

## The impact of country-of-origin on implicit attitudes and beliefs of Consumers\*

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The two main aims of this study were to determine if country-of-origin information would influence implicit beliefs and attitudes of consumers about a product and to explore if the Extrinsic Affective Simon Task(EAST), one of the modified versions of the Implicit Associate Test(IAT), could be applied to the study of consumer attitudes as a useful measurement method. Thirty-six students at Bangor University took part in this experiment. As target concepts measured, three imaginary company names, having different country-of-origin were used to test the impact of country-of-origin, and two existing company names were presented to examine the application of the EAST to real consumer attitudes and beliefs. Respective implicit beliefs and attitudes toward target concepts were measured by the EAST. In the EAST, participants saw white words that needed to be classified on the basis of stimulus valence(good or bad) and colored words that were to be classified on the basis of color(blue or green). Results showed that when the colored words referred to a target name having a positive country-of-origin(i.e., an imaginary Japanese company name) and the existing company name(i.e., SONY) which is believed to have positive images, the reaction time was faster when these words shared the same key orientation with positive white words. These findings indicate that country-of-origin could be a crucial factor which could influence the implicit evaluation of a product and the EAST could successfully be used as a useful method for measuring the implicit attitudes and beliefs of consumers.

*key words* : Country-of-Origin, Implicit attitude, Extrinsic Affective Simon Task

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\* 본 논문에서 소비자의 암묵적인 태도를 측정하기 위해 만들어진 E-Prime program은 University of Wales의 Dr, James Intriligator의 도움을 받아 만들어졌음.

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Stereotypes are part of a society's social heritage. They are internalized and perpetuated through various methods, such as learning, experience, and even punishment. Through these processes most members of society naturally learn these stereotypes(Ehrlich, 1973). In this context, country-of-origin can also be considered as a type of stereotype. People naturally internalize any images, biases, or stereotypes toward other countries and these stereotypes influence their thoughts and behaviors.

Country-of-origin effects are related to how consumers perceive products coming from a particular country(Roth & Romeo, 1992). Generally, country-of-origin significantly influences the perception that consumers have toward products from various countries. For instance, people believe that most Japanese cars are high quality and economic, even without having any data or experience supporting this view. This is likely to be due to the image or stereotype which Japan has.

To date, much research has showed that country-of-origin is an important factor which can influence consumer decision making as well as product evaluation(Schooler, 1965; Erickson, Johansson, & Chao, 1984; Lawrence, Marr, & Prendergast, 1992). For instance, Hong & Toner(1989) asked subjects to evaluate American and Japanese consumer products and found that American consumers perceive Japanese products to be superior in quality. The same conclusion has been supported by studies related to country-

of-origin conducted in other areas of the world, such as Southeast Asian countries(Strutton & Pelton, 1993) and Hong Kong(Cheung and Denton, 1995). Such results show that people have specific stereotypes toward the products of a foreign country and often use these stereotypes as criterion of judgment.

Over the past few decades, there has been extensive research on country-of-origin effects on consumers' attitudes, preferences, and behaviors (Peris, Newman, Bigne, & Chansarkar, 1993; Nooh & Powers, 1999). As most national markets have been opened to foreign trade, availability of foreign goods has increased. As a result, much research is now interested in the effect of country-of-origin on consumers' evaluations of imported goods and many researchers have insisted that studies concerning the country-of-origin need to be done(Bilkey & Nes, 1982; Liefeld, 1993).

The influence of country-of-origin on consumer product evaluation

Most early studies related to country-of-origin focused on examining consumers' attitudes toward imports. Almost all studies supported the fact that country stereotyping affects evaluations for products in general. For instance, the findings from Reiersen(1966) showed that American consumers have definite stereotyping of foreign products. Similar results were found in a study conducted by Nagashima(1970). His study, using

70 American and 100 Japanese business people as a sample, indicated that country-of-origin stereotyping in an industrial buying situation showed clear and significant perceptual differences between the two groups. Similarly, the findings from Reiersen(1966), in this study respondents showed a strong bias(preference based on nationalism) for products from their own country.

Recently much research has primarily focused on examining consumers' attitudes in developing countries toward domestic imported products (Lawrence, Marr, & Prendergast, 1992; Nooh & Powers, 1999). Lawrence, Marr, and Prendergast (1992) investigated the effect of country-of-origin stereotyping in the New Zealand motor vehicle industry. They assessed the attitude of new car purchasers toward automobiles "made in" four different countries: Japan, Germany, Italy, and France. The subjects were asked to select from which country they would choose a hypothetical motor vehicle equal on quality, styling and price. The results verified the existence of country-of-origin stereotyping and confirmed the research undertaken. The results reported that under these conditions, more than half would choose a German automobile and about 19 per cent would prefer a Japanese automobile. Surprisingly, nobody would choose a French automobile. In addition, in evaluation of the automobile attributes, "made in Germany" and "made in Japan" represented to consumers a more expensive, reliable, comfortable product

than those manufactured by the Italians or the French. The findings from Nooh and Power (1999) were similar to the results of Lawrence, Marr, and Prendergast(1992). In their studies, using Malaysian consumers as respondents, it was reported that a significant positive correlation exists between favorable country-of-origin perception and product preference. These results have all suggested that the country-of-origin cue plays an important role when consumers evaluate imported goods.

#### The formation of country-of-origin

Generally, most studies related to country of origin effects have explicitly or implicitly considered country-of-origin as a kind of stereotype. The formation of stereotypes has been under controversy in the literature. However, most are of the opinion that stereotypes are often not factually based and tend to be relied on more when there is incomplete information concerning the subject(Lawrence, Marr, & Prendergast, 1992). Erickson, Johansson, and Chao(1984) considered country-of-origin as an image variable and analyzed its effect on formation of beliefs and attitudes, and on how this process influences product evaluation. They investigated the impact of a particular type of image variable, country of origin, on attitude and beliefs obtained through a survey of evaluations of automobile alternatives. The results indicated that country-of-origin affects belief formation rather than

attitude. Erickson, Johansson, and Chao(1984) proposed that there are three different types of beliefs, as follows: descriptive, inferential, and informational. They suggested that although these beliefs are formed in different ways, all contribute to consumers' beliefs about a product's attributes. According to Fishbein and Ajzen(1975), descriptive beliefs derive from direct experience with the product. Namely, this belief connects physical characteristics with product perceptions. Likewise, information beliefs are based on outside sources of information such as commercials, family, friends, and so on. Erickson, Johansson and Chao attribute the remaining type of belief(inferential belief) as contributing to the formation of stereotypes. This belief is formed by making inferences(correctly or incorrectly) based on past experience, as this experience relates to the current stimulus(Fishbein and Ajzen, 1975). For instance, people whose experience suggests that Japanese electronic products are durable might infer this since Sony is a Japanese electronic product and, from past experience, Sony produces durable electronic products.

Although early studies of consumers' preference toward domestic and foreign-made products focused on single-cue models(Bilkey & Nes, 1982), this situation changed after an article by Erickson, Johansson, and Chao(1984). After this article was published, the country-of-origin cue extended to include multi-cue designs and the use of tangible products rather

than product descriptions(Nooch, Powers, 1999). Various studies have shown that country of origin is not merely a cognitive cue, namely, an informational stimulus about or relating to a product that is used by consumers to infer beliefs regarding product attributes such as quality(Verlegh, Steenkamp, 1999). For instance, several studies(Hogn & Wyer, 1989; Li & Wyer, 1994) have reported that the impact of country of origin cannot be explained completely by a quality signaling process. In addition to its role as a quality cue, country of origin may have symbolic and emotional meanings to consumers. These results have shown that country of origin is not merely a cognitive cue for product quality, but is also related to emotions, identity, pride and autobiographical memories(Verlegh, Steenkamp, 1999).

As stated previously, the effect of country-of-origin in consumer product evaluation is a complicated phenomenon. In their quantitative meta-analysis of past studies related to country-of-origin, Verlegh and Steenkamp(1999) insisted that the effect of country-of-origin is derived from three mechanisms: Cognitive, affective and normative processing. In the cognitive aspects of the country-of-origin effect, country-of-origin may be considered as an extrinsic cue for product quality. For example, the findings from several studies(Li & Wyer, 1994; Steenkamp, 1989) showed that country-of-origin is used as a signal for overall product quality and quality attributes, such as reliability and durability. In addition, in

the affective aspect, consumers were found to connect country-of-origin with status, identity, national pride and past experiences(Askegaard & Ger 1998; Batra et al., 1998). For example, Obermiller and Spangenberg(1989) reported that although an Arab-American recognizes the superior quality of Israeli optical instruments, they show a negative attitude toward these products due to their strong negative attitude toward Israel. Finally, in normative aspects, consumers tend to hold social and personal norms related to country-of-origin. A salient norm relating to country-of-origin is the norm to buy domestic products. Generally, buying domestic products is considered the “right thing to do” since it is a way to support the domestic economy. Such consumer ethnocentrism plays an important role in the decision to buy domestic products(Shimp & Sharma, 1987). In reality, these three processes, cognitive, affective, and normative processes, can not be distinguished and are not independent determinants of consumer preferences and behaviors. The boundaries between these aspects are unclear and they are constantly interacting. Therefore, country of origin effects are often influenced by an interplay of cognitive, affective and normative aspects(Verlegh and Steenkamp, 1999).

#### The Implicit Association Test

Although explicit attitudes have long been assumed to be important factors influencing

behavior, recently many psychologists have been interested in how the automatic, effortless, and implicit aspects of human information processing influence attitude and behavior. Many studies have reported that implicit attitudes outside of conscious awareness can be activated and influence behavior directly(Bargh, Chen, and Burrows, 1996; Fazio and Dunton, 1997; Greenwald & Banaji, 1995). During the past few years, many methods of studying automatic and implicit processes have been developed, such as affective priming, masked affective priming, Go/No Go Tasks, and the Implicit Association Test(IAT). A technique of indirect attitude measurement, the Implicit Association Test(IAT), was introduced by Greenwald, McGhee, and Schwartz(1998). With the exception of the IAT, the reliability of almost all measurement methods is either very low or unknown. Therefore, the IAT has recently become very popular as a method for measuring implicit attitudes due to relatively high internal consistency values(usually  $\alpha = .80$ ), reasonable test-retest values(usually  $r = .60$ ) as well as its showing the greatest evidence of construct and predictive validity(Perugini, 2005).

At a high-level, the IAT measures the differential association of two target concepts with positive versus negative attributes. The main assumption of this test is that if a target concept and an attribute dimension are highly associated, the task will be easier and performed more rapidly, while if a target concept and an

attribute dimension are incongruent, the task will be more difficult and performed more slowly.

The modified IAT: the Extrinsic Affective Simon Task

Recently, the modified IAT(EAST - The Extrinsic Affective Simon Task) suggested by De Houwer(2001, 2003) has extended the range of applications to various situations in IAT. Although the IAT has been proved as an efficient and reliable method for measuring indirect attitudes, many critics have pointed out limitations with it(Mierke and Klauer, 2001). Such limitations are related to the fact that IAT effects are based on a comparison of performance in two separate tasks. As mentioned by Greenwald and Farnham (2000), in the IAT, we must use complementary pairs of concepts and attributes(e.g. good-bad and black-white). Therefore, there is a significant limitation in that the IAT can provide only a relative measure of associations and attitudes. For instance, when we assume that through the IAT we assess the attitudes of participants toward flower and insect, we can expect the typical result that reaction times of participants are faster when flower and positive are assigned to one key and insect and negative to the other key. As De Houwer(2003) pointed out, such an effect could be due not to the fact that both concepts are positive but “flower” more so than “insect”, or that both concepts are negative but

“insect” more so than “flower”, but the fact that “flower” is positive and “insect” negative. Especially in consumer attitudes and beliefs studies, it is likely to be impossible and worthless to just select complementary pairs of concepts(e.g. brand names, company names, and products) as target concepts measured because most consumers usually prefer specific products and brands rather than others. That is to say, they have positive attitudes and beliefs toward specific brands and products not because they hate or have negative attitudes and beliefs toward others but because relatively they have more positive emotions and attitudes than others. Therefore, the IAT has a crucial limitation in applied studies, such as consumer attitude. However, in the EAST we can assess the attitudes and beliefs toward a target concept by selecting stimuli that represent this concept and comparing the time needed to make extrinsically positive response with the time needed to give an extrinsically negative response to those stimuli(De Houwer, 2003). Therefore, we can choose various non-complimentary target concepts without any restriction. In addition, we are able to assess the attitude toward several attitude objects at once.

In the EAST, participants see two intermixed sets of words on the computer screen. One set of words always appears in white. Another set of words appears half the time in blue, half in green. Participants are told if the word is white(i.e. not colored), then the meaning of the word is important. All participants are instructed

to press the “good” key(e.g. P) for white words with a positive meaning(e.g. Funny) and to press the “bad” key(e.g. Q) for white words with a negative meaning(e.g. Evil). However, if the word is colored, they are instructed to press the good or bad key on the basis of the color of the word. For instance, participants are asked to press the good key for blue words and to press the bad key for green words. In addition, each blue or green word consists of the target concepts’ names measured by the experimenter. During these colored trials, each target concept’s name is presented the same number of times in each color(blue or green). In this process, although pressing a good key or a bad key is not a positive or negative response as such, those responses are associated with positive or negative valence because one response is also assigned to positive words and the other response is also assigned to negative words. Therefore, we can predict that reaction times would be faster in trials in which the participants need to select the extrinsically positive response in response to a colored target concept’s name which is believed to have a positive meaning, and trials in which the extrinsically negative response has to be given in response to a colored target concept’s name which is believed to have a negative meaning.

#### Research objectives and research design

In the context of stereotypes and prejudice,

people may sometimes consciously describe themselves as unprejudiced or even be unaware of their implicit prejudice. In these cases, it is difficult to measure genuine attitude just by using direct measurements, such as a self-report questionnaire. Therefore, indirect measurements, such as the IAT and the modified IAT, have been shown to be a very useful method in the context of stereotypes and prejudice(Dasgupta & Greenwald, 2000; Maison & Bruin, 1999; De Houwer, 2003). In general, there is accumulated empirical evidence that the IAT can predict specific behaviors(Perugini, 2005).

Although many studies have been done related to the impact of country-of-origin on attitude of consumers toward a special product, no studies have been conducted on how country-of-origin can affect implicit attitude and belief toward a product. As the studies conducted previously have shown, country-of-origin can affect cognitive and affective aspects of consumer decision making. In addition, many studies have supported the idea that implicit attitude measurements, such as the IAT and the modified IAT, are useful methods to measure implicit attitude in the context of stereotype, such as country-of-origin. Therefore, it could be possible to investigate the impact of country-of-origin on implicit attitude and belief of consumers toward a specific product by using the IAT or the modified IAT.

The Research design involved two stages: Implicit attitude measures by the EAST and



explicit attitude measures by a survey questionnaire. The purpose of this research was to deal with the research questions as follows: First, to examine whether the impact of country-of-origin can influence implicit beliefs and attitudes of consumers toward a product. Second, whether an implicit attitude measurement, especially the EAST can be applied to assess the implicit attitudes and beliefs of consumers. For these purposes, the study examined how country-of-origin derived from different countries(Japan, China, South Korea) influences implicit attitudes and beliefs toward a specific company name with respective countries-of-origin. Respective Implicit beliefs and attitudes were measured by the EAST. In addition, since many studies have reported that implicit attitude and belief can be classified and measured according to the meaning of the words used(Banaji, 2001), we postulated that if we use the word lists connoting different dimensional meanings(See Appendix 1), implicit beliefs and attitude could be classified and measured according to affect, quality, and cost respectively.

Finally, in order to examine the application of the EAST as a real consumer attitude measurement toward the existing brand names, we assessed implicit attitudes and beliefs of two existing companies(SONY, SKODA), which are evaluated as having opposite images. Since SONY is generally well-known as the company having “High-quality” images in UK, it was expected that participants would show positive

implicit attitude and beliefs. In contrast, we picked up SKODA because it is notorious for having low-cost and low-quality images in UK (“SKODA's image”, 2005). Such implicit attitudes and beliefs were compared with explicit attitudes and beliefs measured by questionnaires.

The following hypotheses were tested for examining the impact of Country-of-Origin on implicit attitudes and beliefs and the application of the EAST.

H1. Participants would show positive implicit attitudes and beliefs toward a specific company having Japan as its country-of-origin.

H2. On the contrary, China as the country-of-origin would cause negative implicit beliefs and attitudes.

H3. SONY, which generally is believed to have positive images, such as a “High-tech Japanese electronics company”, would cause positive implicit beliefs and attitudes.

H4. SKODA, which is traditionally recognized as a poor and cheap car brand in UK due to its poor-images and Czech imports, would show negative implicit beliefs and attitudes.

## METHODS

### Participants and Materials

Thirty-six psychology students(21 female and 15 male) at the University of Wales Bangor took part in this experiment. They were given



course credits and print credits in exchange for their participation.

In the country-company pairing test, three imaginary company names(DOOSAN, KUKMIN, and HANSOL) were paired with three country names(JAPAN, CHINA, KOREA). All company names and country names were presented as black letters on a white background.

In the EAST test, three imaginary company names, two real company names(SONY and SKODA), and the meaningless letter-string "XXXXX" were presented on the colored trials. For each of three dimensional attributes(affect, quality, cost) 10 related white words(adjectives) were presented on the white trials(see Appendix A). The list of good and bad words was created based on the list of stimuli used in previous experiments(Greenwald, McGhee, & Schwartz, 1998; Houwer, 2003). Firstly, a list of high and low-quality words was selected from the Oxford English Dictionary 6<sup>th</sup> edition. After selecting 20 words having high- or low-quality meaning from the dictionary, we asked 20 subjects(all native English speakers) to rate the list of words on the basis of the meaning(7-point semantic differentials). The 5 highest and lowest scored words were finally selected as the list of high and low-quality words. The list of high and low-cost words was also selected by the same procedure. The colored words were either presented in a green or blue color. In order to make the green and blue colors look similar, both the blue color and the green color were

created by setting the red, blue, and green values through the Photoshop program but at different ratio respectively. As a result, the blue and green were made to be easily confusable - thus making the task more demanding. All words were presented on a black background.

#### Apparatus

The experiment was administered on a compatible desktop computer that was situated in a darkened research cubicle. Participants were seated in front the computer at a distance of approximately 40 cm from the 17 inch screen and gave left responses with their left forefinger and right responses with their right forefinger. The EAST was completed and the reaction times of participants were recorded in E-prime program (version 1.1), which was specially developed for psychological experimentation related to measuring reaction time.

#### Procedure

Participants completed the experiment individually. After filling in an informed consent form, they were instructed to read the instruction sheet, describing the experiment procedure. Before starting the experiment, participants were instructed to read the information sheet, including different imaginary company names(DOOSAN, KUKMIN, and HANSOL) with three countries of origin(Japan,

China, Korea). In the information sheet, three imaginary companies were introduced as famous electronic companies in the South East Asian Market. Also, participants were informed that these companies have been fighting a battle to become a dominant company in their market, and have different countries of origin. Since no other information was given related to each company except its country-of-origin, it was postulated that participants would judge three dimensional attributes(affect, quality, and cost) in relation to each company on the basis of stereotypes or images of each country. Each imaginary company name was paired with a country of origin with regard to all possible counterbalancing.

The experimental procedure consisted of six sections, three sections involving the company-country pairing test and another three sections involving the EAST for measuring the three different attributes(affect, quality, and cost). Every time, the section for the company-country pairing test preceded the section for the EAST.

#### **The company-country pairing test**

The purpose of the company-country pairing test was to make participants recall and memorize the three companies' countries of origin. In this test, participants saw pairs of words(i.e. company-country) on the computer screen. Participants were asked to press the correct pairing key(i.e., key / ) or the incorrect pairing key(i.e., key Z ) depending on the

pairing of country-company. Participants were instructed to press the correct pairing key( / ) for the correct pairing of country-company and to the press the incorrect pairing key(Z) for the incorrect pairing of country-company . When participants responded correctly 10 times in a row, this test finished. A total of nine pairs of words(i.e. company-country) were presented in a random order.

#### **The EAST**

Participants completed three different EAST sections to measure their implicit attitudes and beliefs in relation to three dimensional attributes (affect, quality, and cost) toward companies. The presenting order of these three was counterbalanced. Before starting the EAST, participants were given written instructions for each EAST on the computer screen.

In each EAST, two kinds of words(white and colored) were presented on the computer screen. When participants saw white words, they were instructed to press either the “Q” or “P” key on the numeric keypad, on the basis of stimulus valence, while colored words were judged on the basis of color(Blue or Green). They were told that if the word was white(i.e., not colored) then the meaning of the words was important. For instance, in the EAST for quality, all participants were instructed to press the high key(P) for white words with a high-quality meaning(e.g., FINE and SURE) and to press the low key(Q) for white words with a low-quality

meaning(e.g., JUNK and TRASH).

If a colored word was presented on the screen, however, participants were instructed to press the high or low key on the basis of the color of the word. Half of the participants were instructed to press the high key(P) in response to words in a blue color and the low key(Q) in response to words in a green color. The other participants received the reversed color response assignments. Three imaginary company names (DOOSAN, HANSOL, and KUKMIN), two real company names(SONY and SKODA), and the meaningless letter-string XXXXX were presented on the colored trials.

In each EAST, the experiment started with the first practice block during which each of the 10 white words was presented twice in a random order. During the second practice block, each of the 6 colored words was presented, once in blue and once in green. In the practice blocks, if participants made an incorrect answer, the word causing the incorrect answer showed once more afterward in a random order. As soon as the two practice blocks had been completed, the instruction announcing that the real test will start was given on the screen, and when participants pressed any key the real test started. Next there were four test blocks of 34 trials during which each of the 6 colored words was presented twice in each color and each of the 10 white words was presented once.

After the computer tasks, participants completed paper-and-pencil questionnaire measures of their attitudes and beliefs toward general electronic companies of the three countries(Japan, China, and Korea) and the two real companies(SONY and SKODA). The questionnaire consisted of a set of three semantic differential items(quality, cost, and affect) for each of the five target concepts. The 7-point scales were anchored at either end by polar-opposite dimension pairs: high-quality / low-quality, high-cost/ low-cost, and positive(like)/ negative(dislike). The questionnaire had two different forms; self-report and third-person technique. In a self-report question form, we asked participants what they think about the target on three dimensions. In a question using third-person technique, participants were asked what other people think about targets on three dimensions(quality, cost, and affect). Generally, the third-person technique tends to be used to elicit deep-seated feelings and attitudes that might be perceived as reflecting negatively upon the individual(Zickmund, 2003). Therefore, we expected the results from the questions which have the third-person technique form to be more useful in measuring attitudes and beliefs in relation to stereotypes. In addition, the result from the third-person technique might be more similar to the results from the EAST rather than those from self-report questions.

### **Explicit attitude measures**

## RESULTS

### Data transformation

We analyzed the results of the test trials on which colored words were presented, only taking into account the time of the first response on those trials and discarding reaction times on trials with an incorrect response. As suggested by Greenwald et al.(1998), we then log-transformed response latencies in order to use a statistic that had satisfactory stability of variance for analyses, namely, to reduce skewness before computing means.

### Implicit attitude toward stimulus - EAST effect

We analyzed the mean log-transformed reaction time for trials on three different EAST respectively to measure implicit attitudes and beliefs in relation to three dimensional attributes (affect, quality, and cost). In this process, we calculated the mean log-transformed reaction time separately for trials on which six stimulus words(three imaginary company names, two real company names, and the meaningless letter-string XXXXX) were presented and an extrinsically positive response was required(i.e., the response that was assigned to white words related to a high-quality meaning in EAST for quality, a high-cost meaning in EAST for cost, and a positive meaning in EAST for affect),

trials with six stimulus words and an extrinsically negative response(i.e., the response that was assigned to white words related to a low-quality meaning in EAST for quality, a low-cost meaning in EAST for cost, and a negative meaning in EAST for affect). The resulting mean log-transformed reaction times were analyzed using a 6(target stimulus) x 2(extrinsic response valence) ANOVA with repeated measures respectively on three different dimensions.

### The EAST for Quality

Stimulus x Response Valence ANOVA with Greenhouse-Geisser correction showed that the main effect of target stimulus was not significant in the analysis of the log-transformed reaction times,  $F(3.958, 138.528) = 1.072, p = .372$ . In addition, the main effect of extrinsic response valence did not reveal significant effect,  $F(1, 35) = .066, p = .799$ . However, importantly, the interaction between target stimulus and extrinsic response valence was significant for the log-transformed reaction time data in EAST for quality,  $F(4.029, 141.032) = 3.028, p = .019$ .

According to De Houwer(2003), an EAST score was calculated for each target stimulus by deducting the mean log-transformed reaction time on trials with an extrinsically positive response from the mean log-transformed reaction time on trials with an extrinsically negative response. A positive EAST score thus means a positive attitude toward a target stimulus. However, as suggested by De Houwer(2003), for

reasons of clarity, we used the mean EAST scores as calculated on the basis of untransformed reaction times. The resulting mean untransformed reaction times can be found in Table 2. The EAST scores on the target stimuli are given in Figure 1. In order to examine statistical significance of the EAST score on the target stimulus, we analyzed the difference between the mean untransformed reaction times on trials with an extrinsically positive response and the mean untransformed reaction times on trials with an extrinsically negative response with a paired samples t-test. A paired samples t-test performed on the reaction time EAST scores for quality dimension revealed a marginally significant positive score for an imaginary Japanese company name,  $t(35) = 1.793, p = .082, M = 32.88$  ms, a significant positive score for SONY,  $t(35) = 2.619, p = .013, M = 39.21$  ms. The EAST score for SKODA showed a significant negative score,  $t(35) = -1.977, p = .056, M = -38.45$  ms. The reaction time EAST scores for an imaginary Korean company name and an imaginary Chinese company name revealed negative scores but not significant negative scores,  $t(35) = -.103, p = .919, M = -1.78$  ms, and  $t(35) = -1.204, p = .237, M = -20.19$  ms. Finally, the EAST score for the neutral letter-string did not show a significant score,  $t(35) = -.839, p = .407, M = -14.42$  ms. Clearly, the findings indicated that participants consider the Japanese company as having a more high-quality image than the other two countries'. It appears that the country-of-origin effect relevant to the three countries influenced participants' belief related to quality. These results are consistent with those showing the existence of positive country-of-

Table 1. Paired Samples t-test on Target stimulus Trials as a Function of Stimulus category and Extrinsic Response Valence in Quality dimension

Stimulus	Extrinsic Response Valence in Quality dimension (Positive response vs Negative response)	
	<i>t</i>	<i>p</i>
Japanese company	1.793	.082
Korean company	-.103	.919
Chinese company	-1.204	.237
SONY	2.619	.013*
SKODA	-1.977	.056
XXXXXX	-.839	.407

Note: Tables show results of two-tailed significance tests.

\*  $p < .05$ .

Table 2. Mean Untransformed Reaction times in ms(SD in Parentheses) on Target stimulus Trials as a Function of Stimulus category and Extrinsic Response Valence in Quality dimension

Stimulus	Extrinsic Response Valence	
	High-Quality	Low-Quality
Japanese company		
Reaction Time	636.58 (103.56)	669.45 (131.36)
Korean company		
Reaction Time	658.66 (135.59)	656.88 (120.91)
Chinese company		
Reaction Time	682.64 (151.79)	662.45 (136.05)
SONY		
Reaction Time	630.73 (137.62)	669.94 (128.44)
SKODA		
Reaction Time	680.61 (143.14)	642.16 (116.17)
XXXXX		
Reaction Time	654.59 (163.40)	640.17 (112.95)

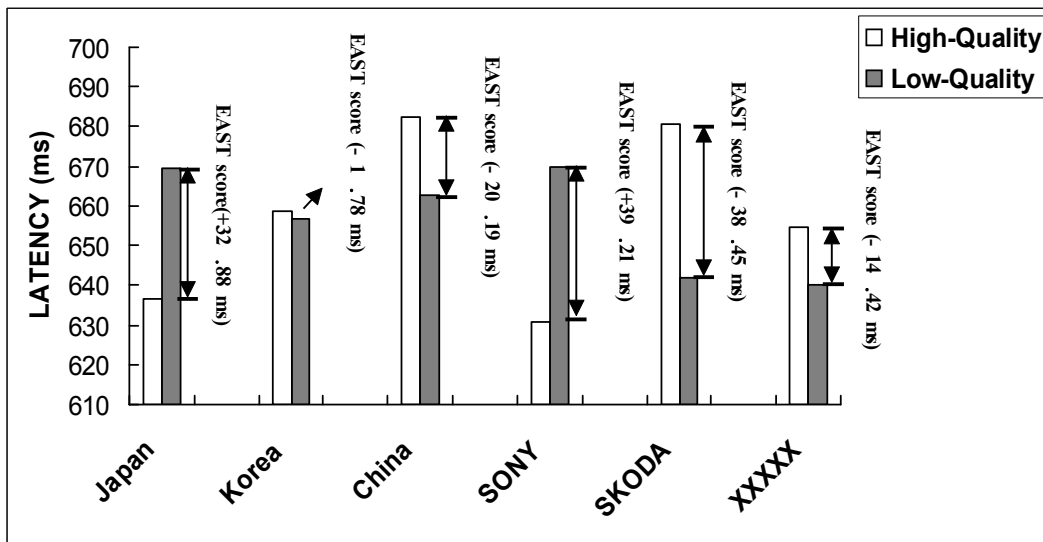


Figure 1. The mean of EAST scores as calculated on the basis of untransformed reaction times for target stimuli on Quality dimension.

Note: A positive EAST score indicates participants consider a stimulus has a high-quality image. On the contrary, a negative EAST score means they consider a stimulus has a low-quality image.

origin stereotyping about the Japanese product's quality in previous studies(Hong & Toner, 1989; Lawrence, Marr, & Prendergast, 1992). Additionally, participants thought SONY has a high-quality image, whereas it was considered that SKODA has a low-quality image.

**The EAST for Cost**

The mean of reaction time on target stimulus trials and the EAST score for cost were calculated and analyzed in the same way as in the EAST for quality. In Stimulus x Response Valence ANOVAs with Greenhouse-Geisser correlations, no effects approached significance,  $F(4.448, 155.693) = .635, p = .655$  for the main effect of stimulus,  $F(1, 35) = .004, p = .948$  for the main effect of extrinsic response valence, and  $F(4.568, 159.868) = 1.253, p = .289$  for the interaction between stimulus and response valence.

All relevant means untransformed reaction

times are shown in Table 4. The EAST scores on target stimuli are displayed in Figure 2. In the reaction time EAST score analysis, a paired samples t-test did not reveal any significant EAST score. However, it showed a positive score close to significance for the imaginary Japanese company name,  $t(35) = 1.508, p = .141, M = 28.11$  ms. Although the reaction time EAST score for SONY was positive, the EAST score was not significant,  $t(35) = .568, p = .574, M = 10.54$  ms. The reaction time EAST score for an imaginary Korean company name,  $t(35) = -.525, p = .603, M = -9.18$  ms, for an imaginary Chinese company name,  $t(35) = -1.198, p = .239, M = -28.26$  ms, and for SKODA,  $t(35) = -.740, p = .464, M = -15.95$  ms, all showed negative EAST scores, but were not significant in t-test analysis. Finally, the reaction time EAST for the neutral letter-string "XXXXXX" did not differ significantly,  $t(35) = -.388, p = .700, M = -6$  ms. These findings

Table 3. Paired Samples t-test on Target stimulus Trials as a Function of Stimulus category and Extrinsic Response Valence in Cost dimension

Stimulus	Extrinsic Response Valence in Cost dimension (Positive response vs Negative response)	
	<i>t</i>	<i>p</i>
Japanese company	1.508	.141
Korean company	-.525	.603
Chinese company	-1.198	.239
SONY	.568	.574
SKODA	-.740	.464
XXXXXX	-.388	.700

Note: Tables show results of two-tailed significance tests.

\*  $p < .05$ .



Table 4. Mean Untransformed Reaction times in ms(SD in Parentheses) on Target stimulus Trials as a Function of Stimulus category and Extrinsic Response Valence in Cost dimension.

Stimulus	Extrinsic Response Valence	
	High-Cost	Low-Cost
Japanese company		
Reaction Time	668.47 (129.89)	696.59 (143.97)
Korean company		
Reaction Time	672.11 (124.74)	662.93 (134.57)
Chinese company		
Reaction Time	685 (153.87)	656.74 (119.50)
SONY		
Reaction Time	666.07 (142.56)	676.61 (140.49)
SKODA		
Reaction Time	687.35 (150.49)	671.40 (153.16)
XXXXX		
Reaction Time	664.80 (119.88)	658.80 (122.02)

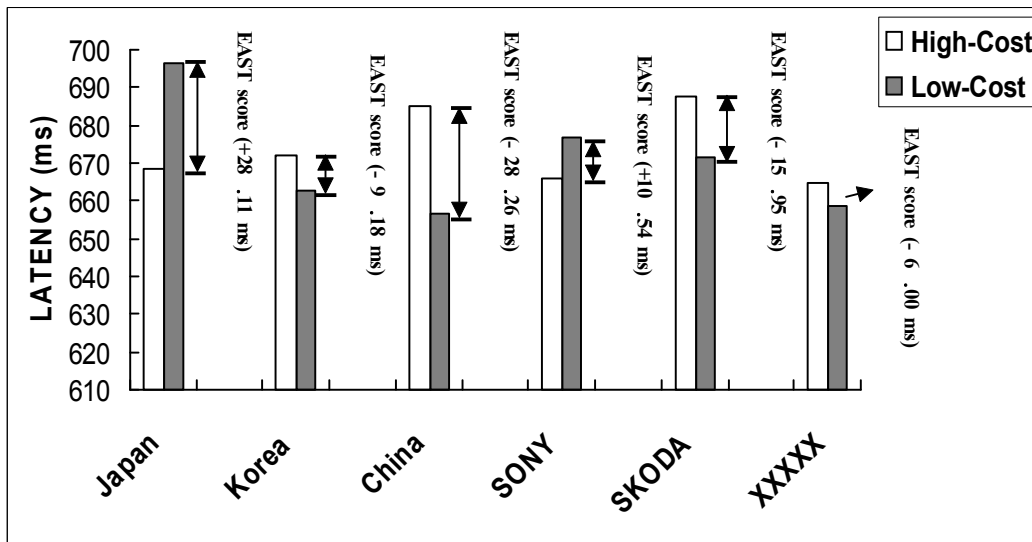


Figure 2. The mean of EAST scores as calculated on the basis of untransformed reaction times for target stimuli on Cost dimension.

Note: A positive EAST score indicates participants consider a stimulus has a high-cost image. On the contrary, a negative EAST score means they consider a stimulus has a low-cost image.

showed that although the EAST score did not show statistical significance in paired t-tests which compared the condition assigned to an extrinsically positive response with the condition assigned to an extrinsically negative response for each target stimulus separately, participants tended to consider the Japanese company as having a more high-cost image rather than the other two countries'. It seems that the impact of country-of-origin also affects the belief relevant to cost dimension. In addition, participants tended to think that SONY has a slightly high-cost image and SKODA has a slightly low-cost image.

**In EAST for Affect**

The analysis of the log-transformed reaction times with Stimulus x Response Valence ANOVAs with Greenhouse-Geisser correlations revealed that the interaction between stimulus and extrinsic response valence was not significant

but showed a meaningful value close to significance,  $F(4.259, 149.066) = 1.775, p = .133$ . The main effects of both stimulus and extrinsic response valence were not significant,  $F(4.631, 162.101) = 1.181, p = .321$  for stimulus,  $F(1, 35) = .019, p = .892$ .

In t-test analysis for the EAST score, no significant EAST scores were shown. The reaction time EAST scores for an imaginary Japanese company name and SONY were positive respectively,  $t(35) = .130, p = .898, M = 2.58$  ms,  $t(35) = .414, p = .681, M = 7.84$  ms. An imaginary Chinese company name showed a positive score,  $t(35) = 1.496, p = .144, M = 25.93$  ms. Both an imaginary Korean company name(  $t(35) = -.045, p = .964, M = -1.04$  ms ) and SKODA(  $t(35) = -1.211, p = .234, M = -23.50$  ms) showed negative EAST scores. The reaction time EAST for the neutral letter-string did not differ significantly,  $t(35) = -1.320, p = .196$ . The

Table 5. Paired Samples t-test on Target stimulus Trials as a Function of Stimulus category and Extrinsic Response Valence in Affect dimension

Stimulus	Extrinsic Response Valence in Affect dimension (Positive response vs Negative response)	
	<i>t</i>	<i>p</i>
Japanese company	.130	.898
Korean company	-.045	.964
Chinese company	1.496	.144
SONY	.414	.681
SKODA	-1.211	.234
XXXXXX	-1.320	.196

Note: Tables show results of two-tailed significance tests.

\*  $p < .05$ .

Table 6. Mean Untransformed Reaction times in ms(SD in Parentheses) on Target stimulus Trials as a Function of Stimulus category and Extrinsic Response Valence in Affect dimension.

Stimulus	Extrinsic Response Valence	
	Positive	Negative
Japanese company		
Reaction Time	677.40 (153.66)	679.98 (120.45)
Korean company		
Reaction Time	655.04 (123.45)	654 (142.41)
Chinese company		
Reaction Time	635.33 (118.47)	661.26 (125)
SONY		
Reaction Time	649.86 (127.58)	657.70 (120.52)
SKODA		
Reaction Time	677.63 (162.60)	654.13 (133.70)
XXXXX		
Reaction Time	664.40 (125.31)	641.52 (125.82)

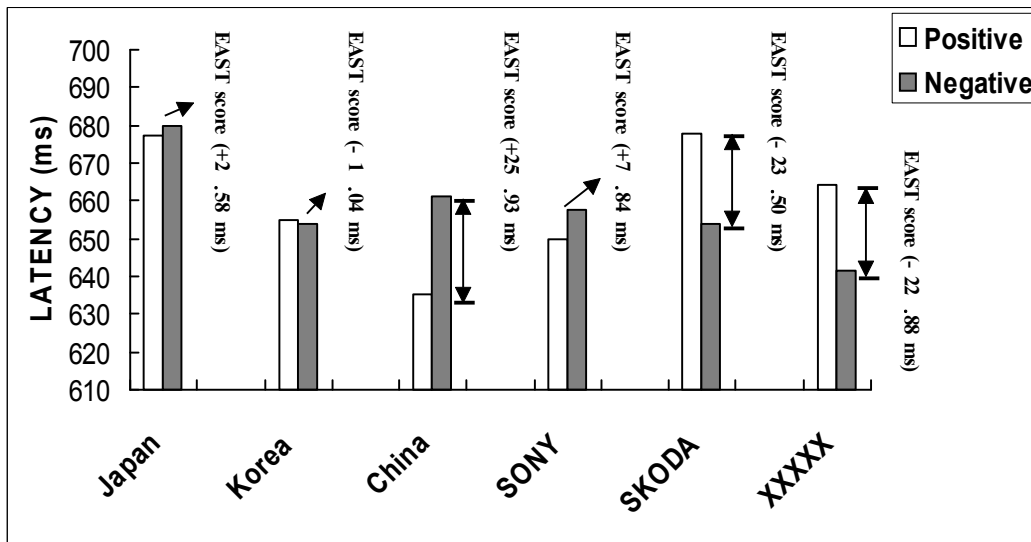


Figure 3. The mean of EAST scores as calculated on the basis of untransformed reaction times for target stimuli on Affect dimension.

Note: A positive EAST score indicates participants consider a stimulus has a negative image. On the contrary, a negative EAST score means they consider a stimulus has a positive image.

relevant mean untransformed reaction times and the EAST scores on target stimuli can be found in Table 6 and Figure 3, respectively. These results indicated that participants were prone to have a positive image toward Chinese products, while they showed a negative affect toward SKODA.

Explicit attitudes toward target stimuli

In the results from questions using the third-person technique, participants rated that a Japanese electronic company has a more high-quality and high-cost image than a South

Korean electronic company and a Chinese electronic company. In addition, participants were prone to consider a Japanese electronic company more positively than others. The image which SONY has was rated as high-quality, high-cost, and positive. On the contrary, the SKODA image was considered as low-quality, low-cost, and negative(Table 7). These findings from the third-person technique question follow the same trend as those from the EAST score although there are slight differences.

Although the results from questions using a general self-report form were quite similar to those from the third-person technique, the

Table 7. Explicit attitudes toward target stimuli, Japanese electronic company, South Korean electronic company, Chinese electronic company, SONY, and SKODA.

The third-person	Quality	Cost	Affect
Japanese company	<b>2.42</b>	<b>1.17</b>	<b>2.28</b>
Korean company	<b>0.31</b>	<b>-0.53</b>	<b>0.17</b>
Chinese company	<b>0.78</b>	<b>-0.11</b>	<b>0.58</b>
SONY	<b>2.56</b>	<b>1.86</b>	<b>2.47</b>
SKODA	<b>-0.31</b>	<b>-0.67</b>	<b>-0.42</b>
The self-report	Quality	Cost	Affect
Japanese company	<b>2.25</b>	<b>1.08</b>	<b>1.97</b>
Korean company	<b>0.72</b>	<b>-0.31</b>	<b>0.56</b>
Chinese company	<b>0.94</b>	<b>-0.17</b>	<b>0.83</b>
SONY	<b>2.17</b>	<b>1.78</b>	<b>1.69</b>
SKODA	<b>0.61</b>	<b>-0.03</b>	<b>0.42</b>

Note: Judgments were made on a 7-point scale(-3 to +3). A higher value on each three dimensions(Quality, Cost, and Affect) means a more positive judgment(e.g. more high-quality, high-cost, and positive). The questions analyzed were all third-person technique questions(above Table) and all the self-report questions(Below Table).

responses tended to lean more to the positive direction (Table 7). It seems that when using the self-report question, people tend to avoid negative evaluation toward the target stimulus.

Correlation between explicit and implicit attitudes

In order to analyze the correlation between

explicit and implicit attitudes toward target stimuli, we used the mean of the rating scores between the two questions, the self-report question and the third-person technique question, as the explicit attitude score. The log-transformed EAST scores were used as implicit attitudes in order to be compared with these explicit measures. Correlations among the explicit and implicit attitude measures are shown

Table 8. Correlations among Implicit and explicit Attitude Measures

Measure	Explicit Belief related to Quality					EAST effect for Quality dimension				
	1	2	3	4	5	Japan	Korea	China	Sony	skoda
1. Explicit Belief (Japan)	1	.11	.12	.51	.02	<b>-.21</b>	.07	-.06	-.15	.04
2. Explicit Belief (Korea)	.11	1	.08	.12	-.14	.21	<b>.17</b>	-.01	.01	.05
3. Explicit Belief (China)	.12	.08	1	.17	.06	-.28	.08	<b>.19</b>	.03	-.30
4. Explicit Belief (SONY)	.51*	.12	.17	1	.18	-.12	.02	.14	<b>.25</b>	.15
5. Explicit Belief (SKODA)	.02	-.14	.06	.19	1	.01	-.05	.11	.23	<b>-.10</b>
Measure	Explicit Belief related to Cost					EAST effect for Cost dimension				
	1	2	3	4	5	Japan	Korea	China	Sony	skoda
1. Explicit Belief (Japan)	1	.22	.26	.30	.14	<b>-.30</b>	.10	-.11	-.21	.29
2. Explicit Belief (Korea)	.22	1	.37*	.11	.21	.11	<b>.14</b>	-.01	-.14	.04
3. Explicit Belief (China)	.26	.37*	1	.05	.36*	-.16	.10	<b>-.14</b>	-.30	.06
4. Explicit Belief (SONY)	.30	.11	.05	1	.23	.41*	.31	.28	<b>.35*</b>	.15
5. Explicit Belief (SKODA)	.14	.21	.36*	.23	1	.43*	.12	.01	.07	<b>.13</b>
Measure	Explicit Belief related to Affect					EAST effect for Affect dimension				
	1	2	3	4	5	Japan	Korea	China	Sony	skoda
1. Explicit Belief (Japan)	1	.10	.08	.37	.18	<b>-.04</b>	.09	.01	.08	-.17
2. Explicit Belief (Korea)	.10	1	-.14	.11	-.08	.22	<b>.51*</b>	-.02	-.05	-.07
3. Explicit Belief (China)	.08	-.14	1	.33*	.60*	-.22	-.08	<b>-.18</b>	-.36*	-.18
4. Explicit Belief (SONY)	.37*	.11	.33*	1	.16	-.05	-.10	.04	<b>-.09</b>	-.05
5. Explicit Belief (SKODA)	.18	-.08	.60*	.16	1	-.06	.06	-.01	-.29	<b>-.04</b>

Note: Tables show results of two-tailed significance tests. \*  $p < .05$ .

in Table 8. Scores on the explicit measures in three different dimensions (quality, cost, and affect), were only weakly correlated with implicit attitude scores derived from the EAST, even several correlation coefficients showed negative relationships. These findings might indicate that the EAST scores detected evaluative differences despite the fact that participants consciously denied wanting to describe themselves as unprejudiced, and other reasons may have been undetected (Bohner & Wanke, 2002). These results are consistent with those of Greenwald, McGhee, & Schwartz (1998) showing that explicit and implicit attitudes toward the same object were not highly correlated.

## DISCUSSION

### The effect of country-of-origin

We initially assumed that participants' implicit attitudes and beliefs toward target companies would be influenced by the impact of country-of-origin which each target company has when making participants judge three dimensional attributes in relation to each company on the basis of stereotypes or images of each country. The findings in this study lend support for the hypothesis that the impact of country-of-origin can influence implicit attitudes and beliefs.

In the EAST for quality, the reaction time EAST score for an imaginary Japanese company

showed a marginally significant positive score, while that for an imaginary Korean company was close to a neutral (zero) score, and that for an imaginary Chinese company revealed a negative score but not a significant negative score. That is to say, when the colored word referred to an imaginary Japanese company name, the reaction time tended to be significantly faster when this colored word shared the same key orientation with white words having a high-quality meaning. In the reverse case, the performance tended to be significantly slower when this colored word shared the same key orientation with white words having a low-quality meaning. One possible conclusion about these findings is that participants have the stereotype on the basis of the belief that generally Japanese companies produce high-quality products. These results are in substantial agreement with those of previous studies (Han, 1989; Lawrence, Marr, & Prendergast, 1992) showing that people tend to consider Japanese products as having high quality. Consequently, these findings indicated that the stereotype related to country-of-origin influenced the implicit evaluation about quality attribution.

In the EAST for cost, as shown in the EAST for quality, the performances of participants tended to be faster when an imaginary Japanese company name (as the colored word) shared the same key orientation with white words having a high-cost meaning. The reverse was right. However, although an imaginary Japanese company

showed a higher positive score rather than other countries', this EAST score is not significant. In other words, participants did not consider significantly that an imaginary Japanese company has a high-cost image. The results can be explained by the fact that generally Japanese products are considered to be economical and inexpensive and are positioned as medium-cost products in the market. Therefore, one possible implication is that in participants minds the three countries' products are categorized into a similar cluster having no big difference in price. Namely, since generally the three countries' products have been recognized as medium-cost products to consumers, although there might be slight differences in belief related to product price for the three countries, there might be no significant positive or negative EAST score.

Finally, in the EAST for affect, although it was not significant, the EAST score for an imaginary Chinese company showed a high positive EAST score. In other words, participants showed a high positive attitude toward an imaginary Chinese company. On the other hand, the EAST score for an imaginary Japanese company was close to a neutral(zero) score. We are not sure how to explain these results because we expected that the EAST score for an imaginary Japanese company might reveal a high positive EAST score. One possible reason might be that these results reflected the perspectives in participants' minds toward the rapid growth of the Chinese economy.

In this study, there are several limitations. Above all, there is a high possibility that participants might not have enough time to recognize and memorize the names of the three imaginary companies having different countries-of-origin respectively. Although the section for the company-country pairing test preceded the section for the EAST in order to make participants memorize each pair of a company and a country, we can not ensure that this limitation did not occur. It is important that participants accurately and thoroughly recognize the names of companies because the crucial assumption of this study was that as soon as participants saw the name of a company on the computer screen, the country-of-origin associated with the company having that name, unconsciously and automatically has to come to mind. Unless this process happens as quickly and accurately as possible, reliability of the results in this study could be jeopardised. Therefore, the approach outlined in this study should be replicated by using the existing companies and products which have already frequently been exposed to consumers in the real world and include their own strong country-of-origin images.

The EAST as a method to assess attitudes and beliefs of consumers

This study has also attempted to assess implicit attitudes and beliefs of two existing companies(SONY, SKODA) in order to examine



the application of the EAST in real consumer attitude measurement. The results from this study showed that the EAST scores for SONY reveal positive in three attribute dimensions (Quality, Cost, and Affect), especially in the EAST for quality, there is a significant positive EAST score. Namely, when the colored word referred to SONY, the reaction time was faster when this colored word(SONY) shared the same key with the white words having a positive meaning(i.e., high-quality, high-cost, and positive). On the contrary, when this colored word(SONY) shared the same key with the white words having a negative meaning(i.e., low-quality, low-cost, and negative), the performance was slower. One explanation of these findings is that participants have strong positive implicit beliefs and attitudes toward SONY. On the other hand, participants showed strong negative EAST scores in three attribute dimensions for SKODA. Namely, when the name "SKODA" shared the same key orientation with white words having a negative meaning(i.e., low-quality, low-cost, negative), the performance tended to be faster. These findings showed that participants have strong negative implicit beliefs and attitudes toward SKODA. These results are likely to be consistent with general beliefs and attitudes of consumers toward two existing companies in the United Kingdom(UK). The research by HI Europe, one of the influential marketing research companies, in 2003 showed Britons picked SONY as their nation's best brand(HI Europe,

2003). That is to say, consumers in the UK tend to consider SONY as a company having a positive and reliable image and believe SONY products could satisfy their needs toward products. On the other hand, in the SKODA case, although its image and beliefs related to products' value have been improved gradually since Volkswagen took it over in 1991, many people still stick to the past images haunting SKODA, that it is a cheap, unreliable, and valueless brand. For instance, the 1990s research by Millward Brown showed that 60 per cent of consumers would still not consider buying SKODA due to its image and quality("Skoda's image", 2005). That is to say, many Britons still remember that SKODA was associated with poor-quality Czech imports. In conclusion, the findings shown in the EAST for the two existing companies might exactly reflect the attitudes and beliefs of consumers toward these companies.

#### General conclusion

In this study, we examined whether the EAST can be applied to attitudes and beliefs of consumers toward a certain product and company. As several studies(Brunel, Collins, Greenwald, & Tietje, 1999; Maison, Greenwald, & Bruin, 2001) have shown that the IAT could be used as a method to assess consumer's attitudes and beliefs, the results of this study demonstrated that the EAST could also be a useful method to evaluate beliefs and attitudes of consumers. First,

results of this study showed that when the colored words referred to a target name having a positive country-of-origin(i.e., an imaginary Japanese company name) and the existing company name(i.e., SONY) which is believed to have positive images, the reaction time was faster when these words shared the same key orientation with positive white words. Namely, these findings indicate that the EAST could successfully reflect the implicit attitudes and beliefs of participants. In addition, the findings from the questions for measuring the explicit attitudes and beliefs toward target concepts(three imaginary companies and the two existing companies) tended to correspond with the findings from the EAST mirroring the implicit attitudes and beliefs.

Consequently, we can state with certainty that the EAST could be a useful method for measuring the implicit attitudes and beliefs of consumers not only in the context of stereotype, such as country-of-origin, but also in evaluation toward a certain product and company. In addition, these results shed some light on possibilities for using the EAST as a method to complement explicit methods, such as the self-report questionnaire. During the 20th century, many researchers assumed that consumers make choices consciously and rationally. But after many consumer behavior studies revealed that consumers' behavior is not completely the consequence of rational cognitive processes, this assumption required modification. It became

necessary to understand the emotions of consumers and unconscious motives in order to explain responses to advertising and other aspects of consumer choice(Maison, Greenwald, and Bruin, 2001). Especially, in the case of advertising, the findings from Shapiro(1999) showed that usually advertising increases brand recognition beyond people's conscious control, but only rarely influences conscious decisions to choose a certain advertised product. As a result, in situations such as the one described above, measuring consumer implicit attitude and belief by techniques like the EAST become obviously important in that such measurement can provide new indicators toward people's attitudes and behaviors beyond conscious aspects.

As shown in this study, explicit and implicit attitudes toward the same target often did not show a high correlation(see Table 8). However, the proper explanation for these findings might not be that implicit measures were invalid, but that it may reflect that different aspects of an attitude or indeed different attitudes were being measured(Bohner & Wanke, 2002). To date, although much research has been done to examine the relationship between the two evaluations, research might still be said to be in the early stages of exploring and understanding the psychometric properties of implicit attitude measures and how we can use the combination between two evaluations in order to predict capricious consumer behaviour. Thus, we recommend that future studies examine the

relationship between both attitudes.

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## 원산지 효과가 소비자의 암묵적인 태도에 미치는 영향

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직접적으로 스스로의 의사를 표현하는 형태로 발연되어지는 외현적인 태도(Explicit Attitude)의 경우 이미 지금까지 많은 연구가 이루어져왔으며, 이러한 태도가 소비자들의 구매와 같은 행동을 설명하는 주요한 요인이라는 것 역시 밝혀진 상태이다. 외현적인 태도와 관련된 측정상의 단점은 그것이 의도적으로 왜곡되어진 방향으로 표현되어질 수 있다는 것이다. 이러한 외현적인 태도가 가진 측정상의 단점을 극복하고자 많은 심리학자들이 태도와 행동에 영향을 미치는 자동화 되어지고, 암묵적인 형태로 이루어진 인간 정보 처리 측면에 대한 연구를 실시해 오고 있는 중이다. 본 논문의 목적은 크게 두 가지로 나누어질 수 있다. 첫째, 특정 대상이 가진 country-of-origin 정보가 그 대상을 향한 소비자들의 암묵적인 태도(Implicit Attitude)와 신념(Implicit Belief)에 영향을 줄 수 있는가를 대표적인 암묵적인 태도 측정 기법들 중 가장 최근에 널리 사용되어지고 있는 Extrinsic Affective Simon Task (EAST)를 통해 알아보는 것이다. 두 번째는 현재 주로 사회, 인지 심리학에서 활발하게 응용되어 사용되어지고 있는 암묵적인 태도 측정 기법인 EAST가 과연 소비자 태도 연구 영역에서 역시 응용되어 사용되어질 수 있는가를 확인해보는 것이 되겠다. 많은 연구를 통해 Country-of-origin이 소비자들의 외현적인 태도나 신념에 영향을 미치는 것으로 알려졌으며 이러한 Country-of-origin이 대표적인 stereotype중 하나이기에 상대적으로 의식적인 수준을 벗어난 암묵적인 정보처리 측면에서 강한 영향을 주고 있을 가능성이 높으므로 이를 통하여 암묵적인 태도와 신념을 측정해 보는 것이 의미가 있을 것이라 생각되어졌다. 본 연구에서는 실험상황에서 서로 다른 세 국가로부터 나온 Country-of-origin을 설정하고 이러한 각 각의 국가에서 생산되어졌다고 믿게 만든 가상의 회사들을 향한 암묵적인 태도와 신념을 EAST를 통해 측정해보았다. 결론적으로, 실험 전 긍정적인 Country-of-origin을 가졌을 것이라 예상되어진 국가와 그렇지 않을 것이라고 예상되어진 국가의 가상적인 회사들에 대한 암묵적인 태도와 신념이 유의미한 차이를 보여주었다. 이러한 결과는 이전 사회, 인지 심리학 테두리에서 주로 사용되어진 암묵적인 태도 측정 기법인 EAST가 소비자 행동 연구에 있어서 역시 응용되어 질 수 있으며, 이러한 EAST를 통해 특정 브랜드나 대상에 대한 소비자들의 암묵적인 태도를 측정할 수 있다는 가능성을 보여주었다.

주제어 : 원산지 효과, 암묵적인 태도, Extrinsic Affective Simon Task

Appendix A. The list of White Words presented in the EAST

**Positive Attribute Words:** FUN, JOY, HAPPY, WARM, GLAD

**Negative Attribute Words:** BAD, SAD, GLOOM, MISERY, FEAR

**High-quality Attribute Words:** EXPERT, GREAT, FINE, SURE, SOUND

**Low-quality Attribute Words:** JUNK, GROTTY, TRASH, ROUGH, CRUDE

**High-cost Attribute Words:** COSTLY, LUXURY, STEEP, DELUXE, LAVISH

**Low-cost Attribute Words:** CHEAP, BUDGET, BASIC, SLASHED, BARGAIN

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