers' purchase or if there is anything further, you can do. This kind of follow-up can relieve any possible feelings of buyer's remorse and reinforce the positive feelings about your business your customers had when they originally bought from you.

Make it easy for people to contact you

There will always be times when a customer needs to talk to or e-mail someone directly, so do not hide your contact details away in a dark corner of your website, and always provide contact information on every message you send out. You may also want to create a customer service page on your site that includes your FAQs, the names and e-mail addresses or phone numbers of people who can help, and other relevant information. I am often surprised at how many people with small e-businesses really do not want to talk to customers and actually make it hard for people to get in touch. However, the worst thing you can do is look like you are hiding or just do not care.

Personalize and segment your e-mail messages

I cannot say this often enough: Use your customers' names in your e-mail subject lines and in your messages. Only 4 percent of marketers personalize and segment their messages, according to Jupiter Research, and yet personalized messages have almost twice the click-through rate of bulk e-mail. As an e-business owner, you can personalize and segment your communications with customers in many ways, including: Personalizing emails with names and other pieces of information you collect Sending

customers personalized birthday, anniversary or special occasion offers. Sending customers details of new products you know they'll be interested in (in its recent "Consumer E-Mail" study, Double Click reported that 43 percent of the respondents would respond to "purchasing recommendations based on past purchase behavior") The more details you can collect about your customers, the better you can serve them with laser-targeted offers, thank-you messages and information that's relevant to their needs and wants. This is where your e-mail management software makes your life easier. It can do the segmenting and personalizing for you, so you can spend your time thinking of more ways to target your marketing.

Ask your customers how you can serve them better

People love taking short surveys, and it has been shown that customer satisfaction is rated higher among people who have been asked what they want, even if their answers have not been acted upon. Just asking what your customers want and how you can make your service better makes them feel listened to. Actually, *acting* on their suggestions and improving your service is gravy! Remember, good customer service does not have to cost much. You do not have to spend a fortune giving away free products or large discounts.

Even a small gesture like thanking customers for their business can help maintain a positive vibe around your business. In addition, automating your everyday customer service tasks frees you up to respond to real concerns or complaints--making your overall customer service even faster and better.

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APPENDIX

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