

COMMUNITY-BASED BRAND EQUITY AND ITS RELATIONSHIP WITH MARKET PERFORMANCE: A NEW PRODUCT PERSPECTIVE

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Abstract

Most prior studies in the field of brand equity have focused on studying brand equity *after* the products are launched on the market and have rarely considered pre-launching stages. In fact, there used to be few pre-launch visible data for potential consumers to gain brand knowledge and forge brand equity and, in parallel, for companies to anticipate brand equity and measure it until the products were effectively launched on the market. However, this context is now changing due to different factors among which: 1) new advancements in ICTs that have facilitated new web 2.0 platforms such as online brand communities that allow users to form opinions and associations of new products even before launch, and also because of 2) the pre-announcements of upcoming products in several industries (e.g., movie trailers) that are increasingly developing. Such new product preannouncements allow community members to form associations long before the products are effectively launched on the market. In this new context, it is now possible to measure brand knowledge at the community level, but also to measure community-based brand equity (CoBBE) before product release, as shown in this study. Our findings show a significant and positive relationship between CoBBE and market performance. The implications of our study are also presented.

Keywords: Brand equity, online communities, market performance, new product preannouncement behavior

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1. Introduction

In most prior studies, brand knowledge or brand equity of products are conceptualized, measured, or their impacts are studied only after those products are launched on the market and not before

launch (E.g. Hennig-Thurau, Houston, & Heitjans, 2009; Mizik & Jacobson, 2008). This can be explained by the fact that the existence of brand equity could be hardly considered, and thus measured, before product launch. However, the increasing prevalence of new product preannouncement¹ (NPPA) behavior by firms (Bayus, Jain, & Rao, 2001; Lilly & Walters, 1997; Zhang & Su, 2010) in several industries (such as mobile phones, software, motion picture industry, music industry, automobile industry, videogames, etc.), has contributed to create *awareness* among potential customers. As a consequence, it has also enabled them to form associations such as opinions, expectations, attitude, belief, feelings, as well as to gather information and share product knowledge, intention to adopt, etc., long before the product is launched on the market. In other words, NPPA leads to the creation of awareness as well as to the formation of several associations among potential customers of the upcoming product long before the product is actually released on the market (Eliashberg & Robertson, 1988).

Online brand communities bring together people with shared interests and passion for a specific product (e.g., iPhone, Harry Potter, Porsche, etc.), even though they may be geographically distributed across heterogeneous places (Füller, Matzler, & Hoppe, 2008; Jang, Olfman, Ko, Koh, & Kim, 2008). In a product or service related online community, new product preannouncements (NPPA signals) often generate new topics of discussion to which community members (signal receivers) respond² by posting comments or votes, thus sharing information, opinions and evaluations that reflect their preferences, experiences, tastes, adoption intention, etc.

Existing literature shows that brand equity is primary measured (or studied) at three main levels: 1/ the firm level 2/ the product level and 3/ the customer level (relating to customer-based brand equity). In this paper, we study brand equity from the perspective of an online community, thus adding a fourth level of measuring brand equity. We conceptualize this fourth level as **community-based brand equity** (CoBBE) and define it as the differential effect that a community's brand knowledge has on the community's response to the marketing of that brand. Therefore, in addition to explaining 'why' it is important to measure pre-release brand equity,

¹ *Preannouncement* is defined as a formal deliberate communication before a firm actually undertakes a particular marketing action such as new-products (or services) launch, a price change, a new advertising campaign, or product line change (Eliashberg & Robertson, 1988).

² For example, in a movie based online community like Flister.com, where there is information about various upcoming movies, almost 6 to 12 months before its theater release, its community members will choose themselves whether to participate or not in discussions related to some or all of the upcoming movies, depending on their preferences or tastes or several other factors which may be specific to that individual.

this paper addresses two other complementary issues: how to measure brand equity at the community level (CoBBE)? And how to measure pre-release brand equity? Finally, it provides external validity to the concept of pre-release CoBBE by establishing its relationship with future market performance. In other words, it demonstrates that pre-release CoBBE can be used to signal the success-potential of an upcoming product.

Following this section, we introduce the research setting and then we present the methodology used, followed by the analysis of the findings, and then discussion, conclusions, limitations and directions for future research.

2. Empirical Setting

A movie-based online community called ComingSoon³ was chosen for this study. A content analysis framework was developed to code the collected data related to each movie from the online community – ComingSoon.net. The online platform provided by the web 2.0 enabled online communities to leave a virtual fingerprint (user generated data) of all the activities taking place within the community. User generated data relating to pre-release community activities concerned eight movies listed in Table 1a. Once the movies are released, for each movie there are two types of community members who participate in the community: 1) some members who participated both in the pre-release period and in the post-release period 2) members who did not participate in the pre-release period but were active in the post-release period. As the focus of the present study is on the pre-release period, we collected³ and analyzed the users' postings only during the pre-release period.

2.1 Data analysis

To code the collected data, category systems were developed both inductively (which shows the exploratory nature of the study) and deductively (based on existing theories and insights from related literature e.g., to categorize the strength, favorability and uniqueness of brand associations). Data analysis was performed using the software solution QSR NVIVO 9 in which data was imported, structured, coded and linked. As mentioned earlier, a content analysis

³ ComingSoon.net is a property of CraveOnline Media, LLC. and CraveOnline is the source for all of the entertainment needs that young men have. Represented by some of the leading sites in film, gaming, sports and video, CraveOnline is the premier destination for in depth news, interviews and reviews. CraveOnline feeds the appetites of nearly 26 million unique visitors every month with information from the voices that matter to young men. (Source: www.ComingSoon.net and www.craveonline.com/about).

framework (Krippendorff, 2004) was used to code the collected data. Content analysis is used as a quantitative tool in this study (Kassarjian, 1977) to quantify the maximum coded associations. To investigate the third research objective (i.e., to establish the relationship between pre-release community based brand equity and future market performance), data were analyzed using Pearson's correlational analysis using statistical software SPSS 20.

Based on the research objectives of this study and also based on the accessibility of the above-mentioned user generated data, the following process was followed for each movie:

1) number of members who participated in the pre-release period, (as a proxy for community's brand or new movie awareness-level for each movie),

2) number of 'comments' or postings for each movie (total 415 user's comments),

3) classification of the postings relating to the 8 movies into 5 preliminary groups including: positive, negative, mixed, neutral and irrelevant comments respectively. Analysing these comments will provide insights on how community members could evaluate movies long before they are released and without actually experiencing them.

4) the **positive and negative comment groups** were further analysed and coded inductively for the various (brand) associations.

During the coding process, several 'types' of brand associations were identified and we operationalized the strength, favourability and uniqueness of brand association as follows:

1. The higher the number of different types of positive (or negative) brand associations (i.e., diversity of brand association), the **stronger** the brand association will be.
2. The higher the number of each of the different types of brand associations (i.e., volume of each brand association), the more **favorable** the brand association will be.
3. Positive (or negative) associations which are uniquely associated with one movie and not shared with other movie are operationalized as **unique associations** of that movie. (i.e., associations which are coded for, in only one movie and not found or shared in other movies)

Data relating to movies' market performance in terms of box office revenues were also collected from publically available sources (e.g., variety.com and ERCboxoffice.com) in order to investigate whether the pre-release community-based brand equity are potential signals of market performance.

Overall, there are no self-reports used in this study and hence all major sources of bias are circumvented by using user generated data in this study. One of the many advantages of online communities is that, whatever online activities its community members are involved in (especially in response to a signal), it leaves a virtual fingerprint (user generated data – UGD-) in the community platform and they are accessible publically or privately to its members. Such UGD provide a wealth of information for academic researchers to pursue their investigation.

3. Findings and Discussion

The findings from the content analysis are presented in Table 1. Brand knowledge has two components, namely, brand awareness and brand associations. Hence, we created **higher-order constructs**: (brand) awareness level (Column no.II in Table 1), strength of brand association (Column no.III), favorability (Column no.IV), and uniqueness of brand association (Column no.V) respectively.

Column no. II in Table 1 (i.e., total number of posts) shows the number of comments that were posted for each of the movies included in this study. It is interesting to note that the number of user comments or posts received for each movie is different for different movies. Does this difference indicate something regarding the popularity or awareness of each movie? This question can be answered only by comparing this difference with the actual market performance of each movie (which will be shown in the section 4.1). Column no.III in Table 2 shows the strength of the association for each movie, measured in terms of the diversity or the different types of brand associations. Moreover, since strong brand associations can be either positive or negative, we therefore presented both positive and negative strong brand associations into separate columns under column no.III. Except for movie M8 (The Tourist), the

Tab. 1: Output from Quantitative Content Analysis

| I. Movie ID | II | III. STRENGTH | | IV. FAVORABILITY | | V. UNIQUENESS* | | VI. No. of Positive Comments** | VII. No. of Negative Comments | VIII. Comments which are NOT positive/negative (i.e., comments which are mixed/neutral/irrelevant) |
|-------------|--------------------------------------|------------------------------------|------------------------------------|---------------------------------|---------------------------------|----------------------------------|-------------------------------|--------------------------------|-------------------------------|--|
| | Total no. of posts (Awareness-level) | Diversity of Positive associations | Diversity of Negative associations | Volume of Positive associations | Volume of Negative associations | Diversity of Unique associations | Volume of Unique associations | | | |
| M1 | 201 | 18 | 8 | 213 | 13 | 1 | 2 | 125 | 10 | 66 |
| M2 | 52 | 14 | 2 | 45 | 3 | 2 | 2 | 23 | 3 | 26 |
| M3 | 24 | 4 | 2 | 5 | 3 | 1 | 2 | 7 | 6 | 11 |
| M4 | 32 | 6 | 3 | 15 | 14 | 1 | 1 | 11 | 13 | 8 |
| M5 | 17 | 4 | 1 | 12 | 1 | 2 | 5 | 7 | 5 | 5 |
| M6 | 35 | 4 | 1 | 8 | 1 | 1 | 1 | 10 | 1 | 24 |
| M7 | 12 | 5 | 0 | 11 | 0 | 4 | 15 | 7 | - | 5 |
| M8 | 42 | 7 | 12 | 31 | 44 | 2 | 2 | 24 | 3 | 15 |

*In our sample, we did not observe any unique associations which were negative. Only positive unique associations were observed

** Please note that by 'Comments' we mean, the entire posting of a user where as 'Associations' are subset in a specific comment

Source: Authors' own elaboration

Tab. 1a: List of movies whose data is used in this study*

| ID | Movie | Release Date | Movie genre | MPAA ratings |
|----|----------------|--------------|---|--------------|
| M1 | Toy Story 3 | 18/06/2010 | Adventure Comedy, Children's Fantasy, Family-Oriented Adventure, Fantasy, Children's/Family | G |
| M2 | Inception | 16/07/2010 | Suspense/Thriller | PG-13 |
| M3 | Case 39 | 1/10/2010 | Supernatural Horror, Horror | R |
| M4 | Social Network | 1/10/2010 | Drama | PG-13 |
| M5 | 127 Hours | 5/11/2010 | Adventure Drama, Docudrama, Drama | R |
| M6 | Unstoppable | 12/11/2010 | Action/Adventure | PG-13 |
| M7 | Black Swan | 3/12/2010 | Suspense/Thriller | R |
| M8 | The Tourist | 10/12/2010 | Drama, Suspense/Thriller ⁹²⁸ | PG-13 |

*User generated data is collected from a movie-based online community ComingSoon.net

diversity of positive associations were found to be greater than the diversity of negative associations, suggesting that, the community level (based on simple majority), all the movies have overall strong positive brand associations, except M8 which has strong but negative brand associations. Similarly, column no.IV in Table 1, shows the favorability of brand associations for each movie (measured in terms of ‘volume’ of positive and negative brand associations) and, except for movie M8 (The Tourist), the volume of positive associations was found to much higher than the volume of negative associations, suggesting that, at the community level (based on simple majority), all the movies have overall positively favorable brand associations. Finally, the uniqueness of brand associations is listed in column no. V in Table 1 and only movie M5 and M7 have overwhelmingly more number of unique but negative brand associations than unique and positive associations. A comparison of all the above-mentioned constructs related to brand equity reveal that, one cannot use (for e.g., in order to make any marketing decisions) each of these pre-release constructs in isolation as different movies school differently for different constructs. Hence, a second **higher-order construct** (called pre-release community-based brand equity) which takes into account all of the above mentioned constructs, might be a better indicator of each movie’s success potential (which will be presented in the next section 3.1).

3.1 Relationship between pre-release community-based brand equity (CoBBE) and market performance

Table 2 below provides the result from Pearson's correlation between pre-release community-based brand equity and market performance. The results show that there is strong positive and significant correlation between brand **awareness** and the opening week as well as gross box office sales i.e., market performance (see row no. II in table 2). Similarly, the **strength** of brand association shows strong positive and significant correlation market performance (see row no. III and IV in table 2). However, only strong and positive brand association is significant (see row no. III), whereas the strong but negative brand association is insignificant (see row no. IV). This insignificance is explained by two reasons: 1) the diversity of positive associations was far greater than the diversity of negative associations for each movie as explained in the earlier section, i.e., there was very few strong but negative associations, and, 2) the small sample size used in the analysis (in fact, one would expect negative correlation between strong but negative brand association and market performance).

Similarly, the **favorability** of brand association shows strong positive and significant correlation with market performance (see row no. V and VI in table 3). However, only the positively favorable brand association is significant (see row no. V), whereas the negatively favorable brand association is insignificant (see row no. VI). The reason for this insignificance is the same as for the above mentioned insignificance of strong but negative associations. Finally, the correlation between the **uniqueness** of brand associations and market performance is insignificant, and this can be explained by the fact that the diversity, and the number of unique brand associations were too few for each movie, and their values were almost similar across all the movies, has this variable behaved more like a constant than a variable.

Tab. 2: Pearson's Correlations*

| | Brand Associations Variables | | Opening Week sales (LogN) | I | II | III | IV | V | VI | VII | |
|---|--|----------------------------------|---------------------------|-------------|-------------|-------------|-------------|-------------|-------------|------|--|
| | Market Performance | I. Gross Box Office sales (LogN) | | .806 | | | | | | | |
| | P-value | | .016 | | | | | | | | |
| Pre-release Community-based Brand-Equity | II. Brand Awareness(LogN) | | .832 | .671 | | | | | | | |
| | P-value | | .010 | .069 | | | | | | | |
| | Strength | III. Positive Brand Associations | | .729 | .797 | .869 | | | | | |
| | | P-value | | .040 | .018 | .005 | | | | | |
| | | IV. Negative Brand Associations | | .448 | .284 | .603 | .421 | | | | |
| | | P-value | | .265 | .496 | .114 | .299 | | | | |
| | Favorability | V. Positively favorable (LogN) | | .638 | .758 | .861 | .942 | .606 | | | |
| | | P-value | | .088 | .029 | .006 | .000 | .111 | | | |
| | | VI. Negatively favorable (LogN) | | .472 | .402 | .462 | .355 | .876 | .508 | | |
| | | P-value | | .285 | .372 | .297 | .434 | .010 | .245 | | |
| Uniqueness** | VII. No. of Unique and positive | | .476 | .620 | .655 | .585 | .207 | .622 | .244 | | |
| | P-value | | .233 | .101 | .078 | .128 | .623 | .100 | .598 | | |
| | VIII. Volume of Unique and positive (LogN) | | .318 | .344 | .570 | .460 | .137 | .492 | .209 | .898 | |
| | P-value | | .443 | .405 | .140 | .252 | .747 | .215 | .652 | .002 | |

* Insignificant values are highlighted using 'bold' numbers

**There were no negatively unique associations for any of the movies focussed in this study

The above findings suggest that CoBBE is a valid measure and that it can be used as a signal or predictor of success-potential of upcoming movies long before its market release. Moreover, this positive relationship between CoBBE and market performance is in line with prior studies which have highlighted the positive relationship between brand equity and market performance (E.g. Hennig-Thurau, et al., 2009; Tolba & Hassan, 2009). It, therefore, validates our measure of community-based brand equity.

4. Conclusion, implications, limitations and future research

The main objective of this study is to measure brand equity at a very early stage, long before the product is effectively launched on the market. We achieve this by measuring pre-release brand equity at the community level which adds a fourth level measure of brand equity complementary to the already established consumer, product and firm levels. Taking advantage of user generated data, in this study, we measure pre-release community-based brand equity (CoBBE), by operationalizing its antecedents such as, favorability and uniqueness of brand associations, as well as brand awareness, and by using quantitative content analysis. After this step, we investigated the relationship between the pre-release community-based brand equity and market performance and concluded that there is strong positive and significant association between the two. Based on these findings, and also in line with prior studies linking the relationship between brand equity and market performances, we conclude that the pre-release community-based brand equity is not only a valid measure but also a signal or predictor of future market performance.

The implication of our findings measuring pre-release brand equity at the community level, are that they provide marketers with a diagnostic and forecasting tool to predict future market performance. Moreover, while being more knowledgeable of the strength, favorability and uniqueness of brand associations, marketing managers will be able to make informed decisions and also to take corrective measures in the case of weak pre-release brand equity (e.g. increasing the frequency of advertising or making better marketing programs to improve the awareness level).

There are certain limitations as regards our study. One of the main limitations is the use of a small sample size of movies, which might have led to insignificant correlations for the negative brand associations and market performance. As a future direction from our study, it will be interesting to compare our pre-release community-based brand equity with post-release brand equity. Then, if our core conceptualization of CoBBE is valid, one might expect that the post-release brand equity is similar to CoBBE. Moreover, it will also be interesting to compare CoBBE with the off-line or real market based brand equity to examine their similarities or differences.

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