Incorporating Kano's Model and Markov Chain into Kansei Engineering in Services

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ABSTRACT

Nowadays, customers concern themselves more on fulfilling their emotional needs/Kansei instead of focusing only on functionality and usability. Products and services need to be attractive, delightful and appealing to consumers' emotions. In dealing with this, Kansei Engineering (KE) has been applied extensively. KE is useful in several regards. The first is its ability to translate customer emotions into concrete product/service design parameters. The second is its capacity to optimize properties that are not directly detectable or visible. The third is its flexibility to grasp and accommodate 21st century's trends including hedonism, pleasure and individuality.

This study focused on attractive attributes of service quality as the drivers of customer delight and loyalty. Kano's model is used to exhibit the relationship between service attribute performance and emotional response. Customer preferences change over time. This study developed a means to respond to these changing needs. Markov chain can be applied towards this end.

This study provides an integrative framework. It has two objectives. The first is to conduct a survey of luxury hotel services. Singaporean and Indonesian tourists served as the subjects. The second it is to enable service designers to prioritize their customer service improvement programs. A comprehensive interview and survey

involving 181 Indonesian and 170 Singaporean tourists who stayed at luxury 4- and 5-star hotels was carried out. Luxury hotels were chosen since they focus much on delighting customers.

A finding of this study shows the following three service attributes to be important: i) "the outdoor environment is visually clean", ii) "the employees are never too busy to respond to your requests" and iii) "the employees are consistently courteous with you". Subjects rated the attribute "the employees are never too busy to respond to your requests" as the most important. A house of quality (HOQ) was used to illustrate this. This study determined that the proposed improvements in response to this attribute are related to personnel management, general affair management, employee training, complaint responses and information services.

This study offers several contributions. First, the results can be used as a prioritization tool in service quality improvement efforts where resources are limited (e.g., limited budget and time). Second, guideline for practitioners can be constructed to determine service attributes that are significantly sensitive to customer delight. Third, with the use of Markov chain, practitioners can be provided with information to understand the dynamics of customer needs over time and to prepare appropriate response strategies early.

Keywords: The Kano model, emotions, Kansei Engineering, Markov chain, services, house of quality

1 INTRODUCTION

In today's competitive business, it is imperative for companies to provide innovative and differentiated products and services. Competitive pricing, performance and features have become relevant factors in deciding which products to buy (Schifferstein and Hekkert, 2008). Products and services, therefore, need to offer features which can make them distinguishable and attractive to customers.

The sale of many products tends to decrease over time as compared to their first launch. Efforts such as quick model changes and even price reduction have been taken into account to reduce turnover. However, these are no longer sufficient solutions (Shaw and Ivens, 2002; Schütte et al., 2004). This condition indicates a lack of understanding of customer needs.

Designing for customer is increasingly important for the success of new services and products. Companies must listen closely and carefully to the voices of their customers, especially their latent needs. These are the unspoken emotional needs that customers seek in products and services. According to Nagamachi and Lokman (2011), good quality products are not enough to win market competition. However, products and services that consider peoples' feelings and emotions will sell (Hartono and Tan, 2011a; 2011b).

The focus of customers has shifted from objects to product and service experience. This refers to the switch from functionalism to product semantics and emotions (Krippendorff, 1995). In dealing with customer emotions in product