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Exploring Factors Affecting the Evaluation of Cable Network Brand Extension

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This study explored to find the factors affecting evaluation of brand extension for cable network. The explanatory variables in this study were categorized as (1) fit (perceived fit: similarity or feature overlap between a parent brand and extended channels); (2) non-fit (evaluation of original brand/channel, perceived number of extended brand/channel, and perceived quality variance of original channel); and (3) cable-specific (consumption of overall television as well as of original cable channel, and number of channel repertoire). The results of correlation and multiple regression analysis showed that, among all the variables, perceived fit, evaluation of original brand/channel and perceived quality variance are significant predictors of the success of a cable network's brand extension.

Although the concept of a brand has been popular in many industries for a long time (Aaker, 1991), the adoption of the concept in the electronic media has been made recently (McDowell, 1998).¹ The reason the adoption of the brand concept and brand management in electronic media is relatively recent might be closely related to the nature of market structure in the electronic media industry. For a long time, over-the-air television industry has enjoyed an oligopoly by only three players (ABC, CBS, and NBC). Logically, little market segmentation or product differentiation strategies were practiced by the three networks. Since 1980s, however, these comfortable situations began to change: New over-the-air networks such as Fox began to enter the over-the-air market and the market share of cable networks continuously increased. From 1977 to 1997, the three network affiliated stations combined lost over 40 percent of their viewing households to basic and other alternative media (Myers, 1997).

As the number of unique cable programming options increased, so did the number of subscribers and with more subscribers came more audience fragmentation (Lin, 1995). This audience segmentation became more vivid with the inception of digital technologies such as digital DBS and digital cable. In addition, the traditional over-the-air broadcasting began to adopt the digital technologies. In short, more channels lead to more market (audience) segmentation. Responding to these structural changes, electronic media companies in all areas such as over-the-air broadcasting, cable, and DBS had to use positioning strategies based on audience segmentation and for this aim they came to focus on brand management.

Compared to the media practitioners, media researchers' reactions were a lot later.

The concept of brand has been frequently used since the middle of 1990s in trade journals (e.g., Mandese, 1993; Dupree, 1996). The academic research focusing on media branding, however, began to appear from late 1990s (e.g., Bellamy, 2000; Chan-Olmsted, & Jung, 2001; Galbi, 2001; Ha, & Chan-Olmsted, 2001; McDowell, 1998; McDowell, & Sutherland, 2000; McGovern, 2001). These research generally tried to introduce brand management concepts to media industries, but the applications were limited to basic concepts such as brand equity.

The objectives of this paper are to enhance the applications of brand management in electronic media studies and especially to apply the concept of brand extension in the context of cable television industry. With the increase of available channel capacity, cable networks are introducing new channels. These channels (e.g., CNN Headline News) usually are named based on their original channel names (e.g., CNN). These spin-offs can be more easily explained and their effects will be more exactly estimated if the brand extension (or line extension) concepts are used. Until now few studies have been conducted regarding the brand extension in the context of cable television industry.

Considering these limitations, this study tries to find important factors which affect the success of cable network brand extension. Regarding the success of brand extension, this paper uses a term, evaluation, which many previous studies regarding brand management have used as a dependent variable. That is, this study measures the evaluation of cable network brand extension as a proxy of success of the strategy. Regarding most of predictive variables, this study adopts variables which general research on brand management have used in their research because few media specific variables have been

tested in the previous research. This study, however, tries to test some media specific variables such as channel repertoire in order to enrich knowledge about the effects of brand extension in the cable television context. As an exploratory research, this study conducts a survey for college students in order to test the effects of the independent variables on the evaluation of brand extension.

This paper is divided into five sections. Section I introduces previous research on brand extension and finds relevant conditions or variables for successful brand extensions. Section II investigates what cable-specific variables can be transferred to the conditions or predicting variables in the context of cable network brand extensions. Section III explains the research design and section IV shows results of the survey. Section V discusses the implications of the results and shows future research directions.

Previous Research on Brand Extension

Extensions of existing product lines have accounted for over 90 percent of the new consumer packaged goods offered each year (Gallo, 1992). Practitioners' proclivity to embrace a brand extension strategy has led to commensurate levels of academic research (e.g., Aaker, & Keller 1990; Herr et al. 1996; Smith, & park 1992).

Concepts of Brand Extension

Researchers have conceptualized a brand as a category in memory with dominant (i.e., those which constitute brand meaning) attributes, benefits or image-related associations, secondary (i.e., non-defining) associations, and an attitudinal component (Boush, & Loken, 1991; Cohen, & Basu 1987; Keller, 1993; Myers-Levy, & Tybout 1989; Sujan, 1985). Brands function as insurance policies against the potential time, monetary,

and social/psychological losses facing consumers when they purchase a product. (Delvecchio, 2000)

In a typical brand extension situation, an established brand name is applied to a new product in a category either related or unrelated, in order to capitalize on the equity of the core brand name (DeGraba, & Sullivan, 1995). In other words, brand extension is to use an established name in one product class to enter another product class (Glynn, & Brodie 1998). A good brand extension strategy is one where the brand name aids the extension, while a very good brand extension also enhances the brand name (Aaker, 1991). Numerous studies, however, suggested that an extension strategy may lead to dilution of the brand (e.g. Chakravarti et al. 1990; Keller, & Aaker 1992; John et al 1998; Loken, & John 1993).

Brand extensions come in two primary forms: horizontal and vertical (Kim, & Lavack, 1996). In a horizontal brand extension situation, an existing brand name is applied to a new product introduction in either a related product class, or in a product category completely new to the firm (Sheinin, & Schmitt, 1994). A vertical brand extension, on the other hand, involves introducing a brand extension in the same product category as the core brand, but at a different price point and quality level (Keller, & Aaker, 1992). Sometimes, this vertical brand extension is called line extension. (Kirmani, Sood, & Bridges, 1999). In the conceptual level, cable network spin-offs are similar to vertical or line extension because those spin-offs are made in the same product category. But, considering the popularity of brand extension concept, in this paper, cable network spin-offs will be called cable network brand extension.

Most of research on brand extension focused on finding the conditions which lead

to successful brand extensions (e.g. Aaker, & Keller 1990; Barwise, 1993; Boush, & Loken 1991; Herr et al. 1990; Keller, & Aaker 1992; Park et al. 1989; Rangaswamy et al. 1993; Sunde, & Brodie 1993; Shocker et al. 1994; Uncles, 1996). Through these research, many variables or conditions have been suggested. Past research focused primarily on the fit between the existing products affiliated with the brand and the extension category (DelVecchio, 2000). Some research, however, tried to suggest non-fit variables in estimating the brand extension evaluations. This paper tries to devise a model for evaluating cable network brand extensions from a broader perspective, so those non-fit factors are important for modeling. Considering this necessity, this paper divides the previous research into two parts: fit-focused research and non-fit-focused research.

Fit-Focused Research

Two factors have emerged to be important in extension evaluations, one is the effect of the parent brand and, second, the similarity between the original and the extension categories (Glynn, & Brodie, 1998). Similarly, Aaker and Keller (1990) indicated that the quality of the original brand and the perception of fit between a brand and a brand extension have a direct relationship on the attitude towards the extension.

At first, perceived fit was conceptualized as the similarity or feature overlap between the parent brand and extension category (Aaker, & Keller, 1990; Boush, & Loken, 1991; Romeo, 1990). Affect is transferred from the parent brand to the extension based on how well the extension is perceived to fit with the brand category (Aaker, & Keller, 1990; Park, Milberg, & Lawson, 1991).

Boush et al. (1987) noted the greater the similarity between the current product and

the extended product the greater the transfer-of-brand affect. Perceived fit was high if the extension category shared important product attributes with the parent brand category, e.g., a cheese cracker extension from a potato chip parent brand would likely to fit because both could be seen as dry, salty snacks (Keller, & Aaker, 1992)

While many studies emphasized product attributes such as fit and product similarity, some research highlighted the role of non-product attributes in brand extension (Glynn, & Brodie, 1998). Broniarczyk and Alba (1994) demonstrated that unique brand-specific associations that were valued in the extension category could dominate parent affect and category similarity in predicting extension evaluations. Bridges (1992) found that by building associations not tied to the physical product, a brand's growth prospects could be enhanced. A brand's image is also more likely to transfer to an extension if it is more general than product-specific (Nakamoto et al., 1993).

Park et al, (1991) extended the definition of perceived fit beyond category similarity by showing that two brands in the same category could have extensions that varied in fit. In their study, extension evaluations depended on both category similarity and brand consistency. Functional brands with dominant associations related to performance (e.g., Timex) extended best to categories which shared the functional association (e.g., stopwatches), and symbolic brands with dominant associations related to prestige (e.g., Rolex) extended best to categories which shared the prestige association (e.g., bracelets), independent of category similarity.

Bridges et al. (2000) proposed a definition of perceived fit which suggests that any parent brand association, including category, brand concept, or brand-specific associations,

can connect the parent brand with an extension and serve as the basis for perceived fit. The critical determinant is not the type of association but whether the association is salient (i.e., accessible from memory) and relevance (i.e., deemed appropriate and important) in the extension context (Keller and Aaker 1992). Salience of associations depends, in part, upon the dominant parent brand associations; relevance depends, in part, upon the parent brand-to-extension category relationship. In addition, Bridges et al. (2000) suggested that high perceived fit results when consumers identify “explanatory links” that make the brand category “hang together” and permit it to remain cohesive when an extension is introduced.

Non-Fit Focused Research

In addition to the fit between the original brand and the extension category, several explanatory variables have been suggested. Boush (1993) and Pryor and Brodie (1998) investigated the influence that priming advertising slogans has on the attitudes and perceptions of consumers towards brand extensions. The results suggest that advertising slogans can play an important role in either supporting or undermining a brand extension strategy.

Brand quality plays an important part in brand extension strategy (Aaker, & Keller, 1990; Dacin, & Smith, 1994). Similarly, brand attitude toward the original brand can affect consumers’ brand extension fit perception (Bridges et al., 2000)

Dawar and Anderson (1994) showed that undertaking brand extensions in a consistent direction also increased purchase likelihood. Brand esteem and familiarity were important with stock market reaction to extensions (Lane, & Jacobson, 1995). Taylor and Bearden (2002) researched the effects of price on consumer evaluations of brand extension.

Higher prices are more likely to adversely affect consumer perceptions of quality, value and purchase intentions for similar product extensions.

Kirmani, Sood and Bridges (1999) researched the ownership effects on brand extension in the line extension context. They proposed that owners have more favorable responses than nonowners to the brand extensions. The ownership effect occurs for upward and downward stretches on nonprestige brands and for upward stretches of prestige brands. For downward stretches of prestige brands, however, the ownership effect does not occur because of owners' desire to maintain brand exclusivity. In this situation, a subbranding strategy protects owners' parent brand attitudes from dilution.

DelVecchio (2000) focused on the role of brand portfolio regarding brand extension evaluations. Based on Dacin and Simith's (1994) theory, DelVecchio argued that as the number of products affiliated with the brand increases, so does the firm's investment in the brand resulting consumers' more favorable attitude toward brands that are associated with a greater number of products. Also DelVecchio introduced the concept of brand quality variance. Brand quality variance measures the extent to which consumers believe that the products affiliated with a brand vary in quality. DelVecchio showed that as the perceived quality variance of the products associated with a brand increases, brand extension evaluation decreases.

Application to Cable Industry

Applying brand equity concepts to over-the-air broadcasting, McDowell (1998) showed some difficulties in the application. For example, unlike most consumer goods (Taylor, & Bearden, 2000), pricing is not a paramount concern for broadcasters. In case of

line extension, price differentiation is generally regarded as an important component. But, in the case of over-the-air, this concept cannot be directly applied. Also, in the context of cable television, pricing might not be good predictor because most of cable subscribers use basic or standard tiers which do not demand different price schemes for individual channels. Only pricing can be used for premium channels or pay per view (PPV) channels. Considering these limitations, this study does not consider pricing as an independent variable which affects consumers' evaluation of cable network brand extension.

Another important concept is channel repertoire. Generally channel repertoire is defined as “the number of channels that a viewer chooses to watch, without much regard to the total number of channels available” (Ferguson, & Melkote, 1997, p.190). Previous research have found that there is a positive relationship between the richer new media repertoires and a more active audience (Lin, 1994; Perse, Ferguson, & McLeod, 1994). These results imply that the number of channels actually used by viewers is not straightly increased with the increase of available channels. Also, from the previous research, we can reason that viewers with more channel repertoires will have more positive evaluations toward cable channel brand extensions because they are more active in using media.

The ownership concept is differently applied to cable situation. Unlike other consumer products, cable ownership implies multiple meanings. In terms of direct application, cable ownership means subscribership. This measure, however, does not fully reflect the real television consumption. Among cable subscribers (or premium channel subscribers), there might be huge differences in total viewing time. In order to consider these differences, degree of consuming needs to be considered instead of subscribership.

Hypotheses Development

Based on the previous literature review, this paper combines independent variables which may affect the evaluation of the cable network brand extension. First of all, many of previous research (e.g. Aaker, & Keller, 1990; Boush, & Loken, 1991; Broniarzyk, & Alba, 1994; Bridges et al., 2000) suggested that perceived brand fit is an important factor. Based on these findings, a positive relationship is predicted between the perceived fit and evaluation toward cable network brand extension.

H1: The perceived fit between the original cable channel and extended channels will have a positive effect on brand extension evaluation.

Aaker and Keller (1990) and Dasin and Smith (1994) suggested that quality of the original brand affected brand extension evaluation positively. If other conditions held, the high quality of the original brand will increase the salience of the association between the original brand and the extension category (Bridges et al., 2000). Similarly, Bridges et al. (2000) suggested that higher brand attitude toward the original brand will result in higher brand extension evaluation. In this paper, considering high correlation, both perceived quality of the original brand and brand attitude toward the original brand are combined into a new variable (brand evaluation toward the original brand). Also, this variable is consistent to the dependent variable (brand extension evaluation).

H2: The brand evaluation of the original cable channel will have a positive effect on brand extension evaluation.

DeVecchio (2000) suggested that the number of products affiliated with the original brand has a positive effect on brand extension evaluation while the perceived quality

variance of the products associated with a brand has a negative effect on brand extension evaluation. Applying these findings to cable situation, this paper suggest following hypotheses.

H3: The perception of the number of extended channels affiliated with the original cable channel will have a positive effect on cable extension evaluation.

H4: The perceived quality variance of the cable extension will have a negative effect on cable extension evaluation.

In addition to the fit and non-fit variables addressed above hypotheses (H1-H4), this paper adopts a couple of cable-specific attributes. Kirmani *et al.* (1999) proposed that owners have more favorable responses than nonowners to the brand extensions. Previously this paper explained that the effect of ownership can be differently measured in the cable network situations: watching time. Based on Kirmani et al (1999)'s logic, the paper expect that heavy users of television and the original cable network which is extended will have more favorable evaluations to cable extension.

H5-1: Heavy viewers of television will have more positive evaluation to cable extension than light-viewers.

H5-2: Heavy viewers of the original cable channel will have more positive evaluations to cable extension than light viewers.

As another cable-specific attribute, this paper adopted channel repertoire. Channel repertoire means a total set of choice in which a cable subscriber chooses a channel. This paper suggests that this channel repertoire will affect the cable network extension evaluation. If a subscriber has many channels in her/his set of choice, this means that the

subscriber has a large flexibility in adopting new channels. On the contrary, if a viewer has a small number of channel repertoires, it will be difficult to occupy a niche in the restricted channel repertoires.

H6: The number of channel repertoire of cable subscribers will have a positive effect on cable extension evaluation.

Insert <Figure 1> here

Methodology

Data Collection

Data was collected via questionnaires administered to 302 undergraduate students at a large southeastern university in the late April, 2003. This study used a campus intercept method to obtain the respondents. Survey respondents were picked in the campus randomly, and were given a slice of pizza for their cooperation. Compared with in-class survey, this intercept method is considered to have a higher external validity in that it can generate a more diverse combination of students. In spite of this effort, the use of students sample is difficult to avoid some limitations compared to research which use probability and national-level samples. This study, however, aims to test the theoretically constructed relationships among variables rather than to provide generalized explanations about the characteristics of cable viewers. Although there might be some limitations in applying the results to general population, this study will provide an important insight regarding the relationship between brand extension evaluation and several explanatory variables at the exploratory level. For similar purposes, the use of student subjects has been widely accepted in brand extension

research in several areas (DeIVecchio, 2000).

Brand Selection

In selecting a cable network brand, this study used two criteria. First, given that brand extensions are typically offered by brands that are both well known and favorably perceived, a cable network with which the sample are familiar and holds a favorable attitude toward was considered. Second, in case of extended channels, the channels need to have a low level of brand familiarity among cable viewers considering this study's theorizing that the original brand (channel) unidirectionally affects the extended channels. If the extended channels have a high level of familiarity, it will be difficult to make sure that the relationship is unidirectional.

Considering these two criteria, this study decided to use the Discovery Channel and extended channels in the final survey. Among the cable networks, the Discovery Channel is considered to have the highest brand equity. For example, the Spring 2003 Equitrend brand study by Harris Interactive showed that the Discovery Channel is the number one media brand in overall quality for the seventh consecutive year, and the number one television network brand in overall quality for the eleventh consecutive year. Also the Discovery Channel is a top 10 consumer brand among 1152 measured brands (www.cabletvadbureau.com). This means the Discovery fulfills the first criteria of the assumptions in selecting an appropriate brand. Also, in spite of such familiarity, many of its extended channels in Discovery Channel are provided as a premium service which demands digital cable subscribership. In this reason, its extended cable channels do not have high familiarity among cable viewers. A pilot test which was conducted in October,

2002 showed that most of the college students did not use the digital cable service. Thus, this fulfills second criteria as well.

Among the channels which Discovery is providing, this study selected seven channels (Discovery Health, Discovery Times, Discovery Kids, Discovery Home and Leisure, Discovery Wings, Discovery en Espanol, and Discovery HD Theater) as the extended channels because these channels contained the name of Discovery in their channel names.²

Variables

To predict the factors affecting the evaluation of cable network brand extension, this paper adopted seven independent variables: perceived fit, original brand evaluation, perception of perceived quality variance, number of extended brand (channels), consumption of overall television, consumption of original brand, and number of channel repertoire. These six variables can be categorized into 3 groups: (1) fit (perceived fit); (2) non-fit (original brand evaluation, perception of perceived quality variance, and number of extended brand / channels); and (3) cable-specific variables (consumption of television/original brand, and number of channel repertoire).

Brand extension evaluation

Adopting the scales of Pryor and Brodie (1998), subjects are required to provide evaluative ratings of the brand extension using three 7-point bipolar adjective scales (desirability: 1=undesirable, 7=desirable; favorability: 1=unfavorable, 7=favorable; and quality: 1=low quality, 7=high quality)

Perceived fit

To measure the perceived fit, students were asked to rate the similarity of each Discovery extension (Discovery Health, Discovery Times, Discovery Kids, Discovery Home and Leisure, Discovery Wings, Discovery en Espanol, and Discovery HD Theater) to the original Discovery Channel (1=dissimilar, 7=similar).

Original brand (channel) evaluation

To measure the students' evaluation of original brand (channel), the authors used the scales of Pryor and Brodie (1998). The respondents were asked to evaluate Discovery brand overall using three 7-point bipolar scales (desirability: 1=undesirable, 7=desirable; favorability: 1=unfavorable, 7=favorable; and quality: 1=low quality, 7=high quality).

Perception of number of extended channels

This index is based on DelVecchio (2000). Although objective measures of the number of channels affiliated with Discovery are readily available, this paper captured consumers' perceptions of the number of channels associated with Discovery. This is because in evaluating a product, consumers must typically draw on their own knowledge and perceptions. For this aim, the students were required to rate their perception of the total number of discovery channels (1=too small, 7=too large)

Perceived Quality Variance

Using the DelVecchio (2000) scale, this variables were measured by three 7-point questions (1=strongly disagree, 7=strongly agree). The statements to measure perceived quality variance were: (1) If I were to watch the Discovery channels, I would feel very certain of the levels of quality that I am getting; (2) The channels offered by Discovery are consistent in terms of quality; and (3) The channels offered by Discovery provide very

predictable levels of quality. Hypothesis 4 states the negative relationship between the perceived quality variance and the evaluation of brand extension. The questionnaire, however used reversed forms in order to avoid misconceptions of respondents.

Number of Channel Repertoire

Using Neuendorf, Atkin, and Jeffres (2001)'s definition of secondary repertoire, this study asked respondents the number of television channels viewed at least weekly.

Statistical Analysis

Zero-order correlation and multiple regression analyses are used to test the given hypotheses. Correlation analyses between evaluation toward brand extension and each of explanatory variables directly tests the hypotheses assuming that the effects of the other explanatory variables. In that they do not consider the effects of the other variables, however, correlation analyses can provide only partial support for the hypotheses. As the second step, this study uses a multiple regression analysis including all the explanatory variables. Through the regression analysis, this study can find out which explanatory variables are significant in predicting the evaluation of brand extension despite the effects of the other variables.

In addition to correlation and multiple regression analyses, ANOVA (Analysis of Variance) and Cronbach's alpha were used to test the appropriateness of data and reduce the number of items.

Results

Descriptive statistics and data screening

Sample characteristics

The sample consisted of a total number of 302 students with a mean age of 20.4. Female students comprised 51% of the sample, while male students were 49%. It is noteworthy that although this study used a campus intercept method, the sample turned out to include equivalent number of respondents in terms of gender. Based on this, the authors used one-way ANOVA test to see if there is any significant difference between male and female students. With regard to gender, the between-group differences were found in terms of consumption of the original Discovery Channel. Males (M= 2.1 days per week) reported watching the Discovery Channel more than females (M= 1.5 days per week). In addition, among all the extended brands of Discovery, females are relatively more familiar with Discovery Health (Mean of females = 3.62; Mean of males = 2.98) and Kids (Mean of females = 2.58; Mean of males= 2.16) than males, while less familiar with Discovery Wings (Mean of males = 2.46; Mean of females: 1.63). The difference was also found in perceived quality variance. More females think the channels offered by Discovery are consistent and predictable in terms of quality than males.

A majority of respondents were seniors and juniors, averaging 3.06 year college students. One-way ANOVA test was used to examine if there is significant difference among the four groups of students according to their grade or college year. The outcome showed that there was no significant difference except in the original brand evaluation. That means, the longer the year a student is in college, the higher the evaluation of original Discovery Channel (Mean of 1st year = 4.24; Mean of 2nd year = 4.73; Mean of 3rd year = 5.27; Mean of 4th year = 5.29). Although there is no other significant difference among the four groups of students, it could be a limitation of this study not to have an equivalent

number of students for each of the four groups.

Descriptive statistics

The respondents reported they are watching television 3 hours and 6 minutes per day on average with the average channel repertoire of 8.39. A majority of respondents (72%) reported they are watching the Discovery Channel more than one day per week, while 28% do not watch it, averaging 1.79 days per week. Respondents appeared to be somewhat familiar with the Discovery Channel ($M = 4.79$), while they were not familiar with other extended channels provided by Discovery (e.g. Discovery Kids, Discovery Times, etc). Among the seven extended channels of Discovery, students were relatively more familiar with Discovery Health ($M = 3.31$) than the other six channels ($M = 1.54 \sim 2.37$). This outcome supported one of assumptions of this study that students will be significantly more familiar with the Discovery Channel (original brand) than the extended channels.

As for the evaluation of original brand, students appeared to have a relatively positive attitude toward the Discovery Channel, stating that it is “desirable” ($M=4.84$), “favorable” ($M=4.99$), and “of high quality” ($M= 5.50$). While respondents did not report that the seven extended channels are similar with the original Discovery Channel ($M= 2.75 \sim 3.61$), their evaluation of brand extension appeared to be relatively positive, reporting that the entire Discovery channels are “desirable” ($M=4.85$), “favorable” ($M=4.88$), and “of high quality” ($M= 5.25$).

Turning to perceived quality variance, students appeared to be positive in evaluating how much the channels offered by the Discovery are consistent and predictable

in terms of quality (M= 4.51 ~ 4.67). Regarding the number of extended brand, students evaluated the total number of the Discovery channels is relatively large (M=4.65).

Data screening

Among the seven variables, four variables were measured by single items in the questionnaire. However, three or seven items were used in the questionnaire when measuring following variables; the evaluation of original brand, perceived fit, brand extension evaluation, and perceived quality variance. Thus, the authors needed to combine the multiple items used to measure the four variables to single items for convenient analysis. For this scale refinement process, the scale reliabilities were estimated using Cronbach's alpha. All of the four constructs had Cronbach's alpha exceeding the standard acceptance norm of 0.80; evaluation of original brand (.86), perceived fit (.89), brand extension evaluation (.91), perceived quality variance (.91).³ Based on this result, the study averaged the multiple items of each construct.

Hypotheses testing

This study used zero-order (Pearson) correlation and multiple regression analyses. As the first step, Pearson correlation was used to measure the strength and direction of the relationship between the brand extension evaluation and all other explanatory variables. Among the seven explanatory variables, three variables, such as the perception of the number of extended brand, consumption of overall television, and the number of channel repertoire, revealed no statistically significant relationship with the brand extension evaluation. Thus, the correlation analysis did not support H3, which states that the perception of the number of extended channels will have a positive effect on the evaluation

of cable network extension. The results also showed that H5-1, which assumes the relationship between consumption of overall television consumption and cable extension evaluation, is not supported. In addition, the results did not support H6, which predicts the positive relationship between the number of channel repertoire of cable subscribers and cable extension evaluation.

Except for these three, all the other variables appeared to have some statistically significant relationship with the brand extension evaluation. First, perceived fit appeared to be moderately related to the brand extension evaluation ($r=.34$, $p<.01$), supporting H1 which states that the perceived fit between the original channel cable and extended channels will have a positive effect on brand extension evaluation.

Second, H2, H3, and H4 predict the effects of non-fit variables on the brand extension evaluation. The correlation results showed that, among others, evaluation of original brand/channel ($r=.77$, $p<.01$) showed a strong and positive relationship with the evaluation of brand extension, supporting H2, which states that the brand evaluation of the original cable channel will have a positive effect on brand extension evaluation. That means, the higher the evaluation of original brand, the more positive the evaluation of brand extension.

The correlation analysis also revealed a strong relationship between perceived quality variance and brand extension evaluation ($r=.68$, $p<.01$). This result supports H4, which predicts the negative relationship between perceived quality variance and brand extension evaluation. That means, the more the subscribers feel that the Discovery channel is consistent and predictable in terms of quality, the more likely for them to evaluate the

Discovery brand extension positively.

Third, the correlation analysis was also used to examine the effects of cable-specific variables on cable extension evaluation. The cable-specific variables in this study include consumption of television overall as well as of the original Discovery Channel, and the number of channel repertoire. As discussed above, the consumption of overall television and the number of channel repertoire have not been found to have any statistically significant relationship with the extension evaluation. This result did not support H5-1 and H6.

Meanwhile, the consumption of the original Discovery Channel had a moderately positive relationship with the evaluation of the Discovery brand extension ($r=.39, p<.01$). It indicates that the more a viewer watches the Discovery Channel, the more likely for him or her to evaluate the brand extension positively.

Insert Table 1 here

Overall, the correlation analysis revealed that two non-fit variables such as the evaluation of original brand ($r=.77, p<.01$) and perceived quality variance ($r=.68, p<.01$) have the strongest relationship with the evaluation of brand extension. Meanwhile, perceived fit appeared to have a moderately positive relationship ($r=.34, p<.01$), which is less effective than those two non-fit variables. However, as a correlation analysis provides only partial support for the hypothesis testing, this study used a multiple regression to find out which explanatory variables are significant regardless the effect of other variables.

Multiple regression analysis was adopted to test the seven hypotheses. In this model,

perceived fit (H1), original brand evaluation (H2), perception of number of extended brand (H3), perceived quality variance (H4), consumption of television (H5-1), consumption of original cable brand (H5-2), channel repertoire (H6) were entered as independent variables. Dependent variable in this model was brand extension evaluation. All seven independent variables were entered into regression model.

Before conducting the regression analysis, this paper examined whether the data satisfy the assumptions required for regression analysis. Among several assumptions, this study checked multicollinearity and heteroscedasticity problems which are considered as basic assumptions. The analyses showed that the data are appropriate for regression analysis although there are a few minor violations. First, with regard to multicollinearity problem, variance-inflating factors (VIF) of all the independent variables ($VIF = 1.04 \sim 1.75$) was significantly less than 10 that is regarded as a critical point. Second, with regard to heteroscedasticity, the authors used Park test (Park, 1966) which adopts a regression equation showing the relationships between a log-transformed squared residues and log-transformed independent variables. The result shows that most of independent variables are not related with heteroscedasticity problem except one variable (perceived quality variance).

Regression analyses are processed in three steps. First, this study examined whether the overall regression model is significant. Second, this study investigated whether the individual independent variables are significant. Third, this study conducted a hierarchical regression analysis using three blocks of independent variables devised by the suggested model: fit, non-fit, and cable-specific variables.

In the first step, the regression analysis showed that the overall regression model is

significant. The model explained 69.2% of entire variance and F-test confirmed that the model is significant ($F = .69.44, p < .01$).

In the second step, the regression result indicates that three independent variables, perceived fit ($B=.095, t=1.999, p=.047$), evaluation of the original Discovery Channel ($B=.574, t=11.048, p=.000$) and perceived quality variance ($B=.328, t=6.757, p=.000$), among seven independent variables were adopted as significant variables to affect brand extension evaluation.

The analysis supported H1 which assumes the relationship between perceived fit and brand extension evaluation. The analysis also confirmed H2, indicating that the brand evaluation of the original cable channel has a positive effect on brand extension evaluation. In addition, the result also supported H4, revealing that the perceived quality variance of the cable extension has negative effect on cable extension evaluation. The other hypotheses, H3, H5-1, H5-2, and H6, were not supported by the analysis.

Insert Table 2 here

In the third step, the hierarchical regression analysis showed that fit and non-fit variables were significant as separate blocks of variables while the input of cable specific variables did not increase the explanatory power of the regression model. Specifically, R^2 changes following the input of each block showed that fit variable block (R^2 change=.120, $F=30.207, p<.01$) and non-fit variable block (R^2 change=.569, $F=133.220, p<.01$) were significant. Cable-specific variables as a whole did not make a significant contribution (R^2 change=.004, $F=.921, p=.432$).

Insert Table 3 here

Discussion

This study proposed seven hypotheses regarding the factors affecting evaluation of brand extension. The explanatory variables include perceived fit (which belongs to “fit” category), evaluation of original brand/channel, perception of number of extended brand, perceived quality variance (which fall into “non-fit” category), consumption of overall television as well as of original channel, and number of channel repertoire (which belong to “cable-specific” category).

Regression analyses showed that perceived fit, original brand evaluation, and perceived quality variance were significant among the seven suggested independent variables. Based on this result, H1, H2, and H4 are supported while H3, H5-1, H5-2, and H6 are rejected.

Although perceived fit appeared to have a significant relationship with brand extension evaluation, the explanatory power was less than the two non-fit category variables (original brand evaluation and perceived quality variance) unlike our expectation. Previous literature (Aaker & Keller, 1990; Boush & Loken, 1991; Milberg & Lawson, 1991) showed that perceived fit is generally the most powerful explanatory variable for brand extension evaluation. This result provides some implications. First, the operationalization and measurement of “fit” in cable context could be discussed further. In previous studies, perceived fit was conceptualized as the similarity or feature overlap between the parent brand and extension category (Aaker & Keller, 1990; Boush & Loken, 1991; Romeo, 1990).

As this study asked how much the extended Discovery channels are similar to the original Discovery Channel based on the current channel line-up, whether the viewers perceive fit as a similarity in program genre could be explored further. It has been observed that the overall characteristics of the current Discovery channels are educational and informational, comparing with other channels offering other genre such drama, sports, and entertainment. That means, if we expand the scope of “fit” to the *imaginary* channel line-up of the Discovery Sports, then measuring perceived fit between the original Discovery and Discovery Sports, for example, would result in different evaluation in terms of the “perceived fit.” Second, the authors assume that the weak effect of the “fit” on brand extension evaluation can be also explained by the measurement and conceptualization issue of line extension vs. brand extension. As stated earlier, the authors proposed that that cable network spin-offs are called cable network brand extensions in the present study. However, the channel extension in cable network industry can be defined as line extension rather than pure “brand extension,” because those spin-offs are made in the same product category. That means, pure “brand extension” of cable networks can be measured by the cable network’s expansion into other media such as newspaper, radio, or the Internet. Therefore, the authors assume that measuring “intra-media” fit would result in different outcome with possible effects of perceived fit.

Our results show that the more subscribers perceive the original cable channel positively, the more likely for them to evaluate brand extension of the original cable channel. This outcome confirms the previous study that showed the more positive brand attitude toward the original brand resulted in higher brand extension evaluation (Aaker &

Keller, 1990; Bridges *et al.*, 2000; Dasin & Smith, 1994). It indicates that a viewer's positive evaluation of cable channel extension relies on the strong brand power of the original channel, regardless there exists the fit or similarity between the parent brand and extended channels.

In addition, perceived quality variance of the cable extension was found to have a negative effect on the cable channel extension evaluation. This result indicates that severe quality variance among channels under the same brand can blur the brand equity of the original channel which is assumed to have a strong effect on brand extension evaluation. This implies that when a cable network tries to launch or acquire a new channel it is strategically necessary for the network to consider the generally perceived quality of the new channel. If the new channel is evaluated to have a significantly lower level of quality compared with the original channel, then the network needs not to use a brand extension strategy for the new channel.

This study did not show that the perception of number of brand extension significantly affect the brand extension evaluation in the context of cable television. Although the current study cannot completely prove the possibility of the effect of perceived number of extended brand in the context of cable television, some alternative hypotheses can be suggested. For example, we can assume that the relationship between the evaluation toward the brand extension and the perception of number of extended brand is non-linear (e.g. curvilinear). That is, an increasing trend with a positive relationship between the number of extended brand and evaluation of brand extension might stop, or even drop, after the number of extended brand reaches a certain point.

The effect of cable-specific variables such as consumption of television, consumption of original channel, and channel repertoire were not proved in this study. In case of consumption of overall television, this unexpected result can be understood in that general television watching behavior is not directly related to evaluation toward a specific channel or brand extension related to the channel. Interpreting results regarding the effects of consumption of original channel and channel repertoire, however, demands some caution. First, in case of consumption of original channel, the correlation analysis showed a moderate relationship with evaluation of brand extension ($r=.39$, $p<.01$). Consumption of original channel also shows a strong association with evaluation of original channel. It is reasonable to believe that the more a viewer watches a channel, the higher the viewer evaluates the channel. Therefore, the insignificant relationship between consumption of original channel and brand extension evaluation needs to be investigated in the context of association with the other independent variables. Second, in case of channel repertoire, we need to use more diverse operationalizations. Actually, in this study, only one item (number of channels a viewer watches weekly) was used for measuring the concept of channel repertoire. It is necessary to use addition items with more objective or narrowly tailored meanings before discarding this variable.

In summary, our results indicate that an audience will positively evaluate the extension of a cable network provided that the network has strong brand power in the original channel and that viewers expect the consistency in terms of the quality of programs which the original channel and extended channels provide together. These findings also have some strategic implications for the cable network industry with regard to the decision

making in brand extension. A cable network might try the brand extension based on the strong brand power of the original brand instead of the perceived fit. However, they are strongly recommended to consider the quality variance factor for the successful brand extension.

Conclusion

The objectives of this paper were to enhance the applications of brand management in media management studies, especially applying the concept of brand extension in the context of cable television industry. This study tried to find the factors affecting evaluation of brand extension of cable network. The explanatory variables include perceived fit, evaluation of original brand/channel, perceived number of extended brand, and perceived quality variance, consumption of overall television as well as of original channel, and number of channel repertoire. The results showed that, among all the variables, perceived fit, evaluation of original brand/channel and perceived quality variance are strong predictors of the success of cable network's brand extension.

Although three variables were proved, four variables were rejected by this study among the suggested seven independent variables. Especially, none of cable-specific variables were proved significant. This indicates the necessity of more refined conceptualization and operationalization of the variables in the context of cable network. In addition, due to the limitation of using student sample, the reported results are to be generalized with consideration of the sample characteristics.

Further, this study used the Discovery Channel with current channel line-up for the example of an original brand as well as extended brands. As the majority of respondents are

already familiar with the Discovery Channel and extended channels, the results reflect their current attitude and perception of the Discovery Channel, which already has a strong brand power, and successful line-up of extended channels. That means that using other channels as example might results in different outcome. Future study may use imaginary situations, rather than specific channels currently available, to assess more accurate evaluation of brand extension.

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Figure 1: A suggested model of cable network brand extension evaluation

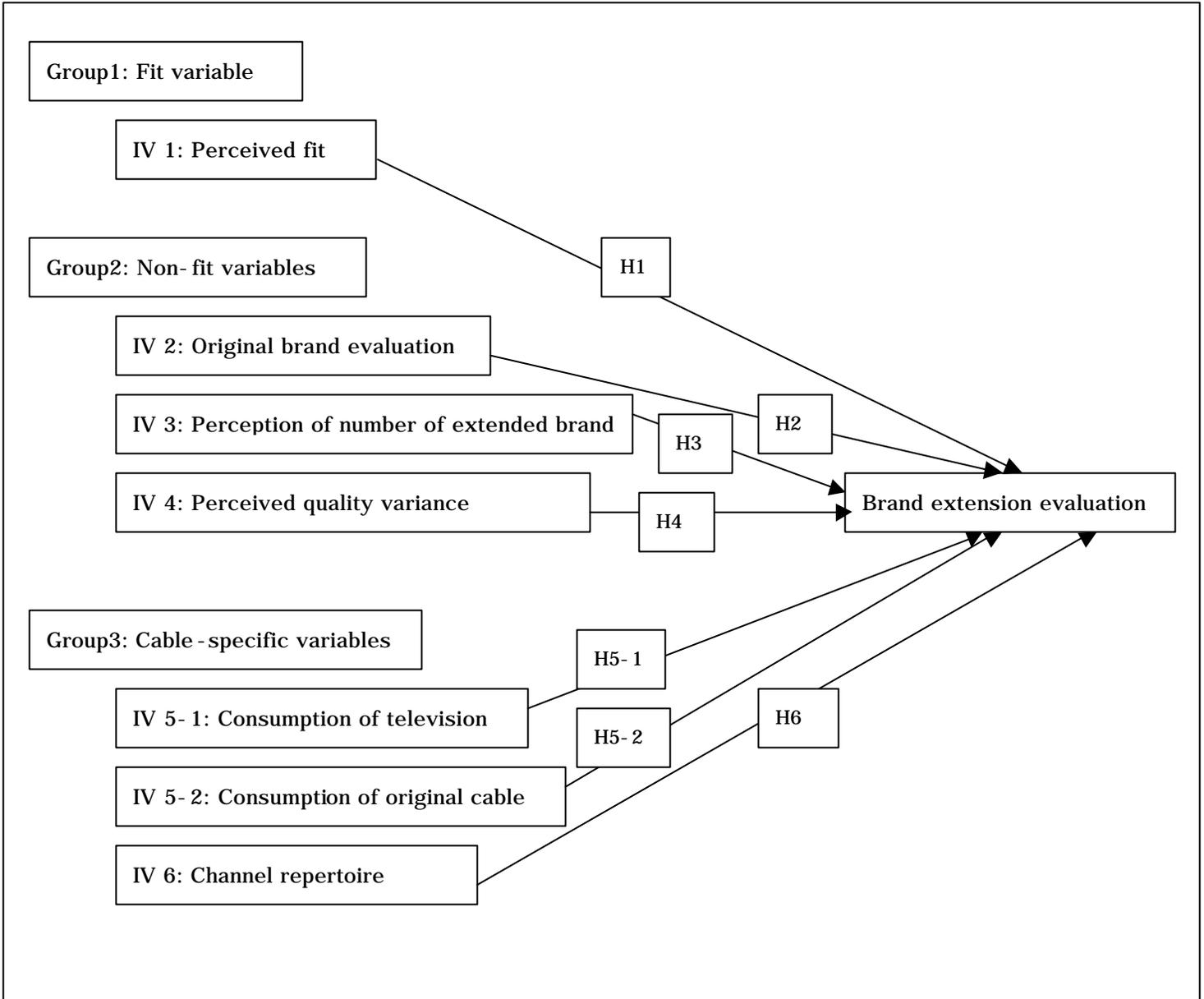


Table 1: Correlation matrix among dependent and independent variables

	Dep	1	2	3	4	5-1	5-2	6
Dependent: Brand extension evaluation	-							
1: Perceived fit	.34**	-						
2: Original brand evaluation	.77**	.31**	-					
3: Perception of number of extended brand	-.00	.03	.00	-				
4: Perceived quality variance	.68**	.30**	.56**	.03	-			
5-1: Consumption of television	.04	.07	.07	-.13*	-.01	-		
5-2: Consumption of original cable	.39**	.16*	.45**	-.14*	.28**	.16**	-	
6: Channel Repertoire	.11	.05	.14*	-.05	.11	.46**	.21**	-

** p<.01; * p<.05

Table 2: Regression analysis of the suggested model

Independent Variables	B	SE of B	β	t	Sig
Constant	.504	.312		1.619	.107
Perceived fit	.095	.047	.081	1.999	.047
Original brand evaluation	.574	.052	.552	11.048	.000
Perception of number of extended brand	-.071	.044	-.063	-1.638	.103
Perceived quality variance	.328	.049	.310	6.757	.000
Consumption of television	.000	.000	.035	.805	.422
Consumption of original brand	.053	.037	.063	1.426	.155
Channel repertoire	-.002	.009	-.012	-.270	.787

$R^2=.692$, Adjusted $R^2=.682$, $F=69.44$, $p<.01$

Table 3: Hierarchical Regression analysis

Block	Variables	R2 Change	F Change	Sig
Fit	(H1) Perceived fit	.120	30.207	.000
Non-fit	(H2) Original brand evaluation (H3) Perception of number of extended brand (H4) Perceived quality variance	.569	133.220	.000

Cable-specific	(H5-1) Consumption of television (H5-2) Consumption of original cable (H6) Channel Repertoire	.004	.921	.432
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¹ One of the first occasions where the concept of “media as brand” was presented was in 1993 at the Advertising Research Foundation Annual Conference by David Bender, President and CEO of Mediamark Research (McDowell, 1998). After the speech, several trade journals such as Advertising Age, Broadcasting and Cable, Electronic Media, and Media Week began to use the term, brand, for media products (McDowell, 1998).

² Whole channels owned by Discovery are as follows: TLC, Animal Planet, BBC America, Science Channel, Discovery Health, Discovery Times, Discovery Kids, Discovery Home and Leisure, Discovery Wings, Discovery en Espanol, and Discovery HD Theater.

³ Although there is no gold standard about how high coefficients should be in order to consider reliability as ‘good,’ some rough guidelines are offered: reliability coefficients around .90 can be considered ‘excellent,’ values around .80 as ‘very good,’ and values around .70 as ‘adequate’ (Kline, 1998, p. 194).