MOVIE MARKETING: ADVERTISING, ONLINE REVIEWS AND BOX OFFICE

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The goal of this paperis to investigatethe impact of advertising spending and online reviewson the market performance, specifically box office, in Korean motion picture industry. The Bass Model is applied to classify the characteristics of box office, innovator and imitator. Empirical data, including advertising, word of mouth, and sales (the number of entries) of Korean movies are used for analysis.Theresults of preliminary analysis show that innovators are influenced by volume and adverting spending rather than valence of online reviews no matter when the reviews are posted. Unlike innovators, imitators are influenced by post-online reviews in both volume and valence aspects.

Keyword- Advertising, Movie, Online Reviews, Word-of-Mouth, Innovator, Imitator, Bass Model

I. INTRODUCTION

Companies often spend a lot of money to advertise their new products prior to their launch. That is particularly true for products in creative industries such as motion pictures, books, and video games (Caves 2001), where the most of share of advertising spending typically occurs in the pre-launch period. Recently, one of the most visible and publicized trends in the movie industry is the escalation in movie advertising expenditures over time. Yet, the returns to movie advertising are poorly understood. One of my objectives in this research is to find the effect of advertising in the pre-launch period on the movie performance in the post-launch period.

Word of mouth might play important roles of consumers' decisions. A McKinsey & Company's study found that 67% of the sales of consumer goods are based on WOM (Taylor 2003). In general, it is believed that WOM strongly influences people's movie selection (Neelamegham and Chintagunta 1999). Up to now, because of difficulty of measurement of WOM, WOM researchers used the proxies of WOM, such as intention to recommend or WOM, the number of usage review, and scores after usage, in the previous research. The current study differs from previous research in several ways. First, we examine the effects of both controllable marketing action (advertising spending) and less controllable marketing response (WOM) in the pre-launch period on the performance in the post-launch period. Second, we investigate the different effects of two factors on innovators and imitators using Bass Model. Finally, this study can contribute to predict the performance after launching using the empirical data before launching.

II. MODELSPECIFICATION

Basic Bass Model for Movie Performance

$$\frac{n_i(t)}{m_i - N_i(t)} = p_i + \frac{q_i}{m} N_i(t) : \text{bass model for movie i}$$

This equation represents the basic Bass Model(Bass 1969). pmeans the proportion of innovators in the remaining potential. And, q/m reflects the pressures operating on imitators as the number of previous buyers increase. We can apply the Bass model to predict the movie performance. [Figure 1] show the excellent model fit of performance for some Korean movies.

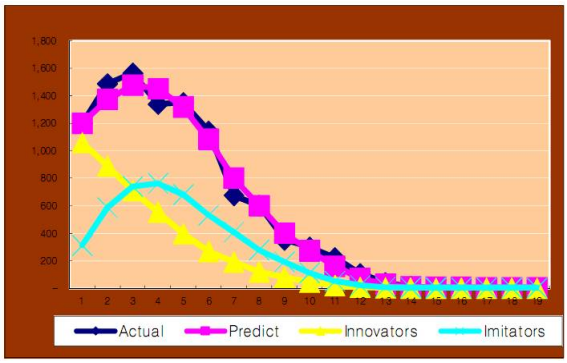


Figure 1. Model Fit of Performance for Movie

III. MODEL FOR WOM

First of all, we need to model for WOM. Although there are many operationalized definition of WOM, we adopt the definition of Godes and Mayzlin (2004). They developed two constructs, volume and dispersion, for WOM. Volume is the first and most obvious dimension of WOM: How much WOM is there? Dispersion is how fast to spread in the communities. For examples, WOM can be spread quickly with communities and slowly across them. In addition to two constructs, weseparated the positive and negative WOM in my model. Some researches related to WOM argue that positive WOM and negative WOM has different effects on performance. Anderson (1998) proposes a utility-based model that give rise to a U-shaped function. Very dissatisfied customers and very satisfied customers are most likely to engage in WOM. So, we develop the volume

and dispersion of both types of WOM. With the definition of Godes and Mayzlin (2004), we try to develop unidimensional construct or score of positive WOM and negative WOM. Following equation are unidimensional construct for WOM, which are defined by product of dispersion and volume. If it has a big volume, but doesn't have a small dispersion, WOM is not big effect on performance.

IV. DATA

Our data set consists of 198 movies released between 2006 and 2008 in South Korea. We use the data for movies with 50,000 attendances or more and no less than 20 screening days. We collected the attendance data from the Korea Movie Database (KDB), which manages daily attendance from most of the theaters in Korea.Our advertising measure includes TV, cable, newspapers, and magazines at a daily level. We collected the rated movie reviews to measure WOM from a portal site in South Korea. This portal site manages user-generated reviews and 10-scale evaluation ratings of each movie at a daily level and generates an average rating per movie, like Yahoo! Movies.

V. RESULTS

Table 1 shows the summarized descriptive statistics ofBass Model's parameters (p,q, and m). We can estimate the numbers of innovators and imitators with parameters p and q.

Table 1 Descriptive Statistics of Estimated Parameters p,q and m

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
P	198	.20	.97	.5847	.16771
Q	198	.00	1.02	.2648	.16592
p_{t-1}	198	.20	.97	.5844	.16781
q_{t-1}	198	.00	1.03	.2638	.16857
p_{t-2}	172	.20	.88	.5548	.15707
q_{t-2}	172	-.04	1.06	.2636	.17594

Table 2 shows the summarized results of our model analysis.

	R^2=.919			R^2=.776	
	lnT			lmT	
Standardized	Beta	Sig.		Beta	Sig.
(Constant)		.968	(Constant)		.366
VolB	-.099**	.044	VolB	-.126	.123
VolA	.498**	.000	VolA	.318**	.002
AvgB	.005	.886	AvgB	-.066	.210
AvgA	-.033	.275	AvgA	.097*	.053
AdT	.042*	.098	AdT	-.023	.586
ScrT	.582**	.000	ScrT	.748**	.000
RT	-.042*	.077	RT	-.016	.685
Action	.018	.634	Action	.007	.913
Comedy	-.028	.548	Comedy	.093	.226
Drama	-.013	.773	Drama	.057	.455
Horror	-.026	.493	Horror	.017	.796
Sf	-.005	.879	Sf	-.059	.289
G12	-.004	.900	G12	-.040	.463
G15	.034	.345	G15	-.070	.241
Seq	.058**	.021	Seq	-.079*	.058
Comp	-.020	.398	Comp	.014	.729
Tstar	.037	.157	Tstar	-.051	.236
Dom	-.054*	.090	Dom	-.061	.257

CONCLUSION AND LIMITATION

First of all, we investigate the different effects of adverting and WOM on movie performance. Advertising budget could strongly affect the innovator behavior, whereas, thevalence of WOM could strongly affect the imitator behavior. It is consisted with general conclusion of previous advertising and WOM researches. Therefore marketing manager has different strategies for advertising and WOM to increasing movie performance. In addition, the result of this study could help marketing manager to advertising budget planning.

For practical Implication, the WOM data of this research is one of the most accurate empirical data for online WOM. From these data, we can get the same result of previous WOM research. Also, we develop the model to predict the pre-launched movie performance (innovators' demand) with only empirical data and without customer survey. So, our model could be the useful tool for marketing managers.

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