

**KEY PURCHASING DETERMINANTS AND THEIR
IMPACT ON BRAND EQUITY OF THE TOOTHPASTE
MARKET IN SRI LANKA: AN EMPIRICAL STUDY**

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Degree of Master of Science

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Dissertation submitted in partial fulfillment of the requirements for the degree Master
of Science in Business Statistics

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Sri Lanka

May 2016

DECLARATION OF THE CANDIDAT AND SUPERVISOR

I declare that this is my own work and this dissertation does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

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ABSTRACT

This study was carried out to determine the benefits of consumers seek from toothpaste and impact of key purchasing determinants on brand equity of the toothpaste market in Sri Lanka. The tooth paste industry in Sri Lanka is highly competitive. Marketing mix and many factors frequently create meaningful differences in a brand's performance. This study analyzed the factors that affecting to develop new products and proper advertisement campaign. Survey was conducted with a random sample size of 200 customers from the selected three key supermarkets in Colombo district during March in 2014. The sampling method was purposive random sampling. The data collected through a structured questionnaire were analyzed using factor analysis and 2-way frequency tables. Reliability of data were confirmed by Cronbach's Alpha test. Results found that three factors: (i) health conscious or health beneficiary, (ii) social beneficiary and (iii) specialized beneficiary impact the purchase of toothpaste. Furthermore, it was found that key purchasing determinants: prevent cavity, shiny teeth, strengthen gum, freshness of breath, strengthen of enamel and attractive teeth significantly influence ($p < 0.05$) the brand equity of products. Furthermore, it was found that company image and price do not significantly influence the brand equity of products. The findings in this study has practical implications, especially for the decision makers of new product development and advertisement campaign development for toothpaste industry to maximize benefits from investments. The study also revealed that when introducing new products to toothpaste industry it needs to be more focused on oral hygiene habits of people.

Keywords: Factor Analysis, Key Purchasing Determinants, Marketing Mix, Oral Hygiene, Toothpaste industry.

DEDICATION

This thesis is dedicated to my beloved parents and my loving wife who never failed to aid me with the financial and moral support when required instilling the importance of hard work and higher studies and teaching me that the best kind of knowledge to have is that which is learned for its own sake.

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M.W.M. Wasantha Wijesinghe

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LIST OF ABBREVIATIONS

Abbreviation	Description
KPD	Key Purchasing Determinants
AMA	American Marketing Association
FMCG	Fast Moving Consumer Goods
SWOT	Strengths, Weaknesses, Opportunities & Threats
KMO	Kaiser-Meyer-Olkin
FA	Factor Analysis
PCA	Principle Component Analysis
EFA	Exploratory Factor Analysis
CFA	Confirmatory Factor Analysis
PCF	Principle Component Factor
ME	Marketing Environment

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Appendix 1: Letter to Customer

Appendix 2: Questionnaire Survey

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Today living standard of human being is greatly improved as a result of rapid development of modern economy and the increasing incomes. Therefore, the demands of variety of daily necessities have begun to rise strictly. Essential household item, toothpaste, is one of the major shares in the global market. The most of toothpaste brands that may be marketed by multinational or domestic toothpaste manufactures in Sri Lanka become very competitive. Different toothpaste manufactures have their own different market strategies, such as products for different ages, targeting the purchasing power of consumers for different products, products for different regions, product for different physiological functions etc (Ameer, 2013).

When considering the new product development for any organization new products are life blood for all their business (Aaker, 1996). Investing in their new products development is very crucial to business growth and profitability. Therefore, a lot of market researches and feasibility studies are carried out prior to develop any new product to reach consumers expectation (Steele, 2000). Otherwise invested money will get in vain. Most of organizations they have internal product development teams and research and development department. Some organizations obtain external support for data collection and analysis to develop their products (Kotler and Keller, 2008).

Consumers have different characteristics and when developing new products they need to correlate with those characteristics and finally lead to wide range of brands of toothpaste. Also, the market segmentation is increased evidently. People's demand for oral hygiene products is constantly upgraded because the oral health is now recognized as equally important in relation to general health (Blackstone, 1995). Factors like education, income, information from media advertisements and personal

choices like taste, flavor, color, appearance have effect on choice of an oral hygiene product by people (Thomas, 2010). On the other hand as a competitive nature of toothpaste market in Sri Lanka toothpaste manufactures are developing branding strategies to develop unique brand image and attracting customers towards their brands. Most of tooth paste brands emphasize different product characteristics impact on their key purchasing determinants (KPD). However, there is no proper understanding of marketing practitioners regarding the benefits of consumer seek from toothpaste and association between KPD and brand equity of toothpaste market (Bhasin, 2006).

1.2 Industry Overview of Toothpaste Market

The global toothpaste market is on the threshold of a new phase with the advent of new biotechnologies that help curb problems of sensitivity and enable the re-growth of teeth (Blackstone, 1995). Oral care is undergoing significant changes with innovative and fresh products motivating people to alter their oral hygiene habits. Purchase of toothpaste is mainly driven by individual habits, inclination towards particular flavor and familiarity with the product. The toothpaste market is generally not price sensitive and brand loyalty plays an important role in majority of the customers (Toussaint, 2009). Currently nearly 97% of the population in developed countries uses at least one variety of toothpaste. This gives marketers virtually no space to expand the market with new users. Consequently, adding or increasing value to the product is the preferred alternative. Technological progress made in recent years altered the toothpaste segment into one that offers additional benefits such as fresher breath, healthier gums and whiter teeth, besides just fighting cavities (Joes, 2008).

Dental health of human has improved dramatically in recent past. At the same time trend that oral care products like toothpaste manufactures in multibillion dollar business have to exploit (Steele, 2000). These days a lot of toothpaste products can be seen in market that has different attributes or combinations of attributes like products include whiteners and fluorides, product for tartar control and sensitivity etc (Smith & Whan, 2005). According to numerous studies that related to oral

epidemiological revealed that people are keeping their teeth longer than ever before in this century (Schwarz and Wong, 1998).

1.2.1 Global toothpaste industry

Toothpaste is not a relatively modern phenomenon. It has history as long ago as 3000-5000 BC. According to history Egyptians made dental cream by mixing powdered ashes of oxen hooves with burned egg shells pumice and water (Schwarz, and Wong, 1998). In eighteenth century in England toothpaste introduce to market was packed in a ceramic pot. At the end of the twentieth century pure plastic tube was used to store tooth paste. At present several well-known brands of international and domestic can be seen in the market. Based on Global industry analysts' incorporation that was published in 2013, global industry of toothpaste market will reach US\$ 12.6 billion by the year 2015. It is also highlighted that the growth of the toothpaste market was related to different criteria such as whitening toothpastes, product innovates, rising population and greater awareness about tooth oral hygiene (Roper et al, 2006). Toothpaste market is not price sensitive product and brand loyalty plays an important role in most of the customers. Currently nearly 97% of the population in developed countries uses at least one variety of toothpaste (San, 2012). This gives marketers virtually no space to expand the market with new users. Therefore, value addition to the product is the one of the preferred alternative to capture the market share.

The world toothpaste industry comprises of several big players medium scale and domestic players competing each other in highly crowded and fragmented market place. There is a large presence of both international brands and local brands. Leading market participants include Church & Dwight, Colgate-Palmolive Company, Colgate-Palmolive GmbH, Colgate-Palmolive (India) Limited, Gaba Holding AG, GlaxoSmithKline, Henkel AG & Co. KgaA, Johnson and Johnson, Procter & Gamble Company, Unilever N.V., and Hindustan Unilever Limited (Sharma, 2012).

In term of oral hygiene in the world, majority of population are still not able to access modern dental care and relying on substance like coal ash and different types

of tooth powders that made in domestically (San, 2012). In some countries like India penetration level of toothpaste is 55% and only 15% of those using brush twice a day (Prasad and Dev, 2000).

The highest per capita toothpaste consumption show in USA and it is at 542 g/year (Fig 1.1). Also, India's per capita consumption is less than half of the other emerging markets and almost 1/4th the amount of consumption in U.S. It is one of the lowest in world. Given the low per capita consumption and penetration rates, toothpaste demand is mainly being driven by the overall market growth of 8-10 % (Sharma, 2012).

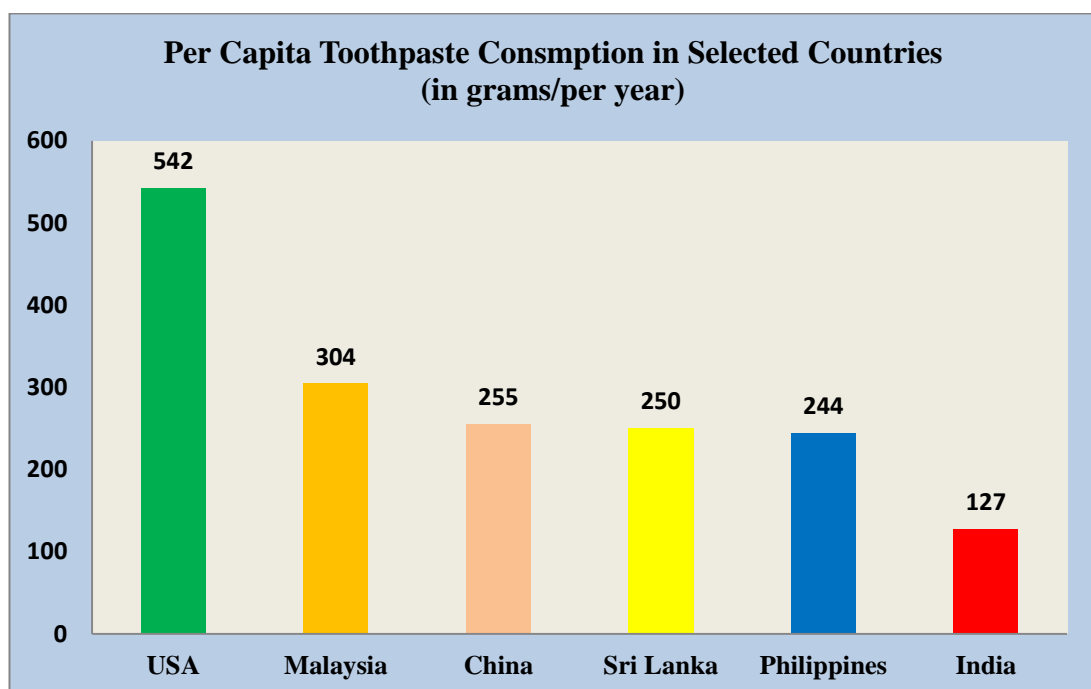


Figure 1.1: Per capita toothpaste consumption in the selected six countries.

(Source: <http://www.sanasecurities.com/future-prospect-indian-oral-care-industry>)

1.2.2 Toothpaste industry in Sri Lanka

In Sri Lanka's toothpaste market is mainly consists of herbal toothpaste market and multinational brands like Signal, SR, and Close up etc. According to recent market researches (Dona, 2013) it is revealed that brands that are marketed by multinational companies are rapidly being threatened by a range of local herbal brands that are produced by small and medium scale indigenous producers. Industry analysts

(Perera, 2013) highlighted that this was mainly one reason where local producers are holding their own against giant conglomerates and targeting to capture market share. It is a tremendous achievement on the part of local producers in this field particularly in the context of globalization and international marketing. The toothpaste market in Sri Lanka, earlier driven by whiter teeth and cavity protection values, is now facing a situation where such values and beliefs are losing ground to ayurvedic and herbal oral care.

Oral care is a highly practicing health habit in all over the world. In Sri Lanka it may have once been a narrow market segment but today it represents a flourishing sector with several sub segments. It has a high degree of penetration with in the country through tooth paste and tooth powder. There are channel for products that address gum diseases, cavities, plaque and tartar build up, sensitive teeth etc. Toothpaste and toothpowder have a combined house hold penetration of 89% in 2005. It has been estimated this market to be worth 2.5 billion Rupees with annual volume of approximately 4,500 metric tons (Dona, 2013).

Highest sales volume in Sri Lanka shows in the Western province that includes Colombo, Gampaha & Kalutara districts. Sri Lankan market is dominated by two brands: (i) Signal with volume share of 47% marketed by Unilevers Company Sri Lanka and (ii) Clogard with 23% volume share marketed by Hemas group. Current market value of tooth paste market in Sri Lanka is Rupees 2.5 billion. It also estimated for 2015 as 3.5 billion rupees (Perera, 2013). When considering toothpaste market in Sri Lanka, oral market has high degree of penetration through toothpaste and tooth powder products. It also identified that market growth for 2012 is around 8% compared to 2011 (Perera, 2013). The market shares in sales volume and value for leading brands are shown in Figure 1.2 Table 1.1 respectively.

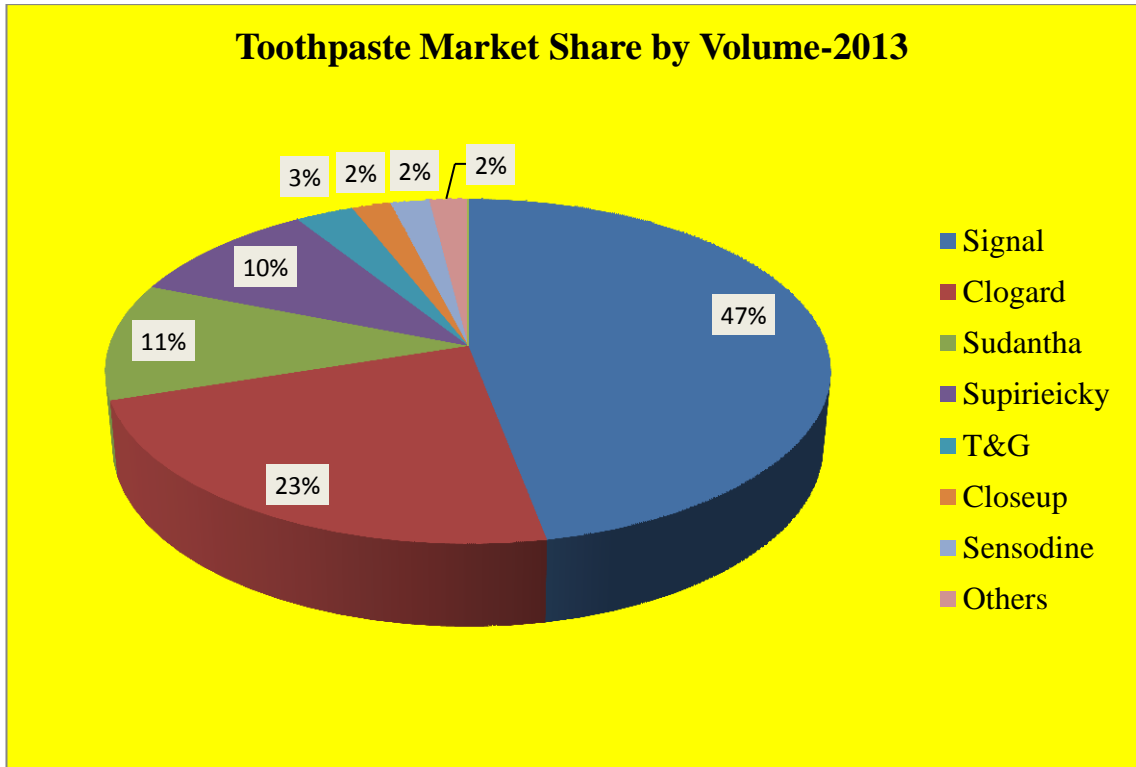


Figure 1.2: Toothpaste market share by volume in Sri Lanka (2013 up to Quarter 3)

(Source: Daily Financial Times, 2013)

Table 1.1: Toothpaste market share by volume and value in Sri Lanka (up to 3rd quarter in 2013)

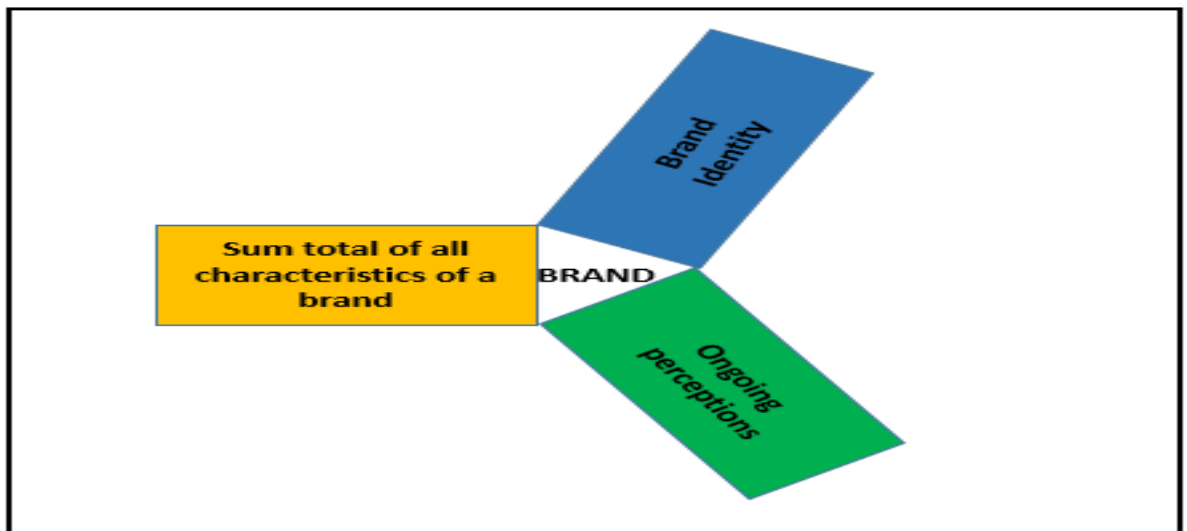
Brands	Market share by volume	Market share by value
Signal	47%	45%
Clogard	23%	19%
Sudantha	11%	12%
Supiriwicky	10%	9%
T&G	3%	2%
Closeup	2%	6%
Sensodine	2%	5%
Others	2%	2%

(Source: Daily Financial Times, 2013)

1.3 Brand

In a simple way a brand can be described as proprietary name for product, service or group (Kotler, 2000). Brand also describes in more multifaceted level as a, brand is a sum total of all functional and emotional assets of product, service, or group that differentiate it among the competition. It also has following three integrated meaning as depicted in Figure 1.3.

- The total of all characteristic of the product, service or group that including its physical features, its emotional assets, and cultural and emotional associations.
- The brand identity as applied to a single product or service, family product or service or a group.
- The ongoing perception by the consumer or public by of the brand.



Figuer1.3: Integrated parts of brand

(Source: http://www.investopedia.com/terms/b/brandequity.asp?header_alt=a)

When considering the all characteristics of brand each product or a service has functionalities, features or capabilities which may or may not be unique to the product or service category. Also, each product or service owns its heritage, parent company, logo, visual identity, advertising, and audience perception (Walter, 2012).

American Marketing Association (AMA) defines a brand as a "name, term, sign, symbol or design, or a combination of them intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of other sellers". To succeed in branding, organizations must understand the needs and wants of their customers and prospects. A strong brand is invaluable as the battle for customers intensifies day by day. It's important to spend time investing in researching, defining, and building of brand. Brand is the source of a promise to your consumer. It's a foundational piece in marketing communication (Francisco, 2010). A traditional definition of a brand was the name that associated with one or more items in the product line, which is used to identify the source of character of the items (Kotler, 2000).

1.4 Brand Equity

Brand equity means the value premium that a company realizes from a product with a recognizable name as compared to its generic equivalent. Companies can create brand equity for their products by making them memorable, easily recognizable and superior in quality and reliability. Mass marketing campaigns can also help to create brand equity. Brand equity has aroused intense interest among business strategists from a wide variety of industries as brand equity is closely related with brand loyalty and brand extensions. Besides, successful brands provide competitive advantages that are critical to the success of companies (Francisco, 2010).

According to the branding expert Aaker (1996) brand equity define as "a set of assets and liabilities linked to a brand, its name and symbol, which adds to or subtracts from the value provided by a product or service to a firm and / or to that firm's customers." Positive brand equity can help a company in a variety of ways. The most common is the financial benefit which enables a company to charge a price premium for that brand (Francisco, 2010). Furthermore, positive brand equity can also help to expand a company through successful brand extensions and expansions (Kotler, 2000). And not only can brand equity help increase sales and revenues, but it can also help reduce costs. For example, there is little need for awareness promotions for a brand that has deep, positive equity. Marketing budgets can be more

strategically invested in initiatives that will drive short-term results. A company with strong brand equity is also positioned for long-term success because consumers are more emotional connections and loyalties to a brand. Positive brand equity helps a company navigate through macro-environmental challenges far more easily than brands with little or negative brand equity can (Aaker, 1996).

According to Susan (2013) brand equity is typically the result of brand loyalty. Brand loyalty leads to increased market share. Further, he emphasize that there are five stages of brand experience that lead to positive brand equity such as:

- i. Brand awareness: consumers are aware of the brand.
- ii. Brand recognition: consumers recognize the brand and know what it offers versus competitors.
- iii. Brand trial: consumers have tried the brand.
- iv. Brand preference: consumers like the brand and become repeat purchasers. They begin to develop emotional connections to the brand.
- v. Brand loyalty: consumers demand the brand and will travel distances to find it. As loyalty increases so do emotional connections until there is no adequate substitute for the brand in the consumer's mind.

Higher brand value or brand with high brand equity, means that the brand has the ability to create some sort of positive differential response in the marketing environment. This can mean that brand is easily recognizable when encountered in advertising or seen on a yard sign. Obviously, brand equity is an intangible asset, meaning that it is something that is not easily accounted and it is not listed on any specific line in a firm's financial statements. It is reflected in earnings and in stock price (Susan, 2013).

1.5 Importance of Brand Equity

Brand equity is built up by any organization overtime by building awareness, having a well-known name or a clear identity, consistent communications, marketing to the consumer, acting socially responsible, and spending on advertising and promoting the brand. It is important because the products associated with the brand command a

premium price in the market and are perceived to be higher quality when compared to the similar generic unbranded products. Brand equity also offers competitive advantages by reducing the marketing costs to firms. Because of high brand awareness and loyalty brand equity enhances their earnings. Brand equity is created over a long period of time by using various tools like advertising, public relations, sponsorships, events, social causes etc. Once the brand equity has been created it is also important to carefully manage and overtime grow the equity of the brand employing the same tools mentioned above (Laxmi, 2006).

Brand equity also describe as a marketing term that used to refer the marketing impact of a given product in association with a brand name. It helps to examine how a given product or service will perform in the market if it did not have the privilege of that brand name. Therefore, the basis for brand equity and its impact on a business is based on the knowledge of the customer about that product or services. Brand plays a vital role in helping build that knowledge and awareness in business environment, as well as the choices they make based on that knowledge. Brand equity reinforces the significance of a brand's value and produces that positive type of recall in the mind of consumers. Marketing research has revealed that brand equity is one of the most important assets to any organization to achieve their continuous growth. As an intangible asset, brand equity only gets its meaning out of the perceived quality and associations made by a consumer on a given product (Wood, 2000).

When consider the benefits of a powerful brand equity it provides several benefits to the company. Establishes a more reliable stream of income, companies are also able to increase their profits through increased market share and premium pricing for less promotional costs. Those are just some of the helpful benefits that a company can gain from brand equity. It is also very important of handling & enhancing the brand Equity. It involves the introduction of a product or services of a given brand into the market. It must establish a certain standard for that brand to be able to launch products in the future that will sell in the market (Kotler, 2000). Aim of the organization should be to produce a positive response from the consumer to build

trust among consumers. Produce a brand or services need to be unique and yet memorable. The attitude of any brand must be accessible to consumers and must also provide benefits to satisfy its users. Consistency is one of the key criteria. Message must be synchronized with the company's overall image and reinforce the value espoused by the organization. This is one of the most successful ways to make strong brand equity (Hooker, 2010).

1.6 Brand Equity Dimensions

Today's competitive business environment, the concept of brand equity is an important area for strategic intelligence for marketers. Brand equity dimensions is important for any organization to enhance purchase intentions of customers, maximize profits and share returns, maintain market power, sustainable competitive advantages, brand extension and consumer's willingness to pay premium prices. Brand equity dimensions facilitates in the effectiveness of brand extensions and brand introductions. This is because consumers who trust and display loyalty toward a brand are willing to try to adopt brand extensions (Johnson & Bruwer, 2007).

While there have been methods to measure the financial value of brand equity, measurement of customer-based brand equity has been lacking. The customer-based brand equity scale is developed based on the five underlying dimensions of brand equity: performance, value, social image, trustworthiness and commitment (Wood, 2000). According to the model suggested by Aaker (1996) brand equity has four dimensions (Fig 1.4). Those are brand awareness, brand association, perceived quality and brand loyalty.

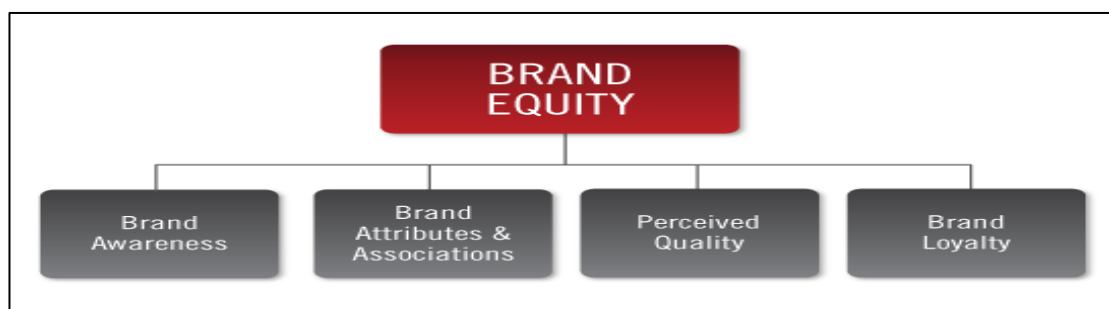


Figure 1.4: Aaker's Brand Equity Dimensions Model

1.7 Key Purchasing Determinants (KPD).

Customer satisfaction is widely recognized as key influences in the formation of consumers' purchase intentions or KPD. Customer satisfaction is a term frequently used in marketing. It is a measure of how products and services supplied by a company meet or surpass customer expectation. Customer satisfaction provides a leading indicator of KPD. In today's business environment consumer satisfaction is identified as main feature in decision making that is the cores of marketing programs for each organization (Toussaint, 2009). Customer satisfaction is established when brand fulfills the needs and desires of customers. Customer satisfaction makes the customers loyal to any organization that provides goods or service.

Previous researchers have found that the satisfaction of the customers can help the brands to build long and profitable relationships with their customers (Eshghi, Haughton and Topi, 2007). Though it is costly to generate satisfied and loyal customers but that would prove profitable in a long run for a firm (Anderson, Fornell and Mazvancheryl, 2004). Therefore, a firm should concentrate on the improvement of quality and charge appropriate fair price in order to satisfy their customers who would ultimately help the firm to retain its customers and enhance the brand equity (Griffin et al, 2007).

According to the past studies discussed above, researchers have introduced several KPD's of toothpaste market in different socio cultural context. However, there is no common agreement among them. Furthermore the influence of KPD's on brand equity can be varied in different context. Based on this it was noted that significant gap in the respective field.

1.8 Problem Statement

Previous researchers in marketing have investigated regarding KPD's in different consumer products (Kotler, 2000), but some researchers specially focus on toothpaste market (Bader, Shugars & Bonito, 2009). According to Chalmers (2005) most of the customers are used to consider product attributes in purchasing branded toothpastes. Furthermore, Aaker (1996) noted that product attributes are associated

with the brand values and perceived quality. However, in his model brand awareness, brand association, perceived quality and brand loyalty were altogether considered as brand equity. Therefore, it can be postulated that KPD's may have significant impact on brand equity towards the toothpaste market.

However, there are no sufficient empirical studies conducted by previous researches to determine the benefits of consumer seek from the purchase of toothpaste and understand the association between KPD and brand equity of toothpaste market. Furthermore, in Sri Lankan context there is no comprehensive study conducted in this area.

1.9 Objectives

On view of the above description the objective of this study are:

- To determine the factors that influence the purchase of toothpaste by consumers.
- To identify how these factors apply for new product development.
- To investigate KPD of toothpaste market in Sri Lanka.
- To investigate brand equity of leading toothpaste brands in the Sri Lankan market.
- To recommend strategies to develop brand equity of toothpaste manufactures.

1.10 Significance of the Study

The industrial sector makes significant contribution to any economy in the world. In the Sri Lankan context, industrial sector generate jobs to labour force in the country. At the same time industry becomes very competitive and they have to openly compete with industries in world market. With this background management of industry sector in Sri Lanka should adapt to new systems of improving their business performance by identifying criteria like KPD to satisfy their customer base.

The toothpaste industry in Sri Lanka is very competitive and most of leading brands are marketed by multinational companies. It can be seen that new product developments and different types of advertisement campaign to capture toothpaste

market in Sri Lanka by increasing their budgeted investment for research and development projects. However, some new products are not satisfied by customers and therefore the real benefits of the investments are not achieved the target as expected.

Therefore, outcome of this research will assist to different fields in today's business environment. Findings will help to brand managers, advertising agents, new package developments and new product developments. This will also benefit to researchers to continue research related to toothpaste market. Furthermore, oral hygiene factors related to human being will benefit to health ministry promotional activities of oral hygiene. Thus there is a vacuum of studies relevant to this field. Also, the researcher was able to achieve the objectives through better understanding and fill up the gap. At the end of this study appropriate suggestions are given based on key findings. The suggestions will assist to stake holders of toothpaste industry to make further improvement of their products and sustain in business with competitive manner. In academic point of view, this study would create further research questions to investigate into KPD of toothpaste industry. As a whole the findings of the study would help to the manufacturing sector to make a great contribution to the economic well-being.

1.11 Organization of chapters

This dissertation consists of five chapters namely Introduction, Literature Review, Methodology, Data Analysis & Discussion and Conclusion & Recommendations. Focused areas of each chapter are briefly described in below.

Chapter 1: This chapter presents introduction about the study, toothpaste industry, research problem, objectives, research questions, significant of the study, methodology, limitation of the study.

Chapter 2: This is encloses the literature review part. The aim of the second chapter is to theoretical background and explores the relevant literature.

Chapter 3: This chapter covers the theories and the fundamentals that are required in analysing the data collected in the research. This chapter also emphasis conceptual

framework, operationalization and discuss the hypotheses to be tested in detail. Also, present the Research Methodology with sampling, data collection and data analysis.

Chapter 4: This chapter analyse the data that collected through the self-structured questionnaire using appropriate presentation techniques and the findings of the study will be presented using statistical tools.

Chapter 5: This chapter is entailed with the finding and the conclusions derived using the results. Also this chapter provides recommendation for the tooth paste manufacturing industry of and resents suggestions for the further research work related to this area.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter is to give an in-depth analysis of this topic. This chapter aims to review the critical points of current knowledge on this topic, considering the variables which have been taken based on previous studies and the availability of data. Thus, this literature review chapter deals with the review of literature related to the brand equity, key purchasing determinants and their impact on brand equity.

2.2 Conceptual Background of Brand Equity

Today brand equity concept has become very important topic in business environment. There are two main general motivations for studying brand equity. It can be described as financial based motivation and strategy based motivation to improve marketing productivity (Laforet & Saunders, 2004). When consider on financial based motivation it focus to estimate value of brand more accurately and precisely for accounting purpose like asset valuation in balance sheet, mergers, acquisition or divest purpose. Strategy based motivation mainly considers cost, competition, flatten demand in many markets and finally firms seek to increase their market share by increasing productivity of their marketing expenses. In recent days much attention has been given for concept of brand equity. Brand equity has been described in different perspectives (Manoj & Vithala 1996).

2.2.1 Introduction of brand

A vast body of knowledge exists regarding brand and its definitions. Kottler (2000) stated a traditional definition of a brand as the name that associated with one or more items in the product line, which is used to identify the source of character of the items. In the modern business environment word of brand can be considered as an important to their sustainability. In a simple way brand is the name, symbol, term, design, or any other feature that identifies one seller's product different from those of other sellers. Valuation of brand is an important management criterion that ascribes a monetary value to brand that is very important in marketing investments to maximize

shareholder value (Walter, 2012). Brand also described as proprietary name for product, service or group. In more multifaceted level as a, brand is a sum total of all functional and emotional assets of product, service, or group that differentiate it among the competition. It has three integrated meaning, first as the total of all characteristic of the product, service or group that including its physical features, its emotional assets, and cultural and emotional associations. Secondly the brand identity as applied to a single product or service, family product or service or a group and finally the ongoing perception by the consumer or public by of the brand (Kamakura and Russell, 2003).

American Marketing Association (AMA) defines a brand as a "name, term, sign, symbol or design, or a combination of them intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of other sellers. To succeed in branding organizations must understand the needs and wants of their customers and prospects. A strong brand is invaluable as the battle for customers intensifies day by day. It's important to spend time investing in researching, defining, and building of brand. Brand is the source of a promise to your consumer. It's a foundational piece in marketing communication (Francisco, 2010).

2.2.2 History of brand

Brands and branding are not a new phenomenon, neither for academics nor the business environment. There is possible evidence to trace back the use of brands all the way to the Stone Age. The history of brand like using symbols to represent products or services can be traced back to ancient times. In the early stage merchants in Egypt, China, Greece, and Rome used pictures and symbols to communicate with customer regarding their products. The word of brand derives from the German word of "brandr", that meaning of to burn. It means to burn the mark of the producer onto the product they made (Douglas, 2004).

Brands in the modern term began to develop in the United State. It was accelerated in the mid of 1800s because rise of mass media. That assisted by advertising, merchandising, and the emergence of middle-class, literate customers. That leads to purchase products by choice rather than of necessity of customers. The shift from the simple generic product to branded product has not been sudden or in way of

haphazard. It had happened in step by step, that means it grew out of the standardization of quality products for consumers in the middle of the 20th century. Popularity of branded products required companies to find a new way to differentiate themselves from their competitors. In the 1950s, multinational companies like Procter and Gamble, General Foods and Unilever developed the discipline of brand management process separately to focus on branded products. That leads to distinguished product or services from competitors (Joe, 2012). This evolution of branded product was perceived to offer superior value to its competitors, the company offering the brand could charge a little more for its products.

2.2.3 Evolution of brand

Brand and branding concepts have evolved over time. It is possible to trace back the use of brands in early stage of human being that way back to the Stone Age. Burk & James (1996) stated that during the 16th century brands similar to those see today in business environment have started to take shape. They further emphasize that since the 18th-century England and France, there have been a massive development of the knowledge, procedures, and theories with related to brand and branding.

According to the Farquhar & Peter (1995) contemporary theories related to brand and branding has their origin and evolutionary starting in the mid-20th century. This is mainly due to the development of commercials in mass media. For a long time, an uncertainty existed as how companies should emphasize their brands and how much the average customer focuses about those brands. Therefore it became vital for marketers to establish through research how important brands were in the key activities like new product development and capturing of market share.

Smith & Wendell (1996) founded the concept of segmentation in marketing as early as in the 1950s, and this has become an important milestone for develop brand and branding of products in marketing environment. The segmentation variables mainly focus to socio-economic variables such as consumers' working situation, income, education, demographic variables such as age, life cycle, and civil status. Those variables were played vital role in evolution of different kind of brands. During

1970s, the field of branding was primarily associated with mass production and mass advertisements. Most of companies principally used brand commercials to differentiate their products from other products (Roper & Parker, 2006).

Another important factor in the evolution of branding is the concept of positioning. Kotler (2000) argued that positioning is about the target group. The main aim of marketers is to put the product into the mind of the customers. When outlaying the positioning strategy it needs to be concentrated on the surrounding elements of the product. It also highlighted that to positioning of product company could choose to make alterations to the price strategy, product name, or the package. In the 1970s and 1980s that branding was further developed and more firmly established in the business environment. In this era brand, branding and brand equity became an important area within the entire discipline of marketing (Moore & Reid 2008).

Consequently it is very important for companies to prove that customers had a need for branded products and that a brand added an extra value to the product. In the most of literature review shown that the development of the society influences the development of marketing. Hence, to predict the development of market share for any business it has to look into their brands in rationally (Blumenthal et al. 2003).

2.2.4 Definitions of brand and branding

There are many definitions can be seen for the brand in today's dynamic marketing landscape. Roper et al. (2006) argue that concept of the brand in business environment as a multidimensional construct that matching a firm's functional and emotional values with the performance and psychosocial needs of consumers. According to the Kotler (2000) simple traditional definition of a brand can be described as the name that associated with one or more items in the product line it is used to identify the source of character of the item.

Further, vast body of knowledge exists regarding definitions of brand in past literature. Hunt & Burnett (1982) define a brand as that represents an organization and reflects its heritage, values, culture, people, and strategy. Also he emphasized brand may identify one item, a family of items, or all items of that seller. If used for

the firm as a whole, the preferred term is trade name. Donna (2013) stated that brand is an identity of any organization in terms of what products and services they offer but also the essence of what the company stands for in terms of service and other emotional, intangible consumer aspects. Brand describe the company stands whether it is most economical, does it stands for superior service, is it an environmental friendly or responsible service or product. Another way of describing a brand is a shorthand marketing messages that make emotional bonds with consumers.

Brands are composed of intangible elements related to its specific aptitude, character, and positioning and tangible components having identifiable representation including logos, graphics, colours and sounds. A brand creates perceived value for consumers through its personality in a way that makes it stand out from other similar products. Brand also describe as identity of a product or service. It may be the name, the logo, the design, or a combination of those that customers use to identify, and differentiate, one product from another. A good brand must be delivered a clear message, provide credibility, connect with customers emotionally, motivate the buyer, and create user loyalty in business environment (Gini, 2010).

In today's business environment it is clear that customers are controlled business based on their satisfactions. Marketers may be investing huge money to build a brand. According to Charlene and Josh (2006) brand is the emotional relationship between the consumer and the product, there for marketers need to focus with consumers and build positive brand associations. The deeper the relationship, the more market share exists. Branding can be described as ongoing process of focusing organization past and present then creating a cohesive personality for the organization and its product going forward. For this SWOT (Strengths, Weaknesses, opportunities & Threats) analysis is done and go through all benefits like real and emotional that the product or services fulfills their customers. It has been found that vast body of knowledge discussed branding in marketing management.

According to the Kerpan (2007) branding is the representation of the organization as a personality. Branding is differentiates one from another and it is defined

personality of a product, service, company, organization or individual. Using survey data Sigel et al (2002) argue that successful branding requires delivering consistently positive experiences for organization's constituents. It comes from keeping promises to customers and earning their trust that brand will do its best at every point of contact to deliver on what they want and expect from the brand. This trust leads to their choosing brand again. Successful brands never take their constituents for granted. Customer never forget that most important to constituents are what's in it for them, that constituents are distracted, and organization must earn their attention.

Based on above discussion it is clear that there are many definitions for brand and branding. Although marketers' definitions of brand may differ, it's consistent is the importance of building brand as a competitive marketing tool. Brands retain their power in today's evolving social media ecosystem and device indifferent information consumption because they provide communication that breaks through the ever-increasing message-laden environment (Sigel et al, 2002).

2.3 Role of Brand in Marketing Practice

Modern marketing as it derive from economics advance, view the firm and the customer as separate and discrete entity. The customer is exogenous to the firm and recipients of the firm's active value creation efforts. One of the main role of the brand is close this gap between firm and customer. A strong brand name in today's business environment allows for greater success in implementing a strategic plan, remaining consistent in messaging and putting the firm in a better position for cross-selling in market place (Kotler, 2000).

When consider the role of brand a successful brand differentiates itself from its competition either in quality, price or uniqueness. Brands can be positioned in their market in three single ways, which should never be mixed among each other. First way can be selected as brand differentiator. That means differentiates itself from its competition though quality, functionality, availability and design. Second way is the cost leader. It differentiates itself from its competition through a lower price. Therefore, it is obvious it belonging in a low budget category and consumer is aware

of the abundance of one or more of the differentiator's values. Finally, role of market is considering in niche market. It has no perceived competition in its market and can theoretically be priced very high, targeting mainly Innovators and early adopters. When the connection between the customer and the product is strong then brand becomes a motivator for the customer to continue buying products continually and increase loyalty even if they have never used that exact product before (Stuart, 1993).

2.4 Importance of Brand

The time is tough in the marketing world. Business is not running as smoothly as before due to changing customer requirements and fast developing information technology that can be easily accessed. The competitive landscape in the business environment is fairly differentiated. Product or technology-based advantages and their developments are difficult to maintain. Today's most products are becoming more alike, but intangible attributes like brand, branding and brand equity take the reign in marketing environment (Dobson, 2009).

As technology evolved in day by day, the market has slowly shifted from a seller's playground to a consumer-dominated territory. The consumer-king concept has become a reality that taking commercial competition to the next level. Consumer insights are very important in the designing of efficient branding programs. Markets are competing in highly unstable environment in these days and most components modify rapidly in day to day business. Every day brings a new technological discovery that immensely threatening to completely change the customer requirements and that lead to change the characteristics of brand. Therefore, companies need to focus on their brands in proactive way to sustain in the business (Bolmback & Axelsson, 2007).

At the same time a different lifestyle and high living standards have imposed changes in habits and attitudes. Therefore, products and services has transcend their functional nature and now become to pure experiences. The key to success in this competitive marketing context intangible attribute like branding is one of the powerful tools in today's business environment (Berry, 2004). Prior research suggests that one of the main reasons is technological progress and social dynamics

play crucial roles in today's rapidly change in business environment. Therefore, brands face harsh competition and they have to constantly reinvent marketing rules to appeal to an audience that is gradually becoming more exigent and demanding. But tuning in brand with the present is a difficult challenge. Product quality is no longer sufficient to assure success of brand, it needs to be sustained and enriched by intangible attributes (Smith & Whan, 2005), Customers expect only the best from the best, and general products are never enough. They have to come in a proper package, after sales service, and hold intrinsic value. Quality is implicitly assumed but it is not sufficient in the high-end segments of the market in any brand (Laforet & Saunders, 2004).

The social perspective is extremely important in these days. Economists and marketing researchers have given considerable attention over recent years to the importance of brands. The role of brands in determining consumer purchase-making decisions are widely discussed and it is required further investigation to enhance their brand. A brand is a unique and identifiable symbol, association, name or trademark which serves to differentiate competing products or services. Brand represents not only a physical trigger but moreover an emotional hanger to create a relationship between consumers and the product or service. The meaning that marketers infuse in a brand and the subsequent meaning that consumers associate with the brand has to be correlated in positive way. This collation enhances their brands and this leads to build customer relation. It is also clear that brand is trigger to over time that is used to class beliefs and feelings toward products so labeled. For this reason, the meaning of the brand is of critical concern to develop and capture market share (Berry 2004).

According to Teas and Grapentine (1996) creation of an effective brand is not only captures a high market share, but optimizes marketing effectiveness as well. They further emphasize that strong and durable brand concepts communicated to well-targeted segments result in favorable brand images which reflect the brands identity and signal a level of quality to consumers and they can be effectively used to gain a competitive advantage. Costabile (2000) in his research on how loyalty toward a particular brand or product is cultivated in consumers reveals that integrates aspects

of cognitive, behavioral, and emotional constructs into a cyclical relationship. He further argue that a feeling of trust, accompanied by anticipated satisfaction, confirmation or disconfirmation following purchase and the importance of the brand is emphasized by the fact that customers tend to generalize their positive or negative experiences with a brand to all products that share the brand name. Branding has been recognized as the key to success in nowadays business. It provides value to the consumer through the buying process and thereby assures value to the company by attracting consumers and stimulating loyalty. The complex and versatile branding principle has imposed itself as the new business paradigm. It is implemented virtually across all markets and categories. Vast body of researches underlines the relational aspects of brand that emphasizing trust and dependability between consumers and the company (Chow & Holden, 2005).

2.5 Brand Equity

Brand equity is one of the critical parts in building a today's business and companies that successfully build brand equity understand just how important it is to the bottom line. However, development of brand equity is not a simple task. It takes time, patience, and a great deal of effort to build positive brand equity and its sustainability.

2.5.1 Background of brand equity

Brand equity concept devoted much attention recently and it has been viewed from different perspectives. The existing of the brand equity among the customers assists any organization to develop brand reputation and dominate in a competitive marketing environment (Aaker, 1996). Brand equity also triggers the brand extension within and across the product category at it has been as an appropriate matric evaluating the effectiveness of marketing communication and service performance (Kellar, 1993). Improvement of brand equity is considered an important part of brand building process in today's competitive business environment. Cobb, Beal and Donthu (1995) have explained brand equity is supposed to bring several advantages to a firm to sustain in business. For example, high brand equity levels are known to lead to higher consumer preferences and purchase intentions that leads to high

customer relations. Many researchers identified that firms with high brand equity are also known to have high stock returns.

2.5.2 Definitions of brand equity

In the field of marketing the word “brand equity” is associated with myriad words to try to define things that people regard as distinct from others. There is a consensus that brand equity is sum of all the mental associations of customers that have about a particular brand in abundance of brands. There are vast body of knowledge prevail regarding definitions of brand equity in past studies.

According to Leuthesser and Jones (1988) brand equity defined as the added value with which a given brand endows a product or a product is something that offers a functional benefit. Further Joseph (1975) argued that brand equity consists of the long term brand perceptions and associations in the minds of consumers. The stronger of perceptions like coherent, motivating will assist to influence purchase decisions and add value to a business. He also emphasized that brand equity is derived from the total brand experience like product, packaging, design, price, store presence, and controlled and uncontrolled communications and this runs contrary to the belief that brand equity should be all about the desire created by its marketing not the attractiveness of its more tangible assets.

According to the David Aaker (1991) brand equity defined as “A set of assets and liabilities linked to a brand, its name and symbol that adds to or subtracts from the value provided by a product or service to a firm and/or to that firm’s customers.” Keller (1993) described brand equity as “differential effect of brand knowledge on consumer response to the marketing of brand”. Brand equity also defined as “the enhancement in the perceived utility and desirability a brand name confers on a product” (Mackay, 2001). According to the American Marketing Association brand equity is defined as “the value of a brand. From a consumer perspective, brand equity is based on consumer attitudes about positive brand attributes and favorable consequences of brand use.”

2.5.3 Consumer based brand equity

The customer-based brand equity is identified as evaluating the value of a brand in customers' minds. As proper branding can be increased profitability in large and small-scale businesses by filling in gaps in customers' knowledge and by offering their requirements. Therefore, nowadays consumer based brand equity has become an important topic in the business world. Keller (1993) argued that success of brand is related to what resides in the heart and minds of consumers. He described customer based brand equity as “the differential effect of brand knowledge on consumer response to the marketing of brand”.

When consider on consumer-based brand equity measures it is important in several reasons. Main reason is consumer-based measures allow the assessment of brand equity at the brand level. Second, there is lot of published research in marketing uses these types of measures. Third, marketing managers are highly familiar with consumer-based measures that use data commonly collected in research studies and will thus use the information to enhance their brand further (Simon and Sullivan, 1993). Any organizations are interested in building brands with great equity but it is not easy task. Therefore, to build brand organizations must star in proper way to get what makes a brand strong. Keller (1993) developed a model that is called customer – based brand equity model which maps brand equity and how it should be best to be built, manage and measured.

According to Keller’s customer based brand equity model consist of series of steps for blinding strong brand as (I) establish a proper brand (II) creating of appropriate brand meaning (II) elicit a right brand responses and (IV) forge appropriate brand relationship with customers. According to Keller’s customer based brand equity model also depends on six brand buildings blocks namely salience, performance, imagery, judgment, feeling and resonance that leads to the foundation for successful brand development. It is depicted in Figure 2.1.

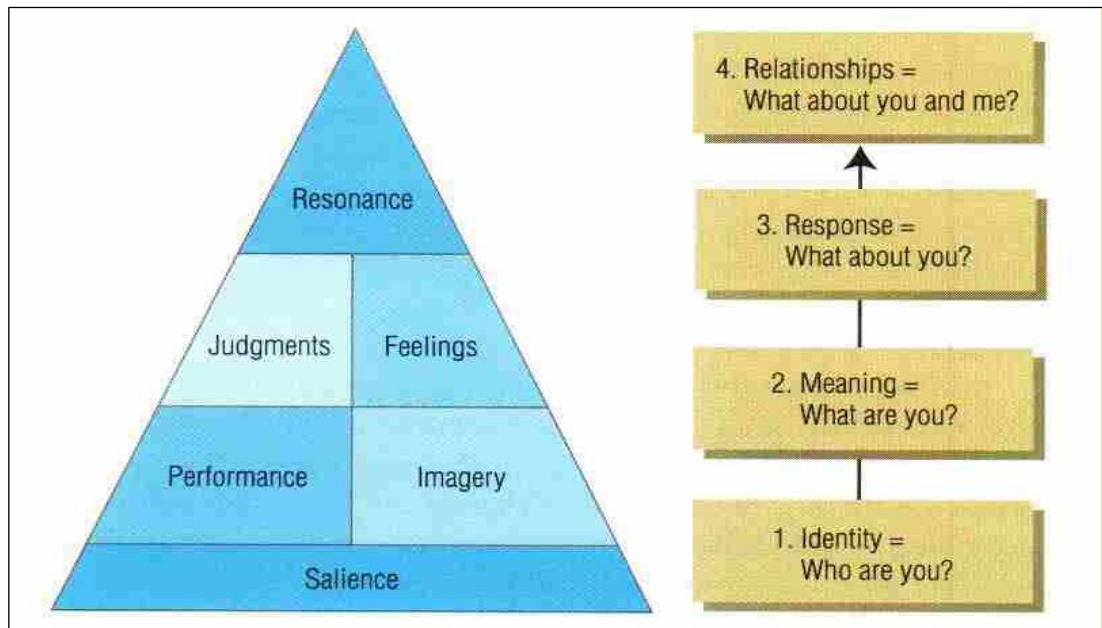


Figure 2.1: Customer – Based Brand Equity Model
 Source: Keller (1993)

2.5.4 Research related to brand equity

Vast body of researches are available that related to brand equity (Leuthesser and Jones, 1988; Mackay, 2001; Keller, 1993). Based on those brand equity has been formulated from different perspective in studies that investigate for the widely different propose. According to Franzen (1999) brand equity can be measured at the firm level and consumer level or combination of both. He also stated that firm based approach to brand equity for financial and evaluation purpose and there is also brand equity at individual customer level.

According to Barwise et al (1990) firm level measure of brand as a financial asset and brand equity as an intangible asset displayed in variety of forms of in the financial statement. The brand equity bestows long term return on company through the creation of loyal customers. Preliminary research related to brand equity help for companies to develop an effective brand strategy, and a strategy that is custom-tailored to the company. There are many ways in which brand equity studies go hand-in-hand with strategy development in today's business environment.

2.5.5 Dimensions of brand equity

Today's in competitive business environment, the concept of brand equity is an important area for strategic intelligence for marketers (Keller, 1993). Brand equity dimensions is important for any organization to enhance purchase intentions of customers, maximize profits and share returns, maintain market power, sustainable competitive advantages, brand extension and consumer's willingness to pay premium prices (Franzen, 1999). Brand equity dimensions facilitates in the effectiveness of brand extensions and brand introductions. This is because consumers who trust and display loyalty toward a brand are willing to try to adopt brand extensions. While there have been methods to measure the financial value of brand equity, measurement of customer-based brand equity has been lacking. The customer-based brand equity scale is developed based on the five underlying dimensions of brand equity: performance, value, social image, trustworthiness and commitment (Wood, 2000). Even though various researches available in brand equity through the past years there is considerable debate regarding the definition of brand equity and its measurements. Numbers of dimensions have been used to examine consumer based brand equity (Yoo and Donthu, 2001).

These measures may be direct or indirect. Direct measure are determined the potential source of inherent characteristics of the brand equity. Indirect measures attempt to identify the concrete aspect influence the brand association in the minds of customers (Keller, 1993). In simply, brand equity is accepted as the overall utility that customers place in a brand (Vazquez et al, 2002). The definitions of brand equity can be classified into main two perspectives. The first perspective of brand equity is from a financial point of view where the asset value of a brand is evaluated. Nowadays in business environment brand equity has increasingly been defined in customer-based perspectives, which defines brand equity as the value of a brand to the customer. Brand equity defines by Aaker (1991) as "a set of brand assets and liabilities linked to a brand, its name and symbol that add to or subtract from the value provided by a product or service to a firm and/or to that firms' customers". Keller (1999) stated that the strength of a brand lies in the minds of the customers. It is depend on what customers have experienced and learned about the brand over

time. He defines customer-based brand equity as “the differential effect that brand knowledge has on consumer response to the marketing of that brand”. According to the Aaker’s (1991) model of brand equity it has four dimensions. Those are brand loyalty, brand awareness, perceived quality and brand association as depicted in Figure 2.2.

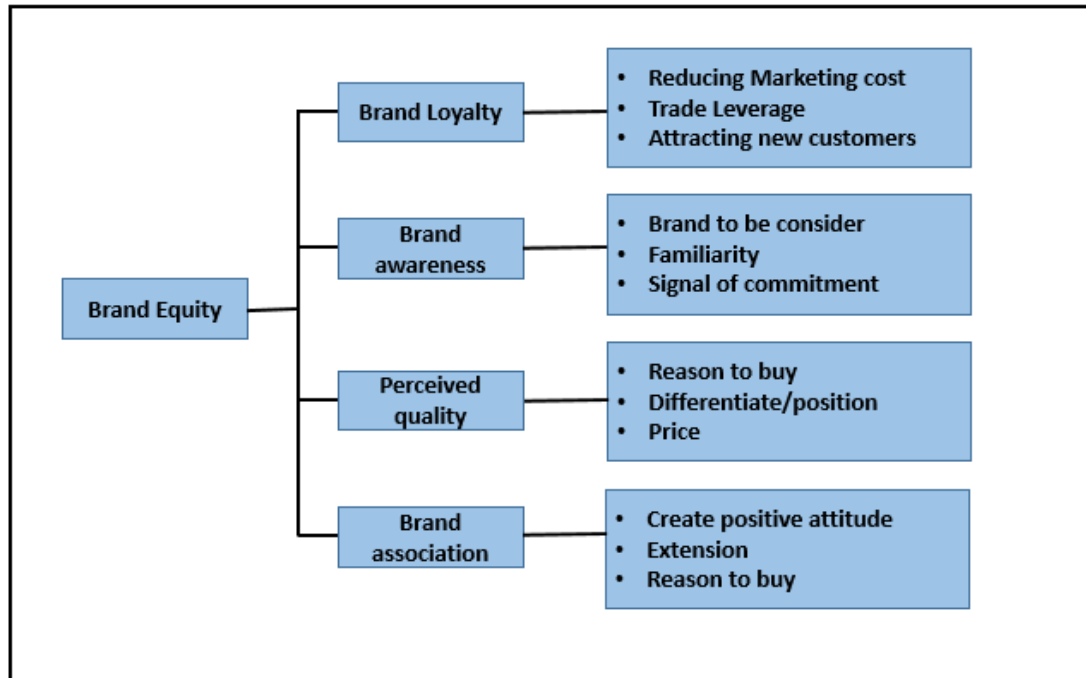


Figure 2.2: Customer – Aaker’s Brand Equity Model
Source: Aaker (1991)

2.5.5.1 Brand loyalty

According to the Aaker (1991) brand loyalty defines as ‘the attachment that a customer has to a brand’. Two different levels of brand loyalty can be identified as behavioral and cognitive loyalty. When consider behavioral loyalty it considers of repeated purchases or commitment to rebuy the brand as a primary choice. Cognitive loyalty refers to the consumers’ intention to buy the brand as the first choice (Keller, 1993). Chaudhuri and Holbrook (2001) stated that brand loyalty is the customer’s willingness to pay higher price for a brand in comparison with another brand offering similar benefits. Building brand loyalty is very important in any business because it triggers potential profit for origination (Kerpan, 2007). The main reason for this is

cost of recruiting new customers are much higher than the cost of retaining existing customers. Furthermore loyal customers are more likely to pay price premiums and less likely to be price sensitive. The brand pyramid that was explained by Millward (2010) is one of the useful tools that can be used to identify customer's journey towards the brand loyalty as depicted in Figure 2.3.

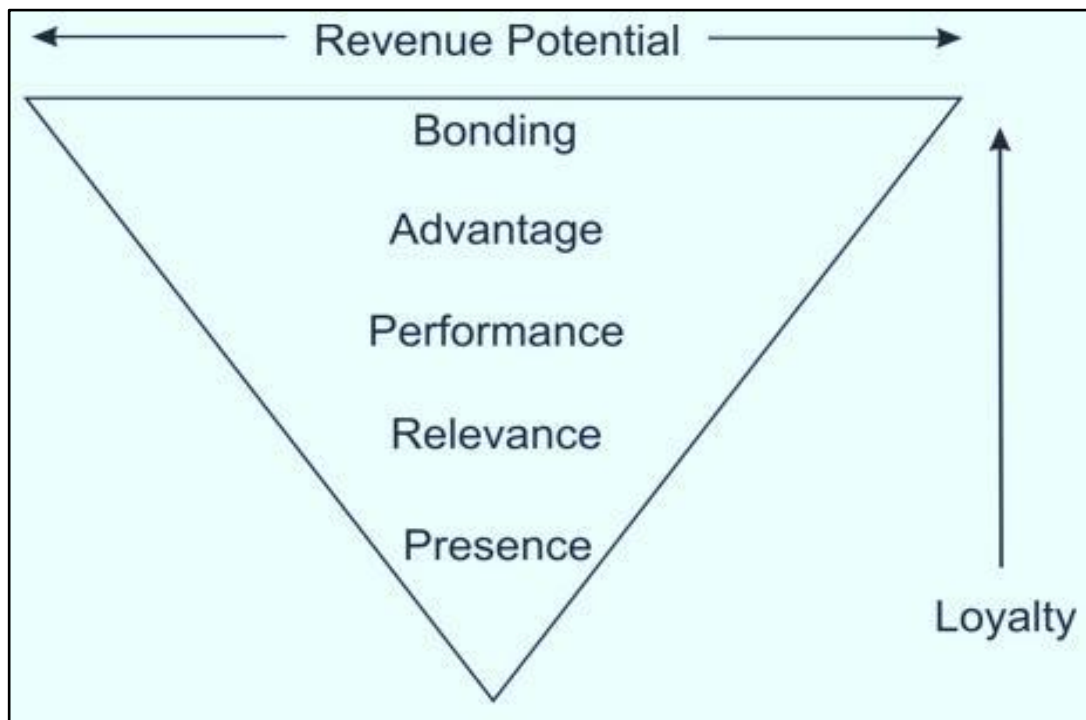


Figure 2.3: Brand Pyramid

Source: Millward (2010)

Brand Pyramid shows that five key stages for customers go through as they build loyalty to a brand, product, or service. The five stages are namely, presence, relevance, performance, advantage and bonding. (Millward, 2010).

2.5.5.2 Brand awareness

Brand awareness can be considered as the first steps of building brand equity among individual customer level. Aaker (1991) described brand awareness as “the ability of a potential buyer to recognize or recall that brand is a member of a certain product

category”. He further stated that brand awareness stimulate the memory of customer to give them a certain sense of familiarity with the brand in putting together their considerations. Basically brand awareness functions to reveal to uncover customers’ ability to identify a brand in memory increase the likelihood of brand name without outside. Brand awareness also measures how familiar people are with a product or services. Recognition of product’s name has an advantage over brands that don’t recognize. Brand awareness indicates the health of a brand and it can be used as a tool to measure the effectiveness of advertising aid (Franzen, 1999).

Brand awareness plays a major role in a consumer’s purchasing decision process. Therefore maintaining of brand awareness is a very important aspect in marketing. The eventual goal of most businesses is maximize profits and increase sales. Thus every business intends to increase their consumer pool and encourage repeat purchases. When consider the brand awareness it affects consumer decision making by influencing the formation and strength of brand association and this leads to enhance the brand loyalty among the customers (Kamakura and Russel, 2003).

2.5.5.3 Perceived quality

Perceived quality cannot objectively determine. Because it is a perception and judgments about what is important to customers are involved. In simple way perceived quality can be defined as the customer's perception of the overall quality or superiority of a product or service. Perceived quality is also measure with respect to its intended purpose and relative to alternatives. Perceived quality is, generate in customers’ insight. Perceived quality is an intangible, it express overall feeling about a brand (Johanson and Bruwer, 2007). Aaker (1991) described perceived quality as “customer’s perceptions of the overall quality or superiority of a product or service with respect to its intended purpose, relative to alternatives”. According to the Zeithaml (1998) perceived quality defined as a customer’s judgment about the superiority, esteem or excellence of a brand in relative terms. Holbrook and Corfman (1985) stated that perceived quality is differed from objective quality that involves a subjective response and evaluation of product or service. Further, they argued that the dimensions underlying perceived quality depend upon the characteristics of the product or service. Customers evaluate the perceived quality of brands on their

understanding of service delivery and performance. Hosted (1985) argued that perceived quality can be considered as a key strategic variable for most of the firms. Total quality management that popular in past decade has been central to many firms for the enhance quality and reduction of cost and finally perceived quality is usually the end goal of total quality management programs. Cobb et al. (1995) proved that in his research there is a positive relation between the amounts spent on advertising and brand awareness. Further Aaker and Joachimsthaler (2000) observed that there is a positive relationship between advertising spending and perceived quality. These findings are also supported by Kirmani and Wright (1989).

2.5.5.4 Brand association.

Brand association seated in customer's mind about the brand. When a brand is associated with something positive then customers are relate it to being positive. Brand associations are also the attributes of brand which come into consumers mind when the brand is talked about. It is related with the implicit and explicit meanings which a consumer associates with a specific brand name. Brand association can also be defined as the degree to which a specific product recognized within its product category (Mackay, 2001).

Based on a literature review it can be identified two types of brand association. One is product association. The other one is organizational association that including corporate ability association and corporate social responsibility association. It also found that in past research the number of brand association and total association have significant relationships with brand equity. But the core of the brand association, instead of total association, is the key factor of driving brand equity building. The greater the numbers of the core brand association, the higher the brand equity (Netemeyer et al, 2004).

According to Aaker (1991) brand association is another dimension of consumer-based brand equity. He also defined brand association as "anything link in the memory to brand". The association may be linked to product (Bullmore, 1984), country of origin, company (Blomback & Axelsson, 2007), competitor (Biel, 1993), retailer, lifestyle or demographic (Engel et al, 1998). Vast bodies of researches have

explored that brand image in an effort to understand the brand associations (Biel, 1993), brand personality (Kotler & Keller, 2008) and brand meaning (Berry, 2000). According to Keller (1993) brand image defined as “perceptions about a brand as reflected by the brand association held in the consumer memory” and described brand associations as any informational node linked to the memory of brand that has a comprehensive meaning for the customer. Brand association is very important for devolving a favorable, strong and unique brand image (Keller, 1993) and creating conceivable and reliable meaning for customers through the differentiation of the characteristic and personalities of the brand (Berry, 2000).

2.6 Consumer Buying Behavior

Consumer buying behavior is one of the extensively studied areas by researchers and marketers in the past. There are different reasons why consumer behavior has been topic for many researches. One factor is the consumer behavior has become a direct impact of overall business performance (Kotler & Keller, 2008). Another view suggests consumer behavior is crucial because of fierce competition in worldwide business environment (Laing et al, 2002).

Kotler and Keller (2008) stated that as a part of the marketing, buying behavior of consumer is very important area to study. They further emphasized in their studies regarding way how the individuals, groups or organizations choose, buy use and dispose the goods with the factors that effecting to purchasing decision such as their previous experience, taste, price and branding. They also show that personal habits and previous experience of the consumers have a direct impact on the purchasing decision of the consumers. They also stated that the image of the product has a vital impact on the purchasing decision of the consumer. Further they recommended that the product image should continuously be improved in order to encourage the purchasing decisions of consumers. It has been identified that in many researches, the consumer buying behavior is the outcome of the needs and wants of the consumer and they purchase to satisfy their needs and wants. It also clear that needs of human being depends on the personal factors such as age, psychology and personality.

Also there are some other external factors which are broad and beyond the control by consumer. Large numbers of researches have been carried out by academics and scholars on identifying and analyzing factors affecting the consumers' buying behavior. Those studies identified various types of factors that effect for the consumer behavior. These factors have been classified into different types and categories in different ways by different researchers. Laing et al, (2002) classified them into internal and external factor. On the other hand, Lassar et al (1995) divided these factors into social, personal and psychological. Despite the fact that they have been classified into different groups by different researchers they are similar in scope and purpose (Berry, 2000).

2.7 Consumer Buying Decision Process

Purchase can be considered as only the visible part of a more complex decision process created by the consumer for each buying decision. But what happens before and after these purchases have to consider in more broadly. The Factors influencing the choice of product purchased by the consumer are very important to capture market in further. Engel, Blackwell and Kollat (1998) developed a model for consumer buying decision process. It consist of five steps namely need recognition, information search, evaluation of alternative, purchase and post purchase evaluation as depicted in Figure 2.4.

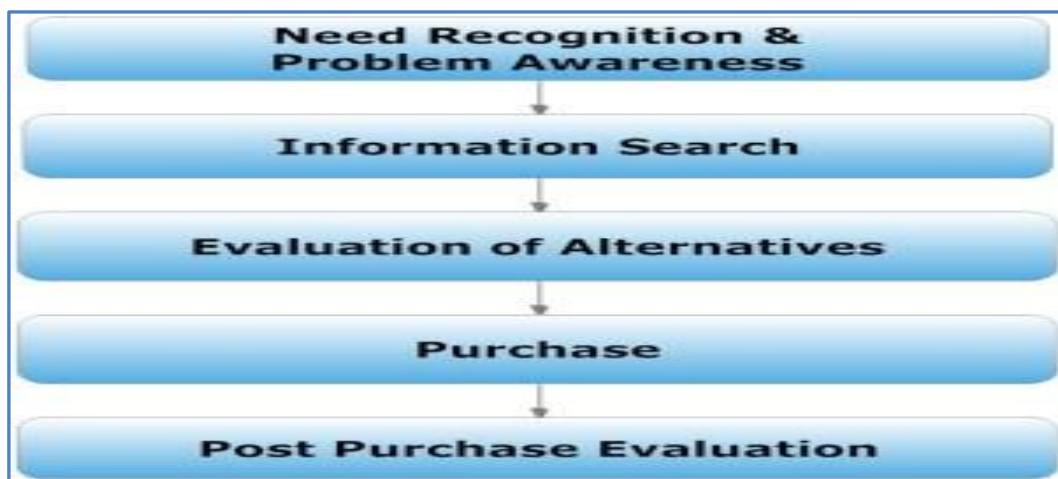


Figure 2.4: Buying decision process

Source: Engel, Blackwell and Kollat (1998)

The first and most important step in the buying process is need recognition or problem awareness. Purchase depends on need and if there is no need, there is no purchase in market place. Recognition happens when there is a gap between the consumer's actual situation and desired situation. However, all the needs are not end up as a buying behavior. It requires that the lag between the two situations is quite important.

Second step of buying decision process is seeking information about possible solutions to the problem. Customer will search more information depending on the complexity of the choices to be made. Customers also consider his level of involvement in this step. The consumer will be able to evaluate the different alternatives with proper information. Then evaluate the most suitable product or service that fulfills customer's need. After evaluating the different solutions and products available for respond to need, customer will be able to choose the product or brand that seems most appropriate to their needs. Then proceed to the actual purchases that represent fourth steps of the buying decision process. After purchased and used of the product, the consumers will eventually evaluate the adequacy with their original needs (Engel, Blackwell and Kollat, 1998).

2.8 Key Purchasing Determinants (KPD)

Most of the industries are trying to expand their market worldwide in this era. For this purpose they need to study their respective market and identify the factors that will steer them to success. Thus, the identification of KPD is very important and factors which influence KPD should be identified in order to success in the fast-moving consumer goods (FMCG) industry in worldwide. When consider the KPD customer satisfaction is widely recognized as key influences in the formation of consumers' purchase intentions because it is one of the main factors in making purchasing decision. Some studies have highlighted concepts such as Brand Equity (Aaker, 2003), Customer Equity (Laing et al, 2002) enhance the purchasing determinants of customers.

Furthermore, some researchers have investigated the impact of other factors on key purchasing determinates. As example the impact of consumer perception on green purchasing product influence of packaging on consumer purchasing decision for FMCG (Biel, 1993). Bullmore (1984) carried out study to focuses on the facts that affect the consumers purchasing decision making process on purchasing of imported health food products, in particular demographic effects such as gender, education, income and marital status. The researcher employed questionnaire method in order to reach the objectives of the research. His analysis reveals that impact of family members on the consumer decision making process of purchasing imported health food products was significant.

According to the literature given in this chapter KPD has direct impact on brand equity dimensions. However, the relations impact on KPD can be varied based on the industry and socio economic context. Further, influence of the KPD may not have same impact on each dimensions of the brand equity. This situation becomes further complex when it comes to developing countries due to majority of customers are not brand conscious. Therefore, the association between KPD and brand equity in the toothpaste market did not hugely consider by previous researchers. Further, this research issue did not significantly address by previous researches in Sri Lankan context. Therefore, it can be identified significant literature gap. Accordingly, this study mainly focus on fulfill that literature gap.

2.9 Chapter Summary

There were various studies related to determine the benefits of consumer seek from product and impact of KPD on brand equity on varies products including toothpaste by various countries. However, in Sri Lanka not much studies were reported on this aspect in particularly for toothpaste. Nevertheless various aspect and analyses carried out by various authors are immensely useful to this study.

CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter mainly focuses how research problem has been developed into a conceptual model that can be investigated using statistical analysis. Also the statistical methods used are briefly discussed.

3.2 Conceptual Framework

Literature reviewed by the researcher has helped in conceptualizing the research problem. The research problem at hand is to determine the benefits of consumer seek from toothpaste and impact of KPD on brand equity of toothpaste market in Sri Lanka. In conceptualizing the study, researcher has attempted to build relationship between independent variables and dependent variable. It is also necessary to examine the relationship between two key variables and other variables influenced on dependent variable. This would enable the researcher to interpret the findings in a more comprehensive manner. As per the literature review several KPD's were identified in toothpaste market in different perspective.

For instance it highlights various factors affecting purchase of toothpaste like price (Zeithaml, 1988), prevent cavity (Steele, 2000), shiny teeth (Heinjnbrok & Vander, 2007), strengthen gum (Mojon & Baehni, 1998), freshness, strengthen of enamel, attractive teeth (Griffin et al, 2007) company image and advertising (Simoes & Dibb, 2001.). Based on those dimensions researcher developed the conceptual model for the study and it is depicted in Figure 3.1.

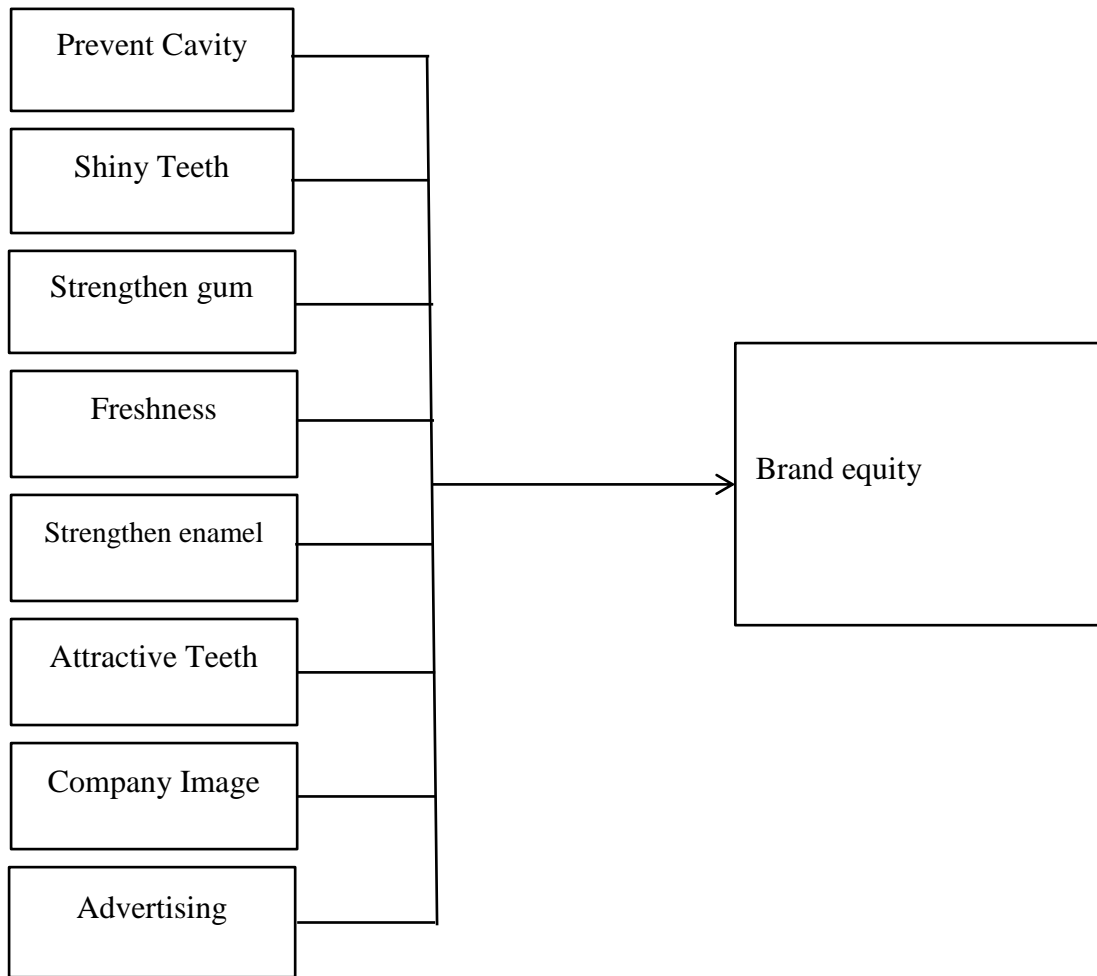


Figure 3.1: Conceptual framework

3.3 Operationalization of the Study

The focus of this research is to determine the benefits of consumer seek from toothpaste and impact of KPD on brand equity of toothpaste market in Sri Lanka. Therefore, concepts defined in the conceptual framework need to be operationalized to testable levels, in order to establish the focus of the research. To determine the benefits of consumer seek from toothpaste self-administration questioners with five point likert scale were included. This part included in questioner with focus of eight areas of consumer seek from purchase of toothpaste. These eight areas are given below.

- X₁ : Purpose of toothpaste is preventing cavity.
- X₂ : Preferred to purchase toothpaste gives shiny teeth
- X₃ : Toothpaste should be helped to strengthen gum.
- X₄ : Freshness of breath is important
- X₅ : Strengthen of enamel
- X₆ : Attractive teeth is very important
- X₇ : Company image is consider when purchasing toothpaste
- X₈ : Price of the toothpaste is consider when purchasing toothpaste

The concepts appearing in the hypotheses were reduced to operational terms and each variables of the conceptual framework has been operationalized based on literature survey described in Chapter 2 and shown in Table 3.1. The identified two concepts are KPD and brand equity. For each concepts, many variables have been identified and for each variable different indicator were identified (Table 3.1).

Table 3.1: Operationalized Table

Concept	Variable	Measurement Indicator
KPD	Prevent Cavity	Customer awareness and importance of prevent cavity
		Current satisfaction level of prevent cavity in toothpaste that use
		How far consider of prevent cavity in teeth in oral hygiene
	Shiny Teeth	How far importance of shiny teeth in oral hygiene
		Current satisfaction level of shiny teeth in toothpaste that use
		Extent of importance in shiny teeth
	Strengthen gum	How far strengthen of gum importance in oral hygiene
		What extent currently use toothpaste assist to strengthen gum
		Current satisfaction level of strengthen of gum in tooth past
	Freshness	Customer awareness and importance of freshness in toothpaste products Facing Problem with prevent cavity in oral
		Current satisfaction level of freshness in toothpaste that use
		How far consider freshness in teeth in oral hygiene
	Strengthen of enamel	How far consider regarding strengthen of enamel in oral hygiene
		What extent currently use toothpaste focus to strengthen enamel
		Current satisfaction level for attribute strengthen of enamel
Attractive Teeth	How far importance of attractive teeth in oral hygiene	
	Current satisfaction level of attractive teeth in toothpaste that use	

Table 3.1: Operationalized Table (Continued)

Concept	Variable	Measurement Indicator	
KPD	Attractive Teeth	What extent of importance in attractive teeth	
	Company Image	How far company image impact on selecting toothpaste	
		Which extent company image assist to make change in customer base	
		How far company image reflect the quality of product	
	Advertising	How extent advertising campaign enhance the brand equity of tooth paste	
		What extent advertising assist to get information regarding tooth paste products	
		Customers can be changed by advertising campaigns	
	Brand equity	Brand Awareness	How far one brand can identify among other competing brands
			What extent symbol of favorite brand keep in memory
		Brand association	Current feeling of brand selection and it association level
How far get excitement using tooth paste brand that use			
Preferential level of the company which makes tooth paste brand			
What extent trust the company which makes tooth past			
Perceived quality		Level of quality offers in tooth paste product	
		Consistent level of quality offers in tooth paste product	
		Assurance level reliability in tooth paste product	
Brand loyalty		What extent consider consumer loyal to tooth paste brand	
		Any priority of selection to choose tooth paste brand	
		How far recommend your tooth paste brand to others	

3.4 Methodological Choice

The main purpose of this study is to determine the benefits of consumer seek from toothpaste and impact of KPD on brand equity of toothpaste market in Sri Lanka through a self-administered questionnaire. Accordingly, both qualitative and quantitative statistical methods were carried out. Under this context, deductive research approach was also employed.

3.4.1 Primary data

Collecting data directly from the practical field is called primary source of data. Among the methods of collecting primary data main methods include: questionnaires, interviews, focus group, observation, case-studies, diaries, critical incidents, portfolios (Mohammad 2010) etc. However, there are several factors to be considered in collecting this data. It is important to look into the time structure, resource availability nature of the research when choosing a particular method of data collection (Saunders et al 2003). Due to the time and resource availability of the research, a structural questionnaire was designed to collect the primary data from customers with the self-administrated questionnaire.

3.4.2 Secondary data

Secondary data is data that has already been collected by someone else for a different purpose. For example, this could mean using: data collected by a hotel on its customers through its guest history system, data supplied by a marketing organization, annual company reports, and government statistic (Mohammad 2010). The secondary data gathered will help to strength the primary data analysis and to give a better understanding the results. The secondary data need for the study when selecting the research variables and the sample for the survey. In the process of selecting the research variables, the published documents such as research articles, journals of marketing, annual reports, Internet, newsletters of local and foreign companies, various brochures on the products offered by toothpaste manufactures were utilized.

3.4.3 Sampling design

Cooper & Schindler (2003) have identified many compelling reasons for sampling: lower cost, greater accuracy of results, greater speed of data collection and availability of population elements. Saunders et al (2003) stated that the major task in sampling is to select the sample from the defined population which will ensure that sample will represent the population and is unbiased as far as possible. The primary target population for this research would be the tooth paste users in Sri Lankan fast moving consumer goods (FMCG) sector. Based on research available it was decided to carry out the survey in main supermarkets in Colombo. Reason for selecting Colombo district is highest consumption of toothpaste in 2013 recorded in this district. Due to various constraints sample size was limited to 200 and sampling design was purposive random sampling.

3.4.4 Data collection instrument

The main tool of the study is self-administrative questionnaire which was designed in order to check several aspects. The design of the questionnaire was based on benefits of consumer seek from the toothpaste and key purchasing determinates of tooth paste industry and brand equity. The questionnaire consisted of four parts. The first part consisted of general information pertaining to the respondent's awareness. The second part was based on to measure benefits of consumer seek from the purchase of tooth paste. Part three consider the respondent's expectations and perceptions of key purchasing determinants of toothpaste market. This part was important because it measured the respondent's attitude, opinion, perception and knowledge about key purchasing determents. Final part of the questionnaire included demographic information. According to Malhotra and Satyabhusan (2010), this survey approach is the most common method of primary data collection in marketing research and the advantages are simple administration and data consistency. A sample of questionnaire is shown in Annexure 1.

3.5 Statistical Methods

The statistical techniques used in this study are factor analysis and 2- way chi- square table.

Factor Analysis (FA)

The concept of factor analysis is to identify the reasons for the correlation among observed variables. That is, FA detects relationship between correlated variables by examine variances and covariance of the system consist of several variables (Johnson & Wichern, 2007). Further, Johnson and Wichern argued that its modern beginning lie in early 1900's with Charles Spearman's interest in human ability and his development of the two factor theory. This leads to burgeoning of work on theories and mathematical principals of factor analysis (Harman, 1976).

Factor analysis an intricate representation of the covariance structure of a set of data. According to the Johnson and Wichern (2007), FA is considered as an extension of principle component analysis (PCA). Therefore, FA can be described as a statistical technique used for finding common factor that explains the correlation among the observed variables. The main difference between PCA and FA was discussed by Johnson and Wichern (2007). The main difference is in PCA, it is attempting to explain the variability of system using fewer dimension of the orthogonal components. In FA, it is attempting to identify few factors (latent factors) to explain covariance of the original system using unobservable factors.

There are two methods of factor analysis: (i) Exploratory Factor Analysis (EFA) and (II) Confirmatory Factor Analysis (CFA). EFA does not require any prior knowledge of about number of factors. CFA is commonly used for testing the identified FA model. In this study EFA is used. Main requirements for EFA are given below.

- I. High correlation among variables indicate that the observations can be grouped in to homogeneous group (cluster) and the partial correlations controlling other variables should be small compared to the original variables.

- II. The significance of the correlation matrix is testing by using Bartlett's test sphericity. The null hypothesis, H_0 : population correlation matrix, $\Sigma = I_p$ vs $H_1 \neq I_p$
- III. KMO statistics is a measure of sampling adequacy of variables and it indicates the extent in which the new indicators belong together. The following criteria can be applied for factor analysis.

KMO Indicator	Recommendation
> 0.9	Highly recommended
> 0.8	Recommended
> 0.6	Reasonable to consider
< 0.6	Not recommended

The basic idea underlying factor analysis is that p observed random variables ($X_1, X_2, X_3, \dots, X_p$) can be expressed, as linear function of m ($< p$) unobserved variable (common factors). That is if $X_1, X_2, X_3, \dots, X_p$ are the variables and $F_1, F_2, F_3, \dots, F_m$ are the factors. Therefore, the factor analysis model can be written as:

$$X_1 = \lambda_{11} F_1 + \lambda_{12} F_2 + \dots + \lambda_{1m} F_m + \varepsilon_1$$

$$X_2 = \lambda_{21} F_1 + \lambda_{22} F_2 + \dots + \lambda_{2m} F_m + \varepsilon_2$$

.....

$$X_p = \lambda_{p1} F_1 + \lambda_{p2} F_2 + \dots + \lambda_{pm} F_m + \varepsilon_p$$

Where, λ_{jk} , $j = 1, 2, 3, \dots, p$; $k = 1, 2, 3, \dots, m$ are the factor loadings, and ε_j , $j = 1, 2, 3, \dots, p$ are unique factors. There are number of assumptions associated with factor models are:

- (i) $E(\varepsilon) = E(F) = E(X) = 0$
- (ii) $E[\varepsilon\varepsilon'] = \Psi$ (diagonal)
- (iii) $E[F\varepsilon'] = 0$ (a matrix of zeroes)
- (iv) $E[FF'] = I_m$ (an identity matrix)

Number of factors to be retained

Several methods have been proposed for determining number of factor that should be retained for factor analysis. The most common and popular method is dropping factors whose eigenvalues are less than one since they produce less information. However, in general it makes sure to that the selected factors account for about 70-80% of the variance of the initial system.

Factor Rotation

Once the factor model has been extracted, it might be difficult to name the factors on the basis of factor loadings. Most variables have high loadings on the most important factors and small loadings on all other factors (Herman, 1976). Thus interpretation of factors can be difficult. Solution from either principle component analysis or maximum likelihood method can be rotated in order to simplify the interpretation of factors (Hostae, 1985). Factor rotation redistributes variances among factors and make it easier to interpret factors by investigating factor loadings (Herman, 1976). There are number of orthogonal rotation methods such as Varimax, Quartimax, Equamax and Orthomax. Among these rotation methods, according to the Habing (2003), Varimax and Quartimax methods are the most popular orthogonal rotation methods. Both Varimax and Quartimax methods maximize the sums of the squared factor loadings, wherea Varimax focuses on the columns and quartimax focuses on rows.

Chi-square test

Chi-square test serve both as a goodness of fit test, where the data are categorized along one dimensions, and as a test for the more common contingency table, in which categorization is across two or more dimensions. Chi- Square statistics is used to investigate whether distributions of categorical variables differ from one another.

CHAPTER 4

DATA ANALYSIS AND DISCUSSION

4.1 Introduction.

This chapter describes the statistical analysis of the collected data and interpretation of the results with regarding benefits of consumer seeks from toothpaste and key purchasing determinant and their impact on brand equity of the toothpaste market in Sri Lanka. In order to create a clear understanding of data analyses some graphical representation and tabular form are used.

4.2 Response Rate

To collect quantitative data for this research surveyor method was applied in key super markets in Colombo district. The sampling unit was a customer in a super market. Of two hundred customers only 183 (93%) were responded. Among this 183, 12 (6%) respondents were rejected due to incomplete information. Therefore, information of 171 was included for data analysis. Thus the effective response rate is considered as 85.5%.

4.3 Analysis of Demographic Variables

As the sample consist of different demographical categories, different job categories, different age & education levels etc, initial analyses was carried out to find the distribution of demographic variables.

4.3.1 Distribution of gender

Frequency distribution was taken to get classification for gender percentage of sample profile. Figure 4.1 are included the details related to percentage of males and females in the sample.

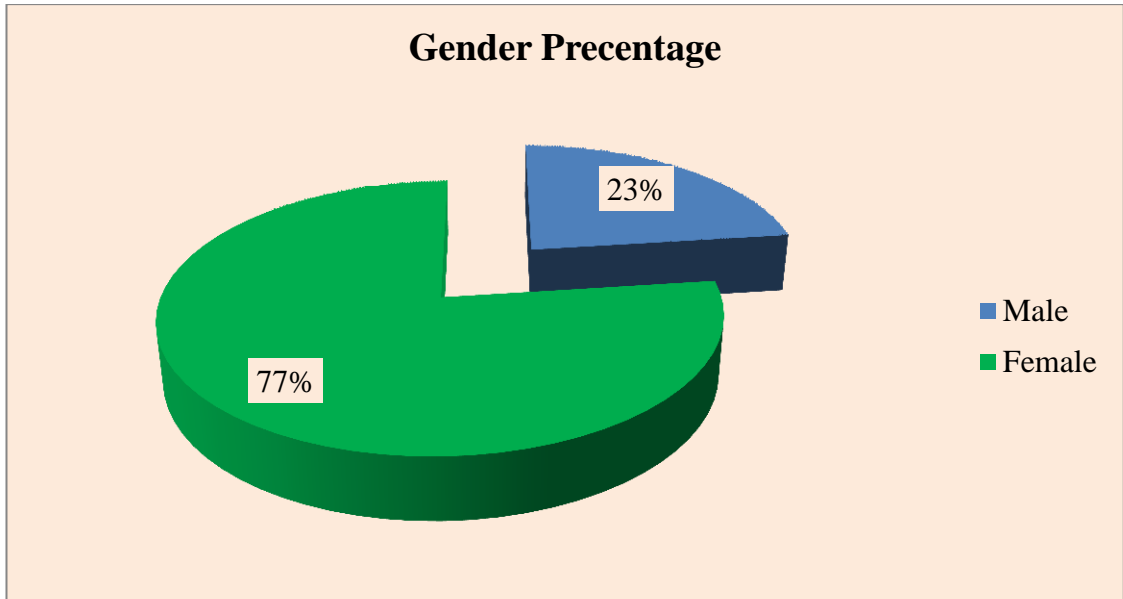


Figure 4.1: Male vs. female percentage of respondents

Figure 4.1 indicates that the majority of the respondents were females (77%). This shows that when considering the demographic profile high percentage of females purchased fast moving consumer goods (FMCG) like toothpaste in their daily routing habits. Although the number of females is more, an impartial feedback can be gathered from both perspectives.

4.3.2 Distribution of marital status

Frequency distribution information for marital status of sample profile is shown in Table 4.1.

Table 4.1: Marital status of respondents

Marital status	Frequency	Percentage (%)
Married	117	68
Unmarried	54	32
Total	171	100

According to results in Table 4.1 it is clear that 32% of the respondents are single and 68% of the respondents are married.

4.3.3 Age group

Age group analysis of respondents is shown in Table 4.2.

Table 4.2: Distribution of age

Age Group (in years)	Frequency	Percentage
Less Than 25	5	2.9
26-35	51	29.8
36-45	103	60.2
46-54	9	5.3
over 55	3	1.8
Total	171	100.0

According to above results it is clear that the highest percentage (60.2%) is for age group of 36 to 45 years, followed by 29.8% in age group of 26 to 35 years. The lowest percentage (1.8%) falls in to over 55 years. Other than this 2.9% of respondents falls in to less than 25 years and 5.3% of respondents are in age group of 46 to 54 years.

4.3.4 Distribution of education level

When considering the education of the respondents it consists different educational back ground and distribution of education level of the respondents is shown in Table 4.3.

Table 4.3: Educational back ground of respondents

Education status	Frequency	Percent (%)
Secondary Level	53	31.0
Diploma Level	57	33.3
Graduate Level	45	26.3
Postgraduate Level	6	3.6
Other	10	5.8
Total	171	100.0

Based on the results in Table 4.3 it is clear that the education level of the respondents is high. Highest percentage of 33.3% is for diploma level and second highest percentage of 31% is for secondary educational level. Degree level percentage is 26.3% and master degree holders percentage is 3.5%.

4.3.5 Distribution of monthly income level

Sample profile is consisted with different monthly income levels. Frequency distribution information for income level of sample profile is shown in Table 4.4.

Table 4.4: Monthly income level of respondents

Monthly Income	Frequency	Percentage (%)
less than 7,500	3	1.8
7,500 to 14,999	6	3.5
25,000 to 40,000	51	29.8
More than 40,000	111	64.9
Total	171	100.0

According to Table 4.4, out of 171 respondents 111 (64.9%) respondents have monthly income greater than Rs. 40,000. Percentage between Rs.25000 to Rs.40,000 is 29.8% of the population. This shows that the income level of the respondents were fairly good.

4.3.6 Distribution of employment

Sample profile consists with different category of employee. They are categorized in to unemployed, executives, senior management and others. Their frequency distribution of those groups are given in Table 4.5.

Table 4.5: Distribution of employment of the respondents

Employment	Frequency	Percentage (%)
Unemployed	4	2.4
Executive	73	42.7
Senior Management	51	29.8
Other	43	25.1
Total	171	100.0

The highest percentage of the respondents were executives (42.7%), the second highest false in senior management level (29.8%) and the third highest were other professions (25.1%). According to the characteristics given in sample profile selected sample is almost correspondent to the characteristics of target population. Therefore, data set is sufficient to solve the existing research problem.

4.3.7 Distribution of daily habit of using toothpaste

In addition to sample profile daily habits of using toothpaste was also acquired and analyzed (Table 4.6).

Table 4.6: daily habit of using toothpaste

How many Time Use daily	Frequency	Percentage (%)
One time per day	5	2.9
Two times per day	90	52.7
Three times per day	59	34.5
More than three per day	17	9.9
Total	171	100.0

According to the results in Table 4.6, it is clear that highest percentage (52.6%) used toothpaste two times per day. Another 34.5% is used toothpaste three times a day and 9.9% used more than three times a day. Least percentage (2.9%) used tooth paste one time per day.

4.4 Association among Attributes

In order to find the association between pairs of each attributes correlation analysis was carried out (Table 4.7).

Table 4.7: Correlation matrix among attributes of toothpaste

	Prevent cavity	Shiny teeth	Strengthen of gum	Freshness	Strengthen of enamel	Attractive teeth	Company image
Shiny teeth	-0.160 (0.035)	1					
Strengthen of gum	0.915 (0.000)	-0.295 (0.000)	1				
Freshness	-0.155 (0.042)	0.705 (0.000)	-0.299 (0.000)	1			
Strengthen of enamel	-0.863 (0.000)	0.015 (0.843)	-0.787 (0.000)	-0.120 (0.119)	1		
Attractive teeth	-0.171 (0.026)	0.720 (0.000)	-0.235 (0.002)	0.763 (0.000)	-0.079 (0.304)	1	
Company image	0.053 (0.494)	0.127 (0.099)	0.002 (0.981)	0.201 (0.008)	-0.139 (0.071)	0.118 (0.124)	1
Price	0.047 (0.545)	0.117 (0.129)	0.005 (0.948)	0.175 (0.022)	-0.119 (0.121)	0.104 (0.174)	0.971 (0.000)

(Parenthesis indicates the p- value of the significance of the correlations)

As many pair of correlation coefficients are significantly different from zero it can be concluded that there is strong significant association among the attributes considered in this study. Based on data in correlation matrix (Table 4.7) it can be seen that relatively high significant correlation ($r=0.915$, $p=0.00$) between prevent cavity of teeth and strengthen gum. Results further indicate that there is a significant correlation ($r=-0.863$, $p=0.00$) between prevent cavity of teeth and strengthen of enamel. Furthermore, highly significant correlation can be seen among shiny teeth ($r=0.705$, $p=0.00$) vs. freshness, and shiny teeth vs. attractive teeth ($r=0.720$, $p=0.00$). Strengthen of gum also significantly correlated with freshness ($r=-0.299$, $p=0.00$) and attractive teeth ($r=-0.235$, $p=0.02$). When considering the company image and price these two variables are highly correlated ($r =0.91$, $p=0.00$) with each other. For the factor analysis to be appropriate, the variables need to be correlated. Based on the above it is clear that the correlation matrix is strengthening the requirements of factor analysis.

4.5 Validation of Data for Factor Analysis

For the factor analysis to be appropriate, variables must be correlated. Therefore, formal statistic test of Bartlett's test of Sphericity was carried out to test null hypothesis that the correlation matrix is significantly different from an identity matrix. That is $H_0 : \Sigma = I_p$ vs $H_1 : \Sigma \neq I_p$. Results of the Bartlett's test is shown in Table 4.8.

Table 4.8: Results of KMO and Bartlett's Test Data

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.654
Bartlett's Test of Sphericity	Approx. Chi-Square	1421.910
	df	28
	Sig.	.000

Based on results of the Bartlett's statistics shown in Table 4.8, null hypothesis can be rejected confirming that the correlation matrix is significantly different from the

identity matrix. The observed KMO (0.654) statistics is larger than the recommended critical value of KMO (0.6). It is confirmed that data set is suitable for factor analysis.

4.5.1 Identification of factors

In order to select the number of factors, principle component analysis was carried out for the standardized data and results are shown in Table 4.9.

Table 4.9: Results of the eigenvalue analysis for the standardized data

Component	Details of the eigenvalues		
	Eigenvalues	% of Variance explained	Cumulative % of variance explained
1	3.0	37.8	37.8
2	2.5	31.2	69.1
3	1.7	21.3	90.4
4	0.3	4.1	94.4
5	0.3	3.1	97.5
6	0.1	1.4	98.9
7	0.06	0.8	99.7
8	0.02	0.4	100.0

The general rule to decide the number of factor is the component having eigenvalue greater than one. This is the most widely used criterion to retain (Franzen, 1999) factors. Based on this criteria and the results in Table 4.9 it can be identified three components. The percentage of cumulative variance in Table 4.9 indicates that these three components are capable to explain about 90.4 % of the total variability of the initial system. The component 1 accounts for 37.8% of the total variance. The second component accounts for 31.2% and third component accounts for 21.3% of the total variance. Thus, it can be confirmed that 8-D initial system can be reduced to 3-D system. Thus, only 3 factors can be considered for the factor analysis. The

factor score (factor loading) of the 3-factor model extracted using principle component factor (PCF) method without rotation is shown in Table 4.10.

Table 4.10: Factor scores of the 3-factor model extracted via PCF method

Variable	Factor		
	1	2	3
Prevent cavity	-.787	.530	-.223
Shiny teeth	.666	.459	-.361
Strengthen of gum	-.853	.412	-.176
Freshness	.654	.550	-.331
Strengthen of enamel	.590	-.696	.289
Attractive teeth	.642	.506	-.411
Company Image	.153	.639	.744
Price	.146	.622	.759

It can be seen that the factor scores (Table 4.10) are not capable to isolate variables within factors. Thus factors were rotated, using orthogonal rotations so that new factors are still uncorrelated. Further, the rotation is used to avoid the each variable loads mainly on one factor. Thus the variables can be considered to the relatively pure measure of the selected factors. Factors extracted using principle component factoring method were rotated using varimax rotation and the results are shown in Table 4.11.

Table 4.11: Factor score of the 3- factor model extracted via PCF and rotated by Varimax

Variable	Factor		
	1	2	3
Prevent cavity	.967	-.117	.022
Shiny teeth	-.102	.879	.049
Strengthen of gum	.931	-.250	-.015
Freshness	-.047	.907	.124
Strengthen of enamel	-.943	-.140	-.086
Attractive teeth	-.041	.913	.032
Company Image	.043	.093	.987
Price	.033	.073	.989

The factor score in the above Table 4.11 clearly indicate that there are three possible meaningful factors, because it can isolate few variables within the factors. Factor one has significantly high coefficient with variables of prevent cavity, strengthen gum and strengthen of enamel compared with the scores corresponding to other variables. At the same time factor two has high factor score values for variables of shiny teeth, freshness and attractive teeth. Factor three also has very high scores for the variables company image and price. Therefore, it is clear that three meaningful factors can be identified based on the results of the above analysis. Other significant feature is no common variable is loaded to any factor.

In order to test whether the identified factors are independent of the type of rotation, the original factors were rotated using Quartimax and Equamax methods. The corresponding factor scores are shown in Table 4.12 and Table 4.13 respectively.

Table 4.12: Factor score of the 3- factor model extracted via PCF and rotated by Quartimax

Variable	Factor		
	1	2	3
Prevent cavity	.967	-.119	.019
Shiny teeth	-.100	.879	.039
Strengthen of gum	.930	-.252	-.016
Freshness	-.045	.908	.113
Strengthen of enamel	-.943	-.139	-.081
Attractive teeth	-.039	.914	.022
Company Image	.048	.105	.986
Price	.038	.084	.988

Table 4.13: Factor score of the 3- factor model extracted via PCF and rotated by Equamax

Variable	Factor		
	1	2	3
Prevent cavity	.967	-.116	.023
Shiny teeth	-.103	.878	.054
Strengthen of gum	.931	-.249	-.015
Freshness	-.048	.906	.129
Strengthen of enamel	-.942	-.140	-.089
Attractive teeth	-.042	.913	.038
Company Image	.041	.088	.988
Price	.031	.067	.990

Comparing of results in Table 4.11, 4.12 and 4.13, it can be concluded that the identified 3 factors are independent of the type of rotation. Summary of results are shown in Table 4.14.

Table 4.14: Summary of the main results under three rotations

Rotation Method	Variable captured by		
	Factor 1	Factor 2	Factor 1
Varimax	Prevent cavity Strengthen of gum Strengthen of enamel	Shiny teeth Freshness Attractive teeth	Company image Price
Quartimax	Prevent cavity Strengthen of gum Strengthen of enamel	Shiny teeth Freshness Attractive teeth	Company image Price
Equamax	Prevent cavity Strengthen of gum Strengthen of enamel	Shiny teeth Freshness Attractive teeth	Company image Price

Results in the table 4.14 clearly confirm that same variables have been identified for each factor by all three rotations, confirming identified factors are invariant by the type of orthogonal rotation.

4.5.2 Reconfirmation of 3 factors

As Varimax is the most common and popular rotation in factor analysis, the communalities of the identified factors only under Varimax were considered (Table 4.15). The communality of a variable is the amount of variance on a variable accounted for by the selected three factors.

Table 4.15: Communalities of the observed variables

Variable	Communalities based on 3- factor model
Prevent cavity	.950
Shiny teeth	.785
Strengthen of gum	.929
Freshness	.840
Strengthen of enamel	.916
Attractive teeth	.837
Company Image	.986
Price	.985

Result in the Table 4.15 indicates that all communalities are close to one and thus, it can be confirmed that 3-factor model is sufficient to explain the variance, covariance maintain of the original system.

4.5.3 Naming factors

In order to define the three factors, factor score coefficient were obtained (Table 4.16)

Table 4.16: Factor score coefficient of the selected 3-factor model.

Variable	Factor 1	Factor 2	Factor 3
Prevent cavity (X_1)	0.36	0.01	-0.02
Shiny teeth (X_2)	0.01	0.35	-0.04
Strengthen of gum (X_3)	0.34	-0.05	-0.03
Freshness (X_4)	0.03	0.36	-0.01
Strengthen of enamel (X_5)	-0.36	-0.11	0.01
Attractive teeth (X_6)	0.04	0.37	-0.05
Company Image (X_7)	-0.02	-0.04	0.51
Price (X_8)	-0.02	-0.05	0.51

Based on the results in Table 4.16 three factors can be defined as below.

Factor 1 : Health conscious or health beneficiary factor

This factor 1 has high coefficient for variables of prevent of cavity, strengthen gum and strengthen of enamel. Therefore tis factors can be named as health conscious or health beneficiary factors that influence the purchase of toothpaste.

$$\text{Factor 1} = 0.36Z_1 + 0.34Z_3 - 0.36Z_5.$$

Factor 2 : Social beneficiary factor

Factor 2 is highly correlated with variable shiny teeth, freshness and attractive teeth. Thus factor two may be labeled as social beneficiary factor.

$$\text{Factor 2} = 0.35Z_2 + 0.34Z_4 - 0.36Z_6.$$

Factor 3 : Specialized beneficiary factor

Factor 3 is highly correlated with variable company image and price of toothpaste. Therefore this factor can be named as a specialized beneficiary factor that impact the purchase of toothpaste

$$\text{Factor 3} = 0.51Z_7 + 0.51Z_8.$$

Where Z_i is the corresponding standardized value of X_i

4.6 Association among variables and variables identified for KPD

In order to study the association among the variables on brand equity and variables identified for KPD s, 2-way cross tables and Chi – Square test were carried out for each pair separately. Results are shown below.

4.6.1 Association between prevent cavity and brand equity of toothpaste

The results of the Chi-Square test to test null hypothesis, H_0 . There is no relationship between preventing cavity and brand equity of tooth paste, is shown in Table 4.7

Table 4.17: Results of prevent cavity vs brand equity cross tabulation

		Brand Equity		Total
		No	Yes	
Prevent cavity	Disagreed	31 100.0%	0 0.0%	31 100.0%
	Agreed	0 0.0%	69 100.0%	69 100.0%
	Highly agreed	23 32.4%	48 67.6%	71 100.0%
Total		54 31.6%	117 68.4%	171 100.0%

Likelihood Ratio Test $X^2 = 123.8$ ($p = 0.000$)

According to results in Table 4.17, there is very strong evidence of a significance association between brand equity and prevent cavity of tooth paste products ($X^2=123.8$, $p= 0.000$). The percentage of customers claimed that the importance of enhance the brand equity is 68.4%, irrespective of the response the prevent cavity. It is interested to note that 100% of those who disagreed for prevent cavity don't like brand equity. Further it can be seen that the percentage of customers like brand equity among those who agreed prevent cavity is 100%.The corresponding percentage among highly agreed is 67.6%. These results clearly indicate the importance of brand equity especially among those who at least agree for prevent cavity.

4.6.2 Association between shiny teeth and brand equity of toothpaste

The results of chi-square test to test the null hypothesis, H_0 : There is no association between shiny teeth and brand equity of tooth paste is shown in Table 4.18.

Table 4.18: Results of shiny teeth and brand equity cross tabulation

		Brand Equity		Total
		No	Yes	
Shiny Teeth	Disagreed	23 100.0%	0 0.0%	23 100.0%
	Agreed	0 0.0%	77 100.0%	77 100.0%
	Highly Agreed	31 43.7%	40 56.3%	71 100.0%
Total		54 31.6%	117 68.4%	171 100.0%

Likelihood Ratio Test $X^2 = 116.0$ ($p = 0.000$)

Based on data in Table 4.18 it can be concluded that there is a significant association between shiny teeth attributes of toothpaste and brand equity ($X^2=116.0$, $p= 0.000$). According to the results given in Table 4.18, percentage of customers claimed that the importance of enhance the brand among those who agreed for shiny teeth is 100% and the corresponding percentage among that who highly agreed is 56.3%. This results again confirm the importance of brand equity especially among those at least agree for shiny teeth.

4.6.3 Association between strength gum and brand equity of toothpaste

The results of chi-square test to the null hypothesis, H_0 : There is no association between strengthen of gum and brand equity of tooth paste is shown in Table 4.19.

Table 4.19: Cross tabulation results of strengthen of gum and brand equity

		Brand Equity		Total
		No	Yes	
Strengthen of Gum	Highly Disagreed	16 100.0%	0 .0%	16 100.0%
	Disagreed	38 71.7%	15 28.3%	53 100.0%
	Agreed	0 0.0%	16 100.0%	16 100.0%
	Highly Agreed	0 0.0%	86 100.0%	86 100.0%
Total		54 31.6%	117 68.4%	171 100.0%

Likelihood Ratio Test $X^2 = 150.1$ ($p = 0.000$)

Null hypothesis can be rejected based on the results in Table 4.19 ($X^2=150.1$, $p=0.000$). Furthermore, it can be seen that who agreed for strengthen gum is 100% and highly agreed percentage also 100%. Based on these results it is confirmed that strengthen gum claim the importance of brand equity.

4.6.4 Relationship between freshness of breath and brand equity of toothpaste

The results of the chi-square test to test the null hypothesis, H_0 : There is no relationship between freshness of breath and brand equity of tooth paste is shown in Table 4.20.

Table 4.20: Cross tabulation results of freshness of breath and brand equity

		Brand Equity		Total
		No	Yes	
Freshness	Highly Disagreed	14 100.0%	0 .0%	14 100.0%
	Disagreed	38 71.7%	15 28.3%	53 100.0%
	Agreed	0 .0%	39 100.0%	39 100.0%
	Highly Agreed	2 3.1%	63 96.9%	65 100.0%
Total		54 31.6%	117 68.4%	171 100.0%

Likelihood Ratio Test $X^2 = 132.3$ ($p = 0.000$)

According to data in above Table 4.20, there is sufficient evidence ($X^2 = 132.3$, $p = 0.000$) to state that there is a significant relationship between freshness and brand equity of tooth paste. Based on the results given in Table 4.20, percentage of customers claimed that the importance of enhance the brand among those who agreed for freshness is 100% and the corresponding percentage among that who highly agreed is 96.9%. This results again confirm the importance of brand equity especially among those at least agree for freshness.

4.6.5 Association between strengthen of enamel and brand equity of toothpaste

The results of chi square test to test the null hypothesis, H_0 : There is no relationship between strengthen of enamel brand equity of tooth paste is shown in Table 4.21.

Table 4.21: Cross tabulation results of strengthen of enamel and brand equity

		Brand Equity		Total
		No	Yes	
Strengthen of enamel	Highly Disagreed	0 .0%	31 100.0%	31 100.0%
	Disagreed	23 36.5%	40 63.5%	63 100.0%
	Agreed	16 100.0%	0 0.0%	16 100.0%
	Highly Agreed	15 24.6%	46 75.4%	61 100.0%
Total		54 31.6%	117 68.4%	171 100.0%

Likelihood Ratio Test $X^2 = 62.5$ ($p = 0.000$)

Based on results in Table 4.21, null hypothesis can be rejected ($X^2 = 62.5$, $p = 0.000$) and there is sufficient evidence to state that there is a relationship between strengthen of enamel and brand equity of tooth paste. Furthermore, according to the results in table 4.21 those who highly disagreed for prevention of decay is 100% and the corresponding percentage among who disagreed is 65.5%. This results emphasize the importance of brand equity and decays of teeth.

4.6.6 Association between attractive teeth and brand equity of toothpaste

The results of chi-square test to the null hypothesis, H_0 : There is no relationship between attractive teeth and brand equity of tooth paste is shown in Table 4.22.

Table 4.22: Cross tabulation results of attractive teeth and brand equity

		Brand Equity		Total
		No	Yes	
Attractive teeth	Disagreed	23 100.0%	0 0.0%	23 100.0%
	Agreed	8 8.6%	85 91.4%	93 100.0%
	Highly Agreed	23 41.8%	32 58.2%	55 100.0%
Total		54 31.6%	117 68.4%	171 100.0%

Likelihood Ratio Test $X^2 = 83.9$ ($p = 0.000$)

Based on results in Table 4.22 it can be concluded that there is a significant association between attractive teeth attributes of toothpaste and brand equity ($X^2=83.9$, $p= 0.000$). According to the results given in Table 4.22, percentage of customers claimed that the importance of enhance the brand among those who agreed for attractive teeth is 91.4% and the corresponding percentage among that who highly agreed is 58.2%. This results further confirm the importance of brand equity especially among those at least agree for attractive teeth.

4.6.7 Relationship between company image and brand equity of toothpaste

The results of chi- square test to test the null hypothesis, H_0 : There is no relationship between company image and brand equity of tooth paste is shown in Table 4.23.

Table 4.23: Cross tabulation results of company image and brand equity

		Brand Equity		Total
		No	Yes	No
Company Image	Highly Disagreed	8 32.0%	17 68.0%	25 100.0%
	Disagreed	33 30.3%	76 69.7%	109 100.0%
	Agreed	11 42.3%	15 57.7%	26 100.0%
	Highly Agreed	2 18.2%	9 81.8%	11 100.0%
Total		54 31.6%	117 68.4%	171 100.0%

Likelihood Ratio Test $X^2 = 2.4$ ($p = 0.491$)

Based on data in Table 4.23 it can be concluded that there is no significant association between company image and brand equity ($X^2=2.4$, $p= 0.491$). According to the results given in Table 4.23, percentage of customers highly disagreed and disagreed for enhance the brand for company image is 68% and 69.7% respectively.

4.6.8 Association between price of toothpaste and brand equity of toothpaste.

The results of chi- square test to test the null hypothesis, H_0 : There is no relationship between price of the toothpaste and brand equity of tooth paste is shown in Table 4.24.

Table 4.24: Cross tabulation results of price of toothpaste and brand equity

		Brand Equity		Total
		No	Yes	No
Price	Highly Disagreed	4 44.4%	5 55.6%	9 100.0%
	Disagreed	9 22.0%	32 78.0%	41 100.0%
	Agreed	35 38.0%	57 62.0%	92 100.0%
	Highly Agreed	6 20.7%	23 79.3%	29 100.0%
Total		54 31.6%	117 68.4%	171 100.0%

Likelihood Ratio Test $X^2 = 5.9$ ($p = 0.113$)

Based on results in Table 4.24 it can be concluded that there is no significant association between price of the toothpaste and brand equity ($X^2 = 5.973$, $p = 0.113$). Furthermore, results given in Table 4.24 clearly shows that percentage of customers claimed that the importance of enhance the brand among those who highly disagreed and disagreed for price of the toothpaste is 55.6% and 78.0% respectively.

According to above analysis below Table 4.25 includes summary of significance and non-significance variables

Table 4.25: Summary table of significance.

Variable	State of Significance
Prevent Cavity	Significant
Shiny Teeth	Significant
Strength of Gum	Significant
Freshness	Significant
Strengthen of enamel	Significant
Attractive Teeth	Significant
Image of Company	Not significant
Price	Not significant

Based on above analysis (Table 4.25) it is identified that KPD of toothpaste like prevent cavity, shiny teeth, strengthen gum, freshness, strengthen of enamel and attractive teeth influence the brand equity of products. Further, this study mainly emphasizes that image of company and price is not significantly influence the brand equity.

4.7 Chapter Summary

It was found that three factors namely: (i) Health conscious or health beneficiary factor, (ii) Social beneficiary factor and (iii) Specialized beneficiary factor are sufficient to explain the variability of the eight variable namely prevent cavity, shiny teeth, strengthen of gum, freshness, strengthen of enamel, attractive teeth, company Image and price. Furthermore, it was found that only the six variables: prevent cavity, shiny teeth, strengthen of gum, freshness, strengthen of enamel and attractive teeth significant with brand equity of toothpaste. The two variables such as company image and price do not significantly associate with brand equity.

CHAPTER 5

CONCLUSIONS AND RECOMENDATIONS

5.1 Introduction.

As main objective of this research is to determine the benefits of consumers seek from toothpaste and impact of key purchasing determinants on brand equity of the toothpaste market in Sri Lanka. This chapter comprehends the research findings and recommendations based on the analysis of the results. Furthermore, some suggestions are highlighted for the benefits of the toothpaste industry.

5.2 Conclusions.

The analyses of the correlation matrix confirmed that there are relatively high significant correlations among prevents of cavity, strong gum and strengthen of enamel. It was also identified that there are highly significant correlations between shiny teeth, fresh breath and attractive teeth and company image and price of the toothpaste. The results of factor analysis carried out for the eight variables namely: prevent cavity, shiny teeth, strengthen of gum, freshness, prevention of decay, attractive teeth, company image and price found that three factors namely: health conscious or health beneficiary factor, social beneficiary factor and specialized beneficiary factor are sufficient to explain the variability of those eight variables. Factor 1 has highly correlated with for variables of prevent of cavity, strong gum and strengthen of enamel. Therefore, these three factors can be named as health conscious or health beneficiary factors that influence the purchase of toothpaste. Factor 2 is highly correlated with variable shiny teeth, fresh breath and attractive teeth. Those attributes are more related to social benefits of the society. Thus factor two may be labeled as social beneficiary factor. Factor 3 is highly correlated with variable company image and price of toothpaste. Those two attributes are more related to niche market product or specialized product in marketing environment. Thus factor three may be labeled as specialized beneficiary factor. Therefore, it can be concluded that to determine benefits of consumers seek from the purchase of tooth paste can be reduced for three factors namely factor (i) health beneficiary factors then factor (ii) social beneficiary factors and (iii) specialized beneficiary factor.

When consider the association among variables to identify relationships between KPD and brand equity of toothpaste following relationships were identified. KPD s are significantly association with prevent cavity, shiny teeth, strengthen of gum, freshness of breath, prevention of decay and attractive teeth. It also can be concluded that price of the tooth paste and image of the company are not significantly association with KPD. Further, identified factors and relationship between KPD and brand equity can be applied for positive sales growth and profit maximization. The findings of the study would help the manufacturing sector of the toothpaste to make a great contribution to the economic well-being.

5.3 Recommendations.

The research findings of the present study have important implication especially for the decision makers of new product development and advertisements campaign development of toothpaste industry. Toothpaste has come a long way since the late 1800s when developers sold tasteless toothpaste in a jar. Tubes of toothpastes are formulated to meet our every dental need and come in many flavors. Therefore, research findings will assist to product development, marketing, sales and cost effective new product launch in toothpaste industry and consequently identified factors and relationship between KPD and brand equity can be applied for positive sales growth and profit maximization.

Outcome of this research assist to different fields in today's business environment. Findings help to brand managers, advertising agents, new package developments and new product developments. This also benefit to researchers to continue research related to toothpaste market. Furthermore, oral hygiene factors related to human being will benefit to health ministry promotional activities of oral hygiene.

5.4 Suggestions.

This research provides an initial work for further research and industrial application paying attention on the benefits of consumers seeks from toothpaste and impact of

key purchasing determinants on its brand equity. Hence the followings suggestions are made.

- When introducing new products to toothpaste market it needs to be more focus on oral hygiene.
- To obtain maximum benefits of advertisement, necessary to more focus on oral hygiene habits of people.
- When developing advertisement or new products it better to concentrate of market segmentation for social beneficiary customers and specialized beneficiary customers.
- The identified KPD s of toothpaste market in Sri Lanka are attribute of prevent cavity, shiny teeth, strengthen of gum, freshness of breath and attractive teeth and thus any marketing campaign or sales promotions need to be more focus on those KPD of toothpaste products to improve their profitable sales growth.

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APPENDIX 1: Letter to Customer

A survey on “Identifying key purchasing determinants and their impact on brand equity of the tooth paste market in Sri Lanka”

Dear Sir / Madam,

This survey is carried out to identify the factors influencing with regard to key purchasing determinants and their impact on brand equity of the tooth paste market in Sri Lanka. I would appreciate if you could respond to all statements given in the survey.

There are no right [or wrong] answers to these statements. What is needed is to state your sincere opinion for the statements given. I assure you that your responses will only be used for data analysis of the research and will be treated as strictly confidential.

Thank you very much for your time and I value your participation very much.

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APPENDIX 2: Questionnaire Survey

Part A

General information

(Please tick the appropriate place which best express your perception on the given attribute)

- 1) How many times per day do you use toothpaste as a daily habit
 - One Time per day
 - Two Times per day
 - Three times per day
 - More Than Three times
- 2) Do you loyal to the particular brand of toothpaste
 - Yes
 - No

Part B

Benefits of consumer seek from purchase of toothpaste

- 3) Please mark degree of agreement for following statements (1= Strongly Disareed,5= Strongly Agreed)

- Preventing cavity of tooth paste is very important

Strongly Disagree-----Strongly Agreed				
1	2	3	4	5

- Like to purchase toothpaste that gives shiny teeth

Strongly Disagree-----Strongly Agreed				
1	2	3	4	5

- Toothpaste should be helped to strengthen gum

Strongly Disagree-----Strongly Agreed				
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1	2	3	4	5
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- Freshness of breath is one of main attribute of toothpaste

Strongly Disagree-----Strongly Agreed				
1	2	3	4	5

- Strengthen of enamel is important when selecting toothpaste

Strongly Disagree-----Strongly Agreed				
1	2	3	4	5

- Attractive teeth is very important

Strongly Disagree-----Strongly Agreed				
1	2	3	4	5

- Company image is consider when purchasing toothpaste

Strongly Disagree-----Strongly Agreed				
1	2	3	4	5

- Price of the tooth paste is consider when purchasing toothpaste

Strongly Disagree-----Strongly Agreed				
1	2	3	4	5

Part C

Key purchasing Determinant of Tooth Paste & Brand Equity

Following statements are formulated in order to obtain your perceptions on fey purchasing determinants on tooth paste brands based on brand equity. Please indicate how far you agree [or disagree] with these statements with the tick mark in appropriate box.

- 1) Do you consider branded (High brand equity) product of toothpaste in market when purchasing?

Yes	No
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- 1.1) Preventing cavity attribute of tooth paste is mainly enhance the brand equity

Highly Disagreed	Disagree	Agree	Highly Agreed
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- 1.2) Attribute of shiny teeth mainly effect for increase brand equity

Highly Disagreed	Disagree	Agree	Highly Agreed
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- 1.3) Brand equity will growth with attribute of strengthen gum in teeth

Highly Disagreed	Disagree	Agree	Highly Agreed
------------------	----------	-------	---------------

- 1.4) Attribute of freshness of breath will enhance the brand equity

Highly Disagreed	Disagree	Agree	Highly Agreed
------------------	----------	-------	---------------

1.5) Strengthen of enamel is important attribute assist to improve brand equity

Highly Disagreed	Disagree	Agree	Highly Agreed
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1.6) Attribute of attractive teeth is very important to enhance brand equity

Highly Disagreed	Disagree	Agree	Highly Agreed
------------------	----------	-------	---------------

1.7) Company image is impact on brand equity

Highly Disagreed	Disagree	Agree	Highly Agreed
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1.8) Price of the tooth paste has relationship with brand equity

Highly Disagreed	Disagree	Agree	Highly Agreed
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Part D

Demographic Variables

Please mark with a [x] appropriately.

- 1). Gender - Male - Female
- 2). Marital status - Married - Unmarried
- 3). Age Group - less than 25 - 26-35 - 36-45 - 46-54
 - over 55
- 3). Education -Secondary -Diploma -Degree - Master
- Other
- 4). Monthly Income - less than 7,500
 - 7,500 to 14,999
 - 15,000 to 24,999
 - 25,000 to 40,000
 - More than 40,000
- 5). Profession -Unemployed
-Non Executive
-Executive
- Senior Management
- Other

THANK YOU

