

CUSTOMER SATISFACTION OF PRODUCT ATTRIBUTES USING KANO
METHOD (SHAMPOO BOTTLE)

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SUPERVISOR'S APPROVAL

I hereby declared that I have read this thesis and this research is sufficient in term of scope and quality. This project is submitted to Universiti Teknikal Malaysia Melaka (UTeM) as a requirement for completion and fulfillment of Bachelor Degree of Technology Management (High Technology Marketing) with Honours (BTMM).

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DECLARATION

I hereby, declared this report entitled “Customer Satisfaction of Product Attributes using Kano Method (Shampoo Bottle)” is the results of my own research except as cited in references.

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ABSTRACT

Now days, shampoo is one of the basic products that people often use in everyday life and most of people in Malaysia use this product. Viewing on this reason, this study is carried out to find out if the quality of shampoo bottle can affect the satisfaction level of customer. The purpose of this study was to identify the product attributes to the customer satisfaction, analyze product attributes using Kano method and proposed the improvement of the product attributes. This study focus on design products based on customer preferences, customer satisfaction (CS), Kano Method (KM) and physiognomy. The problem from this study it is difficult to identify the level of consumer satisfaction has for a product if it does not use the correct method or technique. The survey was conducted with questionnaires conducted Melaka Tengah area. The preliminary study carried out before the main survey conducted using the pilot test and expert opinion (5 lecturers) to sorting out only the relevant items that will utilize in the main survey. Statistics Package for social science (SPSS) has been used to analyze respondents' for data statistics. At the same time facial recognition methods also has been selected to locate customer characteristics associated with physiognomy identities. The study found that customers preferred to choose the products that has this features (beautiful, casual, comfortable, durability and lovely) and base on customer requirement determined in "Must-Be" category must be given attention to future analysis in improvement product quality in shampoo bottle. Furthermore, the study show that the design relates to product feature and function based on customer's characteristic using physiognomy method, the result from this study will be important to understand the customer characteristic and investigate the improvement priorities required to enhance customer satisfaction related with the product attributes.

Keyword: *Customer Satisfaction, Product Attribute, Kano Method, Physiognomic.*

ABSTRAK

Pada masa kini syampu adalah salah satu produk yang digunakan secara meluas. Oleh kerana itu pengajian ini adalah mengkaji samaada kualiti syampu botol dapat mempengaruhi tahap kepuasan pelanggan. Tujuan kajian ini adalah untuk mengenali, menganalisa, dan mencadangkan penambahbaikan pada ciri-ciri reka bentuk syampu botol. Selain itu, pengajian ini mengfokuskan beberapa aspek iaitu ciri-ciri produk dan kepuasan pelanggan (CS), Kaedah Kano (KM) and fisiognomi. Permasalahan daripada kajian ini adalah sukar untuk mengenal pasti tahap kepuasan pengguna untuk sesuatu produk jika tidak menggunakan kaedah atau teknik yang betul, Kajian itu dijalankan dengan soal selidik yang dijalankan di Melaka Tengah. Statistik Pakej untuk sains sosial (SPSS) telah digunakan untuk menganalisis responden untuk statistik data berdasarkan apa yang diperlukan pelanggan apabila mereka membeli produk. Selain itu, kaedah pengenalan wajah juga telah digunakan untuk mengenali ciri-ciri pelanggan dengan menggunakan pengenalan identiti fisiognomi. Kajian mendapati pelanggan memilih produk yang terdapat ciri-ciri tersebut seperti (cantik, kasual, selesa, ketahanan dan indah) dan "Must-Be" kategori harus ditekankan untuk penambahbaikan dalam kualiti produk. Tambahan pula, kajian ini juga menunjukkan bahawa reka bentuk berkaitan dengan ciri dan fungsi produk berdasarkan ciri pelanggan menggunakan kaedah fisiognomi. Hasil daripada kajian ini sangat penting dalam memahami tingkahlaku pengguna dan mencari jalan untuk melakukan penambahbaikan untuk meningkatkan tahap kepuasan pelanggan terutama yang berkaitan dengan ciri-ciri produk.

Kata Kunci: *Kepuasan Pelanggan, , Atribut Produk, Kaedah Kano dan Fisiognomi.*

DEDICATION

*This thesis is dedicated to my beloved parents,
For their endless love, support and encouragement.*

Harun Bin wahab
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For my supporting supervisor,

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LIST ABBREVIATIONS, SYMBOLS AND NOMENCLATURES

A	-	Attractive
BD	-	Bottle Design
BD	-	Body Design
BSP	-	Buy Shampoo Product
CC	-	Capacity
CD	-	Customer Dissatisfaction
CD	-	Cap Design
CR	-	Customer Requirement
CS	-	Customer Satisfaction
FSP	-	Frequency Shampoo Use
I	-	Indifferences
KE	-	Kansei Engineering
KM	-	Kano Method
M	-	Must-Be
MC	-	Moisturizing Capabilities
O	-	One Dimensional
PCR	-	Price References
PRR	-	Product References
PSM 1	-	Projek Sarjana Muda 1
PSM 2	-	Projek Sarjana Muda 2

QDF	-	Quality Function Deployment
QTY	-	Quantity
RBS	-	Reason For Buying Shampoo
SC	-	Shampoo Colour
SF	-	Shine Factor
SPSS	-	Statistical Package For Sciences Social
TC	-	Treating Capabilities
VC	-	Volumizing

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CHAPTER 1

INTRODUCTION

1.1 Background of Study

In today's market-oriented business environment, the question of how to satisfy customers is the main concern of most companies in all business forms. Dapkevičius and Melnikas (2009:17) stated the customers' satisfaction is a significant factor that leads business to success. Customer satisfaction is important to be measured because of its significant impact on the firm's long-term performance as well as customer purchasing behaviour that will affect the firm's firm income rate. Specifically, according to Shill *et al.*, (2010:113), since the degree of customer satisfaction becomes the competitive advantage in market place. In this context, Mkpojiogu and Hashim, (2016:1) asserted that customer satisfaction is the result of product quality and viability. Thus, an understanding of the level of customer satisfaction with a product or service is important to enable the measurement and utilization of these measurements to be an essential requirement for a business. According to Cengiz (2010:77), customer satisfaction is an asset that should be monitored and managed just like any physical asset. Whiles, based on level of satisfaction associated to customer loyalty, Fornell (1992). Anderson and Sullivan (1993) and Wangenheim and Bayon (2004) discussed on how to improve the reputation of the firm.

Based on this reason, customer satisfaction level should be located on the quality and price of the product required by customers refers to their problems in their daily life. Khan and Ahmed (2012) said that the quality of a product is a critical determinant of consumer satisfaction. First, Ji *et al.*, (2014:6335) argued that an

essential prerequisite to offer a customer-satisfied product is on how to identify, understand and respond to customer requirements (CRs) efficiently. Bei and Chiao (2001) stated that the quality of a product and price as the basis in building user satisfaction. Whiles, Kainuma and Amano (2016:1) pointed out on the product's life cycle that becomes shorter and shorter. Here, they argued that there is need to conduct product development by capturing the customer's requirement based on product-out to market-in conception. Kotler and Amstrong (2012) assumed that quality of product is a feature of a product or service that has the capability to meet the stated or implied customer's needs. Based on these statements, it is important to note that the quality of the product is not viewed from the company's perspective only, but it is seen from a customer's perspective. In this perspective, most customers are demanding and more selective in product selection, one of the factors is the product's features and function.

Moreover, customer actually expects enjoyment by fulfilling of their emotional and psychological needs (Baron *et al.*, 2007). The affective need of the customer must be taken into consideration in the characteristics of the product base in order to understand the attractive product that appeals to the customer. The products must not only meet the customer's fiscal requirements and thus be relevant to the characteristic of the product installed with latest technology, but also to additional feature to meet the customer's psychologically satisfactory needs (Chang, 2008). Shen *et al.*, (2000:91) stated that customers' needs and expectations should be met and exceeded through product innovation. The level of customer satisfaction is fundamental to evaluate quality products or services. There were the objective of quality factors with subjective interactions affected the customer's memory (buyer or end user) with the experience of buying product or using a service (Kotler & Keller, 2007),. Therefore, it is very important to maintain product quality in order to achieve customer satisfaction. Here, customer satisfaction becomes the complex perception related to what the customer expectations. Bilgili *et al.*, (2011:830) stated the importance of understanding customer behaviours towards the future of the companies.

Second, for many years the quality is increasingly identified as one of the factors that affect customer satisfaction, although they differ in conceptually. Quality

and customer satisfaction are integrated. If the quality-oriented customer satisfaction approach continues, the opportunity to make customers satisfied is higher. Consumers have a reason in choosing a brand from a brand that is offered as likely to be related to brand quality perceptions as well as brand awareness and brand associations (Cunningham, 1956). Quality advantages are very important in maintaining customer trust in corporate market leadership. Akbar and Parvez (2009) concluded that quality product, customer satisfaction and customer trust are critical to loyalty customers. To increase customer loyalty, satisfaction is one of the factors to consider. If the customer is satisfied then their loyalty will increase. In this perspective, to make the customer loyal; firm should make the customer satisfied first. Rust and Oliver, (1994) suggested that there are two differences between the quality and satisfaction felt between the customer's view and the company. Therefore, it is suggested that the quality is perceived as a whole in understanding that quality is as a source of satisfaction (Llusar *et al.*, 2001). In this context, Borgianni *et al.*, (2011:118) argued that there were the non-linear relationship between satisfaction and attributes' quality level refers to customer requirements.

Third, according to Lupiyoadi (2006), there are five main factors that need to be considered by the company in determining the level of customer satisfaction. One of the factors is product quality where customers will be satisfied if their evaluation results indicate that the products they use are qualified as they expect. However, since customers usually demand the quality products for every expense they spend on getting the product, the good product quality should be on the added value to the customers mind. The studies conducted by Yuen and Chan (2010) argued that quality products will maintain a level of customer satisfaction that encourages customers to make subsequent purchases, until customer loyalty is gradually formed. However, since satisfaction is related to the fulfilment of implicit and explicit customer needs, according to Tontini *et al.*, (2013:1253), there is need to find out how the performance based on the totality attributes of products may impact on customer satisfaction. In this senses, Bilgili *et al.*, (2011:830) stated about the understanding that is required towards customer demands and needs is as critical importance to manage the quality product based on not only to meet customer demands, but also to understand these.

In conclusion, the concept of customer satisfaction that meeting customer requirement is not enough to capture and retain market share (Shen *et al.*, 200:98). In the context of product, Rotar and Kozar (2017:339) suggested there were the relationship between the objective performance of attributes and customer satisfaction with attributes. Lin *et al.*, (2017) said about the customer satisfaction coefficient as a representation of the frequency measured to the quality attribute. Specifically, according to Here, Hassan *et al.*, (2017) about the relationship function between customer's satisfaction and requirement based on performance, attractive, and must-be.

1.2 Problem Statement

According to Hill and Alexander (2006), companies will lose between 10% and 30% of their customers annually, especially medium size businesses. This is due to, in today's highly competitive markets, many products are now saturated due to similar feature. Mostly, companies do not know what categories of customers they have lost, what the reason, was at what time, and what costs are associated with their loss (Schawager & Meyer, 2007). In this situation, customer position is a priority for companies, most of whom choose customer satisfaction as the indicator of achievement (Mihelis *et al.*, 2001). However, it is not possible to sustain the performance of a company continuously by unclear and insignificant notions such as customer satisfaction (Giese & Cote, 2000).

First, it is difficult to identify the level of consumer satisfaction in certain product if it does not use the correct method or technique, so it must be exchanged within measurable parameters that can be evaluated, understood and influenced using an appropriately approach in order to know the consumer personality and identify what they really need (Khadka & Maharjan, 2017). Here, based on a basic assumption to the consumer's needs, Lee *et al.*, (2001) said that by customer satisfaction understanding produced several important insights formation. Between the expectations of the customer and the perceived quality level of products, Krafft

(1999) defined the customer satisfaction is as a positive emotional reaction on a cognitive standard cycle.

Second, every customer has different views and opinions. To identify the nature or behaviour of each customer is difficult if not using the right method or technique. According to Kreck, (1998), customer satisfaction is not simply on what the customer says it is. The different customers may have different perceptions of what contributes to a satisfactory experience, and therefore customer satisfaction measurement would be most valid if it were based on the consumer's perception of personally selected attributes. Therefore, the measurement of customer satisfaction included the characteristics and behaviours produced by the respondent to each particularly context is a necessary. For an instance, the object of objective measurements or of subjective evaluation (Ayas, 2011:29).

Third, the human face has been a source of great interest for psychologists and other scientists because of person's extraordinarily well-developed ability to process recognize and extract information from other faces (Little *et al.*, 2011). There are several techniques, according to Llinares and Alvaro (2011:233) that can be used to translate consumer or user needs and preferences into product design characteristics. Erto *et al.*, (2011: 2007) suggested the Kano's theory towards attractive quality that provides an effective and easy tool for classifying customer's needs. Based on the theory of attractive quality, Nilsson-Witell and Fundin (2005:153) explained about how the relationship between the objective performance and customer satisfaction towards an individual product. There were various product attributes or features serve as criteria for consumers to assess or evaluate products (Bennur and Jin, 2013:306).

Based on aforementioned, this study will carry out the investigation of customer satisfaction related to attributes of products based on functional and dysfunctional refers to Kano method. In this study, the generated survey questionnaires based on the functional and dysfunctional questions, while the Physiognomy approach will be utilized to investigate the individual characteristics using Digital Physiognomic and/or Surface 5 software. In this study, the analysis

conducted will be using statistical software SPSS v.15, while to classify the individual characteristics based on numbers manipulation using Microsoft Excel.

1.3. Objective

1. To investigate and identify the product attributes related to the customer satisfaction.
2. To analyse customer satisfaction of the product attributes using Kano method and physiognomic.
3. To propose the improvement of the product attribute in shampoo bottle design.

1.4. Scope of study

This study is focused on customer satisfaction towards the quality of shampoo bottle base on functional aspect. This study is conducted at selected sites in Melaka Tengah to identify the level of customer satisfaction based on the attributes and function of shampoo bottle, whether the cost they spend meet that what they expect or otherwise. This study will analyse how the level of customer satisfaction can be measured based on the quality and function of shampoo bottle using physiognomic technic to determining character or personal characteristics from the form or features of the body, especially of the face and measure customer satisfaction using the Kano method. In this study, only quantitative research methods are used based on statistical calculations to obtain more accurate and reliable results. Therefore, the questionnaires are required and made for survey for chose respondent in order to explore the customer expectation and perfection, the collected data from respondent will be analysed using Kano method.