

Use of the World Wide Web for Marketing Purpose : A Comparative Study

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요약 세계화, 정보화, 개방화 등으로 대변되는 오늘날의 불확실하고 변화 무쌍한 경영환경은 규모나 업종에 관계없이 모든 기업들로 하여금 과거와는 다른 경쟁무기를 강구할 것을 강요하고 있다. 이러한 흐름에 발맞추어 기업들은 인터넷, 특히 World Wide Web (WWW)의 활용에 지대한 관심을 기울이고 있다. 기업들이 WWW의 활용에 관심을 기울이는 목적은 여러 가지가 있을 수 있다. 본 연구에서는 기업들의 이러한 활동을 분석해 보기 위하여 미국의 대기업, 미국의 지역의 대기업, 그리고 대형 Website들에 있어서 7가지 마케팅 활동을 위한 WWW의 활용도에 초점을 맞추었다.

본 연구의 결과에 의하면, 미국의 대기업과 미국의 지역의 대기업은 주로 기업의 홍보(Public Relation)에, 대형 Website들은 주로 사용자들의 site 방문을 장려(Encouragement)하는데 WWW을 활용하는 것으로 나타났다. 또한, 본 연구는 미국의 대기업들은 대화형 안내책자 (Interactive Brochure)에도 WWW을 적극 활용하고 있으며, 대형 Website들과 미국의 지역의 대기업들은 직접판매와 고객화 (Direct Sales and Customization)를 위한 WWW의 활용측면에서 상당히 다른 형태를 보여주고 있음을 보여주고 있다.

Abstract Nowadays, both large and small business organizations have been using the Internet in general or the World Wide Web in particular to cope with the global competition. One of the major purposes that these business organizations utilize the World Wide Web is to support their marketing activities. In this study, we compared the uses of the World Wide Web, for supporting seven different categories of marketing activities, among three different groups of companies: the Top US corporation, the Top Non-US corporation, and the Top Web site groups. Results of the study showed that companies in the Top US corporation and the Top Non-US corporation groups primarily focused on Public Relation, while companies in the Top Web site group emphasized Encouragement. The Top US corporations also focused on the Interactive Brochure and the Top Web site companies were significantly different from the Top Non-US corporations with regard to Direct Sales and Customization. We discussed the potential reasons for these similarities and differences. The study also provided the extension for future research and discussed its limitations.

1. Introduction

Since the invention of the World Wide Web (Web) in 1991, the number of Internet hosts has been increasing tremendously. The Web has made the Internet easy to use and navigate by the common untrained person using point and click skills (Emerick 1995).

Additionally, the Web has fueled the rapid growth and expansion of the commercial use of the Internet. According to the latest Internet Domain Survey reported

by the Internet Software Consortium(<http://www.isc.org>) in July 2000, approximately 35% of the more than 93 million Internet hosts registered their top-level domain names as commercial.

Although these organizations can use the Web to support their businesses in many different ways such as for information management, for collaboration, and for customer support and technical assistance, the popular use of the Web by these business organizations is for their marketing activities. Thus, this study observed how business organizations in three different groups: the Top US corporation, the Top Non-US corporation, and the Top Web site groups, employ the Web to support their marketing purpose. Reasons for the similarities and differences of the current Web usage among these three target groups of companies were investigated and discussed.

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The following section provides conceptual background of this study. Research methodology and hypotheses are provided in the third section. The fourth section provides analysis of this research. In the fifth section, we discuss results of this study. Finally, conclusion, limitations of this study, and extension for future studies are discussed.

2. Conceptual Background

In this study, we create typology to define five categories of the Web usage that are relevant to marketing purpose. In addition to these five categories, we add two special categories that can be included on the Web pages, and will reinforce the main objective of the use of the Web because if the customers do not have a compelling hook that engages and involves them in a site, the peril of losing potential business is high (Spalter 1995). The seven categories are:

1. Information Clearing House: Information Clearing House (Ainscough 1996) provides a place to exchange information with customers. It facilitates the concept of one-to-one marketing and supports two-way communication with the customers. Companies can send a single separate message to a particular customer; questions can be asked and answered online; and customers can send their comments or feedback to the company. The Information Clearing House can be in either the easy form that the companies provide their e-mail addresses in their Web sites, or the specific form that the companies create and publish in their Web sites so that customers can use to send their messages to the companies.

2. Public Relation: Public Relation provides a place where the company can announce its interesting information such as company's news, meeting, conference, campaign, research findings, new technology, sponsorship and special events. Public Relation serves as the one-way communication for sending information from companies to their customers.

3. Interactive Brochure: Interactive Brochure provides information about the company's products or services. It may range from the simple advertisements with product information in text-and-photo format, to the multimedia production (Ainscough 1996) such as

listening to music for new CD, watching VDO clip online, and changing car color and accessories online. With the Interactive Brochure, customers can choose the specific product information they want to access, and the more information the consumers have, the better vehicle they will have in mind when they want to buy that product or service (Forrest, Kinney, and Chamberlain 1995).

4. Direct Sales and/or Customization: Direct Sales provides a feature allowing customers to order the company's products or services online. The orders together with customers information (name, shipping address, credit card number, etc.) will be entered and sent directly to the companies via their Web sites. On the other hand, customization allows customers to specify their product requirements when ordering online. With Direct Sales and Customization, customers purchasing behaviors can be recorded directly. Based on analysis of these purchasing behaviors, appropriate marketing campaign may be designed for each individual customer. That is, Direct Sales and Customization support the concept of one-to-one marketing that companies do not sell single product to as many customers as possible, but sell (both currently and in the future) to one customer as many products as possible (Peppers and Rogers 1995).

5. Marketing Research: Marketing research is a questionnaire posted online so that the companies can ask the customers to answer and provide their information such as preferences, demography, occupation, income, expenses, and activities.

6. Encouragement: Encouragement is any special activities such as game, free gift, free software, item turnover (e.g., providing items that change frequently, continually updating and refreshing contents), career opportunities (Spalter 1995), included in the Web site to encourage the customers or visitors to visit the site again. This encouragement directly supports the main objectives of the use of the Web for marketing purpose.

7. Other Internet Activities: Other Internet Activities are the special features that Web sites support such as links to other Web sites, discussion lists, news groups, review from experts, and search engine. These Internet Activities can help the companies making their Web sites visible and bringing many new visitors or potential customers to their sites.

3. Research Methodology and Hypotheses

3.1 Research Methodology

This study investigated 300 Web sites of the companies in three different groups: the Top 100 US corporations from Fortune 1000 List, ranked by revenue, (<http://www.fortune.com/fortune/fortune500/>), the 100 Top Non-US corporations from Global 500 List, ranked by revenue, (<http://www.fortune.com/fortune/global500/>), and the Top 100 Web Sites rated by PC Magazine readers (<http://www.zdnet.com/pcmag/stories/reviews/0,6755,2394453,00.html>).

For each Web site selected in this study, we visited the site, coded, counted, and collected the data that whether the site had or included each of the seven categories of Web usage for marketing purpose in the conceptual background. These results were used to test the following hypotheses.

3.2 Hypotheses

There were many similar characteristics, for example, size of company, level of revenues, number of employees, number of countries in which they operate, and number of businesses or products they produce, etc., between the Top US corporations and the Top Non-US corporations in this study. In contrast, the PC Magazines Top Web site companies were, in average, much smaller and most of them operate or provide their services only in the US. Thus, we expected that the Top US corporations and the Top Non-US corporations would be similar, but the PC Magazines Top Web site companies would be different in their Web usage for supporting their marketing purpose. The three null hypotheses, tested across seven categories of Web usages for marketing purpose, in this study were:

Hypothesis 1 : Web usages for supporting marketing purpose by the Top US corporations and the Top Non-US corporations were similar.

Hypothesis 2 : Web usages for supporting marketing purpose by the Top US corporations and the PC Magazines Top Web site companies were different.

Hypothesis 3 : Web usages for supporting marketing

purpose by the Top Non-US corporations and the PC Magazines Top Web site companies were different.

4. Analysis and Results

For each of the seven categories of Web usage for marketing purpose, number of the companies, in each of the three groups, that had or included that particular category in their Web sites was counted. The results are reported in Table 1. Then, these results together with sample size for each group (100 Web sites) were used to calculate Z-scores to test for similarity or difference, regarding the Web usage in each category, for each pairwise comparison among the three groups. The one-tail Z-score test, with 99% confidential level and critical Z-score at 2.33, was used in the analysis. The Z-score results are reported in Table 2.

Table 1: Number of companies, in each group, using the Web for each category of marketing activities

| Marketing Activities Web Sites | Information Clearing House | Public Relation | Interactive Brochure | Direct sales/Customization | Marketing Research | Encourage | Other Internet Activities |
|--------------------------------|----------------------------|-----------------|----------------------|----------------------------|--------------------|-----------|---------------------------|
| Top US corporations | 85 | 91 | 83 | 35 | 24 | 61 | 54 |
| Top Non-US corporations | 74 | 96 | 42 | 27 | 16 | 49 | 49 |
| Top Web site by PC Magazine | 81 | 49 | 54 | 43 | 13 | 93 | 63 |

| Marketing Activities Web Sites | Information Clearing House | Public Relation | Interactive Brochure | Direct sales/Customization | Marketing Research | Encourage | Other Internet Activities |
|--------------------------------|----------------------------|-----------------|----------------------|----------------------------|--------------------|-----------|---------------------------|
| Top US corporations | 1.93 | 1.43 | 5.99* | 1.22 | 1.41 | 1.71 | 1.99 |
| Top Non-US corporations | 0.75 | 6.48* | 4.41* | 1.16 | 2.00 | 4.19* | 1.29 |
| Top Web site by PC Magazine | 1.18 | 7.44* | 1.7 | 2.37* | 0.6 | 5.76* | 1.99 |

* significant at p = 0.01 level

Table 2: Z-score results

5. Discussion

5.1 Information Clearing House

There was no significant difference in the Web usage for Information Clearing House among the companies in three different groups in this study. The study results supported hypothesis 1, but did not support hypothesis 2 and hypothesis 3. More than 70% of the companies in each group provided their e-mail addresses to allow their customers to contact them. Nowadays, companies accept the concept of one-to-one marketing and realize the importance of customers feedback, comments, or suggestions. Since the Web can be used as an effective two-way communication tool with inexpensive costs, most of the companies use their Web site as their Information Clearing House.

However, an interesting fact regarding how companies in different groups provided e-mail addresses in their Web sites had been found from our investigation. The companies in the Top US corporation and in the Top Non-US corporation groups usually produce and sell many different products and operate in many different countries or regions. Some of the companies in these two groups provide many different e-mail addresses for different functional areas or business units. Thus, customers must decide that who or which e-mail address they should contact. Unfortunately, this may be confusing and create difficulty for customers and, finally, inhibit customers feedback.

5.2 Public Relation

Z-score results showed that there was no significant difference in the Web usage for Public Relations between the companies in the Top US corporation group and in the Top Non-US corporation group. More than 90% of the companies in these two groups used their Web sites as a one-way communication tool to provide their customers the companys interesting information. In contrast, only 49% of the companies in the Top Web site group used their Web site for Public Relation. That is, Web usage for Public Relation by the companies in the Top Web site group was significantly different from those in the other two groups. The study

results supported all three hypotheses.

Many Web sites in the Top Web site group such as Deja.com (www.deja.com), eGroups (www.egroups.com), LibrarySpot (www.libraryspot.com), did not have specific products or services to offer on the Web. Customers know the Web sites in this Top Web site group, however only few customers who visit the Web sites know the companies who own or publish the Web sites. When compared with goodwill or reputation of the companies in the Top US corporation and the Top Non-US corporation groups, the reputation of the companies in the Top Web site group may not be very important for them, but their well-known Web sites are more important for their business. Perhaps, their major business may be the sales of advertising space on their Web pages. Thus, the companies in the Top Web site group tended to use their Web site for Public Relation less than those companies in the other two groups.

5.3 Interactive Brochure

The companies in the Top US corporation group included Interactive Brochure in their Web sites more than the companies in the Top Non-US corporation and the Top Web site groups did (83%, 42%, and 54% respectively). Z-score results showed significant differences in the Web usage for Interactive Brochure between the companies in the Top US corporation and the Top Non-US corporation groups, and between companies in the Top US corporation and the Top Web site groups; but, there was no significant difference in the Web usage for Interactive Brochure between the companies in the Top Non-US corporation and the Top Web site groups. That is, the study results supported hypothesis 2, but did not support hypothesis 1 and hypothesis 3.

With the multimedia capabilities of the Web, it can be effectively used by the companies to present their products to their potential customers. Since the country where the Internet hosts are registered most and the people use the Web most is the United States, the US companies are using their Web sites for Interactive Brochure more than the companies reside in any other countries. It is easy for the potential US customers to purchase products from the US companies after the customers see the products from the Web sites. We

argued that, although many of the Top US corporations selected in this study were international corporations, their major market is still the local market in the country. In contrast, data from the investigations also showed that many Non-US corporations selected in this study (e.g., Sony, Shell, Toyota, Hitachi, Siemens) needed to have another Web site for their US subsidiaries in order to compete in this market.

On the other hand, many companies in the Top Web site group did not have actual or tangible products to offer for their US customers. Thus, the companies in this group did not extensively use the Web for Interactive Brochure.

5.4 Direct Sales and Customization

For the Direct Sales and Customization category, the study results supported hypothesis 3, but did not support hypothesis 1 and hypothesis 2. The Z-score results showed significant difference in Web usage for Direct Sales and Customization between the companies in the Top Non-US corporation and the Top Web site groups. All companies in the Top Web site group were in the United States. If these companies have products to offer to their potential US customers, they may want to fully utilize the online-ordering capability of the Web.

In contrast, companies in the Top Non-US corporation group may operate in many countries and offer different product models in different countries. Thus, it is not flexible for the companies in this group to utilize the online-ordering feature of the Web.

For the companies in the Top US corporation group, on one hand, these companies were similar to those companies in the Top Web site group since all of them are the US companies and the local market is their main customer. For the Top US corporations who have the appropriate products to be sold online, they will utilize the online-ordering capability of the Web. On the other hand, the companies in the Top US corporation group were similar to those in the Top Non-US corporation group since they are large and/or international companies, operate in many countries, and offer many different products. Therefore, it might be difficult (e.g., many different product models for customers in different countries) or might not be appropriate (e.g., buy a new house) for them to employ

the Web feature and allow their customers to order online. Thus, the study results did not show significant difference between the companies in the Top US corporation group and in either the Top Non-US corporation or the Top Web site groups.

5.5 Marketing Research

Results showed that only 24%, 16%, and 13% of the companies in the Top US corporation, the Top Non-US corporation, and the Top Web site groups respectively employed their Web site to collect data about their customers. The Z-score results also showed none of the significant difference among the companies in these three groups regarding Web usage for Marketing Research. Thus, the study results supported hypothesis 1, but did not support hypothesis 2 and hypothesis 3. The fact that the country where people use the Internet or the Web most is the United States may be the main reason that, among the three groups, the companies in the Top US corporation group was the group that used the Web for Marketing Research most. For the companies in this Top US corporation group, it is most likely that the visitors who answer the questionnaire posted in the Web sites will be the company's potential or target customers.

5.6 Encouragement

The study results showed that the companies in the Top Web site group strongly emphasized on encouraging visitors to come back to the Web site again. More than 90% of the companies in this group included something in their Web site to encourage visitors to re-visit the sites. The Z-score results indicated that Web usage for Encouragement by companies in the Top US corporation and the Top Non-US corporation groups were not significantly different; but Web usage for Encouragement by the companies in these two groups were significantly different from that of the companies in the Top Web site group. These results supported all three hypotheses.

Since many companies in the Top Web site group did not have actual products to offer to their visitors, and the major objective of their business on the Web may be the selling of advertising space on their Web

pages, the Web sites of the companies in this group need high frequency of visitors coming to the sites. That is, encouraging visitors to re-visit their Web sites is the critical success factor of the Web sites in this group.

5.7 Other Internet Activities

Approximately, half of the companies in the Top US corporation, the Top Non-US corporation, and the Top Web site groups (54%, 49%, and 63% respectively) included Other Internet Activities in their Web sites. The Z-score results did not show any significant difference in Web usage for Other Internet Activities among the companies in these three groups. Thus, the study results supported hypothesis 1, but did not support hypothesis 2 and hypothesis 3. The main Other Internet Activities included in the Web sites of the companies in all three groups was the hyperlinks to other related Web sites.

6. Conclusion

The study results showed that Web usage of the companies in the three groups of this study did not support all three hypotheses in every category of marketing purpose discussed in the conceptual background. We argued that the main reason for this was the different characteristics (e.g., international companies with potential customers in many different countries vs. US companies focusing more on the local US market, having actual products to offer vs. selling advertising space on the Web pages) of the companies in these three different groups.

Thus, we conclude this study by proposing the preliminary guideline for designing companys Web site. The starting point for designing the Web site should be the examination of companys business. Based on the nature of companys business, several recommendations for its Web site design are:

- if the company has actual products or services to offer, it should consider including the Direct Sales and/or Customization in its Web site and employing the Web site as one of companys distribution channels,
- if the company offers several or many different

products, its Web site needs to be well-organized so that it will not be too complicated or too difficult for visitors to search for each product,

- the company should provide sufficient navigation tools such as site map, menu, and table of content, to help visitors in searching for product information, especially in the case that the company offers many different products,
- each product should utilize the multimedia capabilities of the Web by using the Interactive Brochure,
- if the company operates in many countries with balanced distribution of sales volume and its products are adjusted to match the requirements of customers in each country, the company should consider separating its Web site for each country in each language so that each Web site can effectively employ the Interactive Brochure, Direct Sales, and/or Customization and the visitors of each site will be its potential customers, and
- if the main objective of the company in creating its Web site is the selling of advertising space on it Web pages, the company should focus on niche market and provide something interesting in its Web site to draw high traffic into the site.

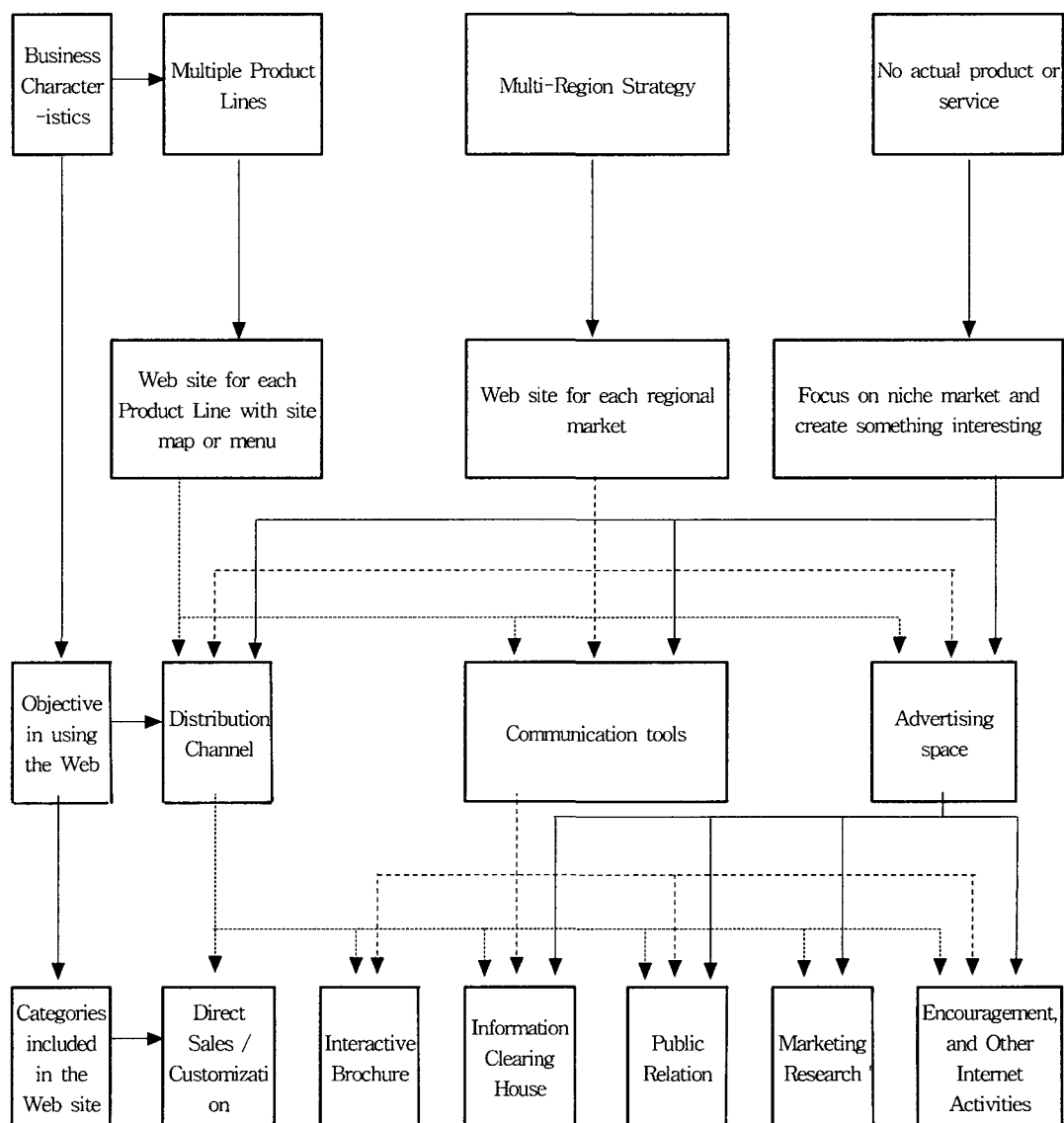
In conclusion, which categories of Web usage for marketing purpose that the company should emphasize are dependent on the objective of its Web business and the appropriateness of its business nature. We summarize the conclusion of this study in Figure 1: Preliminary Guideline for Web Site Design.

Main limitation of this study was the lack of the analysis of companys actual information. We proposed the hypotheses in this study based on the fact that the companies in the Top US corporation and in the Top Non-US corporation groups were in Fortunes list, but the companies in the Top Web site group were not in this list. Another limitation was that there was only one researcher collecting data in this study. Although the seven categories of Web usage for marketing purpose had been defined and their examples were also provided, the researcher who collected data in this study sometimes needed to make his own judgments which might be wrong or bias and lead to errors of the study.

Since some of the companies selected in this study have more than one Web site registered in different

countries(e.g., www.sony.co.jp vs. www.sony.com, www.siemens.de vs. www.siemens.com), it may be interesting to study how different these Web sites are, how the Web affects the international marketing or business of these companies, whether the Web is the potential revolutionary or just another marketing channel, etc. Another interesting extension for future study is that,

with the capabilities of today Web server machine, we can collect data about preferences of the visitors when they visit the Web site (e.g., which Web pages they read, how long they spend their time on each page). Analysis of these data together with the actual Web site design may provide useful and interesting information.



<Figure 1> Preliminary Guideline for Web Site Design

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주요 관심분야 : 정보기술을 활용한 경영혁신, 전자상거래,
정보기술의 전략적 활용 등