Relationship between Market Share and Buzz Share on Movie Ticket Reservation

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Abstract. In this study, we try to investigate the relationship between Internet buzz share and real market share of movie ticket reservation. That is, the correlations between Internet buzz share of news sites, blog, Internet cafe, Internet video sites and market share of movie ticket reservation are analyzed. The data from news sites, blog, Internet café, and video sites of Naver, a representative portal of Korea is gathered to measure buzz share of different Internet communication channels. The market shares of movie ticket reservation per week are gathered from the Movie Promotion Council in Korea. The relationships of buzz share and market share are tested using correlation analysis. The results show that among various Internet buzz channels, the buzz shares of video and news are more correlated with market share as leading indices. However, the buzz shares of blogs and Internet cafe are more correlated with market share with market share as lagging indices.

Keywords: Market share, Buzz share, Web Content Mining

1. Introduction

In marketing area, the market share of a company is considered as an important determining factor for the profitability of the company[1,6]. As a major indicator for assessment of a company, the market share is an important factor determining profitability and survivability of the company[7,10]. The use of the Internet for marketing purpose of a company has been increase due to the exponential growth of the Internet channels such as blog, online community, UGC (User Generated Content), and so on. Especially, public opinions on the Internet are considered as critical element to maintain corporate brand image due to characteristics of the Internet such as ease of replication, fast propagation, the freedom of participation, and anonymity. Recently, consumers can share easily their experiments, opinions, and information through their blogs or online communities[12,13,14,15]. Firms have begun to monitor the activities of consumers in the Internet and used the Internet as communication channels with consumers or potential customers. Also, since huge amount of information exchanges on the Internet can be easily accumulated, firms consider the Internet as a useful resource for data mining[3,15]. Therefore, as well as market share, buzz share is considered as new important information to support right marketing decision-making in companies. Representative examples using buzz share are performance prediction of movie films and the prediction of U.S. presidential elections vote[9,12]. Although there are many interests on Internet buzz share in practices, systematic research on the Internet buzz share is still insufficient[8,9]. Therefore, this paper aims to examine the correlation between Internet buzz share and the actual market share of product, especially in movie ticket reservation domain.

2. Literature Reviews

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2.1. Market share

Market share can be defined as a percentage of a participating company's sales among total sales in the industry where the company belongs to. The concept of market share has been studied mainly in marketing field and most researches are focused on 4P (Product, Place, Promotion, Price) and external factors effect on market share. Recent researches demonstrate that the determinants of market share are different depending on industrial domains[6,7]. Also, there are studies on the linkages of market share with government regulation and M&A[1,6,7].

2.2. Online word-of-mouth

Online word-of-mouth is defined that word-of-mouth activities of consumers appear on the Internet, and typical examples are posts on blog and online community, and reviews of the Internet shopping storefronts[15]. Unlikely off-line word of mouth, online word-of-mouth has characteristics such as storability, concurrently accessibility, anonymity, communication without limit of time and place[4,11]. Depending on how firms use online word-of-mouth, they can make differences in marketing result.

2.3. Web Content Mining

Web mining is an application of data mining techniques to discover patterns in the web. According to analysis subjects, web mining can be divided into three different types; web usage mining, web content mining and web structure mining[2,4,11,16]. Web usage mining is the process to extract useful information from server logs i.e. user history. Web usage mining is the process to find out what users are looking for on the Internet. Web structure mining uses graph theory to analyze nodes and connection structure of a web site. According to the type of web structure data, Web structure mining can be divided into two kinds. The first type is to extract patterns from hyperlinks in the web. The second type is to analyze document structure of page structures to describe HTML or XML tags. Web content mining aims to discovery useful information from the web contents, data, and documents. Recently, many researchers focused on opinion mining as a part of text mining. Opinion mining tries to extract and analyze the means of consumer's opinions on the specific products in the Internet. The texts used in opinion mining can be from opinions stored including comments in blogs, consumers' opinions in news sites [3,4,14].

3. Research Method

Because this study aims to analyze the relationship between buzz share and market share, the correlation between buzz share and market share of movie ticketing are investigated. The detail experimental phases are as follows

Step1: The subject movies are selected as top-two movies per every week, which data is gathered from movie box-office of Movie Promotion Council in Korea.

Step2: For top-two movies at time t, the buzz share of t-2, t-2, t, t+1, and t+2 are gathered from blog, café, Jisik-in (Q&A), News, video services of Naver, a representative Internet portal site in Korea. The numbers of references of movies are translated to the ratios of buzz share of movies.

Step 3: In the third phase, the relationships of buzz share and market share are tested using correlation analysis.

Step 4: In the fourth phase, we try to interpret the results of the experiment.

4. Result

This study conducts correlation analysis between two variables defined as weekend ticket sales (market share) and the buzz share. The results of the correlation analysis depending in time lags on Tab.1 and Fig.1.

Tab.1 The correlation between ticket reservation and buzz share of various channels depending on time[8]

Variables	Time	Blog	Community	Jisik-in	News	Video
Ticket	t-2	0.109	0.135	0.124	0.108	**.232**[**]

Sales	t-1	.271**	.234**	.275**	.305**	.356**
	t	.663**	.584**	.474**	.345**	.477**
	t+1	.602**	.469**	.339**	.413**	.471**
	t+2	.579**	.479**	.389**	.427**	.439**

**. significant level: p < 0.01

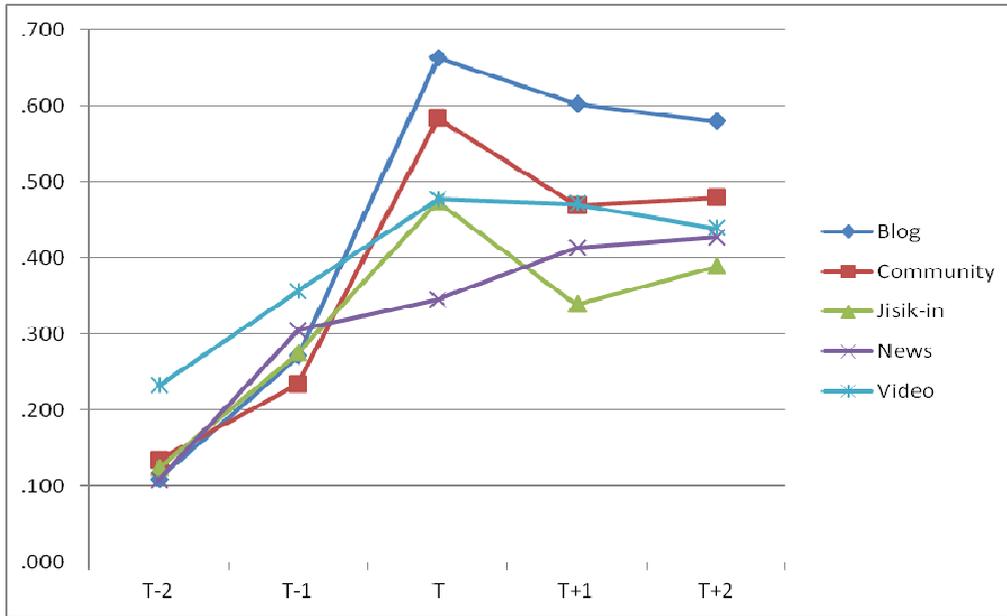Fig.1 Chang in the correlation coefficient depending on time[8]

The analysis results can be summarized as follows.

- The buzz shares can work as leading indeces of market share since the buzz share in t-1 time point is positively correlated with market share.
- The effects of leading indexes are diminishing as time period is far from current time. That is, the correlations of t-2 time point with market share at t time point are lower than those of t-1 time point.
- The buzz share is also lagging indexes of market share. This can be interpreted from the fact that the buzz shares of t+1 and t+2 points are highly correlated with market shares.
- The 'Video' is a more significant leading index because at t-2 time point, only the correlation coefficient of 'Video' is significantly as 0.232.
- The correlation coefficients with buzz shares from 'Video' and 'News' are higher than those of other channels at a point of t-1. This can be happen because 'Video' or 'News' are usually made by film distributing agencies in order to promote their films.
- At the point of t+1 and t+2, consumer-oriented buzz shares such as blog and community are higher correlated with actual movie ticket reservation than commercial channels such as 'Video' and 'News'.

5. Conclusion

This study examines the correlation between buzz shares on the Internet and the actual market share of movies tickets. The empirical experiment results show that there exist correlations between buzz shares and actual ticket sales. Also, the investigation results show that different channels of the Internet have different leading and lagging effects on actual market share. Especially the correlations between buzz shares in video sites and news sites, and ticket sales are higher at t-1 and t-2 time points than blog and Internet community, which means that buzz shares in video sites and news sites are more valuable as leading indexes of market

share. However, the correlations between buzz shares in blog and Internet community, and actual ticket sales are higher at t+1 and t+2 points, which means that buzz shares in blog and Internet community are more valuable as lagging indexes of market share.

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