INDONESIAN CONSUMERS' REPEAT PURCHASE BEHAVIOR OF GREEN INNOVATIVE FUEL: AN EXTENSION OF COGNITIVE – AFFECTIVE - BEHAVIOR MODEL

ARRY WIDODO

UNIVERSITI SAINS MALAYSIA

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by

ARRY WIDODO

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LIST OF ABBREVIATIONS

AVE	Average Variance Extracted
CAB	Cognitive-Affective-Behavior
CMV	Common Method Variance
CR	Composite Reliability
DV	Dependent Variables
EA	Environmental Attitude
GoF	Goodness-of-fit
IPMA	Importance of Importance-Performance Matrix
IV	Independent Variables
LCGC	Low-Cost and Green Car
LEC	Low-Emission Carbon
MGA	Multi-Group Analysis
MPV	Multi-Purpose Vehicles
ModV	Moderating Variable
MV	Mediating Variable
e-services	Electronic Services
OLS	Ordinary Least Squares
P	Product
PL	Place
PLS	Partial Least Square
PM	Promotion
PR	Price
RPU	Repeat Purchase

RON   Research Octane Number

SEM   Structural Equation Modeling

SPSS   Statistical Package Social Science

SA   Satisfaction

SmartPLS   Analysis software for quantitative method

TRA   Theory of Reasoned Action

VAF   Variance Accounted For

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PERLAKUAN PEMBELIAN ULANG PENGGUNA INDONESIA BAGI BAHAN BAKAR INOVATIF HIJAU: PENAMBAHAN KEATAS MODEL KOGNITIF-AFFEKTIF-PERLAKUAN

ABSTRAK

Tren persekitaran yang popular telah menggolongkan produk hijau sebagai salah satu alat strategi penting bagi mencapai pembangunan lestari dalam industri. Akta dan peraturan kualiti alam sekeliling yang ketat dan juga perjuangan tentang alam sekitar yang popular dilihat telah mengubah peraturan persaingan dalam kalangan pihak yang terlibat sehingga telah mewujudkan bahan bakar inovatif lestari untuk pengguna dalam tempat pasaran. Kajian ini berusaha menerangkan tingkah laku pembelian berulang pengguna terhadap bahan bakar inovatif lestari (Pertalite RON 90/Pertamax Turbo RON 98) melalui penggunaan teori kognitif-afektif-tingkah laku (C-A-B). Pendekatan kuantitatif diaplikasi sebagai cara mengkaji perhubungan antara pembolehubah-pembolehubah yang diselidiki, iaitu, kognitif (4Ps – produk, harga, tempat, promosi) dan afektif (kepuasan) yang mewakili pembolehubah bebas/tidak bersandar, sikap terhadap persekitaran pengguna sebagai pembolehubah pencelah, faktor demografik sebagai pembolehubah penyederhana dan tingkah laku pembelian berulang sebagai pembolehubah bersandar. Kajian menunjukkan kesan langsung positif dalam hubungan antara kognitif (contohnya produk dan harga) dengan pembelian berulang (tingkah laku); kesan yang sama dilihat antara sikap terhadap persekitaran pengguna dengan pembelian semula (tingkah laku). Sebagai tambahan, sikap terhadap persekitaran pengguna juga didapati menjadi faktor pencelah dalam hubungan antara kognitif (produk dan harga) dengan tingkah laku

pembelian berulang; begitu juga ia mencelah antara afektif (kepuasan) dengan tingkah laku pembelian berulang. Pembolehubah demografik (status perkahwinan, kadar pendapatan, peringkat pendidikan dan juga bidang pekerjaan) didapati hanya menunjukkan kesan penyederhana dalam hubungan antara kognitif (produk dan tempat) dengan sikap terhadap persekitaran pengguna; tiada kesan penyederhanaan ditunjukkan dalam hubungan Afektif dengan sikap terhadap persekitaran pengguna. Dapatan kajian menunjukkan bahawa menyinambungkan teori kognitif-afektif-tingkah laku (C-A-B) adalah berguna kerana ia membantu menerangkan tingkahlaku pembelian berulang pengguna-pengguna Indonesia ke atas bahan bakar inovatif lestari (produk inovatif hijau).

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ABSTRACT

Green products have become one of the most important strategic tools to achieve sustainable development in the industry due to popular environmental trends. Strict environmental regulations and popular environmentalism have been observed to change competitive rules resulting in the creation of green innovative fuels for consumers in the marketplace. This study attempts to explain the behavior of consumer repurchase of green innovative fuels (Pertalite RON 90/Pertamax Turbo RON 98) using the theory of Cognitive-Affective-Behavior (C-A-B). The study applies quantitative approach in investigating the relationships among the variables investigated, namely, cognitive (4Ps – product, price, place, promotion) and affective (satisfaction) that represent the independent variables, consumer's environmental attitude the mediating variable, demographic factor the moderating variable and repeat purchase behaviour as the dependent variable. The results show direct positive relationship between Cognitive (product and prices) and environmental attitude as well as between Affective (satisfaction) and environmental attitude (Behavior). In addition, environmental attitude shows a direct positive relationship with repeat purchase (Behavior). Consumer's environmental attitude is found to mediate the relationship between Cognitive (product and price) and repeat purchase; as well as on the relationship between Affective (satisfaction) and repeat purchase (Behavior). Demographic variables (marital status, income level, level of education and occupation) are found to moderate only the relationship between Cognitive (product

and place) and environmental attitude with no moderating effect found between Affective (satisfaction) and environmental attitude. The results indicate usefulness of extending the C-A-B theory as it helps to explain Indonesian consumers' repeat purchase behavior of green innovative fuels (green innovative product).

CHAPTER 1

INTRODUCTION

1.0   Introduction

With increased awareness on environmental issues in the marketplace, organizations have started to review the environmental impact of their operation activities and the offering of their products. As an example, energy businesses have started to focus on creating green innovative fuels for their consumers; in Indonesia, the green innovative fuel which is also known as an environmental friendly petrol is observed to be growing in the consumer market. This chapter introduces the general outline of the research. It begins with the background of the study, followed by sub-sections emphasizing on problem statement, list of research questions, research objectives, the significance of study and the definition of the key terms and/or the major variables investigated in this study. The chapter ends with a brief overview on the organization of the remaining chapters in the thesis.

1.1   Background of Study

One of the most notable trends of corporate behavior in recent decades is the growing sensitivity of businesses toward environmental issues (Tate, Stewart, & Daly, 2014). Researchers have identified two tendencies that can be attributed to this phenomenon (Weng *et al*., 2015; Eroglu & Hofer, 2014; Kumar, 2013).

First, environmental problems are global problems such as pollution, global warming, climate change, ozone depletion, greenhouse effect and nuclear meltdown that know no boundaries. Secondly, people such as the consumers and producers are more aware of the environmental impacts of human activities and are more willing to make behavioral changes for environmental reasons. Consumers and producers have realized that, acting together, they can make a big difference in protecting and preserving the environment.

Today, green products have become one of the important strategic tools to attain sustainable development in the manufacturing industries because of the popular environmental trends (Kai *et al*., 2015). Strict environmental regulations and popular environmentalism have been observed to change the competitive rules in practitioners and the marketplace (Wong & Wong, 2014). Pressure created from environmental regulations or policies for example; has influence the creation of a green product (Kai *et al*., 2015; Wong & Wong, 2014). Thus, companies are willing to undertake differentiation strategies and reshape the competitive rules to obtain competitive advantages (Kai *et al*., 2015; Wong & Wong, 2014). In addition, the acceptance and adoption of new products by consumers in the marketplace are said to inevitably be affected by the institutional environment that establishes the framework in which the diffusion takes place (Li & Tellis, 2015; Mazzola *et al*., 2015). In sum, successful eco-friendly products are believed to have the ability to help firms achieve greater efficiency, build and strengthen their core competencies, and improve on their green image; all of these when combined, should contribute towards the firm's profitability.

A green product is a product characterized by its ability to take into account of the green issues like recyclable and disposal issues throughout its life cycle; usage of materials which are recycled and recyclable and, which are less polluting, non-polluting or non-toxic; due to the consideration to energy use, human toxicity, ecological impact and sustainability issues at every stage of its life cycle; incorporation of a continual impact assessment and improvement mechanism in the product development cycle are also considered (Bergh, 2016; Wong & Wong, 2014). While the idea of green products can trigger an overhaul and/or production processes, small changes in the business or production or distribution of goods and price changes may also lead to the involvement with all aspects related to innovative products (Wong & Wong, 2014).

Eco-friendly products are developed and intended for consumers in general; their behavior to accept innovation and adopt them into their lifestyles is also an issue that can affect a company's profitability. Literature has documented how consumer behavior can be understood through various investigations carried out, for instance, perceived product value (Abdul Wahid & Chew, 2015), satisfaction (Khattab & Abdul Wahid, 2015; Delafrooz *et al.*, 2014), intention to purchase/adopt green products (Yen-Nee & Abdul Wahid, 2014; Nik Abdul Aziz & Abdul Wahid, 2015; Grimmer & Bingham; 2013) or an environmental friendly product (Kumar, 2013), and willingness to pay (Salehah *et al.*, 2017; Abdul Wahid & Chew, 2015; Khattab & Abdul Wahid, 2015; López-Mosquera & Sánchez, 2014). Salehah *et al.* (2017) and Nik Abdul Aziz and Abdul Wahid (2015), for example, proposed that consumer's intention to purchase a green product (i.e. alternative energy which in their study was represented by solar energy for homes)

can be due to multiple factors, namely, by how consumers perceive government policy, cost and maintenance, product aesthetics (solar panel aesthetics), product benefits, demographic factors, environmental concerns, social influence, product knowledge and experience. These factors are mediated by their environmental attitude.

In Indonesia, the government has appointed PT. Pertamina as the operator providing petrol in the country, more than that, PT. Pertamina is a state-owned company. As a responsible organization, PT. Pertamina has always given top priority on developing quality products according to the government's intention and its policy as well as customers' expectations on an ongoing basis. PT. Pertamina strives to provide its best to contribute towards the welfare of the nation and the state. Efforts to improve and innovate according to the demands of global conditions are PT. Pertamina's strategy to show its commitment to contribute towards the national economy. The company's commitment is shown through its continuous effort to develop new petrol alternatives for efficient energy sources that is both sustainable and environmentally sound. Currently, PT. Pertamina has developed 4 types of vehicle petrol which are sold in the marketplace; Premium RON 88, Pertalite RON 90, Pertamax RON 92 and Pertamax Turbo RON 98. They are eco-friendly products that are also known as green innovative fuels.

The development of environmental friendly products not only shows PT. Pertamina's expertise and creativity on creating products, it also shows the firm's sense of care about the environment and consumers. In addition, this step was also inspired by the development of the motor vehicle technology and the rapid growth

of motor vehicles in Indonesia. Currently, petrol needs of the medium-size multi-purpose vehicles (MPV) are now totaling up to 824,576,886 units in 2017 (retrieved from https://www.bps.go.id/index.php/Publikasi, on 20th October 2018). Transport statistics for 2000-2017 shows an average of annual growth vehicles by 11% (https://www.bps.go.id/index.php/Publikasi, retrieved on 20th October 2018). This indicates that vehicles have contributed to the pollution of smoke into the air, which can cause negative impacts, both on human health and also on the environment in Indonesia. Table 1.1 displays the growth of vehicles from the year 2000 to year 2017 for Indonesia.

Table 1.1 The Development of the Number of Vehicles for Year 2000 – 2017
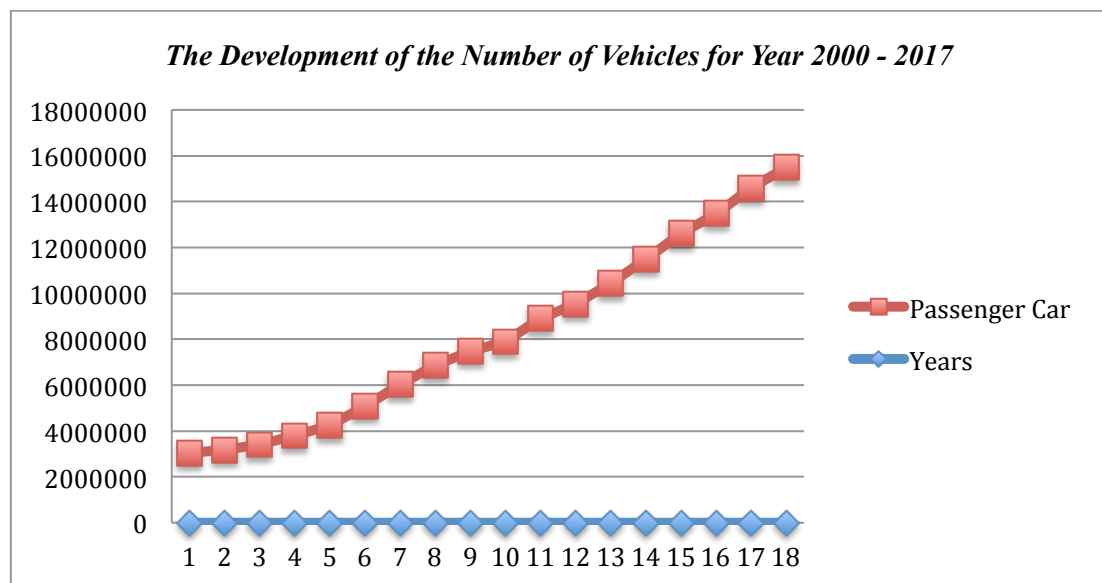
Source: https://www.bps.go.id/index.php/Publikasi, retrieved on 20th October 2018.

It is observed how in recent years, eco-friendly products have received considerable attention by companies to gain competitive advantage in Indonesia. Raising concerns of government and non-government organizations and increasing awareness of consumers globally are also the reason for companies going for solution that concerns more about the environment. Again, green consumerism drives the companies to promote an environmental friendly image of their brands. According to Alhadid *et al*., (2014), the twenty-first century do understand the challenges placed before the environment and are aware about the existence of environmental problems. This is why some consumers base their buying decisions on purchasing products that do not harm the environment (Tate, Stewart, & Daly, 2014). For companies, these green developments open many market opportunities where product excellence and the success of new products originate from orientations such as innovation and proactivity to product excellence (Wong & Wong, 2014). The inclusion of the ecological variable in marketing activities lead to a new way of understanding exchange relationships, known as environmental marketing or green marketing (Alhadid *et al*., 2014).

As of today, with the introduction of Pertalite RON 90 and Pertamax Turbo RON 98, PT. Pertamina now has a total of four petrol-based products to offer medium-sized motor vehicle users in the country, namely Premium RON 88, Pertalite RON 90, Pertamax RON 92 and Pertamax Turbo RON 98. PT. Pertamina believes that newly developed products such as the Pertalite RON 90 and Pertamax Turbo RON 98 offer those vehicle owners with value proposition that they are consuming a range of green products. For comparison purposes, the newly introduced products, namely RON 90 Pertalite is positioned in the middle

between RON 88 Premium and Pertamax RON 92 whereas Pertamax Turbo RON 98 is positioned as premium, thus placed on top of Pertamax RON 92. Consuming these products benefit both the consumers and the country to achieve a cleaner environment (environmentally friendly). This is in line with the current Indonesian law, namely the Decree of the Minister of Environment number 141 of 2003 (this Decree was then replaced by the Minister of Environment Regulation No. 4 of 2009 on Threshold Emissions Vehicle; this regulation was also then updated with the Regulation of the Minister of Environment of the Republic of Indonesia No. 10 Year 2012, About the Quality Standard Motor Vehicle Exhaust Emissions of New Type (esdm.go.id, 2015). Table 1.2 displays the impact of different petrol characteristics on vehicle's specification in Indonesia.

Table.1.2. Comparison of Characteristics Performance of Petrol Vehicles in Indonesia

Vehicle's specification	Premium RON 88	Pertalite RON 90	Pertamax RON 92	Pertamax Turbo RON 98
Maximum power	13.33 dk @ 8.650 rpm	13.38 dk @ 8.650 rpm	13.58 dk @ 8.650 rpm	13.58 dk @ 8.650 rpm
Maximum torque	12.45 Nm @ 6.900 rpm	12.64 Nm @ 6.800 rpm	12.81 Nm @ 6.750 rpm	13.01 Nm @ 7.340 rpm
Acceleration test results	0-100 meter:7.7 seconds	0-100 meter: 7.5 seconds	0-100 meter: 7.3 seconds	0-100 meter: 6.9 seconds
Consumption petrol	10.2 liters / 100 km	9.8 liters/100 km	9.8 liters/100 km	7.2 liters/100 km
Supplemental additives cleansing	NO	YES	YES	YES
From the aspect of technology	Incomplete combustion impact on Knocking cause reduced engine power so as to avoid waste.	More perfect combustion	More perfect combustion	More perfect combustion Equipped with Ignition Boost Formula (IBF)
The view of economy	The continuous knocking damage to the piston	Knocking is not too big on the piston	Knocking is not too big on the piston	No knocking on the piston

The view of the resulting pollution	NOx and Cox produce in large quantities. (This gas is produced from the reaction of combustion within the engine that will be released into the air as air pollution)	Produce NOx and Cox in small amounts. (This gas is produced from the reaction of combustion in the engine that will be released into the air as air pollution)	Produce NOx and Cox in small amounts. (This gas is produced from the reaction of combustion within the engine that will be released into the air as air pollution)	Produce NOx and Cox in very small quantities.
Aspects of Being	Colored Yellow Transparent	Green colored Light	Turquoise blue colored	Bright red
Price	IDR 6.550 (government subsidies)	IDR 7.350 (Unsubsidized)	IDR 8.050 (Unsubsidized)	IDR 9.050 (Unsubsidized)

Source: http://www.pertamina.com/news-room/info-pertamina/pengumuman/, retrieved on 30th April 2017.

It is important to also note that there is a considerable difference between the price offered for Premium RON 88 and RON 90 Pertalite. Premium RON 88 is currently sold at IDR 6.550 per liter (with government subsidies), and this is cheaper than the fluctuating price of Pertalite RON 90 in accordance to the value of rupiah in the market (no government subsidies). As for Pertamax RON 92, it is currently sold at IDR 8.050 per liter while Pertamax Turbo RON 98 is sold at IDR 9.050. These two are the most expensive out of the four gasoline products sold throughout the country because the government does not subsidize these products.

Since they were first launched in July 2015 (Pertalite RON 90) and August 2016 (Pertamax Turbo RON 98), they have been observed to have made remarkable progress and demonstrated their competitive values, indicating the possibility of green products being fully accepted by Indonesians in the near future. Three important observations have been made on Pertalite RON 90 and Pertamax Turbo RON 98.

First of all, the products are now offered and are available at many stations; to date, there are 874 retail outlets and 625 gasolines refueling stations selling Pertalite RON 90 and Pertamax Turbo RON 98 respectively. Of the retail outlets selling Pertonite RON 90 and Pertamax Turbo RON 98, a total of 491 of the stations are located in PT. Pertamina Marketing Operations Zone III (West Java), 92 gas stations in PT. Pertamina Marketing Operations Zone IV (Central Java), 276 fill stations in PT. Pertamina V Marketing Operations (East Java, Bali, Nusa Tenggara) and 14 gas stations and 1 APMS in PT. Pertamina Zone VI (Kalimantan) Marketing Operation Area. In addition, the Pertamax Turbo RON 98 sales territory focuses solely on the capital of the marketing area alone (http://www.pertamina.com/news-room/siaran-pers, retrieved on 30th April 2015).

Secondly, Pertalite RON 90 now enjoys a 25.5% market share, while Pertamax Turbo RON 98 has a market share of 8%. The shares are steadily increasing and it is expected that by the end of 2017, RON 90 Pertalite market share will reach 30% and Pertamax Turbo RON 98 will achieve up to 12%. PT. Pertamina has planned strategies to increase more outlets to sell Pertalite RON 90 and Pertamax Turbo RON 98, throughout its distribution areas in Indonesia. The planning indicates PT. Pertamina's observation on the green innovative fuels' acceptance by the marketplace; the acceptance may be triggered particularly by people who wants vehicle's fuel with RON that is above Premium RON 88 (may be for a better-quality performance).

Thirdly, PT. Pertamina found that there was a decline in sales of RON 88 Premiums from 70% to 50%, and the sales of these products were under Pertalite RON 90. This indicates that RON 90 has now been accepted by the goods market,

although its price is higher. According to PT. Pertamina's research (2015), it appears that Pertalite RON 90 has become the premium for Premium RON 88 customers by 30%, 10% - 17% for Pertamax RON 92 consumers, while Pertamax Turbo RON 98 is 8% - 10%. The implication of increased sales margin of PT. Pertamina's profit is now greater than Premium RON 88 provides. Reasons for this performance were mainly due to the switching behavior of consumers in the marketplace towards the new and higher priced petrol; for instance, consumers who switched to Pertalite RON 90 are most likely the consumers who consume Premium RON 88 or consumer of Pertamax RON 92, but this did not rule out the consumers of Pertamax RON 92 who may also switch to Pertamax Turbo RON 98. From what is observed, Indonesian consumers now know that they have a range of choices on competent vehicle fuel products (green innovative fuel), both in terms of quality and price.

In addition, based on numerous testing carried out on both petrol by the Institutions Research and Industrial Affiliation of Bandung Institute of Technology (2016), in general, Pertamax Turbo RON 98 is found to be more economical and better than the other types of petrol. However, the study shows no significant difference between Pertalite RON 90 and Pertamax RON 92, apart from the price.

All factors identified earlier particularly on the rapid growth of market share indicates that the presence of both Pertalite RON 90 and Pertamax Turbo RON 98 has the potential in developing public's interest on petrol switching from the normal petrol towards green innovative fuels, namely, from Premium RON 88 to Pertamax RON 92, or Pertalite RON 90 or that of Pertamax Turbo RON 98.

The public, in particular the motor vehicle consumers, is observed to be increasingly accepting Pertalite RON 90 and Pertamax Turbo RON 98, as the new green fuel products to be consumed for their vehicles, although they are priced higher than Premium RON 88.

Consumers' behavioral change is what PT. Pertamina and the government are after in particular as under the Organizational Structure Oil and Gas Regulation, by 2025, the petrol oil type premium RON 88 will be removed or totally stopped from being sold to the public. However, the removal of premium RON 88 will be carried out in stages and will be adjusted with the refinery oil revitalization program. In the national industry policy, the transportation (automotive) industry in Indonesia is one of the prioritized sub-sectors to be developed, so there is a need for a policy that is conducive for the public. In this regard, the Ministry of Industry has issued a policy on low-cost and green car (LCGC) as stipulated in regulation of the Minister of Industry No. 33/M-IND/PER/7/2013 on the Development of Four-Wheel Motor Vehicles that Save Energy and Affordable Prices. Its requirements is derived from a low-emission carbon (LEC) car program, which has been regulated in Government Regulation No. 41 of 2013 on Taxable Goods classified as Luxury in Motor Vehicles subject to Sales Tax on Luxury Goods. The issuance of regulation No.33/2013 is intended to continuously encourage and develop autonomy of the national automotive industry, particularly the four-wheeled vehicle components industry in order to create a competitive motor, transmission and axle power along with an increase in demand for energy-efficient and affordable motor vehicles.

In this case, it means that all new motor vehicle owners now have to choose between using RON 90, RON 92 or RON 98 for their vehicle. However, since RON 88 will only be abolished by 2025, they can still choose to purchase RON 88 if they want to, apart from other available fuel choices that they can make today (http://Bisnis.Liputan6.Com/Read/2286922/Pertalite-Beredar-Bagaimana-Konsumsi-Premium-Dan-Pertamax, retrieved on 30th April 2017).

According to Goel and Yang (2015), consumer's behavior such as actual purchase can be triggered by evaluations that they made of a product, namely, through what they think (cognitive), what they feel (affective), and what they intend or desire (conative). Taking this view into Indonesian consumers' green innovative fuel choice, we can assume that while their decision behavior can be influenced by product characteristics (e.g. green, eco-friendly) and marketplace factors (e.g. price), still, the decision to choose a product can also be influenced by other factors in mind, e.g. their attitude towards the environment (e.g. positive or negative attitude) or their social environment background (demographic factors), which translates to their behavior, i.e. how they behave or even consume in an environmentally friendly way (Gordon-Wilson & Modi, 2015).

1.2   Problem Statement

Linking the need to develop green innovative products by businesses in the oil and gas industry with promoting their uses to consumers in the marketplace, in the case of Indonesian vehicle consumers, a green product can be represented by a fuel or petrol-based product that is designed to be environmentally (eco) friendly. As explained earlier in the introduction section,

the government of Indonesia is implementing an environmental related law on Regulation of the Minister of Environment of the Republic of Indonesia No. 10 Year 2012 pertaining to the Quality Standard Motor Vehicle Exhaust Emissions in line with its policy for a cleaner environment. The intention is timely as Indonesia is identified as the country with the most rapid growth of motor vehicles in the medium-size multi-purpose vehicles category in the ASEAN region in 2015 (it has 1,013,291 units from a total of 3,070,488 units in comparison with other countries) (http://www.asean-autofed.com/files/AAF_Statistics_2015.pdf, retrieved on 26th May 2016).

According to the research data produced in bloomberg.com, air pollution in Indonesia ranks as the eighth most deadly in the world with an average mortality rate of 50,000 people every year. Although China's case is worse as it was ranked first with the death rate of 1.4 million people annually due to air pollution problem, still, Indonesia is the only country in South-East Asia with chronic air pollution. The data produced also identified that from all causes of pollution, transportation emissions are found to be the highest contributor to air pollution in Indonesia, which is around 85%, in addition to forest fires and industry (http://www.bloomberg.com/ news/articles/2015-10-28/how-indonesia-s-fires-made-it-the-biggest-climate polluter, retrieved on 28th May 2016; http://www.greenpeace.org/indonesia/publikasi/2217/ data-terkini-kualitas-kualitas-udara-kota-di-seluruh-dunia, 2019) that is detrimental to the population's health and quality of life.

What the rapid increase growth of vehicles and chronic air pollution problems indicate is that Indonesian government needs to find a strategic way to tackle the problems. Introducing a green innovative fuel that can help reduce motor vehicle's exhaust emissions and promoting consumption of such a product to the Indonesian people are amongst the many strategic solutions and corporate behaviors that the government and the industry can implement in the country. Noting the problems, PT. Pertamina, a company that has been appointed by the Indonesian government to be the sole supplier of petrol in the country, has taken an initiative to develop a new green product through the invention of Pertalite RON 90 and Pertamax Turbo RON 98. Pertalite RON 90 and Pertamax Turbo RON 98 are designed in such a way that they are not only considered innovative green products, but they can match motor vehicle consumers' desires to have cleaner engine for their vehicles through the usage of quality and perceived eco-friendly fuel.

According to the Cognitive-Affective-Behavior (C-A-B) theory in the literature (Breckler, 1984; Rosenberg & Hovland, 1960), the theory posits that consumer's behavior is mainly triggered by their thinking or belief (cognitive), emotion (affective), and behavior (conative). Connecting the theory's assumptions to this study, the question to be asked is on whether the Indonesian motor vehicle consumers' purchase decisions are influenced by their cognitive, affective and conative evaluations of the green product. Asshidin, Abidin, and Borhan (2016) observed the existence of many useful models in the literature to forecast a range of outcomes, rather than making precise predictions. According to them, in the case of Cognitive-Affective-Behavior theory (also known as Affective-Behavior-

Cognitive attitudinal-related theory), it represents a crucial form of prediction on people's ability to forecast their own attitudes in relation to their feelings (affect), intent (behavior) and belief (cognition) about events or circumstances that could cause the decision to be taken in the first place. This view is supported by Tsai *et al*. (2015). These views on Cognitive-Affective-Behavior theory or C-A-B theory are thought to justify its use as the underlying theory in investigating consumers' purchase decision and repeat purchase of a green product in this study. This study argues that this is justified considering that individual's behavior is psychologically-based; and the main outcome of behavior (do or act) is triggered by various attributes that relate closely to how the individual thinks, believes or feels. Cognitive-Affective-Behavior (C-A-B) theory seems to have the ability to cover the gap between the attitudinal values or make-up of the green consumer and behavior that will help consumers to concentrate their efforts in the purchase or repeat purchase of green innovative fuels. Consumer behavior focuses on the issue of what underlie their motivations in making a decision, for instance, on whether the decision could lead to new intention to buying an actual green product and the relationship between motivation and cognitive factors or environmentally conscious behavior and decisions on using or buying green products (Lee & Yun, 2014).

In the context of this study following the context of descriptive theory building then, the intended investigated question is on whether the Indonesian vehicle consumers' decision to purchase green products are triggered by how they evaluate the product cognitively first, then followed by affective evaluation before the process is continued to the behavioral aspects' of actual purchase and/or repeat

purchase. In addition, individual's attitude towards the environment is also considered to have a role in triggering their actual/repeat purchase of the product they chose. The literature has documented the importance of this attitude towards the environment variable in consumer's decision-making and behavior, which has not been fully investigated by the Cognitive-Affective-Behavior (C-A-B) theory. In studies by Zhao *et al.* (2014) and Moser (2015), enabling them to make the right choices in their purchasing decisions and developing their willingness to pay higher for green innovative fuels can be an option in their buying behavior in terms of preference for green products, product quality, and competitive pricing (Singh *et al.,* 2012). Consumers were found to be objectively able to judge products by their environmental impact; even when consumers were willing to buy a "greener" product, their subjective evaluation were found to be based on the need to understand the factors that influence eco-friendly purchasing decisions. Gillespie and Sprott (2013) show that consumers are determining purchases on green innovative fuels intrinsically or extrinsically. Evaluation of the condition attached to an object or event can occur consciously or cannot be separated from emotions (Yoon, 2012), where responsibility to the environment is an object that shows that when instructed to do so, the cause of emotions can be cognitively constructed regarding the knowledge and perceptions gained in relation to the various attributes of individual judgments directly or globally on objects (Luomala, 2015). Moreover, the literature argues that what is important for individual's purposes is not the role of conscious cognitions on emotions nor the direct effect of cognitions on decision making (Xu *et al.*, 2015), but rather the specific combinations of antecedent appraisals that have been shown to elicit

invariant emotions (Luomala, 2015), in this case, covers both cognitive and affective which in turn affect that individual's behavior. Individual consumer's cognitive or affective evaluations may be triggered by the type of product to be purchased. One of the most relevant and emerging topics in this field is green innovative fuel as a step in developing environmentally friendly products and their effectiveness in guiding consumer choice. In this study, for example, the green product characters of Pertalite RON 90 and Pertamax Turbo RON 98 indicated that they should either be considered as a specialty or a shopping product but certainly not a convenience product, where a product gives an idea of the good performance in quality and influence on the environment.

Another gap found throughout the literature is on the role of demographics. It is not clear how consumer's demographics, particularly income and education background, may affect the causal relationship among the Cognitive-Affective-Behavior (C-A-B) theory factors. However, Lambert-Pandraud *et al.'s* (2005) study on purchasing behavior considers the impact of demographic variables such as age, education, income, occupation, and gender. Number of studies related to consumer purchase behavior for green products have found that demographic characteristics affect consumer purchasing behavior (Sriwaranun *et al.*, 2015). In most cases, age, gender, education, marital status, income and employment levels have an impact in determining consumer willingness to pay for green products. Women consumers with higher incomes and higher levels of education are more likely to have a higher willingness to pay for green products. It is interesting to note that research has found that women are willing to pay more for organic products than men (Ureña *et al.*, 2008).

Demographic variables may be the determining factors for the behavior of consumers who want and make purchases of green product (Zhu *et al*., 2013), such as Pertalite RON 90 and Pertamax Turbo RON 98. Demographics have been used as a basis for consumer's market segmentation to date by practitioners alike (Zhao *et.al*, 2014). On the other hand, because of the area in Indonesia separates archipelago and population distribution centered on several large islands alone, various responses and perceptions of consumers in making the decision to buy a green product was raised. So, the ability for the industry to identify the demographic profile of the target consumer is very important as it can determine the purchase decision (Yoon, 2012; Kumar, 2013; Gillespie & Sprott, 2013). Kumar (2013) stated that the demographic variable should be investigated as moderation in purchases. In addition, because of the inconsistent results related to the role of demographic factors, the moderating affects on the moderating variable on the relationship between determinants and purchases. Problems related to variables have received rather limited attention in environmental attitude studies (Zelezny *et al*., 2000), especially those carried out in the Asian context (Lee, 2009). Furthermore, the concept of customer satisfaction itself, is seeking an understanding of the motivation to buy green products. Based on the influence of demographic factors, it further explores buyer demographic moderation on the relationship between value and customer satisfaction (Hur, Woo, & Kim, 2015).

The importance of consumer demographics, such as income levels and purchasing power have been found to be the main factors affecting their price sensitivity and willingness to buy green products (Kumar, 2013). Seiler, Rudolf and Krume (2013) suggested that purchases of a green product are influenced by

some demographic variables as controls because they are a potential source of heterogeneity. Since the demographic stated as the moderator variable in the consumer sensitivity and willingness pay the green product then it can limited the generalization of the consumer population whom do the repeat purchase of the green product.

1.3 Research Question

Based on the arguments made on the problem statement, a broad question to ask is on why people buy or conative to purchase the same product. In specific, the question is linked to other questions related to whether consumers' behaviour to purchase and/or to repeat purchase green innovative fuels, namely, Pertalite RON 90 and/or Pertamax Turbo RON 98 are influenced by their cognitive and affective evaluations (as proposed by Cognitive-Affective-Behavior theory). The question is also linked to other question on whether environmental attitude has an influence over consumer's repeat purchase. With these questions, a list of research questions have been developed:

1) To what extent does Indonesian consumers' environmental attitude towards green innovative fuel (Pertalite RON 90, Pertamax Turbo RON 98) are triggered by their cognitive evaluations and affective evaluations?

2) To what extent does Indonesian consumers' decision to repeat purchase green innovative fuel (Pertalite RON 90, Pertamax Turbo RON 98) are triggered by environmental attitude?

3) Do Indonesian consumers' demographic factors (gender, marital status, age, level of income, highest level of education, occupation) moderate

between their cognitive evaluation and environmental attitude towards green innovative fuel (Pertalite RON 90, Pertamax Turbo RON 98); and between their affective evaluation and environmental attitude?

4)   To what extent does Indonesian consumers' environmental attitude mediates the relationship between their cognitive (4Ps – product, price, place, promotion) and repeat purchase behavior of green innovative fuel (Pertalite RON 90, Pertamax Turbo RON 98); and between their affective evaluation (satisfaction) and repeat purchase behavior?

1.4   Research Objectives

Following the positioning and literature supports made in the problem statement section and as per presented by the list of research questions earlier, this study intends to investigate whether cognitive, affective, behavior, and environmental attitude have influences on Indonesian vehicle consumers' decision to purchase and/or to repeat purchase green innovative fuels represented by Pertalite RON 90 and Pertamax Turbo RON 98 (Xu *et al*., 2015; Lee, 2011). This intent is described in the following research objectives:

1)   To determine whether Indonesian consumers' environmental attitude towards green innovative fuel (Pertalite RON 90, Pertamax Turbo RON 98) are triggered by their cognitive evaluations and affective evaluations.

2)   To determine whether Indonesian consumers' decision to repeat purchase of green innovative fuel (Pertalite RON 90, Pertamax Turbo RON 98) are triggered by the environmental attitude.

3) To identify whether demographic factors (gender, marital status, age, level of income, highest level of education, occupation) play a moderating role between Indonesian consumers' cognitive and environmental attitude of green innovative fuel (Pertalite RON 90, Pertamax Turbo RON 98); and between their affective evaluation and environmental attitude.

4) To determine whether Indonesian consumers' environmental attitude mediates the relationship between (4Ps – product, price, place, promotion) and repeat purchase behavior of green innovative fuel (Pertalite RON 90, Pertamax Turbo RON 98); and between their affective evaluation (satisfaction) and repeat purchase behavior.

1.5 Significance of Study

This research is expected to contribute to the advancement of the theoretical and practical through the tri-partite structure of the theory attitude of Cognitive-Affective-Behavior (C-A-B) theory through the stimulus, such as cognitive represents a statement of verbal belief, affective (emotional) individuals representing the statement of verbal feelings and ultimately, the behavior includes actions intended to stimulate the environment. Each component is used to measure such components as cognitive, affective and conative (behavioral), following the theory of tri-partite attitudes (Garcia-Santillan *et al*., 2012; Zhao *et al*., 2014; Moser, 2015). In general, cognitive and affective together is important in determining the consistency of behavior even though cognitive and affective relationships explain the importance of more concrete goals (benefits) in

determining behavior (Chiu *et al.*, 2014). Outside the domain of relationships among variables, affective predicts better behavior-based cognitive roles and environmental attitude by using green products (Barbaro *et al*., 2015). According to Dagher and Itani (2012), general cognitive investigations reflect beliefs about environmental issues, as well as specific attitudes including the assessment of eco-friendly products, given that pro-environmental behavior encourages individuals to contribute to environmental conservation. In addition, according to Rödiger and Hamm (2015), purchase of green products can be influenced by price-related emotions because it has a role in the process in the formation of behavior. Investigations conducted on green products will help predict buyer's behavior, intense cognitive and affective.

1.5.1 Theoretical Contribution

On theoretical contributions, this research contributes by extending the existing Cognitive-Affective-Behavior theory by adding new information on the roles of both mediating and moderating variables in the model. The study for the advancement of the Cognitive-Affective-Behavior (C-A-B) of attitude theory through the tripartite models of attitude structure consisting of attitude used to measure each of the cognitive, affective and conative behavior components. Concepts referring to behavioral dispositions, such as social attitude and personality trait, have played an important role in these attempts to predict and explain human behavior (Ajzen, 1991). The proposed model is intended to identify key concepts that form the attitude that is useful for forecasting the results

to make precise predictions using the concept of component attitudes: Cognitive, Affective, and Behavior (C-A-B), following the model of tripartite attitude (Schiffman & Kanuk, 2004; Solomon, 2002; Breckler, 1984; Rosenberg & Hovland, 1960; Boulding, 1956). This study is expected to strengthen the theory, which assumes that consumers decide on the purchase of a product based on how they evaluate it cognitively, affectively and behaviorally, are widely believed to be essential determinants of pro-environmental decisions (Steg & Vlek, 2009). Furthermore, utilizing these theoretical concepts has long been regarded to be an essential theoretical approach to account for diverse aspects of eco-friendly consumer decision-making (Han, 2014). It is regarded as the principle that guides the formation of attitudes (Pickett-Baker & Ozaki, 2008), although values do not necessarily lead to behavior in real life. That is, people's attitudes affect their thoughts (cognitive function) and feelings (affective function), and thus influence behavior such as buying behavior (Hoyer & MacInnis, 2004). This implies that consumer behavior can change and influence decision making in selecting and using green innovative fuels.

In addition, consumer behavior illustrates the underlying values, attitudes and behavior towards environmentally friendly products (Joshi & Rahman, 2015; Trivedi et al., 2014). Furthermore, theory of reasoned action (TRA) by Ajzen and Fishbein (1980) supports a theoretical approach other than the Cognitive-Affective-Behavior (C-A-B) theory used in this study, where individual behavior is determined by two main factors - individual attitudes and social norms (Ajzen & Fishbein, 1980). Attitudes about specific behavioral actions are the factors that underlie attitudes such as: the belief that behavior leads to certain results, and the

results of evaluation, then subjective norms refer to existing norms in a particular social context. Subjectively, it is the belief that certain references think about whether an act of behavior must be carried out or not and motivation to adhere to certain references (Joshi & Rahman, 2015).

This study emphasized that attitudes (mediator) alone cannot influence behavior; there are other factors that not only affect behavior, but also the power of attitude-behavior relations (Joshi & Rahman, 2015). Cognitive-Affective-Behavior (C-A-B) can better understand individual's behavior where consumers' green behavior is not only determined by attitude, but also by contextual factors. Favorable contextual factors will reinforce while unfavorable contextual factors reduce the power of attitude-behavior relationships. Under favorable conditions, even people with weak environmental attitudes behave in an environmentally friendly manner, while in limited conditions, people with very positive environmental attitudes can also be discouraged to show environmentally friendly behavior (López-Mosquera & Sánchez, 2014; Joshi & Rahman, 2015). Other than that, this study explains on link between green purchasing decisions and environmental consciousness, analysed the applicability of Cognitive-Affective-Behavior (C-A-B) theory on green purchases and re-examined green purchase behavior.

However, in this study , the role of environmental attitudes is assumed to make an impact on purchasing behavior. A number of recent studies, for example, have proposed and investigated the monetary and non-monetary costs involved in purchasing consumer decisions from green products; e.g. environmentally friendly textiles (Chen & Chai, 2010), household products (Wongleedee, 2015),