Available online at www.sciencedirect.com

SCIENCE DIRECT

Journal of Business Research 58 (2005) 1121–1131

JOURNAL OF BUSINESS RESEARCH

Modeling the selection of fast-food franchises among Japanese consumers

Michel Laroche[a,*], Ikuo Takahashi[b,1], Maria Kalamas[a,2], Lefa Teng[c,3]

[a]Department of Marketing, John Molson School of Business, Concordia University, 1455 de Maisoneuve West, Montreal, Quebec, Canada H3G 1M8
[b]Faculty of Business and Commerce, Keio University, Minato-ku, Tokyo 108-8345, Japan
[c]Department of Marketing and Consumer Studies, Faculty of Management, University of Guelph, Guelph, Ontario, Canada N1G 2W1

Received 15 October 2003; received in revised form 16 December 2003; accepted 26 January 2004

Abstract

By linking the Brisoux–Laroche Model and the Extended Competitive Vulnerability Model, this study offers a more complete understanding of the brand choice process in the Japanese fast-food industry. The existence of the four sets of awareness, proposed by the Brisoux–Laroche Model of brand categorization, was first established using fast-food brands and then the causal relationships among brand cognition, attitude, confidence, and intention in each of the sets were examined. After finding direct effects among the constructs in the consideration, hold, reject, and foggy sets, the Extended Competitive Vulnerability Model was tested using the two most popular fast-food brands in consumers' consideration sets. Our results empirically validate the proposed model of brand competition, thus providing new insight into how consumers select one fast-food brand over another. Following a demonstration of the interrelatedness of brand evaluations, a discussion of our findings, with respect to brand management in the fast-food industry, ensues.

Keywords: Brand categorization; Brand choice; Fast-food industry; Quick service restaurants; Brand management; Japan

1. Introduction

"How consumers make their choice of brands in multibrand situations is one of the least understood yet important phenomenon in the marketing of QSRs" (Quick Service Restaurants—hereafter, fast-food restaurants; Laroche and Parsa, 2000, p. 219). Among the limited number of studies that have examined the process of choosing among multiple fast-food brands, Laroche and Parsa (2000) empirically validated the Brisoux–Laroche model of brand categorization, and Laroche and Toffoli (1999) brought together the Brisoux–Laroche model and Bliemel's (1984) theory of price–quality choice behavior (Brisoux and Laroche, 1980). This study extends previous research on brand choice in the fast-food sector by exploring the consumer brand selection process in the Japanese fast-food industry, where multibrand choice is common. Like their North American counterparts, Japanese consumers are faced with a plethora of domestic and foreign fast-food brands (e.g., McDonald's, Lotteria, Kentucky Fried Chicken, Mos Burger, Matsuya, and Yoshinoya). Although young Japanese consumers have wholeheartedly adopted foreign brands like McDonald's, their loyalty to national brands such as Mos Burger remains unwavering (Ohnuki-Tierney, 1997).

In studying consumers' brand selection processes, researchers have demonstrated the existence of both direct and competitive effects between consumers' cognitive evaluations, attitudes, confidence levels, and intentions (see Laroche et al., 1994, 1995, 1996, 2001; Laroche and Sadokierski, 1994). However, no one has previously modeled brand choice within each of the four sets of awareness put forth by Brisoux and Laroche (1980). Also, researchers have not yet examined both the direct and competitive effects within consumers' evoked sets (hereafter, consideration sets), where competition among leading brands is quite intense. This study fills the void by testing the link between the Brisoux–Laroche Model of brand categorization and the Extended Competitive Vulnerability Model of brand competition using Japanese fast-food brands. Our test involves a three-step approach: (1) the Brisoux–Laroche Model of

* Corresponding author. Tel.: +1-514-848-2424x2942; fax: +1-514-848-4576.
E-mail addresses: laroche@jmsb.concordia.ca (M. Laroche), takahasi@fbc.keio.ac.jp (I. Takahashi), mkalamas@jmsb.concordia.ca (M. Kalamas), leteng@uoguelph.ca (L. Teng).
[1] Tel.: +81-3-5427-1280; fax: +81-3-5427-1578.
[2] Tel.: +1-514-848-2424x2738.
[3] Tel.: +1-519-824-4120x53818.

0148-2963/$ – see front matter © 2004 Elsevier Inc. All rights reserved.
doi:10.1016/j.jbusres.2004.01.007

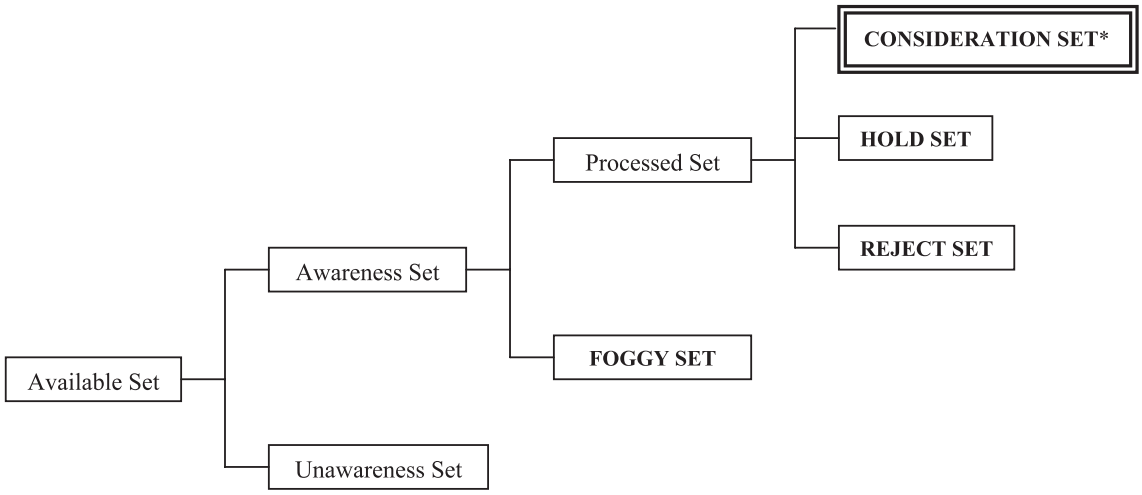
brand categorization is validated, (2) the relationships among brand cognition, attitude, confidence, and intention in each of the four sets of awareness are examined, and (3) the Extended Competitive Vulnerability Model is tested using the two most popular brands in consumers' consideration sets. Based on the findings, useful marketing strategies that allow managers to differentiate their brand from the nearest competitors, especially in consumers' consideration sets, are suggested.

2. The Brisoux–Laroche brand categorization process

In the last decades, researchers have tried to comprehend the brand categorization process and the evaluative criteria used to arrive at a choice in a particular brand category. Howard (1963) indicated that consumers consider only a few alternatives instead of the total set when they simplify and manage their brand choice. He divided the total set into an awareness set and an unawareness set. Later on, Howard and Sheth (1969) put forward the concept of the consideration set in which only a limited number of brands are actively taken into account in the choice process. However, their model only identifies and categorizes brands that are considered as purchase alternatives. Narayana and Markin (1975) further expanded the awareness set into three subsets: the consideration, inert, and inept sets, and adopted the same definition for the consideration set (Howard, 1963). Following Howard's conceptualization, all brands in the consideration set are evaluated positively. Brands in the inert set are neither accepted nor rejected; they are neutral. In the inert set, brands are rejected from purchase consideration and are negatively judged by consumers. In 1980, Brisoux and Laroche proposed a more expanded awareness set, splitting it into two groups: a processed set and an unprocessed (foggy) set (Fig. 1). Consumers assess the brands in the processed set on at least one salient attribute and in turn, form their opinions (i.e., attitudes, confidence levels, and purchase intentions). Conversely, brands in the unprocessed (foggy) set are not evaluated on any salient attribute. Although consumers are aware of these brands, they have no clear opinion of them.

In the Brisoux–Laroche model of brand categorization, the processed set is further divided into three subsets: consideration, hold, and reject sets. Processed on all salient attributes, consumers hold positive attitudes, confidence levels, and purchase intentions toward the brands in their consideration sets (Brisoux and Laroche, 1980) and only consider these brands when making a purchase decision. Although brands in the hold set are not considered as purchase alternatives, consumers still hold positive, negative, or neutral attitudes and intentions vis-à-vis these brands (Laroche and Toffoli, 1999). For instance, a consumer may have a positive attitude toward a brand in the hold set because of its quality, but may consider it as inappropriate for a particular consumption situation. Alternatively, a consumer may have a negative attitude toward a brand because of its price but may still keep it on hold for special occasions. Moreover, the hold set may contain brands that a consumer neither likes nor dislikes. As s/he collects new information regarding these brands, s/he will move them into her/his consideration or reject sets. The consumer may even forget about the brand, thus placing it in the foggy set. The last set is the reject set where brands are considered as unacceptable purchase alternatives and consumers hold negative attitudes toward these brands.

Overall, the Brisoux–Laroche model offers an expanded, better defined brand categorization process. Since its inception, several studies have empirically supported the model



Source: Brisoux and Laroche (1980). * In the original Brisoux-Laroche model, the term evoked set was used instead of consideration set. Since the latter term has gained in popularity, it is used instead.

Fig. 1. The Brisoux–Laroche Model of brand categorization.

Table 1
Hypotheses relating to the Brisoux–Laroche Model of brand categorization

	Consideration set (H1a)	Hold set (H1b)	Reject set (H1c)	Foggy set (H1d)
Cognition	Highest	Average to low	Average	Lowest
Attitude	Highest	Average	Lowest	Lower than average
Confidence	Highest	Average to low	Average	Lowest
Intention	Highest	Average to low	Lowest	Low

Inspired from these sources: Brisoux and Laroche, 1980, Laroche and Parsa, 2000, Laroche et al., 1985, and Laroche and Toffoli, 1999.

(e.g., Laroche and Parsa, 2000; Laroche et al., 1985; Laroche and Toffoli, 1999)—although, never in a Japanese context. Based on the original model and some of the empirical studies that appeared subsequently, relevant hypotheses (H1a, H1b, H1c, and H1d) are summarized in Table 1. These hypotheses outline the different levels of cognition, attitude, confidence, and intention in each of the four sets of awareness. One would expect the highest ratings on all four variables in the consideration set as compared to the other three sets. In the hold set, one would anticipate the ratings to be slightly lower than in the consideration set as a result of positive, negative, or neutral attitudes vis-à-vis the brands. Because consumers do not consider the brands in the reject set as viable alternatives, attitude and intention scores are lowest for them. However, cognition and confidence are higher than in the foggy set, in which brands have not been evaluated in terms of any salient attribute.

3. Competition in the consideration set

As cognitive misers, consumers focus on comparisons of a few brands to reduce the cognitive complexity of the selection process (Bettman, 1979; Lussier and Olshavsky, 1979). This is consistent with the Brisoux-Laroche Model (1980) whereby consumers categorize brands, when faced with multiple alternatives, and then choose among those in their consideration sets. In addition, evidence has shown that there are competitive relationships among brand cognitions, attitudes, and purchase intentions in consumers' choice sets (Laroche, 2002; Laroche et al., 1994, 2001; Laroche and Teng, 2001). Laroche recently put forward the idea that "competitive effects are present at all stages in the consumer decision process" (2002, p.97). Drawing on this insight, competition is incorporated in the Brisoux–Laroche categorization process and the determinants of choice in the consideration set are considered. In so doing, this paper offers a more complete picture of consumer brand choice, and especially the interrelatedness of brand evaluations.

The brand choice process is continuous and sequential in that cognitions are formed first, followed in order by attitudes and confidence levels, and finally, purchase intentions (Laroche and Teng, 2001). In the choice process, generally speaking, consumers select a brand through several steps: (1) they assess available information and previous experiences with some brands to form cognitions of a focal brand; (2) they evaluate their cognitions vis-à-vis the focal brand to form an attitude toward and confidence in that brand while considering their cognitive evaluations of competing brands; (3) they pursue the decision-making process only among the brands available in the consideration set; and (4) they assess their attitude toward and confidence in the focal brand to form a purchase intention toward that brand, while considering their attitudes and confidence levels vis-à-vis competing brands within the consideration set. In the consideration set, consumers evaluate brands both individually and in relation to other brands; that is, consumers treat the brands under consideration in an evaluative and comparative frame of reference before making a choice. A detailed explanation of direct and competitive effects, in the brand selection process, follows.

3.1. Competitive effects: cognition→attitude

Ajzen (1993) argued that most contemporary social psychologists prefer the cognitive approach to attitude formation, whereby attitudes develop from the beliefs that people hold about an object. An individual assigns a positive or negative valence to each salient attribute associated with the object and all beliefs accumulate to form her/his attitude vis-à-vis the object. Therefore, an individual's cognitive evaluation of a brand determines her/his attitude toward the same brand. In addition, her/his prior beliefs of other competing brands may also simultaneously influence her/his attitude toward the focal brand. This explains why experienced consumers are more likely to use their prior experiences to discriminate between brands.

The contention that a consumer's attitude toward a particular brand depends on her/his cognitive evaluation of that brand and her/his perceptions of the competing brands finds support in numerous studies. Woodside and Clokey (1974) were the first to propose that a consumer's beliefs toward competing brands partially impact her/his attitude toward a focal brand and in turn determine her/his intention to buy that brand. Other researchers (e.g., Laroche et al., 1996) also argued that cognitive evaluations of the focal brand might affect consumer choice by creating a favorable attitude toward that brand, while resulting in an unfavorable attitude toward competing brands. Alternatively, cognitive evaluations of the core brand may increase consumers' confidence in that brand and decrease their confidence in competing brands (see the following two sections). Laroche et al. (1994, 1996, 2001; Laroche and Teng (2001)empirically demonstrated the influence of competing brands on attitude formation. Findings from their studies show that an individual's cognitive evaluations of a focal brand and other related brands determine her/his attitude toward the brand of interest. Specifically, cognitive evaluations of the focal

brand positively impact consumers' attitude toward the same brand and negatively impact their attitudes vis-à-vis competing brands. Thus, the second hypothesis is:

H2: Consumers' cognitive evaluations of a focal brand (i_b) positively impact their attitudes toward the focal brand and negatively impact their attitudes toward the competing brands (j_b, $i_b \neq j_b$) in the consideration set.

3.2. Competitive effects: cognition→confidence

Howard (1989, p. 34) defined confidence as "the buyer's degree of certainty that [her/his] evaluative judgement of the brand is correct." This definition suggests that confidence not only pertains to the buyer's overall belief in a brand, but involves the buyer's ability to evaluate the attributes of the brand. Consumers who know a brand's attributes, the importance of such attributes, and the performance of the brand on such attributes can discriminate these brands easily and confidently in a given product category. Researchers have confirmed that confidence in a particular brand is a function of familiarity with the brand (Laroche et al., 1996; Park and Lessig, 1981). Brand familiarity increases the ability to efficiently comprehend and use new information related to the brand (Laroche et al., 1996; Urbany et al., 1989). At low levels of familiarity, consumers are not able to adequately discriminate among available brands. Experienced consumers rely on their prior knowledge of the attributes of various brands to confidently choose an appropriate brand. This suggests that confidence reflects one's conviction in her/his beliefs about a brand and leads us to hypothesize:

H3: Consumers' cognitive evaluations of a focal brand (i_b) positively impact their confidence in the focal brand and negatively impact their confidence in the competing brands (j_b, $i_b \neq j_b$) in the consideration set.

3.3. Competitive effects: attitude/confidence→purchase intention

In the consumer choice literature, researchers have established a significant positive relationship between brand attitude and intention (Fishbein and Ajzen, 1975). Extending previous research, Laroche and Brisoux (1989) proposed a multibrand model of intentions, where different brands compete along their overall attitude evaluations in determining the consumer's intention to choose a specific brand. They classified the influence of attitude toward a focal brand on intention to purchase that brand as a direct effect, while the impact of attitude vis-à-vis other brands on intention to buy the focal brand as a competitive effect. The findings showed that the direct effect (competitive effect) positively (negatively) impacts intention to buy the focal brand. Therefore, a consumer's intent to buy a focal brand is determined not only by her/his attitude toward the same brand, but also by her/his attitudes toward other brands. Several studies have provided evidence to support this argument (Laroche et al., 1994, 1996, 2001; Laroche and Teng, 2001). Evidence has also shown that confidence is one of the determinants of purchase intent and as such, plays a key role in its prediction (Bennett and Harrel, 1975; Laroche et al., 1996; Laroche and Sadokierski, 1994). For example, Laroche and Sadokierski (1994) found that consumers' intentions to choose an investment firm depend on their level of confidence in evaluating the firm. Laroche et al. (1996) confirmed the relationship between confidence and intention in the consumer brand selection process and demonstrated the effects of competing brands on intention to purchase a focal brand. Together, brand attitude and confidence contribute to the formation of purchase intention, which leads us to hypothesize:

H4: Consumers' attitudes toward and confidence in a focal brand (i_b) positively impact their purchase intentions toward the focal brand and negatively impact their purchase intentions toward the competing brands (j_b, $i_b \neq j_b$) in the consideration set.

3.4. Reciprocal relationships: attitude↔confidence

Attitude is considered as a means of altering consumer confidence in brand evaluations, whereas confidence is seen as one of several strength-related attitude properties (Raden, 1985). It is likely that higher or lower attitudes, toward a particular brand, lead to higher or lower confidence levels in evaluating that brand. Similarly, higher or lower confidence levels in a specific brand increase or decrease attitudes vis-à-vis the same brand. Moreover, consumers not only judge specific brands (e.g., McDonald's), they also make overall assessments about brands within a given product or service category (e.g., consumers from 'a global idea' of fast-food restaurants). Because these global assessments influence the evaluation of individual brands (a phenomenon known as the halo effect), one would expect correlated relationships between brand cognition, attitude, and confidence vis-à-vis the focal brand and competing brands (Beckwith et al., 1978; Laroche et al., 1994). The proposed model thus includes several correlated relationships between the various constructs (i.e., Attitude B1↔Confidence B1, Attitude B2↔Confidence B2, Cognition B1↔Cognition B2, Attitude B1↔Attitude B2, Confidence B1↔Confidence B2). The related hypotheses are:

H5a: Consumers' attitudes toward and confidence in a focal brand (i_b) in the consideration set are positively correlated.

H5b: Consumers' cognitive evaluations of, attitudes toward, and confidence in a focal brand (i_b) are positively correlated with their cognitive evaluations of, attitudes toward, and confidence in the competing brands (j_b, $i_b \neq j_b$) in the consideration set.

This study links the Brisoux–Laroche Model and the Extended Competitive Vulnerability Model by explaining

how consumers choose among brands in their consideration sets. Although the consumer goes through the brand categorization process and ends up placing brands in her/his consideration set, s/he must still choose among these brands. Hence, the brands in the consideration set compete against each other until the consumer selects the one with the most competitive attributes (e.g., low price, high quality). This means that the consumer makes a choice by cognitively evaluating the different brands in her/his consideration set, forming her/his attitudes and confidence levels for each brand, assessing these attitudes and confidence levels across the different brands, and then finally selecting one brand.

4. Method

4.1. Sample

Data was collected from undergraduate students at a major Japanese university. The 12-page questionnaire was distributed in classroom settings and participation in the study was optional. Based on menu offerings, 12 restaurants were carefully selected to represent the fast-food industry in Japan—McDonald's, Douter, Mos Burger, Mister Donut, Kentucky Fried Chicken, Lotteria, Starbuck's Coffee, Subway, First Kitchen, Burger King (no longer in operation in Japan but present at the time of the data collection), Matsuya, and Yoshinoya. These chains correspond to different segments of the Japanese QSR industry [e.g., chicken, sandwich, hamburger, beef bowl (a Japanese creation), snack, and coffee], targeting different meal times. Translated into Japanese, the self-administered survey contained questions relating to consumers' evaluations, attitudes, confidence levels, intentions, and choices vis-à-vis the 12 fast-food brands. Of the 254 respondents, 170 were male and 84 were female between the ages of 18 and 28. Young adults who, according to industry surveys, patronize fast-food establishments were targeted (Knutson, 2000; Laroche and Parsa, 2000; Ohnuki-Tierney, 1997).

4.2. Measures

4.2.1. Four sets of awareness

The four different awareness sets of the Brisoux–Laroche Model were measured using five questions. Specifically, the *consideration set* was measured using these two questions: (1) "indicate your first choice from the 12 fast-food brands" and (2) "indicate other fast-food brands which you would consider selecting when your first choice is not available." Following along the same lines, the *hold set* was measured by asking: "of those 12 fast-food brands, are there any which you have formed an opinion of but cannot say whether or not you would be willing to select it/them?" The *reject set* was measured by asking respondents to indicate the fast-food brands they "would definitely not consider purchasing" and finally, the *foggy set* was measured by asking them to indicate the fast-food brands they "have not yet formed an opinion of." The responses were coded as a series of 12 dummy variables (0,1).

4.2.2. Cognition

Two 7-point scales were used to measure consumers' attitudes toward the selected brands. The questions, which referred to brands respondents had previously heard of, were "to what extent do you feel you have enough information to make an informed judgment about...?" (1 = *no information*, 7 = *a lot of information*) and "to what extent do you feel you are sufficiently knowledgeable to make an informed decision about...?" (1 = *not knowledgeable at all*, 7 = *very knowledgeable*). For the four sets, coefficient α values ranged from .84 to .94.

4.2.3. Attitude

Two 7-point scales were used to measure consumers' attitudes toward the selected brands. The items were the following: "please indicate the degree to which you like..." (1 = *dislike very much*, 7 = *like very much*) and "please indicate the degree of your satisfaction with..." (1 = *very unsatisfactory* and 7 = *very satisfactory*). For the four sets, coefficient α values ranged from .84 to .93.

4.2.4. Confidence

Referring to brands respondents had previously heard of, overall confidence in brand evaluations was measured with two 7-point scales (1 = *not confident at all*, 7 = *very confident* and 1 = *very uncertain*, 7 = *very certain*). For the four sets, coefficient α values ranged from .86 to .95.

4.2.5. Intention

For each of the 12 fast-food brands, intention to purchase was measured with two 7-point scales by asking respondents to "indicate the strength of your intentions if you were to make a selection" (1 = *would definitely not intend to buy*, 7 = *would definitely intend to buy*) and "indicate how strongly you feel about purchasing..." (1 = *would strongly consider not buying*, 7 = *would strongly consider buying*). For the four sets, coefficient α values ranged from .83 to .93.

5. Results and interpretation

To study the link between the Brisoux–Laroche Model and the Extended Competitive Vulnerability Model, a three-step analysis was conducted. ANOVAs were first performed to examine the differences in set size, brand cognition, attitude, confidence, and purchase intention across the four sets of awareness. Structural equation modeling was then used to test the causal relationships among the constructs in each set. Finally, a model of the competitive effects between the two most popular brands in consumers' consideration sets was developed and tested.

Table 2
ANOVAs across the four sets and Scheffé comparisons

	F value	Consideration set (CS)	Hold set (HS)	Reject set (RS)	Foggy set (FS)
Set size	135.20	4.71 (0.15)	2.50 (0.10)	1.82 (0.08)	2.07 (0.09)
Cognition	291.14	5.56 (0.06)	3.84 (0.10)	2.90 (0.12)	2.28 (0.08)
Attitude	353.10	5.59 (0.05)	3.88 (0.06)	3.13 (0.08)	3.83 (0.05)
Confidence	86.39	5.56 (0.06)	4.55 (0.09)	4.26 (0.13)	3.60 (0.10)
Intention	383.02	5.62 (0.05)	3.51 (0.08)	2.48 (0.09)	3.31 (0.08)

	Significance of Scheffé comparisons					
	CS-HS	CS-RS	CS-FS	HS-RS	HS-FS	RS-FS
Set size	0.00 (0.16)	0.00 (0.17)	0.00 (0.17)	0.00 (0.17)	0.09 (0.17)	0.58 (0.18)
Cognition	0.00 (0.11)	0.00 (0.12)	0.00 (0.12)	0.00 (0.13)	0.00 (0.12)	0.00 (0.13)
Attitude	0.00 (0.08)	0.00 (0.08)	0.00 (0.08)	0.00 (0.09)	0.95 (0.08)	0.00 (0.09)
Confidence	0.00 (0.12)	0.00 (0.13)	0.00 (0.13)	0.20 (0.13)	0.00 (0.13)	0.00 (0.14)
Intention	0.00 (0.09)	0.00 (0.10)	0.00 (0.10)	0.00 (0.10)	0.25 (0.10)	0.00 (0.11)

The numbers in parentheses are standard errors of estimates.

5.1. Validation of the Brisoux–Laroche Model

Several ANOVAs were conducted in order to determine differences in set size (i.e., the average number of brands in each set), brand cognition, attitude, confidence, and intention between the four sets. Along with mean scores and standard errors, the results also include all possible Scheffé comparisons (Table 2). Of the four sets, the consideration set is the largest at 4.71, followed by the hold set (2.50), the foggy set (2.07), and the reject set (1.82). The difference in set size across the four sets is significant, [$F(3,829) = 135.20$, $P < .01$]. All pairs of means among the four sets are significant ($P < .01$), except the one between the reject and foggy sets. In other words, the set size of the reject set is not significantly different from the one for the foggy set. Overall, the results strongly support the hypothesized profiles of the four sets of awareness (Brisoux and Laroche, 1980).

The consideration set measures of brand cognition, attitude, confidence, and intention were all significantly higher than those in the other three sets. Respondents have more cognitive evaluations (5.56), hold more positive attitudes (5.59), have more confidence in their brand evaluations (5.56), and have higher intentions to purchase the brands (5.62) in their consideration sets than brands in the other three sets (all differences significant at $P < .01$). Thus, H1a is strongly supported.

The mean values of brand cognition, attitude, confidence, and intention in the hold set are higher than in the reject and foggy sets. The mean confidence in judging the brands (4.55) is slightly higher than average but scores for cognition (3.84), attitude (3.88), and intention (3.51) are as hypothesized 'average to low.' The average values of brand cognition, attitude, and intention in the hold set are significantly different from those in the reject set (all differences significant at $P < .01$), while confidence in judging the brands was not significantly different between the two sets ($P = .20$). Similarly, the hold set was found to be significantly different from the foggy set in brand cognition and confidence ($P < .01$) but not in attitude and intention ($P = .95$ and $P = .25$). These results partially support H1b.

The profile of the reject set is consistent with the hypothesized profile for the set. As predicted, the mean values of attitude (3.13) and intention (2.48) are the lowest. Both measures in the reject set are significantly different from those in the other sets (all differences significant at $P < .01$). Because brands in this set are not being considered for selection, the ratings for attitude and intention are the lowest among the four sets (H1c). Mean values for cognition (2.90) and confidence (4.26) are lower than average and close to average respectively. This indicates that "the information received about brands in the reject set do not meet minimum requirements on specific salient attributes, leading to higher confidence in rejecting the brands" (Laroche and Parsa, 2000, p. 209). As a whole, the findings largely support H1c.

Table 3
Standardized estimates of the tested model across the four sets of awareness

Parameters	Consideration set	Hold set	Reject set	Foggy set
Cognition → Attitude	0.606 (9.385)[a]	0.403 (5.491)	−0.053 (−0.590)	0.297 (3.395)
Cognition → Confidence	0.555 (8.686)	0.515 (7.213)	0.541 (6.506)	0.417 (5.083)
Attitude → Intention	0.845 (11.112)	0.822 (11.423)	0.866 (8.664)	0.713 (7.918)
Confidence → Intention	0.077 (1.164)	0.280 (5.239)	0.504 (6.294)	0.379 (5.363)
Attitude↔Confidence	0.509 (5.875)	−0.161 (−1.968)	−0.419 (−4.023)	−0.293 (−3.136)
χ^2	25.82	33.20	19.93	29.13
df	15	15	15	15
χ^2/df	1.72	2.21	1.33	1.94
CFI	0.99	0.98	0.99	0.98
Standardized RMR	0.02	0.04	0.05	0.04
RMSEA	0.05	0.08	0.05	0.07

[a] The numbers in parentheses are *t* values.

In the foggy set, mean attitude and intention scores are close to the average (3.83) and mean intention scores (3.31) are low but not the lowest. Because the brands in this set are unprocessed, the ratings of attitude and intention are obviously neutral. As predicted, cognition and confidence scores (2.28 and 3.60) are also the lowest among the four sets and significantly different from the others (all differences significant at $P < .01$). Thus, the results provide strong support for the hypothesized profile of the foggy set (H1d).

In general, the results support the hypothesized profiles of Brisoux and Laroche's (1980) four awareness sets. Compared to the other three sets, the consideration set exhibits the highest ratings for all four measures. In the hold set, the ratings are slightly lower than in the consideration set as a result of positive, negative and/or neutral attitudes toward the brands. Attitudes and intentions are the lowest for brands in the reject set since respondents do not consider them as worthy purchase alternatives. Cognitions and confidence in judging the brands in the foggy set are the lowest of all the sets since respondents have less experience with the brands and do not feel confident in judging them.

5.2. A test of the causal relationships among the constructs in each awareness set

To test the causal relationships among brand cognition, attitude, confidence, and intention in each of the four awareness sets, the maximum likelihood fitting function in

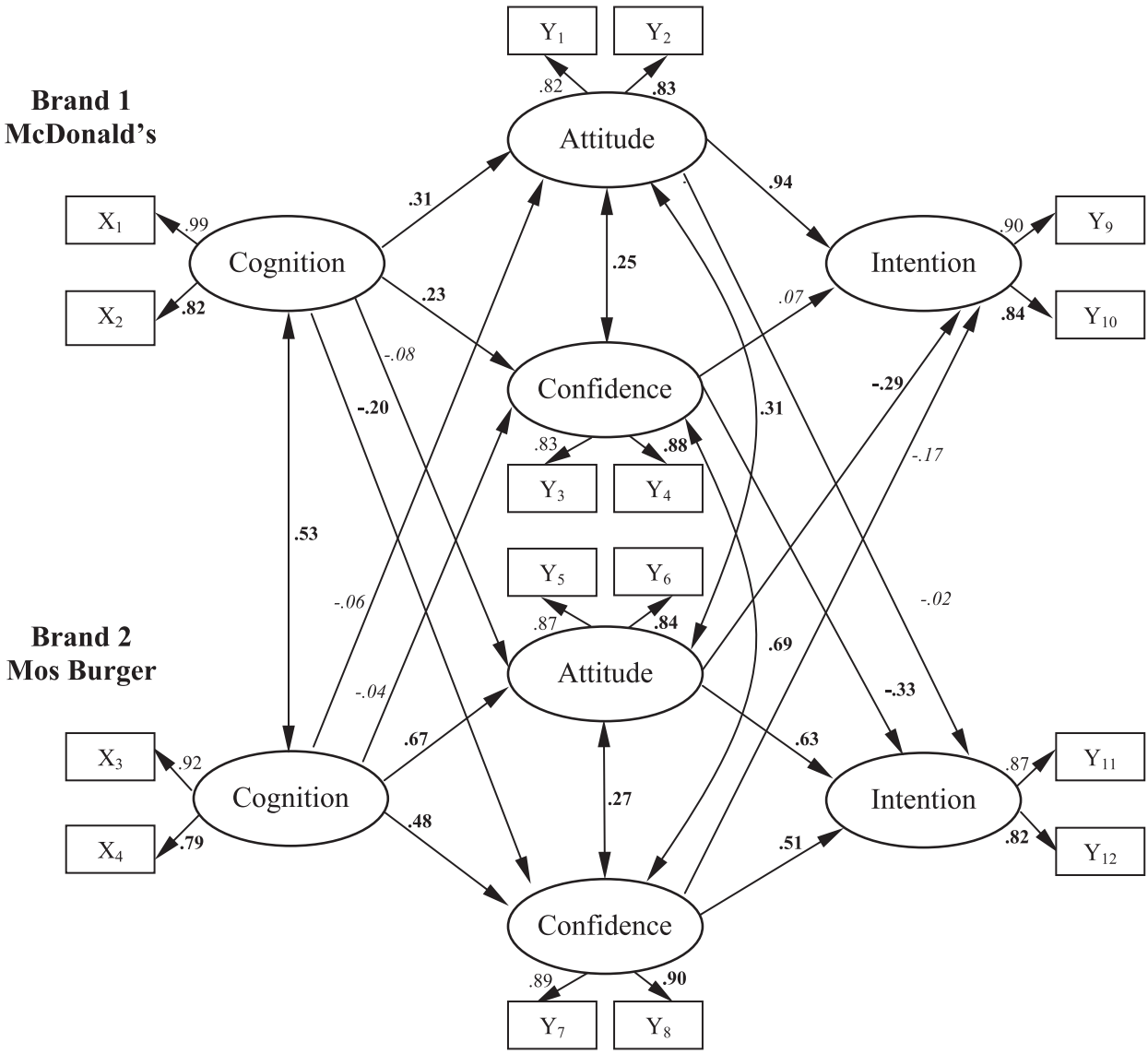


Fig. 2. Standardized estimates for the Extended Competitive Vulnerability Model: Tested using two Japanese fast-food brands. *Note:* X1/X3 (information) and X2/X4 (knowledge) are two measures of cognitive evaluation vis-à-vis brand 1/brand 2. Y1/Y5 (like) and Y2/Y6 (satisfactory) are two measures of attitude toward brand 1/brand 2. Y3/Y7 (confident) and Y4/Y8 (certain) are two measures of confidence in brand 1/brand 2. Y9/Y11 (intent) and Y10/Y12 (consider buying) are two measures of intention to purchase brand 1/brand 2. Numbers in bold indicate paths which are significant; numbers in italics paths which are not significant; all other paths are fixed.

EQS was used. With CFI values ranging from .98 to .99, standardized RMR values ranging from .02 to .05, and RMSEA values ranging from .05 to .08, the resulting models exhibited excellent fit (Hu and Bentler, 1999; Table 3). As expected, the relationships among brand cognition, attitude, confidence, and intention are positive in the consideration set. Interestingly, attitude and confidence are negatively correlated in the hold, reject, and foggy sets, and positively correlated in the consideration set. This finding suggests that consumers' attitudes are low and confidence levels are high in evaluating brands that fall in the hold, reject, and foggy sets.

5.3. Validation of the Extended Competitive Vulnerability Model

After computing means and standard deviations for all the variables in the proposed model (Fig. 2), respondents' cognition, attitude, confidence, and intention scores were found to be above average for both brands in the consideration set (Table 4). Using structural equation modeling, the causal relationships among brand cognition, attitude, confidence, and intention for the two most popular brands were then tested. Brand 1 (McDonald's) was considered as the focal brand while Brand 2 (Mos Burger) was treated as the competing brand (Fig. 2). McDonald's and Mos Burger were the two most popular fast-food brands with 180 respondents selecting the former and 155 choosing the latter. Of these respondents, only 115 placed *both* brands in their consideration sets. The Extended Competitive Vulnerability Model was analyzed using the maximum likelihood fitting function in EQS. Based on Hu and Bentler's (1999) cutoff criteria, the resulting model exhibited very good fit (CFI=.94, standardized RMR=.09, and RMSEA=.08). All the path coefficients and the *t* values are summarized in Table 5.

Verification as to whether the decision process follows a CBA, rather than a CAB, sequence was made. Compared to the original model, fewer competitive pathways were statistically significant in the alternative model. In fact, competition between brands was nonexistent in the latter part of the model (i.e., Intention B1 → Attitude B2, Intention B2 → Attitude B1, Intention B1 → Confidence B2, Intention B2 → Confidence B1). Given these results, the CAB sequence, originally conceptualized, was kept.

Table 4
Means and standard deviations of all factors in the Extended Competitive Vulnerability Model

Factors	Means	Standard deviations
Cognition—Brand 1	6.387	0.874
Cognition—Brand 2	5.200	1.277
Attitude—Brand 1	5.296	1.000
Attitude—Brand 2	5.772	0.949
Confidence—Brand 1	5.643	1.038
Confidence—Brand 2	5.461	1.122
Intention—Brand 1	5.639	1.014
Intention—Brand 2	5.617	1.054

Table 5
Testing the Extended Competitive Vulnerability Model: results

Paths	Estimates	*t* Values
Cognition B1 → Information B1	0.990	fixed
Cognition B1 → Knowledge B1	0.823	15.460[a]
Cognition B2 → Information B2	0.919	fixed
Cognition B2 → Knowledge B2	0.791	8.974[a]
Attitude B1 → Like B1	0.822	fixed
Attitude B1 → Satisfactory B1	0.830	9.476[a]
Attitude B2 → Like B2	0.873	fixed
Attitude B2 → Satisfactory B2	0.841	10.803[a]
Confidence B1 → Confident B1	0.829	fixed
Confidence B1 → Certain B1	0.879	9.491[a]
Confidence B2 → Confident B2	0.894	fixed
Confidence B2 → Certain B2	0.897	12.487[a]
Intention B1 → Intent B1	0.896	fixed
Intention B1 → Consider buying B1	0.837	10.776[a]
Intention B2 → Intent B2	0.866	fixed
Intention B2 → Consider buying B2	0.819	10.515[a]
Cognition B1 → Attitude B1	0.306	2.551[a]
Cognition B2 → Attitude B1	− 0.060	− 0.470
Cognition B1 → Attitude B2	− 0.078	− 0.743
Cognition B2 → Attitude B2	0.666	5.276[a]
Cognition B1 → Confidence B1	0.230	1.893[b]
Cognition B2 → Confidence B1	− 0.043	− 0.334
Cognition B1 → Confidence B2	− 0.201	− 1.757[b]
Cognition B2 → Confidence B2	0.475	3.714[a]
Attitude B1 → Intention B1	0.935	6.510[a]
Attitude B2 → Intention B1	− 0.288	− 2.514[a]
Confidence B1 → Intention B1	0.071	.437
Confidence B2 → Intention B1	− 0.170	− 0.991
Attitude B1 → Intention B2	− 0.016	− 0.149
Attitude B2 → Intention B2	0.626	5.177[a]
Confidence B1 → Intention B2	− 0.332	− 2.363[a]
Confidence B2 → Intention B2	0.514	3.365[a]
Cognition B1↔ Cognition B2	0.532	4.722[a]
Attitude B1↔ Confidence B1	0.249	2.583[a]
Attitude B2↔ Confidence B2	0.274	2.653[a]
Attitude B1↔ Attitude B2	0.307	2.533[a]
Confidence B1↔ Confidence B2	0.692	5.145[a]

[a] Significant at 0.01 (one-tailed).
[b] Significant at 0.05.

5.3.1. Competitive effects: cognition→attitude (H2)

The standardized estimates of the structural parameters (i.e., Cognition B1 → Attitude B1 and Cognition B2 → Attitude B2) show that an individual's cognitive evaluation of the focal brand positively impacts her/his attitude toward that brand (Table 5). Although one would expect a consumer's evaluation of the focal brand to negatively influence her/his attitude toward the competing brand, the competitive relationships (i.e., Cognition B1 → Attitude B2 and Cognition B2 → Attitude B1) were not statistically significant. Hence, our results partly support H2.

5.3.2. Competitive effects: cognition→confidence (H3)

Cognition B1 → Confidence B1 and Cognition B2 → Confidence B2 show that a consumer's confidence in the

focal brand increases while her/his cognitive evaluation of the same brand increases (Table 5). On the contrary, Cognition B1 → Confidence B2 suggests that an individual's confidence in the competing brand decreases while her/his cognitive evaluation of the focal brand increases. Although only one of the two competitive effects is significant, our findings support H3 in that higher cognitive evaluations of a focal brand lead to lower confidence in competing brands and higher confidence in the same brand.

5.3.3. Competitive effects: attitude/confidence→purchase intention (H4)

As expected, an individual's purchase intention vis-à-vis the focal brand is positively influenced by her/his attitude toward and confidence in that brand (Table 5). However, a consumer's attitude toward and confidence in one brand negatively influences her/his intent to purchase the competing brand. Our results support H4 and are consistent with previous findings (see Laroche et al., 1994, 1995, 1996, 2001; Laroche and Sadokierski, 1994).

5.3.4. Reciprocal relationships (H5)

Attitude B1↮Confidence B1 and Attitude B2↮Confidence B2 suggest that attitude and confidence are positively correlated (H5a). In addition, the three reciprocal relationships (i.e., Cognition B1↮Cognition B2, Attitude B1↮Attitude B2, and Confidence B1↮Confidence B2) are significantly different from 1, which indicates that the constructs of brand cognition, attitude, and confidence are different for the focal and competing brands. These results are not only consistent with previous findings (e.g., Laroche et al., 1994), but also support our expectations of correlated relationships between the constructs (H5b).

6. Limitations and future research

Like all studies, this one is not void of limitations. Collected in one Japanese city, the results have limited generalizability. That said, the use of college students, heavy consumers of fast-food products, adds to the strength of our findings. As a first attempt to link the Brisoux–Laroche Model and the Extended Competitive Vulnerability Model, our efforts were successful. Still, this study needs to be repeated in other countries and with other product categories in the retail sector. Further research will help improve our understanding of the elements that make up consumers' cognitive evaluations. Instead of relying on knowledge and information as global measures of cognition, researchers should study specific attributes of fast-food restaurants (e.g., cleanliness, menu offerings, etc.—for a complete list of attributes, see Knutson, 2000) that enter the decision-making process. Because the choice of fast-food franchises is subject to a large degree of situational influence (e.g., time of day, cash on hand, geography, and sales promotions), further studies should include such nonproduct attributes. In so doing, a better understanding of "the process by which players 'tailor' their [decision-making strategies] to the environment" will be achieved (Payne et al., 1993, p. 257).

The main limitation of this study was the small sample size used to run the Extended Competitive Vulnerability Model. Although 254 questionnaires were collected, only 180 and 155 respondents, respectively, selected McDonald's and Mos Burger as their favorite brands; of these, 115 respondents placed *both* brands in their consideration sets. Given this shortcoming, three brands could not be incorporated into the proposed structural equation model. In future studies, the Laroche model of brand competition could easily be extended to include more than two brands. More importantly, the small sample size might explain the lack of significant results for all competitive pathways. Despite the small sample size, 6 of the 11 competitive relationships were significant and some were negative. According to Laroche (2002, p. 92), "not **all** off-diagonal coefficients have to be significant, but if some are and negative, this is an indication of a substitution competitive effect." The *pattern* of results thus supports the idea that competitive effects are present throughout the brand choice process (i.e., brand evaluations are interrelated). Curiously, there is no evidence of the attraction effect, which leads to wonder why consumers fail to discern a dominant alternative when choosing between two *similar* fast-food outlets (i.e., McDonald's and Mos Burger). Laroche (2002) provides several plausible explanations as to why this may be the case. Another possibility is that "the attraction effect may be diluted in real consumer settings by the substantial variability in consumers' subjective utility judgments of the brands' attribute levels" (Sen, 1998, p. 75). For researchers, the challenge is to find, separate, and quantify the different effects operating in multibrand choice.

7. Conclusions and managerial implications

This research examined consumers' brand categorization processes and provided insight into how consumers arrive at the decision to choose one brand. A test of the Brisoux–Laroche Model with 12 fast-food brands revealed that consumers categorize available brands into four awareness sets. Findings thus empirically validated the Brisoux–Laroche brand categorization model in a Japanese context and supported prior findings (Laroche and Parsa, 2000; Laroche and Toffoli, 1999). Unlike previous studies, structural equation modeling was used to delve deeper into the brand choice process that takes place in each of the four awareness sets. Findings showed that consumers' cognitive evaluations impact both their attitudes toward and confidence levels in a brand, and their intent to purchase that brand. These results were consistent across the consideration, hold, reject, and foggy sets, indicating that consumers rely on a systematic information processing approach in multibrand situations.

Our attempt to link the Brisoux–Laroche Model and the Extended Competitive Vulnerability Model was successful. Overall, most parameters were significant and all the structural relationships were in the hypothesized direction (Table 5). These findings strongly support the notion of a positive relationship between a consumer's cognitive evaluation of a focal brand and her/his attitude and intention toward the same brand, and a negative relationship between a consumer's cognitive evaluation of a specific brand and her/his attitude and intention toward competing brands. The influence of competing brands on intention to purchase a focal brand is consistent with previous findings in that an individual's intention to buy a focal brand is negatively affected by her/his global attitudes toward and confidence in other competing brands, and positively affected by her/his attitude toward and confidence in the same brand. By empirically validating the Extended Competitive Vulnerability Model, the findings support the idea that competition among brands is multifaceted. In other words, brands compete against each other at *every* stage of the decision-making process. For managers, constantly monitoring what competitors are doing is of prime importance because increasing or decreasing evaluations of competing brands may shift overall preference orders (Abe and Tanaka, 1989).

As empirically demonstrated, the Brisoux–Laroche brand categorization model allows managers to better understand how consumers sort brands. Not surprisingly, every manager's goal is to move her/his brand out of the other three sets and into consumers' consideration sets. Although this study did not address what causes a brand to move between and within awareness sets, the findings show that brands in each awareness set are heterogeneous. Managers should thus differentiate their brand from the nearest competitors by spreading brand-specific information. For example, previous research has established that information relating to price and quality has a bearing on consumers' evaluations of fast-food brands (Laroche and Toffoli, 1999). The difference in net utility between high- and low-end brands is such that it prevents the latter from being selected. Other factors (e.g., cleanliness, variety, and location) which have not yet been probed (for a complete list, see Knutson, 2000), may also deter consumers from placing brands in their consideration sets.

Even within consumers' consideration sets, competition among brands is formidable. In the Japanese fast-food sector, for example, McDonald's and Mos Burger were found to be the main competitors (i.e., the top two brands in consumer's consideration sets). With a worldwide reputation and more than double the number of outlets as its nearest rival (i.e., Mos Burger), it is of no surprise that McDonald's is the market leader in Japan. McDonald's enjoys a competitive advantage over other domestic and foreign brands by using its resources to influence the brand categorization and choice process in its favor. To successfully compete, Mos Burger and other close rivals should inform customers about their brand management strategies (e.g., brand extensions) and adopt niche marketing (Kotler, 1994; Laroche and Parsa, 2000). This is especially important in the Japanese fast-food industry, which is in the early maturity stage of the life cycle. In the United States, where the industry is fully in the mature stage, brand management is even more important (Laroche and Parsa, 2000). Smaller companies like Chick-fil-A use billboards and taste tests to lure customers, and to keep the company from drowning under the advertising weight of large national brands (Berry, 1999). By emphasizing its distinct brand personality, this U.S.-based company is able to ensure a position in consumers' consideration sets.

Acknowledgements

The authors gratefully acknowledge the financial support of the Social Sciences and Humanities Research Council of Canada.

References

Abe S, Tanaka M. Is brand evaluation independent of other brands? In: Srull TK, editor. Advances in Consumer Research, vol. 16. Provo (UT): Association for Consumer Research; 1989. p. 439–42.

Ajzen I. Attitude theory and the attitude–behavior relation. In: Krebs D, Schmidt P, editors. New directions in attitude measurement. New York: Walter de Gruyter; 1993. p. 41–57.

Beckwith NE, Kassarjian HH, Lehmann DR. Halo effects in marketing research: review and prognosis. In: Hunt HK, editor. Advances in Consumer Research, vol. 5. Provo (UT): Association for Consumer Research; 1978. p. 465–7.

Bennett PD, Harrel GD. The role of confidence in understanding and predicting buyers' attitudes and purchase intentions. J Consum Res 1975;2(2):110–7.

Berry LL. Discovering the soul of service. New York: The Free Press; 1999.

Bettman JR. An information processing theory of consumer choice. New York: Addison-Wesley; 1979.

Bliemel FWA. Brand choice under price–quality considerations: an integrative theory. Working paper 84-18, School of Business, Queen's University, Kingston (ON), Canada; 1984.

Brisoux JE, Laroche M. A proposed consumer strategy of simplification for categorizing brands. In: Summey JD, Taylor RD, editors. Evolving marketing thought for 1980. Carbondale (IL): Southern Marketing Association; 1980. p. 112–4.

Fishbein M, Ajzen I. Beliefs, attitude, intention, and behavior: an introduction to theory and research. Reading (MA): Addison-Wesley; 1975.

Howard JA. Marketing management, analysis and planning. New York: Irwin; 1963.

Howard JA. Consumer behavior in marketing strategy. Englewood Cliffs (NJ): Prentice-Hall; 1989.

Howard JA, Sheth JN. The theory of buyer behavior. New York: Wiley; 1969.

Hu L, Bentler PM. Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. Struct Eq Modeling 1999;6(1):1–55.

Knutson BJ. College students and fast food—how students perceive restaurant brands. Cornell Hotel Restaur Manage Q 2000;41(3):68–74.

Kotler P. Marketing management analysis, planning, implementation, and control. Upper Saddle River (NJ): Prentice-Hall; 1994.

Laroche M. Selected issues in modeling consumer brand choice: the extended competitive vulnerability model. In: Woodside AG, Moore E, editors. Essays by Distinguished Marketing Scholars of the Society for

Marketing Advances, vol. 11. New York: Elsevier; 2002. p. 69–114. Chap. 4.

Laroche M, Brisoux JE. Incorporating competition into consumer behavior models: the case of the attitude–intention relationship. J Econ Psychol 1989;10(3):343–62.

Laroche M, Parsa HG. Brand management in hospitality: an empirical test of the Brisoux–Laroche model. J Hosp Tour Res 2000;24(2):199–222.

Laroche M, Sadokierski RW. Role of confidence in a multi-brand model of intentions for a high involvement service. J Bus Res 1994;29(1):1–12.

Laroche M, Teng L. An empirical test of the Laroche competitive vulnerability model of cognitions, attitudes, intentions, and behavior: an application to fast-food outlets. Bull Fac Sociol, Kansai Univ., Japan 2001;32(2):1–9.

Laroche M, Toffoli R. Strategic brand evaluations among fast-food franchises: a test of two frameworks. J Bus Res 1999;45(2):221–33.

Laroche M, Rosenblatt J, Brisoux J. How consumers categorize brands: basic framework and managerial implications. Working Papers Series, Faculty of Commerce and Administration, Concordia University, Montreal, Quebec, Canada; 1985.

Laroche M, Hui M, Zhou L. A test of the effects of competition on consumer brand selection processes. J Bus Res 1994;31(2/3):171–81.

Laroche M, Kim C, Zhou L. Direct and indirect effects of confidence on purchase intention. In: Kardes FR, Sujan M, editors. Advances in Consumer Research, vol. 22. Provo (UT): Association for Consumer Research; 1995. p. 333–9.

Laroche M, Kim C, Zhou L. Brand familiarity and confidence as determinants of purchase intention: an empirical test in a multiple brand context. J Bus Res 1996;37(2):115–20.

Laroche M, Teng L, Kalamas M. Consumer evaluation of net utility: effects of competition on consumer brand selection processes. Jpn Psychol Res 2001;43(4):168–82.

Lussier DA, Olshavsky RW. Task complexity and contingent processing in brand choice. J Consum Res 1979;6(September):154–65.

Narayana CL, Markin RJ. Consumer behavior and product performance: an alternative conceptualization. J Mark 1975;39(October):1–6.

Ohnuki-Tierney E. McDonald's in Japan: changing manners and etiquette. In: Watson JL, editor. Golden arches east McDonald's in east Asia. Stanford (CA): Stanford University; 1997. p. 160–82.

Park CW, Lessig P. Familiarity and its impact on consumer decision biases and heuristics. J Consum Res 1981;8(September):223–30.

Payne JW, Bettman JR, Johnson ER. The adaptive decision maker. New York: Cambridge Univ. Press; 1993.

Raden D. Strength-related attitude dimensions. Soc Psychol Q 1985; 48(4):312–30.

Sen S. Knowledge, information mode, and the attraction effect. J Consum Res 1998;25(June):64–77.

Urbany JE, Dickson PR, Wilkie WL. Buyer uncertainty and information search. J Consum Res 1989;16(September):208–15.

Woodside AG, Clokey JD. Multi-attribute/multi-brand models. J Advert Res 1974;14(October):33–40.