Study on the Influence of Touch Point in Information Diffusion according to Product Types

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Abstract. The purpose of this study is, in the situation that consumers use not only online news but social media as information delivery media, based on web data, to examine the effect of touch point activities in two media different according to product types on consumer search activities. As a result of the study, it turned out that touch point activities and consumer search activities are different from each other in two media different according to product types

Keywords: Touch point, Product types, Social media, Information media, Search traffic, Information diffusion

1 Introduction

In multimedia environment, for more effective competition in the world’s competitive online market, various online media should be properly utilized [5]. When touch points are well managed and established in various media regarding products or services, they can positively influence consumer behaviors, so it is important to manage and organize touch points of various media based on consumer behaviors[9],[12],[18]. Thus, companies are developing diverse strategies to gain consumer interest through proper touch point activities, and academic circles are also performing various researches on touch point activities.

Presently, although information about products and services are diffusing through multimedia, not all the touch point activities from the time when information exposure first takes place to the time when information diffusion speed is reduced lead to consumer interest. In other words, even though media expose information for a certain period, consumer interest may not be influenced by all kinds of information exposure.

Thus, this study, by considering what advanced researches could not consider, intends to examine the correlation between consumer interest patterns and touch point activities. In addition, by considering product lifecycle differences according to product types claimed by advanced researches, it tries to divide product types, and analyze media touch points and consumer interest by using a time-series analysis method.
2 Literature Review

2.1 Multimedia environment and touch point

The customer touch point service can be defined as direct interactions among people [19]. It means the channel where information providers and receivers can meet under the optimal condition. Media environment changed due to the appearance of social media. The way to receive consumer interest through various methods using various existing touch points is being focused. Thus, studies on strategies to effectively manage touch points regarding products or services, the effect of various touch point activities on consumers, and the correlation between touch point and word of mouth in multimedia are being actively conducted [9],[12],[17].

2.2 Advanced researches using search traffic

Because search traffic provided by websites enables grasping market trends almost in real-time, it is possible to understand social phenomena and predict near future. Studies predicting social phenomena and analyzing consumption trends have been conducted by using search traffic [3],[13],[20]. Goel [6] found that, in music ranks of Billboard Hot 100 chart and first month sales of video games, it is possible to predict consumer behaviors by using search traffic. Web search traffic has a merit that it enables investigating a population because there are many users per day, so it could be considered to be a good analytical method in understanding consumer behaviors [8].

2.3 Hedonic goods and utilitarian goods

Products and services can be divided into utilitarian goods and hedonic goods according to the types of benefits that consumers seek [10]. While utilitarian goods have a characteristic of utilitarian consumption resulted from instrumental attributes of the utilitarian aspect, hedonic goods have a characteristic of emotional consumption resulted from sensuous attributes of the emotional aspect [2],[7].

Hedonic and utilitarian goods or services have differences in the demand pattern of products, and the characteristics of products or services themselves [4]. Hedonic and utilitarian goods generally have different diffusion patterns [1],[14]. Hedonic goods such as movies, music, and books have rapidly decreasing sales speed over time compared to utilitarian goods. This cycle turns out over a short period. On the other hand, the cycle of utilitarian goods often turns out over a long period, not just a few weeks.
3 Hypothesis

3.1 The difference of the cycle of consumer search according to product types

while for utilitarian goods, consumers can resolve the uncertainty of product or service information to some degree by using information provided by online or offline, for hedonic goods, due to high emotional involvement and symbolic values, it is hard for consumers to make a judgment before experiencing products or services[15],[16]. In other words, due to product characteristics, the degree and range of information value and information search recognized by consumers are different according to product types. Thus, a hypothesis was set up as below.

Hypothesis 1: The cycle of consumer search would be different according to product types.

3.2 The relationship between touch point activities and consumer search in information media

For utilitarian goods, not only news information based on the objective ground but information experienced by consumers in social media could be important. Before release of a product, related information is provided by news, and those interested in the product share the information in their social media. However, for utilitarian goods, consumers can know about the characteristics of products to some degree through news information, so it is judged that consumer search may be more related to news information than to social media information. On the contrary, for hedonic goods, information provided by news may be insufficient compared to that provided by social media. Because consumers cannot experience hedonic goods before purchase and they are based on various emotional bases, consumers may show different reactions. Therefore, it is judged that, for touch point of hedonic goods, social media information would have a higher correlation with the amount of consumer search than news information. Thus, hypotheses were set up as below.

Hypothesis 2: Touch point activities and the amount of consumer search would have a correlation.
Hypothesis 2-a: For utilitarian goods, the amount of consumer search will be more related to the information diffusion pattern of news than to that of blogs.
Hypothesis 2-b: For hedonic goods, the amount of consumer search will be more related to the information diffusion pattern of blogs than to that of news.
4 Analysis

4.1 Data collection and analytical methods

For data collection, articles and materials containing product information provided by Naver news and Naver blogs of Naver, the most frequently used portal website in Korea, were collected, and web search traffic information provided by Naver Trend was used for the amount of consumer search.

In order to examine the difference of the amount of consumer search according to product types, products and services were divided into utilitarian goods and hedonic goods, and of them, representative goods were selected by referring to advanced researches [11], [15], [21]. In this study, smartphone was selected as the representative utilitarian goods, and music was selected as the representative hedonic goods, by considering the fact that the patterns of hedonic goods and utilitarian goods could vary with genres or the purpose of use.

For an estimation method, in order to examine the correlation between search traffic and information media, a time-series regression analysis was used.

4.2 Results

4.2.1 Comparison of the information diffusion patterns of media and search traffic according to product types

![Comparison of information diffusion and the amount of search in each media for smartphone (left). Comparison of information diffusion and the amount of search in each media for music (right)](image)

Fig. 1. Comparison of information diffusion and the amount of search in each media for smartphone (left). Comparison of information diffusion and the amount of search in each media for music (right)

4.2.2 Results of comparing search traffic and media
Table 1. Results of the regression analyses for Media and Searching traffic

<table>
<thead>
<tr>
<th>Variables</th>
<th>ARIMA model</th>
<th>Model statistics</th>
<th>Model parametric statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>R squared</td>
<td>Ljung-Box significant probability</td>
</tr>
<tr>
<td>▲ News→Search</td>
<td>(0, 1, 0)</td>
<td>0.809</td>
<td>0.271</td>
</tr>
<tr>
<td>▲ Blog→Search</td>
<td>(0, 1, 0)</td>
<td>0.749</td>
<td>0.109</td>
</tr>
<tr>
<td>△ News→Search</td>
<td>(1, 0, 0)</td>
<td>0.259</td>
<td>1.000</td>
</tr>
<tr>
<td>△ Blog→Search</td>
<td>(1, 0, 0)</td>
<td>0.411</td>
<td>1.000</td>
</tr>
<tr>
<td>▽ News→Search</td>
<td>(1, 0, 0)</td>
<td>0.294</td>
<td>0.976</td>
</tr>
<tr>
<td>▽ Blog→Search</td>
<td>(1, 0, 0)</td>
<td>0.411</td>
<td>1.000</td>
</tr>
</tbody>
</table>

(▲: Galaxy S3 monthly, △: Psy gangnamstyle monthly, ▽: Psy gangnamstyle weekly, *P < 0.05)

The results above indicate that consumer information search is influenced by both news and blogs. That is, media activities may be significant in explaining consumer information search activities. And the fact that the degree of the correlation between media and consumer search activities varies with information types seems to be a significant result.

5 Conclusion and Implications

This study, through the amount of search traffic provided by websites, determined consumer search behaviors different according to product types. In addition, it examined the correlation between touch point activities and consumer search activities different according to product types. In conclusion, looking at the relationship between media and information receivers, for smartphone, although both news and blogs are related to search traffic, it has a higher correlation with news. And music is more related to blogs than to news. In the environment where different media co-exist, it is needed to perform marketing to raise consumer interest at proper times by understanding touch points of each media and consumer search behaviors over time, and by considering media characteristics. Future studies may have to consider more various products or services.

References