Message strategies in smartphone patent battles

Ownership and innovation capability

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Abstract

Purpose – The purpose of this paper is to examine the effects of message attributes on public opinion in regards to corporate reputation and communication intention.

Design/methodology/approach – It conducted a 2×2 between-subject factorial experiment, manipulating media messages in terms of which company owns the patents, and the level of innovation emphasized through the companies' marketing communication efforts.

Findings – The two-way analysis of variance results showed that, for Samsung, the main effects of the two independent variables (ownership and innovation) were found on the perceived corporate reputation; while only a main effect of innovation capability attribute was found on the perceived secondary communication intention for Apple.

Research limitations/implications – One main theoretical contribution of this current study is the exploration of the attribute level of agenda setting in the context of a business communication setting with an experimental study.

Practical implications – This result would suggest that practitioners should focus on their marketing strategies as well when they are involved in a lawsuit case. When a company loses a lawsuit, the company's perceived reputation is dropped; however, the dropping gap can be reduced when the company has been portrayed as an innovative leader in the market.

Social implications – Combined together, market shares of the two companies exceed more than half of the smartphone vender sales, and they have set the standard in the smartphone industry. Hence, media and public pay great attention to the patent battles. Court rulings are not only survived in the courtroom, but the fight also took place in their marketing, communication, and public relations.

Originality/value – This is an empirical experiment exploring a causal effect of message attributes on public opinion. The two companies in this study are the industry leaders and the case is current.

Keywords Public relations, Reputation, Public opinion

Paper type Research paper

Introduction

Two giant technology corporations – Apple and Samsung – have been striving to outcompete each other in the smartphone and tablet PC market. Combined together, their market shares exceed more than half of the smartphone vender sales, and they have set the standard and lead in revenue in the smartphone industry. These companies have periodically introduced new smartphones with short life cycles, arguing that they are most innovative.

Since 2011, the two rivals have battled over patents, and several lawsuits have been filed in different countries around the world, including the USA, Korea, the UK, Australia, and Germany. In 2013, more than 50 lawsuits across four continents were still raging, and court rules had been split over the infringement of patents. Particularly, Apple said that Samsung's products (i.e. Galaxy Tab) had infringed on Apple's patents for designs and software, and Samsung responded to Apple by countersuing over wireless technology patents (Rosenblatt, 2012). On August 24, 2012, the US court in San Jose, California, ruled that Samsung had infringed on Apple's

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patents for the design of the iPhone and iPad and awarded Apple about $1.05 billion (Guglielmo, 2012). In Korea, on the other hand, the court ruled that Apple had infringed on Samsung's wireless patents and fined Apple $35,400 (Kim and Jin, 2012). In Germany, the court's ruling has been split (Associated Press, 2012).

During these types of lawsuits, it is hard for corporations to escape from the media and public's attention. The court rulings not only survive in the courtroom but are aired to the public immediately, and the people become important observers of the corporations' litigation processes. Consequently, these processes would also begin to affect the images or the reputations of the corporations. From a public relations perspective, these battles over patents between these two corporations would raise several critical considerations for communication strategies and management: Do these disputes influence public opinion negatively? How do court rulings affect public opinion toward the products or corporations? How could media portrayals of the issue affect public opinion? And how should corporations respond to the courts and the public?

This current study aims to examine the main effects, including the interaction effect, of the court rulings and each corporation's marketing communication efforts on public opinion in the context of patent battles. To measure the two message variables' effects separately, a 2×2 factorial experimental design study was conducted.

Literature review

Study Background

The revenue of the smartphone, one of the fastest-growing industries, reached about $207.6 billion in 2012 and $242.7 billion in 2013, and it is continuously growing around the world (Vascellaro, 2012). As the top worldwide vendors, Samsung, a giant conglomerate of the Republic of Korea (Korea hereafter) reported a 267 percent market share growth in the first quarter of 2012 (International Data Corporation, 2012); and in terms of revenue, Apple is leading the market with more than $50.7 billion (Whittaker, 2012). Combined together, these corporations accounted for more than half of the global sales of smartphones (Elias, 2012), and the two rivals are competing to become the leader of the global smartphone market.

The two corporations began battles over patents in 2011. In April 2011, Apple claimed that Samsung copied Apple's product design (i.e. slide-to-unlock, rubber-banding, and universal search), and Samsung countersued Apple over 3G technology patents (Duncan, 2014). Since then, more than 50 lawsuits have been filed around the world, including in the USA, Korea, the UK, Australia, and Germany. Court rulings have been divided on the battle, and the decisions consequently affect media portrayals of the issue and public opinion toward the corporations.

Since the smartphone has been introduced, people's lifestyles have been changed significantly, as the device has affected how people use data, music, photos, e-mail, and text messaging. More and more people want a faster, lighter, more data-capable device, and innovation has been the winning keyword among the competitors even during the ongoing legal cases. For example, after Samsung lost in the US court, it launched a full-page advertisement stating, "It doesn't take a genius" (Vega and Chen, 2012). Indeed, a new communication battle began with the new Galaxy S III and iPhone 5 in 2012. These companies each assert that they are more innovative than the other, and it led another public opinion battles (Smith, 2012).

In the context of a smartphone patent lawsuit, hence, this current study focussed on the two main substantive attributes of the issue (i.e. decision on the ownership and communication strategies for innovation) through initial reviews of news articles of the

issue. Many of the news articles reported on the lawsuits in regard to the final verdict, process, monetary fine, or reactions toward the court ruling. In addition to these reports, corporations also heavily invest on their communication strategies to highlight their innovative capacity and leadership in the market (i.e. adverting or public relations campaigns).

Attributes and frames

Grounded in the substantive attributes perspective, particularly framing, this study explore the role of message frames on public opinion – reputation and secondary communication. Scholars define "frames" as a cognitive central aspect of an object that suggests how to understand the object (issues, political candidates, or corporations) (Tankard *et al.*, 1991). Entman (1993) stated that framing explains how people perceive an object as having a certain aspect, while ignoring others. For example, ideology, qualification, or personality attributes have been suggested to describe a political candidate (McCombs *et al.*, 1997).

Iyengar and Simon (1993) also found that the increase of television news about the Gulf crisis influenced an increasing public concern over the crisis between 1990 and 1991. While many studies have explored the effect in the political communication field grounded in the agenda setting (McCombs and Shaw, 1972) and framing perspectives, scholars also have recently expanded its scope into the context of business communication (i.e. Carroll and McCombs, 2003). Carroll and McCombs (2003) found correlations between media coverage of corporations and public perception regarding the corporations.

Highlighting the salience transfer relationship between the two parties' agendas, scholars have explained that there are two levels of agenda setting: first (object) and second (attribute) levels (i.e. McCombs and Reynolds, 2002; Weaver *et al.*, 1981). First-level agenda setting refers to the object salience between the media and the public agenda (McCombs, 2004). Objects can be issues, political candidates, or corporations. On the other hand, the second level refers to the attribute of salience between the media and the public (McCombs, 2004). Moreover, there are two dimensions of the attributes: substantive and affective. The term "substantive attributes" refers to the cognitive dimension of attributes, such as issue frames, while the term "affective attributes" refers to the emotional tone or evaluation (McCombs, 2004). McCombs and Estrada (1997) stated that "these perspectives and frames – called semantic devices – draw attention to certain attributes and away from others" (p. 246).

Innovation attributes

The role of innovation attributes has been emphasized as one of the core competitive advantages for corporations, particularly in the technology industry (i.e. Kapoor *et al.*, 2015). Plessis (2007) defined innovation as "the creation of new knowledge and ideas to facilitate new business outcomes, aimed at improving internal business processes and structures and to create market-driven products and services" (p. 21). Playing as a central cognitive attribute of an organization, innovation creates value and a sustaining advantage for the organization. Zahra and Covin (1994) stated, "innovation is widely considered as the life blood of corporate survival and growth" (p. 183). A recent study shows that the innovation attributes would affect customers' innovation adoption and acceptance behaviors in the context of the "mobile wallet" technology (Kapoor *et al.*, 2015). The attributes of innovation are not only describing a corporation's technological characteristics of its products or services; but also describing the characteristics of its

intangible management capability (Baregheh *et al.*, 2009; Bell, 2005; Damanpour, 1991; Mihalache *et al.*, 2012; Pennings and Harianto, 1992). These capabilities would include corporation's human resources, management styles, entrepreneurship, or research and development (Baregheh *et al.*, 2009). The accumulated know-how, experiences, or shared vision is also included (Mihalache *et al.*, 2012; Pennings and Harianto, 1992).

When a new idea or product comes into the market for the first time, people typically feel fear, and they make their decision of whether or not to adopt it through a cognitive information process (Lin, 2011). Innovation attributes are one of the major cognitive attributes that play a role in the adoption decision. Scholars have suggested the relative advantages to innovation attributes, such as ease of use, visibility, or try-ability of the items, allowing the public to measure the innovation attributes (Lean *et al.*, 2009; Lin, 2011; Rogers, 1995). Also, the concept of innovation capability consists of the eight measurement items – technical and non-technical innovation (Aragon-Correa *et al.*, 2007; Chiesa *et al.*, 1996; Ngo and O'Cass, 2012; Weerawardena and O'Cass, 2004). Technical innovation refers to the knowledge and skills to engage in developing a new product, service, or technology, while non-technical innovation refers to the knowledge and skills to engage in the process of managerial or marketing strategies (Ngo and O'Cass, 2012).

Effects on public opinion

To explore the effects of messages attributes on public opinion, this study particularly explored the effects on the perceived reputation of an organization and the publics' secondary communication intentions about the organization and its products. Wartick (1992) defined the corporate reputation as "the aggregation of a single stakeholder's perceptions of how well organizational responses are meeting the demands and expectations of many organizational stakeholders" (p. 34). Corporate reputation represents the public's perceived behavioral relationship toward a corporation, such as perceived effectiveness or perceived favorability (Grunig, 2003; Wartick, 1992). Focussing on the interaction between business and media, Wartick (1992) found that the tone of media coverage about a corporation is associated with the public's perceived reputation of the corporation. From the agenda-setting perspective, Carroll and McCombs (2003) also found the salience of corporate reputation between media and public agenda.

Multiple items have been suggested to measure corporate reputation. In their agenda-setting study, Carroll and McCombs (2003) used the following items: familiarity, value, operational capability, corporate citizenship, performance, leadership, appeal, and credibility. Borrowing from the Harris/impulse study, scholars also used 20 sub items to measure the perceived reputation of a corporation, developed on the following dimensions: vision and leadership, social responsibility, emotional appeal, product/service, workplace environment, and financial performance (Kiousis *et al.*, 2007).

In addition to the corporate reputation, this study also focusses on the secondary communication intention toward products or the corporations to explore the effects of the attributes. Reputation of an organization can be developed as a result of the interaction among stakeholders, and both news media and secondhand information exert influence on the public's perception of the organization (i.e. Coombs and Holladay, 2007). Scholars assessed the secondary communication intention as the likelihood that the message recipient will tell friends about the information in the message, share the information, or leave any comments on it (Coombs and Holladay, 2007, 2009;

Schultz *et al.*, 2010). In addition, scholars also measured recipients' willingness to boycott the organization or its products and to persuade others to do so as well (Coombs and Holladay, 2007, 2009; Schultz *et al.*, 2010).

Hypotheses and research questions

To explore that role of message attributes in terms of patent ownership and innovation capability in affecting public opinion (reputation and secondary communication intention), the following hypotheses and research questions were proposed for each corporation in the message:

RQ1. Does an interaction effect exist between the perceived patents ownership and the level of innovation capability on the perceived reputation of the corporation in the message?

H1. When the patent is owned by a corporation, the participants will have more favorable perceived corporate reputation about the corporation.

H2. Participants in the high innovation capability condition will have more favorable perceived reputation about the corporation in the messages than those in the low innovation capability condition.

RQ2. Does an interaction effect exist between the perceived patents ownership and the level of innovation capability on the secondary communication intention about the corporation in the messages?

H3. When the patent is owned by the corporation, the participants will have stronger secondary communication intention about the corporation.

H4. Participants in the high innovation capability condition will have stronger secondary communication intention about the corporation in the messages than those in the low innovation capability condition.

Method

Procedure

This current study conducted a 2×2 between-subject factorial experiment, manipulating media message attributes in terms of patent ownership and the level of innovation, emphasized through the companies' marketing communication efforts. Manipulating the two substantive or cognitive attributes of the message, four different message conditions were developed.

Participants were recruited from an online panel service ("Mechanical Turk") (i.e. Buhrmester *et al.*, 2011) with little monetary reward. A pretest was conducted with 24 participants to check the manipulation conditions. Each participant was randomly assigned into one of the four conditions and read one-page message followed by a questionnaire about their opinion toward the corporations in the message. When the manipulation check was successful, a main test was conducted with 181 participants.

Stimuli 1

Attributes on the patent ownership has two conditions of whether the corporation won (was awarded) in the court or not; in other words, which company – either Samsung or Apple – was ruled in favor of. A five-point Likert scale was used to measure the patent ownership (i.e. "I think the company (Samsung or Apple) in the message owns the patents").

Stimuli 2

Innovation capability has two conditions: high or low. The message in the high innovation capability condition described that the company, in the message, has the strong spirit of innovation in their overall business operations. On the other hand, the messages in the low innovation capability condition displayed a very limited amount of information on certain design patents. The innovation capability was measured using both technical and non-technical items adopted from prior studies (Baregheh *et al.*, 2009). A five-point Likert scale was used to measure the each sub-item for both technical and non-technical innovation capability (i.e. "I would believe the company in the message has marketing innovation").

Measurement

Perceived corporate reputation. Adopted from previous research, 20 sub items were used to measure the perceived corporate reputation (Carroll and McCombs, 2003; Kiousis *et al.*, 2007). These items were developed on the corporation's vision and leadership, social responsibility, emotional appeal, product/service, workplace environment, and financial performance. Each item was measured by five-point Likert scale.

Secondary communication intention. Participants' willingness to have secondary communication was also measured with seven five-point Likert scale (Coombs and Holladay, 2007; Coombs and Holladay, 2009; Schultz *et al.* 2010): "whether you are willing to show/forward the message about the corporation or its products," whether you would tell friend about it,' whether you would leave comments/message about it,' "whether you would encourage others NOT to buy it," "whether you would tell negative things about it," "whether you would recommend it when someone asks," and "whether you would sign a petition to boycott it."

Results

In total, 181 participants completed the online experimental study. The average age of the participants was 32 years old, and about 67 percent of them were female (33 percent of them were male). Among the participants, 22 people (12 percent) currently use Apple's cell phone product; while 73 people (40 percent) use Samsung's product. In total, 76 people (about 42 percent) use a cell phone other than Apple or Samsung brands, and ten people (5.5 percent) do not use a cell phone.

Manipulation check

Participants were randomly assigned into the four different communication message conditions. Particularly, 91 people randomly viewed a message saying that Samsung won in the lawsuit while 90 viewed a message saying that Apple was awarded in the lawsuit. Also, 91 of the total participants were randomly assigned in the high innovation capability condition while 90 of them were randomly assigned in the low innovation capability. The *t*-test revealed a statistically significant difference among the mean scores of patent owned ($M = 3.87$, SD = 0.98) and not owned ($M = 2.78$, SD = 1.09) conditions ($t\,(179) = 5.128$, $p < 0.001$). Also, a statistically significant difference occurred between the mean scores of high ($M = 3.88$, SD = 0.45) and low ($M = 3.71$, SD = 0.57) innovation attributes conditions ($t\,(179) = 2.210$, $p < 0.05$). Cronbach's α was calculated to examine the reliability of index score of innovation variable ($\alpha = 0.91$).

In total, 20 five-point Likert scale items were used to measure the perceived reputation of the corporation (Apple $M = 3.87$, SD = 0.59; Samsung $M = 3.80$, SD = 0.60).

Higher scores mean that participants perceive the reputation more favorably (Cronbach's $\alpha = 0.94$). Seven five-point Likert scale items were used to measure the perceived secondary communication intention (Apple $M = 3.72$, SD = 0.77; Samsung $M = 3.68$, SD = 0.72) (Cronbach's α scores were 0.83 and 0.79).

Hypotheses testing

To measure the two message variables' effects from the 2 × 2 factorial design study, the two-way analysis of variance (ANOVA) was run. Both interaction and main effects of each factor on the two dependent variables were analyzed separately.

First and second research questions were asked to explore the interaction effects between the perceived patents ownership and the level of innovation capability on the perceived corporate reputation and the perceived secondary communication intention. For the perceived corporate reputation, the significant interaction effect was found for Samsung ($F = 7.942$, df = 1, $p < 0.05$); while no significant interaction effect was found for Apple ($F = 0.01$, df = 1, $p > 0.05$). In regard to the perceived secondary communication intention, the results also showed that there is a significant interaction effect between the two independent variables for Samsung ($F = 4.353$, df = 1, $p < 0.05$); while no significant interaction effect found for Apple ($F = 0.059$, df = 1, $p > 0.05$).

The first hypothesis proposed that the participants will have more favorable perceived corporate reputation about a corporation when the patent owned by the corporation. Two-way ANOVA was conducted considering the perceived reputation toward the two corporations as a dependent variable. There was a significant effect of patent ownership on the perceived reputation for Samsung ($F = 15.640$, df = 1, $p < 0.001$) (owned $M = 3.96$, SD = 0.06; not owned $M = 3.64$, SD = 0.06); while the patent ownership does not have a main effect on the perceived reputation for Apple ($F = 2.524$, df = 1, $p > 0.05$) (owned $M = 3.94$, SD = 0.06; not owned $M = 3.80$, SD = 0.06). Hence, *H1* was partially supported (see Table I).

Next, the second hypothesis proposed that participants in the high innovation capability condition will have more favorable perceived reputation about the corporation than those in the low innovation capability condition. Two-way ANOVA results showed that there is a significant effect of the perceived innovation on the

Variables	Mean	SD	*F*	df	*p*
Samsung					
Patents ownership			15.640	1	0.001
Owned	3.96	0.06			
Not owned	3.64	0.06			
Innovation capability			5.962	1	0.016
High	3.89	0.05			
Low	3.71	0.07			
Apple					
Patents ownership			2.524	1	0.114
Owned	3.94	0.06			
Not owned	3.80	0.06			
Innovation capability			2.617	1	0.108
High	3.94	0.06			
Low	3.80	0.06			

Table I. Two-way ANOVA for the perceived reputation

perceived reputation for Samsung ($F = 5.962$, df = 1, $p < 0.05$) (high $M = 3.89$, SD = 0.06; low $M = 3.69$, SD = 0.06); while the perceived innovation does not have a main effect on the perceived reputation for Apple ($F = 2.617$, df = 1, $p > 0.05$) (high $M = 3.94$, SD = 0.06; low $M = 3.80$, SD = 0.06). Hence, *H2* was also partially supported (see Table I).

Third hypothesis proposed that the participants will have more secondary communication intention about a corporation when the patent owned by the corporation. Two-way ANOVA results showed that there is a significant effect of patent ownership on the perceived secondary communication intention for Samsung ($F = 13.736$, df = 1, $p < 0.001$) (owned $M = 3.87$, SD = 0.07; not owned $M = 3.49$, SD = 0.07); while the patent ownership does not have a main effect on the perceived secondary communication intention for Apple ($F = 0.817$, df = 1, $p > 0.05$) (owned $M = 3.67$, SD = 0.08; not owned $M = 3.76$, SD = 0.08). Here *H3* was partially supported for Samsung (see Table II).

Finally, the last hypothesis proposed that participants in the high innovation capability condition will have more secondary communication intention about the corporation than those in the low innovation capability condition. Two-way ANOVA results showed that there is no significant effect of the perceived innovation on the perceived secondary communication intention for Samsung ($F = 0.081$, df = 1, $p > 0.05$) (high $M = 3.68$, SD = 0.07; low $M = 3.66$, SD = 0.07); while perceived innovation has a significant main effect on the perceived secondary communication intention for Apple ($F = 5.102$, $df = 1$, $p < 0.05$) (high $M = 3.84$, SD = 0.08; low $M = 3.59$, SD = 0.08. Hence, *H4* was partially supported for Apple (see Table II).

Discussion

The current study examines the effects of message attributes on the consequences of public opinion. In the context of Apple and Samsung's patents battle, this study explored the effects of patent ownership and innovation capability attributes in a communication message on public opinion, in terms of the perceived corporate reputation and the perceived secondary communication intention. Four hypotheses and two research questions were proposed to test the main and interaction effects of the two independent variables on the two dependent variables for both companies. The results

Table II. Two-way ANOVA for the perceived secondary communication intention

Variables	Mean	SD	*F*	df	*p*
Samsung					
Patents ownership			13.736	1	0.001
Owned	3.87	0.07			
Not owned	3.49	0.07			
Innovation capability			0.081	1	0.777
High	3.68	0.08			
Low	3.68	0.07			
Apple					
Patents ownership			0.817	1	0.367
Owned	3.67	0.08			
Not owned	3.76	0.08			
Innovation capability			5.102	1	0.025
High	3.84	0.08			
Low	3.59	0.08			

found different effects on public opinion between the two corporations. For Samsung, the main effects of the two independent variables (ownership and innovation) were found in the perceived corporate reputation, while only patent ownership had a main effect on the perceived secondary communication intention. The interaction effects of the two message attributes were found for both dependent variables in the case of Samsung. On the other hand, for Apple, only a main effect of innovation capability attribute was found on the perceived secondary communication intention.

A main theoretical contribution of this current study is the exploration of the attribute level of agenda setting in the context of a corporate communication setting. Many prior agenda-setting studies have explored the salience of attributes in terms of issue frames or characteristics of political candidates in a political communication context. Like some recent studies stated that the same concept is applicable to broader communication contexts, including business areas (i.e. Carroll and McCombs, 2003), this current study could contribute to adding evidence on the effect of substantive attributes in a business context.

Moreover, this research conducted an experimental study to explore a causal effect of message attributes on public opinion, in terms of the perceived corporate reputation and perceived secondary communication intention. These two variables have been largely explored by communication scholars due to their critical influence on the overall value of business and the relationship outcomes between the organization and the public (Coombs and Holladay, 2007, 2009; Grunig, 2003; Wartick, 1992). Despite its importance, however, what has a direct or an indirect effect on a corporate reputation has not been fully explored. Suggesting the two independent variables, this current experimental study successfully demonstrated the direct effects on the perceived corporate reputation. The results have not perfectly supported the direct causal relationship; however, they have provided a springboard to explore the relationship more in depth. For example, even though the results are not consistent for the two corporations, they did indicate that patent ownership and innovation attributes could be significant predictors of the corporate reputation in certain conditions.

In the context of the patents lawsuit cases between the two rival corporations, this study explored the following two substantive attributes in the communication message: patent ownership and innovation capability attributes. Findings of this current study showed that there could be an interaction effect between the attribute factors on the perceived reputation and the secondary communication intention. This means that the effects of lawsuit results on the corporate reputation can be enhanced or alleviated depending on the company's strategic communication efforts. It may be hard to generalize this finding to other corporate contexts since the interaction effect was found for only one corporation in this current study; however, a new research direction for future studies has been provided.

Practically, this result also showed that the causal direct effects may be differentiated by other variables, such as prior relationship with the brands or their country of origin. When some additional tests were run only for Apple users, for example, Apple's perceived reputation was not significantly different between the two conditions in terms of patent ownership and innovation capability attributes. However, when the same test was run for Samsung or other brand users, Apple's perceived reputation was significantly affected by patent ownership and innovation attributes in the message. This tells us that message attributes may not have much influence on people's attitudes toward the brand if they already use or are loyal to the brand. Future studies should consider these multiple predisposing factors.

Furthermore, the interaction effects on Samsung's reputation and communication intention show that the innovation capability attribute has more influence when the company is perceived not owning the patents. This result would suggest that practitioners should also focus on their communication strategies when they are involved in a lawsuit case. When a company loses a lawsuit, for example, the company's perceived reputation would drop; however, the dropping gap can be reduced when the company has been portrayed as an innovative leader in the market. Samsung's new advertising strategy after it lost in the US court (Vega and Chen, 2012) is an example. On one hand, it could lead another public opinion battle among the customers (i.e. Smith, 2012); however, the results of this current study would also suggest that it is worthy to explore the impact of these marketing communication strategies on public opinion.

Limitations and future study

In spite of its theoretical and practical contributions, this study also suffers from some limitations. First, it examined the public opinion toward corporations in terms of the perceived reputation and communication intention. These variables were measured after a one-time exposure of a communication message; however, the reputation or communication behavioral intention may need much longer time to be formed. Hence, a more longitudinal design of study may be necessary to demonstrate the long-term effects of communication messages on corporate reputation or other consequences.

Second, this study could not account for the effects of some environmental variables to explore the effects of message attributes. For example, a person's prior relationship or prior attitude toward brands can influence the results of the study. Hence, to expand our understanding of the message attribute effects, future studies should explore the relationship in different experimental settings with additional variables such as country of origin (US citizen vs Korean citizen) or brand loyalty (strong vs weak).

Conclusion

To explore the role of message attributes in affecting consequential public opinion toward a corporation, this study examined: the effect of patent ownership on the perceived corporate reputation and the perceived secondary communication intention; and the effect of innovation capability attribute on the same dependent variables. As a result, the main contribution of this current study is to demonstrate causal relationships between message attributes and public opinion variables, to expand the scope of the attribute level of an agenda-setting study into a business context, and to explore the role of innovation attribute in the smartphone industry.

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