

# An Information Processing Model for Corporate Advertising in Japan:

## How Celebrity Endorser and Gender Affect Attitudes toward the Advertising

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### Abstract

Although celebrity advertising plays an important role in communications strategy, no empirical studies have revealed the practical effectiveness of celebrity advertising in Japan. To fill this gap between theory and practice, this study investigated the applicability of celebrity advertising and corporate credibility to the Japanese market. In addition to testing the causal relationships of the existing model, the perspective of gender difference was tested as a moderator. The results of the structural equation modeling indicated that all of the model's causal relationships were supported. Gender differences did not explain all of the model's paths, but the paths from the endorser's credibility to attitude toward the brand, from the corporate credibility to attitude toward the Ad were strong among female consumers.

### Introduction

One of the characteristics of Japanese advertising is celebrity endorsement. In Japan, many advertisers use celebrities in their advertising. A comparative study by Miracle, Taylor, and Chang (1992) points out that Japanese advertisers use many celebrities in TV commercials comparing to Korea and the U.S. Recent research by Praet (2008) also suggests that Japanese advertisers are more likely to use celebrities than other countries, including the United States, France, Germany, and Holland. The reason for this circumstance is thought to be the time limit in TV commercials. In Japan, approximately 80% of TV commercials are aired within 15 seconds, so advertisers need to grab viewers' attention and raise interest in a very short time.

Different factors likely influence advertising. Goldsmith, Lafferty, and Newell (2000) identified both celebrity and corporate affects on attitude toward advertising. To reveal the influence of celebrity, it is important to consider different variables. Despite the fact that many Japanese advertisers have used celebrities in ads, little research has been done. In this paper, we try to reveal the relationships among celebrity endorsers' credibility, corporate credibility, attitude toward the advertising, and gender differences in the corporate advertising context.

### **Research Background and Hypotheses**

The framework of attitude toward the advertising (Aad) is used to explain the information process. According to Lutz, Mackenzie, & Belch (1983), Aad refers to the antecedents of purchase intentions and attitude toward the brand that work as mediator. In this study, we applied this framework as a core model. Therefore, we propose the following hypotheses:

- H1: Attitude toward advertising directly and positively influences attitude toward the brand.
- H2: Attitude toward the brand directly and positively influences purchase intention.
- H3: Attitude toward advertising directly and positively influences purchase intention.

Creative factors play a critical role in advertising. Thus, it is important to reveal how celebrity endorsers' credibility and corporate credibility work in advertising. According to Goldsmith, Lafferty, and Newell (2000), endorser credibility is one of the most frequently used methods in advertising to influence consumers' attitudes. Goldsmith focused on the celebrity's role, revealing that the celebrity endorser's credibility positively influenced attitude toward advertising and indirectly positively influenced attitude toward the brand and the purchase intention via attitude toward the advertising. However, based on the source of the information effect (Hovland & Weiss, 1951), the celebrity endorser's credibility directly positively influences purchase intention as a source of the information. Therefore, we propose the following hypotheses:

- H4: The celebrity endorser's credibility directly and positively influences attitude toward the advertising.
- H5: The celebrity endorser's credibility directly and positively influences attitude toward the brand
- H6: The celebrity endorser's credibility directly and positively influences purchase intention.

Moreover, the source of the information effect suggests positive relationships between corporate credibility and the framework of attitude toward the advertising (Hovland & Weiss, 1951). Goldsmith, Lafferty, and Newell (2000) examined these relations and showed that corporate credibility positively influences attitude toward the advertising, attitude toward the brand, and purchase intention. Therefore, we propose the following hypotheses:

H7: Corporate credibility directly and positively influences attitude toward the advertising.

H8: Corporate credibility directly and positively influences attitude toward the brand.

H9: Corporate credibility directly and positively influences purchase intention.

Furthermore, personal traits play important roles, especially celebrity endorsement. In terms of creative advertising, gender differences moderate the advertising process. Although prior studies have examined gender differences in celebrity advertising, the results are controversial (Wolin, 2003). To develop this topic, gender differences related to endorser credibility and corporate credibility need to be considered. Cramphorn (2011) revealed that, compared to male consumers, female consumers tend to pay more attention to and develop a more positive attitude toward celebrity-endorsed advertising. Thus, we can assume that female consumers tend to be strongly affected by celebrity endorsers' credibility and corporate credibility. Therefore, this study posits:

H10a: For female consumers, the positive relationship between corporate credibility and attitude toward the Aad will be strong;

H10b: For female consumers, the positive relationship between corporate credibility and attitude toward the brand will be strong; and

H10c: For female consumers, the positive relationship between corporate credibility and purchase intention will be strong.

We can also assume that:

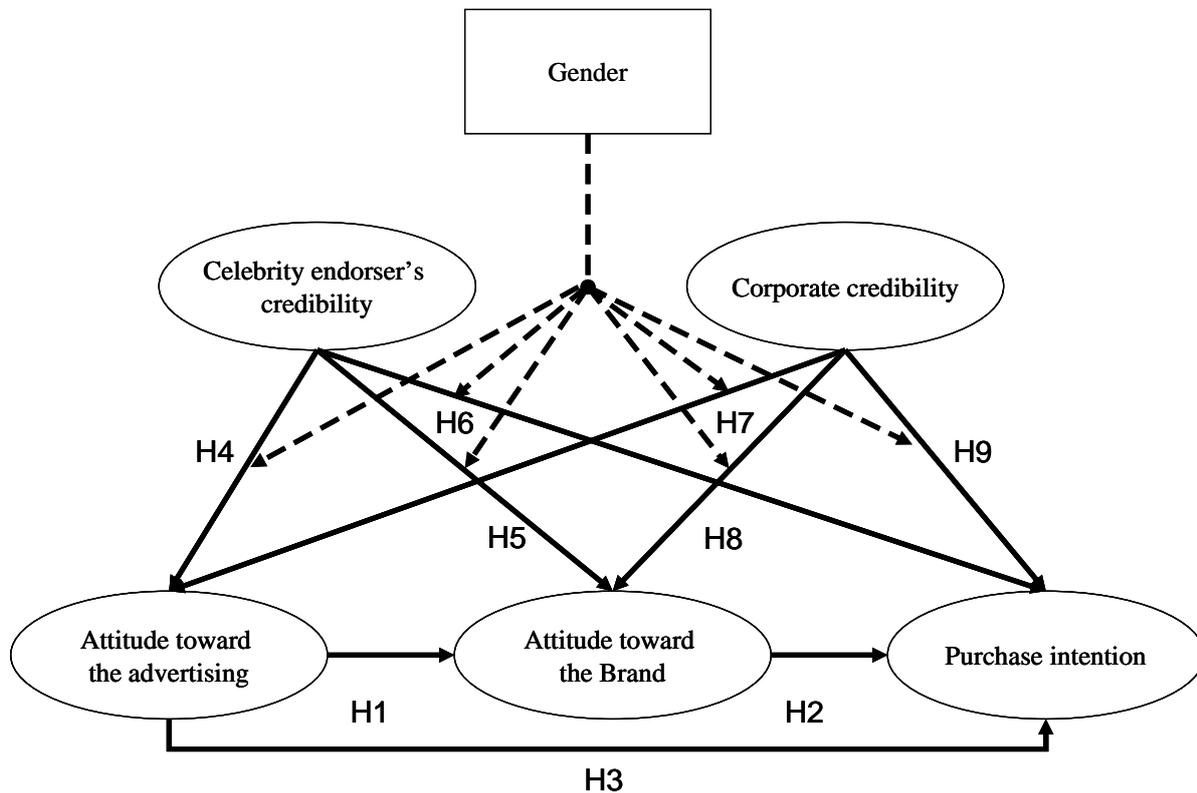
H11a: For female consumers, the positive relationship between celebrity endorsers' credibility and attitude toward the Aad will be strong;

H11b: For female consumers, the positive relationship between celebrity endorsers' credibility and attitude toward the brand will be strong; and

H11c: For female consumers, the positive relationship between celebrity endorsers' credibility and purchase intention will be strong.

Figure 1 summarizes our research hypotheses.

Figure 1: Proposed research model



## Methodology and Results

To address the research questions, the current study was conducted in Japan. The respondents—university students in the Tokyo metropolitan area—were asked to answer questionnaires based on a newspaper advertisement. The survey questionnaire was divided into four parts. The first part included questions related to demographic information. The remaining parts included the main questions on the Aad model, corporate credibility, and celebrity endorser's credibility, respectively. Scales related to Aad were measured using 7-point bipolar scales. The remaining scales were measured using 7-point Likert scales. The scale items for Aad and attitude toward the brand, purchase intention were adapted from Mackenzie, Lutz, and Belch (1986). Celebrity endorser's credibility was adopted from Ohanian (1990), and corporate credibility was adopted from Goldsmith, Lafferty, and Newell (2000). All scale items were translated into Japanese and back-translated to ensure consistency and accuracy of meaning. A group of academics in advertising checked the wording and made appropriate modifications. To check the wording and reliability of the question items, the questionnaire was pretested with 50 potential respondents.

To avoid product bias while simultaneously creating a realistic situation, we operationalized corporate advertising with celebrity endorser. The advertising combined a real corporate advertisement with a celebrity image. The corporate advertisement of a major gas company was selected from an industrial paper that seemed to be unfamiliar to the respondents. A famous male commentator was selected as the celebrity endorser; since he did not have contract with the company, no connection had been established between the celebrity endorser and the advertiser. The survey produced a total of 505 responses. Those who did not know either the company name or the celebrity endorser were eliminated from sample as they could not make certain judgments about the advertising. As a result, the final sample size was 400. In terms of gender, male (52.5%) and female (47.5%) respondents were almost equal in size.

Anderson and Gerbing's (1988) two-step approach was used to analyze the model. A confirmatory factor analysis (CFA) was conducted, comprising five latent constructs and a total of 18 variables. The maximum likelihood method was used with AMOS 17.0 (Byrne, 2010). Following the recommendations of Bagozzi and Yi (1989), multiple indexes, including  $\chi^2$  statistics, CFI, TLI, and RMSEA, were used to assess the proposed model's goodness of fit. All of the indexes except the  $\chi^2$  statistic fell within an acceptable range ( $\chi^2_{142} = 487.70$ , CFI = 0.95, TLI = 0.94, and RMSEA = 0.066)(Hair, Black, Babin, & Anderson, 2009). However,  $\chi^2$  statistics tend to be substantial when the sample size is large (Byrne, 2009). Thus, the measurement model was deemed to be acceptable.

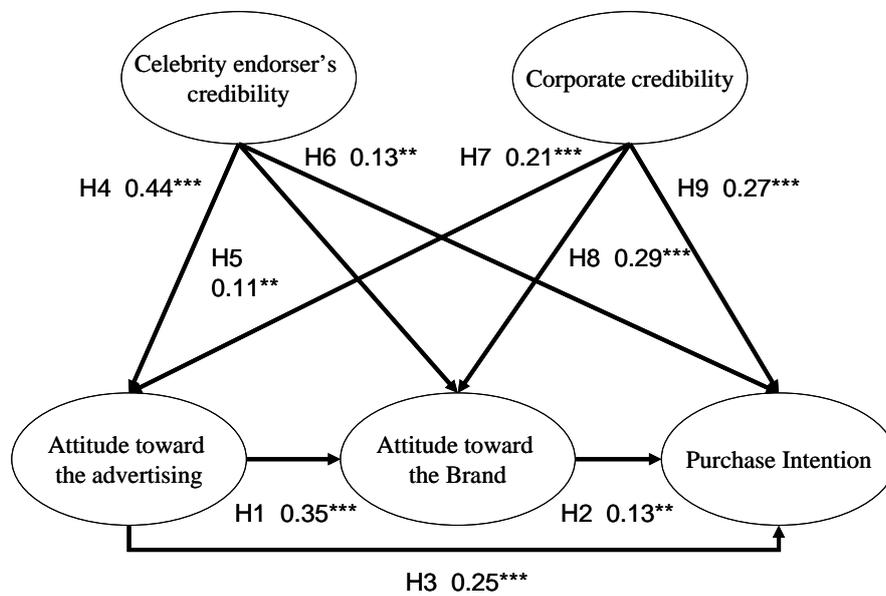
Next, to test the invariance of the measurement model between the male and female model, a multigroup analysis was conducted. In this analysis, the unconstrained and constrained models were simultaneously estimated across the groups. The resulting CFI difference (0.01) showed that the model was completely and totally invariant across the groups (Cheung & Rensvold, 2002). To assess the overall validity and reliability, the construct reliability (CR) and average variance extracted (AVE) were calculated (see Table 1). Almost all scores exceeded the benchmark of 0.70. Given the results from the model assessment, the structural model assessment was conducted.

The proposed model posits that both the celebrity endorser's credibility and corporate credibility influence the Aad model. To explore hypothesized relationships, the structural paths between the proposed constructs for the full sample were examined using the maximum likelihood method. Again, all fit indexes except  $\chi^2$  statistics were statistically acceptable ( $\chi^2_{142} = 536.16$ , CFI = 0.95, TLI = 0.93, and RMSEA = 0.070). All paths were statistically significant (see Figure 2). These results support H1 through H9.

Table 1: Reliability and validity

	CR			AVE		
	Male	Female	Total	Male	Female	Total
Celebrity endorser's credibility	0.99	0.99	0.97	0.75	0.80	0.77
Corporate credibility	0.99	0.99	0.99	0.87	0.89	0.88
Attitude toward the Ad	0.99	0.99	0.99	0.79	0.85	0.82
Attitude toward the brand	0.99	0.99	0.99	0.84	0.85	0.80
Purchase intention	0.98	0.98	0.98	0.75	0.77	0.75

Figure 2: Proposed research model for full sample



\*\*\* p<0.01, \*\* p<0.05

To determine the gender differences based on the influence of the celebrity endorser's credibility and corporate credibility on the Aad model, a multi-group analysis was conducted. Following Byrne's (2010) recommendation, an individual estimation was conducted for each group separately. Table 2 shows the results of this analysis. In the male group model, the paths from the celebrity endorser's credibility to purchase intention, from the celebrity endorser's credibility to attitude toward the brand, and from corporate credibility to attitude toward Aad were statistically insignificant ( $\chi^2_{142} = 311.26$ , CFI = 0.94, TLI = 0.93, and RMSEA = 0.067). In contrast, in the female group, these three paths were statistically

significant ( $\chi^2_{142} = 311.20$ , CFI = 0.95, TLI = 0.94, and RMSEA = 0.065). In both groups, the path from attitude toward the brand to purchase intention was not significant. A multi-group structural equation modeling was also conducted ( $\chi^2_{286} = 662.18$ , CFI = 0.94, TLI = 0.93, and RMSEA = 0.050). The difference in CFI (0.01) suggests invariance across the groups.

*Table 2: Individual estimations*

		Path	Male		Female		Difference
	Attitude toward the Ad	→ Attitude toward the Brand	0.41	***	0.31	***	
	Attitude toward the Brand	→ Purchase intentions	0.13	N.S.	0.15	N.S.	
	Attitude toward the Ad	→ Purchase intentions	0.30	***	0.21	***	
H10a	Crelebrity endorser's credibility	→ Attitude toward the Ad	0.50	***	0.40	***	N.S.
H10b	Crelebrity endorser's credibility	→ Attitude toward the Brand	-0.02	N.S.	0.20	***	**
H10c	Crelebrity endorser's credibility	→ Purchase intentions	0.07	N.S.	0.16	**	N.S.
H11a	Corporate credibility	→ Attitude toward the Ad	0.12	N.S.	0.29	***	**
H11b	Corporate credibility	→ Attitude toward the Brand	0.26	***	0.26	***	N.S.
H11c	Corporate credibility	→ Purchase intentions	0.29	***	0.24	***	N.S.

\*\*\* p<0.01 \*\* p<0.05

A series of *t*-tests detected significant differences between the relationships from corporate credibility to attitude toward the Ad and from endorser credibility to attitude toward the brand. In no case did the male group demonstrate significant relationships. In contrast, the female group demonstrates significant and strong relationships. Considering these results, the data supported H10b and H11a, but not H10a, H10c, H11b, or H11c.

### Conclusion and Discussion

This study sought to investigate information processing for corporate advertising in Japan. Based on Goldsmith's (2000) model, this study examined the causal relationships among celebrity endorsers' credibility, corporate credibility, and the Aad framework in corporate advertising. In addition, this study sought to determine the moderate effects according to gender differences in the model. Positive causal relationships were identified from the endorser's credibility and corporate credibility to the Aad framework. These results were basically consistent with previous research studies.

This study offers two new findings. First, positive relationships exist from celebrity endorsers' credibility to attitude toward the brand and purchase intention. These relationships were not revealed in prior studies (Goldsmith, 2000). These results filled the gap in the theory and prior research results. Second, this study revealed a gender difference for corporate advertising using multi-group analysis. Gender is one of the most popular topics in advertising research. However, this topic is generally analyzed using a simple procedure (e.g., ANOVA or MANOVA) rather than structural equation modeling. The current study used multi-group analysis to provide a broad picture of gender difference in advertising research.

This study's results provide support for prior research results and identify new findings. However, room still exists for further investigations in light of the limitations. First, this study used a student sample; as the research stimuli were controlled, general consumers would be more appropriate for the study sample. Second, this study used a very limited situation. Many factors affect celebrity endorsers' credibility, such as gender, age, familiarity, and expertise; the same is true of corporate credibility. It is very important to apply this model to different situations to generate generalizability. Finally, this study was conducted in Japan, where celebrity endorsement is very popular. It may be necessary to read the results carefully to apply this model to other markets.

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