EFFECTIVENESS OF MARKETING COMMUNICATION STRATEGIES IN INFLUENCING CONSUMER'S BRAND KNOWLEDGE ON AUTOMOTIVE LUBRICANT

TAN CHEONG LEE

MASTER OF BUSINESS ADMINISTRATION

UNIVERSITI TUNKU ABDUL RAHMAN

FACULTY OF ACCOUNTANCY AND MANAGEMENT

AUGUST 2022

Effectiveness of Marketing Communication strategies in Influencing Consumer's Brand Knowledge on Automotive Lubricant

Tan Cheong Lee

A research project submitted in partial fulfilment of the requirement for the degree of

Master of Business Administration

Universiti Tunku Abdul Rahman

Faculty of Accountancy and Management

August 2022

Effectiveness of Marketing Communication strategies in Influencing Consumer's Brand Knowledge on Automotive Lubricant

By

Tan Cheong Lee

This research project is supervised by

Goh Poh Jin

Lecturer

Department of International Business Faculty of Accountancy and Management Copyright @ 2022

ALL RIGHTS RESERVED. No part of this paper may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, graphic, electronic, mechanical, photocopying, recording, scanning, or otherwise, without the prior consent of the authors.

DECLARATION

I hereby declare that:

(1) This Research Project is the end result of my own work and that due acknowledgement has been given in the references to all sources of information be they printed, electronic, or personal.

(2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.

(3) The word count of this research report is 14,065.

Name of Student: Student ID: Tan Cheong Lee 21UKM02046

Signature: Date:

12th August 2022

TABLE OF CONTENTS

Copyright Pageii
Declarationiii
Table of Contentsiv
List of Tables
List of Figures viii
List of Abbreviationix
Abstractx
CHAPTER 1 INTRODUCTION
1.1 Background1
1.2 Problem Statement7
1.3 Objective
1.4 Research Question9
1.5 Significant of Study10
CHAPTER 2 LITERATURE REVIEW
2.1 Brand Knowledge11
2.1.1 Brand awareness
2.1.2 Brand image12
2.1.3 Brand value chain model
2.2 Marketing Communication Strategies14
2.2.1 Social media communication15
2.2.2 Physical store communication16
2.2.3 Advertisement communication
2.2.4 Sales Promotion communication
CHAPTER 3 RESEARCH METHODOLOGY
3.1 Research design

3.2 Sample Design	
3.2.1 Target Respondents and Population	23
3.2.2 Location	23
3.2.3 Sampling Technique	24
3.2.4 Sample size	24
3.3 Data Collection Method	27
3.4 Construct measurement	27
3.4.1 Origin of constructs	
3.4.2 Scale of measurement	
3.5 Pilot Test	
3.6 Factor analysis	
3.7 Model specification	35
3.7.1 Multiple Linear Regression	
3.8 Diagnostic check	
CHAPTER 4 DATA ANALYSIS	
4.1 Descriptive analysis	
4.1.1 Respondent's profile	
4.1.2 Descriptive statistics	40
4.2 Reliability test	42
4.2.1 Cronbach's alpha test	42
4.2.2 Factor analysis	43
4.3 Inferential analysis	46
4.4 Test of significant	
4.4.1 Social media	
4.4.2 Physical store	51
4.4.3 Advertisement	51
4.4.4 Sales Promotion	51

CHAPTER 5 DISCUSSION, CONCLUSION AND IMPLICATIONS52
5.1 Discussion
5.1.1 Relationship between marketing communication strategies and brand knowledge
5.1.2 The best factor or predictor that influence brand knowledge
5.1.3 Different demographic affect the relation of marketing communication strategies and brand knowledge
5.2 Limitation of study
5.3 Recommendation for future study
5.4 Conclusion
REFERENCES
APPENDICES

LIST OF TABLES

	Pages
Table 3.1 Data input to G*Power 3.1.9.4 program	26
Table 3.2 Origin of constructs of dependent variable	29
Table 3.3 Construct of independent variable	30
Table 3.4 Pilot test result	34
Table 4.1: Respondent's profile	39
Table 4.2: Automotive lubricant brand recognised by respondent	40
Table 4.3: Descriptive statistics	41
Table 4.4: Reliability statistic for actual research	43
Table 4.5: KMO and Bartlett's Test	43
Table 4.6: Total variance explained	44
Table 4.7: Rotated Component Matrix ^a	45
Table 4.8 Correlations	46
Table 4.9 Model summary	47
Table 4.10 ANOVA	48
Table 4.11: Coefficient	49
Table 4.12: Test of Significant	50
Table 5.1: Discussion of major findings	53

LIST OF FIGURES

Figure 2.1: Brand value chain model	14
Figure 2.2 Research framework	21
Figure 3.1 Sample size result calculated from G*Power 3.1.9.4	26
Figure 3.2 Nominal scale question (Sample)	32
Figure 3.3 Sample question of Likert scale	33
Figure 4.1: The five communication strategies that influence consumer brand knowledge by gender and age.	41
Figure 4.2: Eigenvalues scree plot	45

LIST OF ABBREVIATION

BrdKnw	Brand Knowledge
MonePrm	Monetary Promotion
NonMonePrm	Non-monetary Promotion
SocMed	Social Media
Advt	Advertisement
PhyStr	Physical Store
SlsPrm	Sales Promotion

ABSTRACT

This paper is divided into five chapters, each of which offers a clear view of the topic from several aspects, including the research overview, literature review, methodology, data analysis, discussion and implications of the research study. The component that will be determined in this paper is the relationship between marketing communication strategies towards brand knowledge. The marketing communication strategies consist of social media communication, advertisement communication, physical store communication and sales promotion communication. There is various of study and new data that are gather from other researchers and respondents. This research will show to the researchers the effects of each independent variable. In order to get the results, this paper underwent multiple analyses. More than 200 respondents were given survey questionnaires to complete in order to get the data from respondents. This paper's conclusion included a number of recommendations for additional research as well as limitations encountered throughout this study. The end of this report includes the survey questionnaire that was used to collect data in this research.

CHAPTER 1

INTRODUCTION

Vehicle maintenance hold part of the journey while consumer owning a vehicle, the journey starts after consumer purchases their beloved vehicle. Vehicle maintenance is essential in order to prolong vehicle's life span as well as preventing vehicle from breakdown, therefore, automotive manufacture recommended maintenance schedule also known as vehicle periodic maintenance. Automotive lubricants replacement is necessary for every periodic maintenance and it is competitive in Malaysia market with more than 200 automotive lubricant brands in Malaysia. Thus, the objective of this study is to analyse the effectiveness of marketing communication strategies for influencing consumer's automotive lubricant brand knowledge. This chapter is containing background which explain the function, application, standard and relation of automotive industry with automotive lubricant market. Additionally, will discuss the problem statement of this research, objective of study, research question and significant of this study.

1.1 Background

Automotive lubricants are product required by automotive vehicle to help relieve the friction of various components in mutual contact which occurs due to the intense movement of the components. Apart from the main function of relieve the friction, automotive lubricants possess other functions including reduce wear and tear, reduce temperature, prevent rust and corrosion, hydraulic pressure transmission, anti-vibration, sealing, heat-transfer, insulation and cleaning. The different function mainly due to the different application of automotive lubricant for different automotive vehicle components. Therefore, to ensure automotive lubricant meet the specification required by the application, the automotive lubricant was foster to contained various substances that consist of base oil as the core ingredient, and enhanced by various additives such as anti-wear additives, dispersants, detergents, viscosity index improvers and others.

After decade of innovation in automotive industry, automotive lubricant plays an important role to meet the automotive industry requirement. Market was emphasizing in sustainability, it is same for automotive industry, with that say so, automotive manufacture urge to produce automotive vehicle that consume lower fuel and required environmentally friendly. Furthermore, emissions legislation was implemented by country's government in order to reduce harmful pollutant and Carbon dioxide (CO2) emissions emanating from automotive vehicles. Engine design require to change in order to meet the emissions regulations have impacted on the oil degradation process and subsequently, each engine change or regulation enforce will lead to a new engine oil specification release (Gligorijevic et al., 2006). Eventually, automotive manufacturer develops the standard of engine oil namely Original Equipment Manufacturer (OEM) approval in order to meet their requirement for fuel economy, oil change interval as well as emission control. In relation to automotive standard approval, lubricant companies always work closely to ensure the development of lubricant technology is on par with the automotive manufacturer.

It is extremely important for consumer to verify the authenticity and approval of the lubricants before purchase it, consumer should only purchase the approved and high-quality genuine automotive lubricants from the market. To prevent consumer confusion, some automotive manufacturer collaborates and endorsed automotive lubricant brand as their official lubricant or provide licensing program for the lubricant supplier that produce lubricant that meet their standard of approval. The quality of information may develop the trust of consumers against lubricant company, and thus lubricant company should understand the most effective marketing strategies to communicate the informative knowledge to consumer in order to gain trust in market.

The automotive lubricant industry growth is solely relied on automotive industry growth. The market was expected to be 20 million metric tonnes in size in 2020, and it is anticipated to grow at a Compound Annual Growth Rate (CAGR) of over 2.5% from 2021 to 2026. ("*Automotive*", n.d.). It means they forecast a constant 2.5% annual growth rate from the years 2021 to 2026. However, global COVID-19 has had a detrimental impact on the automobile industry, resulting in the temporary shutdown of industrial facilities and activities (Raza & Masmoudi, 2020), thus consumption of automotive lubricant expected to decline. In relation to that, the lubricant market is shrinking and lubricant companies should increase their competitive advantage to maintain their market position compare to other lubricant companies.

According to Saha & Gopal (2014), Indonesia is the highest oil consume country whereby Indonesia having the largest vehicle population among ASEAN members and majority of the population is contributed by motorcycle categories also known as two-wheelers, Indonesia known as one of the biggest market of two-wheelers in the world as well. Two-wheelers is core transportation for lower and middle-class population across developing country. It is not only use for personal transportation purpose but also use for commercial purpose whereby providing service of food delivery, transportation, courier service and others, therefore two-wheelers normally are having highest population compare to car categories (four-wheelers). With the high consumption oil automotive lubricants by consumers, lubricants company should understand the lubricants brand perception in market in order to increase purchase of lubricant based on consumers preference.

However, four-wheelers in Malaysia holds the majority of market total vehicle volume (Vehicle, 2021). Automotive industry in Malaysia has been significantly developed for over 39 years with the commencement of 1st Malaysia National Car brand, PROTON in 1983, followed by second national brand, PERODUA established in 1993. The automotive market development was mainly impacted by introduction of National Automotive Policy (NAP) from Malaysian government. According to *National Automotive Policy* (2020), first NAP was introduced in 2006 with the objective of supply chain integration whereby to facilitate the transformation and to integrate the local automotive industry into the increasingly

liberalised and competitive global environment. In order to increase the capability and competitiveness of the domestic automobile sector, NAP modified its goal to promote investments in 2009, this led to the investment and establishment of PERODUA 2nd national car brand. In 2014, with the global trend of Green and Sustainability, NAP 2014 announced to focus on developing Malaysia as the hub for Energy Efficient Vehicle (EEV), in 2014 total Malaysia vehicle population consist of 14.1% of EEV and eventually successfully increase the population of EEV to 62% in 2018 (National Automotive Policy, 2020). Moving forward, NAP 2020 announces linked mobility as its primary goal, aiming to strengthen Malaysia's automotive sector in the age of digital industrial revolution. With the National Automotive Policy implementation, Malaysia having 27 vehicle producers and over 600 component manufacturers. With the manufacturer capability, Malaysia is able to produce approximate 500,000 vehicles annually and thus become 3rd largest vehicle producer in South East Asia and 23rd largest vehicle producer in the world. In addition, Malaysia's automotive industry generated 4% of the country's GDP and 700,000 jobs across the entire automotive ecosystem (National Automotive Policy, 2020).

Furthermore, with the Vehicle Registration Statistics for motorcycle, car, goods vehicle and others in Malaysia show total registered vehicle volume is 27.4 million in Malaysia (Vehicle, 2021). Due to vehicle usage is similar to automotive lubricant usage, we can categorise into two segments, consumer segment and commercial segment. Consumer segment is referred to private usage vehicle which is motorcycle and car, thus commercial segment refers to good vehicle and others. For commercial segment, the total volume is 1.7 million, on the other hand, consumer segment takes up the majority of 25.7 million. Comparing with Malaysian population of 31.63 million (Malaysia, 2021), it shows on average, 80% of citizen owned a private vehicle. Despite the high registration of consumer segment vehicle, the private use vehicle also utilises for business purpose due to the e-hailing, food delivery, transportation service and others. Therefore, there is cross use of consumer and commercial segment for lubricant in Malaysia and thus it is important for automotive lubricant company to enhance its brand knowledge in the market.

The national oil and gas company of Malaysia, Petroliam Nasional also known as PETRONAS, is having high brand presence in market with its automotive lubricant, this might due to existence of PETRONAS gas station in market, same scenario for international brand Royal Dutch Shell (SHELL) and Chevron Corporation (CALTEX). Additionally, other international brand such as British Petroleum Castrol (CASTROL) and ExxonMobil (MOBIL) are having strong presence in Malaysia automotive lubricant brand even after they sold their gas station business in 2005 and 2012 respectively. This shows that the brand knowledge of lubricants brand is not rely on the gas station existence, moreover, other lubricant brands also show their presence in Malaysia market such as, UMW, NASA, GRANTT, HI-REV and others. Eventually, lubricant brands granted their market position with aggressively promoting their brand with marketing communication strategies.

In 2015, SHELL is the top oil supplier with share of 31% and follow by PETRONAS with share of 23% in Malaysia market. The high share volume of SHELL and PETRONAS are due to strategic partnership with automotive manufacturer in Malaysia for their first-fill lubricant in manufacturing plant as well as using in authorized service centre. Despite the appearance of the gas station as branding advertisement in market, it shows that the branding appearance to consumer having impact on consumer's brand awareness when consumer starting their vehicle ownership. However, the strategic partnership with automotive manufacturer able to increase the selling volume in the market and may not develop the consumer's brand knowledge, therefore in order to survive in this competitive market, it is important to determine which marketing strategies can influence consumer's decision when they want to purchase lubricant (Nur et al., 2020).

According to Ng & Law (2016), the total lubricant consumption of Malaysia in 2015 was 255 million litres, therefore, it shows that the demand for automotive lubricant is very high as on average every citizen will need to purchase approximate 8 litre of lubricant every year. In relation to the lubricant sales, the sales channel of automotive lubricant in Malaysia is unfixed and can be divided into two channels, first channel will be the Original Equipment Manufacturer (OEM) channel and second channel will be Retail Market channel. For OEM channel, the lubricant company will be having supply agreement with automotive manufacturer for the

purpose of assembly plant first-filling and authorized service centre usage. Basically, this channel will having the long-term supply agreement, therefore branding of the lubricant brand will be depend on the agreement whereby most of the OEM lubricants is showing the automotive manufacture brand, however, in some case that automotive manufacturer to leverage with the lubricant brand awareness, automotive manufacturer will agree to disclose the lubricant supplier brand in a press-release.

Second channel will be the Retail Market channel, according to Kathy Yuan (2015), analyst at Kline's energy practice, Malaysia's consumers do not like to conduct their own lubricant changes, therefore they will entrust workshops to conduct oil change for them. However, Retail Market channel of lubricant will having different supply chain pattern depending on the lubricant company, most of the well-known lubricant brand will be having distributors in different region of Malaysia, for instance, SHELL having 4 distributors by region, namely Northern Peninsula Malaysia, East-Coast Peninsula Malaysia, East Malaysia and last distributor handling Central and Southern Peninsula Malaysia. Distributor will supply lubricant to dedicated region retailers such as vehicle service centre, individual workshop, tyre workshop, hardware shop, automotive spare part shop, and others. Furthermore, rapid technological changes, precisely, the growth of internet causing big impact to the global commercial ecosystem, all global companies need to ride the wave of new technologies to remain their position in the market (Bartosik-Purgat, 2019). E-commerce is another competing field for lubricants companies. CASTROL and MOBIL launch their online shop in several e-commerce platform by selling lubricant service package, it is Online to Offline selling with collaboration with their physical retailer to enhance their lubricant sales nationwide. Eventually, the lubricant product will be selling to consumers via above mentioned supply chain, it is a norm that the branding knowledge will not be communicated correctly without the cooperation of each layer of the supply chain. With that say so, it is important to form a correct marketing communication strategy for lubricant company to improve the consumer's brand knowledge of automotive lubricant.

Retailer may highly affect consumer's brand knowledge of automotive lubricant due to the nature of supply chain, therefore most of the lubricant company concentrate on investing marketing communication tools which benefit to each supply chain layer. For instance, retailer loyalty program, yearly retailer incentive, sell-in promotion and others. This is also due to the retailer having the power of decision-making on which lubricants brand to be retailed in their shop. According to Kovanoviene et al. (2021), marketing communication strategies having strong relation to creating customer loyalty to your service and product. Marketing communication strategies consist of advertising, sales promotion, and personal sales, public relation and direct marketing.

1.2 Problem Statement

The Movement Control Order (MCO) was implemented in 2020 as the Malaysian government's most important move to sever the COVID-19 chain inside the community. The economy in general and all sectors, from the smallest level of individual income to the highest level of international trade, have undoubtedly been impacted by this difficult decision from government. (Shah et al., 2020). Hence, the automotive lubricant industry facing market demand decreases, and develops into a stiff competitive market.

Due to sales channel of automotive lubricant involving multiple layers, for instance, it involves distributor and individual workshop. If the brand knowledge is not communicated in a proper way, consumer may not have the correct brand knowledge for the product they are using. Consumer will easily switch their preference from one company to another company, therefore retain the existing customer will be another challenge for the lubricant company as well.

Additionally, after COVID-19 outbreak, health and safety have become top priorities, and consumer purchasing power has changed as a result of changing economic situations (Raza & Masmoudi, 2020). Subsequently, consumer purchase behaviours believe to be changed with personal economic situation. Purchase intention will be affected by the external factors which including the brand knowledge of the lubricant product. Therefore, there is a need for lubricant

company to find out which marketing strategy that influence the consumer's brand knowledge of automotive lubricant.

Besides, due to the limited marketing budget allocate by lubricant company, it is important for marketer to figure out the correct marketing communication strategy to be implemented by lubricant company to improve their brand knowledge to consumer. If they have spent the budget in the wrong marketing communication tools, it will exhaust the company's profit and the sales will drop dramatically.

Marketing communication strategies was also relied on the targeted audience whereby different group of consumers may have different preference on the marketing communication. For instance, male consumers having more sensitive to automotive lubricant compare to female consumers, in order to attract female consumers, different marketing communication strategy need to be deployed. Therefore, different group of gender are another factor to consider with different marketing communication strategy.

Last but not least, manager from lubricant company should consider on differentiate the age of targeted consumers. The different age group may influence by different marketing communication strategy, for example, age group above 50 years old was loyalty to some existing lubricant brand knowledge however they do not explore on the added value provided by the newly invented lubricant brand. Besides, to shift their brand knowledge to other brand, the different market communication strategy needs to be conducted. Eventually, age group should be another variable to consider for different marketing communication strategies.

1.3 Objective

The general objective of this research is to evaluate which marketing communication strategies influencing consumer's brand knowledge on automotive lubricant in Malaysia.

Furthermore, the specific objective of this research is as below:

1. To determine the relationship between marketing communication strategies and brand knowledge. Once the relationship is determined, lubricant company can use those strategies to create brand awareness and brand image to retain their consumer.

2. To determine which marketing communication strategies are effectiveness to influence the brand knowledge. This may help lubricant company to allocate their funds wisely and effectively to enhance the brand knowledge of consumer.

3. To examine how gender and age respond to the brand knowledge through marketing communication strategies. Marketers always need to determine the marketing strategy based on their target audience of their marketing communication; therefore, this may assist marketer to identify strategies for their dedicated target audience.

From this study, it can help Malaysia lubricant companies to understand and design appropriate strategies to target their customer and hence it will increase their market demand eventually. The marketing communication strategies consist of providing workshop renovation, workshop signage, product training to workshop, advertising, digital advertisement, social media posting and others.

1.4 Research Question

1. Is there any significance relationship between marketing communication strategies and brand knowledge?

2. Which marketing communication strategies having the highest impact to the brand knowledge?

3. How differential in gender and age affect the marketing communication strategies?

1.5 Significant of Study

Although there are many studies and researches for marketing strategies on fastmoving consumption goods, there is relatively low quantity of automotive lubricants research on marketing strategies. This study is aim to close the gap by conducting the research in Malaysia.

Moreover, this research will help the managers of lubricant companies to identify which marketing communication strategies have more impact on the brand knowledge and thus lubricant companies can allocate more resources on the particular marketing communications strategies.

Besides, the effectiveness of marketing communication strategies is widely seen as monetary return that gives a firm with feedback on its marketing activity (Kotler & Keller, 2020). Therefore, lubricant companies are able to utilize the result of this study to implement the most effective marketing activity to achieve the company goal as well as the financial profitability.

CHAPTER 2

LITERATURE REVIEW

2.1 Brand Knowledge

Brand knowledge means the cognitive cognition and mental representation of the particular brand in consumers' mind and memory (Keller, 2003). Besides, Nguyen et al. (2019) has mentioned that consumers able to memorize all descriptive and evaluative brand-related information. Not only this, branding is able to arouse the conscious mind of consumer and having great impact on consumer personality, lifestyles, presence and values (Aaker, 1991).

According to Webster & Keller (2004), branding theory has been mostly discussed and studied in the context of consumer products, the automotive lubricant market whereby highly involves in business-to-business(B2B) sales channel also playing the important role for automotive lubricant branding creation. The well-developed and well-managed of marketing strategy to enhance the branding for lubricant company is the foundation of marketing strategy and marketing programme. For instance, branding is able to help the company in creating brand's value and leads to competitive advantage, support from value chain to partners including distributor, resellers, workshop and customers.

By adopting from researcher Keller (1993), "Brand knowledge consists of two main elements: brand awareness and brand image". These two concepts are defined by taking some fundamental memory principals from cognitive psychology, which states that knowledge memorizes in memory as information stored in nodes connected by varying strength of links. The following section will discuss about brand awareness and brand image.

2.1.1 Brand awareness

Brand awareness is an essential component of brand knowledge, it is referring to the ability of consumers to identify or recall a brand from their brain, thereby assist the consumer to link the products or service with brands (Keller, 2016 & Aaker, 1991). It means the probability of a brand appear in the consumer's mind and how easily it does so. Additionally, brand awareness is consisted of two other constructs, brand recognition and brand recall. Brand recognition refer to the ability of consumers to confirm previous exposure to the brand, however, brand recall refers to the consumer's ability to retrieve a brand from when provide certain probes, for instance a product category or need fulfilled by that category (Keller, 1993).

Furthermore, strong brand awareness can help consumers understand and remember information about a brand more easily. It also increases the likelihood that the brand will be one of the considerations in purchase decisions. Moreover, in the environment with low-engagement decision-making, brand awareness might be good enough to determine product selection. However, Malik et al. (2013) conclude that brand image strongly affects the buying behaviour of consumer. Therefore, brand image is another component to build brand knowledge.

2.1.2 Brand image

According to Keller (1993, 2001 and 2013), brand image is another important component that building consumer's brand knowledge. "Brand image refers to a series of associations related to a brand in consumer's memory which reflects the brand image in consumer's mind and how it differs from competitors' brands" (Keller, 1993, 2001 and 2013). Brand attributes, benefits, and attributes make up a brand's image. Brand attributes are defining traits and qualities that define a brand and reflect how people view the brand. Brand benefits refer to the consumer-perceived value associated with brand attribute, for instance, functional, experiential and symbolic. Brand attribute refers to how consumers evaluate and

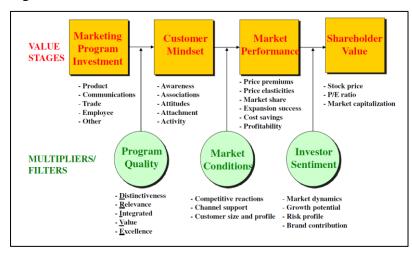
judge the brand attributes and benefits, and it represents the combination of all relevant brand elements and experiences that consumers remember (Wijaya, 2013).

In the process of building a brand in consumer memory and influence on consumer's brand preference, brand image is one of the important factors which is positively correlated with the brand's ability and preference (Chen & Chang, 2008). Therefore, it is important for a lubricant company to build brand image in order to target the desire consumer.

2.1.3 Brand value chain model

Since brand knowledge is important to assist lubricant companies to build their brand image, hence, it is important to find out which marketing investment activities should be focused. Referring to the brand value chain model developed by Keller (2016) to better understand the financial impact of marketing expenditures and investments to promote brand loyalty and strong consumer awareness. Please refer to figure 2.1 for the brand value chain model. The process started with investment of marketing communication strategy whereby research into branding to provide the correct strategy to successful brand building. Hence, marketing communication is the initial stage in order to build brand knowledge thereby influencing the consumer's mindset of the brand awareness and brand image and finally create shareholder value.

Figure 2.1: Brand value chain model



Note. From Keller, K. L. (2016). Reflections on customer-based brand equity: perspectives, progress, and priorities. *AMS Review*, 6(1-2), p. 5.

2.2 Marketing Communication Strategies

According to Wu & Li (2018), a company can use marketing communication strategy as their tools to meet their customers' needs. Customer will feel satisfy, confident on the company's product and hence it can create the customer loyalty towards the product brand. Kovanoviene et al. (2021) having the same thought that there is a signified positive relationship between marketing communication strategy and brand knowledge. Thus, the proper application of marketing communication strategy is important on building the brand knowledge (Kovanoviene et al., 2021). Marketers' continuous challenges in developing and implementing useful marketing communication strategies required further research into marketing activities and customer experiences. Brand knowledge, which is thought to generate financial return to company by influencing consumer loyalty toward a brand, consumer buying intention, and foster competitive advantage are always attract academic attention (Cheung et al., 2019).

Four type of marketing communication strategies were chosen to examine in this study are social media communication, physical store communication, advertisement and sales promotion.

2.2.1 Social media communication

Revolution of the digital era was growing at a fast pace, anyone with a smart smartphone and internet connectivity can access social media at anytime, anywhere. According to DataReportal information in 2021, the average amount of time an individual spends in social media is 2.5 hours per day. The number of social media users has increased tremendously whereby most Malaysians are using Facebook, Instagram, TikTok, Twitter and others. This phenomenon brings new business opportunities for everyone. It has become important communication channels as they change consumer behaviour and provide another channel of communication between consumer and company. In addition, social media communication allows companies to have two-way communication with consumers, for example receive consumer's feedback and comments, understand consumer's attitude and know consumer needs in the communication process regardless of geography (Puangmaha et al., 2020).

Cheung et al. (2019) studied social media communication for the smartphone industry in Hong Kong and found that social media play a considerable role in building brand knowledge. Total of five different social media elements were examined in the paper for instance "entertainment, customisation, interaction, electronic word of mouth (EWOM) and trendiness on social media platforms" (Cheung et al., 2019). Entertainment is the experience of consumers perceived as playful and fun when marketers create entertainment activities on social media platforms. Customisation is the degree to which services; marketing efforts and information are tailored to meet individual consumer preferences. Interaction means the two ways exchange of ideas, comment and information sharing opportunities. EWOM is a communication between former, actual or potential consumers using social media about a product, brand or company. Trendiness means the extent of a brand communicates the recent and trendy information about the services, products and brand.

Additionally, research by Elsharnouby et al. (2021) studied social media demonstrates that brand knowledge is influenced by information sharing with different characteristics, for instance quality content, rewards and virtual interaction. Comprehensive and relevance are components of quality content that helps build consumer brand perception because consumer perceptions and perceived information quality are positively correlated. Rewards characteristic provides direct benefits to consumers as the consumers expect some return which reinforce the brand recognise, recall and awareness. Virtual interaction strengthens the connection between two peoples because the company is able to communicate the service, product and brand to the consumer. The study result shows that social media communication affects brand knowledge significantly with the characteristic of quality contents and virtual interaction (Al-Qudah, 2020).

However, another researcher having contradict opinion on social media communication affecting brand knowledge. According Osei-Frimpong et al. (2019), social media communication unable to fully replace the conventional above the line marketing communications because according to the results, consumer interest in social media interaction techniques is driven by prior brand awareness. Therefore, by using various forms of communication channels, a firm needs to increase brand awareness or brand knowledge, which will affect consumers' interest in connecting with the brand on social media platforms at the first place.

Thus, the following hypothesis is proposed:

H1: Social media communication have significant relationship with consumer's brand knowledge.

2.2.2 Physical store communication

Automotive lubricant product required mechanic application to the consumer's vehicle during the periodic maintenance service, therefore the authorised service centre or individual workshop playing important role on the brand communication to consumer on the automotive lubricant brand that apply into the consumer's vehicle. According to Dong & Lee (2016) study on how the in-store's promotion-mix strategy affect the consumer buying behaviour, the result of study shows that buying experience in-store with appropriate in-store marketing-mix, it is positively influence customer loyalty as well as ensure re-purchase in future. Moreover, the

great purchase experience in the physical store will generate good product or service and brand knowledge. Therefore, relevance physical store communication can be used to influence consumer's brand knowledge because consumer will purchase the brand of product introduce by the sales representative in the physical store.

In the physical store, the physical store communication will be communicated via the sales representative and they playing an important role to convey the message to consumers. According to Memisoglu's (2020) study on Turkey's marketing communications for non-pharmaceutical products and over-the-counter medicines. The results show that the sales representative in the store was the brand representative and needed to provide professional, knowledgeable and up-to-date information in order to gain consumer trust and hence help consumer on purchase decision. In addition, researcher emphasized that the company should collaborate and support the sales representative who are in constant contact with consumer in order to improve the brand knowledge of physical store representative in order to represent the brand in the physical store.

However, research by Porter & Claycomb (1997), study on the fashion physical store image having different findings. Researchers study the store image from three factors, product brand, employee service and store atmosphere. Product brand is the product selling in the retail store whereby the product brand image will have correlation with retail image. Employee service is the employee knowledge, service quality and helpfulness. Last factor is the store atmosphere refers to the interior furnishing that provide feeling of quality retail store. Result showed that only brand image is having positive correlation with store image, which is contradict with the above research.

On the other hand, Bhakuni et al. (2021) studied on the apparel stores image influencing the brand image in India. The physical examination is always required by consumer before the actual purchase is concluded especially in the case of online shopping, so, with strong brand image is able to balance the consumers perception of risk. Moreover, authors also found that store image and brand image have interrelation and influence each other. In the case study, result showed store image

influence brand image significantly with the high quality of store atmosphere and service quality able to constitute brand image.

Apart from brand image on physical store, Graciola et al. (2020) studied on the mini and super markets retail stores industry to examine how store image effects on brand awareness. Authors study the store image with comprehensive in-store marketing mix which consists of pricing, merchandise, customer relation and architecture. Pricing refers to the level of perceived value that consumers received for their money. Merchandise refers to the extent to which the merchandise assortment where the store has well-exposed and stocked the merchandise that consumers desire. Customer relation means how the sales representative appears, as well as the sales representative non-verbal factors for example smiles, facial expression, gesture and others. Architecture refers to the store that communicates an identity of the store and about the brand. Result showed the strong store image significantly affected brand awareness.

Hence, the following hypothesis is proposed:

H2: Physical store communication have significant relationship with consumer's brand knowledge.

2.2.3 Advertisement communication

If a company successfully creates their brand awareness and brand image to the public, they are able to outperform their competitors and eventually they are able to grab more market shares from the existing pie. According to Malik et al. (2013), The author discovered a strong link between the advertisement and customer purchasing habits. The advertisement acts as a driving force for any business because it is a powerful tool for spreading your message and retaining the attention of customers. Researchers examined that if the consumer is well aware of the brand and having good brand perception, brand loyalty and association, hence, naturally brand image will become the part of their buying behaviour. In addition, researchers also examined those adolescents in Gujranwala are aware of their social position so they demand for branded products and advertisements influence their perceived value of the product through brand image.

However, another study done by Buil et al. (2011) are examined the relation of advertisement with brand awareness instead of brand image. In general, academics contend that advertising is successful in establishing consumer-based brand equity and has a consistent, cumulative impact on brand recognition. Advertising is the most obvious form of marketing. Besides, authors mentioned that advertising effects depend on the amount invested and type of messages communicated. Therefore, researchers study advertisement by focuses on consumers perceive of a brand's advertising spend and individuals' attitudes toward the advertisements. Consumer perceive of advertisement spend can be examine by the frequency of the advertisement seen by consumer compare to another brand. Individual's attitudes toward advertisement were determine by the advertisement characteristic such as uniqueness, creativity and original advertisement. Result from this study showed advertisement positively correlated with brand awareness.

Furthermore, many researchers debated that effectiveness of different advertisement appeal on affects the brand knowledge. Researchers Zarantonello et al. (2014) studied on the television advertisement appeals affects the brand knowledge from different countries. The type of advertisement appeals that examined are functional advertisement versus experiential advertisement. Moreover, authors also examine the cross-county culture affects the effectiveness of the advertisement by different levels of economic development. Malaysia GDP per capita in year 2020 is around USD10,000 therefore fall under mid-GDP countries in the research. Mid-GDP countries having significant positive correlation between experiential advertisement with brand awareness and attitude.

Another study of advertisement toward brand awareness was done in Thailand food product industry. The research also revealed that advertising significantly increases brand awareness. The advertisement method that examines were television, radio, print media, outdoor media and others whereby able to build the consumer's brand awareness (Daosue & Wanarat, 2019).

Therefore, the following hypothesis is proposed:

H3: Advertisement communication have significant relationship with consumer's brand knowledge.

2.2.4 Sales Promotion communication

Depending on the marketing objective of lubricant brand company, it is important to design suitable sales promotion. Blattberg & Neslin (1989), they reviewed on the effect of sales promotion with immediate term, intermediate term and long term. For instance, long term effect for sales promotion is able to develop loyalty and consumer will continue to repurchase from the same brand. Furthermore, consumer also will not easily be switching to other substitute brand, this shows that sales promotion has positive influence towards brand knowledge.

In contrast, some research has been performed on the advantages and disadvantages of sales promotion towards branding. Chu & Keh (2006) studied brand image that affects sales promotion activities expenses, advertising expenses and research & development expenses, resulting in lagged spending causing the diminishing returns on brand value. In addition, sales promotion is a strategy mainly for short-term purposes to generate brand awareness among consumers. Besides, only promotion spending that exceeds USD 2 billion seems to increase brand value, therefore the firms in the dataset such as Starbuck, Yahoo, Harley Davidson and others that spend less than USD 2 billion on sales promotion should instead spend in advertising for higher impact of brand values.

On the other hand, according to Joseph et al. (2020), there are two types of promotions: monetary sales promotion and non-monetary sales promotion. Monetary promotions are often used to achieve short-term market share gains, resulting in brand switching, increased sales or more customer trials and thus resulting in short-term financial profits. But regular use of financial incentives might harm a brand's reputation and perceived quality. However, regular use of monetary promotions might harm a brand's reputation and perceived quality. Conversely, non-monetary promotions may not have a negative impact toward brand image because consumers may not directly link perceived benefits. The result

showed that brand image will be negatively affected with frequent monetary promotion, therefore, the authors recommended non-monetary promotion. In addition, Buil et al. (2011) also studied on the monetary promotion and non-monetary promotion affect the brand equity in UK, results also show the monetary promotion has a negative impact on brand image therefore researcher recommended to plan promotion wisely.

Therefore, the following hypotheses are proposed:

H4a: Monetary sales promotion communication have significant relationship with consumer's brand knowledge.

H4b: Non-Monetary sales promotion communication have significant relationship with consumer's brand knowledge.

On the basis of the literature with the study purpose to investigate the relationship of marketing communication strategies and brand knowledge, the hypothesis developed among four types of marketing communication strategies and brand knowledge. The relational path among the constructs is summarized in figure 2.2 research framework.

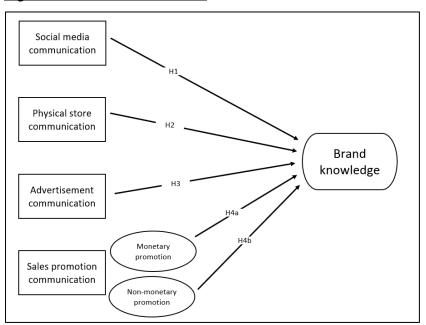


Figure 2.2 Research framework

Sources: Developed for research

CHAPTER 3

RESEARCH METHODOLOGY

Chapter three consists of the design of research, sampling design, data collection methods, research analysis tools, construct measurement for questionnaire following by the model specification and diagnostic check.

3.1 Research design

To empirically test on which marketing strategies are able to influence consumer's brand knowledge, the quantitative research will be carried out with survey method. According to Trochim (2005), "Research design provides the glue that holds research projects together". Research design functioned to structure the research, showing how all major parts of a research project work together to interpret the central research question. For instance, research design gives the elements and a plan for an effective research study, much like a cookbook provides a list of ingredients and directions for producing a dish. In general, research design is the "Pillar" of the study protocol which a plan, strategy, investigation and structure to capture ensured in controlling variance and in searching question. In this research, study of effectiveness of marketing communication strategies in automotive lubricant industry, quantitative research is used to access the information and data from target population.

3.2 Sample Design

3.2.1 Target Respondents and Population

The target respondents of this study are groups of individuals with similar characteristics as the respondents and participants for this research study. The purpose of this research study is to explore which marketing communication strategies were significantly associated with brand knowledge of automotive lubricant brand in Malaysia. Hence, individuals who own personal vehicles such as cars, motorcycles, pickup trucks and others in Malaysia will be the target population in this study, which can provide accurate and precise information on marketing communication. The population group can come from different age groups and genders of people, which gives us to validating on how gender and age affect the results.

3.2.2 Location

There is no specified location selected for this research as long as the target population have been in Malaysia and own personal vehicles. All the required data will be collected from Malaysian that own personal vehicles. Klang valley was chosen as the target location for the study because Klang Valley is the main economy centre of Malaysia. Klang Valley consists of Federal Territory of Kuala Lumpur, Federal Territory of Putrajaya and the state of Selangor. Klang Valley city, also known as Greater Kuala Lumpur, is the most densely populated city in Malaysia with population of approximately 7.564 million (World Urbanization, 2018). In addition, Klang Valley is the cultural, financial and economic centre of Malaysia and all government offices, the Malaysia Parliament and others are located in Klang Valley. Besides, a city with 25% of Malaysia's population, this target location is best representing the entire Malaysian population. Therefore, it is accurate for this study to conduct in Klang Valley.

3.2.3 Sampling Technique

In the research field, different sampling techniques are applied in different fields. It is important to choose the appropriate sampling technique. According to Sharma (2017), sampling is a procedure or device used to methodically select a relatively small number of representative individuals or items (subset) from a predefined group to serve as subjects (data source) for observation and experimentation in accordance with the study's objective. Both probability sampling and non-probability sampling are used as sampling procedures. Random sampling is another name for probability sampling, selects each individual with the same probability and can provide researchers with more accurate data, simple random sampling, cluster sampling, stratified sampling, and systematic sampling are all included in it. Along with convenience sampling, quota sampling, purposive sampling, selection sampling, and snowball sampling, this non-probability sampling technique focuses on judgement.

Convenience sampling and snowball sampling will be utilised in this study which is non-probability sample technique because the participants are often easily to find and readily accessible. For instance, family members, relatives, friends, colleagues, university-mates and their community as sample population is more convenience for this study because the target population is owner of personal vehicle in Klang Valley, Malaysia.

3.2.4 Sample size

Sample size is an important feature of an empirical study that aims to infer the population from the sample. Taherdoost (2017) mentioned that an adequate size of random sample is needed to avoid sampling biases or errors om generalizing a random sample. Having said that, the larger size of sample population, that lesser the probability that findings will be biased does. The sample size calculation shows in following section.

3.2.4.1 Samuel B. Green Formula

The calculation of sample size for regression analysis can be calculate via Green Formula. Green formula is suitable for study by sample survey with data collection in order to test hypothesis by regression analysis. Green developed equation as below and Uakarn et al. (2021) proof that Green formula is adequate for regression analysis.

 $n \geq 50 + 8(m)$

Where,

n is the required sample size *m* is the predictor or independent variables therefore, according to this research independent variables m = 5, sample size estimated

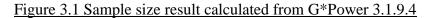
 $n \ge 50 + 8(5)$ $n \ge 90$

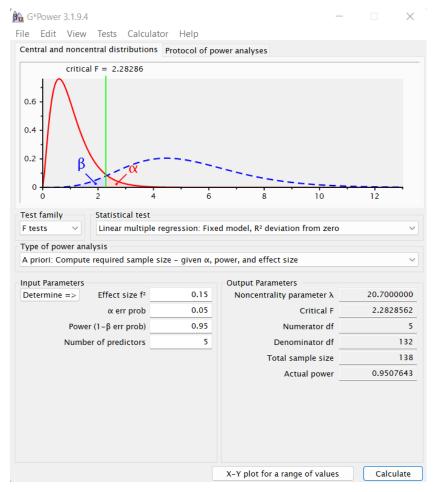
3.2.4.2 G*Power

The using of G*Power program able to calculate the sample size or power test of analytic statistics for instance, F-tests, t-tests, Z tests, Chi-square, correlation, ANOVA and Regression (Faul et al., 2009). Estimate sample size for this research with data input shown in table 3.1 and the sample size result calculated from G*Power 3.1.9.4 program shown in figure 3.1.

Statistical Value $\alpha = 0.05$,	power $(1-\beta) = 0.95$ and Effect size = 0.50
Data Input	Calculation of sample size
Test Family	F-test
Statistics test	Linear multiple regression: Fixed model, R^2 deviation from zero
Type of power analysis	A Priori: compute required sample size-given α , power, and effect size
Effect Size f ²	Mean $= 0.15$
α err prob	5% = 0.05
Power (1- β err prob)	95% = 0.95
Number of predictors	5

Table 3.1 Data input to G*Power 3.1.9.4 program





Pertaining to the result from Green formula shown that estimate 90 respondents are required. In additional, result from G*Power shown that estimate 138 respondents are needed. In order to examine more accurate analysis for this study, minimum 200 respondents of sample size are set for this research study to examine the

effectiveness of the marketing communication strategies influence brand knowledge.

3.3 Data Collection Method

Data collection refers to the process of acquiring all necessary research information in order to analyse the research problem, results, and examine the hypothesis. Data collection method can be categorised into primary data and secondary data collection. Primary data is data that gathered for the specific research topic which design particularly for the research problem. Secondary data is data consist of research object with a range of possible values, coded in variables by setting, containing quantitative data.

In this research, primary data collection will be performed. Self-administrated questionnaire form to be prepared for this study. The survey questionnaire will be created via Microsoft Form, and to prevent sampling bias, this questionnaire will be circulated to individual around and via social network platform to general public. However, respondent who owned personal passenger car, motorcycle or others will be held accountable as valid respondents because lubricant brand target consumer is for who owned private vehicle. Furthermore, Malaysia having 3 main races consisting of Malays, Chinese and Indians, so questionnaires in 3 different languages will be prepared.

3.4 Construct measurement

The survey questionnaire will consist of 3 sections; The first section will have questions related to respondents' personal information, including their gender, age, and the number of personal vehicles they own (measured on a nominal scale). Additionally, brand knowledge is about the cognitive cognition and mental representation of the particular brand in consumers' mind and memory (Keller, 2003). However, some brands of automotive lubricant were not recognised as

automotive lubricant in Malaysia due to their other product such as fuel station, therefore, the last question of the first section were asked about respondent's recognition of automotive lubricant brands and hence the recognise automotive lubricant brand will become "Brand X" in the subsequent section. For instance, there are 15 automotive lubricant brands for selection for this question and consist of international brands to local brand.

Second section will be related to dependent variables for the brand knowledge and follow with third section will be related to independent variable for the marketing communication strategies variable which consist of social media communication, physical store communication, advertisement communication and sales promotion communication. Second and third section adopted a Likert scale with 6 points where ranging from strongly disagree (1) to strongly agree (6).

3.4.1 Origin of constructs

There is one dependent variable and five independent variables for this research study. For the dependent variable for consumer brand knowledge, there are total nine questions whereas four questions informed about brand awareness and five questions informed about brand image. Table 3.2 was shown the origin of constructs of dependent variable, brand knowledge questionnaire items that obtained from the relevant journal and articles.

Table 3.2 Ori	gin of constructs of	dependent variable

Variables	Original Questionnaire	Adopted Questionnaire	References
BK.BA 1	I am always aware of Brand X	I am always aware of Brand X	Cheung et al. (2019)
BK.BA 2	Characteristics of Brand X come to my mind quickly	Some characteristic of Brand X come to my mind quickly	Cheung et al. (2019)
BK.BA 3	I can quickly recall the symbol or logo of brand X	I can quickly recall the symbol or logo of Brand X	Cheung et al. (2019)
BK.BA 4	I can recognize the Brand X among other brands	I can recognize Brand X among other brands	Daosue & Wanarat (2019)
BK.BI 5	Brand X is a leading company	Brand X is/are leading company	Cheung et al. (2019)
BK.BI 6	Brand X offers very good quality products	Brand X offers products with high quality	Buil et al. (2011)
BK.BI 7	Brand X offers products with excellent features	Brand X offers products with excellent features / benefits	Buil et al. (2011)
BK.BI 8	Brand X is good value for the money	Brand X offers products that worth for money	Buil et al. (2011)
BK.BI 9	-	I am confident with Brand X's products that fulfil my expectation	-

For the independent variables for marketing communication strategies, the questions asking method were referred to Daosue & Wanarat (2019). There were four questions on social media which adopted from Cheung et al. (2019) on the different type of social media. On top of that, the four questions related to physical store marketing communication were adopted from Graciola et al. (2020) whereby descripting the different factor of the physical store marketing communication. Additionally, adopted from Keller (2001) and Kotler (2002) to create the 11

questions for advertisement, monetary promotions and non-monetary promotion variables. Table 3.3 shows the construct of independent variable.

Variables	Adopted Questionnaire	References
SM 1	I know Brand X from social media "sponsored post" (Social media advertisement)	Cheung et al. (2019)
SM 2	I know Brand X from social media "information content post" (Brand page)	Cheung et al. (2019)
SM 3	I know Brand X from social media activity (Eg. Live, Competition Live, and others)	Cheung et al. (2019)
SM 4	I know Brand X from social media's content sharing by friend	Cheung et al. (2019)
PS 1	I know Brand X from the workshop signboard / external billboard that I service my vehicle	Graciola et al. (2020)
PS 2	I know Brand X by introduction from the sales/service representative	Graciola et al. (2020)
PS 3	I know Brand X from the marketing material in the workshop I service my vehicle (Eg. Leaflet, catalogue, promotion tools and others)	Graciola et al. (2020)
PS 4	I know Brand X from the interior design in the workshop I service my vehicle (Wallpaper, wall sticker, poster and others)	Graciola et al. (2020)
AD 1	I know Brand X from broadcast advertisement (Eg. Television, radio and others)	Keller (2001) and Kotler (2002)
AD 2	I know Brand X from print media (Eg. Magazine, leaflet, newspaper and others)	Keller (2001) and Kotler (2002)

Table 3.3 Construct of independent variable

AD 3	I know Brand X from outdoor advertisement	Keller	(2001)	and	Kotler
	(Eg. Billboard, digital	(2002)			
	billboard and others)				
AD4	I know Brand X from sponsorship	Keller	(2001)	and	Kotler
	advertisement on event such as motorsport	(2002)			
		× ,			
SP-M 1	I know Brand X from price discount	Keller	(2001)	and	Kotler
	momotion	(2002)			
	promotion				
SP-M 2	I familiar with Brand X from "Buy 3 get 1	Keller	(2001)	and	Kotler
	free"	(2002)			
		× ,			
SP-M 3	I know Brand X from its price discount	Keller	(2001)	and	Kotler
	voucher / coupon or E-wallet rebate	(2002)			
	voucher / coupon of E-wanet rebate				
SP-NM 1	I know Brand X from it's service and product	Keller	(2001)	and	Kotler
	package	(2002)			
SP-NM 2	I know Brand X from it's premium free gift	Keller	(2001)	and	Kotler
	such as umbrella, T-shirt and others	(2002)			
SP-NM 3	Limou Drand V from it's contact comparing	Vallar	(2001)	and	Votlar
SP-INIM 3	I know Brand X from it's contest campaign		(2001)	ana	Kotler
	such as lucky draw	(2002)			
SP-NM 4	I know Brand X from it's loyalty program	Keller	(2001)	and	Kotler
	such as point system, membership program	(2002)	/		
	and others	(2002)			

3.4.2 Scale of measurement

3.4.2.1 Nominal scale

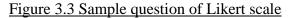
Nominal scale is form of scale does not require numeric or categorical categories, however only a unique identifier to label each different category, for instance, labels, words and letters are used (Messenger & Mandell, 1972). Nominal scale is applied for this study in first section including gender and age. In addition, the quantity of personal-vehicle owned and which brand is/are recognized as automotive lubricant brand were asked by using nominal scale. Figure 3.2 below is one of the samples of nominal scale use in the survey questionnaire.



4. Which of the brand below is/are recognize as automotive lubricant brand * The chosen brand will become "Brand X" in subsequent section
PETRONAS SYNTIUM
SHELL HELIX
CASTROL
CALTEX HAVOLINE & DELO
MOBIL
VALVOLINE
PETRON
TOTAL OIL
MOTUL
MILLERS
ENEOS
PTT LUBICANTS
DEMITSU

3.4.2.2 Likert scale

Likert scale similar to an attitude with two dimensions such as positive and negative, the degree to which a person like or dislike the products or services. In this research, Likert scale is used to measure the degree of respondent agreement or disagreement of all the independent variables and dependent variables. Research and suggestion from Si & Cullen (1998), Asian respondents intentionally select scale midpoint and hence to particularly receive respond from Asian respondent, even-number scale whereby six-points Likert scale will be applied for this questionnaire. The option of Likert scale in this questionnaire is as follow: Extremely disagree, disagree, slightly disagree, somewhat agree, agree and strongly agree. Figure 3.3 below is one of the example questions of Likert scale used in survey questionnaire.



	Extremely		Slightly	Somewhat		Strongly
	disagree	Disagree	disagree	agree	Agree	agree
I am always aware of Brand X	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Some characteristic of Brand X come to my mind quickly	0	\bigcirc	0	0	0	0
l can quickly recall the symbol or logo of Brand X	0	\bigcirc	0	\bigcirc	0	0
l can recognize Brand X among other brands	\bigcirc	\bigcirc	0	\bigcirc	\bigcirc	\bigcirc

3.5 Pilot Test

In any research, pilot test is usually conducted before the actual survey distributed to the public and target respondents. The main purpose of pilot test is to help researcher test the reliability of each variable and attribute, any errors and circumstances that may occur and affect the accuracy of the data. Additionally, it helps researcher conduct surveys more effectively by ensuring respondents understand the words and phrases in the survey without any jargon. 50 questionnaires were given out to the study's target respondents as a pilot test. Following the collection of the surveys, a pilot test using IBM SPSS statistics was conducted to adapt Cronbach's Alpha for each variable. Table 3.4 was shown the result obtain from 50 respondents in pilot test.

Table 3.4 Pilot test result

Variable	Cronbach's Alpha	N of items
Brand Knowledge	0.912	9
Social media communication	0.844	4
Physical Store communication	0.750	4
Advertisement communication	0.579	4
Monetary promotion communication	0.772	3
Non-monetary promotion communication	0.670	4

Sources: Developed for research

3.6 Factor analysis

As the partially of the questionnaire questions are designed for the purpose of this research study, hence, factor analysis will be performed to confirm the number of variables that should be included in the estimation. To determine the validity and reliability of the questionnaire, a statistical analysis was performed on the results. Using the SPSS statistical package, the alpha reliability coefficients were calculated to assess the scale's internal consistency. The factorability of the data was clarify using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity. According to Kaiser, the measure of sampling adequacy values must be greater than 0.50. It is not acceptable if the value is below 0.50.

Next, there are several considerations need to consider when choosing the factor models and number of factors:

1. Factors with eigenvalues must be larger than 1.0.

2. A set number of variables based on the objective of the study and earlier research.

3. Enough factors to explain more than 60% of the variance, which is the required percentage of variance.

4. Factors that the Scree test indicates have a high level of shared variance (for instance, factors before inflection point).

5. Factors above the threshold established by parallel analysis.

6. When sample subgroups are heterogeneous, there are more variables.

7. Consideration of several alternative solution to ensure the best structure is identified.

3.7 Model specification

3.7.1 Multiple Linear Regression

To analyse which marketing communication strategies able to influence the brand knowledge, used of multiple regression analysis is suitable because of more than 2 variables to be analysed. It is a statistical technique that use to predict the outcome or result of the response variable by using few explanatory variables.

Model specification in this study:

$$y = \alpha_0 + \beta_1 \chi_1 + \beta_2 \chi_2 + \beta_3 \chi_3 + \beta_{4a} \chi_{4a} + \beta_{4b} \chi_{4b} + e$$

z Brand knowledge

 $= \alpha_{0} + \beta_{1} \text{ social media} + \beta_{2} \text{ physical store}$ $+ \beta_{3} \text{ Advertisement} + \beta_{4a} \text{ monetary promotion}$ $+ \beta_{4b} \text{ nonmonetary promotion} + e$

Where,

z Brand knowledge: the dependent variable. The standardized score (z score) for the brand knowledge affects by marketing communication on 1 to 6 scale.

Social media: social media marketing communication to influence consumers' brand knowledge

Physical store: physical store marketing communication to influence consumers' brand knowledge

Advertisement: advertisement marketing communication to influence consumers' brand knowledge

Monetary promotion: monetary promotion marketing communication to influence consumers' brand knowledge

Non-monetary promotion: non-monetary promotion marketing communication to influence consumers' brand knowledge.

There are five hypotheses in this model:

1.

H₀: $\beta_1 = 0$, means social media communication have no relation with consumers' brand knowledge.

 H_1 : $\beta_1 \neq 0$, means social media communication have relation with consumers' brand knowledge.

2.

H₀: $\beta_2 = 0$, means physical store communication have no relation with consumers' brand knowledge.

H₁: $\beta_2 \neq 0$, means physical store communication have relation with consumers' brand knowledge.

3.

 H_0 : $\beta_3 = 0$, means advertisement communication have no relation with consumers' brand knowledge.

H₁: $\beta_3 \neq 0$, means advertisement communication have relation with consumers' brand knowledge.

4.

H₀: $\beta_{4a} = 0$, means monetary promotion communication have no relation with consumers' brand knowledge.

H₁: $\beta_{4a} \neq 0$, means monetary promotion communication have relation with consumers' brand knowledge.

5.

H₀: $\beta_{4b} = 0$, means non-monetary promotion communication have no relation with consumers' brand knowledge.

H₁: $\beta_{4b} \neq 0$, means non-monetary promotion communication have relation with consumers' brand knowledge.

3.8 Diagnostic check

For the diagnostic checking, the application of F-test is required. F-test is used to check the model's overall significance, and it demonstrates that the depend variable and the independent variables (χ) have a linear correlation when taken collectively. The hypotheses of F-test are as below:

H0: $\beta 1 = \beta 2 = ... = 0$ (no linear relationship)

H1: at least one $\beta i \neq 0$ means at least one independent variable affects consumers' brand knowledge

On top of above analysis, descriptive analysis will be performed as well to check on respondent's inclination such as mean deviation and standard deviation.

CHAPTER 4

DATA ANALYSIS

Chapter four presents the results of the research questionnaire, which collected responses from 205 participants. This chapter is divided into five sections. The first section of this chapter will perform descriptive analysis from the information collected, the result is shown with data tables and figures. The second section is the reliability test of actual research by using Cronbach's Alpha analysis and factor analysis for questionnaire question to determine the independent variable estimated are accurate thus providing more concrete result and findings. Third section includes inferential analysis which analyse through Pearson correlation analysis from multiple linear regression. The fourth section is significant analysis from multiple linear regression as per purpose of this research to understand which marketing communication strategies to influence brand knowledge.

4.1 Descriptive analysis

4.1.1 Respondent's profile

From this self-administrated survey questionnaire, total of 205 respondents collected. The respondent's profile shown in the table 4.1. Majority of the respondents are male, which is about 59%. Besides, the age group of 21-30 and 31-40 are having the same proportion of 42% from total respondent, and hence, age group of 21-30 and 31-40 respondent pose majority of the respondents with total of 84%. In addition, 69% of respondent owned 1 unit of personal-vehicle, 20% of

respondent owned 2 unit of personal-vehicle and 11% of respondent owned 3 unit and above personal-vehicle. Lastly, Table 4.2 shown the automotive lubricant brand that recognise as automotive lubricant brand by respondent, this shown that SHELL HELIX brand is highly recognised by total of 125 respondents, follow by PETRONAS SYNTIUM that recognised by 106 respondents and LIQUI MOLY recognised by 89 respondents.

		Frequency	%
Gender	Female	85	41%
	Male	120	59%
Age	16-20	3	1%
	21-30	87	42%
	31-40	86	42%
	41-50	17	8%
	51 and above	12	6%
Quantity of personal	1	141	69%
vehicle owned	2	42	20%
	3 and above	22	11%

Table 4.1: Respondent's profile

Sources: Developed for research

Automotive Lubricant Brand	Recognition
SHELL HELIX	125
PETRONAS SYNTIUM	106
LIQUI MOLY	89
CASTROL	74
MOBIL	68
PETRON	60
CALTEX HAVOLINE	52
MOTUL	42
ENEOS	38
TOTAL OIL	37
IDEMITSU	36
VALVOLINE	21
MILLERS	12
LUK OIL	6
OTHERS	6
PTT LUBRICANTS	4

Table 4.2: Automotive lubricant brand recognised by respondent

Sources: Developed for research

4.1.2 Descriptive statistics

From Table 4.3, minimum and maximum is the option given in the questionnaire. Brand knowledge has the highest mean, follow by physical store marketing communication strategy, third is advertisement marketing communication strategy, fourth is non-monetary promotion, fifth is monetary promotion and lastly is the social media marketing communication strategy.

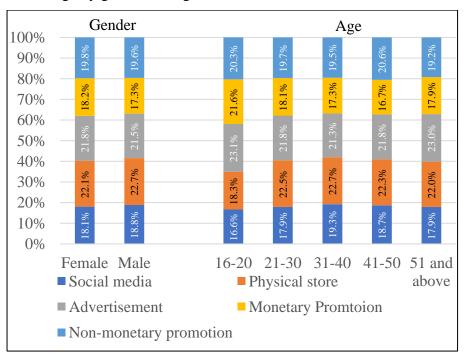
	Minimum	Maximum	Mean	Std.
	Iviiiiiiiuiii	Waxiiluili	Ivicali	Deviation
Brand knowledge	1.00	6.00	4.5035	0.78494
Social media	1.00	6.00	3.5585	1.18026
Physical store	1.00	6.00	4.3159	0.92682
Advertisement	1.00	6.00	4.1585	0.95511
Monetary promotion	1.00	5.67	3.4033	1.12071
Non-monetary promotion	1.00	5.75	3.7768	1.05829

Table 4.3: Descriptive statistics

Sources: Developed for research

From the Figure 4.1 below, according to gender group, female and male have same thoughts that both physical store and advertisement are important to influence their brand knowledge toward automotive lubricant brand. Furthermore, in the age group of 21 to 50 view that physical store is highly influencing them on automotive lubricant brand knowledge and follow with advertisement. Whereas the age group of below 20 and above 50 view that advertisement able to influence them.

Figure 4.1: The five communication strategies that influence consumer brand knowledge by gender and age.



Sources: Developed for research

4.2 Reliability test

4.2.1 Cronbach's alpha test

Cronbach's alpha reliability is most widely used to measure the internal consistency of a scale or test. According to Taber (2017), Cronbach's alpha reliability expressed as a number between 0 and 1 by measuring the same construct or concept associated with the correlated items in the test. The alpha value increases as the correlation between the items under the test increase, but it does not bring about an increase in the degree of internal consistency.

In Table 4.4, it shown the reliability statistic for actual research. Cronbach's alpha for brand knowledge is 0.916 which is excellent and 9 items were used to measure it. Moreover, Social media communication also having excellent Cronbach's alpha which is 0.910 and 4 items were used to measure it. Additionally, Physical store and advertisement communication having Cronbach's alpha result of 0.799 and 0.790 respectively which is at the acceptable level, both variables are using 4 items to measure. Furthermore, the monetary and non-monetary promotion communication having the Cronbach's alpha of 0.838 and 0.815 respectively which is good and 3 items and 4 items are used to measure it respectively. Hence, there are presenting a good range or above of Cronbach's alpha.

Variable	Cronbach's Alpha	N of items
Brand Knowledge	0.916	9
Social media communication	0.910	4
Physical Store communication	0.799	4
Advertisement communication	0.790	4
Monetary promotion communication	0.838	3
Non-monetary promotion communication	0.815	4

Table 4.4: Reliability statistic for actual research

Sources: Developed for research

4.2.2 Factor analysis

Kaiser-Meyer-Olkin Measure	0.848	
	Approx. Chi-Square	2223.607
Bartlett's Test of Sphericity	df	171
	Sig.	0.000

Sources: Developed for research

From the Table 4.5, KMO measure of sampling adequacy is a measure of whether the distribution of value is adequate for conducting factor analysis. As discussed in previous chapter, Kaiser stated that the acceptance level of sampling adequacy which is above 0.50. In this case, it is 0.848 which is meritorious. Hence, the study can be proceeded to the next step. For the Bartlett's test of Sphericity, a significant value of 0.000 which is less than 0.01 indicates that these data do not produce identity matrix and this confirm multivariate normality and acceptable for factor analysis.

		Initial Eigen	values	Rotation	Sums of Squa	red Loadings
	Total	% of	Cumulative	Totol	% of	Cumulative
Component	Total	Variance	%	Total	Variance	%
1	7.063	37.174	37.174	4.009	21.098	21.098
2	2.384	12.548	49.722	3.305	17.394	38.493
3	1.772	9.324	59.046	2.693	14.173	52.665
4	1.389	7.313	66.359	2.602	13.693	66.359
5	.987	5.194	71.552			
6	.746	3.925	75.477			
7	.653	3.435	78.913			
8	.585	3.077	81.990			
9	.554	2.914	84.904			
10	.433	2.278	87.182			
11	.384	2.021	89.203			
12	.363	1.908	91.111			
13	.350	1.840	92.951			
14	.336	1.767	94.719			
15	.260	1.369	96.087			
16	.256	1.345	97.432			
17	.201	1.060	98.492			
18	.157	.825	99.317			
19	.130	.683	100.000			

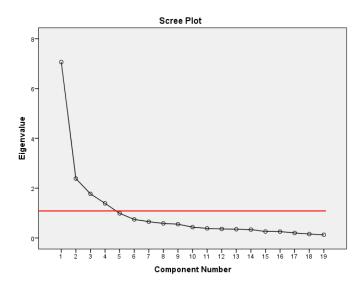
Table 4.6: Total variance explained

Extraction Method: Principal Component Analysis.

Sources: Developed for research

As discussed in methodology part, in order to determine the initial number of factors to retain, the justification is based on the eigenvalues, in this case, there are 4 components' eigenvalues are greater than 1. Hence, expect that there are 4 factors in this model. Besides, from the Figure 4.2 Eigenvalues scree plot below is able to confirm that there are 4 factors that need to include in our estimation.

Figure 4.2: Eigenvalues scree plot



Sources: Developed for research

	Component				
	1	2	3	4	
MonePrm2	.827	.097	015	.069	
MonePrm3	.826	.214	.136	.013	
MonePrm1	.746	.073	.077	.115	
NonMonePrm3	.711	.230	.244	.147	
NonMonePrm4	.639	.338	.330	.051	
NonMonePrm1	.625	.231	.079	.199	
NonMonePrm2	.566	.265	.116	.305	
SocMed1	.250	.861	.167	.102	
SocMed2	.249	.848	.096	.103	
SocMed4	.174	.833	.097	.093	
SocMed3	.247	.804	.220	.015	
Advt3	.014	.099	.790	.254	
Advt4	.078	.061	.770	.162	
Advt2	.216	.180	.729	.185	
Advt1	.248	.215	.658	.035	
PhyStr3	.224	.073	.178	.811	
PhyStr1	016	032	.280	.757	
PhyStr4	.116	.049	.296	.749	
PhyStr2	.255	.228	080	.691	

Table 4.7: Rotated Component Matrix^a

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Sources: Developed for research

From Table 4.7 Rotated Component Matrix^a shows that 12 questions in the questionnaire that were partially adopted from other literature and partially

designed with this research are well categorised for the three factors, namely social media, advertisement and physical store. However, the 7 questions under the monetary promotion and non-monetary promotion were categorised into 1 factor which shouldn't split to monetary sales promotion and non-monetary promotion. After the identification of the 4 factors that possible to influence the consumer brand knowledge, the next section will continue with the inferential analysis by using the new independent variables (which combine monetary promotion and non-monetary promotion).

4.3 Inferential analysis

Pearson's correlation analysis

Table 4.8 Correlations

		BrdKnw	SocMed	PhyStr	Advt	SlsPrm
	Pearson	1	.318**	.409**	.396**	.271**
DadVary	Correlation					
BrdKnw	Sig. (2-tailed)		.000	.000	.000	.000
	Ν	205	205	205	205	205
	Pearson	.318**	1	.264**	.385**	.539**
SeeMed	Correlation					
SocMed	Sig. (2-tailed)	.000		.000	.000	.000
	Ν	205	205	205	205	205
	Pearson	$.409^{**}$.264**	1	.435**	.392**
DhavCta	Correlation					
PhyStr	Sig. (2-tailed)	.000	.000		.000	.000
	Ν	205	205	205	205	205
	Pearson	.396**	.385**	.435**	1	.413**
A .l4	Correlation					
Advt	Sig. (2-tailed)	.000	.000	.000		.000
	Ν	205	205	205	205	205
	Pearson	.271**	.539**	.392**	.413**	1
C1-D	Correlation					
SlsPrm	Sig. (2-tailed)	.000	.000	.000	.000	
	Ν	205	205	205	205	205

**. Correlation is significant at the 0.01 level (2-tailed).

Sources: Developed for research

To evaluate the relationship between the independent variables and dependent variable, Pearson correlation analysis was applied in this research. In Table 4.8 shown below, it includes the correlation matrix between marketing communication for instance social media, physical store, advertisement, and sales promotion toward brand knowledge. Based on the results, it shows the coefficient, R-value for communication type of social media is 0.318; physical store is 0.409 and advertisement is 0.396 which having moderate degree of correlation with the dependent variable, brand knowledge. However, sales promotion communication having the coefficient R = 0.271 which having low degree of correlation with brand knowledge. In general, there is correlation between independent factors and dependent variable which had proved in this study.

Multiple linear regression analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change
1	.499 ^a	.249	.234	.68709	.249

Table 4.9 Model summary

a. Predictors: (Constant), SlsPrm, PhyStr, Advt, SocMed Sources: Developed for research

According to Table 4.9, it indicates the R-value is 0.499 and the R square value is 0.249. the adjusted R square is 0.234. In this research, there is 24.9% of the dependent variable which is brand knowledge can be defined by the independent variables which are sales promotion, physical store, advertisement and social media according to the analysis conducted above.

Table 4.10 ANOVA

Model		Sum of	df	Mean	F	Sig
MOU	CI	Squares			1,	Sig.
	Regression	31.273	4	7.818	16.561	.000 ^b
1	Residual	94.419	200	.472		
	Total	125.692	204			

a. Dependent Variable: BK

b. Predictors: (Constant), SlsPrm, PhyStr, Advt, SocMed Sources: Developed for research

According to Table 4.10, there are 4 degree of freedom is comparing in this research. The significant level is 0.000 and the F-value is 16.561 which a null hypothesis is rejected while an alternative hypothesis is accepted when p-value (p<0.05) is lower than the level of significance. Hence, it shown there are a significant effect on independent variables including sales promotion, physical store, advertisement and social media towards the dependent variable which is consumer brand knowledge in this study.

Rejected H₀: $\beta_1 = \beta_2 = ... = 0$ (no linear relationship)

Accepted H₁: at least one $\beta_i \neq 0$, thus, at least one independent variable affects consumers' brand knowledge

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		В	Std. Error	Beta		
	(Constant)	2.398	.269		8.907	.000
	SocMed	.114	.050	.172	2.311	.022
1	PhyStr	.234	.060	.276	3.923	.000
	Advt	.179	.060	.218	2.997	.003
	SlsPrm	016	.061	020	254	.800

Table 4.11: Coefficient

a. Dependent Variable: BrdKnw

Sources: Developed for research

Referring to Table 4.11, the sales promotion variable shows the negative correlation towards brand knowledge due to the p-value is higher than the significant level of 0.05 which is 0.800. On the other hand, social media, physical store and advertisement show the positive correlation toward brand knowledge because the p-value are 0.022, 0.000 and 0.003 respectively which is lower compare to the significant value of 0.05. An equation can be construct to determine the statistically significant between the marketing communication strategies affecting the consumer automotive lubricant brand knowledge.

The multiple regression equation is construct as the formula below:

z Brand knowledge

$$= \alpha_0 + \beta_1 \text{ social media} + \beta_2 \text{ physical store} + \beta_3 \text{ Advertisement} + \beta_4 \text{ sales promotion} + e$$

Where,

z Brand knowledge: the dependent variable. The standardized score (z score) for the brand knowledge affects by marketing communication.

 α_0 = as constant, value of Y when X become 0

 $\beta_1 =$ social media

 β_2 = physical store

 β_3 = advertisement

 β_4 = sales promotion

e = error item (if applicable)

4.4 Test of significant

Table 4.12: Test of Significant

Construct	Significant Value		
Social media	.022		
Physical store	.000		
Advertisement	.003		
Sales promotion	.800		

Sources: Developed for research

4.4.1 Social media

Rejected H_0 , if p < 0.05

 H_1 = There is significant relationship between social media and brand knowledge According to Table 4.12, the p-value of social media variable is lower than the significant level in which 0.022 < 0.05. Hence, it shows that there is a significant relationship between social media communication and brand knowledge.

4.4.2 Physical store

Rejected H_0 , if p < 0.05

 H_2 = There is significant relationship between physical store and brand knowledge

According to Table 4.12, the p-value of physical store variable is lower than the significant level in which 0.003 < 0.05. Hence, it shows that there is a significant relationship between advertisement communication and brand knowledge.

4.4.3 Advertisement

Rejected H₀, if p < 0.05

 H_3 = There is significant relationship between advertisement and brand knowledge

According to Table 4.12, the p-value of advertisement variable is lower than the significant level in which 0.000 < 0.05. Hence, it shows that there is a significant relationship between physical store communication and brand knowledge.

4.4.4 Sales Promotion

Do not reject H_0 , if p > 0.05

 H_4 = There is significant relationship between sales promotion and brand knowledge

According to Table 4.12, the p-value of sales promotion variable is higher than the significant level in which 0.800 > 0.05. Hence, do not reject the H₀. In result, it demonstrates that sales promotion communication does not have significant relationship with brand knowledge.

CHAPTER 5

DISCUSSION, CONCLUSION AND IMPLICATIONS

In chapter five, the discussion and conclusion of the entire research will be conducted based on the information and data collected from the previous chapters and findings. This chapter will begin with a review of statistical analysis presented in chapter four which included the analyses of Factor analysis, Pearson Correlation Coefficient, Multiple Regression and others. After the analyses of the result, the research objectives were validated. This study goal is to produce a result that determines the most effective marketing communication strategies in order for lubricant companies to implement the most effective marketing activity to achieve the company goal as well as the financial profitability. In addition, by comparison to earlier studies in other industries, social media, physical store, advertisement and sales promotion have influenced the automotive lubricant brand knowledge, hence this chapter contains more in-depth discussion on the automotive lubricant industry. This research's limitations will also be discussed in this chapter. Simultaneously, to address the limitations of this study, suggestions for further research will be discussed. Finally, a conclusion is presented, which summaries the whole study.

5.1 Discussion

Pertaining to the chapter four, factor analysis is able to estimate the reliability and accuracy of the questionnaire. Result shows that questionnaire that construct for independent variable of social media, physical store and advertisement are well categorised. However, the monetary promotion and non-monetary promotion should be combined into one independent variable. This is contrast with Joseph et al. (2020) and Buil et al. (2011) study, researches mentioned that there are two types of sale promotion, for instance monetary promotion and non-monetary promotion. In addition, researchers give the definition that monetary promotion provides short-term financial benefits to firms which may have negative impact toward brand knowledge. Conversely, non-monetary promotion has no negative impact toward brand brand knowledge.

This study of the automotive lubricant industry identifies that the best structure for monetary promotion and non-monetary promotion should be under one factor that influences the brand knowledge of automotive lubricant brands. Therefore, the following statistical analysis was conducted with four independent variables such as social media, physical store, advertisement and sales promotion. The major findings are as follow:

Hypothesis	Result	Supported
H1: Social media communication has	$B_1 = 0.114$	
significant relationship with consumer's	$\beta_1\!=\!0.172$	Yes
brand knowledge.	p = 0.022**	
H2: Physical store communication has	$B_2 = 0.234$	
significant relationship with consumer's	$\beta_2 \!=\! 0.276$	Yes
brand knowledge.	p = 0.000***	
H3: Advertisement communication has	$B_3 = 0.179$	
significant relationship with consumer's	β3 =0.218	Yes
brand knowledge.	p = 0.003***	
H4: Sales promotion communication has	$B_4 = -0.016$	
significant relationship with consumer's	$\beta_4 = -0.020$	No
brand knowledge.	p = 0.800	

Table 5.1: Discussion of major findings

*** denote statistically significant at 1% level ** denote statically significant at 5% level

Sources: Developed for research

5.1.1 Relationship between marketing communication strategies and brand knowledge

5.1.1.1 Social media

Social media communication strategy is the trending communication in the current technology savvy era. From chapter 4, statistical analysis and Table 5.1 results show the p-value for social media marketing communication strategies is 0.022, lower than the significant level of 0.05. This means social media communication has a significant relationship with brand knowledge. Moreover, social media communication with brand knowledge has an unstandardised coefficients beta (B) value of 0.114 which shows a favourable correlation between social media communication and brand knowledge.

From the previous study of Cheung et al. (2019) on the social media communication for smartphone industry and found that social media plays an important role in building brand knowledge with different elements of social media content such as entertainment, customisation, interaction, (EWOM) and trendiness. In addition, according to Elsharnouby et al. (2021) and Al-Qudah (2020), studies on the social media characteristic, for instance quality content, rewards and virtual interaction are able to foster the consumer's brand knowledge toward the brand.

Eventually, social media communication also develops two-way communication between consumers and firms (Puangmaha et al., 2020) which is able to improve the consumers' brand knowledge. Therefore, it is important for the firm to perform social media communication to gain brand awareness and foster the brand image in the automotive lubricant industry.

5.1.1.2 Physical Store

Physical store also known as bricks and mortar store is important marketing communication for many industries although there are many businesses that advocate virtual or online stores. The result from this study shows in Table 5.1 that p-value for physical store marketing communication strategies is 0.000 which is

having the significant level below 1%. This shows that there is a significant relationship between physical store communication with brand knowledge. In addition, physical store communication with brand knowledge has an unstandardised coefficients beta (B) value of 0.234 which indicates that there is a positive relationship between physical store communication and brand knowledge.

With the appropriate physical store marketing-mix strategy, for instance, in-store promotion, in-store collateral, in-store decoration, in-store price setting, store image and others are examined to enhance the consumer brand knowledge (Dong & Lee, 2016; Graciola et al.,2020). In addition, Memisoglu (2020) studied non-pharmaceutical items and over-the-counter medications in Turkey emphasizing that physical store communication, in particular sales representative, is important in creating the consumer brand knowledge.

Store image is also one of the important criteria for physical store which study from Porter & Claycomb (1997) and Bhakuni et al. (2021) in the fashion physical store and apparel store having high impact toward brand knowledge. Nevertheless, similar to the study on other industries, physical store communication has a relationship with brand knowledge of automotive lubricant brands in Malaysia.

5.1.1.3 Advertisement

Brand awareness and brand image of a brand is believed to be created by advertisement communication strategy from past and present. The result from this automotive lubricant industry study shows in Table 5.1 that p-value for advertisement marketing communication strategies is 0.003 which is lower than the 5% significant level. This shows that there is a significant relationship between advertisement communication with brand knowledge. Besides, the unstandardised coefficient beta (B) value of advertisement communication and brand knowledge is 0.179 which indicates positive relationship between advertisement communication and brand knowledge.

Advertisement is having a huge amount of study from the past, researchers always debating about the spending of advertisement communication activity to taking

effect. Buil et al. (2011) and Zarantonello et al. (2014) study indicated that expenses of advertisement need to be above a certain amount to create a high positive relation with brand knowledge. Besides, Daosue & Wanarat (2019) they study on the food product in Thailand is also having the same thought on broadcast, print, outdoor and other media that are still able to develop consumer brand knowledge toward some brands.

Furthermore, with the relation of advertisement and brand knowledge, Malik et al. (2013) found that advertisement is an effective source to convey a message to consumers in order to recognise the firm's product or service and brand. Eventually, firms are able to advertise with different characteristics of advertisement because the advertisement is having positive relation with the brand knowledge.

5.1.1.4 Sales Promotion

Sales promotion is having different thoughts from different studies, in this study, monetary as known as short term promotion and non-monetary as known as long-term promotion is not visible according to the factors analysis. Therefore, these two predictors are combined into one factor. This is in contrast with Blattberg & Neslin (1989) and Joseph et al. (2020) who studied the difference between these two types of sales promotions that influence brand awareness and brand image.

However, referring to statistical analysis and Table 5.1, the p-value for sales promotion marketing communication strategies is 0.800 that is higher than the significant level of 0.05. This means that sales promotion communication has no significant relationship with brand knowledge. Moreover, sales promotion communication with brand knowledge has an unstandardised coefficient beta (B) value of -0.016 which indicates a negative relationship between sales promotion communication and brand knowledge.

This result is in line with Chu & Keh (2006), who studied that in order to foster consumer brand knowledge such as brand value and brand image, firms should not spend on the sales promotion and hence spend on the other activities such as R&D, advertisement and others. Moreover, a rechease done in the UK by Buil et al. (2011)

also determined that sales promotion is having negative correlation with brand knowledge.

In general, the sales promotion is having negative correlation with brand knowledge, therefore, the firm should plan sales promotion wisely to prevent the negative effect on the brand knowledge.

5.1.2 The best factor or predictor that influence brand knowledge

With all the significance and correlation between marketing communication strategy with brand knowledge, this section will examine the best factors or predictors that influence brand knowledge. This can be examined by looking at the standardised coefficients beta (β) of the independent variable. According to Table 5.1, physical store communication has the highest standardised coefficients beta (β) of 0.276 followed by advertisement communication β of 0.218 and lastly social media communication with β of 0.172.

This study is consistent with Osei-Frimpong et al. (2019) who studied social media communication because the social media communication required consumers to subscribe or follow the social media brand page prior to viewing the social media content of the particular brand. In addition, the social media platform will be based on the social media algorithm to advertise the product that viewers are interested in. Therefore, this shows that social media communication strategy is unable to replace advertisement communication because the consumer will need to have communication on advertisement in order to recognise the brand prior social media communication.

Furthermore, pertaining to the advertisement communication that is having lesser impact to the brand knowledge compared with the physical store communication, researchers found that it is affected by the type of advertisement or characteristics of advertisement. For instance, the print advertisement and outdoor advertisement may have different levels of effectiveness for vehicle owners who have more chances to view the advertisement when driving on the road (Zarantonello et al., 2014). In addition, the advertisement characteristics such as functional advertisement and experiential advertisement will have different attraction levels to different consumers, therefore, contributing to varying levels of brand knowledge.

Lastly, Chu & Keh (2006) studied on comparing advertisement communication and sales promotion communication found that sales promotion is a short-term strategy to gain brand awareness or financial outcome, however, it may lead to diminishing the brand image with a long period of sales promotion activity.

As the nutshell, second research question are answered which physical store communication is having the highest impact to the brand knowledge. Therefore, automotive lubricant firms should at all times invest on the physical store communication to foster the consumers' brand knowledge toward the lubricant brand.

5.1.3 Different demographic affect the relation of marketing communication strategies and brand knowledge

Referring to the Figure 4.1 descriptive analysis of independent variables by gender group and age group. The analysis shows the physical store communication is the main factor to influence consumers brand knowledge and followed by the advertisement communication. However, the age group of below 20 and above 50 are having different thoughts that advertisement communication highly influences their brand knowledge. Therefore, automotive lubricant firms that wish to target age groups below 20 and above 50 are encouraged to perform more advertisement activities.

5.2 Limitation of study

First of all, some data collection issues must be considered during the data collection process. In this study, the focus is on gender rather than age. The results showed that the age difference of respondents was large with 84% from 21-40 age group, which may affect the answering process and final results. This can be a

problem because according to Marquie et al. (1994), different age groups have completely different preferences when it comes to decision-making. In this case, a balanced number of all age groups is an important factor that needs to be considered and measured.

In addition to this, the location of this study was also limited. Due to the global crisis known as COVID-19, University Tunku Abdul Rahman has implemented online teaching and learning (OTL). Therefore, this survey is a self-administrated questionnaire via social media and sent to the public via online.

5.3 Recommendation for future study

First of all, recommendations are valuable for future studies to improve research study on the limits. The scope of this study might contain other undiscovered factors like mediation or mediator that influence the sales promotion communication relation toward brand knowledge. Hence, future study can consider these variables.

In addition, the study of different elements of advertisement communication such as uniqueness, creativity and original advertisement that will perceive different perceptions to consumers. Besides, physical store also had different elements such as the store image, in-store marketing mix and others that will impose different brand meanings to the consumer which will affect the consumer brand knowledge. Therefore, the element is also important for an automotive lubricant firm's manager to consider.

5.4 Conclusion

This research is being conducted to assess the impact of different marketing communication strategy influence on consumers' brand knowledge on the automotive lubricant industry. In the initial stage of this study, five independent variables are estimated to influence brand knowledge, including social media communication, physical store communication, advertisement communication, monetary sales promotion and non-monetary sales promotion. The quantitative research approach was utilised to analyse the study. IBM SPSS software was used to analyse all the acquired data.

Due to the fact that some of the questionnaires are self-developed, therefore Factor analysis was conducted in this study, the factor analysis result shows that three initial factors are well categorized. However, there are 2 factors such as monetary and non-monetary promotion that should be categorized into one factor. Therefore, this study was changed to determine four marketing communication strategies that influence brand knowledge.

Based on Pearson's correlation analysis result, the independent variable and the four independent variables have a favourable association. The four independent variables are social media communication, physical store communication, advertisement communication and sales promotion communication. The four independent variables associated with each other, social media communication, have moderate levels of correlation with sales promotion, but low levels of correlation with physical store communication. On the other hand, for physical store communication, Pearson's correlation result shows moderate correlation with advertisement and low-level correlation with sales promotion. Moreover, Pearson's correlation level between Advertisement and sales promotion is moderate. In general, to increase brand knowledge, the four independent variables need to be considered and developed consistently due to all the variables affecting each other positively.

Based on the result of multiple regression, physical store communication is the best predictor known as the best factor that affects the consumers' brand knowledge of automotive lubricant brands. The expenses of marketing budget of automotive lubricant firms to physical store communication definitely will make the consumer gain more brand awareness and brand image for the lubricant brand. With the resources allocated wisely to the physical store communication, it will assist the firm to gain financial benefits. For instance, training for the sales representative to provide professional and quality service to consumers will enable the firm to create consumer retention and the goodwill will guarantee for the future sales. Without a doubt, physical store communication contains a lot of potential to expand and promote better brand knowledge to automotive lubricant brands. Corporate and firms should put more effort and focus in fostering more physical store communication activities.

In conclusion, this study accomplishes the research objective of investigating the impact of marketing communication strategies on automotive lubricant brand knowledge. Lastly, sales promotion communication does not affect nor enhance consumers' brand knowledge. Therefore, corporate organisations, entrepreneurs, marketers and advertisers in the automotive lubricants industry should not pay too much attention to the implementation of sales promotion marketing communication strategy, but should focus more on brick-and mortar stores, advertisement and social media marketing communications strategies, which ultimately influence consumers' brand knowledge of automotive lubricant product in Malaysia.

REFERENCES

Aaker, D. (1991), Managing Brand Equity. The Free Press.

- Al-Qudah, O. M. A. (2020). The effect of brands' social network content quality and interactivity on purchase intention: Evidence from Jordon. *Management Science Letters*, 10(2020), 3135-3142.
- Automotive lubricants market growth, trends, COVID-19 impact, and forecasts (2021-2026). (n.d.) Research and Markets. Retrieved November 15, 2021, from https://www.researchandmarkets.com/reports/4515045/automotive-lubricantsmarket-growthtrends?utm_source=GNOM&utm_medium=PressRelease&utm_code=q7wqp z&utm_campaign=1634273+-+Worldwide+Automotive+Lubricants+Market+(2021+-+2026)%3a+Asia-Pacific+is+Expected+to+Dominate+the+Market&utm_exec=elco286prd
- Bartosik-Purgat, M. (2019). Digital Marketing Communication from the Perspective of Individual Consumers: A Cross-Country Comparison. *Entrepreneurial Business and Economics Review*, 7(3), 205-220. https://doi.org/10.15678/EBER.2019.070311
- Bhakuni, P., Rajput, S., Sharma, B.H., & Bhakar, S. S. (2021). Relationship between brand image and store image as drivers of repurchase intention in apparel stores. *Gurukul Business Review*, 17(Spring 2021), 63-67.
- Blattberg, R. C., & Neslin, S. A. (1989). Sales Promotion- The Long and the Short of It. *Marketing Letter*, *1*(1), 81–97.
- Buil, I., Chenatony, L., & Martínez, E. (2011). Examining the role of advertising and sales promotions in brand equity creation. *Journal of Business Research*, 66(2013), 115-122.

- Chen, C. F. & Chang, Y. Y. (2008). Airline brand equity, brand preference and purchase intentions the moderating effects of switching costs. *Journal of Air Transport Management*, 14(1), 40-42.
- Cheung, M. L., Pires, G., & Rosenberger, P. J. (2019). The influence of perceived social media marketing elements on consumer-brand engagement and brand knowledge. *Asia Pacific Journal of Marketing and Logistics*, 32(3), 695-720. https://www.emerald.com/insight/1355-5855.htm
- Chu, S., & Keh, H. T. (2006). Brand value creation: Analysis of the Interbrand-Business Week brand value rankings. *Market Lett* (2006), 17, 323-331.
- Dong, J. Y., & Lee, C. W. (2016). In-store promotional mix and the effects on female consumer. *International Journal of Management, Economics and Social Sciences*, 5(2), 35–56.
- Daosue, C. & Wanarat, S. (2019). The effects of advertising and sales promotion on brand awareness for a food product brand in wholesales shops, Bangkok and metropolitan areas. *ABAC Journal*, 39(1), 57-75.
- Elsharnouby, M. H., Mohsen, J., Saeed, O. T., & Mahrous, A. A. (2021). Enhancing resilience to negative information in consumer-brand interaction: the mediating role if brand knowledge and involvement. Journal of Research in Interactive Marketing, 15(4), 571-591.
- Faul, F., Erdfelder, E., Bunchner, A., & Lang, L. G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41(4), 1149-1160.
- Gligorijevic, R., Jevtic, J. & Borak, D. J. (2006). Engine oil contribution to diesel exhaust emissions. *J. Synthetic Lubrication 2006*, 23, 27-38.
- Graciola, A. P., Toni, D. D., Milan, G. S., & Eberle, L. (2020). Mediated-moderated effects: High and low store image, brand awareness, perceived value from mini

and supermarkets retail stores. *Journal of Retailing and Consumer Services*, 55(2020), 1-16.

- Hanssens, D. M., & Pauwels, K. H. (2016). Demonstrating the value of marketing. *Journal of Marketing*, 80(6), 173–190. https://doi.org/10.1509/jm.15.0417
- Joseph, J., Sivakumaran, B., & Mathew, S. (2020). Does loyalty matter? Impact of brand loyalty and sales promotion on brand equity. *Journal of Promotion Management*, 26(4), 524-543.
- Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *The Journal of Marketing*, 57(1), 1-22.
- Keller, K. L. (2001). Mastering the marketing communications mix micro and macro perspectives on integrated marketing communication programs. *Journal* of Marketing Management, 17, 819-847.
- Keller, K. L. (2003). Brand synthesis: The multidimensionality of brand knowledge. *Journal of Consumer Research*, 29, 595-600.
- Keller, K. L. (2009). Building strong brands in a modern marketing communications environment. *Journal of Marketing Communications*, 15(2-3), 139-155.
- Keller, K. L. (2010). Brand equity management in a multichannel, multimedia retail environment. *Journal of Interactive Marketing*, 24(2), 58-70.
- Keller, K. L. (2013). Strategic Brand Management: Building, Measuring, and Managing Brand Equity (4th ed.). Prentice-Hall.
- Keller, K. L. (2016). Reflections on customer-based brand equity: perspectives, progress, and priorities. *AMS Review*, 6(1-2), 1-16.

- Kotler, P. (2002), *Marketing Management (11th ed)*. Upper Saddle River: Prentice Hall
- Kotler, P. & Keller, K. L. (2020). *Marketing Management*. Melbourne: P. Ed Custom Books.
- Kovanoviene, V., Romeika, G., & Baumung, W. (2021). Creating value for the consumer through marketing communication tools. *Journal of Competitiveness*, 13(1), 59–75. https://doi.org/10.7441/joc.2021.01.04
- Malaysia: Total population from 2016 to 2026. Retrieved July 6, 2021, https://www.statista.com/statistics/318725/total-population-of-malaysia/
- Malik, M. E., Ghafoor, M. M., Iqbal, H. K., Ali, Q., Hunbal, H., Noman, M., & Ahmad, B. (2013). Impact of Brand Image and Advertisement on Consumer Buying Behavior. *World Applied Sciences Journal*, 23(1), 117–122. https://doi.org/10.5829/idosi.wasj.2013.23.01.824
- Martelo Landroguez, S., Barroso Castro, C. & Capeda-Carrión, G. (2013). Developing an integrated vision of customer value. *Journal of Services Marketing*, 27(3), 234-244.
- Marquie, J. C., Thon, B., Baracat, B. (1994). Age influen on attitudes of office workers faced with new computerized technologies: A questionnaire analysis. *Applied Ergonomics*, 25(3), 130-142.
- Memisoglu, M. (2020). Marketing communications for over-the-counter drugs and non-pharmaceutical products: the professionals perspective. *International Journal of Healthcare Management*, 13(1), 33-40.
- Messenger, R. & Mandell, L. (1972). A modal search technique for predictibe nominal scale multivariate analysis. *Journal of American Statistical Association*, 67(340), 768-772.

- *National automotive policy 2020* (Rev. ed.). (2020). Ministry of International Trade and Industry. https://www.miti.gov.my/index.php/pages/view/nap2020
- Ng, W., Law, H. (2016) *The New Lubricant Trade in ASEAN A Promising New Era.* https://www.ipsos.com/sites/default/files/2016-08/The-new-lubricant-trade-in-ASEAN.pdf
- Nur, D., Ivan, Y. & Zeis, Z. (2020). Partnership strategy on the business performance of automotive lubricant companies in Indonesia. *Russian Journal* of Agricultural and Socio-Economic Sciences (RJOAS), 9(105), 78-86.
- Nyuyen, L. T. V., Lu, V. N., Hill, S. R., & Conduit, J. (2019). The mediating role of brand knowledge on employees' brand citizenship behaviour: Does organizational tenure matter? *Australasian Marketing Journal*, 27(2019), 169-178.
- Osei-Frimpong, K., McLean, G., & Famiyeh, S. (2019). Social media brand engagement practices. *Information Technology & People*, 33(4), 1235-1254.
- Porter, S. S. & Claycomb, C. (1997). The influence of brand recognition on retail store image. *Journal of Product & Brand Management*, 6(6), 373-387.
- Puangmaha, T., Taiphapoon, T., Vadhanasindhu, P., & Sinthupinyo, S. (2020). Innovative social media marketing communication application for Thai Hotel SMEs. *International Journal of Interactive Mobile Technologies*, 14(16), 150-167.
- Raza, S. & Masmoudi, M. (2020). Consumer vehicle purchase decision-making during COVID-19. 2020 International Conference on Decision Aid Sciences and Application (DASA), 692-696.
- Saha, D. & Gopal, R. (2014). An analysis of the factors that influence the influencers' recommendations with regard to the purchase of automotive

lubricants for two-wheelers. *The IUP Journal of Marketing Management*, 13(4), 23-37.

- Shah, A. U. M., Safri, S. N. A., Thevadas, R., Noordin, N. K., Rahman, A. A. R., Sekawi, Z., Ideris, A., Sultan, M. T. M., (2020). COVID-19 Outbreak in Malaysia: Action taken by the Malaysian Government. *International Journal* of Infectious Diseases, 97, 108-116. https://doi.org/10.1016/j.ijid.2020.05.093
- Sharma, G. (2017). Pros and cons of different sampling techniques. *International Journal of Applied Research*, 3(7), 749-752.
- Si, S. X., & Cullen, J. B. (1998). Response categories and potential cultural bias: Effects of an explicit middle point in cross-cultural surveys. *The International Journal of Organizational Analysis*, 6(3), 218–230.
- Taber. K. S. (2017). The use of Cronbach's Alpha when developing and reporting research instruments in science education. *Res Sci Educ*, 2018(48), 1273-1296.
- Taherdoost, H. (2017). Determining sample size; How to calculate survey sample size. *International Journal of Economics and Management Systems*, 2, 237-239.
- Uakarn, C., Chaokromthong, K. & Sintao, N. (2021). Sample size estimation using Yamane and Cochran and Krejcie and Morgan and Green Formulas and Cohen Statistical Power Analysis by G*Power and comparisons. *Apheit International Journal*, 10(2), 76-88.
- Vehicle Registration Statistics for Private Vehicle, Goods Vehicle and Others. Revised May 27, 2021, from https://www.data.gov.my/data/ms_MY/dataset/vehicle-registration-statisticsfor-private-vehicle-goods-vehicle-and-others
- Webster, F. E. & Keller, K. L. (2004). A roadmap for branding in industrial markets. *Brand Management*, 11(5), 388-402.

Wijaya, B. S. (2013). Dimensions of brand image: A conceptual review from the perspective of brand communication. *European Journal of Business and Management*, 5(31), 55-65.

World urbanization prospects (The 2018 Revision). (2018). United Nations.

- Wu, Y. L., & Li, E. Y. (2018). Marketing mix, customer value, and customer loyalty in social commerce: A stimulus-organism-response perspective. *Internet Research*, 28(1), 74–104. https://doi.org/10.1108/IntR-08-2016-0250
- Yoo, B., Donthu, N., & Lee, S. (2000). An examination of selected marketing mix elements and brand equity. *Journal of the Academy of Marketing Science*, 28(2), 195-211.
- Zarantonello, L., Schmitt, B. H., & Jedidi, K. (2014). How to advertise and build brand knowledge globally: Comparing television advertising appeals across developed and emerging economies. *Journal of Advertising Research*, December 2014, 420-434.

APPENDICES

APPENDIX A QUESTIONNAIRE

The Relationship between Marketing Communication Strategies and Consumer's Brand Knowledge

Good day Sir/Madam.

I am student from Universiti Tunku Abdul Rahman (UTAR) who is currently pursuing Master of Business Administration program. I am conducting research in title "Effectiveness of Marketing Communication Strategies in Influencing Consumer's Brand Knowledge on Automotive Lubricant".

The purpose of this research is to examine which marketing communication strategy/strategies could influence on consumer's brand knowledge towards automotive lubricant brand in Malaysia. This survey will take approximately 10 minutes to complete. Please answer all the questions in the best of your knowledge.

The participation of this survey is voluntary and all the responses are collected for academic research purpose and kept PRIVATE and strictly CONFIDENTIAL. Your sincere answer would be helpful in this research project, if you have any inquiries regarding this research project, please do not hesitate to contact me.

Thank you very much for your time and participation in this survey. Best regards, Tan Cheong Lee (21UKM02046) 016-9070186 tan.cl@1utar.my

1st Section: Demographic Profile

INSTRUCTION: Please CHOOSE the most appropriate answer for the following questions.

1.Gender

○ Male

- \bigcirc Female
- 2. Age

○ 16-20

- O 21-30
- 31-40
- O 41-50
- \bigcirc 51 and above

3. Quantity of personal-vehicle owned (Including car, motorcycle, pickup truck and others)

- O 1
- $\bigcirc 2$
- \bigcirc 3 and above

4. Which of the brand below is/are recognize as automotive lubricant brand

INSTRUCTION: The chosen brand will become "Brand X" in subsequent section

- □ PETRONAS SYNTIUM
- □ SHELL HELIX
- \Box CASTROL
- \Box CALTEX HAVOLINE & DELO
- \Box MOBIL
- □ LIQUI MOLY
- \Box VALVOLINE
- \Box PETRON
- \Box TOTAL OIL
- \Box MOTUL

MILLERS
ENEOS
PTT LUBRICANTS
LUK OIL
IDEMITSU

2nd Section: Brand knowledge of Brand X

Please indicate the degree of agreement with the following statements.

	Extremely	Disagree	Slightly	Somewhat	Agree	Strongly
	disagree		disagree	agree		agree
I am always aware of Brand						
Х						
Some characteristic of						
Brand X come to my mind						
quickly						
I can quickly recall the						
symbol or logo of Brand X						
I can recognize Brand X						
among other brands						

5. Brand Awareness

6. Brand Image

	Extremely	Disagree	Slightly	Somewhat	Agree	Strongly
	disagree		disagree	agree		agree
Brand X is/are leading						
company						
Brand X offers products						
with high quality						
Brand X offers products						
with excellent features /						
benefits						
Brand X offers products that						
worth for money						
I am confident with Brand						
X's products that fulfil my						
expectation						

3rd Section: Marketing Communication Strategies

Please indicate the degree of agreement with the following statements.

7. Social media communication (E.g., Facebook, Instagram, YouTube, TikTok and others)

	Extremely	Disagree	Slightly	Somewhat	Agree	Strongly
	disagree		disagree	agree		agree
I know Brand X from social						
media "sponsored post"						
(Social media						
advertisement)						
I know Brand X from social						
media "information content						
post" (Brand page)						
I know Brand X from social						
media activity (E.g., Live,						
Competition Live, and						
others)						
I know Brand X from social						
media's content sharing by						
friend						

8. Physical store communication

	Extremely	Disagree	Slightly	Somewhat	Agree	Strongly
	disagree		disagree	agree		agree
I know Brand X from the						
workshop signboard /						
external billboard that I						
service my vehicle						
I know Brand X by						
introduction from the						
sales/service representative						
I know Brand X from the						
marketing material in the						
workshop I service my						
vehicle (E.g., leaflet,						
catalogue, promotion tools						
and others)						
I know Brand X from the						
interior design in the						
workshop I service my						

vehicle (Wallpaper, wall			
sticker, poster and others)			

9. Advertisement communication

	Extremely	Disagree	Slightly	Somewhat	Agree	Strongly
	disagree		disagree	agree		agree
I know Brand X from						
broadcast advertisement						
(E.g., television, radio and						
others)						
I know Brand X from print						
media (E.g., Magazine,						
leaflet, newspaper and						
others)						
I know Brand X from						
outdoor advertisement (E.g.,						
Billboard, digital billboard						
and others)						
I know Brand X from						
sponsorship advertisement						
on event such as motorsport						

10. Sales promotion communication

	Extremely	Disagree	Slightly	Somewhat	Agree	Strongly
	disagree		disagree	agree		agree
I know Brand X from price						
discount promotion						
I familiar with Brand X from						
sales promotion such as						
"Buy 3 get 1 free"						
I know Brand X from its						
price discount						
voucher/coupon or E-wallet						
rebate						
I know Brand X from its						
service and product package						
I know Brand X from its						
premium free gift such as						
umbrella, T-shirt and others						
I know Brand X from its						
contest campaign such as						
lucky draw						

I know Brand X from its			
loyalty program such as			
point system, membership			
program and others			