



Aesthetic Factors for High Value Chair Development

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Abstract

This paper reports the findings of a research on factors influencing buying decisions of high value chairs and customer preference regarding forms, colors, and materials of the chairs. Interviews and questionnaire survey methodologies were employed. The result shows that 'design' is the most important factor influencing buying decisions. Quadrilateral shape with rounded edges is more favorable compared with other shapes. Slim design with balanced dimensions is more popular than thick, sturdy design. Light tone and fairly bright color is more preferable than darker ones. The majority of customers prefer the colors that are familiar to them. Wood is the most favorite structural material for the chairs while cotton is more popular than leather as a cover material. The implications of such findings for high value chair design and development are discussed.

Keywords: high value chair, chair design, industrial design, product attractiveness, aesthetic design

Introduction

Why do some high value products enjoy tremendous success in the marketplace while others fail miserably? What factors lead to successes and what factors lead to failures? These questions are, of course, not new but the answers seem to be elusive. For some products, customers have the motivation for buying them and doing so without careful thinking. For others, people seem not to care in spite of lots of advertising and promotional campaigns. Some insights into the answers to these questions are extremely valuable for manufacturers and designers of high value products.

This paper attempts to find the answers to these questions of high value chair products. The aim is to identify key factors and subfactors that lead to the buying decisions of high value chairs. What are the motivations for purchasing such products? It is hoped that the results from the study would provide some insights for designing

and developing high value chairs and also other high value furniture items.

Successes and failures as well as factors affecting buying decisions were studied by many investigators. The Incubation and Fertility Research Group (IFRG), for example, has identified a number of factors influencing purchasing decisions of furniture. These include aesthetic appeal, product quality, price, environmental friendliness, social image, and brand [1]. Among these, aesthetic design is ranked at the top of the list. Ratnasingam found that a key success factor of the furniture industry in Europe and North American was design whereas in Asia Pacific design received little attention [2]. The data from the Thai Customs Department suggested, however, that the imports of sophisticated design chairs were increasing, as was the sales volume [3]. This means that the market is changing and design is increasingly playing an important role in the success of

furniture industry. Aesthetic factor in design has also been investigated by many researchers. Aesthetic features have been valued for attracting customers' attention and a key to buying decision, which are the importance of aesthetic consideration as well as usability in all forms of design [4]. Furthermore, in terms of design, the aesthetics has always played a role in the success of product and work design [5]. Although, some researchers argued to forget about aesthetics in chair design which ergonomics should provide the basic for comfort [6]. However, consumers' aesthetic reactions are an increasingly important factor in competitiveness of products [7].

In recent years, Thai designers, engaged in designing and developing a high value chair, have improved their capabilities remarkably and are able to win awards and participate in the world competition. [8]. However, best design might not always be chosen by the customer due to a lack of information about critical factors that satisfy the customer need. Aesthetic design factors have never been studied in Thailand before.

The objective of this research is to identify key factors influencing buying decisions and the factors that constitute attractive design of high value chairs.

Methodology

This research was conducted in 2 stages. In the first stage, 400 interviewees were purposefully selected for interviews. The aim of this stage was to identify key factors that influence decision-making in buying high value chairs. The interviews were conducted via 3 modes; face-to-face, internet and by telephone. The second stage was conducted by questionnaire survey. The aim of this stage was to elicit the preferences of the customers regarding forms, color, and materials in high value chair design. Four forms were used in this research; quadrilateral, circular, triangular, and cylindrical.

The colors examined in this study were green, red, orange, and yellow. Four types of materials were tested for customers preferences; wood, aluminum, natural fabric, and plastic.

The interview questions for the first stage and the questionnaire for the second stage employed in this research are shown in the Appendices.

Results and Discussion

Interview results are shown in Figure 1. It is rather clear that the great majority of the interviewees (98%) rank attractive design as the top consideration when they decide to purchase high value chairs.

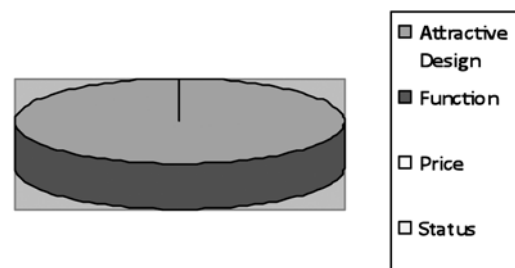


Figure 1: The most important thing in deciding to purchase high value chair.

Probing deeper into the meaning of attractive design, the interviewees responded with various answers including being aesthetic, being fully functional and smart, being ergonomic. Social factors and prices are also important. However, Aesthetic factor, among all the responses, is the most outstanding one, as shown in Figure 2.

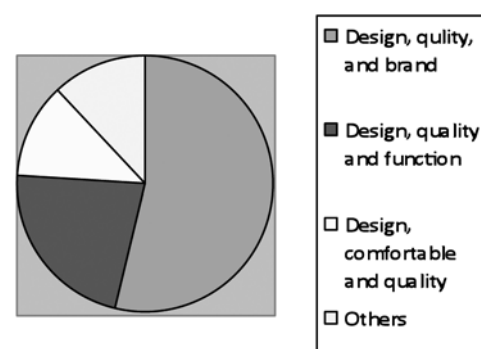


Figure 2: Interview results in other responses.

People do like beautiful things when it comes to making a decision to purchase high value items. This was in line with Park and Han who found that affective user satisfaction is considered one of the most important factors in designing consumer products [9]. Aesthetic design, however, is highly subjective and is a culmination of many factors. Each customer has their different views towards 'attractive design' and beauty is indeed in the eyes of the beholders. For high value chairs, forms/shapes, colors and materials are key factors that constitute attractive design. The results of the investigation into the influences of these factors will be presented and discussed below.

Other factors that are important in taking a decision to buy high value chairs include functions, social status, and cost. Functions refer to specific functions or capabilities that the chairs can be used to perform such as massaging, adjustable configurations. Customers prefer chairs with multifunctions to those with monofunction or a limited function. This seems to be true not only with high value chairs but also for other products. People prefer products with multiple 'features' even though, in reality, only a few functions are actually used. Mobile phone is an example of this kind of product. Social status is also a prominent factor in making a decision to purchase high value chairs. The facts that they are 'luxurious, expensive, and your-neighbors-have-them' make one feel proud of being an owner, and then decide to buy these high value chairs. The one who does not own these chairs may feel rather inferior to friends or neighbors [10]. Although cost is not a primary importance, our interview results show that cost is an essential factor nonetheless. One certainly wants to pay as little money as possible. Further probing on the cost issue reveals that the deeper motivation is in fact at work. It is not only the cost per se but also the need for self-esteem of being smart and important if one can purchase high value items at

'bargain' price or at 'special' price. A customer is very satisfied if he or she can purchase a high value chair at a bargain price or at lower price than his or her colleagues even though the price is still rather high.

There are several implications for the design and development of high value chairs from the above findings. First, attractive design is critical to the success of such products in the marketplace. Product designers and developers must have a deep understanding of what attractive design in the view of the target customers is. Different customers, of course, have different views regarding beauty and attractiveness. Identifying target customers and their views on attractive designs are therefore the key prerequisites for success. These tasks may be difficult and elusive but they are essential. Designers and manufacturers should get the pictures of customers as clear as possible regarding these critical issues. The results of such efforts might be not totally crystal clear but they are useful nonetheless.

The second implication is that high value chairs should be designed to be multifunctional. The functions should, however, be relevant to the needs or perceived needs of target customers. Again, understanding the customers is the key. Functions should not be too complicated to use. Primary functions should be highlighted in the design in order that they can be easily recognized by target customers. Design features which represent status symbols, the third implication, should always be considered in designing high value chairs. This depends on target customers, their cultures, and the ways social status is perceived in their society. The last implication involves pricing strategy of these products. High value chairs should be carefully priced and sold in such a way that the customers feel they are 'clever' in purchasing the products, 'Special offers' for 'special customers' could be one way to achieve such objective.

The results of interview to identify the preferences of basic shapes/forms, basic colors, and basic materials are shown in Figures 3–5.

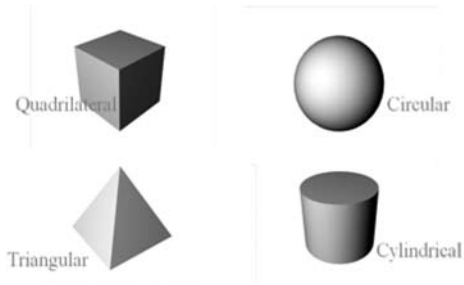


Figure 3: Interview Results: Preferred Shapes/Forms

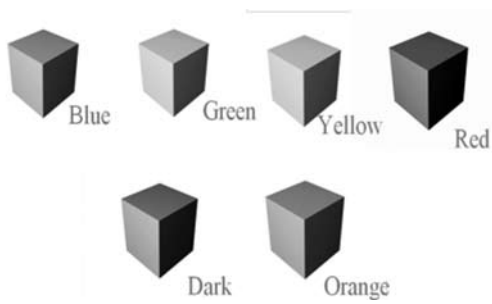


Figure 4: Interview Results: Preferred Colors



Figure 5: Interview Results: Preferred Materials

Quadrilateral and circular shapes are in demand, compared with triangular and cylindrical shapes. Light colors are more preferred than dark ones. Natural materials such as wood and natural fabric are more popular than metals of plastic materials.

The results of questionnaire survey on customers' preferences regarding basic shapes/forms, colors, and materials of model chairs, and those of actual chairs are shown in Figures 6–11.

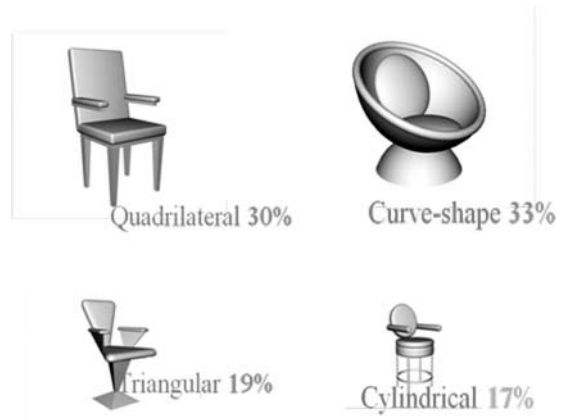


Figure 6: Questionnaire Survey Results: Model Chairs Shape/Form Preferences.

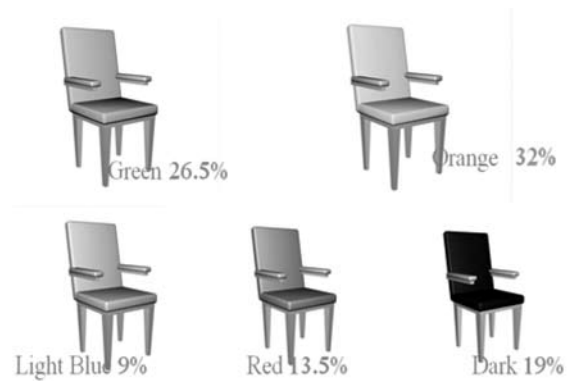


Figure 7: Questionnaire Survey Results: Model Chair Color Preferences.

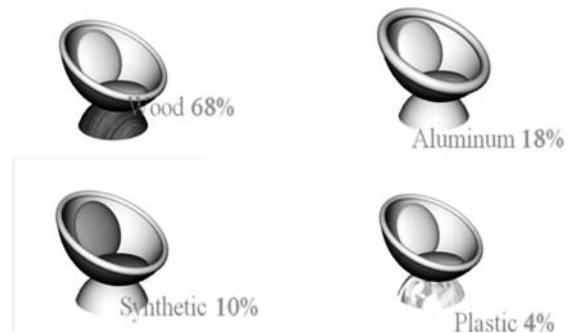


Figure 8: Questionnaire Survey Results: Model Chair Structural Material Preferences.



Figure 9: Questionnaire Survey Results: Real Chairs Cover Material Preferences.

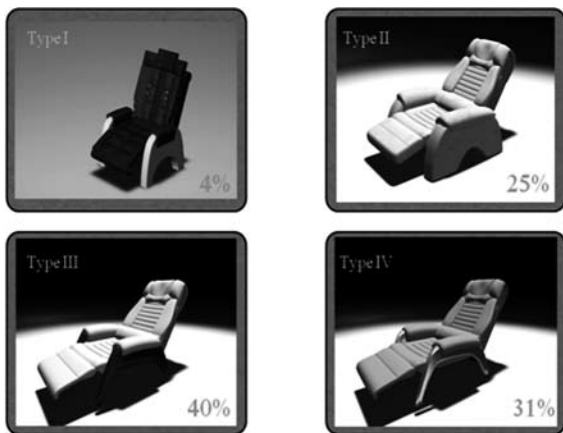


Figure 10: Model Chairs: Form/Shape, Colors, and Materials combined.

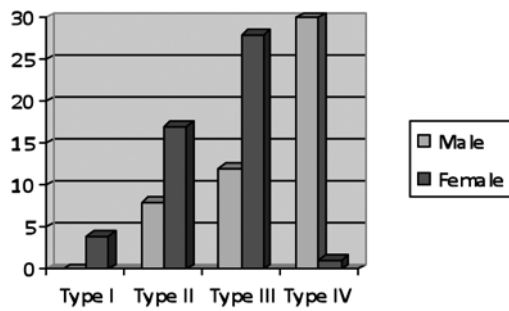


Figure 11: Model Chairs Gender Differences: Form/Shape, Colors, and Materials combined.

Regarding the shapes and forms of high value chairs, 33% of survey respondents prefer curve-shaped chairs and 30% prefer chairs with quadrilateral shapes. Considerably smaller numbers of the respondents prefer triangular and cylindrical shapes with the values of 19% and 17% respectively. Combinations of quadrilateral and curve-shaped forms are perceived to be attractive for high value chairs. What types of combinations are perceived to be more attractive still need to be further investigated. Additional interviews of survey respondents revealed that the shapes and forms of high value chairs should correspond with other dimensions of the chairs so that the chairs will become attractive. In other words, a ‘balanced design’ is required, not only depending on their own shapes and forms.

Light and warm-tone colors are better preferred by most respondents (65%) to dark

colors. Male respondents prefer darker colors. Certain colors are not selected at all. The results indicate that colors of high value chairs do play some role in customer preferences. Males and females perceived ‘attractive colors’ rather differently. However, females are often the ‘decision-makers’ in high value chair purchase, so the designers will perform well if light and warm colors are selected for the products.

Types of materials also play a key role in customer preferences of high value chairs. For the chair structures, the majority of respondents (68%) prefer wood rather than other materials. Only 4% prefer plastics. Cotton fabric is better preferred as a cover material than leather (57% vs 43%). The results indicate that ‘natural’ materials such as wood and cotton are more popular than fabricated or synthetic materials. This implies that people prefer something close to nature. Designers and manufacturers will do well if the materials used in manufacturing high value chairs are as ‘natural’ or ‘look natural’ as possible. The concept of ‘nature-inspired design’ would work well with high value chairs.

All of the above components do not work separately. In other words, they work in unison and are interdependent of each other to a greater and lesser degree. Shapes and forms, for example, are dependent on other dimensions of the chairs, and suitable colors and materials are interdependent. The ‘effective combinations’, in turn, are dependent on and should be derived from the needs of target customers and their perceptions. Identifying the right combinations for specific target market is, of course, not an easy task but should be the goal of designers and manufacturers. This research attempts to give some insights by trying to understand individual components more clearly, and hopes to combine such insights together so that one could move a step further towards the goal.

Conclusion

1. Attractive design is the most important consideration in making a decision to purchase high value chairs.

2. Other factors influencing buying decisions are functions, social status, and price.

3. Combinations of quadrilateral shapes with curved surfaces are preferred, compared to triangular and cylindrical shapes.

4. Light and warm-tone colors are more

popular than darker colors, especially among female customers.

5. 'Natural' materials such as cotton fabric and wood are more preferred than fabricated or synthetic materials such as metals and plastics.

6. 'Attractiveness' of high value chairs depends on the nature and needs of customers. Therefore, understanding real needs and the 'picture' of the customers are prerequisites for attractive design.

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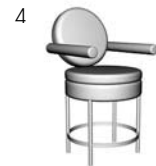
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Appendix

The questionnaire for the second stage research:

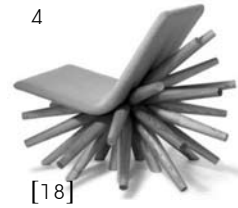
1. Please rank your preference of the following chairs.



2. Please rank your preference of the following chairs.



3. Please rank your preference of the following chairs.



4. Please rank your preference of the following chairs.



5. Please rank your preference of the following chairs.



6. Please rank your preference of the following chairs.

