

## The Antecedents and Outcomes of Customer-Based Brand Equity: The Perspective of Signaling and Perceived-Risk Theories

Mazilan Musa  
mazilanmusa@yahoo.com

Shishi Kumar Piaralal  
shishi@oum.edu.my

Jeannot Abdul Karim  
jeannot@oum.edu.my

Yon Rosli Daud  
rosli\_daud@oum.edu.my

Open University Malaysia

### Abstract

*This study is to propose a model by using signaling theory in juxtaposition with the perceived-risk theory in conjunction with the customer decision making framework and the Hierarchy of Effect (HOE) Model to explain the relationship between customer-based brand equity (CBBE) and its antecedents as well as its outcomes. It is based on a review of the extant literature related to CBBE, signaling theory, and perceived-risk theory. Even though the signaling theory had been used in prior studies to explain the antecedents-CBBE-outcomes relationship, the literature lacks the studies which discuss how this theory actually explains the decision making process of the customers. The literature also lacks the studies that relate signals of quality to customers' perceived-risk and their decision making. This is the main contribution of the present study towards the literature of marketing and consumer behavior. A conceptual framework for future research will also be proposed.*

*Keywords: Customer-Based Brand Equity, Hierarchy Of Effect, Signaling Theory, Brands*

### Introduction

A review of the extant literature revealed that firms are relying more on the strength of their brands to fortify cash flows (Yoo, Donthu, & Lee, 2000) and revenues (Ailawadi, Lehmann, & Neslin, 2003). Hence, there are evidences in the recent literature of the intensification of studies related to customer-based brand equity (CBBE) (Ahmad & Butt, 2012; Basuroy, Desai, & Talukdar, 2006; Bruhn, Schoenmueller, & Schäfer, 2012; Buil, Martínez, & Chernatony, 2013). Prior studies have their foci on the measurement and dimensions of CBBE (Aaker, 1991; Balaji, 2011; Keller, 1993), antecedent of CBBE (Rambocas, Kirpalani, & Simms, 2014; Yoo et al., 2000), outcomes of CBBE (Beneke, Greene, Lok, & Mallett, 2012; Cunningham, Gerlach, Harper, & Young, 2005), and the simultaneous examination of the antecedents and outcomes of CBBE (Bruhn et al., 2012; Snoj, Korda, & Mumel, 2004; Wallin & Coote, 2007). Nevertheless, a lot of work is still needed to further improve the current knowledge on how the antecedents actually affect CBBE and how the latter influences its outcomes or customers' responses.

Various theories had been applied to explain the relationship between CBBE and its antecedents and outcomes. Among the theories are the signal detection theory (Peterson, Birdsall, & Fox, 1954), resource- advantage theory (Hunt & Morgan, 1995), perceived risk theory (Bauer, 1960; Cox, 1967), signaling theory (Spence, 1973), theory of reasoned action (Fishbein & Ajzen, 1975), Bass diffusion model (Bass, 1969), social exchange theory (Emerson, 1976), theory of planned behavior (TPB) (Ajzen, 1991), resource-based view theory (Wernerfelt, 1984), and information processing theory (Miller, 1956). However, this study will focus on the signaling theory (Spence, 1973) and the perceived-risk theory (Bauer, 1960; Cox, 1967) as the underpinning and the supporting theories respectively. The selection of the signaling theory is consistent with the proposition of Erdem, Keane, and Sun (2008) that selected marketing mix facets to broadcast signals of quality. On the other hand, the decision to include the perceived-risk theory is influenced by the proposition advanced by Snoj et al. (2004) that related perceived quality, perceived risk, and perceived value. With exception to Cunningham et al. (2005) limited studies were conducted to relate these theories to the decision making process of the consumers. This is the gap that will be the focus of this study.

## **Methodology**

This study is based on a review of the related literatures. Consistent with the objectives of the study, the literature review was focused on articles in the fields of CBBE, underpinning and supporting theories, as well as the decision-making process. It is worth noting that the literature reviewed adhered to a number of criteria. The articles were published in recognized, peer-reviewed and indexed, either Scopus or ISI, journals. The literature review was mainly focused on recent publications. Nevertheless, some older but seminal works were also included. Hence, based on the literature review, this study proposes a conceptual framework for future research as well the accompanying underpinning and supporting theories.

## **Findings of the Literature Review**

This section elaborates on the findings of the systematic review of the literature. It is partitioned into two sub-sections. Sub-section 3.1 deliberates on the antecedents and outcomes of CBBE. However, consistent with the argument of the signaling theory, the antecedents of CBE are limited to the selected marketing mix facets which create the signals of quality to the customers (Erdem et al., 2008). Sub-section 3.2 offers a discussion on the relevant theories that could be applied to explain the antecedents-CBBE-outcomes relationship. The focus would be on the application of signaling and perceived-risk theories in the context of the decision making process.

### **The Effects of Selected Marketing Mix Facets on Customers' Responses As Mediated By CBBE and Perceived-Risk**

CBBE can be defined as “the differential effect of brand knowledge on customers’ response to the marketing of brand” (Keller, 1993, p.2). On the other hand, Yoo et al. (2000) defined CBBE as, “...the difference in consumer choice between the focal branded product and an unbranded product given the same level of product features” (p.196). Hence, based on the definition presented above, CBBE can be described as the extra value that customers put on a brand above an unbranded product or service of similar features.

A review of the literature indicated that among the antecedents of CBBE are selected marketing mix facets (Bruhn et al., 2012; Yoo et al., 2000), service experience (Mishra, Dash, & Cyr, 2014; Rambocas et al., 2014), brand affinity, and customer satisfaction (Rambocas et al., 2014). However, consistent with the contention of the signaling theory, in this study, the antecedents of CBE are limited to only selected marketing mix facets (Bruhn et al., 2012; Yoo et al., 2000) which signal quality to the consumers (Erdem et al., 2008). Quality can be defined as, "...the underlying, unobservable ability of the signaler to fulfill the needs or demands of an outsider observing the signal" (Connelly, Certo, Ireland, & Reutzel, 2010, p.43). Nevertheless, not all of the antecedents of CBBE generate signals of quality. According to Erdem et al. (2008) the quality signaling mechanics are limited to price, advertising frequency, advertising contents, and user experience.

Outcomes of CBBE or customers' responses can be defined as the customer's "behavioral response to the focal product" (Yoo et al., 2000, p.198). It reflected on how the customers react to the marketing efforts or stimuli of the firms (Yoo et al., 2000). The outcomes of CBBE include, among others, purchase intention (Bruhn et al., 2012; Tolba & Hassan, 2009; Wang & Li, 2012), price premium (Ailawadi et al., 2003; Anselmsson, Bondesson, & Johansson, 2014; Anselmsson, Johansson, & Persson, 2007; Buil et al., 2013; del Rio, Vazquez, & Iglesias, 2001; Sethuraman & Cole, 1999), brand preference (Buil et al., 2013), brand extension (Buil et al., 2013; del Rio et al., 2001), and recommendation of products to others (del Rio et al., 2001). On the other hand, Wang and Li (2012) argued that CBBE allowed product and brand differentiations which led to competitive advantage. It was also argued that CBBE moderated the effect of marketing actions such as advertising and promotion and consumer's actions including purchase (Tiwari, 2010).

However, Erdem and Swait (1998) argued that the effects of CBBE on its outcome are not direct since signals of quality reduce information costs and perceived-risk (Erdem & Swait, 1998) which elevated product preferences (Mitchell, 1999). Perceived-risk can be defined as the "expectation of loss by the consumer" (Cunningham et al., 2005, p.359) or the uncertainty and adverse consequence resulting from a purchase decision (Hornibrook & Fearne, 2003). Perceived-risk can also be defined as "the expected probability of something negative happening during a particular purchasing experience, indicating the consumer's uncertainty about the consequences of their choice" (Lee & Stoel, 2014, p. 402). Stone and Winter (1987) argued that as the level of certainty of loss occurrence increased, the greater the risk that the customer is perceived to be exposed to. Perceived-risk can be categorized as financial, performance, physical, psychological, social, and time (Beneke et al., 2012; Cunningham et al., 2006). However, Cunningham et al. (2005) argued that certain or sure perceived loss is no longer a risk. Contrary to objective risk, perceived-risk, which is the focus of this study, is a subjective determination of consumer's expectation of loss (Cunningham et al., 2005; Mitchell, 1999).

The effect of perceived-quality, which is a dimension of CBBE (Aaker, 1991), on perceived-risk and product value among mobile phone users in Slovenia has been examined by Snoj et al. (2004). In relation to this, Beneke et al. (2012) had examined the effects of perceived-risk on purchase intention among customers of premium grocery private label brands in South Africa. The relationship between risk aversion and brand loyalty among mobile phone users in Australia had been investigated by Matzler, Grabner-Kräuter, and Bidmon (2008). Cunningham et al. (2005) examined the effects of perceived-risk on consumers purchasing decisions of online airline reservation. Perceived-risk had also been suggested to explain on the patronage of online shoppers (Forsythe & Shi, 2003).

Prior studies on the effects of selected marketing mix facets on the outcomes of CBBE or customers' responses had been carried-out in partitions. The first stream of research focuses on the mediating effect of CBBE on the relationship between selected marketing mix facets and the outcomes of CBBE (Bruhn et al., 2012; Mishra et al., 2014; Rambocas et al., 2014). The second stream of studies concentrates on the mediating effects of perceived-risk on the relationship between CBBE and its outcomes (Beneke et al., 2012; Snoj et al., 2004). Hence, there is an opportunity for this study to simultaneously examine the mediating effects of CBBE and perceived-risk on the relationship between selected marketing mix facets on the outcomes of CBBE.

Based on the literature reviewed above, this study proposes a conceptual framework for future

research as exhibited in Figure 2. The inclusion of perceived-risk as a mediator in the model is consistent with the recommendation of Snoj et al. (2004) who argued that "...perceived risks in practice and theory are a neglected field of research that needs to be examined as much in research activity as in consecutive resolutions of managers...more attention must be developed to reduce the perceived risk" (p.163).

### **The Signaling and the Perceived-Risk Theories**

This study insinuates the application of the signaling theory (Spence, 1973) and perceived-risk theory (Bauer, 1960; Cox, 1967) to explain the effects of selected marketing mix facets on CBBE and the influence of the latter on its outcome. According to the signaling theory, in the presence of information asymmetry between the firm and its customers, any information revealed by the firm would be perceived by the customers as a signal of quality (Wallin & Coote, 2007). Selected marketing mix facets (Bruhn et al., 2012; Yoo et al., 2000) created the signals of quality to the

customers. As a consequence, perceived-quality, which is a dimension of CBBE (Aaker, 1991), reduced information costs and perceived-risk exposed to the consumers (Erdem & Swait, 1998). Thus, it can be construed that signals tend to diminish the information asymmetry and make economic transaction possible (Tian & Wang, 2014).

A number of prior studies had employed the signaling theory to explain the aforementioned relationship (Basuroy et al., 2006; Erdem, Swait, & Louviere, 2002; Spry, Pappu, & Cornwell, 2011; Wallin & Coote, 2007). Even though they did not empirically test the effect of CBBE on customer's responses, Yoo et al. (2000) recommended that future research should examine the relationship between CBBE and its outcomes using the signaling theory.

Alternatively, perceived-risk theory (Bauer, 1960; Cox, 1967) had also been applied to explain the influence of CBBE on customers' responses (Beneke et al., 2012; Cunningham et al., 2005; Forsythe & Shi, 2003; Matzler et al., 2008; Snoj et al., 2004). The contention of the perceived-risk theory is that there existed a negative correlation between perceived-risk and the outcomes of CBBE (Anselmsson et al., 2014; Bianchi & Andrews, 2012; Mitchell, 1999).

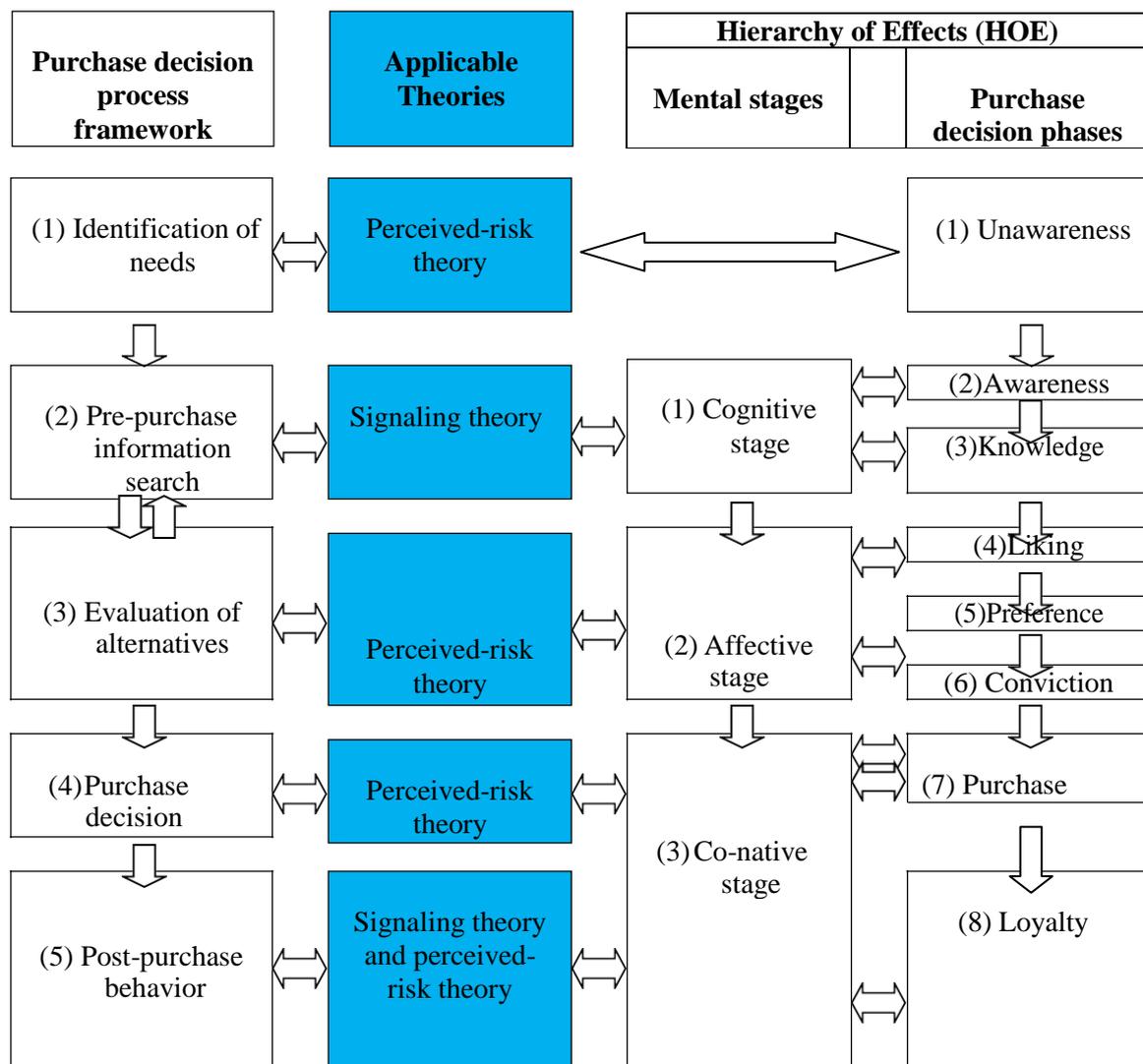
In prior studies, the signaling theory and the perceived-risk theory were applied in partitions. Recent literature also lack studies that examine customers' responses as the consequences of their purchase decision processes. Thus, an opportunity is presented to this study to employ both theories in a collaboration to explain the purchase decision process of the customers. Furthermore, based on the discussion presented above, it is decided that the signaling theory (Spence, 1973) and the perceived-risk theory (Bauer, 1960; Cox, 1967) will be simultaneously employed in this study to explain the outcomes of CBBE which are influenced by the selected marketing mix facets as mediated by CBBE and perceived-risk.

### **Towards a Conceptual Framework**

This section elaborates on how the signaling and the perceived-risk theories explain consumers' behavior and at which stages. It is divided into two sub-sections. Sub-section 4.1 discusses on the consumers' decision making process, the mental stages of decision making phases and their relationships with the signaling and the perceived-risk theories. Finally, sub-section 4.2 offers a conceptual framework for future research.

### **The Roles of the Theories in Decision-Making Process**

This study draws on Cunningham et al. (2005) and Hutter, Hautz, Dennhardt, and Füller (2013) who examined the purchase decision making among customers. While Cunningham et al. (2005) explained the customers' purchase decision using the purchase decision making framework; Hutter et al. (2013) based their study on the Hierarchy of Effects (HOE) Model. Cunningham et al. (2005) argued that customers made their purchase decisions after going through the buying process that reduced or eliminated their perceived-risk. The framework of decision making process (Cunningham et al., 2005) consisted of five stages of activities, which are identification of problems and needs, pre-purchase information search, evaluation of alternatives, purchase decision, and post-purchase behavior (see Figure 1). Nevertheless, Cunningham et al. (2005) did not co-apply the signaling theory in their study. It is noteworthy that pre-purchase information search is a step in the purchase decision making framework (see Figure 1). Since information transmits signal of quality to the customers (Wallin & Coote, 2007), the application of the signaling theory in this study is justified. This is the theoretical gap that this study attempts to reduce.



**Figure 1:** The Combination of the Decision Making Process Framework and the Hierarchy of Effects (HOE) Model adopted from Cunningham et al. (2005) and Hutter et al (2013) respectively.

Conversely, Hutter et al. (2013) applied the HOE to explain the mental stages that customers have to go through in making a purchase decision. The HOE refers to the “fixed [and hierarchical] order in which consumers perceive, process, and use advertising and other marketing communication information” (Hutter et al., 2013, p.343). HOE stipulates a series of mental stages that the consumers have to go through in their decision making process. The mental stages, which are in hierarchical order, are cognitive (thinking), affective (feeling), and co-native (doing) (Hutter et al., 2013; Tolba & Hassan, 2009). This concept has its origins in the field of communication and advertising.

However, Hutter et al. (2013) employed neither the signaling theory nor the perceived-risk theory in customer’s purchase decision process. Hence, there is an opportunity for this study to simultaneously apply the signaling and the perceived-risk theory to explain the effects of selected marketing mix facets on customers’ responses as mediated by CBBE and perceived-risk. The way forward is to apply those two theories on purchase decision process framework and the HOE (see Figure 1 and Figure 2).

Hence in this study, the purchase decision process framework and the HOE will be employed together to explain how customers reach their purchase decisions. In addition, this study will utilize the signaling theory in juxtaposition with the perceived-risk theory to explain each decision making stage and its corresponding mental stage (see Figure 1).

It is evident in Figure 1 that a customer will begin his purchasing process with the identification of his problem, which triggers the need to purchase a product or service. There is a possibility that the customer is not aware of the product/service at this stage. This is the stage where there exists information asymmetry between the firms and the potential customers. If no or insufficient information is available about the intended product or service, the customer will feel that it is risky to make a purchase at this juncture. Therefore, based on the perceived-risk theory, he will not decide to purchase at this stage.

In order to mitigate the perceived riskiness, the customer will enter into Stage 2 of the purchase decision process framework which is to acquire as many information as possible about the product or service. Information could be retrieved or gathered or implied from price of the product or service or from advertisements (Erdem et al., 2008; Yoo et al., 2000). Furthermore, in this era of the internet, more information about products and services are readily available through social media (Bruhn et al., 2012). In accordance to the signaling theory, information provided signals of quality and hence, influenced the customer's perceived quality (Erdem et al., 2008). Since perceived quality is a dimension of CBBE (Aaker, 1991), it is therefore probable to contemplate that information affects the creation of CBBE, via perceived-quality.

The pre-purchase information search corresponds to the cognitive mental stage of HOE. For a new customer, this is the stage where the customers create awareness and acquire knowledge, which are the dimensions of CBBE (Aaker, 1991; Keller, 1993), about the brand or the product. The customers will search for more information related to the products. At the same time, consistent with the contention of the signaling theory, the firms can transmit signals which contain information to the customers via marketing communication tools, including traditional advertisements and social media communications (Bruhn et al., 2012). Now the customers have developed a sense of awareness and are more knowledgeable about the product. At the end of the cognitive stage, the customers are able to make some judgment on the quality of the products or services. Thus, the CBBE of the product is being created.

Next, the customer will enter Stage Three of the purchase decision process framework, which is to evaluate the alternative(s) that he has in hand. At this stage, based on the information gathered, he begins to develop a perception on the CBBE and the riskiness of the service or product. If he is less than satisfied with the information gathered thus far, he can go back to Stage Two and gather more information about the product or service. The Stage Three of the purchase decision process corresponds to the affective mental stage of the HOE. This is the stage where the customers will mentally develop their likings, preferences, and conviction of the products and services. Upon consultation of all sources of information, the customer will make his purchase decision. It is reasonable to posit that CBBE is not only a measure of the overall value of a product or service, but it also provides indication on the riskiness of the product or service (Snoj et al., 2004). Hence, it is fair to suggest that a product of high CBBE is not only high in overall value, but also low in riskiness.

Finally, upon conviction, the customer will decide to make (or not to make) a purchase which corresponds to the co-native stage of HOE. Based on his perception of the level of riskiness that he is exposed to, the customer is in a better position to make his purchase decision. This is consistent with the contention of the perceived-risk theory.

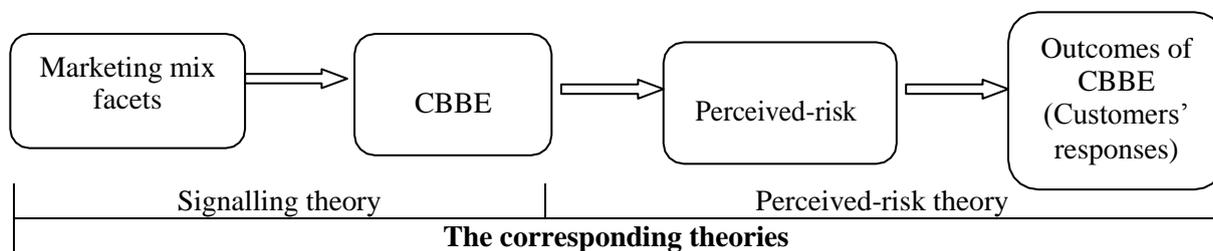
Based on the purchase, the customer will develop his level of satisfaction/dissatisfaction (Nam, Ekinci, & Whyatt, 2011) as the result of consuming the product or the utilization of the service. This occurs at Stage 5 of the purchase decision process framework which is to develop the post-purchase behavior. Satisfaction with the first purchase will lead to repeat purchase which signifies the loyalty of the customers towards the brand. This is coherent with loyalty which is part of the co-native stage of HOE. If he is satisfied with the first purchase, it is fair to posit that his perceived-risk is relatively low. Hence, he will repeat his purchase and becomes a loyal customer. This is coherent with the contention of the perceived-risk theory. However, if he is less than satisfied with the first purchase, following the signaling theory, he may seek for more information about other brands of similar product/service.

The whole purchase decision phases of HOE’s mental stages are more applicable in explaining the decision-making process of new or potential customers (Tolba & Hassan, 2009). However, Tolba and Hassan (2009) argued that customers do not necessarily follow all the phases and stages. For the potential customers who are already aware of the product/service, they could by-pass the unawareness phase of HOE.

In view of the discussions presented above, it can be concluded at this juncture that the signaling and the perceived-risk theories can effectively explain customers’ purchase decision process using the purchase decision process framework and HOE.

### Research Implications

Based on the literature review, this study proposes a conceptual framework, which is illustrated in Figure 2, as the direction for future research. The conceptual framework proposes that there exists a relationship between marketing mix facets and customers’ responses, which are mediated by CBBE and perceived risk. There is no evidence in the recent literature of any known studies that have had simultaneously investigated the relationship that is depicted in Figure 2.



**Figure 2:** The proposed conceptual framework and the corresponding theories.

The proposed model suggests that CBBE (Bruhn et al., 2012; Buil et al., 2013) and perceived-risk (Beneke et al., 2012; Snoj et al., 2004) serve as the mediators in the selected marketing mix facets – customers’ responses relationship. Based on the discussions presented above, it is probable to posit that marketing mix facets will enhance CBBE. Consequently, CBBE reduced perceived-risk (Snoj et al., 2004) and thus, motivated customers’ positive responses (Anselmsson et al., 2014). Nevertheless, it is argued that perceived-risk is more immense in the intangible service than in tangible products (Cunningham et al., 2005). Hence, the effect of CBBE is less significant in intangible services compared to the tangible products (Krishnan & Hartline, 2001).

It is worth noting that the application of the signaling theory alone is insufficient to explain the effects of the selected marketing mix facets on customers’ responses. Since the selected marketing mix facets transmit signals of quality to the customers, it is fair to suggest that the signaling theory only explains the creation of CBBE. The influence of CBBE on customers’ responses is through the reduction or elimination of perceived-risk (Beneke et al., 2012; Snoj et al., 2004). Hence, the effects of selected marketing mix facets on customers’ responses as mediated by CBBE and perceived-risk need to be explained by the signaling theory in juxtaposition with the perceived-risk theory.

### Conclusion

This study proposes a more comprehensive approach in examining the relationship between the selected marketing mix facets and customers’ responses, which is mediated by CBBE and perceived-risk. The focus of this study is on the decision making process and the corresponding mental stages involved. The signaling theory and the perceived-risk theory are employed to provide the rationale behind each stage of the decision making process. It is thus not unreasonable to suggest that this study establishes more advanced theoretical and conceptual frameworks for CBBE-related studies. This is achieved through the consolidation of the signaling and perceived-risk theories with the customers’ decision process framework and the HOE.

## References

- Aaker, D. a. (1991). "Managing Brand Equity." *Journal of Marketing*. Vol. 56, 125.
- Ahmad, S. and Butt, M. M. (2012). "Can after sale service generate brand equity?" *Marketing Intelligence & Planning*. Vol. 30, No. 3, 307–323.
- Ailawadi, K. L., Lehmann, D. R., and Neslin, S. A. (2003). "Revenue Premium as an Outcome Measure of Brand Equity." *Journal of Marketing*. Vol. 67, (October 2003), 1–17.
- Ajzen, I. (1991). "The Theory of Planned Behavior." *Organizational Behavior and Human Decision Processes*. Vol. 50, 179-211.
- Anselmsson, J., Bondesson, N. V, and Johansson, U. (2014). "Brand image and customers' willingness to pay a price premium for food brands." *Journal of Product and Brand Management*. Vol. 23, 90–102.
- Anselmsson, J., Johansson, U., and Persson, N. (2007). "Understanding price premium for grocery products: a conceptual model of customer-based brand equity." *Journal of Product & Brand Management*. Vol. 16, No. 6, 401–414.
- Balaji, M. S. (2011). "Building Strong Service Brands: The Hierarchical Relationship Between Brand Equity Dimensions." *Journal of Brand Management*. Vol. 8, 7–24.
- Bass, F. (1969). "A new product growth for model consumer durables." *Management Science*. Vol. 15, No. 5, 215-227.
- Basuroy, S., Desai, K. K., and Talukdar, D. (2006). "An Empirical Investigation of Signaling in the Motion Picture Industry." *Journal of Marketing Research*. Vol. 43, No. 2, 287–295.
- Bauer, R.A. (1960). Consumer behavior as risk taking, in Hancock, R. (Ed.), *Dynamic Marketing for a Changing World in Proceedings of 43<sup>rd</sup> Conference*, American Marketing Association, Chicago, IL, pp.389-98.
- Beneke, J., Greene, A., Lok, I., and Mallett, K. (2012). "The influence of perceived risk on purchase intent – the case of premium grocery private label brands in South Africa." *Journal of Product & Brand Management*, Vol. 21, No. 1, 4–14.
- Bianchi, C. and Andrews, L. (2012). "Risk, trust, and consumer online purchasing behavior: a Chilean perspective." *International Marketing Review*. Vol. 29, No. 3, 253-276.
- Bruhn, M., Schoenmueller, V., and Schäfer, D. B. (2012). "Are social media replacing traditional media in terms of brand equity creation?" *Management Research Review*. Vol. 35, 770–790.
- Buil, I., Martínez, E., and Chernatony, L. De. (2013). "The influence of brand equity on consumer responses." *Journal of Consumer Marketing*. Vol. 30, No. 1, 62–74.
- Connelly, B. L., Certo, S. T., Ireland, R. D., and Reutzel, C. R. (2010). "Signaling Theory: A Review and Assessment." *Journal of Management*. Vol. 37, No. 1, 39–67.
- Cox, D. (1967). "Risk taking and information handling in consumer behavior." *Division of Research, Graduate School of Business Administration, Harvard University, Boston, MA*.

- Cunningham, L. F., Gerlach, J. H., Harper, M. D., and Young, C. E. (2005). "Perceived risk and the consumer buying process: internet airline reservation." *International Journal of Service Industry Management*, Vol. 16, No. 4, 357-371.
- del Rio, A. B., Vazquez, R., and Iglesias, V. (2001). "The effects of brand associations on consumer response." *Journal of Consumer Marketing*. Vol. 18, No. 5, 410-425.
- Emerson, R.M. (1976). "Social Exchange Theory." *Annual Review of Sociology*. Vol. 2, 335-362.
- Erdem, T., Keane, M. P., and Sun, B. (2008). "A Dynamic Model of Brand Choice When Price and Advertising Signal Product Quality." *Marketing Science*, Vol. 27, No. 6, 1111-1125.
- Erdem, T., and Swait, J. (1998). "Brand Equity as a Signaling Phenomenon." *Journal of Consumer Psychology*. Vol. 7, 131-157.
- Erdem, T., Swait, J., and Louviere, J. (2002). "The impact of brand credibility on consumer price sensitivity." *International Journal of Research in Marketing*. Vol. 19, 1-19.
- Fishbein, M. and Ajzen, I. (1975). "Belief, attitude, intention, and behaviour: An introduction to theory and research." Reading, MA: Addison-Wesley.
- Forsythe, S. M., and Shi, B. (2003). "Consumer patronage and risk perceptions in Internet shopping." *Journal of Business Research*. Vol. 56, No. 11, 867-875.
- Hornibrook, S. a., and Fearn, a. (2003). "Managing perceived risk as a marketing strategy for beef in the UK foodservice industry." *International Food and Agribusiness Management Review*. Vol. 6, No. 3, 70-93.
- Hunt, S.D. and Morgan, R.M. (1995). "The Comparative Advantage Theory of Competition." *Journal of Marketing*. Vol. 59, Issue (April 1995), 1-15.
- Hutter, K., Hautz, J., Dennhardt, S., and Füller, J. (2013). "The impact of user interactions in social media on brand awareness and purchase intention: the case of MINI on Facebook." *Journal of Product & Brand Management*. Vol. 22, No. 5/6, 342-351.
- Keller, K. L. (1993). "Conceptualizing, measuring, and managing customer-based brand equity." *Journal of Marketing*. Vol. 57, 1-22.
- Krishnan, B. C., and Hartline, M. D. (2001). "Brand equity: is it more important in services?" *Journal of Services Marketing*. Vol. 15, No. 5, 328-342.
- Lee, J.E. and Stoel, L. (2014). "High versus low online price discounts: Effects on customers' perceptions of risks." *Journal of Product & Brand Management*. Vol. 23, No. 6, 401-412.
- Matzler, K., Grabner-Kräuter, S., and Bidmon, S. (2008). "Risk aversion and brand loyalty: the mediating role of brand trust and brand affect." *Journal of Product & Brand Management*. Vol. 17, No. 3, 154-162.
- Mishra, A., Dash, S. B., and Cyr, D. (2014). "Linking User Experience and Consumer based Brand Equity: The Moderating Role of Consumer Expertise and Lifestyle." *Journal of Product & Brand Management*. Vol. 23, No. 4/5, 333-348.
- Miller, G.A. (1956). "The magical number seven, plus or minus, two: Some limits on our capacity for processing information." *Psychological Review*. Vol. 63, No. 2, 81-97.



- Mitchell, V. (1999). "Consumer perceived risk: conceptualisations and models." *European Journal of Marketing*. Vol. 33, No. 1/2, 163–195.
- Nam, J., Ekinci, Y., and Whyatt, G. (2011). "Brand equity, brand loyalty, and consumer satisfaction." *Annals of Tourism Research*. Vol. 38, No. 3, 1009-1030.
- Peterson, W.W., Birdsall, T.G., and Fox, W.C. (1954). "The theory of signal detectability." *Proceedings of the IRE Professional Group on Information Theory*. PGIT4, 171-212.
- Rambocas, M., Kirpalani, V. M., and Simms, E. (2014). "Building brand equity in retail banks: the case of Trinidad and Tobago." *International Journal of Bank Marketing*. Vol. 32, No. 4, 300–320.
- Sethuraman, R., and Cole, C. (1999). "Factors influencing the price premiums that consumers pay for national brands over store brands." *Journal of Product & Brand Management*. Vol. 8, No. 4, 340–351.
- Snoj, B., Korda, A. P., and Mumel, D. (2004). "The relationships among perceived quality, perceived risk and perceived product value." *Journal of Product & Brand Management*. Vol. 13, No. 3, 156–167.
- Spence, M. (1973). "Job market signaling." *The Quarterly Journal of Economics*. Vol. 87, No. 3, 355-374.
- Spry, A., Pappu, R., and Cornwell, T. B. (2011). "Celebrity endorsement, brand credibility and brand equity." *European Journal of Marketing*. Vol. 4, No. 6, 882-909.
- Stone, R.N. and Winter, F.W. (1987). "Risk: Is it still uncertainty times consequences?" *Proceeding of the American Marketing Association Winter Educator's Conference, Chicago, IL, U.S.A.*
- Tian, J. and Wang, S. (2014). "Signalling service quality via website E-CRM features: more gains for smaller and lesser known hotels." *Journal of Hospitality & Tourism Research*. Vol. 20, No. 10, 1-35.
- Tiwari, M.K. (2010). "Separation of Brand Equity and Brand Value." *Global Business Review*. Vol. 11, No. 3, 421-434.
- Tolba, A. H., and Hassan, S. S. (2009). "Linking customer-based brand equity with brand market performance: a managerial approach." *Journal of Product & Brand Management*. Vol. 18, No. 5, 356–366.
- Wallin, A. C., and Coote, L. V. (2007). "What Do Brands Signal?" *Proceeding of the American Marketing Association Winter Educator's Conference 2007, San Diego CA, U.S.A.*
- Wang, H. and Li, W-T. (2012). "Factors influencing mobile services adoption: a brand-equity perspective." *Internet Research*. Vol. 22, No. 2, 142–179.
- Wernerfelt, B. (1984). "A Resource-Based View of the Firm." *Strategic Management Journal*. Vol. 5, No. 2, 171-180.
- Yoo, B., Donthu, N., and Lee, S. (2000). "An Examination of Selected Marketing Mix Elements and Brand Equity." *Journal of the Academy of Marketing Science*. Vol. 28, No. 2, 195–211.