The Effect of Corporate Image as an Affect Heuristic on Investors’ Decision Making

Hung-Jen Su, Chia-Jung Chang*, Shih-Chieh Chuang

Department of Business Administration, National Chung Cheng University, Taiwan
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Abstract

This study investigated the impact of positive and negative affective cues on an investor’s intentions to purchase stock, and the moderating effect of cognitive cues on the relationship between the valence of affective cues and an investor’s intentions to purchase stocks. To further explore the moderating effect, this study investigated whether and when the effect of cognitive cues on an investor’s purchase intentions could outweigh the effect of affective cues as the number of cognitive cues increased. Four experiments were conducted to test the hypotheses.

Study One confirmed the effect of corporate image as an affective cue on investors’ stock buying decisions. The findings of Study Two indicated that a single piece of negative financial information had a significant influence on the effect of corporate image on stock buying intentions, while the effect of a single piece of positive financial information did not. The findings of Study Three provided preliminary indications of the quantity of financial information necessary for corporate image to undergo psychological decay, and suggested that an affect heuristic could be lessened or eliminated when the intensity of cognitive evaluations is stronger. To eliminate the possible confounding effects observed in Study Three, the good (bad) financial information in Study Four was described as 15% above (below) the same period of last year, respectively. As expected, the findings of Study Four were similar to those of Study Three. Therefore, Study Four confirmed that the effect of cognitive cues on an investor’s purchase intentions could outweigh the effect of affective cues as the number of cognitive cues increased.

Keywords: Corporate image, cognitive heuristic, affect heuristic, stock buying decision

1. Introduction

With the large number of reports from analysts, the vast amounts of financial information, and the never ending stream of important economic information, even experienced investors can suffer from information overload. Under these circumstances and constraints, investors were likely to make use of judgmental heuristics in their information processing and decision making instead of conducting formal statistical analyses (Jordan and Kaas, 2002). Heuristics have been used in the stock market to understand such phenomena as herding (Banerjee, 1992; Shiller, 2000), disposition effects (Odean, 1998), under-reaction to financial information (Ikenberry et al., 1996), and money illusions (Svedsäter et al., 2007).

Two different kinds of heuristics were being used by investors: affective heuristics and cognitive heuristics. The outcome of an investor’s decision has long been considered the result of the combination of affective and cognitive cues (Berkowitz, 1993).

* Corresponding author. E-mail: ta642753@gogo.net.tw
When two different kinds of cues were available, investors need to act either in a consistent condition, where the valence of affective and cognitive cues were congruent, or in a conflict condition, where the valences of affective and cognitive cues were different. The focus of this study was on the latter. In other words, investors needed to somehow integrate cognitive cues and affective cues into one final decision (Luo, 2007). Previous studies have found that the emotional aspects tend to dominate when affective reactions and cognitive evaluations diverge (Ness and Klaas, 1994; Rolls, 1999). Affective reactions could influence judgment and decision-making without being mediated by cognitive evaluations (Clore et al., 1994; Schwarz and Clore, 1983; Zajonc, 1980, 1984). However, the interaction effect of affective cues and cognitive cues on a stock buying decision has not been examined in an experimental setting. Corporate image has been considered as one of the “affect heuristics” (Slovic et al., 2007) while earnings information has been considered as one the most important cognitive heuristics (Nofsinger, 2001).

The purpose of this study was two-fold. First, by manipulating the valence of corporate image we tried to investigate the impact of positive and negative affective cues on an investor’s intentions to purchase stock. The second purpose of this study was to investigate the moderating effect of cognitive cues on the relationship between the valence of affective cues and an investor’s intentions to purchase stock. Specifically, this study investigated how the moderating effect of cognitive cues strengthens as the number of cognitive cues increase.

2. Conceptual background and hypothesis

2.1 Affective heuristics as predictors of an investor’s trading behavior

Adolphs and Damasio (2001) described affect as a representation that incorporates the value of a stimulus or action to an individual. Thoughts were made up of images that included perceptual and symbolic representations (Charlton, 2000). Mental representations of objects and events were tagged to varying degrees with affect and stored in the memory (Finucane et al., 2000). Objects or events that evoked positive affective reactions were associated with other representations in the memory that produce favorable outcomes. Finucane et al. (2000) conjectured that affective reactions may be a more convenient means to making a choice because they were readily available, and may be far easier than the process of weighing the pros and cons.

To be characterized as the affect heuristic, two conditions needed to be met (Slovic et al., 2007). The first condition was that the stimulus must induce perceiver to experience the specific quality of “goodness” or “badness” as a feeling state and induce perceiver to demarcate a positive or negative attitude toward the stimulus. The second is that the perceiver would rely on such feeling to make a decision. Therefore, an affect heuristic could be an advertisement that contained or did not contained affective cues in the form of humor (Madden, 1991), music in the form of positive or negative (Darke et al., 2006; Gorn, 1982), mood in the form of good or bad (Petty et al., 1993; Schwarz, 2002) or risk in the form of high or low (Finucane et al., 2000; Slovic et al., 2007).

Since the investor relied on the feelings induced by the corporate image to make a decision, the corporate image was qualified as an affect heuristic. In addition, a positive corporate image was considered to be one of the most highly prized assets (De Ruyter and Wetzels, 2000; Storey and Easingwood, 1998), an effective form of differentiation and a source of competitive advantage (Dowling, 1993). A favorable corporate image could provide a company with a distinctive and credible appeal (Markwick and Fill, 1997; Greyser, 1999), transfer directly to quality perceptions when there was no other information available (Martinez and Pina, 2005), increase the support for a new product (Yeoh, 1994) and result in
faster recovery from crisis (Dowling, 1994). Given the significance of corporate image, corporate image was not only an affect heuristic for an investor, but also an influential one.

If investors had a positive affect toward a company, they might be predisposed to evaluate that company favorably (unfavorably), establishing a directional goal that affects subsequent cognitions and reasoning (Kunda, 1987, 1990; Loewenstein and O'Donoghue, 2004). MacGregor et al. (2000) found that a strong positive or negative image toward certain industries may affect an investor’s willingness to invest in these industries. Investor assessments were poorly correlated with the average performance of firms in these industries and, hence, potentially hindered individual portfolio allocation decisions. Moreno, Kida, and Smith (2002) reported that affective reactions influence capital budgeting decisions of the participants. In other words, participants did not necessarily choose the outcome with the highest expected monetary value due to affective considerations. These findings suggested that financial outcomes were not the only consideration in decision making. These results were consistent with a broad view of decision-making that incorporates the influence of affect on decision making. Given the significant effect of affective cues on decision making, direct research on the role of affect in investment decisions was limited (Ackert and Church, 2006).

Based on the above studies, participants were expected to choose investment opportunities that would evoke a positive affective reaction, and avoid those that evoke a negative affective reaction. That is, we expected that investors would use the corporate image as an affect heuristic to determine whether to buy the corporate stock when no other cognitive cues were available.

H1: The valence of a corporate image is positively related to an investor’s intentions to purchase the stock.

2.2 Cognitive heuristics as predictors of an investor’s trading behavior

Other than affective heuristics, investors may also rely on cognitive heuristics to make judgments and choices. The outcome of a decision has long been considered the result of the combination of affective and cognitive cues (Berkowitz, 1993). Investors were affected by the visibility of published information. Earnings information was the most important topic for motivating trading, while dividends and capital budgeting information were also important. Investors bought stock of large firms after good economic news, and sell their stock of large firms after bad economic news, while the trading of small firms did not appear to be motivated by macro-news (Nofsinger, 2001). Ashton and Cianci (2007) found that three characteristics of the information on which analysts based their forecasts (trend, variability, and recency) contributed to optimism in sell-side analyst earnings forecasts.

2.3 Affect heuristics versus cognitive heuristics

Affective reactions occurred during the very early stages in the decision making process and were more basic than cognitive evaluations (Bargh, 1984; LeDoux, 1996; Zajonc, 1980, 1984). Finucane et al. (2000) stated that affective reactions could be a more convenient means to make a choice because they were readily available, thereby making it far easier than the process of weighing the pros and cons. More importantly, affective reactions could influence judgment and decision-making without being mediated by cognitive evaluations (Zajonc, 1980, 1984; Schwarz and Clore, 1983; Clore et al., 1994). When affective reactions and cognitive evaluations diverged, the emotional aspects tended to dominate (Ness and Klass, 1994; Rolls, 1999). Consequently, individuals might use an affect heuristic in their judgment and decision-making process (Epstein, 1994).

Traditionally, researchers have always thought that investors were motivated by the axioms of expected utility theory. However, the theory of cognitive dissonance predicts that the behavior of investors was motivated by their intentions to reduce internal conflict, or
cognitive dissonance. After receiving cognitive cues such as financial information, investors needed to act on a consistent condition, where the valence of affective cues and cognitive cues were congruent, or act on a conflict condition, where the valence of affective cues and cognitive cues were different. The focus of this study was on the latter. Thus, investors needed to somehow integrate the cognitive cues and affective cues into one final decision: to buy or not to buy the stock (Luo, 2007). According to standard finance theory, an investment decision should be based on the trade-off between the expected return of the available alternative and the risk associated with this alternative (Jordan and Kaas, 2002). Risk and benefit judgments were constructed, at least in part, from references to some overall affective evaluations. These findings certainly appear to help explain the relatively low level of scrutiny of highly risky stocks in market bubbles (Finucane et al., 2000).

Previous studies have found that negative information was more informative than positive information (Herr et al., 1991; Poortinga and Pidgeon, 2004). The different weights of a positive or negative corporate image in regards to decision making resembles the idea of the prospect theory (Kahneman and Tversky, 1979). Therefore, we predicted that the effect of positive financial information on the purchase intentions should be stronger than that of the effect of negative financial information in the case of a positive corporate image. However, the effect of negative financial information on the purchase intentions should be stronger than that of the effect of positive financial information in the case of a negative corporate image.

H2: The valence of the corporate financial information will moderate the effect of the corporate image on an investor’s intentions to purchase shares.

H2a: The marginal effect of positive financial information on the relationship between the corporate image and the purchase intention is stronger with a positive corporate image than with a negative corporate image.

H2b: The marginal effect of negative financial information on the relationship between the corporate image and the purchase intention is stronger with a positive corporate image than with a negative corporate image situation.

3. Study One

3.1 Participants, design and procedure

The purpose of Study One was to test H1 and the effect of corporate image on purchase intentions. One hundred and eighteen Business School undergraduate students, enrolled at a university in southern Taiwan, were recruited to participate in this experiment for class credit. The participants consisted of 53 female and 65 male students, with an average age of 19.3. Participants were randomly assigned, either to a scenario with positive or negative corporate image. The description of “corporate image” was based on Aaker (1996) and Keller (1998) (Ganesan 1994; Gurhan-Canli and Batra 2004; Kumar, Scheer et al., 1995). For example, the corporation with a positive image was described as having products of excellent quality, innovative designs, reasonable prices, prompt service, well-trained employees, and a complete system of welfare and social responsibility (see Appendix A). On the contrary, the corporation with a negative image was described as having products with poor quality, old designs, overpriced products, slow service, and a profit oriented philosophy (see Appendix B). Then, the participants were asked whether they would buy shares in the company in question or not (see Appendix A and B).

3.2 Results of Study One

Two five-point Likert items were used to measure participants’ affective value toward the corporations: “My attitude toward Company A was negative and my attitude toward company A was positive.” Then the score on the negative affect scale (the second item) was subtracted
from the score on the positive affect scale (the first item). If the subtracted value was positive, it was the affective value for positive corporate image. If the subtracted value was negative, it was the affective values for the negative corporate image. A t-test showed that attitudes toward the corporation were more positive for the positive corporate image situation than for the participants in the negative corporate image situation ($M_{\text{positive}} = 4.22$ vs. $M_{\text{negative}} = 2.15$, $p \leq 0.01$). This indicated that our manipulation of corporate image was successful. In the positive corporate image situation, 51 out of 62 (82%) participants chose to buy shares. In the negative corporate image situation, only 5 out of 56 (9%) participants chose to buy shares. Hierarchical log linear analysis was used to examine the relationship between corporate image and financial information. We found that there was a main effect of corporate image on stock buying intentions ($\chi^2 (1) = 11.365$, $p \leq 0.01$). Therefore, $H1$ was supported.

4. Study Two

To extend the findings of Study One, the purpose of Study Two was to test the moderating effect of financial information on the relationship between corporate image and purchase intentions. Based on prospect theory and negativity bias (Rozin and Royzman, 2001), we expected to find an asymmetric effect in the influence of information on corporate image. Specifically, the negative information had a stronger effect on positive corporate image than did the positive information on a negative corporate image (Baumeister et al., 2001).

4.1 Participants, design and procedure

Three hundred and forty-six Business School undergraduate students, enrolled at a university in southern Taiwan, were recruited to participate in the experiment for class credit. The participants consisted of 181 male and 165 female students, with an average age of 20.1. The factors were manipulated into a 2 (positive/negative corporate image) × 3 (none/good/bad financial information) between-subject design. Participants were randomly assigned to one of six scenarios (see Appendix C and D). The manipulation for corporate images was the same as the pretest. The “financial information” description was based on the study of Nofsinger (2001). The specific company’s financial information consisted of one of three basic pieces of data: earnings, stock dividends, and capital budgeting. For example, the company with good financial information was manipulated by describing one of the three following conditions: the seasonal performance of the company was above expectation, Earnings Per Share (EPS) was revised upwards, or overhead was decreasing due to an efficient business operation. The three above conditions were randomly assigned to the participants. After reading the scenario, the participants were asked to indicate whether he/she would purchase shares in the company described in the scenario. At the end of the experiment the participants were asked to rate, on a five-point scale, their impression of the company.

4.2 Results of Study Two

A t-test showed that attitudes toward the corporation were more favorable in the positive corporate image situation than for those participants in the negative corporate image situation ($M_{\text{positive}} = 4.16$ vs. $M_{\text{negative}} = 2.15$, $p \leq 0.01$). This indicated that our manipulation of corporate image was successful. In the combination of positive corporate image and positive financial information situation, 48 out of 53 (91%) participants chose to buy company stock, while in the combination of positive corporate image and negative financial information situation, 44 out of 62 (71%) participants chose to buy company stock. In the negative corporate image and positive financial information situation, only 8 out of 62 (13%) participants chose to buy company stock, while in the negative corporate image and negative financial information situation, only 2 out of 76 (3%) participants chose to buy shares. Hierarchical log-linear analysis was used to examine the relationship between corporate
image and financial information. We did not find a two-way interaction between the effect of corporate image and positive financial information on purchase intentions ($\chi^2 (1) = 0.404, p \geq 0.5$). Therefore, $H2a$ was not supported. However, a two-way interaction existed between the effect of corporate image and negative financial information on purchase intentions ($\chi^2 (1) = 3.086, p \leq 0.1$). Therefore, $H2b$ was supported.

In summary, Study Two supported the effect of corporate image on purchase intentions and a two-way interaction between corporate image and negative financial information on purchase intentions. However, Study Two did not find a two-way interaction between the effect of corporate image and positive financial information on purchase intentions. This insignificant result may have been caused by the small effect of only one piece of positive financial information on purchase intentions. To further test this argument, Study Three investigated whether extra financial information would augment the effect of financial information, and make the two-way interaction between the effect of corporate image and positive financial information on purchase intentions become significant.

![Figure 1. The interaction between corporate image and purchase intentions when positive financial information is presented.](image-url)
Table 1. The means of purchase intentions for Study Two.

<table>
<thead>
<tr>
<th>Financial Information</th>
<th>Number of Piece of Information</th>
<th>Corporate Image</th>
<th>Purchase Intentions Mean a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>Zero</td>
<td>Positive</td>
<td>0.851(40/47)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Negative</td>
<td>0.087(4/46)</td>
</tr>
<tr>
<td></td>
<td>Single</td>
<td>Positive</td>
<td>0.906(48/53)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Negative</td>
<td>0.129(8/62)</td>
</tr>
<tr>
<td>Bad</td>
<td>Zero</td>
<td>Positive</td>
<td>0.851(40/47)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Negative</td>
<td>0.087(4/46)</td>
</tr>
<tr>
<td></td>
<td>Single</td>
<td>Positive</td>
<td>0.710(44/62)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Negative</td>
<td>0.026(2/76)</td>
</tr>
</tbody>
</table>

a Purchase Intentions Mean = Numbers of participants who intended to purchase the stock / Total of participants.

5. Study Three

5.1 Design and procedure

As mentioned, Study Two did not find a two-way interaction between the effect of corporate image and positive financial information on purchase intentions. This insignificant result may have been caused by the small effect of only one piece of positive financial information on purchase intentions. Therefore, Study Three further investigated whether extra financial information would more significantly impact purchase intentions. Similar to prospect theory, the impact of positive corporate image on purchase intentions should differ from the effects of negative image on purchase intentions. Therefore, this study also
compared the dissimilar impact of positive financial information on purchase intentions between a corporation with a positive image and a corporation with a negative image.

**H3:** The quantity of financial information will moderate the effect of corporate image on an investor’s intentions to purchase shares.

**H3a:** The effect of positive financial information on purchase intentions is stronger when an investor has a negative attitude toward the corporation than when an investor has a positive attitude toward the corporation.

**H3b:** The effect of negative financial information on purchase intentions is stronger when an investor has a positive attitude toward the corporation than when an investor has a negative attitude toward the corporation.

Three hundred and ninety-one Business School undergraduate students, enrolled at a university in southern Taiwan were recruited to participate in the experiment for class credit. The participants consisted of 175 male and 216 female students, with an average age of 19.7. The factors were manipulated into a 2 (positive/negative corporate image) × 2 (valence of financial information: good/bad) × 4 (none/one piece/two pieces/three pieces of financial information) between-subject design. Participants were randomly assigned to one of sixteen scenarios (see Appendix E and F). The “financial information” description was based on Nofsinger’s (2001) study. The specific company financial information included three basic pieces of data: earnings, stock dividends, and capital budgeting. For example: the company providing good financial information was described as performing above expectations, with EPS revised upwards and overhead decreasing due to an efficient business operation. After reading the scenario, the participants were asked to indicate whether he/she would purchase shares in the company described in the scenario. At the end of the experiment, the participants were asked to rate their impression of the company on a five-point Likert-type scale.

**5.2 Results of Study Three**

A t-test revealed that the attitude towards the corporation was more positive within the positive corporate image situation than for those participants in the negative corporate image situation ($M_{positive} = 4.15$ vs. $M_{negative} = 2.13$, $p \leq 0.01$). This indicated that our manipulation of corporate image was successful. As the amount of positive financial information increased, the percentage of purchase intentions also increased for those participants either in the positive or in the negative corporate images. In addition, the slope was steeper for those participants in the negative corporate image situation than those participants in the positive image (see Figure 3). In contrast to this, as the amount of negative financial information increased, the percentage of purchase intentions decreased. The slope was steeper for those participants in the positive corporate image situation than for those in the negative corporate image situation (see Figure 4). Hierarchical log linear analysis was used to examine the relationship between corporate image and financial information. There existed a two-way interaction between corporate image and positive financial information on purchase intentions ($\chi^2 (1) = 7.828$, $p \leq 0.01$). Therefore, $H3a$ was supported. Also, a two-way interaction between corporate image and positive financial information on purchase intentions existed ($\chi^2 (1) = 4.766$, $p \leq 0.05$). Therefore, $H3b$ was supported.
Figure 3. The interaction between corporate image and purchase intentions when positive financial information is presented.

Figure 4. The interaction between corporate image and purchase intentions when negative financial information is presented.
6. Study Four

The purpose of Studies One, Two and Three was to examine whether the corporate image might lead investors to use the affect heuristic while at the same time the financial information might induce them to use a more analytical processing strategy. To eliminate the possible confounding effects observed in Study Three, the good (bad) financial information such as performance, EPS or overhead of current year was described as 15% above (below) the same period of last year, respectively.

6.1 Design and procedure

Five hundred and thirty-five members of an online stock club were recruited to participate in the experiment in exchange for a chance to win an iPod Nano. The participants consisted of 401 males and 134 females, and the average age was 25.2 years. The factors were manipulated into a 2 (positive/negative corporate image) × 2 (valence of financial information: good/bad) × 4 (none/one piece/two pieces/three pieces of financial information) between-subject design. Participants were randomly assigned to one of sixteen scenarios (see Appendix G and H). The manipulation checks for the affective value of the corporate image were based on the study of Kalamas et al. (2008). The “financial information” description was based on the study of Nofsinger (2001). The specific company financial information consisted of three basic sets of data: earnings, stock dividends, and capital budgeting. The precise financial information was manipulated by stating that the seasonal performance of the company was 15% above (below) expectations or that the EPS was revised upwards (downwards) by 15%, or that the overhead had increased (decreased) by 15% due to efficient
business operation. After reading the scenario, the participants were asked to indicate whether s/he would purchase shares of the company described in the scenario. At the end of the experiment, the participants were asked to rate their impression of the company using a five-point Likert-type scale.

6.2 Results of Study Four

Manipulation check

The t-test showed that two pieces of good financial information induced a more positive attitude toward the company that did only a single piece of good financial information (M_{SinglePosInf} = 4.198 vs. M_{TwoPosInf} = 4.488, p ≤ 0.01), while three pieces of good financial information induced an even better positive attitude toward the company (M_{TwoPosInf} = 4.488 vs. M_{ThreePosInf} = 4.625, p ≤ 0.05). In terms of bad financial information, two pieces of bad financial information induced a more negative attitude toward the company than did only a single piece of bad financial information (M_{SingleNegInf} = 2.360 vs. M_{TwoNegInf} = 1.824, p ≤ 0.01) while three pieces of bad financial information induced even more negative attitude toward the company (M_{TwoNegInf} = 1.824 vs. M_{ThreeNegInf} = 1.403, p ≤ 0.01). In addition, a t-test revealed that the attitude toward the corporation was more positive within a positive corporate image situation than in a negative corporate image situation (M_{positive} = 4.21 vs. M_{negative} = 2.20, p ≤ 0.01). These indicated that our manipulation of both the corporate image and the financial information was successful, respectively.

The percentage of purchase intentions increased with the increase in the amount of positive financial information, for either a positive or a negative corporate image. In addition, the slope was steeper for the negative corporate image situation than for the positive image (see Figure 5). On the other hand, as the amount of negative financial information increased, the percentage of purchase intentions decreased. The slope was steeper for the positive corporate image situation than for the negative corporate image situation (see Figure 6). Hierarchical log linear analysis was used to examine the relationship between corporate image and financial information. Even thought, a two-way interaction between corporate image and two positive financial information on purchase intentions (χ^2 (1) = 2.830, p => 0.1) and a two-way interaction between corporate image and two negative financial information on purchase intentions (χ^2 (1) = 0.420, p => 0.1) were not significant, there existed a two-way interaction between corporate image and three positive financial information on purchase intentions (χ^2 (1) = 3.301, p ≤ 0.1) and a two-way interaction between corporate image and three negative financial information on purchase intentions (χ^2 (1) = 7.531, p ≤ 0.01).
Figure 5. The interaction between corporate image and purchase intentions when positive financial information is presented.

Figure 6. The interaction between corporate image and purchase intentions when negative financial information is presented.
A series of four studies were conducted to investigate how investors’ stock buying decisions would be influenced by affective evaluations and cognitive evaluations of the corporation. The results of the first study revealed that when investor impressions of corporate image were positive, investors were more likely to purchase the stock of that company, whereas when investor impressions of corporate image were negative, they were less likely to purchase stock rapidly and automatically. All of these implied that corporate image could be termed as an affect heuristic which was consistent with the argument put forward by Slovic et al. (2007), and could help individuals to make a better decision rapidly and automatically. Like emotion, corporate image should be treated as an important indicator of the affective factor on individuals’ stock buying behavior. Research has shown that emotions have a greater effect on the investors’ decision making (e.g., Daniel et al., 2002; Hirshleifer, 2001). Unlike emotions, corporate images evolved over time such that their valence could not be changed instantaneously (Purohit and Srivastava, 2001). Therefore, the effect of corporate image on the decision making of an investor was more significant than that of emotion.

Given the effect of corporate image on investors’ stock purchase intentions, evaluating and ranking corporate image in a more objective manner such as the way which mutual funds were evaluated by Morning Star to reduce investor misconception toward the corporation might be justified. Besides, corporate image could be developed alongside corporate reputation in the level of companies and better extended in individuals’ stock buying decisions, especially for affective aspects.

The results of the second study showed that a single piece of negative financial information impacted the effect of corporate image on an investor’s purchase intentions while...
a single piece of positive financial information did not. The different outcomes might indicate that negative information had a stronger effect on an investor’s stock purchase intentions than did positive financial information. This finding was consistent with the idea that negative information was more informative than positive information (Herr et al., 1991; Poortinga and Pidgeon, 2004). The different values of positive and negative financial information, in regards to decision making, resembled the idea of prospect theory. For future study, the effects of positive and negative information on the decision making of the investor should be treated as two separate conditions, just as “gains” and “losses” were differentiated in the prospect theory. The results of the second study demonstrated that a single piece of information was not enough to alter the effect of corporate image on an investor’s purchase intentions. Consistent with Shiv and Fedorikhin’s (1999) study, spontaneously evoked affective reactions (corporate image) rather than cognitions (financial information) tended to have a greater impact on choice. Another possibility was that the initial positive (negative) affective position induced by the corporate image was too strong to be influenced by one single cognitive cue.

The third and fourth study investigated whether the moderating effect of positive/negative financial information on the relationship between corporate image and purchase intentions became stronger as the amount of positive/negative information increased. The hierarchical log-linear analysis results revealed that financial information moderated the effect of corporate image on stock purchase intentions. In line with our hypotheses, the moderating effect of financial information became significant as the amount of financial information increased. Based on prospect theory and negativity bias (Rozin and Royzman, 2001), we found an asymmetric effect in the influence of information on participants’ purchase intentions. That is, the impact of bad financial information, in conjunction with positive corporate image, on participants’ purchase intentions was more significant than that of good financial information, with negative corporate image, on participants’ purchase intentions. Specifically, the marginal effect of extra positive financial information on participants’ purchase intentions was smaller for those corporations with a positive image than those corporations with a negative image. This implied that it would be more cost effective for those corporations with negative images to heavily invest in publicizing their positive financial information to the public, than those corporations with good images.

Financial information impacted the effect of corporate image on purchase intentions; it might take more than two pieces of information to counter the effect of a bad corporate image. In actuality, it took only two pieces of bad information to offset the effect of a good corporate image. This implied that even corporations with good images needed to immediately activate their damage control in the case of any release of bad financial information. In a way, the damage control could serve as a vaccine against any further bad financial information. It was imperative for the manager to cultivate the corporate image in order to minimize the impact of bad financial information. Consistent with the idea that decisions were a combination of affective evaluations and cognitive evaluations (Herbst et al., 2003; Kim and Morris, 2007; Scarabiss et al., 2006), the results of these two studies implied that there was an influence of corporate image information on investors’ affective evaluation toward the corporation. However, the effect of affective evaluations on investors’ purchase intentions was lessened as more and more cognitive information became available to the investor. That is, in the interplay between the two separate processes of affect and cognition, the cognitive evaluations could act as an additional cue and reduce the investors’ tendency to rely on intuitive processing.
8. Limitations and suggestions

The limitations of the current research study involved issues of manipulation. The financial information paired with corporate image information in Studies Two and Three excluded devastating information such as bounced checks or major scandals, in order to avoid a ceiling effect, which would have interrupted the purpose of our study. Nonetheless, this manipulation did not reflect the reality of devastating information release occurring from time to time.

Another limitation involved the temporal issue of financial information. This article did not investigate the long-term effect of financial information on corporate image and on participants’ purchase intentions. By using longitudinal data to investigate the long-term effect of financial information on corporate image and on participants’ purchase intentions, the temporal dimension of this study would be extended.

Another limitation involved the number of pieces of financial information manipulated in this study. This finding implied that with enough financial information, it was still possible to counter the effect of a good/bad corporate image. For future studies, the moderating effect of more than three pieces of financial information on purchase intentions should be investigated. As in prospect theory, the effect of positive financial information on a bad corporate image and the effect of negative financial information on a good corporate image should be treated separately. Therefore, the exact number of pieces of positive financial information needed to counter the influence of a bad corporate image, and the exact number of pieces of negative financial information needed to offset (counter) the influence of a good corporate image, should be investigated, discretely and respectively.

To quantify the impact of the financial information, this study made a strong assumption that the quality of financial information provided was equal. Further studies might try to allow participants to weigh the importance of each piece of information. This article might also have overlooked one possible effect of a potential blocking variable on investors’ decision making – the time preference of the investors. To reduce this confounding effect, in each study the participants were randomly assigned to one of four groups. Nonetheless, it might be possible to measure time preference and block the participants accordingly in a future study. In addition, this article did not employ a more realistic decision making situation where a no-choice option was a possible alternative. As in a set of serial studies by Dhar (1997) and Dhar and Simonson (2003), future studies might include a no-choice option in the choice set.

References


Appendix A

Scenario 1: A company with a positive corporate image.

Please carefully read the scenario below. Based on the impression you get from the short description, please decide whether you want to purchase shares of this company or not. There is no right or wrong answer to the questions. Your information will be kept strictly confidential. If you are interested in the findings of this study, please leave your e-mail. Upon completion of this study, we will send you a copy of the abstract of this study. Thank you.

Scenario:

Company A is a publicly traded firm. It is well recognized for the excellent quality of its product. In addition, its innovative design is very popular among young consumers. Most of the consumers who have purchased the product manufactured by Company A would agree that the price of its product is reasonable and the post-purchase service is excellent.

Furthermore, research and design is one of the major fortes of the company. Their customer-oriented nature contributes to the success and popularity of its product. Company A creates an environment where employees are fully authorized to be charge of their own projects, and are encouraged to be more creative and innovative. Company A also provides full retirement. With this piece of mind, employees can focus entirely on their jobs. Company A has also devoted a lot of effort to community and society projects. Yearly, Company A donates money to clean up the streets and parks. They are second to none when come to charity sponsorship. Helping underprivileged people is a way for Company A to give back to society.

1. Do you plan to purchase the stock of Company A?
   □ Yes  □ No

2. On scale of “1” to “5”, please indicate how strongly you agree or disagree with the following statements related to information search process.

   Strongly Disagree  Strongly Agree
   1  2  3  4  5
   ________  ________  ________  ________  ________
   _____ My attitude toward Company A is positive.
   _____ My attitude toward Company A is negative.

3. Now we would like some information about you so that we can compare your responses to other participants.

   What is your gender?  □ Male  □ Female

   What is your age?  ________

If you are interested in the findings of this study, please leave your e-mail. ______________

Appendix B

Scenario 2: A company with a negative corporate image
Please carefully read the scenario below. Based on the impression you get from the short description, please decide whether you want to purchase shares of this company or not. There is no right or wrong answer to the questions. Your information will be keep strictly confidential. If you are interested in the findings of this study, please leave your e-mail. Upon completion of this study, we will send you a copy of the abstract of this study. Thank you.

**Scenario:**

Company B is a publicly traded firm. The poor quality of their product is well publicized. In addition, their product design is one step behind the latest trend. Most consumers who have purchased the product manufactured by Company B would agree that the price of their product is more expensive than the other brands, and that the post-purchase service is not responsive.

Furthermore, research and design is one of the major weaknesses of the company. The profit-oriented mindset inhibits the innovation of their product. Employees are not fully authorized to be charge of their own projects, and are not motivated to be more creative and more innovative. Company B is not devoted in terms of its effort to community and society projects. The motto of company is to maximize profits.

1. Do you plan to purchase the stock of Company B?
   - [ ] Yes
   - [ ] No

2. On scale of “1” to “5”, please indicate how strongly you agree or disagree with the following statements related to information search process.
   - [ ] Strongly Disagree
   - [ ] Strongly Agree
   
   1 ______ 2 ______ 3 ______ 4 ______ 5 ______
   
   _____ My attitude toward Company B is positive.
   
   _____ My attitude toward Company B is negative.

4. Now we would like some information about you so that we can compare your responses to other participants.
   
   What is your gender?  [ ] Male  [ ] Female

   What is your age? ________

If you are interested in the findings of this study, please leave your e-mail. ______________

**Appendix C**

**Scenario 3-1:** A company with a positive corporate image.

**Scenario 3-2:** A company with a positive corporate image PLUS one piece of good financial information

One piece of good financial information was manipulated by stating that the seasonal performance of Company A is above expectation.

**Scenario 3-3:** A company with a positive corporate image PLUS one piece of bad financial information

One piece of bad financial information was manipulated by stating that the seasonal performance of Company A is below expectation.
Appendix D

**Scenario 4-1:** A company with a negative corporate image.

**Scenario 4-2:** A company with a negative corporate image PLUS one piece of good financial information
   One piece of good financial information was manipulated by stating that the seasonal performance of Company A is above expectation.

**Scenario 4-3:** Negative corporate image PLUS one piece of bad financial information
   One piece of bad financial information was manipulated by stating that the seasonal performance of Company A is below expectation.

Appendix E

**Scenario 5-1:** A company with a positive corporate image.

**Scenario 5-2:** A company with a negative corporate image

**Scenario 5-3:** A company with a positive corporate image PLUS one piece of good financial information
   One piece of good financial information was manipulated by stating that the seasonal performance of Company A is above expectation.

**Scenario 5-4:** A company with a positive corporate image PLUS one piece of bad financial information
   One piece of bad financial information was manipulated by stating that the seasonal performance of Company A is below expectation.

**Scenario 5-5:** A company with a positive corporate image PLUS two piece of good financial information
   Two pieces of good financial information was manipulated by stating that the seasonal performance of Company A is above expectation and this year’s of EPS will be revised upward.

**Scenario 5-6:** A company with positive corporate image PLUS two pieces of bad financial information
   Two pieces of bad financial information was manipulated by stating that the seasonal performance of Company A is below expectation and this year’s of EPS will be revised downward.

**Scenario 5-7:** A company with positive corporate image PLUS three pieces of good financial information
   Three pieces of good financial information was manipulated by stating that the seasonal performance of Company A is above expectation, this year’s EPS will be revised upward, and the overhead will decrease due to an efficient business operation.

**Scenario 5-8:** A company with a positive corporate image PLUS three piece of bad financial information
   Three pieces of bad financial information was manipulated by stating that the seasonal performance of Company A is below expectation, this year’s EPS will be revised downward, and the overhead will increase due to an inefficient business operation.
Appendix F

Scenario 6-1: A company with a positive corporate image.
Scenario 6-2: A company with a negative corporate image
Scenario 6-3: A company with a negative corporate image PLUS one piece of good financial information
   One piece of good financial information was manipulated by stating that the seasonal performance of Company A is above expectation.
Scenario 6-4: A company with a negative corporate image PLUS one piece of bad financial information
   One piece of bad financial information was manipulated by stating that the seasonal performance of Company A is below expectation.
Scenario 6-5: A company with a negative corporate image PLUS two piece of good financial information
   Two pieces of good financial information was manipulated by stating that the seasonal performance of Company A is above expectation and this year’s of EPS will be revised upward.
Scenario 6-6: A company with a negative corporate image PLUS two pieces of bad financial information
   Two pieces of bad financial information was manipulated by stating that the seasonal performance of Company A is below expectation and this year’s of EPS will be revised downward.
Scenario 6-7: A company with a negative corporate image PLUS three pieces of good financial information
   Three pieces of good financial information was manipulated by stating that the seasonal performance of Company A is above expectation, this year’s of EPS will be revised upward and the overhead will decrease due to an efficient business operation.
Scenario 6-8: A company with a negative corporate image PLUS three piece of bad financial information
   Three pieces of bad financial information was manipulated by stating that the seasonal performance of Company A is below expectation, this year’s of EPS will be revised downward and the overhead will increase due to an inefficient business operation.

Appendix G

Scenario 7-1: A company with a positive corporate image.
Scenario 7-2: A company with a negative corporate image
Scenario 7-3: A company with a positive corporate image PLUS one piece of good financial information
   One piece of good financial information was manipulated by stating that the seasonal performance of Company A is 15% above expectations.
Scenario 7-4: A company with a positive corporate image PLUS one piece of bad financial information
   One piece of bad financial information was manipulated by stating that the seasonal performance of Company A is 15% below expectation.
Scenario 7-5: A company with a positive corporate image PLUS two piece of good financial information
Two pieces of good financial information was manipulated by stating that the seasonal performance of Company A is 15% above expectation and this year’s EPS will be revised upward 15%.

Scenario 7-6: A company with positive corporate image PLUS two pieces of bad financial information
Two pieces of bad financial information was manipulated by stating that the seasonal performance of Company A is 15% below expectation and this year’s of EPS will be revised downward 15%.

Scenario 7-7: A company with positive corporate image PLUS three pieces of good financial information
Three pieces of good financial information was manipulated by stating that the seasonal performance of Company A is 15% above expectation, this year’s EPS will be revised upward 15%, and the overhead will decrease 15% due to an efficient business operation.

Scenario 7-8: A company with a positive corporate image PLUS three piece of bad financial information
Three pieces of bad financial information was manipulated by stating that the seasonal performance of Company A is 15% below expectation, this year’s EPS will be revised downward 15%, and the overhead will increase 15% due to an inefficient business operation.

Appendix H

Scenario 8-1: A company with a positive corporate image.
Scenario 8-2: A company with a negative corporate image
Scenario 8-3: A company with a negative corporate image PLUS one piece of good financial information
One piece of good financial information was manipulated by stating that the seasonal performance of Company A is 15% above expectation.

Scenario 8-4: A company with a negative corporate image PLUS one piece of bad financial information
One piece of bad financial information was manipulated by stating that the seasonal performance of Company A is 15% below expectation.

Scenario 8-5: A company with a negative corporate image PLUS two piece of good financial information
Two pieces of good financial information was manipulated by stating that the seasonal performance of Company A is 15% above expectation and this year’s of EPS will be revised upward 15%.

Scenario 8-6: A company with a negative corporate image PLUS two pieces of bad financial information
Two pieces of bad financial information was manipulated by stating that the seasonal performance of Company A is 15% below expectation and this year’s of EPS will be revised downward 15%.

Scenario 8-7: A company with a negative corporate image PLUS three pieces of good financial information
Three pieces of good financial information was manipulated by stating that the seasonal performance of Company A is 15% above expectation, this year’s of EPS will be revised upward 15% and the overhead will decrease 15% due to an efficient business operation.
Scenario 8-8: A company with a negative corporate image PLUS three piece of bad financial information

Three pieces of bad financial information was manipulated by stating that the seasonal performance of Company A is 15% below expectation, this year’s of EPS will be revised downward 15% and the overhead will increase 15% due to an inefficient business operation.