

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

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Abstract— 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. 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 step by step. 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.

Index Terms— Electronic Commerce, Commercial Website, Manufacturer, Information Technology, Website Design, Search Engine Optimization, Analytic Hierarchy Process

1 INTRODUCTION

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's 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. And 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's 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-plat form/ 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.

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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 customer 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, customer testimonial, links/ resources, shopping cart (the advanced E-commerce), buy 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”, customers 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.

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. But marketing

efficiency requires effective exposure to the right prospects. Search engine optimization (SEO) is the process of affecting the visibility of a website or a web page in a search engine's "natural" or un-paid ("organic") search results. In general, the earlier (or higher ranked on the search results page), and more frequently a site appears in the search results list, the more visitors it will receive from the search engine's users. SEO may target different kinds of search, including image search, local search, video search, academic search, news search and industry-specific vertical search engines. As an Internet marketing strategy, SEO considers how search engines work, what people search for, the actual search terms or keywords typed into search engines and which search engines are preferred by their targeted audience. Optimizing a website may involve editing its content, HTML and associated coding to both increase its relevance to specific keywords and to remove barriers to the indexing activities of search engines. Promoting a site to increase the number of backlink, or inbound links, is another SEO tactic. The plural of the abbreviation SEO can also refer to "search engine optimizers," those who provide SEO services.

WARRANTY & 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. For example, new car sales typically include a factory warranty which guarantees against the malfunction of the car for a certain time period. In real estate transactions, a general warranty deed may promise good title to a parcel of land while a limited warranty provides a limited guarantee of good title. A warranty may be express or implied, depending

on whether the warranty is explicitly provided (typically written) and the jurisdiction. 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.

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. Don't want your phone ringing off the hook? Just use an email address, but be sure you answer emails in a timely manner. Moreover, please, get an email address for your domain. Using Gmail – or worse, an AOL email address – is not professional, and that is what you are striving to be. If you like Gmail's interface, you can use Google Apps to set up custom email addresses through Gmail – it is free for up to 10 email addresses.

WEBSITE USABILITY

Web usability is the ease of use of a web site. Some broad goals of usability are the presentation of information and choices in a clear and concise way, a lack of ambiguity and the placement of important items in appropriate areas. Also it is appropriate for all ages and both genders. As more results of usability research become available, this leads to the development of methodologies for enhancing web-usability. There are a number of usability testing tools available in the market. In the context of E-commerce websites, the meaning of web-usability is narrowed down to efficiency: triggering sales and/or performing other transactions valuable to the business. Web usability received renewed attention as many early e-commerce websites started failing in 2000. Whereas fancy graphical design had been regarded as indispensable for a successful e-business application during the emergence of internet in the 1990s, web-usability protagonists said quite the reverse was true. They advocated the KISS principle (keep it simple, stupid), which had proven to be effective in focusing end-user attention.

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 doesn't answer users' key questions, they leave. Note a pattern here? There's no such thing as a user reading a website manual or otherwise spending much time trying to figure out an interface. There are plenty of other websites available; leaving is the first line of defense when users encounter a difficulty.

The first law of e-commerce is that if users cannot *find* the product, they cannot *buy* it either. For **intranets**, usability is a matter of employee productivity. Time users waste being lost on your intranet or pondering difficult instructions is money

you waste by paying them to be at work without getting work done. Current best practices call for spending about 10% of a design project's budget on usability. On average, this will more than double a website's desired quality metrics and slightly less than double an intranet's quality metrics.

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.

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. Some have argued that the quality and level of customer service has decreased in recent years, and that this can be attributed to a

lack of support or understanding at the executive and middle management levels of a corporation and/or a customer service policy. To address this argument, many organizations have employed a variety of methods to improve their customer satisfaction levels, and other key performance indicators (KPIs).

The customers use e-mail, chat, and text messaging in their daily lives, and your business website is the first place they turn for help. It is necessary to engage with them on all of these online channels, without losing track of the conversation. By creating a single conversation over time across phone, Web, and mobile channels, you can improve the customer experience while streamlining interactions.

APPEARANCE

A site must be visually appealing, polished and professional. Remember, it is reflecting your company, your products and your services. Your website maybe the first and only, impression on a potential customer receives of your company. An attractive site is far more likely to generate a positive impression and keep visitors on your site once they arrive. As businesses large and small continue to populate the web, your challenge is to attract and keep user's attention. Ideas like this are what PR professionals pay attention to keep their businesses successful.

INVESTIGATING & 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 (A, B, C, D, E and F) which analyzed by the expert choice application, shown in figure number one.

F company now has the highest rank with score of .234 out of 1.000. This means that F is the most successful company among other companies in attracting consumers through its website.

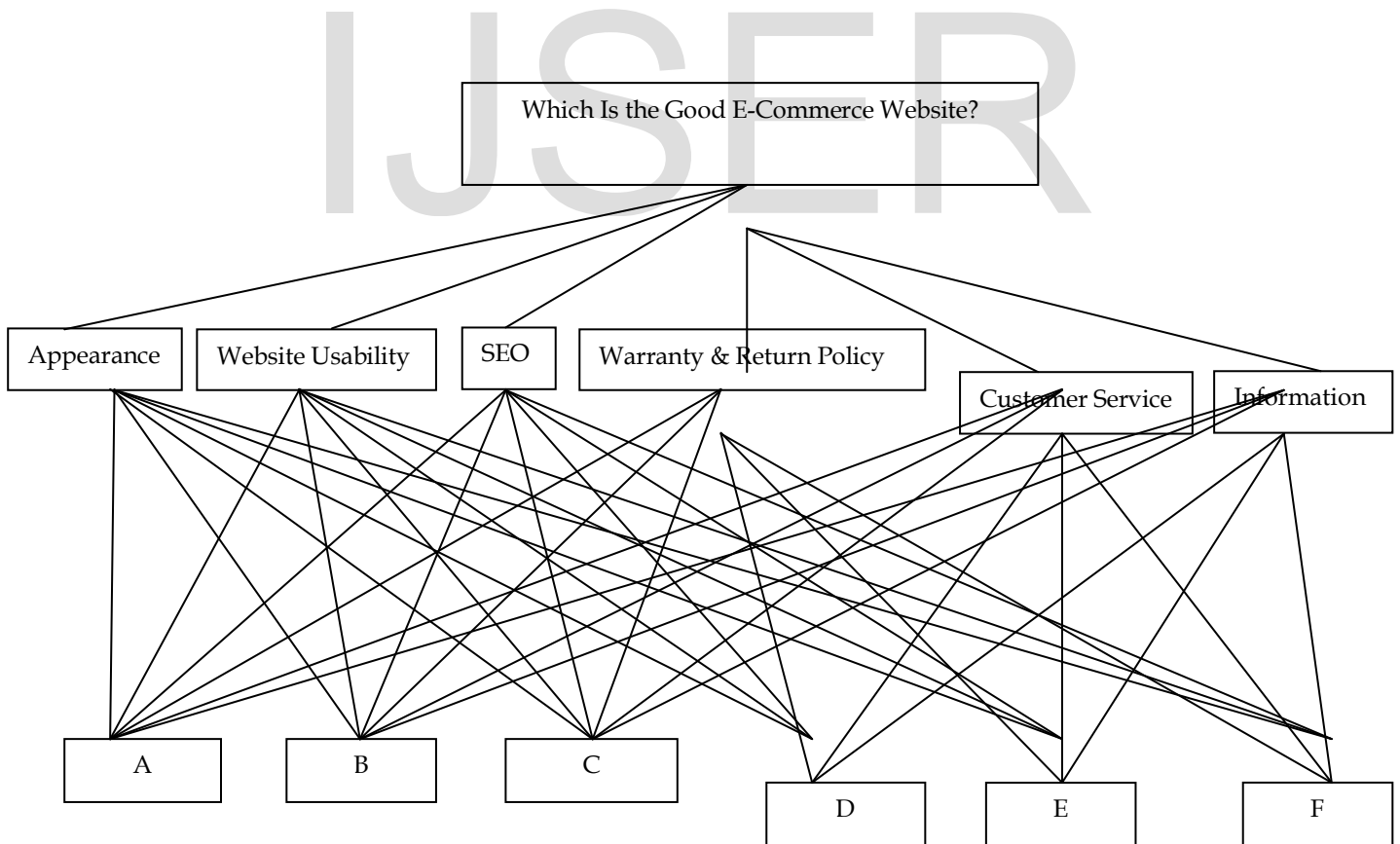


Fig. 1. Tree Diagram of E-Commerce Website

F wins this success because Vans has done the design principles better than other companies. A, C and E are approximately in the same level. Finally B and D have the

lowest score in the analysis, this has shown these companies are not success to attract customers through their websites. If these companies wish to earn more money and win more customer 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.

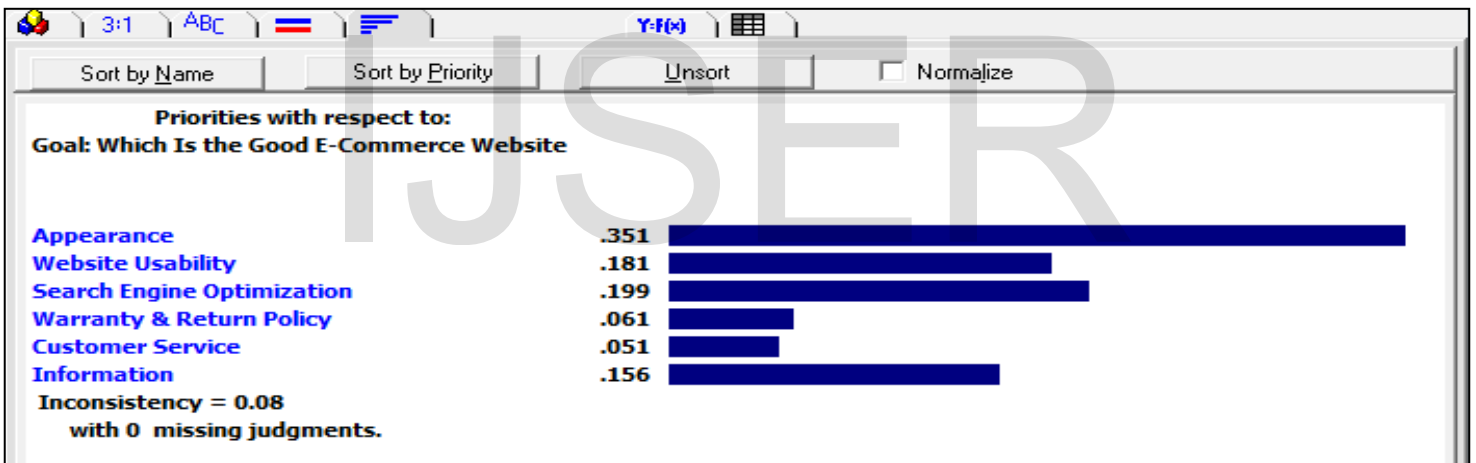


Fig. 2. The Result of Analysis of Six International Shoes Companies in Expert Choice Application

CONCLUSION

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, 80 to 90% of Internet users turn to search engines such as Google, Yahoo, MSN to find information they need. Therefore, the importance of search engines should be treated according in the marketing campaign. Even if the exact formulae that the top search engines use to calculate rankings are usually a closely guarded secret, you can apply SEO

techniques because it is free, it is easy, it is targeted marketing, and do not need to be constantly monitored or funded as they are self-sustaining once you set them into motion. 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.

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