CHAPTER 6
CONCLUSION AND DISCUSSION

The purpose of this chapter is to discuss implications, limitations, and future research avenues. Firstly, this chapter presents theoretical implications of the research findings from hypotheses testing. Secondly, this chapter provides managerial implications. Finally, this chapter discusses limitations of this study and suggests future research avenues.

6.1 Theoretical Implications

Prior literature largely examined product type, purchase environment, and individual differences separately to understand the role of haptic information processing in a product evaluation. The present dissertation includes all three sets of variables to complete the gestalt of Mehrabian and Russell (1974). It throws light on the process through which these three variables influence overall evaluation and purchase intention, offering new insights to both researchers and practitioners. By doing so, this dissertation expands upon Peck and Childers’s (2003a; 2003b) work and examines the role of haptic information processing in the product evaluation using a comprehensive framework. In addition, it provides an insight for overarching debate of the role of cognition and affect in consumer decision making process using haptic information processing as a theoretical underpinning.

This research has several theoretical implications. First, the study extends the Stimulus-Organism-Response (S-O-R) theory to haptic information processing context, examining the effects of purchase environment and product type on cognitive and affective responses with a single conceptual model. While this theoretical framework is guided by earlier work (e.g., Spies et al. 1997; Turely and Milliman 2000), the framework allows one to examine mediating effects of cognitive and affective responses between the relationships of purchase environment and
overall evaluation and purchase intention. It extends the prior research work by concurrently investigating the moderating roles of NFT and consumer knowledge in a theoretically grounded framework.

Second, findings indicate that evaluation of a haptic product results in higher positive attitudinal and behavioral intentions in touch environment than in no-touch and print environments. In contrast, print environment is found to be more suitable for evaluation of non-haptic product than touch and no-touch environments. These mixed findings can be attributed to the properties of the products used in the study. Haptic product possess pleasant sensory haptic attributes such as softness in the case of sweater which can be evaluated better in touch environment than in no-touch and print environments. On the other hand, non-haptic product is supposed to have instrumental haptic attributes such as weight in case of DVD player which can be assessed in print environment as well. In addition, touch environment does not facilitate the accessibility of any additional haptic information about the non-haptic product. Therefore, for promoting non-haptic products, print environment is likely to be more suitable than touch and no-touch environments.

Third, results show that purchase environment exerts significant direct effect upon overall evaluation and purchase intention for both haptic and non-haptic products. While various researchers (Childers and Peck 2010; Grohmann, Spangenberg, and Sprott 2007) have postulated that affective state mediates the effect of purchase environment on overall evaluation for haptic product, their studies do not support the hypothesized mediating role of affective response. The present study concurrently examines the mediating effect of cognitive and affective responses on overall evaluation across haptic and non-haptic products. Results show that affective and cognitive responses mediate the relationship between purchase environment and overall
evaluation only for haptic product but not for non-haptic product. The possible reason could be that haptic product involves sensory exploration in touch environment which is likely to result in affective and cognitive responses, but this would not happen for non-haptic product which is composed of instrumental haptic attributes such as weight. Therefore, only for haptic product, cognitive and affective responses mediate the relationship between purchase environment and overall evaluation.

Fourth, it is shown that for haptic product the interaction effect of purchase environment and NFT on cognitive response is significant. It suggests that for haptic product in touch environment, individuals with high NFT show higher cognitive response than those with low NFT. This result is consistent with prior research findings (Grohmann, Spangenberg, and Sprott 2007; Peck and Childers 2003a; 2003b). However, the present study does not find support for the hypothesized interaction effect of purchase environment and NFT on affective response for haptic product. This unexpected result could be attributed to the fact that individuals use haptic information in touch environment as a primary information source to judge the quality of a haptic product. In touch environment it is likely that individuals with high NFT exhibit more functional goal oriented behavior than sensory enjoyment of touching a product. This lends support to the arguments advanced by Shavitt, Lowrey, and Han, (1992) that products often constrain the influence of individual differences when objects are dominantly evaluated for a specific function.

Fifth and finally, it is important to note that Sujan (1985) did not find evidence of a relationship between subjective knowledge and affective response. Though for non-haptic product, the results of the current study are consistent with the findings of Sujan (1985) and several other studies (Brucks 1985), it demonstrates a positive effect of subjective knowledge on
affective response for haptic product. This finding supports the arguments advanced by several researchers (Peracchio and Tybout 1996) that consumers with high subjective knowledge of affective laden product do exhibit affective response. This is likely to happen as in case of the product which has affective properties such as softness in the case of a sweater. Results also show that objective knowledge about haptic and non-haptic products has significant impact on cognitive response but not on affective response. The possible reason could be that objective knowledge is the sum total of knowledge of a product which relates to schema held in customers’ minds. Such cognitive schemas are likely to have influence on customer’s cognitive response but not on affective response. It has been observed that cognitive response is relatively stronger for non-haptic product than for haptic product. This suggests that non-haptic product which is likely to have some instrumental haptic attributes such as weight is likely to elicit higher cognitive response than haptic product which is likely to have more autotelic attributes such as softness.

6.2 Managerial Implications

Study findings provide several key managerial insights. First, study results reinforce the findings of earlier research work which suggest that haptic products are difficult to be sold online (Citrin et al. 2003; Peck and Childers 2003a). Retail managers should understand that touch environment elicits more affective and cognitive responses which would lead to favorable overall evaluation and higher purchase intention of a haptic product. Hence, they should allow the consumers to touch the haptic product for its evaluation. In addition, it is even more important for the retail managers to understand that print environment has a direct role to play in eliciting favorable overall evaluation and higher purchase intention for a non-haptic product. This study suggests that non-haptic products can also be sold in online and in no-touch environment. On the other hand, this gives an indication that store retailers should place a picture of the non-haptic
product at the point of purchase. This is likely to result in higher positive overall evaluation and purchase intention compared to the same haptic product kept in touch environment without any picture.

Second, findings indicate that consumers differ in their propensity to seek haptic information. It has been found that individuals high on NFT exhibit cognitive response for haptic product more in touch environment than in no-touch and print environments. It underscores the importance of segmenting the consumers based on NFT scores. Online sellers can target those consumers who are low on NFT scores and sell even haptic products in online setting. Findings also indicate that for non-haptic product, individuals who are high on NFT exhibit higher favorable response in print environment than in touch and no-touch environments. Managers selling haptic and non-haptic products need to be very careful while targeting those individuals who are high on NFT.

Third and finally, findings suggest that targeting consumers with subjective and objective knowledge of haptic and non-haptic products would not be easy for the managers. Specifically when consumers have high level of subjective knowledge about haptic product, managers need to understand that they emit more cognitive and affective responses which in turn result into higher purchase likelihood. In contrast, consumers with high level of subjective knowledge about non-haptic product have shown more positive response. It is also important to note that consumers with high objective knowledge show more cognitive response than their counterparts who are low on objective knowledge. Findings further suggest that consumers with high objective knowledge about haptic product show more cognitive response, affective response, and favorable overall evaluation in touch environment than in no-touch and print environments. In such cases, managers should encourage those consumers to touch the product in a retail setting.
Therefore, it is required that managers should segment the potential markets based on the consumers’ knowledge levels about haptic and non-haptic products. For example, in a retail store, retailers can create two shelves with the product and its required information for targeting these two distinct segments.

6.3 Limitations and Future Research Avenues

Although this study expands our knowledge about the role of haptic information processing in product evaluation, viable prospects for further research remain. First, the current study used a homogeneous set of graduate college students. Although, relevance of product categories was pretested for this sample, differences in the degree to which a more general population may use haptic information in product evaluation are yet to be explored. For example, functionally illiterate consumers tend to process available information with a 1-to-1 correspondence to the physical world, rather than the symbolic world that develops with literacy (Viswanathan et al. 2009). Functionally illiterate consumers generally struggle to process the standard marketing communication used for promoting a product. Therefore, it would be worthwhile to examine the role of haptic information processing among functionally illiterate consumers since they use more concrete and sensorial information than textual information.

Second, one haptic and one non-haptic products were used for the study. Future research should extend this by examining multiple haptic and non-haptic products. It would be interesting to examine the effect of purchase environment on attitudinal and behavioral intentions with low levels of purchase involvement for haptic and non-haptic products such as in the context of ball pen, laundry detergent, handkerchief, and battery. It would be informative for future research to consider such products and examine whether accessibility of haptic information may also affect product evaluation.
Third, purchase environment was manipulated using three levels-touch, no-touch, and print- to simulate realistic shopping scenarios. Though, realism scores for each of the purchase environment were satisfactory, it might not be directly applicable to real-world settings and should not be generalized beyond the experimental manipulations. Therefore, it would be worthwhile to conduct future research in natural shopping environment such as in a retail store. However, as is the case in many controlled experiments, focus of the study was on internal validity rather than the external validity. It would be even more insightful to add internet as one more level of purchase environment. It would shed some light on the possible compensatory role of interactivity for haptic information in online purchase environment.

Fourth, measure of affective response was based on a relatively narrow definition of the construct. It must be acknowledged that affective response is likely to have more than one dimension and the importance of those dimensions might differ across purchase environments and product categories. Though, it was argued that overall affective response was composed of all the possible dimensions (Khan and Isen 1993; Shiv and Fedorikhin 1999), but it might not be the only dimension of affective response as suggested by Mehrabian and Russell (1974) and Fiore, Yah, and Yoh (2000). Future studies should measure more than one dimensions of affective response such as pleasure, arousal, and dominance (Mehrabian and Russell 1974) to expand our knowledge in this context.

Fifth, limitation of relying on behavioral intentions instead of actual behavioral data is well acknowledged. Extending the research by measuring consumers’ actual behavior of haptic and non-haptic product in a natural setting would be a useful direction for future research.

Sixth and finally, consumer knowledge about sweater and DVD player were measured using scales in the first phase of the study. It might be possible that respondents might have
acquired additional information about these two products during the six weeks of time period. This might have influenced the scores used for classifying consumers with high and low knowledge about haptic and non-haptic products. In order to overcome this limitation, future study can manipulate it by administering a training exercise at the outset of conducting the main experiment. This can be done by randomly dividing a homogenous group of consumers into two groups. One group will receive the training exercise in which they will be provided with the knowledge about the product identified for the study and another will not receive any training for the product knowledge.