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GREEN CONSUMER BEHAVIOR OF YOUNG JAPANESE

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ABSTRACT

Environmental degradations from mass production and entailing mass consumption has been major concerns worldwide in the last decades. Consumers in recent years started to be aware of their purchasing behaviour and showing more interests in green consumptions as ways of appreciating environmental protection. Many studies have investigated to identify what are the key factors in explaining such green consumer behaviours in the Western world. This study, on the other hand, stretches its investigating country to Japan. The purpose is to fill the gap in knowledge of what factors and how those factors influence the shaping of green consumer behaviour of Japanese young consumers towards grocery products.

The study was done initially by reviewing the previously theorised explanations of green consumer behaviour. Alphabet theory, Theory of planned behaviour, and Green attitude-behaviour gap will be highlighted as the framework of these provide thorough understanding about the influence of socio-demographical, and psychographic predictors on the green consumer behaviour, as well as its ultimate impact on the actual green purchasing. A quantitative questionnaire is used to collect the data from 81 young Japanese respondents.

The main findings of the empirical study confirm the similarity in influencing factors of young Japanese green consumer profile as is observed in the Western world. The study also witnesses the green attitude-behaviour gap among young Japanese for grocery products and their perception towards the green marketing practices observed in the supermarket, namely sustainable packaging and eco-labels.

Keywords: Green consumer behaviour, Green purchasing behaviour, Green marketing, Japan

INTRODUCTION

Due to the environmental deterioration at global scale ranging from global warming to air and water pollution as a result of the technological and industrial revolution in earlier decades and entailing mass production and overconsumption of businesses and consumers, there has been a consumers' environmental awareness is progressively increasing (Kalafatis, et al. 1999). From the 1990s, continues up to present days have been a new era of the 'decade of the environment' or 'the Earth decade' that environmental concerns have become more relevant and tangible problems of the society (Prothero 1996). Following the societal shift in growing awareness of sustainability, Consumers, especially in developed countries, have begun to be more concerned about their everyday shopping practices and the environmental consequences they might have. (Krause 1993).

Although more consumers have realized the environmental impacts of their daily purchasing behaviour and numerous consumers are expressing their willingness to pay more for environmentally friendly products (Laroche, et al. 2001), there are contradictory explanations in what triggers consumers' willingness in performing green purchasing behaviour. Therefore, in order to better understand the phenomenon of green purchasing behaviour, many studies have been investigating the green consumer profile as well. For example, earlier empirical studies conducted by Anderson and Cunningham in 1972 proposed that green customers are people who are concerned not only about meeting their personal needs, but also about the well-being of society and the world as a whole. The typical profile of green consumers they concluded at that moment were female, 40 years old, with a high level of education, and socioeconomic status above average. However, later studies witnessed contradiction in the results. The current mainstream of understanding agrees that socio-demographic characteristics such as age, sex, income, and literacy have little relevance in explaining green consumer behaviour. Instead, recent studies emphasize rather on psychographic characteristics such as one's value, beliefs, and attitudes to be more relevant in shaping green consumer behaviour.

Green marketing has also become a common trend in business practices, reflecting a significant change in customer perception of the environmental effects of their everyday product use, as well

as successful regulations enacted by policymakers, mostly in developed countries but also in some emerging countries. The market for environmentally friendly goods has been brought into sharp focus as a result of this significant change in buying intentions. (Braimah, Tweneboah-koduah 2011). As a result, companies are increasingly incorporating green marketing strategies into their production processes, as Peattie and Charter (2003) pointed out, businesses must consider the effect of production and consumption on quality of life and the growth of a sustainable society.

The author's inspiration for writing this thesis stems from the growing perception of environmental consumption among Japanese youth following the government's announcement that supermarkets would charge for plastic shopping bags beginning in June 2020. Furthermore, a transition from ecological marketing to sustainable marketing has been observed in the Japanese market (Kyuri 2011), and environmentally conscious customers account for well over 10% of the overall Japanese market segmentation, indicating that many companies anticipate a greening trend in the market as a whole (Hakuhodo 2009). According to a study conducted by Chan and Lau (2000), China's young generation has done well in terms of sustainable action and environmental conservation. This is supported by later empirical studies by Smola and Sutton (2002), Heaney (2006), and Hume (2010), which show that the younger generation has a greater ability to reflect on their choices of environmentally friendly products, greater flexibility to adapt to technological innovation that allows for better product information collection before purchase, and more disposable income than any other generation. Unfortunately, previous research on young people's green buying behaviour has been confined to a "Euro-American" background (Cheah, Phau 2011). While many studies have been conducted in China, it is still considered as a developing economy compared to Japan, where the economy has already matured to the point of being classified as a developed nation. What characteristics and factors influence the formation of green consumer behaviour among Japanese youth towards grocery products remains undefined due to this lack of studies conducted in Japan and following knowledge gap.

Therefore, the research problem of this thesis is the knowledge gap of what factors and how those factors influence in shaping green consumer behaviour of young Japanese consumers towards grocery products. Consumers' intrinsic natures, such as socio-demographic and psychographic characteristics, as well as external drivers, such as businesses' green marketing strategies, may influence young Japanese consumers' green buying actions. Therefore, the research problem intends to fill in the knowledge gap from both sides of the factors.

The aim of this bachelor thesis, therefore, is to identify the characteristics of green consumer behaviour among young Japanese and how this is translated to their green purchasing behaviour in grocery domains.

Three main research questions as follow:

RQ1: What is the green consumer profile of young Japanese consumers?
RQ2: To what extent the green consumer behaviour of young Japanese influences actual green purchasing?
RQ3: How are the attributes of green marketing practices perceived among young Japanese consumers and what are the influence of the attributes the green consumer behaviour?

RQ1 and RQ2 are designed to see whether the theories and empirical studies about the green consumer behaviour and mainstream characteristics of green consumers profile can be observed among Japanese youth as in Euro-American countries, also to investigate if there are any country specificity in the phenomenon. RQ3 is to find out the most favourable attributes of green marketing strategies of Japanese green businesses for young consumers to encourage green consumer behaviour. Since the primary goal of this paper is to discover a generalized explanation for the phenomenon of green buying behaviour among Japanese youth, quantitative survey research methods, in addition to a review of previous studies, were chosen.

There are three main body chapters in the study. The first chapter focuses on a study of scientific literature. The literature review covers well-known theories to explain green consumer behaviour. The main factors of socio-demographic and psychographic variables that have an influence on the formation of green consumer behaviour will be discussed further in the second chapter, followed by the brief history of green marketing, conventional green marketing strategies, and practices will be discussed in the following section. The third chapter is devoted to the quantitative online survey research methods and data interpretation. The analysis of the gained data, key findings, suggestions, and potential limitations will be addressed further.

1. LITERATURE REVIEW ON GREEN CONSUMER BEHAVIOUR

The first chapter is devoted to a literature review of well-known theories to give a better overview of the paths in how consumers shape their green consumer behaviour, or environmentally conscious consumer behaviour (ECCB) and how it impacts consumers green purchase behaviour (GPB).

Green purchase behaviour (GPB) is defined as consumers who behave in accordance with their convictions that make successful purchases of green goods (Chan 2001). Those who stop using plastic bags and instead opt for an eco-bag while shopping, buy natural detergents, buy items in biodegradable packaging, and refuse to buy products from certain companies that affect the environment, are the ones demonstrating GPB according to Schwartz and Miller (1991). To determine the effective GPB of consumers, it is inevitable to investigate the Ecologically Conscious Consumer Behaviour (ECCB) as this reflects a "behavioural orientation" of a consumer, that is ECCB acts as a foundation for consumers to perform GPB. ECCB is made of both socio-demographic and psychographic green consumer profile (Straughan, Roberts 1999). Hence, evaluating ECCB and getting in-depth knowledge on green consumer profile leads to a better understanding of the impacts it has on the later GPB. In order to do so, this thesis will introduce several theories related to the formation of ECCB, focusing especially on the explanation of the relationships within the psychographic factors, their later impacts on GPB. The theories to be discussed will be Alphabet theory, Theory of Planned Behaviour, and Green attitude-behaviour gap. The first two theories give a good overview of how psychological factors of ECCB are related within and have an influence on the consumers' GPB. The Green attitude-behaviour gap is chosen to be discussed in the paper because there is a certain limitation when applying those theories into real-life situations, namely the gap in consumers' perception about their ECCB and their actual GPB. Hence, the paper will take a closer look at the reasons behind the gap below in section 1.3.

1.1. Alphabet Theory

Alphabet theory is a framework that brings together several different consumer theoretical elements: Value-Belief-Norm theory (VBN) from Stern, et al. (1999), Attitude-Behaviour-Context theory (ABC) from Guagonano, et al. (1995), Knowledge (K), Information Seeking (IS), Context (C), Habits (H), and Demographics (D). Figure 1 graphically explains the relationships of each component and path to the GPB, which is indicated as "behaviour".

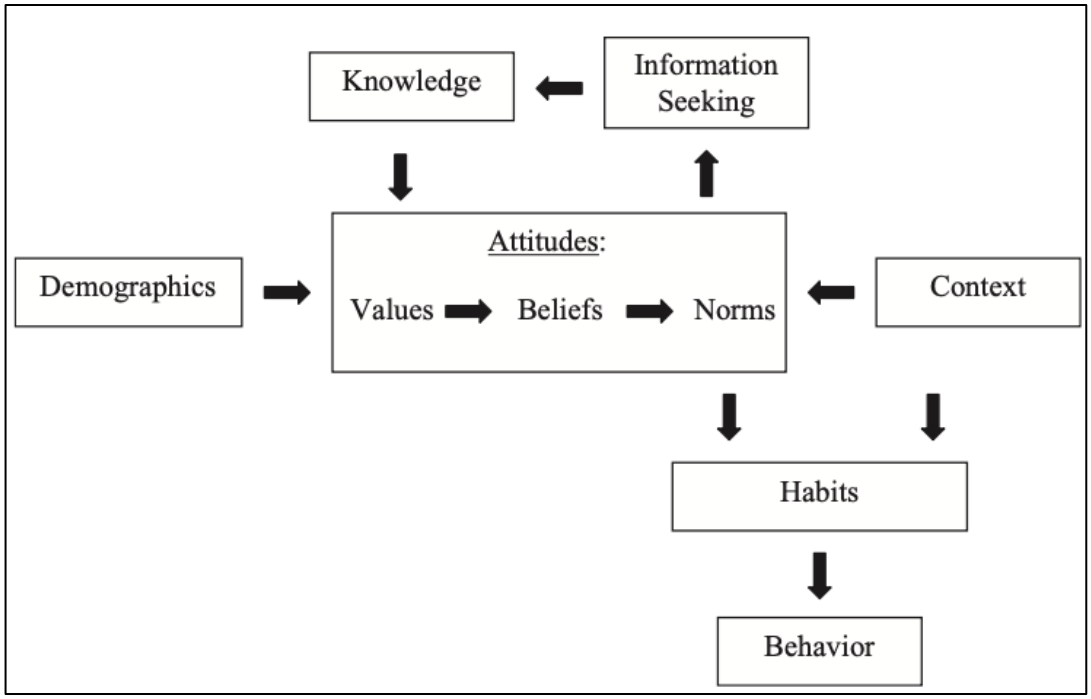

Figure 1. Conceptual framework of Alphabet Theory
Source: Zepeda, Deal (2009)

The reason behind the choice of this theory is that this approach may explore a more systematic perspective on individual green behaviour compared with other single theory perspectives. The pillar elements of this theory are VBN theory and ABC theory, where VBN theory gives an overview on how attitudes are shaped based on the stream of value, beliefs and norms, while ABC theory explains how attitudes are transmitted or not into actual GPB (Zepeda, Deal 2009). In short, VBN theory best describes the environmentally supportive attitudes (Stern 2000) and ABC theory to explain behaviours (Guagnanol, et al. 1995). Other elements were carefully chosen and put into the framework by Zepeda and Deal (2009) in their study in order to paint a complete picture of green consumer behaviour. The interview conducted in the study of Zepeda and Deal (2009) revealed that Habits, Information Seeking and Knowledge played a vital role in influencing the

consumers' organic food purchase. As for the Habits, the author brought an argument that organic shoppers were less driven by need than conventional shoppers because they learned to cook later in life compared to conventional shoppers who tend to start cooking at their early age. This indicates that Habits plays a role between behaviour and attitudes or contexts. Information Seeking and Knowledge are also important instruments in shaping and reinforcing attitudes towards green purchasing behaviour (Zepeda, Deal 2009). Demographic as part of Alphabet theory has a contradiction in study results, many researchers agree on its lesser importance than knowledge, values and/or attitude when explaining ECCB (e.g. Chan 1999). Yet, it is included in Alphabet theory as it explains why education, as one of the major demographic factors, is consistently and significantly correlated with organic food purchase as a demonstration of GPB. This is because education can be classified rather as Knowledge than Demographic, as the authors pointed out (Zepeda, Deal 2009). Therefore, Alphabet Theory gives a new insight in explaining organic food purchase, or GPB. In this paper, Alphabet theory is used to identify the driving factors that influence the consumers GPB.

1.2. Theory of Planned Behaviour

Theory of Planned Behaviour (TPB) is a well-known model to assess the consumers' beliefs and how they are translated into the behaviour. TPB is generally used to examine the consumers' beliefs, attitudes, intentions and their relationships with the actual behaviour. TPB considers that the development of the intention is driven by a combination of factors followed: 1) attitudes toward the behaviour, 2) subjective norms, and 3) perceived behavioural influence. This intention is thought to be the precursor of actual behaviour. The individual's intention to perform certain behaviour (in this case, buying environmentally friendly products) is the key element in the TPB, along with the three factors that have an impact on the intention in the first place. Figure 2 is a visual presentation of the Theory of Planned Behaviour. As the figure confirms, in the presence of Perceived behavioural control, consumers' positive attitudes, and a high level of positivity in the subjective norm, green behaviour increases (Albayrak, et al. 2011). In this thesis, this theory is used as a reference to how consumers motivation towards green purchasing behaviour can be formed based on their attitudes, perceptions, and intentions.

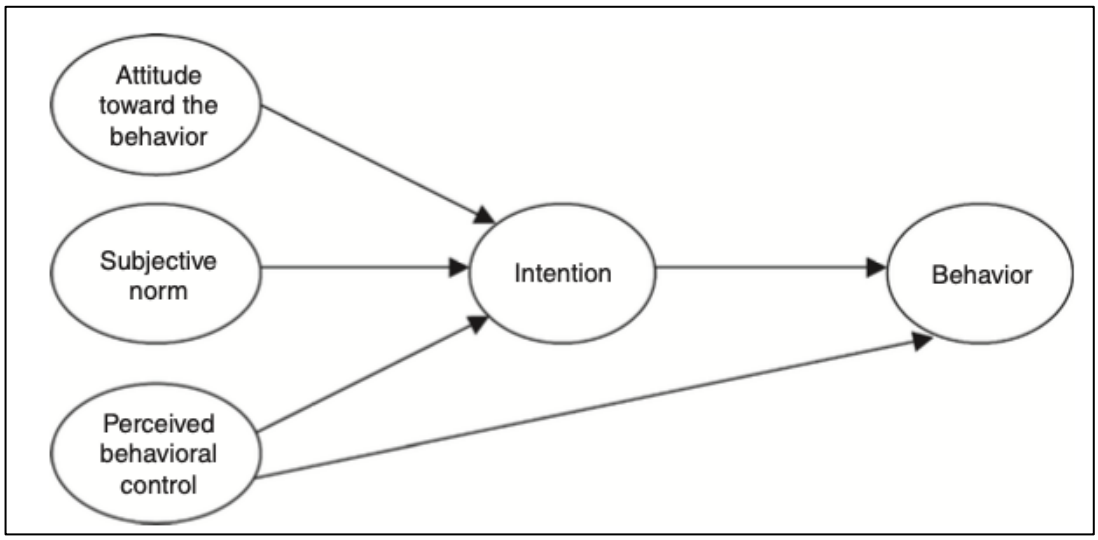

Figure 2. The framework of Theory of Planned Behaviour
Source: Ajzen (1991)

Factors 1) to 3) act as indicators of how hard people are willing to try, or how much effort they want to put in to carry out the certain behaviour. In other words, the greater the desire to participate in a particular behaviour, the more likely the behaviour will be carried out (Ajzen 1991). As part of influencing factors that shape intention, perceived behavioural control determines consumers' perceived control over their decision of whether a certain product is easy to consume or rather difficult or impossible to consume. For example, the intention to perform the green purchasing behaviour by performing the purchase of bio-degradable shopping bags instead of conventional plastic shopping bags would likely to happen in the existence of perceived behavioural control (Albayrak, et al. 2013). Intention towards green purchasing behaviour is formed not only by consumers' attitudes but also by perceived social norms, which are the individuals' assumptions about other consumers' normative expectations. This is called subjective norm, and it reflects the individuals' perceived social pressure that makes it difficult for him/her to conduct non-compliant behaviour or vice versa (Ajzen 1991). For example, purchasing environmentally friendly products can be interpreted as a result of an interaction in beliefs between public and individual. Because of the pressure from the subjective norm; public, individuals tend to give up their non-corresponding behaviour so that they behave accordingly to satisfy their perceived society (Biswas, et al. 2000).

1.3. Green attitude-behaviour gap

While many consumers claim to be concerned about the environment, their purchasing behaviour of environmentally friendly products does not always represent this concern (Kalafatis, et al. 1999). One explanation for this is the phenomenon given by Young et al. (2010) that consumers' decision-making processes become more complicated as they choose to live a healthy lifestyle. The authors named this phenomenon as "attitude-behaviour gap". While 30% of consumers highlighted that they are concerned about environmental problems, this does not always translate into their purchasing habits (Young, et al. 2010). Regardless of how favourable many consumers' attitudes toward the environment are, consumers tend to prioritise the cost for their self-interest maximization rather than the cost of cooperating to tackle the environmental issue by purchasing more environmentally friendly products. This trade-off is due to consumer anxiety about mutual social benefits (Gupta, Ogden 2009). In other words, they are concerned about the environment, yet they are not perfectly ready to put up with certain attributes such as the extra price of the products that they need to pay in order to behave accordingly to their claims. Hence the discrepancy of what they are saying about their concern towards the environment and the actual action in purchasing is so often observed (Jay 1990). Price, performance risk, confidence, and customer scepticism are just a few reasons of many, why environmentally conscious consumers tend not to purchase greener goods (Gupta, Ogden 2009). Indeed, a survey conducted in the UK revealed that even though the consumer concern for the environment keeps growing (albeit at a slower rate), their desire to purchase environmentally friendly goods has decreased (Mintel 1991; 1995). And this downward trend in the green purchasing would confirm that the consumers in the UK show hesitation in changing their purchasing habits despite their expressed concerns about the environmental issues (Chowdhury, Samuel 2014). An interesting study was carried out by Chowdhury and Samuel (2014). They applied the Theory of neutralisation (Sykes, Matza 1957) to the green attitude-behavioural gap to find out how and why environmentally conscious customers do not act accordingly to their attitudes and justify their indulgence to choose non-green, conventional products. The authors found out the explanations to the gap by applying the theory: 1) Despite their concern for the environmental issues, they felt they are not to be blamed for their non-green behaviours because they believe it was beyond their control – the denial of responsibility. 2) Since consumers cannot see the consequences of using non-green goods, they see no need to change their habits. 3) Consumers, according to Polonsky (2011), have trouble predicting potential results and effects. Difficulty in seeing the long-term gains from green purchasing behaviour is also the key reason of consumers feeling no significant need for the change

– the denial of injury/benefit (Johnstone, Tan 2015). 4) Condemning the condemners - when an individual accused of misconduct moves the emphasis to those who are condemning the person, the assumption is that they, too, participate in norm-violating behaviour, in this case, non-green purchasing behaviour (Vitell, Grove 1987). 5) Appeal to higher loyalties - when a person argues that his/her "norm-violating behaviour is the consequence of an effort to accomplish some higher order ideal or meaning", this is what happens (Chatzidakis, et al. 2004, 530). In other words, consumers sometimes prioritise what their loved one's opinion about the environmentally friendliness. Good example would be a husband saying he doesn't care about the green purchasing and a wife prioritise his statement over her interests in green consumer behaviour because keeping the calm relationship with her husband is more important for her. Like those, many studies witnessed the huge gap in their expressed worries about the current state of the environment and their actual behaviour, which does not necessarily lead to the consumers' green purchasing behaviour. In this paper, we will be aware of the existing gap in intention and the actual behaviour and examine if this hesitation can be observed among young Japanese consumers too.

2. FORMATION OF GREEN CONSUMER PROFILE

This chapter explores further into the factors affecting shaping the characteristics of green consumers. Socio-demographic and psychographic variables that have major impacts on the formation of ECCB are discussed in detail. The following section is devoted to a brief overview of green marketing's evolution, as well as its strategies and practices that consumers demonstrate GPB on, as well as its role as an external influencer of the formation of ECCB.

According to Rettie et al. (2014), green consumers have been described as those who are concerned about the environment and engage in pro-environmental behaviour. Recycling, energy conservation, avoiding plastic bags, considering alternative modes of transportation, and purchasing environmentally friendly goods are all examples of pro-environmental behaviour. They also try to avoid the purchase of products with any perceived risk to health and environment throughout the product cycle: production, use, and final disposal, as well as products that consume much energy, have unnecessary packaging, are made from ingredients rooted from threatened habitats or living things. Fortunately, a growing number of people are willing to pay more for green products if they offer the same level of satisfaction as traditional products (Bei, Simpson 1995).

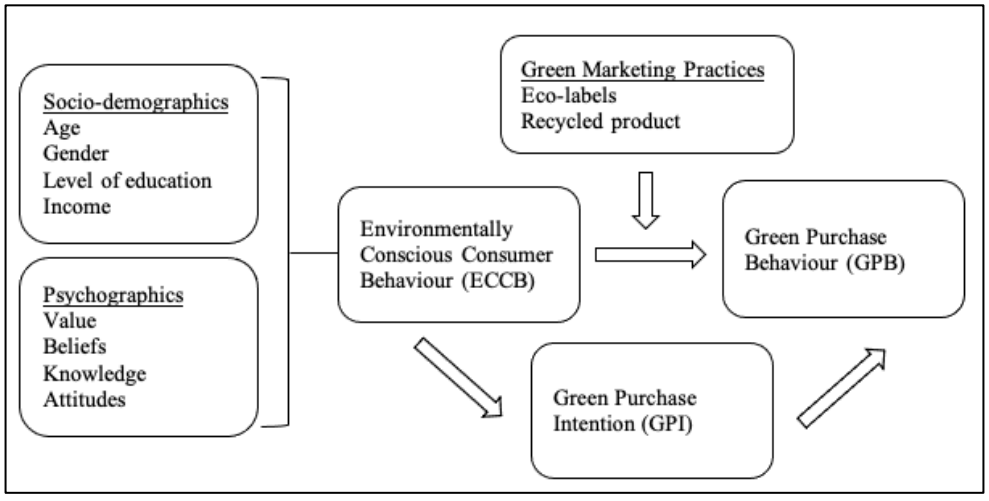

Figure 3. A simplified framework of green consumer behaviour variables that lead to GPB
Source: Author's adaptation (Akehurst, et al. 2012)

Many influencing factors affect the formation of green consumer profile mainly consists of two domains: socio-demographic characteristics and psychographic characteristics. In this paper, the author will use the framework as shown in figure 3 and take a deeper look at both characteristics and included factors in the following sections.

2.1. Socio-demographic factors

In some studies, age, education, and political orientation were all found to be strongly linked, with the conclusion that younger, better-educated, and liberal people are more concerned about environmental quality (Kanchanapibul, et al. 2014), while other studies claimed that the most common green consumer is female, 40 years old, with a high level of education and socioeconomic status above average (Akehurst, et al. 2012). As is obvious from these two examples of study results, what socio-demographic factors and how they influence in describing the profile of green consumers remain controversial and no clear definition has been given yet (Akehurst, et al. 2012). Nevertheless, in the study of Akehurst, et al. (2012) four factors were brought up to the argument: age, gender, income, and literacy. In this paper, the author will also use the same four factors in examining the green consumer profile among young Japanese consumers because of the novelty of the work of Akehurst.

Age. Since the subject of this study is limited to the young generation, how young consumers are placed in previous studies of green consumer profiling is mainly discussed at first, following general results from empirical studies of the effect of age on the green consumer profile. The young generation is a vast and strong target consumer group with nuanced behavioural intentions, outstanding lifestyles, and sensational disposable buying behaviours. Additionally, they are mostly well-educated and have access to information about the importance of sustainable consumption (Kanchanapibul, et al. 2014). According to Straughan and Roberts (1999), young consumers are more likely to be concerned about environmental issues thanks to their flexibility in accepting innovative ideas as well as their high level of consciousness about society, environment, and culture (Ottman, et al. 2006). Because this generation grew up during a time when environmental problems were highlighted worldwide, they are more likely to be sensitive to these issues. For this reason, the author assumed young consumers to be more inclined to take part in pro-environmental activities compared to older generations. Furthermore, young generations not only care about their immediate satisfaction from a certain purchase but also concern about the long-term impacts of

the previous actions and have a better ability to consider their choice of products based on the environmental friendliness compared to older generations (Smola, Sutton 2002). In general, empirical studies see the contradiction in results. Some found the non-significant effect of age on one's green behaviour (e.g. Straughan, Roberts 1999), while others witnessed significant and positive relations (Sandahl, Robertson 1989). From this, it is expected that Japanese young consumers can also be characterised as discussed above because of the similarity in nature as countries the studies were conducted are developed countries as in Japan. However, the paper will not examine further the impact of age on GPB as the study only includes young consumers and unable to compare with other generations.

Gender. Unfortunately, the findings of gender-based research are still far from conclusive as in the age and its impact on green consumption (Straughan, Roberts 1999). Some argue that due to the evolution of distinct sex roles, skills, and behaviours, most researchers believe that women are more likely than men to hold pro-environmental attitudes (Straughan, Roberts 1999). This is initially justified by the study of Eagly (1987), who claimed that women will weigh the effect of their decisions on others more carefully as a result of social growth and sex-role differences. Akehurst et al. (2012) concluded in their research that in terms of green consumption, women are more likely than men to behave in an environmentally conscious manner; however, the findings are not definitive. Contrary to the positive findings in the relations of women and green consumption, it has been identified that women are more concerned about environmental quality than men, despite the fact that men are more informed about environmental issues (Diamantopoulos, et al. 2003). According to Reizenstein et al. (1974), only men were willing to pay more for air pollution control, and Balderjahn (1988) found that the association between environmentally conscious attitudes and the use of non-polluting goods was more intense among men than among women. In this research, the sample includes both male and female in order to avoid the gender-based biased results as gender is not a good predictor to identify the ECCB of young Japanese because of the contradiction in the results from previous studies.

Education and income. Level of education is one of few socio-demographic variables that are often studied and found to be significantly linked to consumers' environmental attitudes and following GPB. Unlike age and gender, education sees consistency in the results across studies and is thought to have a positive correlation with the formation of ECCB and later GPB (Straughan, Roberts 1999). Generally, consumers with higher education level demonstrate more sensitivity to environmental degradation and act accordingly (Akehurst, et al. 2012). Level of income is often

tied to the level of education as Henion (1972) justified in his study that customers with a medium or high income are more likely to behave in an environmentally friendly manner due to their higher levels of education and, as a result, their increased sensitivity to social issues. Also, according to Awad (2011), income is often considered to have a positive relationship with green consumer behaviour because most green goods are perceived to be more expensive than traditional ones. These positive relationships between the level of income and green consumer behaviour are further acknowledged by Straughan and Roberts (1999) that the most popular reason for this assumption they found is that people with higher income levels can afford the marginal cost increases associated with promoting green causes and purchasing green products. The thesis will take the level of education more seriously as the target group of this study is mostly university students who do not have full-time work to be eligible enough to evaluate the level of income.

2.2. Psychographic factors

Psychographic variables are thought to provide a more solid and hence, more precise profile of green consumers (Straughan, Roberts 1999). The thesis will base the framework of Groening et al. (2018) to explore the psychological factors shaping the ECCB.

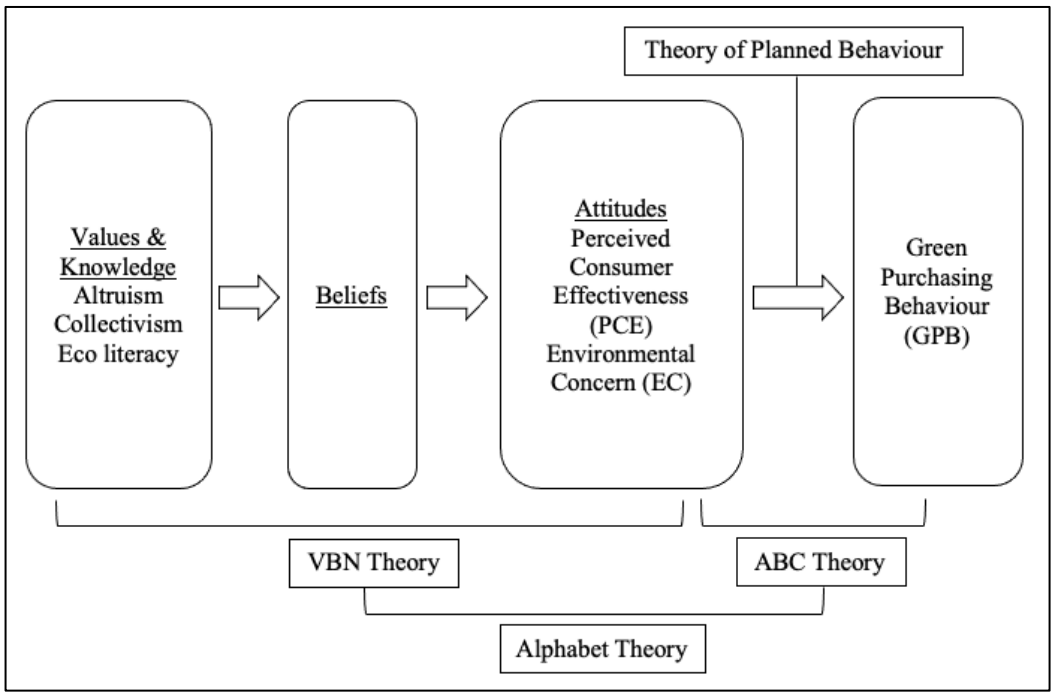

Figure 4. A simplified framework focuses on psychographic variables that lead to GPB
Source: Author's adaptation (Groening, et al. 2018)

Figure 4 visually explains the path of psychographic factors that lead to the final goal of GPB. Environmental values and knowledge are the foundation for all the other factors ahead. In this paper, the author will focus on altruism and collectivism as variables of environmental value. After successfully forming the beliefs on green consumption, attitude variables play a major role in enhancing the ECCB. Perceived Consumer Effectiveness (PCE) and Environmental Concern (EC) will be the components that have an influence on the formulation of consumers' attitude (Akehurst, et al. 2012), hence the paper will take a closer look at those two variables exclusively. The intention being the final step towards effective GPB. The intention is often abbreviated to GPI as in Green Purchase Intention and is formed as a result of an assessment of the interaction between personal and environmental consequences. It also refers to the consumers' readiness in acting for the benefit of the environment (Chan 1999). This, as well as all the other variables introduced above, will be further discussed in the following sections.

2.2.1. Value

Human values are described by Schwartz (1994) as "desirable goals, varying in importance, that serve as guiding principles in people's lives". According to McCarty and Shrum (1994), it is reasonable to assume that one's value will affect actions that function for the common good or social good. Recycling, for example, is an action that one "ought" to engage in, despite the fact that the immediate individual incentives for doing so are generally restricted. As a result, it will be expected that anyone who recycles is motivated by strong values. As a result, considering the impact of values will help us gain a better understanding of the motivational determinants of environmentally friendly action (Laroche, et al. 2001).

Altruism was first defined as a situation in which a customer acts on behalf of another without receiving anything in return by Schwartz (1968) and later analysed by Stern, et al. (1993) that altruism is a concern about the welfare of society as a whole, including others. Stern, et al. (1993) further examined the effect of three different kinds of altruism: socio-altruism, biospheric-altruism, and egoism towards green behaviour. Socio-altruism is the one we usually refer to, the concern for the well-being of others and is found to be the sole driving factor of green behaviour. This is the counterparty of egoism that refers to self-interest rather than the benefit of society. Biospheric-altruism is defined in the research as a concern for the living things other than human in the environment. They concluded the study by bringing up the certain relationships between three variables and consumers' willingness to take actions in green consumption. However, since their research was specifically focusing on the effect of altruism on the consumers' political actions

towards environmental prevention by paying extra taxes, the significance in the results was not observed. Nevertheless, a later study confirmed that people who had strong altruistic and biospheric concerns were more likely to make green purchases than those who had low altruistic and biospheric concerns (Albayrak, et al. 2013). This phenomenon is confirmed also in the Asian country as Yadav and Pathak (2016) emphasized the role of altruistic values in shaping young Indian consumers' purchasing intentions, the current study predicted that altruism would have a major effect on environmental attitudes. The thesis will further examine whether this tendency can also be observed among young Japanese consumers as in the same generation in the emerging countries.

Individualism and collectivism are thought to be two driving variables that have major impacts on consumer behaviour (Triandis 1993). Individualism refers to a person's reliance on his or her independent self; how much they believe in themselves. Individualists participate in cooperative organisations to ensure that, even though they are members of organizations, they remain distinct individuals. They often compete with others for status, which is centred on their achievements instead of just their participation in a community (Triandis 1993). This type of individual is believed to be not favourable to environmental stewardship. On the other hand, collectivism involves teamwork, helpfulness, and an emphasis on the group's interests rather than the individuals. Being a collectivist means putting one's motivations aside for the benefit of the community. Triandis (1993), McCarty and Shrum (1994) further noted that collectivists are much more environmentally friendly than individualistic peoples. Interestingly, consumers in Eastern Europe are considered to be more individualistic and short-term focused, while China, as well as other Asian consumers, are collectivistic and has a strong long-term orientation, according to Hofstede's (1980) cultural dimensions. Lee (1990) further goes on to say that people from Confucian countries like China, Japan, and Korea have a clear tendency to adhere to the standards of their social classes and that they are very worried about losing face within those groups. From that empirical evidence, the author assumes that young Japanese consumers also share collectivism hence, the paper will later examine to what extent do Japanese youths exhibit collectivism and the impacts on it on GPB.

2.2.2. Knowledge and Beliefs

According to D'Souza, et al. (2007), environmental knowledge, or eco-literacy is characterized as a consumer's understanding of the effect of a product's use on the environment. Environmental knowledge refers to the ability to evaluate whether a product comes in an environmentally friendly

manner. This knowledge is an essential construct that impacts how consumer base and arrange information (Alba, Hutchinson 1987), how much input is used in decision making (Brucks 1985), and how consumers analyse goods and services. (Murray, Schlacter 1990). Therefore, when purchasing a product, consumers who are more knowledgeable about environmental issues are more inclined to spend more on green goods (Laroche, et al. 2001). Furthermore, respondents from the younger generation have some knowledge of environmental concerns and draw conclusions about their dedication to green behaviour based on their knowledge (Kanchanapibul, et al. 2014). As in the case of age and gender, knowledge has a contradiction in the results from previous studies. For example, Maloney and Ward (1973) argued that there was no clear association between environmental knowledge and environmentally compatible action. Vining and Ebreo (1990), as well as (Chan 1999), have demonstrated that environmental knowledge is a powerful determinant of environmentally friendly action. Amyx et al. (1994) discovered that individuals who are well-informed about environmental issues are more likely to pay a fair premium for green goods. The thesis tries to determine the level of knowledge of young Japanese consumers and examine the relationships between their knowledge and actual GPB.

Green beliefs can be drawn from broad principles, including the belief that humans should protect the environment (Zepeda, Deal 2009). Some green beliefs, on the other hand, are situational and may not be based on a core belief; for example, beliefs about the quality of green goods (de Velde, et al. 2009). There are also green beliefs that fall somewhere between general and situational beliefs. For example, someone who values a healthy lifestyle might assume that eating organic food is better for her health (Zepeda, Deal 2009). Alternatively, consumers' green behaviour can be impacted by their internal and external beliefs (other people's subjective norms) (Osterhus 1997). As discussed in 1.1.2, external beliefs are suitable for describing public behaviour where group norms can be more influential, such as the negative consequences of non-compliance (Biswas, et al. 2000). He brought up an example of the purchase of goods produced from recycled materials or products that can be recycled easily, to explain the key effects and interaction of beliefs and predicted negative consequences from external beliefs. Customers who are willing to pay more for green goods agree that businesses do not behave responsibly against the environment, while reluctant respondents believe the contrary (Laroche, et al. 2001). In short, green beliefs have strong influences from both external factors such as the pressure from group norms and internal factors of how much consumers believe that their action plays role in environmental protection.

2.2.3. Attitudes

Environmental attitude is characterized as the capacity to assess the state of the environment with a degree of agreement (favour) or disagreement (disfavour) (Milfont, Duckitt 2010). Additionally, environmental attitudes, according to Zelezny, et al. (2000), are the perceptions of individuals who perceive themselves to be part of the environment. Furthermore, if an individual has a positive mindset toward the environment, they are more likely to act in a pro-environmental manner, which has a positive impact on green purchasing decisions. Research done by Kaiser, et al. (2007) revealed that young consumers' environmental attitudes have a major influence on their green behaviour, same as older age groups. Similarly, Kanchanapibul, et al. (2014) mentioned in their study that young consumers have a very optimistic attitude about environmentally friendly products. Therefore, this research expects to see a similar trend between young Japanese consumers' attitudes towards the environment and their GPB. Environmental attitudes have two major dimensions that have prominent impacts on the GPB, that is, Perceived consumer effectiveness (PCE) and Environmental concerns (EC) (Straughan, Roberts 1999).

Perceived consumer effectiveness (PCE) refers to consumers' attitudes of how to approach environmental concerns as a reflection of their belief that individuals will have a positive impact on the outcome of such issues (Roberts 1995). Therefore, PCE is one of the major drivers of GPB by positively influencing ECCB through consumers' perception of how much of a difference their decisions will make in addressing environmental issues, and encouraging socially responsible attitudes (Ellen, et al. 1991). Its focus is rather on individual-level concern on the environment than social concern in general. PCE is displayed in forms of green consumption (Roberts 1996), green product purchases (Lee, et al. 2014), and the purchase of goods packaged in a minimal/green manner (pre-cycling) (Ellen 1994). Although PCE successfully explains the individual concerns and actions in accordance with the perceived environmental concerns of consumers, it does not ideally encourage group participation in environmental prevention activities. This is particularly prominent among individuals with poor PCE who are more likely to endorse environmental regulations enacted by the government because they do not think their actions are meaningful (Ellen, et al. 1991). Therefore, it is important to make sure that individuals believe their pro-environmental efforts would be successful in combating environmental degradation (Awad 2011). He further concluded in his research by highlighting the fact that consumers no longer purchase products with a single claim of being "green", businesses are now facing the necessity to demonstrate how consumers' choice of green products positively influences in combatting

environmental degradation. In this study, the author will examine the level of PCE among young Japanese consumers and see if PCE significantly influences their ECCB.

Environmental concern (EC) is usually recognised as an individual's awareness of environmental issues and ability to participate in problem-solving (Dunlap, Jones 2002). According to Maloney, et al. (1975), EC is associated with feelings, knowledge, and the willingness to modify one's behaviour. Bang, et al. (2000) highlighted in their study that consumers who are more concerned about the environment are more inclined to buy green goods than those who are less concerned. From the myriad of previous studies, several authors agree on the high level of consumers' EC have positive impacts on their GPB (Czap, Czap 2010) and is even considered as a pre-requisite for paying attention to specific product attributes such as environmentally friendliness (Thøgersen 2000). However, although many people may be concerned about the environment, they may also believe that it is the role of the government and/or big companies to safeguard it (Wiener, Sukhdial 1990). This neglect in individual-level responsibility of consumers despite their displayed EC is thought to be one of the major reasons that the effect of EC does not have a significant influence on ECCB (Awad 2011). This may imply that customers are more concerned about the environment if they believe in the significance of their behaviour in maintaining the environment (Akehurst, et al.s 2012). The thesis tries to find out the level of EC among Japanese youths and examine if the same tendency of EC to be less influential compared to other variables in forming ECCB can be observed.

2.3. Green marketing

The definition of green marketing reflects the various factors, and it varies depending on the study. In this thesis, the brief overview of how the green marketing has been evolving will be given, along with the reactions of businesses and consumers towards the establishment of green marketing.

2.3.1. Evolution of green marketing

Green marketing evolved through three stages according to Peattie (2001). The first step was dubbed "Ecological" green marketing, and all marketing efforts during this period were focused on aiding with environmental issues and providing solutions. The second step was "Environmental" green marketing, in which the emphasis transitioned to renewable technologies,

which included the creation of new innovative goods that addressed pollution and waste concerns. The “Sustainable” green marketing process was the third phase and it started to be recognised significantly in the late 1990s and early 2000s. In 1974, the American Marketing Association hosted the first workshop about “Ecological Green Marketing”. The purpose was to introduce the term “Green Marketing” for the first time. Green marketing was initially described as the study of the positive and negative aspects of pollution and energy depletion (Kinnear, Taylor 1973). Simultaneously, the first definition related to green marketing has provided in 1976 by Hennion and Kinnear (1976) as “concerned with all marketing activities that have served to help cause environmental problems and that may serve to provide a remedy for environmental problems”. In the following years beginning in the late 1980s, “Environmental Green Marketing” took place as an understanding of global environmental issues develops, so does the recognition of the interdependence of the environment, society, and economy, marketing began to concentrate its attention not only on reducing environmental harm but also on achieving long-term sustainability (Dangelico, Vocalelli, 2017). Accordingly, Peattie (1995) summarised this new idea of green marketing as “the holistic management process responsible for identifying, anticipating and satisfying the needs of customers and society, in a profitable and sustainable way”. This notion was further developed and structured more in an organised manner as approaching the final phase of “Sustainable Green Marketing”. For example, Fuller (1999) defined Green Marketing as “the process of planning, implementing and controlling the development, pricing, promotion, and distribution of products in a manner that satisfies the following three criteria: (1) customer needs are met, (2) organizational goals are attained, and (3) the process is compatible with eco-systems”. This definition successfully empathises on how green marketing shifted to the central function for more sustainable production and corporate operation because it has become vital for businesses to manufacture environmentally friendly goods as raising the attention of such products increases and consumers seek environmentally friendly products and technologies (Lazăr n.d.).

2.3.2. Green marketing impacts on businesses and consumers

Green marketing increasingly adopted recently in many sectors of businesses because, in today's business world, environmental protection is a primary focus for two reasons: one, the government’s pressure to go green, and the other, shifting consumer needs, wants, and expectations in a green direction. In other words, firms’ motivation to implement green marketing can be explained by both external, and internal drivers. On one hand, external drivers generally include meeting customer demand, responding to a competitor’s greening efforts, channel/supplier demands for input changes, and the regulations from the government (Polonsky, Rosenberger

2001). On the other hand, having sufficient management support and engagement, employee education, and financial and human resource capital encourage firms to go green by stimulating their internal drivers (Lee 2008). Moreover, the significance of green marketing is strongly enhanced by the fact that customers' needs are shifting toward more sustainable goods and services, and by responding to these needs, firms see innovation to green product and process and gain competitive advantages from that (Ottman, et al. 2006). For that reason, the authors highlighted that firms are striving to satisfy two dimensions simultaneously by adopting green marketing: to develop a top-notch level of environmentally friendly products and to meet consumers' expectation. The advent of green marketing can also be explained as it stems from the realization that firms are judged not only on their product/service results but also on their social and environmental responsibilities. In the sense of environmental responsibility, green marketing tends to be a support mechanism for tracking, searching, and meeting customer needs and desires (Ottman 1993).

In terms of the impacts of green marketing on consumers, in section 2.3.1, the evolution of green marketing and influencing factors for businesses to go green were discussed, but little was mentioned about its tangible impacts to consumers to stimulate their GPB. In this section, the author will introduce several real-life examples of green products and their attributes where businesses demonstrate their green marketing strategies, that has an influence on the decision-making process of consumers. Green products can be anything that is "ecological", ranging from food, cosmetics, clothes, electronics, and so on (Gurău, Ranchhod 2005) as long as they have superiority in recycling capacity, low emissions, and resource efficiency (Ginsberg, Bloom 2004). In this paper, green food, recycled products, and eco-label will be exclusively explained as examples of green marketing practices since the study limits its focus to young Japanese' GPB on grocery domains.

It is universally acknowledged that the production and consumption of food products, particularly meat such as beef and pork, contributes to air pollution, land and water scarcity, and domestic waste in the ecosystem, resulting in environmental degradation (Elferink, et al. 2008). In order to combat this negative impact of food production on the environment, raising awareness and demand for green food has been observed. For instance, green food sales in the United States soared by about 20% per year from $1 billion in 1990 to $17 billion in 2006, accounting for about 2.5 per cent of total food sales (Dimitri, Greene 2002). Green food is products grown without pesticides, synthetic fertilizers, sewage sludge, genetically modified organisms, or ionizing radiation, as well

as products manufactured without antibiotics or growth hormones (Dahm, et al. 2009). Empirical research in both developed and developing countries have found that environmental concerns have a positive impact on attitudes toward green food purchases (Nguyen, et al. 2019). Indeed, consumers in Europe and North America express enthusiasm about purchasing green food because they perceive it is healthier, tastes better, and is better for the environment, while the primary factors for not buying green food are high prices and limited availability (Thøgersen 2010). According to Aschemann-Witzel & Aagaard (2014), young consumers have favourable perceptions toward organic food, but they seldom perform the actual purchases.

Consumers perceive recycling and the use of recycled products as a way to "leave the environment as it is" (Guagnano 2001) and recycled products are favourably regarded by consumers (Mobley, et al. 1995). Guagnano (2001) found that over 86 per cent of respondents would be favoured to pay more for a common household product if it is made from recycled materials. Accordingly, Lund (1982) pointed out that the implementation of recycled materials into the production process of businesses is beneficial in that they can make more money than the average company. However, there are some contradictions in the previous studies. In some cases, Recycled goods are thought to be of poorer quality than products manufactured from fresh raw materials (Reid 1990), and consumers' perceptions of recycled product quality are influenced by product category (Mobley, et al. 1995).

As we have covered above, there are myriad ways that firms apply their green marketing onto their product attributes such as green food and products made from recycled materials. But often, consumers get confused to differentiate the green products from conventional ones due to the vast variety of the products available at grocery stores. In order to eliminate this consumers' confusion, eco-labelling was first implemented in Germany in 1978 (Kirchhoff 2000). Eco-labels are icons or logos on products that indicate that they are environmentally friendly and can be identified as green. As a result, eco-labels serve as a platform for informing customers about the product's genuine environmental benefits (Atkinson, Rosenthal 2014). Eco-labels help consumers identify products' intangible qualities, including the production process and the value of selecting the particular product, by reducing information asymmetry between sellers and buyers (Cai, et al. 2017). For those reasons, when it comes to purchasing, eco-labels are useful to green consumers (Amos, et al. 2014) since the packaging is the most appealing factor that initially sways a consumer in the purchasing decision process (Tang, et al. 2004). In Japan, there are several eco-labels available but the most common one the firms can obtain is called "Eco mark" from Japan

Environmental Association, a third-party monitoring organisation. Products from any field of businesses, as well as services in hotels and restaurants, are eligible to Eco mark when they meet the requirements of having positive attributes towards the environmental protection and less environmental damages throughout the product's life cycle, which includes the product's creation, manufacturing, consumption, and disposal (Nishikawa 2017).

3. METHODOLOGY AND DATA ANALYSIS

The author illustrates the methodological part of quantitative research, the design of questionnaire structure, data collection, target group selection process, and data analysis in this chapter. The first part covers the approach to the deductive quantitative method by using both primary and secondary data. Second part reviews research designs as well as the data collection procedure. The following part analyses the gathered data and examine the relationships of independent and dependent variables. Finally, the author will discuss the possible suggestions and limitation of the empirical study.

3.1. Research Methodology

This thesis contains two research methods: literature review and quantitative research. On one hand, secondary data was gathered from the review of prior works of literature to gain in-depth knowledge of green consumer behaviour and the formation of green consumer profile. Secondary data is the information gathered from other sources that were not developed exclusively for the study in question, such as business websites, research reports, or annual reports, while primary data is gathered by the author and can come in many forms, including interviews, questionnaires, observations, and other methods of data collection (Burns 2000). Hence, primary data of this thesis will be gained from the online questionnaire survey that provides empirical evidence on the features of young Japanese consumers' green profile and the actual purchasing behaviour towards greengrocery products. The study focuses on a deductive approach since existing theories are used as a starting point in a deductive method, which is then validated using empirical results from researchers (DePoy, Gitlin 2005). By using a deductive approach, the empirical study can obtain implications to green consumer behaviour among young Japanese in the grocery domain rather than coming up with new theories from gained information as in an inductive approach. The quantitative research method was chosen because, in quantitative studies, we rely on questionnaires to assess how strongly people feel about issues and/or react to the phenomenon, according to Silverman (2002). Therefore, it perfectly suits to analyse the green consumer profile and entailing attitude and behaviour towards green products.

In the result section, gathered data will be used to interpret the components to describe the young Japanese' green consumer behaviour and their green purchasing behaviour by learning from the previous empirical studies. Firstly, descriptive results of the socio-demographical, as well as the psychographic components of the respondents will be shown in order to consolidate the green consumer profile of Japanese youths. Then, the relationships of the socio-demographical features and the respondent's green consumer behaviour will be addressed by using the multiple linear regression method. Spearman's correlation coefficients will be used to measure the impacts of psychographic variables on green consumer behaviour. The reasons behind the choice of Spearman's correlation are that it best suits the study as this method deals with non-parametric measures to assess the direction and the strength of the two paired variables. It also allows the data from ordinal scales, which the Likert scale fall within. Pearson's correlation, on the other hand, works better with the liner relationships with continuous variable with ratio or interval scales, which is not the case in this study. Therefore, in the study, the correlation analysis will be carried out under Spearman's correlation method. This section also addresses to what extent the respondents' green consumer behaviour is translated into the actual green purchasing behaviour. The final section of results reveals the respondent's perception towards the green marketing practices of businesses and see if there is a favourable impact on the green consumer behaviour, as well as green purchase behaviour of the respondents.

3.1.1. Questionnaire design

The survey consists mainly of two parts. The first part is designed to evaluate the ECCB of young Japanese consumers in terms of the socio-demographical, and psychographic factors by adopting the measurement constructed by Straughan and Roberts (1999). The second part measures the GPB of consumers concerning their expressed ECCB, along with the impact of green marketing practices on their GPB. The questionnaire consists of four sections: two open-ended questions, seven multiple-choice questions, and 34 items of 5 point, as well as two items of 7-point Likert-scale questions.

The first section contains four multiple-choice questions regarding respondents' socio-demographical status: age, gender, level of education, and level of income, which is modified from the earlier study by Kanchanapibul, et al. (2014). The second section intends to measure the five variables of the psychographic factors: altruism, collectivism, knowledge, PCE, and EC that have an influence on the formation of the respondents' green consumer profile. altruism (ALT) from

five items with the 5-point scale of agreement (1 = strongly disagree, 5 = strongly agree), collectivism (COLLECT) from three items with the 5-point scale of importance (1 = very unimportant, 5 = very important), knowledge (EK) from four five-category, multiple-choice questions with 1 point for a correct answer and 0 for a wrong answer, perceived consumer effectiveness (PCE) from three items with the 5-point scale of agreement (1 = strongly disagree, 5 = strongly agree), and environmental concerns (EC) from five items with the 5-point scale of tendency (1 = never true, 5 = always true). Questions there were chosen based on the studies of Yadav, Pathak (2016), Laroche, et al. (2001), Chan (2001), Kim, Choi (2005), and Straughan, Roberts (1999). The third section aims to identify the respondents' green consumer behaviours, green purchase intention and their actual green purchase behaviour. Environmentally conscious consumer behaviour (ECCB) will be measured by 10 items with the 5-point scale of tendency (1 = never true, 5 = always true), green purchase intention (GPI) by three items with the 5-point scale of likelihood (1 = never true, 5 = always true), and green purchase behaviour (GPB) by two items of 7-point scales and one open-ended question. Likert-scale questions were used here according to the previous studies of Straughan, Roberts (1999), and Chan (2001). The final section intends to measure the respondents' perceptions towards green marketing practices and how it impacts consumers' purchasing intentions, referring the study done by Kong, et al. (2014). Green marketing practices (GM), especially the effect of eco-label and sustainable packaging will be measured by five items with the 5-point scale of agreement (1 = strongly disagree, 5 = strongly agree). Details of the questionnaire are available in Appendix.

3.1.2. Data collection

Data collection was carried out by using non-probability judgemental sampling methods as this method gives the author control over who should be included in this study as representative samples. Since the study's primary focus is the young generation, the questionnaire was distributed mainly to university students or age group of 19-29 years old. The distribution of the survey was done by using instruments such as social media, email, messages. The choice of the instruments was decided based on the author's assumption that the audiences are those who actively participating in the online network services. Respondents were collected from the author's connection on the social media services as well as with the help from the respondents' network. The data collection period was set for a week from 17th to 23rd of March and the questionnaire collected 81 responses by the end of the period. All of the respondents meet the age requirement therefore eligible for the study.

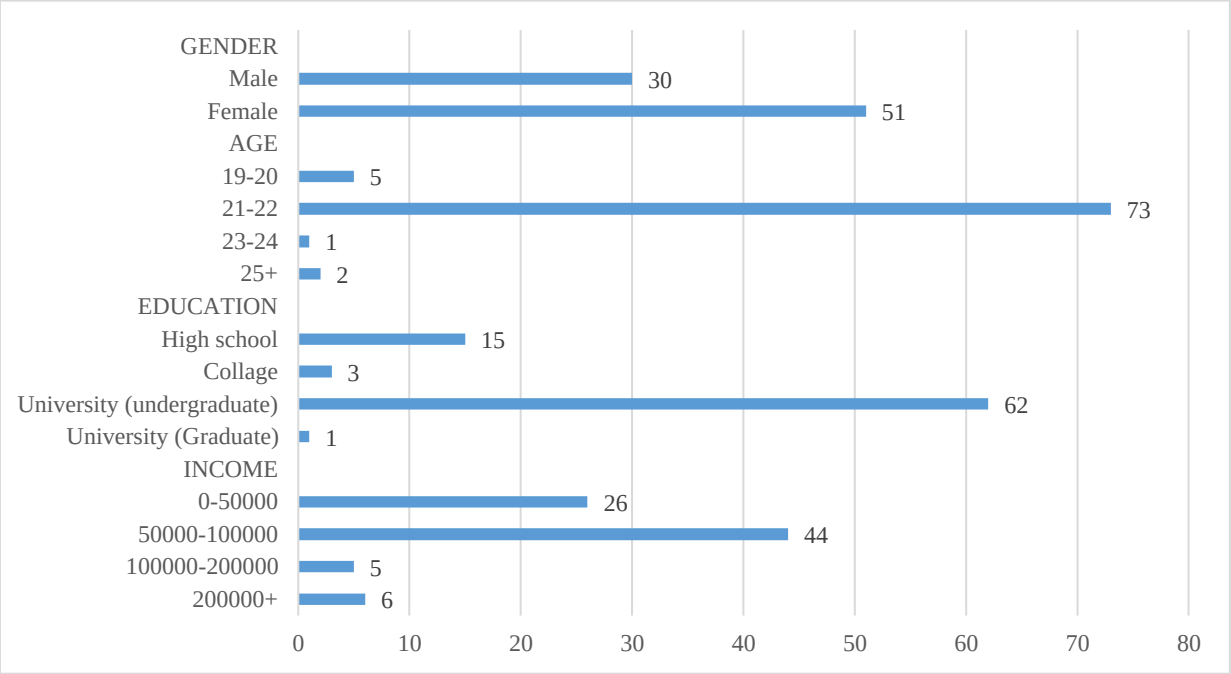

Figure 5. Socio-demographic distribution
Source: Tanabe (April 2021) data collected by author

According to the collected data, the demographic of the respondents are as follows: 30 respondents of male and 51 respondents of female, age group of 19-20 years old was 5 respondents, 21-22 years old was 73 respondents, 23-24 years old was 1 respondent, and more than 25 years old was 2 respondents. The majority of the respondents appeared to be Bachelor students at universities - 62 respondents, followed by high school graduates of 15 respondents, college students of 3 respondents and Masters' degree of 1 respondent. The monthly income level of the respondents was skewed as 26 respondents earned 0 to 50000 yen, 44 respondents for 50000 to 100000 yen, 5 respondents for 100000 to 200000 yen and only 6 respondents earned more than 200000 yen (cf. 1 euro ≈ 125 yen). Therefore, the dominant respondents are those who are 20-21 years old, Bachelor students with 50000 to 100000 monthly income.

3.2. Results

In this section, the findings from the data collection will be discussed. Descriptive analysis along with Spearman's correlation method was used in order to analyse the results from the online questionnaire and identify the characteristics of young Japanese consumers' green profile and purchasing behaviour towards green products at grocery stores. The first section will focus on the

descriptive analysis by comparing the sum of mean scores from each item of Likert-scale questions and looking at the % dispersion of individual questions to identify the green consumer profile of the respondents. The following section addresses the relationships of predictors by applying Spearman's correlation method and analyse the influence of each predictor on the respondents' ECCB, GPI, and GPB. Finally, a discussion and recommendation from the gained information will be made in the third section.

3.2.1. Descriptive statistics of green consumer behaviour

Green consumer profile consists of socio-demographic and psychographic variables. Socio-demographic variables refer to the age, gender, level of education, income in this study. The data on psychographic variables, namely altruism, collectivism, and knowledge for shaping ECCB, as well as influences of green marketing practices, resulting GPI, GPB were collected through the questionnaire. The sum of mean scores from each item (called mean scores from hereafter) and the corresponding standard deviations of each variable are shown in Table 1 in order to get a descriptive overview of the results and get indications from those.

Table 1. Descriptive Statistics of the Variables

	Mean Score	**Standard Deviation**
ALT	3.97	0.70
COLLECT	4.35	0.69
EK	0.41	0.22
PCE	4.19	0.77
EC	4.00	0.63
GMS	3.69	0.68
ECCB	2.89	0.79
GPI	3.29	0.93
GPB:		
GPB1: Shopping frequency	1.95	1.14
GPB2: Amount spent	1.79	1.01
GPB3: No. of items bought	1.21	1.73

Source: Tanabe (April 2021), author's calculations

The results indicate that young Japanese consumers have exhibited a high level of altruism and collectivism with scores of 3.97 and 4.35 respectively (Table 1). Also, figure 6 shows that all of the measuring statements for Altruism recorded more than half of the respondents answering either agree or strongly agree, indicating they are classified as highly altruistic consumers. Collectivism was measured in terms of how much respondents feel the importance of "loving", "helpful", and "the warm relationships with others". And 34, 46, and 46 respondents, respectively felt that those factors above are very important for them. This means over 80% of respondents felt those factors are important or very important for them to respect.

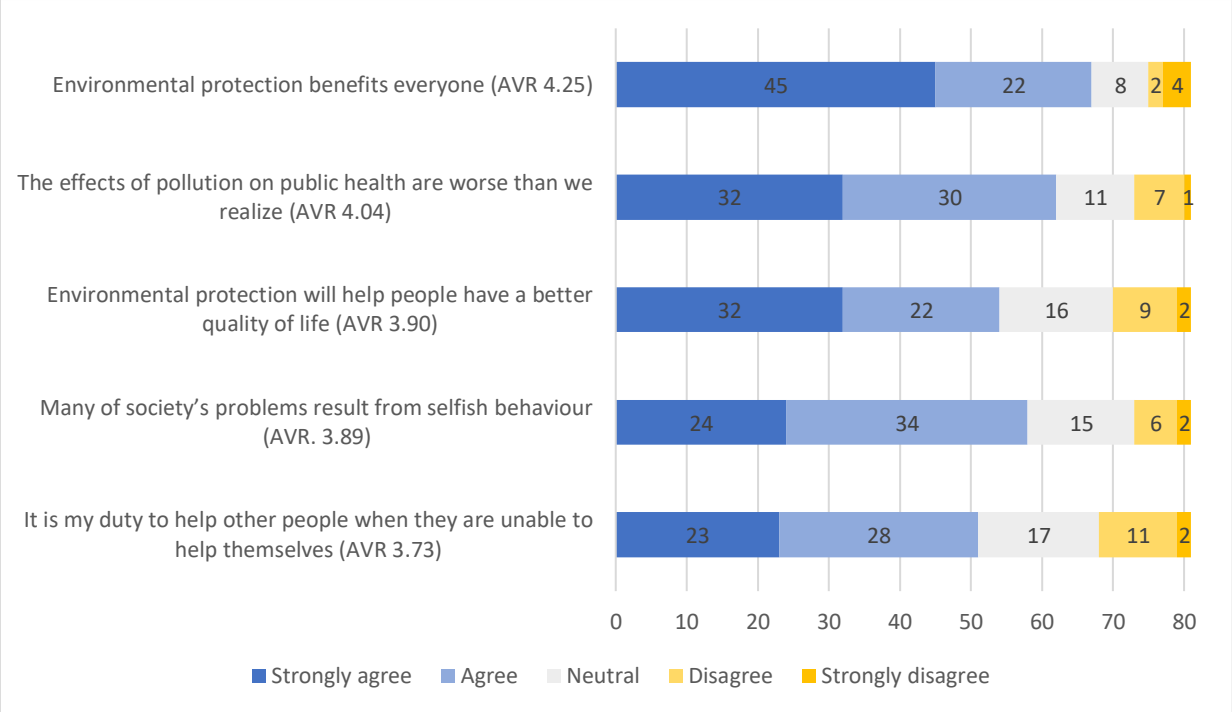

Figure 6. Responses to the measuring statements of Altruism
Source: Tanabe (April 2021) data collected by author

Knowledge on environmental degradation scored 0.41 (Table 1), which is slightly below the mid-score. But compared to the score of 0.35 from a previous empirical study conducted among Chinese audience (Chan 2001), young Japanese consumers can be concluded to be more knowledgeable about the environment. As is obvious from figure 7, respondents showed great knowledge on the effect of poisonous metals to wild animals particularly, with 48 respondents chose the correct answer, while their least known environmental issue was the cause of the lead in the atmosphere, which was resulted from the emissions from cars.

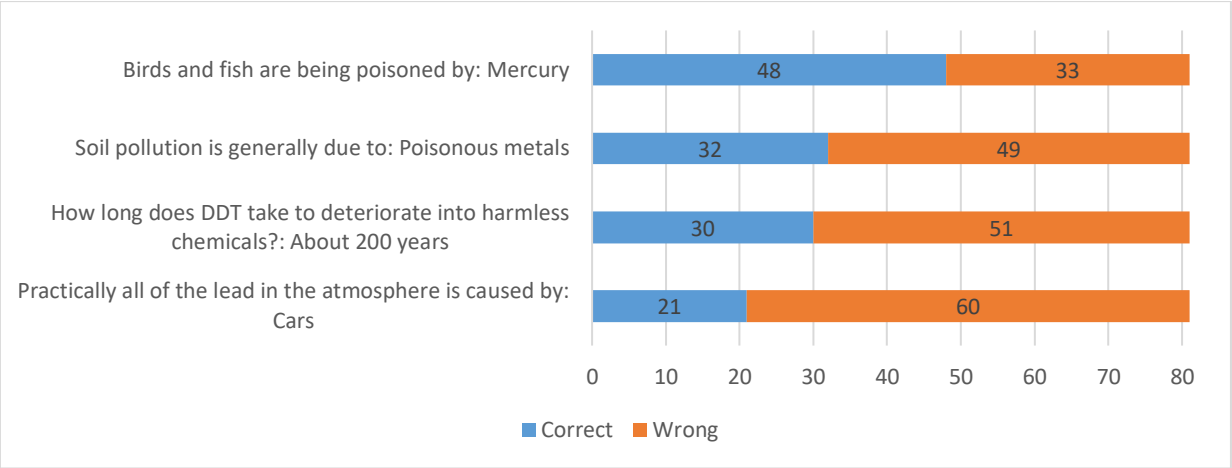

Figure 7. Responses to the measuring statements of Knowledge
Source: Tanabe (April 2021) data collected by author

PCE and EC were the measurements of the consumers' attitudes. Along 5-point Likert scale, PCE and EC mean scored as high as 4.19 and 4.00, respectively (Table 1). As is observed in figure 8, the results of the PCE had similarity in the level of agreement as 61 to 72 respondents either agreed or strongly agreed to all of the statements. Respondents perceived that an individual's behaviour can make effective differences in promoting the environment and have a positive impact on environmental protection by means available to them such as saving recourses and purchasing environmentally friendly products. This positive consumer effectiveness in environmental protection seemed to be widely shared among young consumers in Japan.

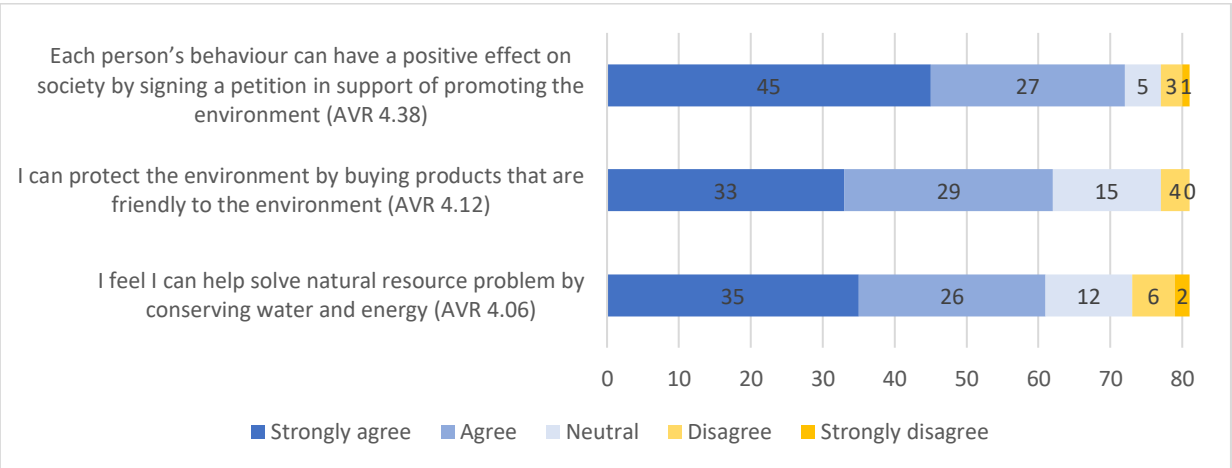

Figure 8. Responses to the measuring statements of PCE
Source: Tanabe (April 2021) data collected by author

However, apart from the coherent results in PCE, EC saw major discrepancies in the level of agreement as it varies from low as 30 respondents to as high as 79 respondents. According to figure 9, respondents don't agree with the idea of humans' interference with nature results in disastrous consequences, even though they do feel that humans need to live in harmony with nature. Yet, because the level of negative responses (usually not true, never true) is generally low, ranging from 1 to 18 respondents, young Japanese are more of an indifferent group in terms of environmental concerns rather than extremely negative or positive toward it.

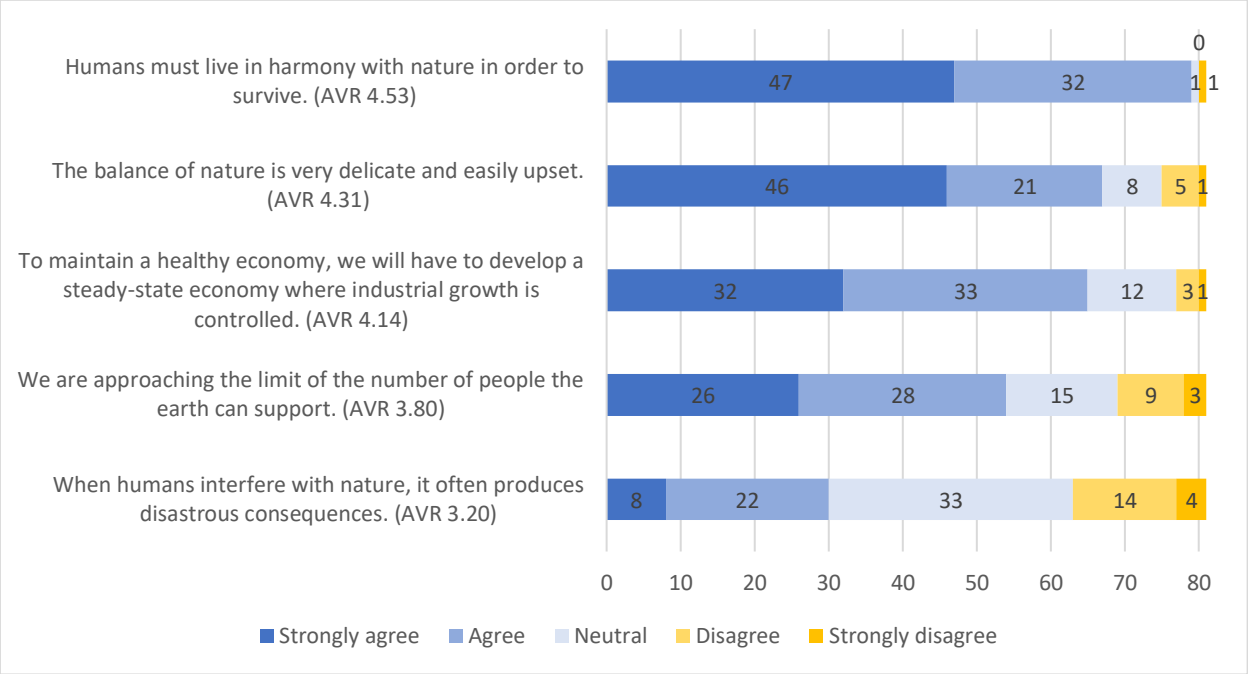

Figure 9. Responses to the measuring statements of EC
Source: Tanabe (April 2021) data collected by author

The mean score of green consumer behaviour, namely ECCB was 2.89 (Table 1), which is the lowest among the predictors. More-than-average scores of psychographic variables: altruism, collectivism, and knowledge were not translated into ECCB effectively. As shown in figure 10, 61 respondents have tried buying products with reusable containers, which is a good demonstration of ECCB. Whereas only 7 of them have consistent effort in choosing products that avoid the use of scarce recourses and 15 of them to make every effort to choose products with recycled paper.

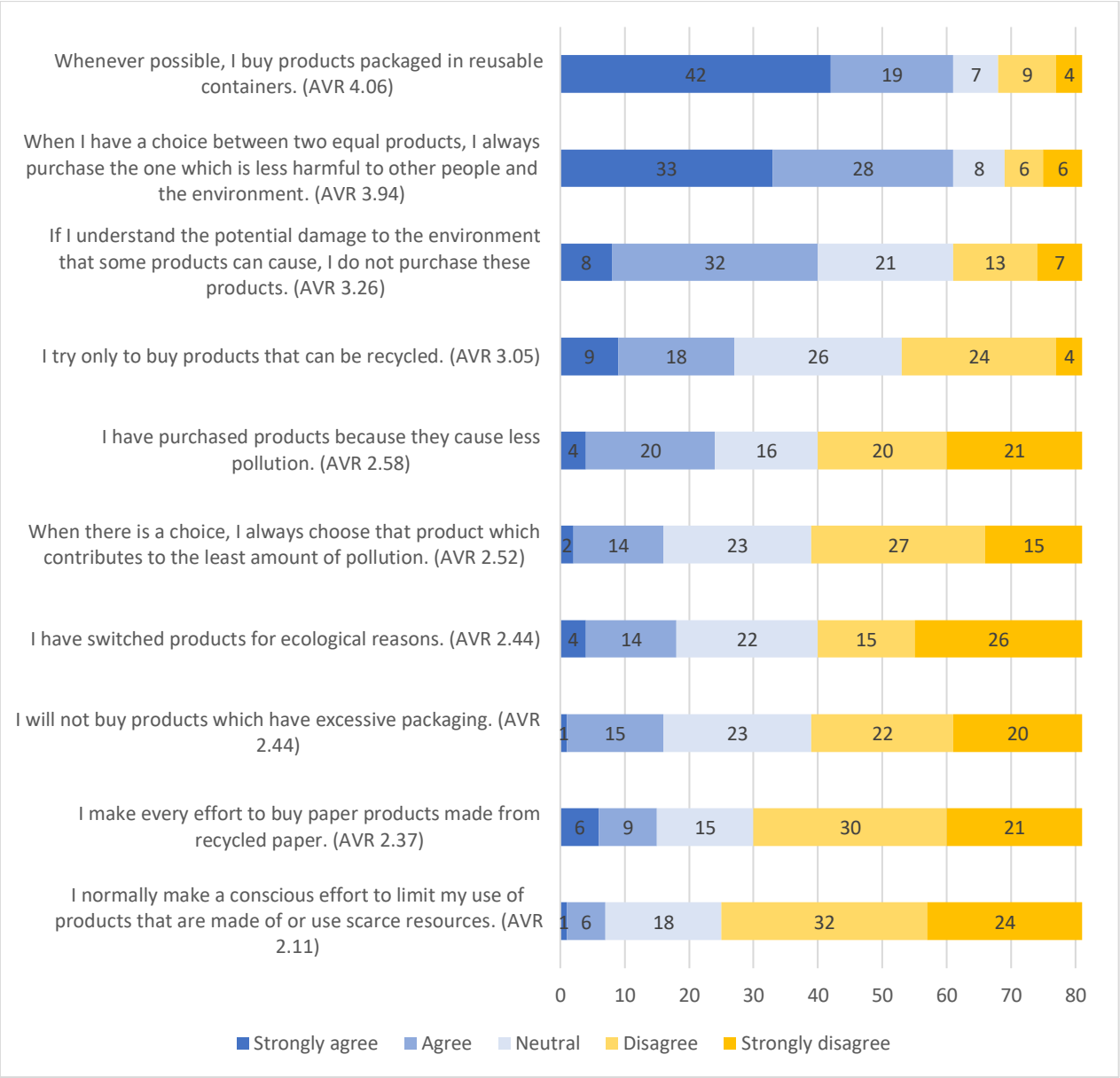

Figure 10. Responses to the measuring statements of ECCB
Source: Tanabe (April 2021) data collected by author

Green purchase intention (GPI) scored a mean of 3.29, and the businesses' marketing practices has been marked 3.69 (Table 1). Both scored more than mid-value and seem to have been positively perceived among the respondents. In terms of the GPI, 62 respondents are very likely or likely to purchase products that are not harmful to the environments, while the intention to switch brand for ecological reasons was a feasible option to only 15 respondents (Figure 11).

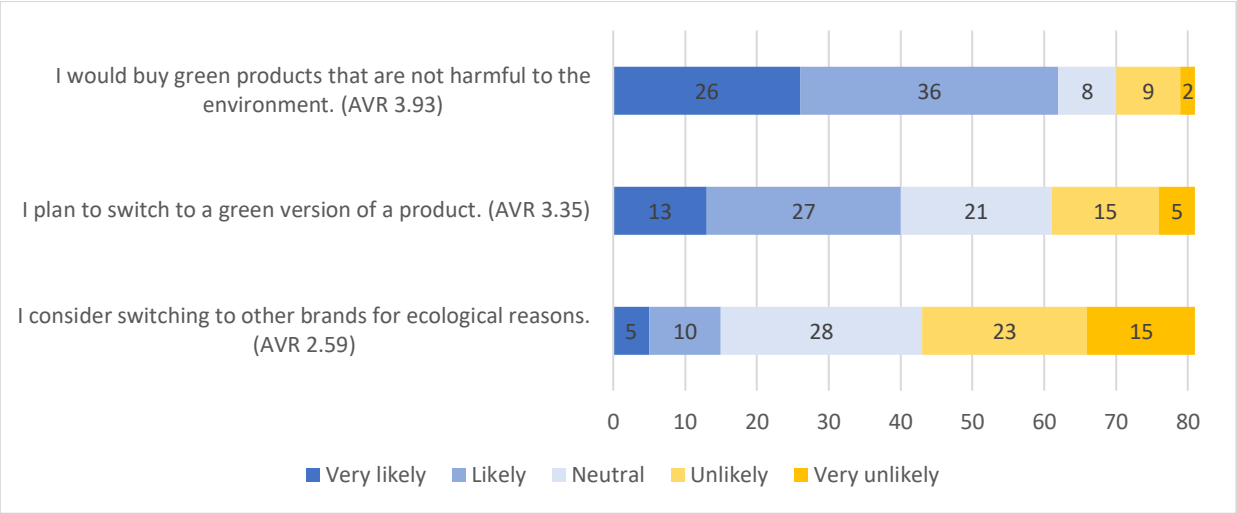

Figure 11. Responses to the measuring statements of GPI
Source: Tanabe (April 2021) data collected by author

Focusing on the influences of the green marketing practices on the green consumer behaviour of young Japanese, figure 12 shows the level of agreement on the importance of green marketing practices among respondents. In this study, the author focuses on sustainable packaging and eco-labels as the main attributes of green marketing practices. It is clear that recyclable, non-excessive attributes of packaging attracted the respondents the most with 67 and 63 respondents with either strongly agree or agree with the statements. However, eco-label was rather disregarded by the respondents as it seems that the eco-label doesn't convey accurate information to consumers, and it is also difficult to tell the most important information from the labels. Especially the accessibility to understandable information on the eco-label is a major bottleneck to Japanese young consumers, as almost half of the respondents (38 respondents – 47%) disagree or strongly disagree with the statement "The information on eco-labels is usually easy to understand".

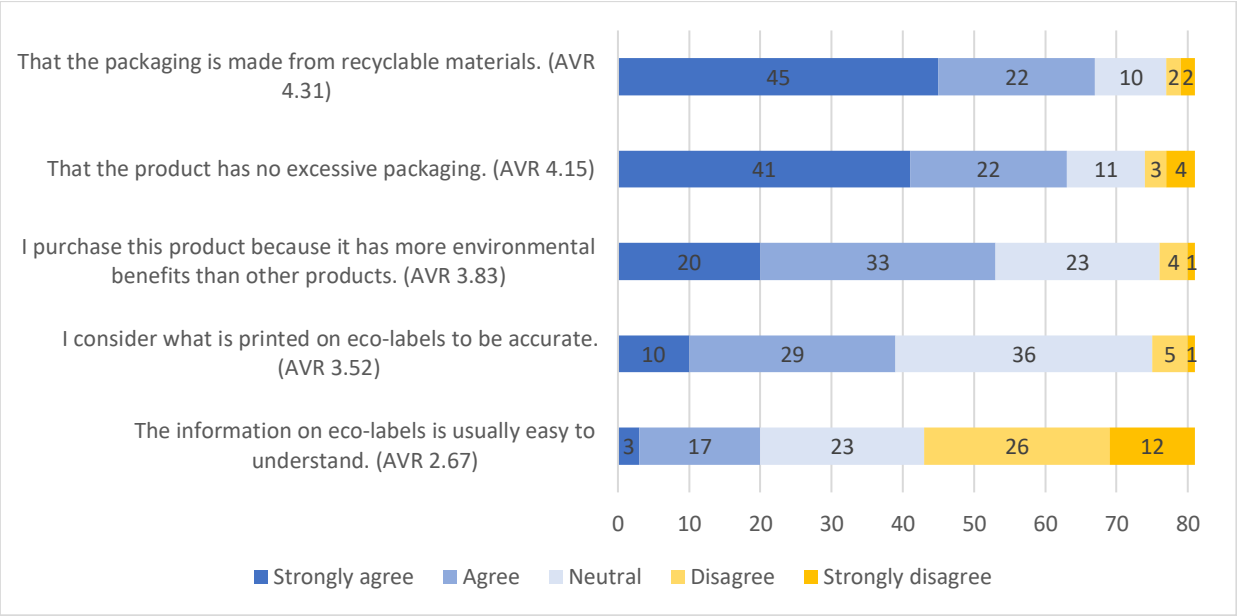

Figure 12. Responses to the measuring statements of Green Marketing Practices
Source: Tanabe (April 2021) data collected by author

Despite the favourable scores of all the variables above mentioned, GPB scored significantly low. In Table 1, along the 7-point Likert scale of GPB1 and GPB2, the scores of 1.95 and 1.79 are almost only one-fourth of the highest possible score. Also, on average, respondents have purchased as little as 1.21 green products in a previous month from the study period. Interestingly though, respondents who demonstrated high awareness in ECCB (35 respondents who have average of 3.0+ agreement to the ECCB statements) showed higher average scores of 2.09 in GPB, while those who showed less interest in environmental issues (46 respondents who have average of <3.0 agreements to the ECCB statements) only had average scores of 1.33 in GPB. Hence, the study also witnessed the coherency in responses where highly aware respondents are more likely to carry out GPB and the opposite is true for less aware respondents.

Therefore, the psychographic aspects of the green consumer profile of Japanese youths in this study can be concluded as highly altruistic and collectivist individuals with sufficient knowledge about environmental issues. Their involvement in attitudes towards the environment is also high, while those high level of potentials doesn't necessarily be fully translated into their green consumer behaviour and corresponding green purchase intention. This poor translation becomes even worsen towards the green purchasing behaviour as their experiences in actual green purchasing is almost non-existent. The possible cause of this poor translation could be that more

respondents are not aware of the environmental protection and they overpower the positivity of respondents who are performing green consumer behaviour and following green purchasing.

3.2.2. Relationships of the variables

In section 3.2.2, we have discussed the detailed descriptive features of socio-demographic, and psychographic factors, as well as the external influencer of green marketing practices that shape ECCB and following GPI, GPB. In this section, we will reveal the numerical evidence to the correlations of the above-mentioned predictors with the dependent variable of ECCB to measure the relevance in explaining the green consumer profile of Japanese youths.

Firstly, the effect of the socio-demographic variables on ECCB will be examined. Since the age was a pre-condition for respondents to be eligible to the survey rather than the experimenting variable, the result does not include age as a predictor. In order to examine whether the demographic variables are correlated with the green consumer behaviour, namely ECCB, a multiple linear regression method was chosen. ECCB was set to be the dependent variable and four socio-demographic variables were used as predictors by adapting the previous empirical study conducted by Akehurst, et al. (2012).

The total variance (R^2) was 4.5%, F = 1.214, p = 0.310 with the confidence level of 95%. Table 2 shows the result of the calculation. The significance of every predictor surpasses the level of significance 0.05 at the confidence level of 95%, indicating that socio-demographic variables are not significant in explaining the ECCB of Japanese young consumers.

Table 2. Regression coefficients of the socio-demographic variables (N=81)

	Regression Coefficient	**Significance**
(Constant)	3.086	< 0.001
Gender	-0.309	0.097
Education	0.010	0.927
Income	-0.064	0.571

Source: Tanabe (April 2021), author's calculations

Psychographic variables of altruism and collectivism for values and beliefs, knowledge, attitudes (PCE and EC) and their correlation to the ECCB, as well as how much ECCB will be translated into GPI and GPB was calculated by using Spearman's correlation method. Table 3 indicates that psychographic variables to be more appropriate to describe green-conscious customer behaviour (ECCB). This result is in accordance with the previous empirical study of Straughan & Roberts (1999).

Table 3. Spearman's correlation of the psychographic variables (N=81)

	Correlation Coefficients (rho)	**Significance**
ECCB ← ALT	0.537	< 0.001
ECCB ← COLLECT	0.347	0.001
ECCB ← EK	0.092	0.412
ECCB ← PCE	0.429	< 0.001
ECCB ← EC	0.333	0.002
GPI ← ECCB	0.710	< 0.001
GPB ← GPI	0.257	0.020
GPB ← ECCB	0.462	< 0.001

Source: Tanabe (April 2021), author's calculations

Of those psychographic variables, all but knowledge (EK) was demonstrated to be significant in explaining the green consumer behaviour of young Japanese at the confidence level of 95%. In particular, altruism (ALT) and perceived consumer effectiveness (PCE) are more effective predictors of ECCB as rho, the correlation coefficients of those are the highest among the predictors with 0.537 and 0.429 respectively. On the other hand, environmental concern (EC) has less correlation with ECCB with a rho of 0.333. Surprisingly Japanese young consumers are more environmentally aware if they value the effectiveness of their behaviour in maintaining the

environment rather than just objectively worrying about the environment. Green consumer behaviour (ECCB) appeared to be the driving force for the green purchasing intention (GPI) of young Japanese as rho scored as high as 0.710, which demonstrate the strong correlation between the two variables. The correlation of GPI with green purchase behaviour (GPB) has proven to be very little with only 0.257, while the correlation of ECCB with GPB was demonstrated to be 0.462.

Table 4. Spearman's correlation of the green marketing practices (N=81)

	Correlation Coefficients (rho)	**Significance**
ECCB ← GM	0.543	< 0.001
GPI ← GM	0.575	< 0.001
GPB ← GM	0.284	0.01

Source: Tanabe (April 2021), author's calculations

Table 4 illustrate Spearman's correlation of green marketing practices (GM) with ECCB, GPI, and GPB to measure the external influences. The correlation test was run with a significance level of 95% and all of the pairs are demonstrated to be significant. Green marketing practices, sustainable packaging and eco-label in this study, effectively and directly influence the Japanese youths' ECCB and GPI with rho of 0.543 and 0.575 respectively. However, as is similar to the case of psychographic variables, GM is not a good predictor in explaining the GPB of young Japanese as rho is as low as 0.284, which indicates a very low correlation between the two.

3.3. Discussion and recommendations

The empirical study was conducted to get the knowledge of green consumer profile, as well as green consumer and purchasing behaviour of young Japanese consumers by adopting socio-demographic, psychographic variables and green marketing practices as predictors. The results reveal the green consumer behaviour of the Japanese audience and its relationship with the actual purchasing behaviour. This gained information is useful in answering the questions of this thesis.

The study revealed that the socio-demographic features of the respondents such as gender, the level of education and the level of income don't have significant impacts on the green consumer behaviour among young Japanese consumers. However, altruism and collectivism, which represent the psychographic values and beliefs, were surely observed among them, indicating the similarity to other emerging Asian nations such as China where many of the previous empirical studies were carried out. Japanese young consumers appeared to be very aware of the impact of their deed to the environment and showed altruistic concerns, as well as feeling the importance in the collective coherence with others. Interestingly though, altruism has more significance in picturing the green consumer behaviour of young Japanese more so than collectivism.

Respondents showed slightly better knowledge on the environmental issues than previously done empirical studies, yet knowledge appeared to not correlate with the green consumer behaviour of the respondents. On the other hand, the attitude components of the psychographic predictors, perceived consumer effectiveness (PCE), which stands for the consumer expectations and reactions to environmental challenges that are based on their conviction of individuals having a positive impact on the outcome of such issues among young Japanese consumers, was confirmed to be observed at a high level in this study and having moderate correlation in explaining the green consumer behaviour of them. The study also revealed that on the contrary to the PCE, environmental concerns (EC) appeared to have less impact on the green consumer behaviour of young Japanese, while respondents showed positive reactions for many items in the questionnaire. Therefore, the green consumer profile of young Japanese consumers can be explained as highly valuing altruistic beliefs more so than collectivism coherence, as well as believing in their effectiveness in their actions towards the environmental protection, while the knowledge and concerns about environmental degradation are rather poor.

Green consumer behaviour or ECCB was not as prominent as its predictors in terms of the mean scores, which indicate the poor translation of psychographic variables into green consumer behaviour. When looking at the responses to the individual scales of ECCB, the level of agreement varies widely as the more effort or hassle the respondents have to take in order to demonstrate ECCB, the less likely it that they take actions towards environmental protection. This can easily be observed in the order of statements in figure 8, the easier the action is, the more likely that the action was carried out. Interestingly, green purchase intention seems to have been influenced greatly by ECCB as the correlation coefficient was shown to be as strong as 0.71. It seems that Japanese youths have the intention to purchase environmentally friendly alternatives of conventional products they newly start using, but they don't bother to switch their purchasing patterns and brands for products that they already have been using only for ecological reasons. On the other hand, the influence of the green marketing practices, namely the sustainable packaging and the eco-label in this case, have found to be positively perceived among young Japanese consumers as well as having a favourable influence on ECCB, GPI but GPB. It appeared that respondents showed greater interest and favour towards the green marketing practices of the sustainable packaging as 78% to 83% of them agreed to the statement regarding the sustainable packaging, while this is not the case for the eco-labels with only 25% to 47% of respondents reacted positively towards the statements for the eco-labels. It seems that some improvement in the information conveying attributes of the eco-labels in the Japanese market is in need and making it understandable for consumers is crucial for marketers as well as promoting the sustainability of the packaging more so than at the current level to stimulate the favourable impacts of positive reactions of consumers.

By analysing the relationships of psychographic variables and assessing the magnitude of those impacts to actual behaviour, green purchasing behaviour (GPB), the destination of all the variables appeared to be poorly observed among young Japanese consumers in this study. Despite the satisfactory level of mean scores in other variables, GPB only scored 1.95 and 1.79 for the purchasing frequency and the amount of money spent, respectively. It is clear that among young Japanese consumers, the high level of psychographic factors somewhat encourages ECCB and following GPI, but they haven't gone further enough to positively influence in stimulating the actual GPB. Therefore, the green attitude-behavioural gap among young Japanese consumers is confirmed.

To wrap up what was found in the empirical study in order to understand the green consumer behaviour and ultimately the green purchasing behaviour of young Japanese consumers, figure 13 below can be explained. + signs describe the level of influence on the arrowed items. + means the predictor has weak impact, ++ means moderate impact, +++ means strong impact towards the influenced items. – sign indicates no significance in explaining the variables.

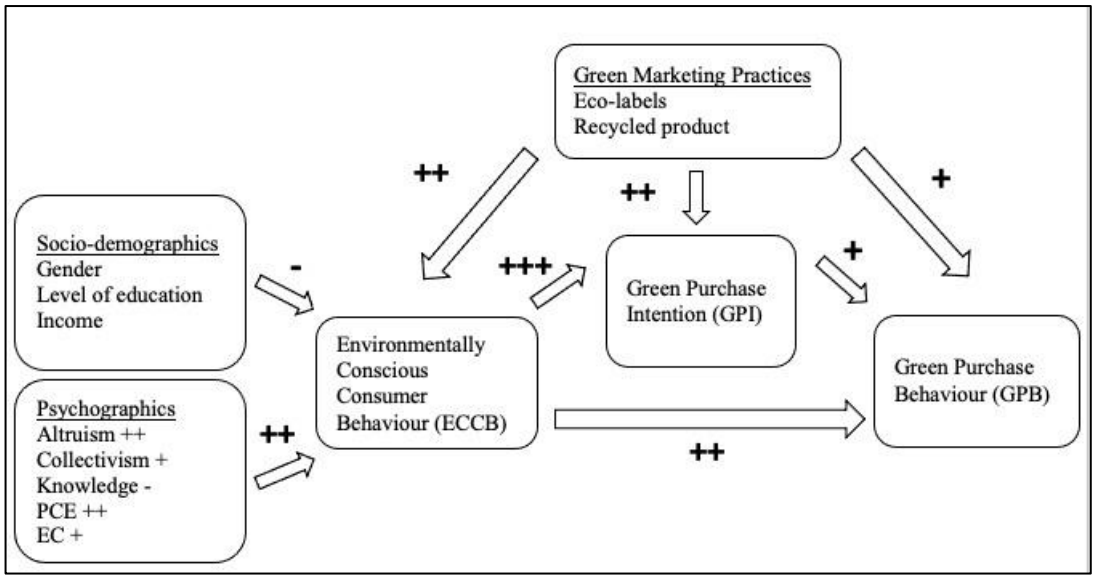

Figure 13. The relationships of predictors
Source: Tanabe (April 2021) prepared by the author

Further research can extend its possibilities in both theoretical, and practical manners. Even though the theories to explain the formation of green consumer behaviour, as well as its relation to green purchasing behaviour, have widely been examined in previous research, the limitation can still apply to those in terms of the countries in which the studies were conducted. Further research can extend its venue to Asian nations where less evidence was found.

The findings in this study are particularly helpful as it examined the unknown field of young Japanese consumers for the first time and gained knowledge about their characteristics as green consumers. However, the study in this thesis was conducted by a non-probability judgemental sampling method, the results cannot be generalized to the population. It is recommendable for further research to target a larger sample size with probability sampling methods in order to overcome the inaccuracy and allowing the generalization of the results. The study also limited its focus to the young generation because of their relatively high level of disposable income available compared to other generations, so the further study could eliminate the age restrictions to gain

more widely applicable information. Yet, the findings from this study confirmed the similarity in the green consumer characteristics and green purchasing tendency of young Japanese with other Euro-American developed countries, as well as China, an emerging Asian country.

This finding ensures the effectiveness of the green businesses and marketers referring from the previously made green marketing strategies in the Western world. The results of the study would especially be helpful for both large and small Japanese businesses and enterprises who are planning to promote green products or sustainability in production to young consumers to get the insight of the consumer characteristics and bottleneck as the study revealed the positivity in the psychographic predictors are not fully translated into the actual green purchasing. The author also suggests the practical application of the results by policymakers to effectively educate consumers, therefore enhancing the level of environmental friendliness in the community.

CONCLUSION

The environmental degradation in previous decades had cast doubt on the traditional way of mass-production and consumption in the market. The emergence in consumers awareness towards environmental friendliness has been witnessed and empirically examined widely in recent years but less was conducted in the Asian context, especially in Japan. Therefore, the research problem tried to overcome the gap in knowledge of what factors and how those factors influence in shaping green consumer behaviour of Japanese young consumers towards grocery products. The aim was set to identify the characteristics of green consumer behaviour among young Japanese consumers and how this is translated to their green purchasing behaviour in grocery domains.

The research questions tried to find answers around internal aspects, the formation of green consumer behaviour and ultimately assessing the actual exercise of green purchasing behaviour, as well as external aspects of the influence of green marketing strategies on green consumption. The findings filled the gap in knowledge of young Japanese consumers by answering the questions about the characteristics of green consumer profile of Japanese youth, the extent to which the ECCB lends to the GPI and GPB, and the favourable attributes of green marketing practices and those impacts to the ECCB, GPI and GPB.

The main findings confirmed the green consumer characteristics of young Japanese as driven by a highly altruistic mindset, strong belief in PCE. While their collectivistic beliefs as Asian, knowledge and concerns on environmental issues appeared to have no significance in their profile. In terms of the internal translation, their ECCB has a highly favourable impact on GPI but extremely poorly translated into the actual GPB. The external influencer of green marketing practices, sustainable packaging was perceived more positively than eco-labels with its simplicity in understanding the gentle attributes to the environment. Those green marketing practices are found to have a favourable influence on ECCB and GPI but very little impacts on GPB was observed.

This thesis consists mainly of two parts. Firstly, the theoretical review about the influencing factors of ECCB and its relations to GPI and GPB was carried out. The empirical study was conducted by adapting the previous research made by Straughan & Roberts (1999), R. Y. K. Chan (2001), and Akehurst et al. (2012). The data were collected according to the young Japanese consumers' perceptions towards green consumption through the online questionnaire by implementing the judgemental sampling method. The study gathered responses from 81 young Japanese to be analysed in the results.

The study is helpful for Japanese enterprises to succeed in green businesses with the input of green consumer profile and bottleneck of GPB from the study. It is also useful for policymakers to effectively educate the people to have better knowledge ad concerns towards the environmental issues and enhance the green consumer profile. However, the study had its primary focus on the young generation and tested some of the most prominent psychographic predictors. In order to gain more promising data, it is suggested to conduct among wider age groups with more variables to measure.

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APPENDICES

Appendix 1. Design of online questionnaire

Section	Measured variable	Questions	Scale items	Scale type
Socio-demographic variables (Kanchanapibul, et al. 2014)	Age	What is your age?		Open-ended
	Gender	What is your gender?	1. Male 2. Female	Nominal
	Level of education	What is the highest education you have completed?	1. Less than High school 2. High school 3. Collage 4. University (Undergraduate) 5. University (Graduate) 6. Another post-secondary	Nominal
	Level of income	What weekly income range do you fall after?	1. 0 – 50000 yen 2. 50000-100000 yen 3. 100000-200000 yen 4. Over 200000 yen	Nominal
Psychographic variables	Altruism (Albayrak, et al. 2013)	The effects of pollution on public health are worse than we realize		5-point Likert (1=Strongly disagree, 5=Strongly agree)
		Environmental protection will help people have a better quality of life		
		Environmental protection benefits everyone		
		Many of society's problems result from selfish behaviour		
		It is my duty to help other people when they are unable to help themselves		

Appendix 1. Continuation

	Collectivism (Laroche, et al. 2001)	Loving (i.e., affectionate, tender)		5-point Likert (1=very unimportant, 5=very important)
		Helpful (i.e., working for the welfare of others)		
		Warm relationships with others		
	Knowledge (Chan 2001)	Soil pollution is generally due to:	(A) sparse rains (B) improper farming methods **(C) poisonous metals** (D) over-fertilization (E) poor crop rotation	Nominal
		Birds and fish are being poisoned by:	(A) iron **(B) mercury** (C) silver (D) lead (E) magnesium	
		Practically all of the lead in the atmosphere is caused by:	**(A) cars** (B) Industrial plants (C) airplanes (D) burning refuse (E) cigarettes	
		How long does DDT take to deteriorate into harmless chemicals?	(A) it never does (B)10–20 months depending on the weather **(C) about 200 years** (D) about 400 years (E)anywhere from several days to several years	
	Perceived Consumer Effectiveness (PCE) (Kim, Choi 2005)	Each person's behaviour can have a positive effect on society by signing a petition in support of promoting the environment		5-point Likert (1=strongly disagree, 5=strongly agree)
		I feel I can help solve natural resource problem by conserving water and energy		
		I can protect the environment by buying products that are friendly to the environment		

Appendix 1. Continuation

	Environmental Concern (EC) (Straughan, Roberts 1999)	We are approaching the limit of the number of people the earth can support.	5-point Likert (1=never true, 5=always true)
		To maintain a healthy economy, we will have to develop a steady-state economy where industrial growth is controlled.	
		The balance of nature is very delicate and easily upset.	
		When humans interfere with nature, it often produces disastrous consequences.	
		Humans must live in harmony with nature in order to survive.	
Green Consumer Behaviour	Environmentally Conscious Consumer Behaviour (ECCB) (Roberts 1996)	I normally make a conscious effort to limit my use of products that are made of or use scarce resources.	
		I will not buy products which have excessive packaging.	
		When there is a choice, I always choose that product which contributes to the least amount of pollution.	
		If I understand the potential damage to the environment that some products can cause, I do not purchase these products.	
		I have switched products for ecological reasons.	
		I make every effort to buy paper products made from recycled paper.	
		I have purchased products because they cause less pollution.	
		Whenever possible, I buy products packaged in reusable containers.	
		When I have a choice between two equal products, I always purchase the one which is less harmful to other people and the environment.	
		I try only to buy products that can be recycled.	

Appendix 1. Continuation

	Green Purchasing Behaviour (GPB) (Chan 2001)	What is the frequency of shopping for green products within the previous month?	7-point Likert (1=never, 7=at every opportunity)
		What is the amount spent on green products within the previous month?	7-point Likert (1=none, 7=much money)
		What is the total number of green products bought within the previous month?	Open-ended
Green Marketing Practices	Green Packaging (Kong, et al. 2014)	That the packaging is made from recyclable materials.	5-point Likert (1=strongly disagree, 5=strongly agree)
		That the product has no excessive packaging.	
	Green Product Value (Kong, et al. 2014)	I purchase this product because it has more environmental benefits than other products.	
	Eco-label (Nittala 2014)	I consider what is printed on eco-labels to be accurate.	
		The information on eco-labels is usually easy to understand.	
	Green Purchase Intention (Kong, et al. 2014)	I plan to switch to a green version of a product.	5-point Likert (1=Very unlikely, 5=Very likely)
		I consider switching to other brands for ecological reasons.	
		I would buy green products that are not harmful to the environment.	

Source: author's survey, 2021

Appendix 2. Results of the questionnaire

Section	Characteristics		Number of respondents (n)	Proportion (%)
Socio-demographic	Age	19-20 years old	5	6.17
		21-22 years old	73	90.12
		23-24 years old	1	1.23
		25+ years old	2	2.47
	Gender	Male	30	37.04
		Female	51	62.96
	Level of education	High school	15	18.52
		Collage	3	3.70
		University (Undergraduate)	62	76.54
		University (Graduate)	1	1.23
	Level of income	0-50k yen	26	32.10
		50k-100k yen	44	54.32
		100k-200k yen	5	6.17
		200k+ yen	6	7.41

Altruism (1=Strongly disagree, 5=Strongly agree), N=81

Statement	1 (n)	1 (%)	2 (n)	2 (%)	3 (n)	3 (%)	4 (n)	4 (%)	5 (n)	5 (%)
The effects of pollution on public health are worse than we realize	1	4.94	7	2.47	11	9.88	30	27.16	32	55.56
Environmental protection will help people have a better quality of life	2	2.47	9	7.41	16	18.52	22	41.98	32	29.63
Environmental protection benefits everyone	4	2.47	2	13.58	8	20.99	22	34.57	45	28.40
Many of society's problems result from selfish behaviour	2	2.47	6	11.11	15	19.75	34	27.16	24	39.51
It is my duty to help other people when they are unable to help themselves	2	1.23	11	8.64	17	13.58	28	37.04	23	39.51

Appendix 2. Continuation

Collectivism (1=Very unimportant, 5=Very important), N=81

Statement	1 (n)	1 (%)	2 (n)	2 (%)	3 (n)	3 (%)	4 (n)	4 (%)	5 (n)	5 (%)
Loving (i.e. affectionate, tender)	1	1.23	1	1.23	11	13.58	34	41.98	34	41.98
Helpful (i.e. working for the welfare of others)	1	1.23	1	1.23	7	8.64	26	32.10	46	56.79
Warm relationships with others	2	2.47	0	0	6	7.41	27	33.33	46	56.79

Knowledge, N=81

Characteristics		Number of respondents (n)	Proportion (%)
Soil pollution is generally due to:	(A) sparse rains	8	9.88
	(B) improper farming methods	7	8.64
	(C) poisonous metals	33	40.74
	(D) over-fertilization	33	40.74
	(E) poor crop rotation	0	0
Birds and fish are being poisoned by:	(A) iron	8	9.88
	(B) mercury	48	59.26
	(C) silver	1	1.23
	(D) lead	17	20.99
	(E) magnesium	7	8.64
Practically all the lead in the atmosphere is caused by:	**(A) cars**	21	25.93
	(B) Industrial plants	39	48.15
	(C) airplanes	3	3.70
	(D) burning refuse	17	20.99
	(E) cigarettes	1	1.23
How long does DDT take to deteriorate into harmless chemicals?	(A) it never does	6	7.41
	(B) 10–20 months depending on the weather	19	23.46
	(C) about 200 years	30	37.04
	(D) about 400 years	11	13.58
	(E) anywhere from several days to several years	6	7.41

Appendix 2. Continuation

PCE (1=Strongly disagree, 5=Strongly agree), N=81

Statement	1 (n)	1 (%)	2 (n)	2 (%)	3 (n)	3 (%)	4 (n)	4 (%)	5 (n)	5 (%)
Each person's behaviour can have a positive effect on society by signing a petition in support of promoting the environment	1	1.23	3	3.70	5	6.17	27	33.33	45	55.56
I feel I can help solve natural resource problem by conserving water and energy	2	2.47	6	7.41	12	14.81	26	32.10	35	43.21
I can protect the environment by buying products that are friendly to the environment	0	0	4	4.94	15	18.52	29	35.80	33	40.74

EC (1=Strongly disagree, 5=Strongly agree), N=81

Statement	1 (n)	1 (%)	2 (n)	2 (%)	3 (n)	3 (%)	4 (n)	4 (%)	5 (n)	5 (%)
We are approaching the limit of the number of people the earth can support.	3	3.70	9	11.11	15	18.52	28	34.57	26	32.10
To maintain a healthy economy, we will have to develop a steady-state economy where industrial growth is controlled.	1	1.23	3	3.70	12	14.81	33	40.74	32	39.51
The balance of nature is very delicate and easily upset.	1	1.23	5	6.17	8	9.88	21	25.93	46	56.79
When humans interfere with nature, it often produces disastrous consequences.	4	4.94	14	17.28	33	40.74	22	27.16	8	9.88
Humans must live in harmony with nature in order to survive.	1	1.23	0	0	1	1.23	32	39.51	47	58.02

Appendix 2. Continuation

ECCB (1=Never true, 5=Always true), N=81

Statement	1 (n)	1 (%)	2 (n)	2 (%)	3 (n)	3 (%)	4 (n)	4 (%)	5 (n)	5 (%)
I normally make a conscious effort to limit my use of products that are made of or use scarce resources.	24	29.63	32	39.51	18	22.22	6	7.41	1	1.23
I will not buy products which have excessive packaging.	20	24.69	22	27.16	23	28.40	15	18.52	1	1.23
When there is a choice, I always choose that product which contributes to the least amount of pollution.	15	18.52	27	33.33	23	28.40	14	17.28	2	2.47
If I understand the potential damage to the environment that some products can cause, I do not purchase these products.	7	8.64	13	16.05	21	25.93	32	39.51	8	9.88
I have switched products for ecological reasons.	26	32.10	15	18.52	22	27.16	14	17.28	4	4.94
I make every effort to buy paper products made from recycled paper.	21	25.93	30	37.04	15	18.52	9	11.11	6	7.41
I have purchased products because they cause less pollution.	21	25.93	20	24.69	16	19.75	20	24.69	4	4.94
Whenever possible, I buy products packaged in reusable containers.	4	4.94	9	11.11	7	8.64	19	23.46	42	51.85
When I have a choice between two equal products, I always purchase the one which is less harmful to other people and the environment.	6	7.41	6	7.41	8	9.88	28	34.57	33	40.74
I try only to buy products that can be recycled.	4	4.94	24	29.63	26	32.10	18	22.22	9	11.11

Appendix 2. Continuation

GPB (Statement 1: 1 = never, 7 = at every opportunity, Statement 2: 1 = none, 7 = much money)

Statement	1 (n)	1 (%)	2 (n)	2 (%)	3 (n)	3 (%)	4 (n)	4 (%)	5 (n)	5 (%)	6 (n)	6 (%)	7 (n)	7 (%)
What is the frequency of shopping for green products within the previous month?	39	48.15	19	23.46	14	17.28	6	7.41	3	3.70	0	0	0	0
What is the amount spent on green products within the previous month?	42	51.85	22	27.16	10	12.35	6	7.41	1	1.23	0	0	0	0

Statement	0-1 (n)	0-1 (%)	2-3 (n)	2-3 (%)	4-5 (n)	4-5 (%)	6+ (n)	6+ (%)	DK (n)	DK (%)
What is the frequency of shopping for green products within the previous month?	57	70.37	17	20.99	6	7.41	1	1.23	5	6.17

GMP (1=Strongly disagree, 5=Strongly agree), N=81

Statement	1 (n)	1 (%)	2 (n)	2 (%)	3 (n)	3 (%)	4 (n)	4 (%)	5 (n)	5 (%)
That the packaging is made from recyclable materials.	2	2.47	2	2.47	10	12.35	22	27.16	45	55.56
That the product has no excessive packaging.	4	4.94	3	3.70	11	13.58	22	27.16	41	50.62
I purchase this product because it has more environmental benefits than other products.	1	1.23	4	4.94	23	28.40	33	40.74	20	24.69
I consider what is printed on eco-labels to be accurate.	1	1.23	5	6.17	36	44.44	29	35.80	10	12.35
The information on eco-labels is usually easy to understand.	12	14.81	26	32.10	23	28.40	17	20.99	3	3.70

Appendix 2. Continuation

GPI (1=Very unlikely, 5=Very likely), N=81

Statement	1 (n)	1 (%)	2 (n)	2 (%)	3 (n)	3 (%)	4 (n)	4 (%)	5 (n)	5 (%)
I plan to switch to a green version of a product.	5	6.17	18.52	3.70	21	25.93	27	33.33	13	16.05
I consider switching to other brands for ecological reasons.	15	18.52	28.40	7.41	28	34.57	10	12.35	5	6.17
I would buy green products that are not harmful to the environment.	2	2.47	11.11	4.94	8	9.88	36	44.44	26	32.10

Source: author's calculation, 2021

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