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Creation of Market Categories through Product Strategy: A Text-Mining Approach

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Abstract

The study aims to investigate the process employed by companies to intentionally create market categories through implementation of product strategy. Much of the research on market category formation focuses on the spontaneous emergence of market categories, with a few studies focusing on the intentional creation of market categories. In the course of this study, I therefore sought to understand the logic by which companies intentionally create market categories, by treating the process through which market categories are formed as a sensemaking process, and by treating the behavior of a company intentionally forming a market category as an effort to manage this sensemaking process. In empirical study, we conducted an exploratory case analysis through content analysis of company press releases and consumer reviews. It is possible that market categories can be formed or changed if the way in which they are shared among market participants can be changed. In this study, we identified two sense-giving activities for the creation of market categories by firms as follows: (1) reorganizing market categories that flat-panel TV manufacturers in the North American market have attempted to form into subcategories of smart TVs, and (2) connecting them to surrounding categories through strategic labeling to establish new categories.

Keywords: Market Category, Sensemaking, Sensegiving, Content Analysis

JEL Classification Code: L10, M10, M31

1. Introduction

The purpose of this study is to consider the process by which new markets are formed. More specifically, it is to investigate the process used by companies to create new market categories through implementation of product strategy.

For players such as producers, consumers, and critics (securities analysts and specialized publication editors who evaluate companies), market categories are understood to be the foundations for decision-making and action (Glynn & Navis, 2013). Although there has been research on market categories considering relationships between members or the relationship between market categories and the behavior of each member, research in this field has accelerated in recent years due to increasing interest in clarifying how market categories are formed (e.g., Kodeih et al., 2019; Glaser et al., 2020). The prevailing notion was that new market categories are formed naturally through the introduction of products that differ from existing products. One impetus in the natural formation of market categories is the development and release of differentiated products in the market. There is an increasing number of products being released to the market that cannot be placed under existing market categories, and new market categories emerge when participants in markets (especially consumers) become aware of product groups that differ from existing ones.

However, researchers have just begun to understand the process by which companies (as producers of products) intentionally form market categories. There has been much research on marketing strategy and innovation management regarding product differentiation and product development (e.g., Christensen, 1997; Nishikawa et al., 2013). However, for a company to intentionally form a new market, it must adopt a product strategy besides differentiation at product level. We are faced here with two questions. What product strategy should a company adopt if it is attempting to

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intentionally create a new market category? How do new market categories form through the behavior of companies? In this study, I treat the process by which market categories are formed as a sensemaking process and treat the behavior of a company intentionally forming a market category in an effort to manage this as a sensemaking process. Furthermore, I elucidate the questions above by conducting an exploratory case analysis on the flat-screen TV market in the North American market.

In this study, I first adopt a perspective of market category research and investigate how companies intentionally form markets. In Section 2, I investigate an analysis framework to understand how meaning is managed when a company attempts to form a market. I further investigate an analysis method for the exploratory case analysis conducted on the flat-screen TV market during this study in Section 3, while in Section 4, I reveal the results of my analysis on how market categories are intentionally created and consider the theoretical significance of the findings. Finally, I conclude the study and identify its contributions and limitations in Section 5.

2. Literature Review

Markets have tended to be perceived as the foundations on which companies engage in strategy and marketing. However, markets themselves as topics of research (such as the intellectual and systematic foundations of markets) has not yet become a central topic of consideration in the fields of business administration and marketing theory (Durand & Khaire, 2017). Even in research that has continued to investigate how markets are understood, markets are given an autonomous position separate from market participants, and researchers are faced with issues such as the difficulty of explaining market transformation and formation, as well as the impact market participants have on markets (Cattani et al., 2017). However, many researchers continue to advance discussion on how markets themselves form and are transformed (Glaser et al., 2020). In the following section, I cover previous research related to the field of market category research, which treats markets as means of interaction between companies and consumers and examines the behavior of market participants.

2.1. Market Category Formation

A market category is a "conceptual system" recognized and shared between a production organization (such as a company) and an interested audience (such as investors and consumers) (Rosa et al., 1999), it provides a basis for recognition in evaluating the organization and its products, driving expectations, and engaging in physical and symbolic exchange (Durand & Paolella, 2013). The boundaries of a market category are formed and reformed based on the realities facing market participants and the objectives they seek (Glynn & Navis, 2013). The first basic element of a market category is its constituent members. The constituent members of a market category are classified based on rules and boundaries related to the type of product or service. The concepts, labels, and identities that reflect the characteristics linking these constituent members are also basic component elements of a category (Mervis & Rosch, 1981).

How market categories form and transform has been a popular topic in recent years in the field of market category research (Vergne & Wry, 2014). Research on how market category forms can be said to have begun with Rosa et al. (1999), who argues that the boundaries of a market category become stable through consent attained via the interaction of the member organization and audience. When a market category is formed, the audience is able to understand that the member company belongs to the said category and that its product or service is also a part of that category. As an example, let us consider the automotive market. When a new category of "minivan" is formed, it means that the audience recognizes Ford, GM, and Honda as member companies of the minivan market, and that the vehicles they provide are new models (minivans) that are neither sedans nor RVs (Rosa et al., 1999).

However, a bias at play is noticed here, in discussing the formation of market categories. Durand and Khaire (2017) argue that a change in the classification system or standard in an existing market category represents a change in the market category itself or the formation of a new market category, and they classify market category formation into one of two types ("category emergence" and "category creation") as patterns of change in a classification system or standard. Bringing a differentiated product to market that cannot be understood using existing classification frameworks serves as the impetus for "category emergence." A new market category forms naturally as the number of such products in the market increases (e.g. Rosa et al., 1999).

In contrast, "category creation" is when a member of an existing market category engages in an intentional effort to redesign a market (including its boundaries) by intentionally redesigning standards within the market category. For example, Khaire and Wadhwani (2010) describe a case in which gallery owners and auction houses leveraged the modern art criticism of art historians to blur the boundaries of modern art, and redefined twentieth century Indian art (which had until then been lumped together with art from the South Asia region) into a new genre of modern art (that is, the market category of modern Indian art). The formation of market categories has only just begun to be addressed seriously as a topic of discussion for researchers, and most research on market category formation has so far focused on the emergence of market categories (Durand & Khaire, 2017).

In contrast, the flat-screen TV market, which is the focus of this study, is home to companies strategically engaged in creating a new market category, as stated by Bu-Geun Yun of the Visual Display Division of Samsung Electronics. However, the way companies engage in creating new market categories has not been given sufficient consideration. In this study, I therefore borrow the concepts of sense-making (Weick, 1995) and sense-giving (Gioia & Chittipeddi, 1991) in constructing an analysis framework for the purpose of understanding the process by which companies intentionally create market categories through engaging in product strategy.

2.2. Sensemaking and Sensegiving in Market Category Research

Although sensemaking or sensegiving has been applied in recent years in diverse areas, including high-reliability organizations and risk governance(Weick & Sutcliffe, 2015; Choi et al., 2019), some researchers have considered how new market categories are formed from a sensemaking perspective (Vergne & Wry, 2014). For example, in analyzing how the minivan market was formed, Rosa et al. (1999) consider the process of incorporating new products within a market category (as a conceptual system between producers and consumers) as a sensemaking process. In addition, in analyzing the formation of the satellite radio market in the US, Navis and Glynn (2010) frame sensegiving and sense-making as efforts to clarify the meaning and identity of a market category that continues to form, as well as efforts to promote further understanding of new market categories. They classify producers as agents involved in sensegiving to ensure that new categories are understandable and attractive to their audience and classify the audience as agents involved in sensemaking by applying categories as reference points to categorize, order, and evaluate companies within the market.

When a new market category is formed, new product features are given meaning through the process by which a new product (that could not have been understood with reference to a conventional market category) is understood and evaluated. It seems appropriate, then, to understand this process by treating it as sensegiving and sensemaking process engaged in by producers and consumers. However, there is no prior research on how market categories are formed, that considers sense-giving and the sensemaking process. Therefore, in the following section I consider the sensemaking process, investigate how sense-giving behavior is framed, and employ this as an analysis framework for investigating how market categories are formed.

2.3. The Substance of Sensemaking and Sensegiving

According to Weick (1995), sensemaking occurs the instant something unknown is introduced into the frame of an individual. Weick (1995) sees sensemaking as consisting of three elements: “frames,” “cues,” and “connections.” Sensemaking occurs when a “frame” that summarizes past experience is somehow “connected” with “cues” that capture the particularities of current experience (Weick, 1995). He also treats “frame” and “cue” together as vocabularies. He sees frames (as a highly symbolic vocabulary) as encompassing and being designated by cues (which are of a low abstract quality), and sees cues as being given meaning though the context created by frames. Rosa et al. (1999) argue that the sense-making process, “leads to assimilation of new product categories into the product conceptual systems of both producers and consumers” (Rosa et al., 1999, p.69). However, if we take the previous discussion into consideration, we can also consider the sense-making process that occurs when a market category is formed as a process by which a new product category (which will be a cue) is related to (or incorporated into) an existing conceptual system serving as a frame.

The important implication in perceiving sensemaking in this way is that taking this frame, cue, and connection approach opens the possibility of managing the sense-making process. “Sensegiving” is a concept that focuses on this point. For example, Bartunek et al. (1999) have clearly exhibited the relationship between the sensemaking process and sensegiving. In their research, they include the sensegiving tactics of transformation leaders during strategic organizational transformations conducted in Boston from 1984 until the latter half of the 1990s. In their research, they interpret the schemes of leaders connecting cues with existing frames as sensegiving tactics.

In this study, I will therefore analyze sensegiving (in other words, how to “connect” “cues” and “frames”) in order to treat the formation of new market categories as a sensemaking process in which “cues” are “connected” as the special qualities of current experiences to “frames” that serve as summaries of past experiences, to manage this process.

3. Research Method

In this study, I utilize text mining to conduct a content analysis of press releases and consumer reviews and investigate an exploratory case study based on the results of this analysis, in order to clarify the process through which companies intentionally create market categories. Content analysis is an investigative technique in which the content of explicitly stated communication is described objectively, systematically, and quantitatively (Berelson, 1952). Text mining is a method of conducting content analysis. Exploratory case studies focus on the context of the company under study, and are performed with the objective of describing in detail what occurs within this context (Willig, 2001).

3.1. Data

In this study, I conduct content analysis of text data that has been structured through text mining, in order to analyze changes over time in the points of appeal presented by companies in the flat-screen TV market, the category labels used by these companies, and consumer recognition of product features.

Press releases issued by companies (N = 127) and consumer reviews on Amazon.com (N = 15215) were used for the content analysis. The six-year period from 2010 to 2015 was selected for analysis based on accessibility to data. IBM SPSS Text Analytics for Surveys English Language Extractor ver. 4.0.1.1 was used for the content analysis.

In this study, we analyze the press releases issued by Samsung Electronics and LG Electronics when they announce new products. Although annual reports (Khanifah et al., 2020) and CSR reports (Yin & Zhang, 2019) have been used in the past for content analysis, a chronological analysis of press releases should allow us to identify terms and category labels used to explain points of appeal and new product features to the intended audience, as well as to reveal changes in the market. Press releases were obtained from the databases of Business Wire, PR newswire, and other companies that distribute press releases.

The audience analysis was conducted on product models mentioned in press releases that also have reviews posted on Amazon.com. Comments and reviews posted by consumers online are now commonly perceived as representing consumer recognition (e.g., Choi et al., 2007). These sources are therefore used in the study to identify the focus of attention as well as terms and category labels used when consumers evaluate products. Only reviews posted within the year the product was released were included in the analysis. The review filtering function on Amazon.com was used to select only reviews from individuals who had purchased the products in question.

Although a content analysis was not conducted on this topic during the study, articles from Consumer Reports (a publication issued by Consumer Union) were used to analyze the frames used by critics in evaluating new products. Consumer Reports includes a special feature focusing on a single product category each month, which includes evaluations that take market trends and product tests into consideration, as well as advice and other information to serve as reference in making purchases. The special feature on flat-screen TVs included an article on overall trends in the market followed by product rating of how highly they were evaluated. The article on overall market trends was included in the analysis conducted in this study.

3.2. Analysis Overview

The analysis focused mainly on the category level summarized into several terms for the text that was covered. Conducting the analysis at the category level in this way can resolve the issue of a reduced sample size. The natural language processing technology included with the software was used to set categories. To interpret the results of the analysis, I borrowed the expertise of prior research based on published documents, including newspapers, Consumer Reports magazine, and TWICE (a specialized publication focusing on the consumer electronics industry).

Content analysis was conducted in three steps as described below. During the first step, data that had been organized ahead of time was imported into the software, which used natural language processing technology to extract morphemes. During the second step, an analyst set the analysis categories based on the resulting morphemes. These analysis categories were set according to the number of samples that included terms belonging to the analysis category as well as how the market being studied has changed over time. During the third step, the categories selected during the previous step were used to quantify (structure) text data. This quantified data was then applied to analyze the "frames" shared by the audience in the North American market and the "connections" presented by companies.

The following tables (Tables 1 and 2) list the analysis categories set for content analysis.

4. Formation of the Smart TV Category in the North American Flat-Screen TV Market

The term "smart TV" was used extensively by both Samsung Electronics ("Samsung" below) and LG Electronics ("LG" below) during the January 2011 Consumer Electronics Show (CES). Thereafter, the term is now largely accepted as a label describing TVs that allow users to connect to the Internet and access a wide range of applications including video streaming services. In the following section, I examine the efforts of Samsung and LG to establish the smart TV market category as well as how audiences received these efforts, from the perspective of sensemaking and sensegiving.

4.1. Existing Frames in Audiences

In this study, I treat the criteria used by consumers and critics to evaluate flat-screen TV performance as the frame of the audience in investigating changes in company sensegiving and frames, based on the research by Rosa et al. (1999). Here, I investigate the evaluation criteria used by consumers and by Consumer Reports magazine (i.e., critics reviewing products).

4.1.1. Flat-Screen TV Evaluation Criteria as the Frame of Critics

In order to identify the frame of the audience, the first step is to confirm the criteria by which Consumer Reports evaluates flat-screen TVs, based on the rankings listed by it (as described above). This process is explained below.

Table 1: List of analysis categories (company press releases)

analysis categories	items	analysis categories	items
category labels		content	
3d tv			4k content
	3d tv		hd content
4k tv			internet content
	4k tv		online content
	uhd tv		streaming
smart tv			streaming content
	smart tv		video content
hdtv		design	
	plasma hdtvs		design
	lcd hdtvs	internet	
	hdtv		built-in wi-fi
non category labels			internet
easy to use		motion	
	easy to use		120hz
enjoyable			240hz
	enjoyable		fast-moving
experience			motion
	entertainment experience	remote	
	experience		remote
	home entertainment experience		remote control
	tv experience	sound	
	user experience		sound
	viewing experience		sound quality
lifestyle		viewing angle	
	lifestyle		viewing angle
room		3d	
	bedroom		3d
	family room	4k	
	guest room		4k
	living room		uhd
	room	hd	
picture			hd resolution
	picture		hd
	picture quality	smartphone	
application			smartphone
	application		
	samsung application		
	tv application		
	vizio internet application		

Table 2: List of analysis categories (Amazon.com reviews)

analysis categories	**items**	**analysis categories**	**items**
category labels		content	
3d tv			4k content
	3d tv		hd content
4k tv			internet content
	4k tv		online content
	uhd tv		streaming
smart tv			streaming content
	smart tv		video content
hdtv			hulu
	plasma hdtvs		netflix
	lcd hdtvs		movies
	hdtv	design	
non category labels			design
easy to use		internet	
	easy to use		built-in wi-fi
enjoyable			internet
	enjoyable	motion	
experience			120hz
	entertainment experience		240hz
	experience		fast-moving
	home entertainment experience		motion
	tv experience	remote	
	user experience		remote
	viewing experience		remote control
room		sound	
	bedroom		sound
	family room		sound quality
	guest room	viewing angle	
	living room		viewing angle
	room	3d	
picture			3d
	picture	4k	
	picture quality		4k
application			uhd
	application	hd	
	samsung application		hd
	tv application	smartphone	
	vizio internet application		smartphone
price			
	expensive		
	cheap		
	price		

Consumer Reports mainly evaluates flat-screen TVs on three criteria: “image quality,” “price,” and “sound quality.” For example, a special issue of Consumer Reports devoted to flat-screen TVs provides “the best combination of performance and price” as the criteria for recommending a particular model as a “CR Best Buy.” This special issue is published in the month of March each year and includes a ranking of flat-screen TVs, with “image quality” serving as the most heavily weighted evaluation criterion for this ranking.

This allows Consumer Reports to cover flat-screen TVs with newly added features without having to alter its evaluation criteria. For example, the magazine praised LED TVs for their ability to produce great blacks (due to the usage of LEDs for backlighting), their lower power consumption, and their thinner frames (Consumers Union of United States, 2010; Consumers Union of United States, 2013). However, the editors of the magazine did not urge consumers to purchase these models because they were also more expensive than TVs that use fluorescent backlighting (Consumers Union of United States, 2010; Consumers Union of United States, 2011). The magazine was similarly cautious of 3D TVs, noting that there was little 3D content available and that viewing 3D content required special glasses (Consumers Union of United States, 2012).

In other words, Consumer Reports could be described as interpreting new products based on an existing classification system and by evaluating types of TVs in this way. An audience evaluates new products released to market based on the standards they already have (Hannan, 2010). Therefore, they tend to poorly rate products or services that are incompatible with their standards (Zuckerman, 1999). As for the three types of TVs above, if we consider the standards for evaluating flat-screen TVs set by Consumer Reports (image quality and price), LED TVs and 3D TVs can also be evaluated based on the standard of image quality.

4.1.2. Frame for Consumers

Let us now consider the frame used by consumers. In this section, I investigate the features consumers consider before purchasing their own flat-screen TVs, based on conducting a content analysis of reviews posted by consumers on Amazon.com, to analyze what was written in reviews.

Table 3 lists the emergence sample count and emergence ratio for analysis categories, created based on consumer reviews posted on Amazon.com from 2010 to 2015. Based on Table 3, the analysis categories most often mentioned by consumers in 2010 were “image quality,” “price,” and “sound quality.” In other words, consumers valued the same features as critics in Consumer Reports. The term “3D” also appears often, though more as a characteristic of a product’s features than a type of TV.

The results above indicate that “hdtv” was another label that was often used. A co-occurrence analysis of the label “hdtv” in reviews posted in 2010 found that of the 161 reviews that used the “hdtv” label, only 6 of the 161 reviews used the other TV label(“3D TV”). Flat-screen TVs provide several features and may be referred to as “TVs” in some cases or “high definition 3D TVs” or “HDTVs with 3D capability” at other times. However, the results above reveal that many consumers view 3D not as a new TV category, but as a new feature provided by TVs.

4.2. Cues Presentation and Tactics for Connection

In this section, I discuss the product strategies that Samsung and LG engaged in to create a new market category (“smart TV”), and investigate strategies to present a new cue (“smart TV”) and connect it with frames. Samsung stated that, “Samsung has created a new category of TVs – Smart TV– that not only delivers personalization and customization to the TV viewing experience, but also content discovery and distribution service to the home (Samsung Electronics, 2010)” The company then began releasing its smart TV products worldwide in March 2011. This global release resulted in over two million TVs sold over a period of three months, with 730,000 sold in the North American market alone. Furthermore, according to IHS Inc., the company’s market share (based on units shipped in the US) grew from 17.0% in the third quarter of 2009 and 19.3% in the third quarter of 2010, and then to 35.1% in the first quarter of 2012, pulling far ahead of its closest competitors at second place (LG) and third place (Sharp), with 11.3% and 8.9% of the market, respectively. Samsung also enjoyed a large share of the market based on sales volume, with 30.0% and 31.0% of the market during the first quarter of 2012 and first quarter of 2013, respectively.

Prior to releasing their new TVs to the North American market, Samsung and LG designed their TVs to connect to the Internet and integrated external platforms (such as Yahoo! Connected TV) into their products, so that consumers could obtain brand new viewing experiences. They also developed applications, improved user interfaces, and worked aggressively on developing operating systems for their TVs, leading up to the release of the TVs that would later be called “smart TVs.”

However, as Samsung mentioned in 2010, to create a new market category, it would be important to not only release a new product designed with features to differentiate it from conventional flat-screen TVs, but to also adopt a product strategy of framing the TV as a new product. Below, I investigate the product strategies adopted by Samsung and LG to create a new market category, as a form of managing the sensemaking process.

Table 3: Trends in analysis category number of appearances in flat-screen TV reviews (2010–2015)

Rank	2010		2011		2012	
	analysis categories	**number of appearances**	**analysis categories**	**number of appearances**	**analysis categories**	**number of appearances**
1	picture	1106	picture	2522	picture	1171
2	price	628	price	1387	price	671
3	sound	497	sound	1170	3d	611
4	content	353	3d	1101	sound	502
5	room	344	content	851	remote	496
6	remote	310	remote	729	content	424
7	3d	284	room	705	room	314
8	hdtv	161	application	408	application	258
9	experience	119	hdtv	319	smart tv	166
10	application	116	motion	288	motion	138
11	internet	102	experience	282	hdtv	122
12	hd tv	98	smart tv	213	internet	121
13	motion	96	hdtv	201	experience	116
14	enjoyable	92	enjoyable	193	enjoyable	104
15	easy to use	75	internet	190	easy to use	96
16	design	55	easy to use	176	3d tv	85
17	viewing angle	52	3d tv	149	hdtv	81
18	3d tv	37	design	116	design	76
19	smart tv	1	viewing angle	100	viewing angle	59
20	4k	1	4k	1	4k tv	0
21	4k tv	0	4k tv	0	4k	0
	n=1757		*n*=3989		*n*=2031	
Rank	**2013**		**2014**		**2015**	
	analysis categories	**number of appearances**	**analysis categories**	**number of appearances**	**analysis categories**	**number of appearances**
1	picture	1523	picture	1262	picture	929
2	price	796	price	646	price	456
3	sound	580	sound	473	remote	385
4	content	474	content	441	content	372
5	remote	442	remote	420	sound	289
6	3d	440	smart tv	307	4k	264
7	room	420	application	300	application	204
8	application	269	room	231	room	193
9	smart tv	250	3d	169	smart tv	171
10	motion	128	4k	128	3d	105
11	enjoyable	117	experience	91	experience	95
12	hd tv	112	easy to use	89	easy to use	65
13	experience	97	internet	83	internet	65
14	easy to use	91	enjoable	73	4k tv	63
15	internet	83	motion	73	enjoyable	57
16	design	75	hdtv	66	motion	48
17	hd	63	hdtv	54	viewing angle	41
18	viewing angle	42	design	45	hd	38
19	3d tv	36	4k tv	37	design	36
20	4k	34	3d tv	7	hdtv	28
21	4k tv	13	viewing angle	0	3d tv	7
	n=2730		*n*=2680		*n*=2024	

Let us consider the first strategy that was adopted. When releasing their smart TVs to market, Samsung and LG reformed the market category which flat-screen TV manufacturers (including themselves) had attempted to form in the North American market, as a feature provided by smart TVs. Samsung conducted a bold marketing campaign to communicate to consumers that "3D TV means Samsung," and were able to attain the top spot in market share (based on units shipped) in the world. Due to the stiff competition, the number of 3D TVs shipped rose dramatically in 2010 in the North American market, and even publications such as TWICE and Consumer Reports began using the term "3D TV." It was under these conditions that Samsung LG in 2011 began releasing "smart TVs" that could connect to the internet and use applications such as video distribution services. However, in addition to reducing their use of the "3D TV" label and increasing their use of the "Smart TV" label, both companies also used terms such as "3D," "hd," and "4K (UHD)" not as labels but in the context of features provided by their TVs, in the press releases they issued using the label "smart TV."

Among 39 press releases issued by Samsung and LG between 2011 and 2015, a co-occurrence analysis was performed for 35 press releases that refer to smart TV models. There were six and eight press releases, respectively, in which the terms "3D TV" and "4K TV" co-occurred with the smart TV label, while there were 10, 18, and 20 press releases, respectively, in which the terms "4K," "hd," and "3D" co-occurred with the same label. This indicates that the terms were used more often simultaneously with TV models than with category labels. Samsung, LG, and other Korean companies had conducted bold promotional campaigns during CES events for LED-backlit TVs in 2009 and then for 3D TVs in 2010. However, "3D TV" was being used less often as a TV label in press releases beginning in 2011, while the use of the "smart TV" label increased. This can be interpreted as demonstrating the relationship between smart TVs and the TV models promoted until then.

The second strategy worth examining here is how companies associated labels with categories as media and promoted understanding among consumers. Samsung and LG both used the term "smart" as a label for their new market category. Although "smart" is typically used to mean "clever, intelligent, or highly functional," the companies likely chose this term as a category label in an attempt to associate it with the "smartphone" category that had already formed a market category.

This is particularly true of Samsung, which developed the world's first store that could be used to download application to a TV over the internet in March 2010, as a part of the Samsung Application Store, a store for smartphones applications that the company launched in September 2009. Smart TVs provide access to content through applications, and therefore, other companies also planned to develop applications. However, by linking its smart TV and smartphone application stores, Samsung was able to take the lead over companies such as LG and Sony. Furthermore, Samsung and LG designed similar interfaces (including the TV user interface and its various control screens) for their smartphones and smart TVs and introduced applications that would allow smartphones and smart TVs to be linked, soon after releasing their smart TVs to market.

Samsung and LG thus attempted to associate the new "smart TV" category with the existing "smartphone category," by adopting the linguistic method of using a label ("smart") to form a new flat-screen TV market category, and then by adopting the non-linguistic method of providing connectivity and a common interface for their application stores.

4.3. Incorporation of Cues into Frames

In this section, I investigate how the product strategies employed by Samsung and LG altered evaluation criteria as the frame of the audience.

4.3.1. Changes in the Frame of Critics

Let us first consider the frame of critics. Consumer Reports provided a different evaluation of smart TVs compared with how they evaluated 3D TVs and LED TVs. The December 2011 issue is the first time where Consumer Reports uses the term "smart TV." In contrast with the terms "LEDTV" and "3DTV," which was no longer used in 2014, the term "Smart TV" was already being used in special flat-screen TV issues published in 2011.

Furthermore, "internet connectivity" was added as an evaluation criterion for the rankings provided in every March and December issue of *Consumer Reports*, beginning in 2010. Another criterion, streaming video support (for services such as Netflix and Hulu), was added in 2011. The use of these services in a full web browser was added as an evaluation criterion in 2013. However, all these criteria were then combined in 2015, with "smart TV" added as a specification for flat-screen TVs. A perusal of the rankings reveals that 43 of the 59 models ranked in the December 12, 2012 issue were smart TVs. If we limit models to only those with screens 45-inches and larger, then more than 80% of the models listed (38 out of 47) were smart TVs. In this way, Consumer Reports continued to focus on image quality and price as evaluation criteria while adding internet connectivity and streaming video features provided by smart TVs as new evaluation criteria, and as features (similar to 3D and LED features) that could not be covered by the evaluation criteria on which the magazine had traditionally focused (image quality and price).

4.3.2. Changes in the Frame of Consumers

In this section, I investigate changes to the frame used by consumers. As indicated in Table 3, the reference ratio for “image quality” and “price” remained high until 2015, proving that these evaluation criteria were important for consumers in evaluating flat-screen TVs. However, the same table reveals that the reference ratio had decreased in 2015 compared to 2010.

A chi-squared test and symmetry test was conducted on the difference in references by consumers in 2010 (prior to the release of smart TVs) and 2015 (after the release of smart TVs). As a result, except for the category label, only the “application” item had a statistically significant increase in the reference ratios($\chi^2 = 14.676$, Cramer). With the release of smart TVs in 2011, consumers could now use various applications on their TVs, and manufacturers also began providing access to their application stores. Consumers therefore became aware of this new market category (“smart TVs”), and through the use of these TVs, they grew more interested in applications.

However, this would soon result in a dramatic change in the ratio at which TV labels and features would appear in reviews posted by consumers. As revealed in Table 4, the emergence ratio increased for the “smart TV” and “4K TV” labels, while the emergence ratio for “3D TV” and “HD TV” continued to decrease each year. Figure 3 graphically shows these trends.

Figure 1 reveals that, with regard to TV labels, the “smart TV” label appeared the most often in 2012, while the use of the “3D TV” and “HDTV” labels continued to decrease beginning in 2010.

These results also suggest that the TV label that was used the most often was “smart TV.” We conducted a co-occurrence analysis of reviews posted in 2015, using the “Smart TV” label. Result of the analysis reveals that, out of 171 reviews that used the “smart TV” label, there were only five or six that also used another label (“hdtv” or “4k tv,” respectively). Other TV labels were not used, and all analysis categories that were used simultaneously were related to needs served by a product feature.

5. Discussion

In this study, I investigated how frames and cues are framed as evaluation criteria for products in the flat-screen TV market and as points of appeal for smart TVs, respectively, as well as the sensegiving tactics adopted by flat-screen TV manufacturers–in other words, the connection between frames and cues. In this section, I present the significance of my findings.

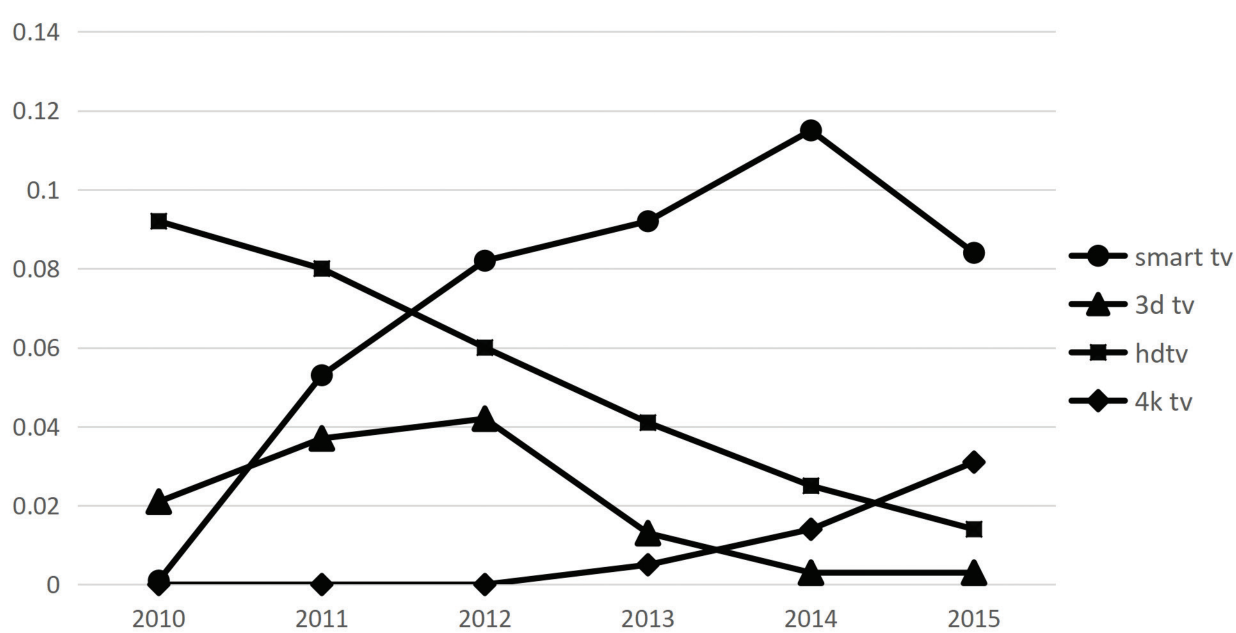

Figure 1: Trends in the emergence ratio of TV labels in Amazon.com reviews

5.1. Strategic Labeling as a Sensegiving Tactics

In order for the new TVs released by Samsung and LG to carry meaning as TVs belonging to a new category, these new products had to be understood and accepted by consumers not only in terms of new product features but also as new types of TVs not previously available. To accomplish this, Samsung and LG used the term “smart” as a label for a new market category and engaged in efforts to promote connectivity with smartphones. The two companies employed this product strategy to build a meaningful connection between the smart TV category and smartphone category.

Previous market category research has not addressed how this labeling was conducted by Samsung and LG as a sensegiving strategy. Although researchers have treated labels as important component elements in market categories, they have not discussed the use of labels by companies, as labeling tends to be most often provided by audiences (such as newspapers and magazines) rather than by companies participating in market categories (Porac et al., 1995; Zuckerman, 1999; Hsu, 2006).

Therefore, there is a lack of research examining the strategic use of labeling in market category research regarding this point. In a survey of nanotechnology companies, Granqvist et al. (2013) revealed three strategic labeling functions as the reasons why company leadership selected certain labels: to claim an identity for their company, to disconnect from a market category of low confidence, and to hedge risk. There is little research on strategic labeling within the field of market category research, with Granqvist et al. (2013) being a prominent example. However, the labeling performed by Samsung and LG, as discussed in the present study, could be considered a function of strategic labeling with the goal of associating a market category that had already been established with the new market category label the companies tried to create.

5.2. Existing Market Reorganization as a Sensegiving Tactics

When releasing their smart TVs to market, Samsung and LG reformed the market category that flat-screen TV manufacturers (including themselves) had attempted to form in the North American market, as a subcategory of smart TVs. Samsung and LG had previously worked aggressively on releasing their LED-backlit LED TVs to market in 2009 and then again on releasing 3D TVs (capable of playing 3D footage) in 2010. Subsequently, Samsung and LG incorporated LED backlights as standard features in the smart TVs they marketed, with 3D as an optional feature. As mentioned previously, the market shares of both companies increased in North America beginning in 2012. However, the companies would then intentionally position the new category they were hoping would take hold, above an existing category, so that if the product was successful consumers would recognize it not as a single product but as a new category.

Prior research on how market categories form has focused mainly on explaining how market categories form naturally when a differentiated product that cannot be understood using classification frameworks in existing market categories is brought to market (Rosa et al., 1999). In contrast, this study presents a methodology a company could use to intentionally create a market category by changing the classification methods formed through interaction between market participants. This research also presents a case study illustrating a specific strategy for companies to change classification methods.

6. Conclusion and Implications

In this study, I applied the concepts of sensemaking and sensegiving to reveal how companies intentionally create market categories and presented a methodology and specific strategy for a company to create a market category.

Researchers in the market category research field have previously covered the impact of categories on company behavior and consumer product reviews, and have focused on how market categories limit the behavior of companies participating within them (e.g., Zuckerman, 1999; Hannan, 2010). However, in recent years, independent aspects of companies have been attracting attention regarding the relationship between companies and market categories (e.g., Navis & Glynn, 2010; Glynn & Navis, 2013). Nevertheless, most research on how market categories form has focused on the spontaneous emergence of market categories.

In contrast, this study was conducted with the goal of determining the logic used by a company in intentionally creating a market category. The empirical study conducted during this study revealed behavior in which a company that has created a new market category encourages additions and changes to evaluation criteria for products owned by consumers and attempts to change how products (including existing products) are classified by using new category labels, to further show the relationship between the new category and existing categories.

The findings of this study have two implications. The first is the conceptual framework presented here for applying the concepts of sensemaking and sensegiving in analyzing meaning management concerning the intentional formation of new market categories. There is some market category research covering market category formation as a sensemaking process. However, researchers in this field have stopped short of investigating a construct for this sensemaking process and have only just begun investigating how companies intentionally form market categories. In this study, I present a framework to explain how these market categories are intentionally formed, by framing sensemaking as a process that "connects" abstract "frames" (as summaries of past experiences) and concrete "cues" (as special qualities of current experiences), and by framing this approach of "connecting" these "frames" and "cues" as sensegiving, based on Weick (1995).

The second implication is that a possibility was demonstrated for companies intentionally creating market categories. Market categories are formed through interaction and cannot be easily controlled by a single player. However, a company could change how a market category is formed by altering the classification method shared by market participants. This offers two sensegiving tactics. The first strategy was for a company to reform as a subcategory of smart TVs a market category that flat-screen TV manufacturers had attempted to form in the North American market. The second strategy was for a company to make use of strategic labeling to connect to an existing category. I also demonstrated a possibility for companies to employ product strategies to intentionally create market categories.

Although these findings are significant, I must call attention to two limitations regarding this study. The first limitation is one of methodology. Research for this study was conducted using an exploratory case analysis. A more logical and empirical study would be required for generalization. This is particularly true of content analysis, which must be conducted with sufficient consideration of statistical rigor during an experimental study for generalization,

The second limitation is related to the logic by which new market categories are formed. This study merely demonstrates a possibility with regard to how new market categories form (as shown in this study) and how market categories are created intentionally. Further investigation would be required to provide a systematic explanation on how new market categories form.

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