THE EFFECTS OF TECHNOLOGY ANXIETY AND BRAND TRUST ON THE RELATIONSHIP BETWEEN BRAND MANAGEMENT'S ELEMENTS AND BRAND LOYALTY: MALAYSIAN CAR CONSUMERS' PERSPECTIVE

by

SYAHIDA ABD AZIZ
(1443011347)

A thesis submitted in fulfillment of the requirements for the degree of
Doctor of Philosophy

School of Business Innovation and Technopreneurship
UNIVERSITI MALAYSIA PERLIS

2018

i

UNIVERSITI MALAYSIA PERLIS

DECLARATION OF THESIS

Author's Full Name   :   SYAHIDA ABD AZIZ

Title   :   THE EFFECTS OF TECHNOLOGY ANXIETY AND BRAND TRUST ON THE RELATIONSHIP BETWEEN BRAND MANAGEMENT'S ELEMENTS AND BRAND LOYALTY: MALAYSIAN CAR CONSUMERS' PERSPECTIVE

Date of Birth   :   03 JANUARY 1990

Academic Session   :   2017/2018

I hereby declare that this thesis becomes the property of Universiti Malaysia Perlis (UniMAP) and to be placed at the library of UniMAP. This thesis is classified as:

☐ **CONFIDENTIAL**   (Contains confidential information under the Official Secret Act 1997)*

☐ **RESTRICTED**   (Contains restricted information as specified by the organization where research was done)*

☑ **OPEN ACCESS**   I agree that mythesis to be published as online open access (Full Text)

I, the author, give permission to reproduce this thesis in whole or in part for the purpose of research or academic exchange only (except during the period of ___3___ years, if so requested above)

Certified by:

SIGNATURE	SIGNATURE OF SUPERVISOR
900103-10-5600	PROF MADYA DR. MUHAMMAD SHAHAR JUSOH
(NEW IC NO. /PASSPORT NO.)	**NAME OF SUPERVISOR**
Date: 27 February 2018	Date: 27 February 2018

ACKNOWLEDGEMENT

Alhamdulillah, all praises to the Almighty Allah S.W.T for His blessings and guidance in giving me this privilege to go through the entire process of this thesis. I would like to express my deepest appreciation and gratitude to the many individuals who have supported me in reaching this milestone.

Foremost, I am deeply indebted to Prof Madya Dr Muhammad Shahar Jusoh, my main supervisor and Dr Mohammad Harith Amlus, my co-supervisor. As mentors, their knowledge, expertise, and encouragement have been incomparable. Their contribution in shaping this thesis is not only appreciated, but they were also a positive influence on my academic and personal development. Without their encouragement and guidance, this research would not have materialized.

My sincere thanks to my parents, Mr Abd Aziz and Mrs Salmah, for their encouragement and support throughout this process. I would also like to thank my siblings for their constant support and understanding on the need for me to spend countless hours working on this thesis, and not being able to participate in family activites. Their endless love and support motivated and encouraged me to complete this thesis.

I would like to thank both the internal and external examiners during the proposal defense and viva-voce session for their useful inputs to inprove this research. Not forgetting all my friends for their support and words of encouragement. I could not have accomplished such an endeavour without the love, prayers, and support of a multitude of family and friends.

Finally, I would like to thank the doctoral office staff of Centre for Graduate Studies UniMAP and program chairman of the School of Business Innovation and Technopreneurship for their guidance and prompt assistance through the thesis prosess. This academic journey has been an amazing experience and it was not easy, but it was interesting and rewarding in the end. There are few moments in one's life where they take the time to honestly feel proud of their own accomplishments. Though humble, I am proud of myself, and all of those who have supported me along the way.

TABLE OF CONTENTS

CHAPTER 1 INTRODUCTION

CHAPTER 2 LITERATURE REVIEW

CHAPTER 3 RESEARCH METHODOLOGY

CHAPTER 4 RESULTS AND DISCUSSION

CHAPTER 5 CONCLUSIONS AND RECOMMENDATIONS

LIST OF TABLES

LIST OF FIGURES

ix

LIST OF ABBREVIATIONS

AFTA	ASEAN Free Trade Area
ASEAN	Association of Southeast Asian Nations
AVE	Average Variance Extracted
BI	Brand Image
BL	Brand Loyalty
BT	Brand Trust
BV	Brand Value
CB-SEM	Covariance-based SEM
CFA	Confirmatory Factor Analysis
CTAM	Car Technology Acceptance Model
E-CRM	Electronic Customer Relationship Management
EEV	Energy-Efficient Vehicles
MAA	Malaysian Automotive Association
MIDA	Malaysian Investment Development Authority
NAP	New Automotive Policy
PLS	Partial Least Square
PLS-SEM	Partial Least Square Structure Equation Model
PQ	Product Quality
RM	Relationship Marketing
SQ	Service Quality
TA	Technology Anxiety
TAM	Technology Acceptance Model
TRA	Theory of Reasoned Action
UTAUT	Unified Theory of Acceptance and Use of Technology

Kesan Kebimbangan Teknologi dan Kepercayaan kepada Jenama terhadap Hubungan di antara Elemen Pengurusan Jenama dan Kesetiaan kepada Jenama: Menurut Perspektif Pengguna Kereta di Malaysia

ABSTRAK

Walaupun terdapat pelbagai persepsi dan banyak kajian dalam bidang pengurusan jenama-kesetiaan kepada jenama, hubungan di antara pemboleh ubah ini adalah berbeza. Ternyata hubungan di antara elemen pengurusan jenama (kualiti produk, kualiti servis, nilai jenama dan imej jenama) dan kesetiaan kepada jenama yang disederhanakan dan dihubungkan oleh kebimbangan teknologi dan kepercayaan terhadap jenama masih belum dikaji sepenuhnya. Oleh itu, langkah segera perlu diambil untuk menyiasat kesetiaan pelanggan terhadap jenama secara empirikal supaya pengkaji boleh menganalisis pemboleh ubah yang terlibat dengan lebih berkesan. Kajian ini cuba untuk menutup jurang dalam kajian-kajian lalu dengan membina model yang mengkaji kesetiaan pengguna terhadap jenama. Dengan berpandukan asas pemasaran dan kajian tentang pengurusan jenama, kajian ini membina konsep model yang menerangkan hubungan di antara elemen pengurusan jenama dan kesetiaan terhadap jenama. Satu teknik meta-analisis telah diserapkan ke dalam kajian ini dengan mengenalpasti arah hubungan dalam sebuah model yang berdasarkan sumber kajian lalu. Kajian ini menyerapkan teori Model Kano, Model Penerimaan Teknologi 2, Model Penerimaan Teknologi Kereta dan Teori Pilihan untuk mengukur hubungan di antara elemen pengurusan jenama dan kesetiaan terhadap jenama. Objektif kajian ini adalah untuk: 1) mengukur kesan elemen pengurusan jenama terhadap kesetiaan terhadap jenama; 2) mengkaji kesan penyederhanaan kebimbangan teknologi terhadap hubungan di antara elemen pengurusan jenama dan kesetiaan terhadap jenama; 3) kesan pengantaraan kepercayaan jenama terhadap hubungan di antara elemen pengurusan jenama dan kesetiaan terhadap jenama. Berdasarkan model yang dicadangkan, dua belas hipotesis telah dibina menerusi tujuh pemboleh ubah. Dengan berpandukan hasil dari soal selidik, pengukuran kajian ini telah diperhalusi dan soal selidik telah dibina. Data dianalisis menggunakan 205 soal selidik. Model persamaan struktur dengan menggunakan Partial Least Squares (PLS) telah digunakan untuk mengukur model dan struktur, menguji hipotesis dan menguji hubungan di antara pemboleh ubah. Kajian ini membandingkan keputusan meta-analisis yang diperolehi dari sumber kajian yang lalu dengan keputusan kajian lapangan yang diperolehi daripada soal selidik yang dijalankan ke atas pengguna kereta. Keputusan menunjukkan bahawa walaupun hubungan di antara pemboleh ubah itu wujud, tidak semua hubungan itu kuat signifikasinya. Elemen pengurusan jenama didapati memberi kesan terhadap kesetiaan kepada jenama manakala kebimbangan pengguna terhadap teknologi pula didapati menyederhanakan hubungan diantara kualiti produk dan imej jenama produk terhadap kesetiaan mereka kepada jenama. Keputusan juga menunjukkan bahawa terdapat kesan pengantaraan kepercayaan kepada jenama terhadap hubungan di atas. Kajian ini memberi sumbangan secara teoritikal, praktikal dan pembangunan undang-undang dengan menangani jurang yang ada dalam kajian lalu dan menyelesaikan pandangan yang berbeza terhadap konsep kajian dengan mengkaji kesan kebimbangan teknologi di kalangan pengguna kereta. Kajian ini telah menunjukkan satu keperluan untuk mengembangkan liputan kajian ini dengan menguji hubungan tersebut bersama pengaruh faktor yang lain dalam meningkatkan kesetiaan mereka terhadap jenama dalam konteks kajian yang serupa dan/atau berlainan.

The Effects of Technology Anxiety and Brand Trust on The Relationship Between Brand Management's Elements and Brand Loyalty: Malaysian Car Consumers' Perspective

ABSTRACT

Despite the common perception and various researches in the area of brand management-brand loyalty, findings on the relationship between these variables are rather conflicting. Links between brand management's elements (product quality, service quality, brand value and brand image) and brand loyalty which is moderated and mediated by technology anxiety and brand trust are not comprehensively understandable. Therefore, there is a need to investigate ways in which brand loyalty can be empirically measured in order for researchers to effectively analyse the key variables related to it. The current study attempted to bridge this existing gap by developing an effective brand loyalty measurement and model. Grasped within the foundation of marketing and brand management literature, this investigation developed a conceptual model that explains the relationships between brand management's elements and brand loyalty. A meta-analysis technique was employed in this investigation to statistically identify the magnitude and the direction of relationships in a single model based on literature reviewed. The investigation employed such theories (Kano model, Technology Acceptance Model 2, Car Technology Acceptance Model and Choice theory) to measure the interrelationship between brand mangement's elements and brand loyalty. The objectives of the investigation are: 1) to evaluate the direct effects of brand management's elements on brand loyalty; 2) to investigate the direct effects of brand management's element on brand loyalty moderated by technology anxiety; 3) to investigate the indirect effects of brand management's elements on brand loyalty mediated by brand trust. Based on the proposed model, twelve hypotheses were developed with seven latent variables. Conducting a survey and a pilot test, the measurements were refined and the questionnaire used for the main study was developed. Data was analysed using 205 procured surveys. A structural equation modelling approach using partial least squares (PLS) method was employed to evaluate the measurements and the structural model and to test the research hypotheses and relationships among the latent constructs. The results indicated that although the relationships between the research constructs exist, not all relationships were significantly strong. Brand management's elements were found to directly influence brand loyalty and technology anxiety was found to moderate the link between product quality and brand image with brand loyalty. The results also indicated the critical mediating effect of brand trust between brand management's elements and brand loyalty. The investigation compared the meta-analysis results, obtained from independent empirical studies, with the field study results, which were obtained from surveying passenger car consumers. This investigation contributes to academicians and practitioners through the establishment of theoretical, practical and policy development. The investigation addressed the existing gap in the literature, and attempts to resolve the existing mixed views on the studied concepts by examining technology anxiety among car's consumers. This investigation indicated the need to expand this area of research further by examining the investigated relationship with the influence of other factors to establish brand loyalty in a similar and/or different context of study.

CHAPTER 1 :   INTRODUCTION

Chapter 1 provides an overview of the problems faced by marketers and the background of this research. The purpose of this study, which relates to the problems faced by managers and marketers are emphasized in the research questions and research objectives of this thesis. This chapter also describes the scope of the study before providing the operational definitions for each variable.

1.1 Background of the study

What do Toyota, Honda, Nissan, and Hyundai all have in common? The majority of them gain benefits from a strong brand management. In Dannenberg and Kleinhans (2007) view:

"For automakers, it is all about the brand management."

Over the past century, there has been a dramatic influx of variables including brand management as part of relationship management tactics and the long term value enhancement of a customer. Brand management is one of the strategies to help companies to stay focused and produce different products compared to their competitors (Jain, 2007). The central focus of brand management has always been brand loyalty (Chaudhuri & Holbrook, 2001). In utilising brand loyalty, automakers enhance commitment levels by improving the image and value of the brand (Koller, Floh, & Zauner, 2011), as it is expected to boost their sales and maximize their profits (Tu, Lin, & Hsu, 2013).

A high level of awareness towards brand loyalty is needed among customers as it creates cost efficient mechanism. This is due to the fact that it can cost up to five times more to attract new customers as compared to retaining the existing ones (Oladele & Akeke, 2012). In addition, loyal customers always bring in extensive revenues and need less time to make informed decisions to their current providers (Yang & Peterson, 2004). However, during purchasing, several stages of brand loyalty exists among customers to differentiate their tendency in remaining loyal to a certain brand. At the first level, customers stay loyal to only one brand, whereas in the second level, customers stay loyal to two different brands. Meanwhile, in the third level of loyalty, customers change their brands from time to time and finally, in the last level, customers are not loyal to any brand (Ahmed, Majid, Nadeem, & Jalbani, 2013). Thus, brand loyalty is essential to firms as the long lasting relationship built between the firms and their customers would sustain the profitability and growth of the firm.

Additionally, recent data highlighted the importance of brand loyalty whereby firms can implement their best pricing strategy to target customers as well as trim down their expenses in promoting their products. This is due to the willingness of customers who are willing to pay more for the product and the benefits accrued through the product brand to their families and friends (Upamannyu, Gulati, & Mathur, 2014). Further brand switching might occur as time goes on when the customers' needs have not been fulfilled by companies (Dawes, Meyer-Waarden, & Driesener, 2015). Hence, to establish and maintain the satisfactory levels of customer brand loyalty, companies need to improve the brand value, image and quality of their products and services (Ishaq, Bhutta, Hamayun, Danish, & Hussain, 2014). As such, the car industry becomes an ideal setting to further examine the brand importance and brand loyalty as customers are unconsciously exposed to their self-expressive nature based on their selected car

brands (Ghodeswar, 2008). Meanwhile, the managing director of Edelman Malaysia, Robert Kay revealed the most trusted industry sectors among the public in Malaysia (Mohd Zakaria, 2017), which is illustrated in Figure 1.1.
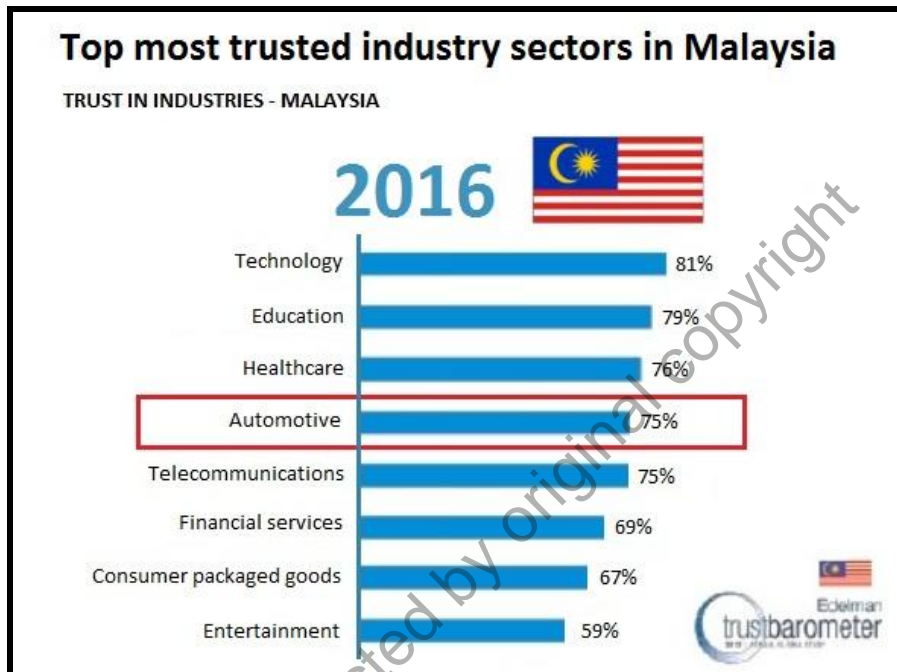
Source: Adapted from "The Sun Daily News" by Mohd Zakaria (2017)

Figure 1.1: The most trusted industry sectors in Malaysia

Although the automotive industry is ranked the fourth most trusted industry in Malaysia for the year 2016 after technology (81 per cent), education (79 per cent) and healthcare (76 per cent), this industry faces moutning difficulty and uncertainties in retaining existing customers as the industry evolves and the need to bestow continuous extraordinary experiences to consumers emerges (Pyeman, Wan Rashid, Syed Jamal, Syed Mohamad, & Tan, 2014). The emergence of advanced technology in cars nowadays has led marketers to design and implement new strategies to understand customer needs and expectations during purchase decision stage.

Technology is found to play a vital role in managing different areas of businesses more importantly than marketing as technology becomes one of the major catalysts for change in the marketplace despite more time and money spent (Marshall & Johnston, 2010). A survey conducted on 3,600 business leaders revealed that 93 per cent of business leaders' worldwide insisted that in the past five to ten years, technology has altered the expectations of the customers on a product (EMC, 2015). Meanwhile, in a survey conducted on 100 automotive CEOs, Hanna (2015) reported that although automotive CEOs recognize the importance of digital technologies, they are increasingly anxious regarding the abnorminal rise of technology and it showed that in 2015, around 55 per cent of CEOs were worried about keeping abreast of new technologies as compared to 49 per cent in 2014. Commenting on technological changes awakening in the automotive industry, the President and CEO of the Volvo Group, Olof Persson (2016) stated that:

"With the technology shifts and technology implementation that we're seeing today, it's important for every organisation to be prepared. And if you're not, there could be a technology shift that you miss."

As such, in the context of this study, customers' feeling (i.e. anxiety) toward the technology installed in a car will be an important point to understand the intention for customers to do repeat purchases when deciding to buy a car. Osswald, Wurhofer, Trösterer, Beck, and Tscheligi (2012) noted that there is a high anxiety level among public towards technologically advanced cars which is related to poor customer behaviour. Customers use cars as means to ease their journey to the extent that they can reach their destinations without facing delays and getting lost by using the suggested

routes. As customers fail to understand the systems installed in cars and feel anxious when using the system, they become reluctant in using and buying the cars as well as talk negatively about the cars through their experiences. Moreover, potential buyers nowadays seek for comments and reviews on a product through a webpage or social networking site before they decide to purchase a product. This situation worriers marketers the most as bad reviews written about their products might affect their companies' performance. Therefore, this situation merits further investigations on whether technology anxiety strengthens the tendency for customers to stay loyal to a particular brand.

Furthermore, advanced technology in goods and services have extended the importance of brand loyalty in the consumer industry (Rai & Medha, 2013). Over the past few years, researchers demonstrated the benefits of technology in the car industry, especially via the safety approach in terms of providing information, enhancing the safety environment aspects and the ability of intensifying driving tasks assistance tools (Osswald et al., 2012). The message is clear: A lower anxiety of technology among customers increase trust towards a brand, while higher anxiety reduces trust towards a brand. Once customers place their trust in a brand, they tend to remain loyal to the brand. In relation to customer behaviour in technology related industries, it is recognized that the relationship between the infrastructure of technology and customer intention is moderated by technology anxiety (Yang & Forney, 2013). As such, technology anxiety is vital in strengthening brand loyalty relationships.

Additionally, with the availability of advanced technology, car manufacturers currently produce numerous fuel-efficient cars believed to be able to protect the environment, in response to reports that transportation is responsible for about 20 per cent of the global greenhouse gas emissions (Benthem & Reynaert, 2015). Apart from

reducing air pollution, technology can also be used as a preventive tool in providing greater safety and avoiding thefts (Laguador et al., 2013). Henceforth, customers would prefer to own a safer car which includes additional safety features such as airbags, antilock brake systems and anti-theft alarm systems. However, these advanced technological systems installed in cars elevates an anxious feeling among drivers. Due to these reasons, the present study is motivated by the need to take into consideration anxious feelings of customers towards technological tools and its relationship in influencing customers purchase decisions.

Similar to other industries, the use of electronic components in the car industry has rapidly increased as multiple aspects of driving a modern car is controlled by electronics devices. Among driving experiences that extensively use technology include acceleration, braking systems, security, in-car entertainment, navigation, and crash protection designs (Osswald et al., 2012). For instance, Hyundai's cars have been installed with electronic features that enable people to control their cars directly from their smart phones. Thus, it benefits the car companies as the market values of their electronics engagement grows which brings satisfaction and builds trusts towards their cars. Once customers place their trust on a car based on its performance and durability, there is a tendency that they will purchase a similar product line of the car's brand.

Besides, due to the challenges initiated on environmental protection and safety regulations, various new and advanced technologies are emerging and have been introduced to the car market which finally leads to an emergence of a new brand of car in every developing country (Meyer, 2014). As a consequence, the tendency of customers to stay loyal to their current brands will be difficult to be achieved by car companies. More recently, a survey which has been conducted on car consumers has found that less than a third of consumers love their car's brand while more than two

6

thirds of the consumers would prefer to choose a different brand in their next purchase (Harris, 2016). In Malaysia, owning a car is part of today's lifestyle. People have changed their errand driving patterns these days. Cars were once a transportation method for long journeys or for wage earners to go to work, but nowadays they are using cars to even just purchase products or groceries at nearby stores or for sight-seeing. This situation increases the number of cars on the road since people are more inclined to use cars as their main transportation method. Owning many cars as personal collections is also part of hobbies for some. Hence, it has been reported that Malaysia is positioned as the fourth largest car density country after Australia, Germany and United States of America (Kaiser, 2015); which is shown in Figure 1.2.
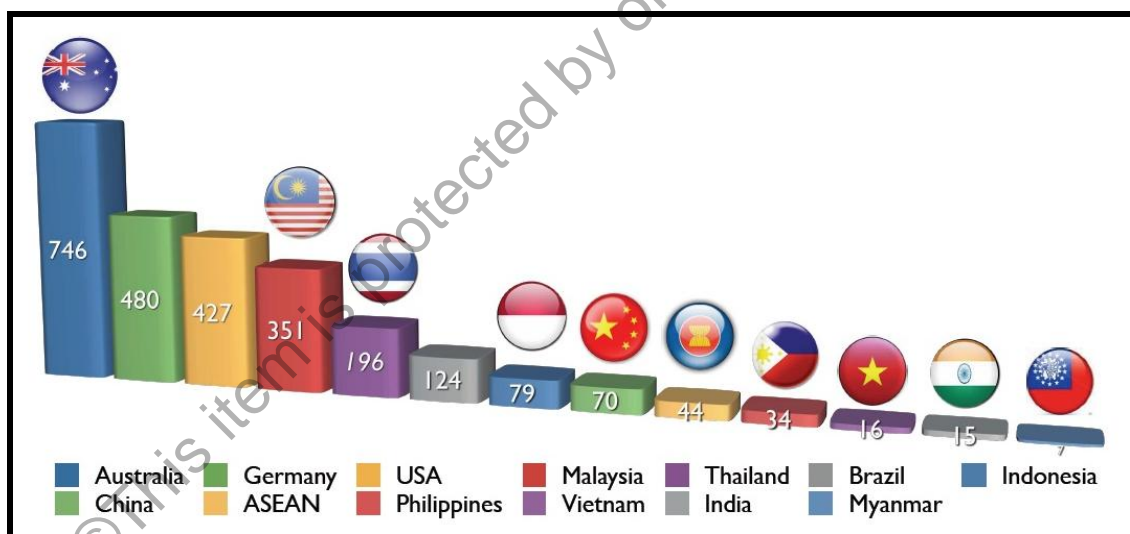
Source: Adopted from "Thailand & Indonesia Auto Book" by Kaiser (2015)

Figure 1.2: Car density in 2015

As shown in Figure 1.2, the numbers of cars on the road in Malaysia is higher as compared to the nearest neighbouring countries such as Thailand and Indonesia. This indicates that cars are the main transportation mode for going to work or personal use. This could lead to an increase in the number of cars on the road. Based on this situation,

it warrants the need to examine the level of brand loyalty among car consumers in Malaysia. Hence, marketing managers need to grab the opportunities from this scenario by planning and performing new strategies to retain their existing customers and attracting potential customers. Besides, in response to the changes of consumer preferences and expectations, the products supplied by the automotive industries have dramatically increased as they are providing a variety for customers to choose from. The customers however show increasing interest in certain features such as safety innovations and performances of the cars (Meyer, 2014). This makes the companies competing in order to attract new customers (Narteh, Odoom, Braimah, & Buame, 2012). Customers normally purchase a product by choosing a brand according to the value offered in terms of high status, modern and intellectual lifestyle and bright personality (Yee, San, & Khoon, 2011). Therefore, companies need to carefully consider customers satisfaction, as in return the customers allows companies to thrive and achieve the business goals as they start to believe and put their trust on the brand.

Trust is known as one of the major constructs in the customer relationship management. It is essential to a firm, as without trust, it would be difficult to develop commitment with consumers (Malik, Naeem, & Munawar, 2013). Consumers who trust a brand are willing to remain loyal to the current provider by purchasing its brand extensions and pay a premium price for the brand (Alam & Yasin, 2010). Hence, it is possible for businesses to transform a passerby customer into a loyal brand advocate. As such, brand trust becomes a need among customers especially when they face uncertainty and perceiveness of high risk in their purchase decision making (Aydin, Ar, & Taskin, 2014). People who trust a brand tend to share information regarding the brand to their families and friends (Alam & Yasin, 2010). As a result, the positive sayings regarding the brand will lead to an increase in sales of the brand. Thus, in order

to achieve high sales and profitability, the automakers must continuously improve their product brand by uplifting customers' trust towards their brand. This will most likely ensure customers to be a loyal brand advocate to their current providers.

Moreover, quality has long been considered integral to the automotive industry, particularly the car manufacturing processes as illustrated by the slogans of Mercedes-Benz, "The Best or Nothing", and Kia Motor, "The Power to Surprise". However, poor quality of cars will reduce the profitability of car companies and affect the overall business. Since 2008, millions of cars have been recalled due to the Takata air bag inflators which caused threatening damages to users during the collision (McAleer, 2015). Recent data reported that around 63 million vehicles have been recalled by automakers of various brands in 2014 including Honda, Toyota, Nissan, Volkswagen, BMW and other car brands (The New York Times, 2015) due to several severe causes which are illustrated in Figure 1.3.
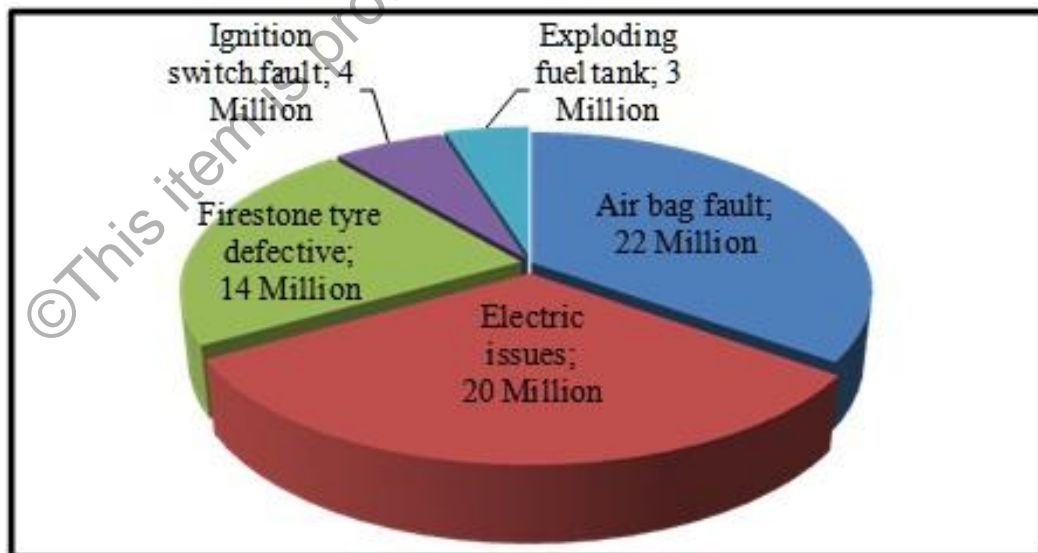
Source: Adopted from The New York Times (2015)

Figure 1.3: Auto recalls in 2014

The figure above shows the number of cars that have been recalled by automakers due to various issues. According to the norm, car companies facing this issues will contact the owners and ask them to bring their cars to selected dealership and authorised service centres for inspections. This clearly indicates that the car companies are concerned with the safety of their customers and the image of their companies. Once the owners feel that the companies are genuinely concerned with the issue, there is a tendency to purchase another car within the company's product line in the future. On the contrary, the companies will face losses if they provide poor service to their customers. It has been reported that every year, U.S companies face $41 billion in losses due to poor customer services. 82 per cent of their customers stopped doing business with them and 56 per cent of the customers switched from their existing brands (Burke, 2015). This demonstrates the importance of further investigation that need to be conducted in order to measure whether the quality of products and services play a vital role in influencing customer purchase behaviours (i.e. brand loyalty).

Moreover, the consequences of this global issue is that the reputation and image of car companies tend to decline (Rechtin, 2010). This is because people assume that the companies which have a high frequency for recalling their cars indicates that they are producing vehicles below the required quality. The customer perception towards the cars might change and they might not remain loyal to their current brand and decide to switch to other brands. The quality perception among customers determines the success or failure of car brands. Due to car recalling issues, it warrants closer scrutiny to examine the level of brand loyalty among the car consumers when such incidents occur. Hence, it has attracted many scholars and practitioners in the marketing and management area to study and examine the subject of brand loyalty. It is necessary for a